IOWA BIRDS

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Preface

Three major works covering Iowa's avifauna have been published. The first, by Anderson (1907), was especially valuable and complete in summarizing published and unpublished pioneer information on Iowa's birds. The second, by DuMont (1933), like that of Anderson is based on a doctoral dissertation from the University of Iowa. DuMont's work is perhaps the most scholarly, as he pays particular attention to museum specimens and subspecies of various birds in Iowa. The most recent was Brown's (1971) annotated list of Iowa birds. Since 1971, there has been a tremendous increase in data on Iowa's birds. The Field Reports section in **Iowa Bird Life** has almost doubled in length in the last 5 years, and the reports being submitted by field observers are more detailed and better documented now than ever before.

Starting in 1980, the Records Committee of the Iowa Ornithologists' Union (I.O.U.) has undertaken a thorough reevaluation of records of all species reported in Iowa. By using more stringent criteria for evaluating old and new records, the status of many species, especially those of casual and accidental occurrence in Iowa, has been redefined. The results of this reevaluation process have appeared in a new "Official Checklist of Iowa Birds: 1982 Edition" (Kent et al. 1982), which has been incorporated into this book.

Also, the American Ornithologists' Union has been evaluating many recent taxonomic decisions relative to North American birds. The results of their work have appeared as a new official A.O.U. Check-list of North American Birds (American Ornithologists' Union 1982).

The combination of increased reporting of Iowa birds, the critical examination of all old records, and the new standardized list of North American birds made this an appropriate time to prepare a new book on the birds of Iowa. This volume is not intended to be a guide to bird identification. There are several well-illustrated, widely distributed bird guides already available that fill that need (Robbins et al. 1966; Peterson 1980). Rather, this book is intended to provide an up-to-date summary of Iowa's avifauna, emphasizing the status, habitats, and seasonal occurrence of the bird species reported in Iowa. It also attempts to relate Iowa's avifauna, and especially the vagrant species, to the avifauna of the surrounding states. In some cases, difficult identification problems are discussed, especially of species that are not sufficiently covered in some of the field guides.

In preparing this volume, the authors divided the species groups and each prepared certain accounts. The preliminary accounts were circulated among the other authors for additions and comments before final versions were prepared. The division of labor was as follows:

Dinsmore: Gaviidae, Podicipedidae, Pelecaniformes, Ciconiiformes, Anseriformes, Gruiformes, Laridae, Corvidae, Thraupinae, Icterinae, Passeridae.

Kent: Charadriidae, Recurvirostridae, Scolopacidae, Psittaciformes, Turdinae, Mimidae, Cardinalinae, Fringillidae, plus all accidental, extirpated, extinct, and excluded species.

List of Abbreviations

Months: first three letters of month without a period: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec

a. = acres
A. = Area
A.O.U. = American Ornithologists' Union
BBS = Breeding Bird Survey
C = central
ca. = circa
CBC = Christmas Bird Count
Co. = county
e = east (of)
E = east or eastern
EC = east central
F. = Forest
I. = Island
I.O.U.= Iowa Ornithologists' Union
L. = Lake
M. = Marsh
n = north (of)
N = north or northern
NC = north central
ne = northeast (of)
NE = northeast or northeastern
nw = northwest (of)
NW = northwest or northwestern
N.W.R. = National Wildlife Refuge
P. = Park
P.H.A. = Public Hunting Area
R. = River
Res. = Reservoir
s = south (of)
S = south or southern
SC = south central
se = southeast (of)
SE = southeast or southeastern
S.F. = State Forest
Sl. = Slough
S.P. = State Park
S.Pr. = State Preserve
sw = southwest (of)
SW = southwest or southwestern
w = west (of)
W = west or western
W.A. = Wildlife Area
WC = west central

IOWA BIRDS

CHAPTER ONE
The State List

The current number of species accepted as having occurred in Iowa is 362 (Kent et al. 1982, plus 1 late addition). Of these, 276 are regular, 16 casual, 62 accidental, 6 extirpated, and 2 extinct (Appendix A). In addition, there are 12 hypothetical species and 26 other unacceptable species cited in the literature (Appendix B). The classification system used to determine these categories is explained in Chapter 2.

The first known list of birds that might be considered for Iowa is that of Thomas Say at Engineer Cantonment in 1819-1820 (James 1823). This was a local list with Nebraska and Iowa sightings not separated. Allen (1868) published a list of 108 summer birds seen in west central Iowa and Parker (1871) added 54 species to this list. In the meantime Allen (1870) published a "Catalogue of the Birds of Iowa" as an appendix to C. A. White's **Report of the Geological Survey of the State of Iowa.** Allen's 1870 list contained 283 species, including the 108 he personally saw. He does not indicate the basis for including the other species; but they probably represent species expected to occur rather than actual sightings, because there was very little literature available at the time.

In 1889 Keyes and Williams published a list of 254 species, mostly from the vicinity of Charles City, Des Moines, and Iowa City and mostly based on specimens. Only two species listed by Keyes and Williams, Western Bluebird and Bachman's Sparrow, are not on the current state list. Otherwise, the Keyes and Williams list can be considered the first valid and reasonably representative state list. Currently accepted species not on the Keyes and Williams list are given in Appendix C, in the order of the year of the first acceptable record. Carolina Parakeet and Rock Wren, although on the Keyes and Williams list, are included in Appendix C because the citations by Keyes and Williams were not judged acceptable. Rock Dove is not listed because no first record was found.

Osborn (1892) published a list based on the Keyes and Williams list with the addition of Scaled Quail. Later it was judged that this bird was probably introduced or an escapee. Two reports of the Committee on State Fauna of the Iowa Academy of Sciences (Nutting 1893, 1895) added several species to the state list. In 1897 a committee of the Iowa Ornithologists' Association was formed to compile the state list (Savage 1897), but there is no evidence that this was ever completed.

Anderson (1907), in the first exhaustive treatise on Iowa birds, listed 354 species plus 24 hypothetical species for the state. Bailey (1906, 1910) published a book for use in schools, **200 Wild Birds of Iowa**, and in the second edition listed 352 species that are nearly the same as those given by Anderson.

DuMont (1933), in the second major treatise on Iowa birds, listed 364 species and 18 hypothetical species. DuMont (1935a, 1935b, 1944) updated his list and investigated available specimens. Musgrove (1949, 1952)

published a list of 373 species and subspecies of Iowa birds to update DuMont's list.

In 1954 a committee of the Iowa Ornithologists' Union (I.O.U.) published a list of 297 species with seasonal and geographic distribution, based on a 15-year period with input from many observers (Ennis et al. 1954). They also listed 69 extinct, accidental, and hypothetical species, based on the works of Anderson, DuMont, and Musgrove.

Grant (1963) published a list of 361 species, with complicated codes for frequency, seasons, geographic location, and occurrence in Iowa.

Brown (1971), who published the third major treatise on Iowa birds, provided an annotated list of 369 species of which 7 were considered hypothetical. In addition to the literature citings, Brown gathered data from many observers and listed early and late migration dates.

In 1977 the Checklist Committee of the I.O.U. listed 378 species reliably identified in Iowa up to May 1977 (Brown et al. 1977).

In 1980 the Checklist Committee was replaced by the Records Committee. This seven-member committee began updating the "Official Checklist of Iowa Birds: 1982 Edition" (Kent et al. 1982). Extensive evaluation of old and current records produced a number of changes in the list of accepted species and firmer criteria for evaluation of records (Kent 1982). Changes in nomenclature and taxonomic order have also occurred since the 1977 list, which was based on the 1975 edition of the **A.B.A. Checklist: Birds of Continental United States and Canada** (Robbins et al. 1975). The 1982 Iowa Checklist, which is used in this book with the exceptions noted below, follows the Thirty-fourth Supplement to the American Ornithologists' Union Check-list of North American Birds (American Ornithologists' Union 1982). The A.O.U. Check-list differs in a few common names, many scientific names, and taxonomic order from the **A.B.A. Checklist: Birds of Continental United States and Canada** (Keith et al. 1982).

Since publication of the 1982 checklist, the following changes have been made and incorporated into this book (see Chapter 2 for explanation of categories): Mew Gull added to list (accidental, I-P); Sandhill Crane and Pine Warbler moved from casual to regular; Great Black-backed Gull moved from III to I-P; Black-throated Blue Warbler moved from III to I-S; Blue Grosbeak moved from I-P to I-S; Yellow-throated Warbler moved from I-R to I-P; Bufflehead and Winter Wren moved from N? to N; and Red Crossbill moved to N?.

A number of future additions to the state list can be expected; observers should be aware of those that are most likely and be prepared to photograph, tape record, or document them. Guidelines for documentation have been described by Kent (1981). Of the current hypothetical (Class IV) species, Red Phalarope is a regular fall vagrant through the Midwest in October-November. Glossy Ibis should occur occasionally in eastern Iowa, but it will be difficult to prove this; photographs or specimens are needed. Groove-billed Ani, at present represented as Ani species, occurs in the Midwest nearly every year, with the majority of records in November. Painted Bunting is another possibility and might be found in spring or winter. Gyrfalcon is unlikely, but possible, and would require careful documentation or photographs.

Of Class V and VI species, the Great-tailed Grackle seems most likely to be added to the state list as it has invaded northwest Missouri and is spreading northward and eastward in Kansas and Nebraska. Black-necked Stilt is a rare vagrant that should appear in Iowa from time to time. Thayer's Gull occurs sporadically in the Midwest, especially on the Great Lakes, and should soon be found in Iowa. Band-tailed Pigeon, Common Ground-Dove, and McCown's Longspur are also rare vagrants to the Midwest.

Of species not yet reported for Iowa, Tricolored Heron is a prime candidate to be added, as it has occurred in all adjacent states and as far north as Manitoba. California Gull is a summer resident to the northwest of Iowa and has also been seen in all adjacent states. Several vagrant gulls seen on the Great Lakes and on the Mississippi River above St. Louis include Little Gull, Common Black-headed Gull, and Lesser Black-backed Gull. Pomarine Jaeger and Arctic Terns are vagrants in the Midwest and Ancient Murrelets have been blown from the Pacific Coast into the midcontinent. Rufous Hummingbird is an occasional vagrant in the fall and has been seen in Nebraska, Minnesota, and Missouri. Black-throated Sparrow is a possible fall/winter vagrant from the Southwest. Other, somewhat less likely vagrants from the Southwest include Vermillion Flycatcher, Ash-throated Flycatcher, and Scott's Oriole. Eurasian Tree Sparrow is resident in the St. Louis area and has been seen in Illinois across from Scott County. Waterbirds that are remote possibilities include White Ibis, Barnacle Goose, Tufted Duck, and Curlew Sandpiper.

It is clear that the Iowa list has been growing steadily and has ample room to grow. The procedures and standards for adding species to the state list have been more firmly established in recent years.

(Great-tailed Grackle and Vermillion Flycatcher were found in Iowa in the spring of 1983.)

CHAPTER TWO

Definition of Species Status

The true distribution of birds in Iowa, always changing, will never be completely known. Nevertheless, it is useful to classify the occurrence of species, using well-defined categories, even though application may be somewhat arbitrary and limited by available data. Precise terminology makes communication, description, and recall easier. Unfortunately, many terms are used in differing ways by authors of books on birds of North America and of the various states and provinces. These terms fall into five categories describing the status of the species covered in this book:

1. Species occurrence in Iowa
2. Frequency of occurrence
3. Seasonal occurrence
4. Evidence of nesting
5. Firmness of records

SPECIES OCCURRENCE IN IOWA

The five categories of occurrence used in this book are defined in Table 2.1, and the species in each category are listed in Appendix A.

Table 2.1. **Categories of Occurrence of Species in Iowa**

Category	Definition
Regular	Seen every year or nearly every year somewhere in the state. Reliably reported for at least 9 of the last 10 years, or 8 of 10 years and voted "regular" by the I.O.U. Records Committee
Casual	Seen in the the state many but not all years. Reliably reported in 5 to 7 of the last 10 years; or 8 of 10 or 4 of 10 years and voted "casual" by the I.O.U. Records Committee
Accidental	Seen in scattered years, once to occasionally. Reliably reported for 3 or fewer of the last 10 years; or 4 of 10 years and voted "accidental" by the I.O.U. Records Committee
Extinct	No longer seen anywhere
Extirpated	Formerly regular or casual in Iowa but no accepted records in the last 50 years

A species whose normal range, whether it be in winter, summer, or migration, overlaps with a geographic area is said to be "regular" in that area. The term "casual" is often used to describe a species whose range is nearby or sometimes overlapping with the area under consideration. Two terms are applied here to species that are found definitely out of their normal range: "vagrant" and "accidental." The term vagrant puts more emphasis on the bird being away from its usual location; the term accidental emphasizes that the bird is unlikely in the area to which it wandered. In this sense, most accidentals are vagrants, but there are exceptions. For example, the Varied Thrush in Iowa is well outside its normal range, but it occurs nearly every year so the term accidental is inappropriate. On the other hand, many authorities show Iowa within the normal range for Black Rail, but the observed occurrences are few so the term accidental is not inappropriate. In this book we have followed the Iowa Ornithologists' Union (I.O.U.) Records Committee in adopting a frequency-based definition of regular, casual, and accidental rather than a range-based definition. This follows the practice of the majority of books on state birds, although many use the terms in both senses. Basing the definitions on frequency has the advantage of being more operational; that is, the records can be counted. A range-based definition of occurrence would be more descriptive, but its application would be seriously limited by the difficulty of defining normal and casual ranges.

The term accidental has been used by some to mean only one or two records, that is, the species is not likely to occur again. The I.O.U. Records Committee adopted the terminology used here because it is operationally defined and also does a reasonable job of categorizing species that have occurred in Iowa. Species that are vagrants in Iowa are usually not accidental in the sense that they are totally unexpected but are rather a part of a continental pattern of occurrence that can be discerned when the records of the species outside its normal range are viewed over a larger area than Iowa and over a long time period. For this reason we have included in the species accounts a discussion of the vagrancy patterns of accidental species. The Iowa records for a vagrant species do not always correspond exactly to the regional or continental pattern of vagrancy, but for most species the findings fit reasonably well.

Species that once occurred in Iowa on a regular or casual basis but no longer do so are categorized as "extinct" if they can no longer be expected to occur anywhere or as "extirpated" if there are no acceptable records for Iowa in the last 50 years.

Of the regular species, at least two might be considered vagrants: Varied Thrush and Townsend's Solitaire.

Of the casual species, a few such as Yellow Rail, Buff-breasted Sandpiper, and Sharp-tailed Sparrow are probably underrepresented in the records because they are difficult to find.

Of the accidental species, Black Rail might be regular if it could only be found more easily; recent evidence also suggests that Smith's Longspur has been overlooked (IBL 52:64). Other species close to their normal range that might be elevated to casual status by more extensive field observation include Sprague's Pipit, Black-headed Grosbeak, and Lazuli Bunting.

Of the extinct species, the Passenger Pigeon was once abundant, but the Carolina Parakeet probably was much less common and localized to riparian habitat in the southern parts of the state. Most of the extirpated species disappeared when the marsh and prairie habitat was turned into farmland.

FREQUENCY TERMS

The definitions of terms such as common or rare used by authors of state bird books are variable, and the application of such terms is judgmental. Nevertheless, such terms do give some idea of expected frequency. We have adopted definitions similar to those used by by Green and Janssen (1975) for Minnesota (Table 2.2), but they are not always applied with precision. The number of birds required for a particular frequency term should be judged by the standard of a hypothetical competent and active field observer in appropriate habitat at the appropriate time of year without recourse to netting.

Table 2.2. Frequency Terms Applied to Species

Term	Definition
Abundant	50+ per day or 250+ per season
Common	6-49 per day or 25-249 per season
Uncommon	1-5 per day or 5-24 per season
Rare	0-4 per season

Note that the terms casual and accidental, although describing frequency, are only used for casual and accidental species. Thus a regular species that has occurred only once in winter will be designated "rare in winter" rather than "accidental in winter." These terms of frequency are particularly difficult to apply to infrequently occurring species (are they uncommon or rare?), to those that occur in flocks (should they be counted by occurrences or numbers?), and to those that are erratic (what if they are common one year and rare the next?).

SEASONAL OCCURRENCE

It is easy to define the seasonal occurrence of species but harder to fit the species to the categories. Permanent residents are those species present all year. Some of these, such as Northern Cardinal, do not migrate and are present in about the same numbers all year. Others, such as Blue Jay, are common all year, but large flocks are observed migrating in spring and fall. Still others may be uncommon in midwinter, compared with migration and summer (e.g., Horned Lark), or uncommon in summer, compared with migration and winter (e.g., Red-tailed Hawk).

Summer residents are present in summer and most nest; a few are better termed summer visitants because they do not nest. Most summer residents have a noticeable spring migration peak, but many disappear imperceptibly in the fall. A few birds that are predominantly summer residents linger into winter (e.g., Killdeer).

Winter residents, sometimes called winter visitors or visitants, are present in winter and not summer. They may reach a peak in midwinter (e.g., Common Redpoll) or be more common in migration (e.g., Purple Finch). Sometimes a few linger into summer or even nest on occasion (e.g., Short-eared Owl, Pine Siskin).

Migrants are those species that pass from one border of the state to the other during spring and fall. There are pure migrants, such as many of the warblers and shorebirds, which are not seen in winter or summer. Some species are predominantly migrants, such as many of the ducks, but some birds may be present in summer or winter. A few species (e.g., Lesser Golden-Plover, Hudsonian Godwit, White-rumped Sandpiper) are predominantly spring migrants because they take a different route in fall.

In the species accounts that follow, the seasonal occurrences are listed in order of predominance with appropriate modifiers for frequency.

EVIDENCE OF NESTING

All species that have definitely nested in the state are designated under Status by "N"; "N?" designates those with only inferred evidence of nesting. The data for nesting are based on the work of Dinsmore (1981) and a review of questionable nesting accounts by the I.O.U. Records Committee. The criteria are those of Green and Janssen (1975) for Minnesota (Table 2.3).

Table 2.3. **Evidence Used to Determine Nesting**

Positive evidence of nesting
Nest with eggs
Adult sitting on nest constantly
Eggshells near nest
Young in nest seen or heard
Downy young
Young unable to fly seen away from nest
Evidence of inferred nesting
Nest building
Excavation of nest hole in progress
Adults seen in distraction display or feigning injury
Used nest found
Recently fledged young seen
Adult seen carrying fecal sac
Adult seen carrying food for young
Adult seen entering or leaving nest site in circumstances indicating occupied nest

FIRMNESS OF DATA

Some authorities writing state bird books have included only species substantiated by existing, well-labeled specimens; others have used all published and even unpublished records. This book takes the middle road. On the one hand, all published records of significance are mentioned, especially those for accidental, hypothetical, and excluded species. On the other hand, the standards set up by the I.O.U. Records Committee for evaluation of the status of species were used. For acceptance of records on rare, rare out-of-season, casual, and accidental species, the Records Committee established the criterion "beyond reasonable doubt." Records

have been divided into six classes according to the quality of the supporting evidence (Table 2.4), which may be applied to species or to individual records. Accepted records fall into the first three classes, with Class I records supported by tangible evidence; thus validity can be reevaluated in the future by examination of the primary data.

Most Class I records are represented by specimens, but for 34 species only a photograph is available and for one (Alder Flycatcher) a recording is the only tangible evidence.

Class II and III records are sight records, with Class II records requiring independent documentation by three observers. Six Class III species are based on specimens that are no longer available but were examined in the past by experienced ornithologists. All species on the state list should be represented by tangible evidence, including a specimen if possible. The species that are represented only by photographs, recordings, or sight records are listed in Appendix B.

Sight records can be inaccurate, and there is no way to see or hear the bird again; the likelihood of error is reduced by accepting only records that have been critically evaluated by a committee of people knowledgeable about Iowa birds and their identification and who know many of the observers in the state. Some might argue that the chance of error with a sight record is too great to place a bird so identified on a state list. But without this risk true occurrences may not be accepted. For the latter reason, the I.O.U. Records Committee has further classified those records that are not accepted in Classes IV to VI (Table 2.4).

The evaluation of records is to some extent subjective. Those records that have been evaluated by the Records Committee are often referred to in this book by classification. The Committee has reviewed (1) all records for those species that are only represented by sight records, (2) all records for some additional species with specimens or photographs needing review, and (3) accidental species documented since 1980. In the case of casual, accidental, extirpated, extinct, and some rare species with one or more available specimens, such specimens were examined by one or more committee members and many were photographed. Other sight records, especially those of accidental species for which there were specimens or photographs, were judged by the authors using the same criteria used by the Records Committee. The evaluation of records takes into consideration the likelihood of occurrence of the species at the given time and place, the difficulty of identification, the ability and experience of the observer, and the details of appearance and song provided.

The I.O.U. Records Committee and authors were unlikely to accept a record of an accidental species without some descriptive details even when the observer is competent and the species easily identified. Most of the Class IV, or hypothetical, species fall into this category; however, three species (Magnificent Frigatebird, Carolina Chickadee, and American Dipper) are in this category because location of collection of the specimen is subject to question. Black-bellied Whistling-Duck is hypothetical in spite of an excellent photograph because it is unlikely as a vagrant and common as a captive species and thus can be an escapee.

One of the Class V species (Black-necked Stilt) is easily identified, but all sight records are without description and the two specimens are unlabeled as to location and date. The likelihood of vagrancy for the other Class V species is variable, but none of the records are sufficiently well described to evaluate the occurrence of the species in Iowa.

Of the Class VI species, two were misidentified and corrected in the literature (Barrow's Goldeneye and Gray Hawk), two were likely escapees (Scaled Quail and Common Ground-Dove), three are introduced species not

Table 2.4. Classification of Species (and Records)

Class	Definition
I-S	An existing specimen (or diagnostic photograph of the specimen) that has been examined by the I.O.U. Records Committee and is authentically labeled (date, place, collector)
I-P	A published photograph or photograph on file with the I.O.U. Records Committee that identifies the bird as to species and is authentically labeled (date, place, photographer)
I-R	A tape recording published as a sonogram or on file with the I.O.U. Records Committee that identifies the bird as to species and is authentically labeled (date, place, recorder)
II	A sight record of 1 or several birds independently and convincingly documented by 3 or more competent observers as judged by 6 of 7 of the members of the I.O.U. Records Committee
III	A sight record of 1 or more birds convincingly documented by 1 or 2 observers as judged by 6 of 7 members of the I.O.U. Records Committee
IV	A probable record that does not meet the criteria for Class I, II, or III but is judged probable by 6 of 7 members of the I.O.U. Records Committee. "Hypothetical" is used in this book as a synonym for Class IV, a probably correct sight record, although some authors use this term to mean an acceptable sight record.
V	A possibly accurate record, but one for which there is insufficient evidence to make a judgment
VI	A record that is or is judged likely to be incorrect, or an escaped bird, or a record (acceptable or not) of an introduced species not yet considered established in Iowa

Note: Tangible evidence (specimen, photo, recording) that is not diagnostic or adequately authenticated may be used as supporting evidence for a lower class.

yet accepted to the Iowa list by the Records Committee (Chukar, Ringed Turtle-Dove, and Monk Parakeet), and the rest were judged by the Records Committee and other authors to be possibly misidentified.

Complete accounts of Class IV, V, and VI species are included in their appropriate order in the species accounts (with the species name in parentheses) so that readers and ornithologists in the future can evaluate the evidence.

CHAPTER THREE

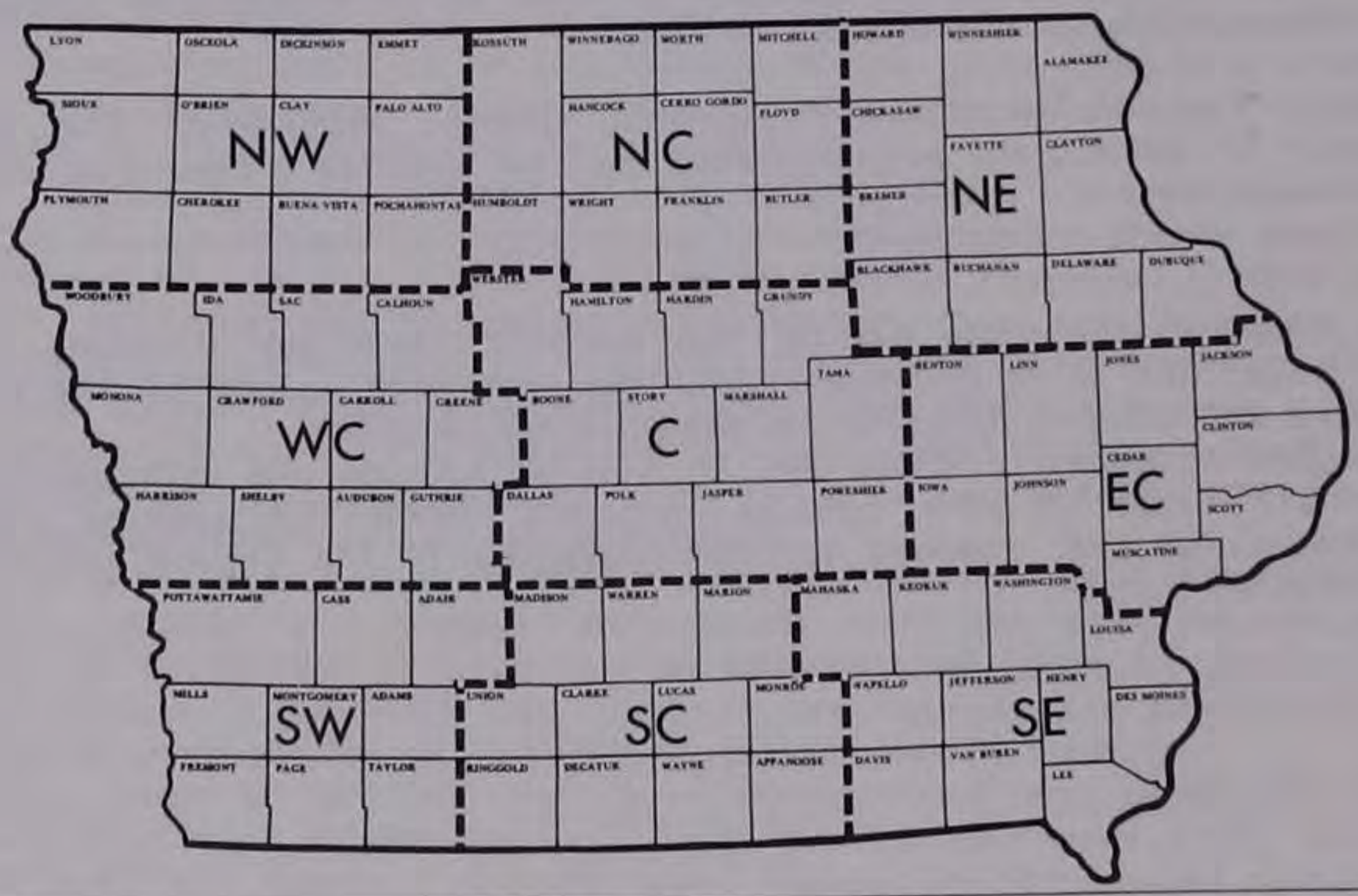
The Relationship of Birds to Iowa Geography

PHYSICAL SETTING

Iowa lies between 42 degrees 20 minutes and 43 degrees 30 minutes north latitude and between 90 degrees and 96 degrees 30 minutes west longitude near the center of the continental United States. Two of the world's principal rivers bound the state, the Mississippi on the east and the Missouri on the west. The maximum east-west distance is approximately 340 miles (547 km), and the greatest north-south distance is slightly over 200 miles (322 km). The total area is 55,986 square miles (145,192 square kilometers). Elevation varies from 480 feet above sea level in the southeast to 1,670 feet in the northwest.

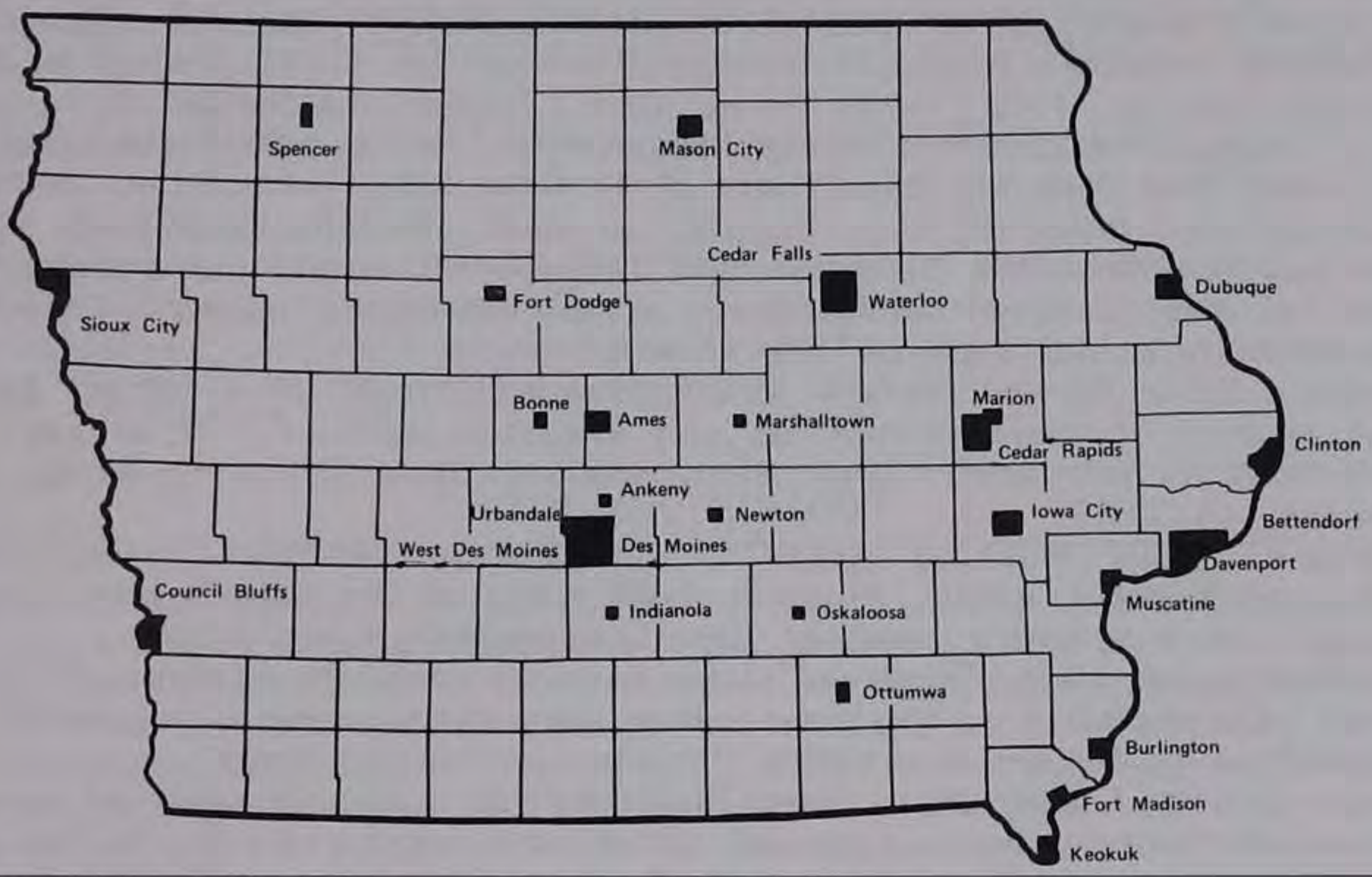
LOCATION OF BIRDING AREAS

The location of birds is often described in relation to political units such as counties and cities. The state's 99 counties are fairly uniform in size and are laid out in rows and columns. We have divided them into the nine rectangular regions used by the Iowa Department of Agriculture and the state climatologist (Map 3.1). In 1980, Iowa had 27 cities with over 10,000

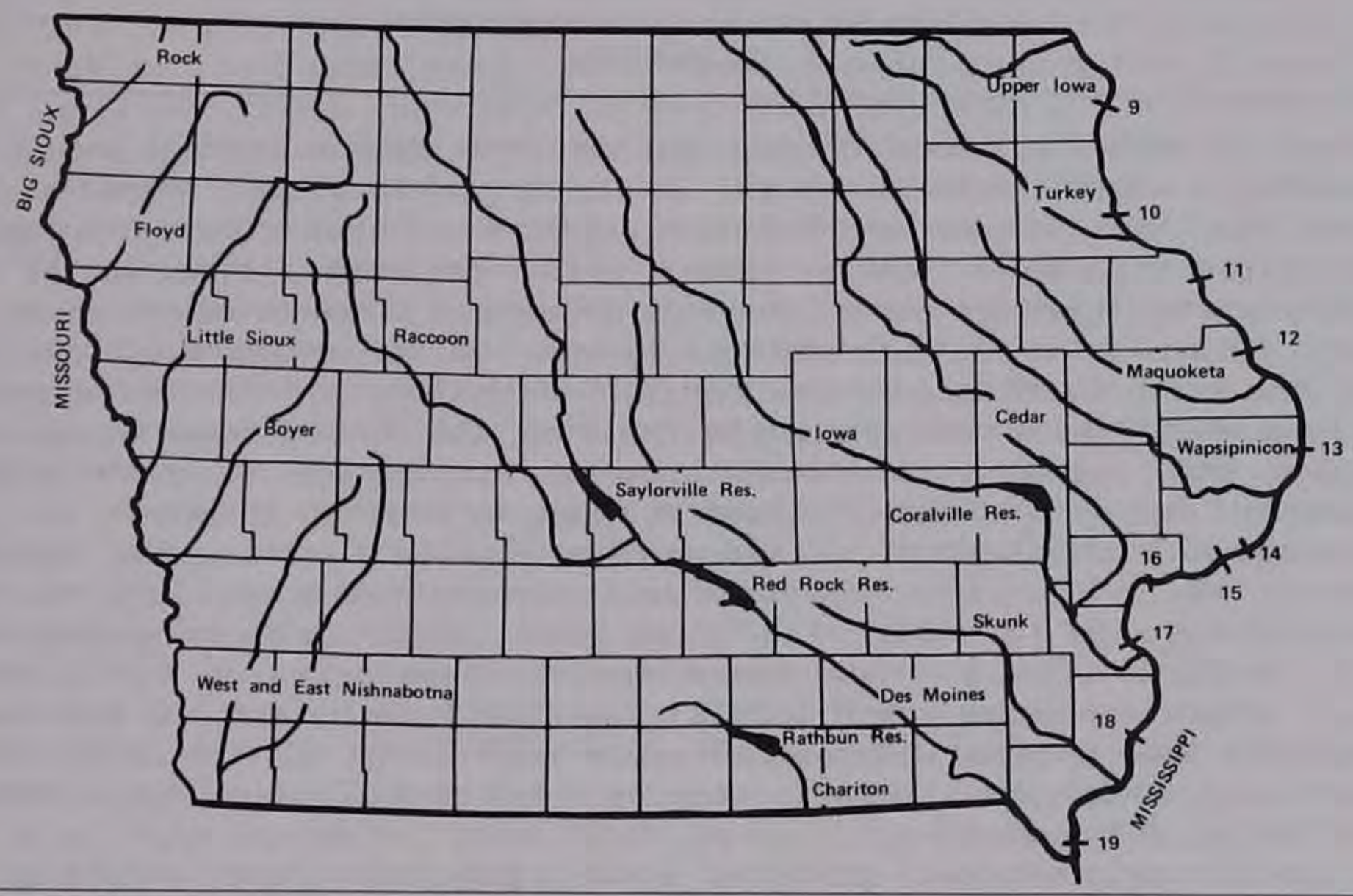


Map 3.1 State of Iowa, with counties and nine regions used in this book.

population (Map 3.2), 6 of them suburbs. Iowa's rivers, reservoirs, and Mississippi River dams also serve as landmarks for describing the occurrence of birds (Map 3.3). Many of the best birding areas of the state are located on public lands, which include national wildlife refuges (N.W.R.), state parks (S.P.), state preserves (S.Pr.), state forests (S.F.), state public hunting areas (P.H.A.), and county parks. The Gazetteer lists the birding areas cited in the text in alphabetical order as



Map 3.2 Cities in Iowa with over 10,000 population.



Map 3.3 Major rivers, reservoirs, and Mississippi River dams.

well as by county. Also listed are the major rivers and the cities over 10,000 population. Smaller cities and towns are easily located on standard road maps. In the species accounts, the county location of small cities and towns is given when dealing with accidental species or very unusual records.

The following sources contain useful information on birding areas of Iowa:

1. "Birding Areas of Iowa" (Petersen 1979a), a compilation of articles originally published in **Iowa Bird Life** describing areas by county, is available from the Iowa Ornithologists' Union for $4.82. Write to Mrs. Patricia Layton, 1580 Linmar Drive, Cedar Rapids, IA 52402.
2. The "Iowa Official State Transportation Map," an excellent road map, is available free from the Department of Transportation, Ames, IA 50010.
3. County road maps for each county, in small, medium, and large sizes, are available from the Department of Transportation and individually from the various county courthouses at a reasonable cost. They are particularly useful because they show all roads.
4. "Iowa's State Parks, Forests and Recreation Areas" is a foldout listing the location of these state areas and available facilities. It is free from the Iowa Conservation Commission, Wallace State Office Building, Des Moines, IA 50319.
5. "Iowa's Public Hunting Areas" is an 8-page pamphlet listing state-managed hunting areas, which include many of the state's best birding spots. It is available from the Iowa Conservation Commission.
6. "Directory of State Preserves" is a 94-page pamphlet available from the Iowa Conservation Commission that describes areas designated as preserves (many are also parks, forests, or hunting areas).
7. The "County Conservation Area Directory" is a complete list of county-managed public areas, some of which are large enough to be good birding areas. It is available from the Iowa Conservation Commission.
8. Maps of the four major reservoirs (Coralville, Rathbun, Red Rock, and Saylorville) are available at the reservoir headquarters or from the U.S. Army Corps of Engineers, Clock Tower Building, Rock Island, IL 61201.

CLIMATE

Iowa's climate is characterized as extreme midcontinental or humid continental, warm summer, with a small portion of northern and northeastern Iowa in the cool-summer subtype. These climatic types are characterized by warm or occasionally hot summers with rainfall in the form of showers and thunderstorms. Iowa is subjected to seasonal extremes and frequent local, rapid weather changes due to the convergence of cold, dry arctic air, moist maritime air from the Gulf of Mexico, and Pacific air masses that have lost their moisture while crossing the Rocky Mountains. The relatively flat character of Iowa, allowing air masses to move without impediment, results in these frequent changes in weather patterns.

Average annual temperatures range from 46 F (8 C) along the northern border to 52 F (11 C) in the southeast corner. Average July maximum temperatures range from 86 F (30 C) to 90 F (32 C), with minima of 60 F (16 C) to 66 F (19 C). The lowest temperatures occur in the northern portion, where minima of -20 F (-29 C) to -25 F (-32 C) are not uncommon. In southern Iowa, comparable lows of -10 F (-23 C) to -15 F (-26 C) occur. In southeast Iowa, the January mean is 24 F (-4 C); in the northwest corner, it is 13 F (-11 C).

A gentle precipitation gradient exists generally from southeast to northwest, with an average of over 34 inches (86 cm) in the extreme

southeast and east to less than 26 inches (66 cm) in extreme northwest Iowa. The available moisture of eastern Iowa favors the growth of upland deciduous forest, an extension of the eastern deciduous woodland biome. These upland forests provide habitat for a variety of forest-dwelling birds that are missing in western Iowa. The dry conditions of western Iowa limit the distribution of trees, allowing mid- and tall-grass prairies to flourish and attracting some prairie birds associated with the dry western plains. The dry conditions reach their maximum in the loess hills of western Iowa. These hills, kept treeless in presettlement time by the hot, dry conditions and prairie fires, have become more forested in recent decades, resulting in a change in the avifauna.

There is considerable variation in the length of the growing season, from 135 days in northeast and northwest Iowa to 175 days in southeast Iowa, with a state average of 158 days.

The varying climatic conditions from north to south and east to west produce subtle but definite effects on Iowa's avifauna. Iowa is on the north-south or east-west edge of the range for a number of species, thus making the state an interesting location for bird study.

GEOLOGIC HISTORY

The current habitats in Iowa are a product of the state's geologic past and the current climatic conditions. An understanding of Iowa's geologic history should give a person interested in birds a better understanding of why various habitats and their associated avifauna occur where they do.

The geology of Iowa is described in easily understood terms in **Iowa's Natural Heritage** (Cooper 1982). The state's landforms are described in more detail in **A Regional Guide to Iowa Landforms** (Prior 1976). Both references are extensively illustrated and are recommended to anyone interested in understanding Iowa's geology.

Precambrian rock, formed on earth before life began, is found exposed only in the extreme northwest corner of Iowa at Gitchie Manitou State Preserve in the form of the Sioux Quartzite. Otherwise, these ancient rocks are covered by thick layers of younger sedimentary rocks (up to a mile thick in southwest Iowa), which were formed during the Paleozoic Era when early life forms flourished in seas covering Iowa. These seas waxed and waned during a span of millions of years, and the sediments deposited in them were compressed into shale, sandstone, limestone, and dolomite. These layers of sedimentary rock later became warped, so they now tilt from northeast to southwest. The result is that older sedimentary rocks are found in northeast Iowa, younger rocks in southwest Iowa. In the Mesozoic (middle life) and Cenozoic (modern life) eras, North America gradually separated from the other continents and shifted from a tropical to a temperate location. There is little geologic evidence of the Mesozoic and early Cenozoic eras in Iowa, periods when erosion rather than deposition was the dominant agent at work. Although dinosaurs roamed the earth in Mesozoic times, only questionable traces of their fossils have been found in Iowa. In the late Mesozoic Era, volcanic activity in the western states produced some wind-blown ash deposits in Iowa. However, the major events that shaped Iowa's present land surface occurred late in the Cenozoic Era, during a period known as the Pleistocene (Ice) Age.

Glaciers, moving over Iowa from the north, covered the old, eroded bedrock surface and deposited hundreds of feet of glacial debris composed mainly of clay, boulders, sand, and gravel. Four major glacial periods are recognized, although recent evidence suggests that there were even more. The first two glacial advances, the Nebraskan (beginning about 2,000,000

years ago) and the Kansan (spanning the period from 1,000,000 to 600,000 years ago), covered the entire state; a few signs remain in the northeast corner where Paleozoic Era sedimentary rock remains near the surface and dominates the topography. The third glacial advance, the Illinoian, extended only a short distance into southeast Iowa. The last glacial period, the Wisconsinan, brought a tongue-shaped ice mass into north central Iowa as far south as the present site of Des Moines, hence the name "Des Moines Lobe."

During the Wisconsinan period, winds blew fine particles, known as loess, from sediments in the Missouri River floodplain eastward to cover much of the state. The greatest deposits of loess are present along the east side of the Missouri River valley and compose Iowa's well-known loess hills. The deposits thin to the east and are missing in the parts of the Des Moines Lobe that were still covered by the receding glacier.

The glacial deposits on the Des Moines Lobe are quite recent (14,000 to 12,500 years old) and thus are poorly drained and contain most of the state's natural lakes and potholes. The remainder of the state's older glacial deposits were subject to stream erosion for many thousands of years, producing a series of valleys without natural lakes. Where the rivers eroded deeply, portions of bedrock were exposed, such as at Dolliver State Park, Ledges State Park, Woodman Hollow State Preserve, Red Rock Reservoir, Lacey-Keosauqua State Park, and along the Maquoketa River in Jackson County and Mississippi River in northeast Iowa. These valleys are well suited for the development of artificial lakes and reservoirs.

After the last glacier receded, Iowa was forested with conifers typical of the cool, moist northern latitudes. Later the climate became warmer and dryer, and prairies eventually replaced most of the woodlands except for deciduous forests in the eastern part of the state. Decay from prairie and forest produced Iowa's famous topsoil. The deep roots of the prairie grasses, mixed with weathered deposits of loess and glacial till, formed this thick layer of rich soil. In the latter half of the 1800s, the forest and prairie were transformed into farmland, beginning in the east.

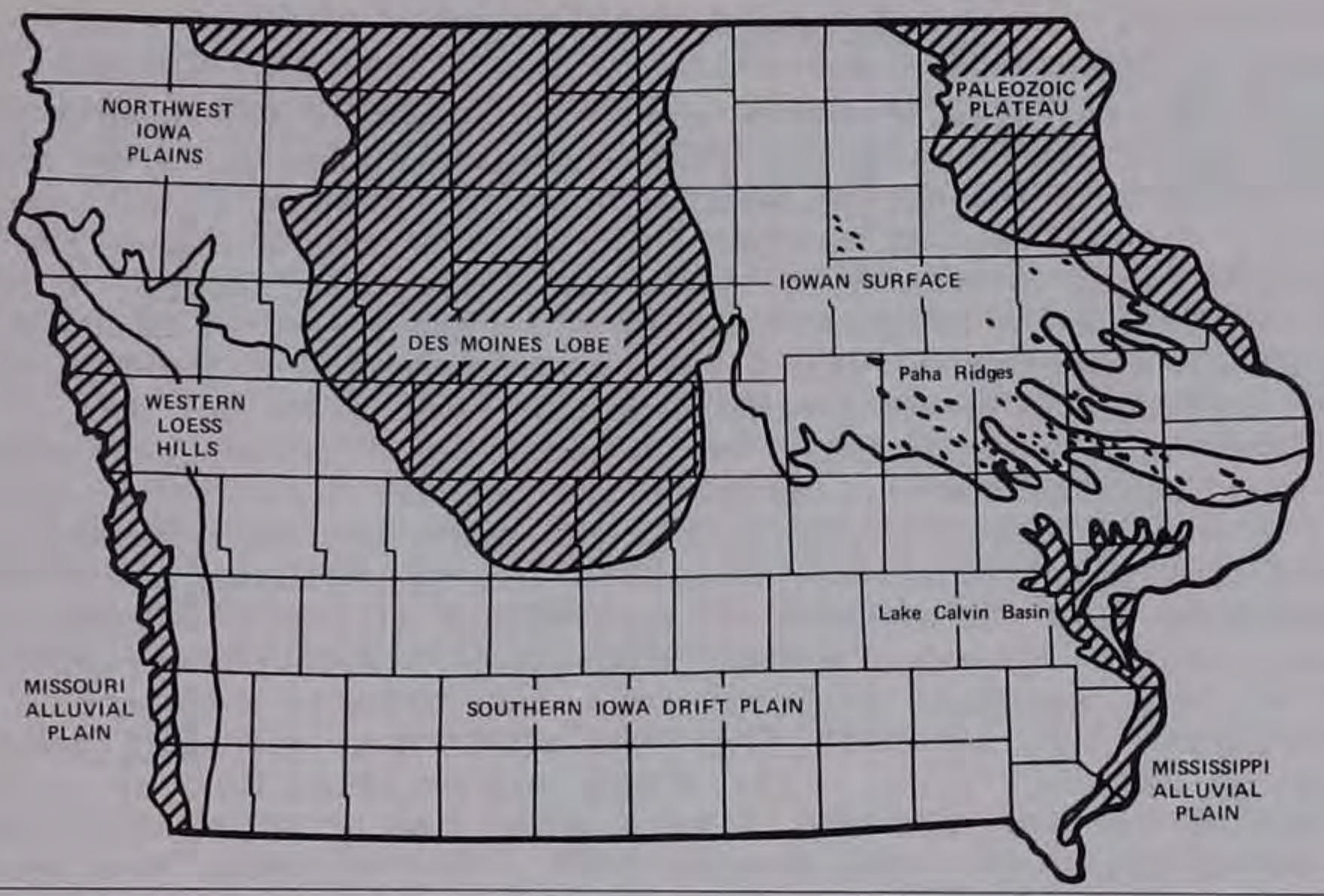
Currently, three-fourths of the land in Iowa is under cultivation. The lack of plant cover on these cultivated lands for much of the year exposes the soil to wind and water erosion, and the balance has shifted from a very slow buildup of topsoil beneath prairie to a rapid net loss of soil. Another recent change is the widespread use of various chemicals to increase crop production. These chemicals have the potential for contaminating Iowa's abundant surface water as well as the underlying groundwater supplies that permeate much of the porous sedimentary rock beneath the state.

NATURAL REGIONS

Iowa is divided into seven natural geologic regions, according to the distribution of bedrock, glacial deposits, loess deposits, and erosion by major rivers (Map 3.4). These regions, based on the work of Prior (1976), will be briefly described with a few comments on their relationship to bird distribution.

Paleozoic Plateau Region

The Paleozoic Plateau in northeast Iowa, the most scenic part of Iowa, is divided from the remainder of the state by the Niagaran, or Silurian, Escarpment. The rugged landscape with deep valleys and extensive woodlands provides some isolation for numerous bird species, including nesting Pileated Woodpecker, Ruffed Grouse, Turkey Vulture, Broad-winged



Map 3.4 Biogeographic regions of Iowa.

Hawk, Louisiana Waterthrush, Kentucky Warbler, Acadian Flycatcher, Ovenbird, and Veery. Golden Eagles have been found wintering in recent years. Much of the Paleozoic Plateau includes the Iowa portion of the Driftless Area, an approximately 15,000 square miles (38,900 square kilometers) of rugged terrain located mainly in Wisconsin, with lesser areas in Illinois, Minnesota, and Iowa. Here the bedrock controls the landscape, glacial influences are minimal, and extensive erosion has produced a varied landscape replete with caves, abundant rock outcrops, high bluffs, and deep valleys.

Iowan Surface Region

The Iowan Surface Region is situated between the young Des Moines Lobe on the west and the ancient Paleozoic Plateau on the east. This mature, rather homogeneous landscape with well-developed drainage systems is characterized by gently rolling topography, creating the "swell and swale" conformation. Boulders of Precambrian rocks, carried by glaciers from regions to the north and deposited in Iowa fields, are a prevalent feature, although they are steadily becoming scarcer. The southern portion of the Iowan Surface Region is characterized by somewhat steeper slopes and elongate, elliptical hills known as "paha." Paha are erosional remnants and have a distinct northwest to southeast orientation. They are covered by a cap of loess. The Wapsipinicon and Cedar rivers run nearly the full length of the Iowan Surface Region. Flooded backwaters provide habitat for wetland species such as Wood Ducks, while marshes in the uplands have typical marsh species.

Some of the species of this area include Turkey Vulture, Pileated Woodpecker, and Henslow's Sparrow. Swainson's Hawks have nested there in recent years, and there are also recent nesting records of the Northern Harrier, Short-eared Owl, and Common Snipe. Migrating waterfowl and hawks regularly follow some of the larger river valleys. Peregrine Falcons have been reported there more often than elsewhere in Iowa.

Des Moines Lobe Region

One of the youngest landform regions in Iowa is the tongue-shaped, approximately 12,000-square-mile (33,707-square-kilometer) area in north central Iowa left by the melting Wisconsin glacial ice some 13,000 years ago. This poorly drained region, marked with ridges of glacial debris (moraines) that include such prominent features as Ocheyedan Mound in Osceola County, Pilot Knob in Hancock County, and Pilot Mound in Boone County, is a southern extension of the prairie pothole region of the Dakotas and western Minnesota. Many glacial marshes and lakes dot the surface. Larger lakes include Spirit Lake, West Okoboji Lake, Storm Lake, and Clear Lake. The uplands contain some of the richest topsoil the world has known, originally covered by extensive tall-grass prairie. Because of the rich soil, this region is intensively farmed and has probably undergone the most alteration and disturbance of any region of Iowa. Though vastly diminished today, enough wetlands have been preserved to capture the feeling of the luxuriant diversity of presettlement landscape. These wetlands contain rich areas for waterfowl production, including habitat for many marsh-dwelling birds. The Yellow-headed Blackbird is a common nester on the prairie potholes, along with Pied-billed Grebe, American Coot, Marsh Wren, and Blue-winged Teal. Nesting Black and Forster's terns, Northern Pintail, Least Bittern, and Black-crowned Night-Heron are less common. Upland Sandpipers still nest on remnant prairie and Bobolinks are still common. The Gray Partridge is fairly common there and is expanding its range southward.

In the northeast part of the Des Moines Lobe is an area with glacial knobs partially or wholly surrounded by shallow marshes that contained the prairie fires and allowed scattered burr oaks to persist. These gentle ridges, dotted with large burr oaks under which tall-grass prairie species grew, formed an oak-savanna. The savanna, fairly widespread in Iowa, is especially noticeable in this area, particularly near Pilot Knob State Park. Isolated savannas occasionally provide suitable habitat for nesting raptors such as Red-tailed and Swainson's hawks, and the shallow potholes support a representative complex of marsh birds. At one time, large areas of sedge swales and aspen bogs existed. Most have been drained and farmed, but a few are still actively mined for peat.

In the central part of the Des Moines Lobe are prominent glacial moraines, which are dry and often gravelly. These are especially visible in southwest Wright County, southeast Franklin County, and portions of Boone County. Small depressions ("kettleholes"), as well as potholes and marshes, result from the relatively recent glacial activity. This area contains more woodlands than are found farther north, and some species normally found in eastern or southern Iowa have outlying populations here, especially along the Des Moines River valley. These species include Turkey Vulture, Broad-winged Hawk, Veery, Brown Creeper, Louisiana Waterthrush, Blue-winged Warbler, Cerulean Warbler, and Acadian Flycatcher.

Nesting waterfowl and other marsh birds have been extensively studied on the Des Moines Lobe, especially in the area around Ruthven in Clay and Palo Alto counties, by students and faculty from Iowa State University.

Southern Iowa Drift Plain Region

The southern half of Iowa was last covered by Kansan-age glaciation some 600,000 years ago. Prior to settlement, this part of Iowa was heavily wooded and today still contains a significant portion of the state's forest

cover. The forest cover thins as one moves west across the region. The eroded, well-drained character of the landscape is shown by the absence of marshes and moraines and the steeply rolling topography. There are few flat uplands, and the principal flat-lying terrain occurs along the river valleys. The loess, deep in the far western edge, thins gradually as one travels east, and the hills become more undulating.

In the grasslands of this region, the Eastern Meadowlark and Dickcissel reach their greatest densities in Iowa. This area also contained the last booming grounds of the Greater Prairie-Chicken in Iowa. Where the land is more broken or shrubby, Lark Sparrow, Loggerhead Shrike, Northern Mockingbird, and Yellow-breasted Chat may be found. Wooded areas may support Chuck-will's-widow, Cerulean Warbler, Summer Tanager, Blue-gray Gnatcatcher, Cooper's Hawk, and an occasional Long-eared Owl. The introduced Wild Turkey has its most extensive populations in the central and eastern portions of this region. In extreme southeast Iowa are found the Yellow-throated Warbler and Northern Parula.

Western Loess Hills Region

In western Iowa, a relatively narrow tract of hills formed of wind-deposited loess parallels the floodplain of the Missouri River. These spectacular hills--steep, westfacing, and dry--are a unique feature of Iowa's landscape. Kept nearly treeless in the past by intermittent prairie fires and extreme climate, many are now heavily forested. Because of the steepness of their slopes, many of these areas have not been farmed although grazing has often occurred. Wildfires are now controlled, and some of the grasslands are being invaded by trees. Although not rich in birdlife, the Chuck-will's-widow has been discovered there in increasing numbers in recent years. The loess hills are also one of the better areas for wintering raptors in Iowa.

Northwest Iowa Plains Region

The Northwest Iowa Plains Region is a largely treeless, gently rolling area of northwest Iowa. Once tall-grass prairie, it has been largely converted to agriculture and only small prairie remnants remain. Drainage is better developed there than in the Wisconsinan region to the east, and thus it lacks most of the prairie marshes of that region. This region has the lowest annual temperature, greatest altitude, and lowest annual precipitation in Iowa. In overall character, the landscape resembles the Iowan Surface Region.

Typical birds of this region include prairie species such as Western Meadowlark and Bobolink. Blue Grosbeak and small numbers of Say's Phoebe nest in the western parts of the region. This area has been frequented by several western species, including Prairie Falcon, Burrowing Owl, Black-billed Magpie, and Lark Bunting.

Alluvial Plains Regions

The importance of the alluvial regions along Iowa's major rivers is now vastly diminished, compared with presettlement Iowa. The floodplain forests of this region are greatly reduced in area, and the remainder has been significantly altered. It has served for centuries as a major migration pathway for birds.

Along the Mississippi River, the alluvial plain is composed of scattered tracts of forests and flooded backwaters and marshes. Typical bird species

include Wood Duck, Prothonotary Warbler, and Barred Owl. These forests also provide nesting habitat for several unusual birds, such as Brown Creeper, Yellow-bellied Sapsucker, Yellow-crowned Night-Heron, and Red-shouldered Hawk. Several Great Blue Heron and Great Egret heronries are located in this section, and Bald Eagles roost there in winter. A section of the Mississippi Alluvial Plain extends along the Iowa and Cedar rivers in the area of prehistoric Lake Calvin, a glacial-age lake once thought to have formed, in part, when the Illinoian glacial advance blocked the lower Mississippi River; more recent evidence suggests possible formation at a later time.

The floodplain of the Missouri River, as much as 12 miles (19 km) wide in places, has nearly all been converted to farmland. Old oxbows, reminders of the free-flowing river, are prominent features. This region provides a major migration pathway for waterfowl, especially Snow Geese. Typical nesting species include Western Kingbird, Blue Grosbeak, and, in the south, Bell's Vireo. Least Tern and Piping Plover formerly nested on sandbars in the river before it was channelized.

CHAPTER FOUR

Breeding and Endangered Species

BREEDING SPECIES

There is definite evidence of nesting for 188 species in Iowa and inferred evidence for 4 additional species.

The first summary of Iowa nesting birds was compiled by DuMont (1934), who listed 141 species (plus 3 subspecies) that had nested in Iowa between 1917 and 1934. In addition, he listed 15 species (Common Loon, Trumpeter Swan, American Swallow-tailed Kite, Bald Eagle, Osprey, Peregrine Falcon, Wild Turkey, Whooping Crane, Long-billed Curlew, Willet, Marbled Godwit, American Avocet, Passenger Pigeon, Hooded Warbler, and Summer Tanager) as extirpated as breeding birds in Iowa by 1907. He listed another 12 species (Swainson's Hawk, Merlin, Brown Creeper, Rock Wren, Veery, White-eyed Vireo, Black-and-white Warbler, Worm-eating Warbler, Golden-winged Warbler, Chestnut-sided Warbler, Kentucky Warbler, and Henslow's Sparrow) that had formerly nested but for which he had no recent nesting records. He failed to mention the Sandhill Crane and Purple Finch, for which there were old nesting records (Anderson 1907). The nesting records for 4 species that he listed (Osprey, Willet, American Avocet, and Henslow's Sparrow) have not been accepted by the current Iowa Ornithologists' Union Records Committee (Kent et al. 1982) and the Purple Finch nesting record is not well substantiated, leaving a total of 165 species for which there were known nesting records by 1934. DuMont (1935c) soon added nesting records for 4 more species (Double-crested Cormorant, Lesser Scaup, Hooded Merganser, and Sharp-tailed Grouse), plus noting that the Swainson's Hawk was reestablished in Iowa; the Sharp-tailed Grouse nesting record has not been accepted by the current Records Committee (Kent et al. 1982). This raised the total of known nesting species in Iowa to 168.

The next analysis of Iowa nesting birds listed 193 species (Dinsmore 1981), 149 of which were considered regular nesters, 27 occasional nesters, and 17 extirpated nesters in Iowa. This list included 3 species (Carolina Parakeet, Sharp-tailed Grouse, and American Avocet) whose nesting records have not been accepted by the Records Committee (Kent et al. 1982), 2 species (Alder Flycatcher and Henslow's Sparrow) that both probably nest in Iowa but for which there is no unequivocal evidence of nesting in the state, and 1 (Northern Parula) for which the Records Committee considers there is only inferred evidence of nesting in Iowa. One additional species (Western Grebe) has been added to the state list of nesting species since 1981 and Red Crossbill has been added to inferred nesting status. This leaves the known list of breeding species in Iowa at 188 plus 4 (American White Pelican, Northern Parula, Prairie Warbler, and Red Crossbill) for which there is inferred evidence of nesting in Iowa.

Since DuMont (1935c), the following 19 species have been added to the Iowa list of nesting species in the years indicated:

Canvasback 1934
Black-billed Magpie 1937
Gadwall 1939
Piping Plover 1940
Franklin's Gull 1940
Great Egret 1942
Yellow-crowned Night-Heron 1956
Red-breasted Nuthatch 1958
Ring-necked Duck 1960
Say's Phoebe 1960
American Wigeon 1961
Bufflehead 1962
Blue Grosbeak 1964
Green-winged Teal 1965
Chuck-will's-widow 1970
Scissor-tailed Flycatcher 1979
Winter Wren 1979
Western Grebe 1981
Yellow-throated Warbler 1981

However, not all of the above have established nesting populations in Iowa. Six (Black-billed Magpie, Franklin's Gull, Red-breasted Nuthatch, American Wigeon, Bufflehead, and Scissor-tailed Flycatcher) all were nesting outside their normal nesting range and probably will nest again in Iowa only rarely if at all. The other 4 ducks (Canvasback, Gadwall, Ring-necked Duck, and Green-winged Teal), Winter Wren, and Say's Phoebe probably have nested in Iowa in recent years but only in small numbers. Since the Piping Plover was first found nesting in 1940, its numbers have declined and there are no nesting records since 1973. There has not been enough time to evaluate the future of the 2 most recent additions in Iowa; but the Yellow-throated Warbler probably nests along the Des Moines and Mississippi rivers and in southeast Iowa, while the Western Grebe may have been responding only to suitable marsh conditions in 1981. The grebe range, however, has been expanding southward in Minnesota, and it may become established in Iowa. This means that only 4 of the 19 (Great Egret, Yellow-crowned Night-Heron, Chuck-will's-widow, and Blue Grosbeak) seemingly have established breeding populations in Iowa, although all 4 still have restricted distributions in the state.

On a positive note, 7 of the species that DuMont (1934) listed as extirpated or with no recent nesting records have nested in Iowa in recent years (Bald Eagle, Wild Turkey, Summer Tanager, Swainson's Hawk, Brown Creeper, Veery, and Kentucky Warbler), and all except the eagle are fairly widely distributed over suitable Iowa habitat.

Against this gain in breeding species, at least 4 other species (Greater Prairie-Chicken, Double-crested Cormorant, Peregrine Falcon, and Least Tern), in addition to the Piping Plover, have been lost as nesting species since the mid-1930s.

It must be kept in mind that the avifauna of any area is dynamic. Species whose nesting range barely extends into Iowa (e.g., Say's Phoebe, Yellow-bellied Sapsucker) could easily disappear for a few years only to reappear in the future. What is of most concern is the permanent loss of peripheral species and the steady decline in numbers and eventual loss of widely distributed species (e.g., Greater Prairie-Chicken, Short-eared Owl). There are several other species that have shown such declines and may be lost from Iowa in the near future (e.g., Sharp-shinned Hawk, Cooper's Hawk, Red-shouldered Hawk, Upland Sandpiper, King Rail, Common Barn-Owl).

There also are several species that might be added to Iowa's nesting avifauna. The Henslow's Sparrow almost certainly nests and the Alder Flycatcher may nest in Iowa, but both need to have their nesting in the state documented. The American White Pelican and Brewer's Blackbird nest in southern Minnesota and could easily extend their nesting range south

into Iowa. Likewise, the Lark Bunting has been reported a number of times in northwest Iowa and may nest there. In eastern Iowa, range expansions by the Eurasian Tree Sparrow could easily take it into Iowa in the next decade. A colony of Double-crested Cormorants in Illinois just across the Iowa border south of Clinton has grown rapidly in recent years and could expand into Iowa. Five southern wading birds (Little Blue Heron, Snowy Egret, Cattle Egret, Tricolored Heron, and White-faced Ibis) have nested in several of the states adjacent to Iowa and could conceivably nest in Iowa in the near future. Two introduced species that are not yet placed on the Iowa list have nested in Iowa (Chukar and Ringed Turtle-Dove).

ENDANGERED SPECIES

Because of increasing public concern about the decline in breeding populations of some species in the past decade, several types of endangered species lists have been prepared. These lists have had varying relevance to Iowa's avifauna.

The federal list of "Endangered and Threatened Wildlife" (Anon. 1979) includes 5 bird species on the Iowa list, only 1 of which, the Bald Eagle, nests in Iowa. One of these 5 has been extirpated from Iowa (Eskimo Curlew) and 2 are accidental (Brown Pelican and Whooping Crane), although the Whooping Crane formerly nested in Iowa. Of the 2 regular species, the Bald Eagle has made a good recovery and is now a rare nester and common in winter in Iowa, while the Peregrine Falcon remains rare with a few sightings each year.

Since 1971, the National Audubon Society has published a Blue List of North American species that, in addition to the birds on the federal endangered species list, are of special concern because they might become endangered. The 1982 Blue List (Tate and Tate 1982) contains 30 species, of which 23 are regular, 2 casual, and 1 extirpated in Iowa. The other 4 have not occurred in Iowa. Of the 23 regular species on the current Blue List, 7 (Red-shouldered Hawk, Short-eared Owl, Willow Flycatcher, Eastern Bluebird, Loggerhead Shrike, Eastern Meadowlark, and Dickcissel) have clearly declined as nesters in Iowa since 1960; 7 (Least Bittern, American Bittern, Sharp-shinned Hawk, Northern Harrier, Upland Sandpiper, Ruby-throated Hummingbird, and Grasshoppper Sparrow) probably have declined but the evidence is not conclusive; 6 (Swainson's Hawk, Black Tern, Hairy Woodpecker, Bell's Vireo, Golden-winged Warbler, and Yellow Warbler) show little evidence of recent decline in Iowa; 2 (Piping Plover and Least Tern) are marginal species that no longer nest in Iowa; and 1 (Western Grebe) is a marginal species that nested for the first time in Iowa in 1981. Of the casual species, both (King Rail and Bewick's Wren) were formerly regular in Iowa and have decreased in numbers in recent years. The extirpated species (Long-billed Curlew) nested in Iowa many years ago.

The 1982 Blue List also contains species of special concern for which the evidence of continental decline is inconclusive. Of these, the following are most worthy of concern in Iowa: Black-crowned Night-Heron, Cooper's Hawk, American Kestrel, Common Barn-Owl, Eastern Phoebe, Purple Martin, and Henslow's Sparrow.

In 1975, the Iowa legislature passed a state endangered species act covering species that breed in Iowa. In 1977, the Iowa Conservation Commission adopted a list of plants and animals that would be given special status under this act, including 31 bird species in five categories (Roosa 1977a): (1) extinct (Passenger Pigeon and Carolina Parakeet), (2)

extirpated as nesters (Trumpeter Swan, American Swallow-tailed Kite, Sharp-shinned Hawk, Bald Eagle, Greater Prairie-Chicken, Sharp-tailed Grouse, Whooping Crane, Sandhill Crane, Long-billed Curlew, Eskimo Curlew, and Short-eared Owl), (3) endangered as nesters (Red-shouldered Hawk, Northern Harrier, Peregrine Falcon, Piping Plover, Upland Sandpiper, Least Tern, Common Barn-Owl, and Burrowing Owl), (4) threatened as nesters (Eared Grebe, Cooper's Hawk, Broad-winged Hawk, Long-eared Owl, Say's Phoebe, Loggerhead Shrike, and Blue-winged Warbler), and (5) status undetermined but may be threatened (Black-billed Cuckoo, Bell's Vireo, and Yellow Warbler). There is no definite evidence of nesting for Sharp-tailed Grouse in Iowa, although it is likely. The Eskimo Curlew is an arctic breeder, so it was very improbable as a nester in Iowa. Recent Bald Eagle and Short-eared Owl nestings move these species from extirpated to endangered. Peregrine Falcon and probably Piping Plover and Least Tern should be moved from endangered nesters to extirpated nesters.

The Blue List and the federal and state lists of endangered and threatened species indicate species of most concern, but data are needed on all species to identify future population trends.

CHAPTER FIVE

History of Iowa Ornithology

CHRONOLOGICAL HISTORY

The eastern edge of Iowa was first explored by Marquette and Joliet in 1673; exploration of the western edge began with the Lewis and Clark expedition in 1804.

The first list of Iowa birds comes from the S. H. Long expedition, which stopped at Engineer Cantonment on the west bank of the Missouri River opposite Pottawattamie County, Iowa, and north of the present city of Omaha from 19 September 1819 to 6 June 1820. The biologist on this expedition was Thomas Say, later a famous entomologist. Say's list of species seen in the vicinity of Engineer Cantonment was published with the account of the expedition (James 1823; Thwaites 1905), but it is not clear which ones on the list were seen in Iowa rather than Nebraska. All of the rarer species he saw are mentioned in the species accounts in this book. Say collected the first known Long-billed Dowitcher at Boyer River, which enters the Missouri River in northwest Pottawattamie County. He listed several species that are now extinct (Passenger Pigeon and Carolina Parakeet), extirpated (American Swallow-tailed Kite, Mississippi Kite, Sharp-tailed Grouse, and Long-billed Curlew), or accidental (Common Raven, Greater Prairie-Chicken, and Whooping Crane). He also reported Northern Hawk-Owl, Brown Pelican, Laughing Gull, and Gull-billed Tern, which seem unlikely even for that day.

During the next 47 years there were no published contributions to Iowa ornithology except for brief notes left by two famous naturalists traveling the Missouri River on the state's western border. Maximillian, Prince of Wied, a German traveler and explorer, described his trip up the Missouri past Iowa in early May 1834 and his return in mid-May 1835 (Thwaites 1906a, 1906b). He was mostly interested in the Indians and only mentioned birds in passing. The only species mentioned that was later to be extirpated was Wild Turkey.

In the twilight of his career, John James Audubon made an expedition up and down the Missouri, passing Iowa in mid-May and early October 1843. He was accompanied by Edward Harris, a patron of scientific men, for whom Audubon named the Harris' Sparrow and Harris' Hawk; by Isaac Sprague, an artist interested in birds, for whom Audubon named the pipit they discovered in North Dakota; and by John Bell, a naturalist-taxidermist, for whom Audubon named Bell's Vireo. Audubon left a detailed log of this trip, which was published by his granddaughter with annotations by Elliot Coues (Audubon and Coues 1897; Petersen 1971a, 1971b). Audubon gave the most definitive account of the Carolina Parakeet in Iowa, noting that this species was plentiful at least as far north as the area of Council Bluffs. Other birds of significance noted by Audubon were American Swallow-tailed Kite, Wild Turkey, Sandhill Crane, Pileated Woodpecker (near the present site of Sioux City), Common Raven, and Lark Bunting.

Three eastern ornithologists, J. A. Allen, T. Martin Trippe, and John Krider, made early surveys of bird life in Iowa. Allen, who later founded the American Ornithologists' Union (A.O.U.), edited the **Auk**, and was curator of birds and mammals at the American Museum of Natural History, visited Iowa from July to September 1867 when he was about 29 years old. He traveled in Boone, Crawford, Sac, Greene, Dallas, Guthrie, Audubon, and Carroll counties, where he listed 108 species (Allen 1868). American Swallow-tailed Kite, Greater Prairie-Chicken, Ruffed Grouse, and Long-billed Curlew were common, and he saw Wild Turkey and Sandhill Cranes in small numbers but was told that the cranes were common in migration. During his trip he was helped by C. A. White, the director of the Iowa State Geological Survey, and was asked by White to develop a list of state birds for Iowa to be published as an appendix of White's Geology of Iowa (Allen 1870). Allen does not state how he developed this first state list of 283 Iowa species, except for noting the ones he had seen on his trip to Iowa. Many of the birds on the list must have been "hypothetical" in the sense of being postulated to occur, as there were very few sources of data on Iowa birds at the time. The unusual species listed by Allen but not seen by him are mentioned in the species accounts of this book but are not considered to have been definitely seen in Iowa on the basis of Allen's list. All the species on Allen's list were later reported in Iowa, but some have not been accepted to the "Official Checklist of Iowa Birds: 1982 Edition" (Kent et al. 1982).

T. M. Trippe, a New Yorker in his early twenties, spent 2 years (years not given) in Mahaska and Decatur counties (Trippe 1873). He listed 162 species, of which he thought 92 were breeding. Greater Prairie-Chickens were abundant, and he saw Long-billed Curlews in Decatur County. He listed secondhand reports of Great Gray Owl and Carolina Parakeet. His Rock Wren report, later published separately, is considered dubious by the current Records Committee.

John Krider was a collector from Philadelphia who spent time in Hancock County and wrote a book on birds he saw in Iowa and the East (Krider 1879). His data were sketchy, and his records cannot be considered as accurate as those of Allen and Trippe.

The first report from a local birder appears to be that of Parker (1871) from Poweshiek and Jasper counties, who added 54 species to Allen's 1868 list of 108 species. These were collected, and most were "preserved in the cabinet of Iowa College, Grinnell." Passenger Pigeon and Whooping Crane were included.

In the winter of 1881-1882, Wells W. Cooke attempted to secure the assistance of Iowa ornithologists to study bird migration (Cooke 1888, p. 9). However, Cooke moved from Iowa and enlarged his study to cover the whole Mississippi valley. In 1882 he received reports from 13 observers, with 2 from Iowa, and in 1883 there were 26 observers, with 4 from Iowa. In the fall of 1883, at the first meeting of the A.O.U., a committee was appointed on the "migration of birds" to cooperate with Cooke and the area of reporting was enlarged to include the United States and Canada. In the spring of 1884 there were 27 Iowa observers reporting from 18 locations, and in the spring of 1885 there were reports from 19 locations with 15 new observers listed. Some of those observers who contributed much to the rapid development of ornithology in Iowa included William Praeger of Keokuk, C. R. Keyes of Des Moines and Iowa City, Lynds Jones of Grinnell, H. Osborn of Ames, C. F. Henning of Boone, and G. D. and Morton Peck of La Porte City. Following the publication of the **Report on**

Bird Migration in the Mississippi Valley in the Years 1884 and 1885 (Cooke 1888), the literature on Iowa ornithology developed rapidly.

Keyes and Williams (1889) published an annotated list of 262 species, most of which were based on specimens taken by the authors near Charles City, Des Moines, and Iowa City. This list is quite solid and can be considered the first authentic list of the birds of the state. Only a few species listed on the basis of secondhand information are questionable. Osborn (1892) published a condensed version of the Keyes and Williams list.

In the early developmental period of Iowa ornithology, the 1880s and 1890s, transportation was limited, so bird observations focused on the major geographic and governmental unit, the county. It is not surprising that a series of county lists were published over the 50-year period from 1881 to 1931. Pierce (1933a) described many of these early lists. Table 5.1 lists the significant county/regional lists that have been published.

Table 5.1 **References to County Bird Lists**

Year	County	Author	No. of Species
1881	Fremont	Anon. (Todd)	275
1883	Johnson	Anon. (Shimek)	190
1889	Jasper/Poweshiek	Jones	186
1890	Buena Vista	Crone	52 (summer)
1891	Poweshiek	Kelsey	200
1896a	Franklin	Shoemaker	150
1897	Allamakee/Winneshiek	Bartsch	98/96 (summer)
1897	Winnebago/Hancock	Anderson	216
1900	Boone	Henning	25 (incomplete)
1906	Scott	Wilson	166
1909	Polk	Fagan	101
1913	Cass	Pellet	53 (summer)
1914	Clay	Gabrielson	50 (summer)
1914	Clay/Palo Alto	Tinker	86 (summer)
1916	Floyd	Fenton	90
1917a	Clay/O'Brien	Gabrielson	136
1917	Sac	Spurrell	232 (3 papers)
1919	Sac (continued)	Spurrell	
1921	Sac (continued)	Spurrell	
1918	Marshall	Gabrielson	201 (2 papers)
1919	Marshall (continued)	Gabrielson	
1920	Story	Cole	85
1921	Buchanan	Pierce	97
1922	Story	Paulson	46 (summer)
1923-24	Floyd	Fenton	230
1924	Wapello	Spiker	142
1926	Keokuk	Nauman	46 (summer)
1930	Buchanan	Pierce	215
1931	Polk	DuMont	289
1931	Woodbury	Bennett	292
1959	Scott	Hodges	206
1973	Black Hawk	Schlicht	127

The late 1880s and early 1890s was a period of formation of ornithological organizations and publications. Burns (1915) described the early ornithological journals, and Pierce (1933b) outlined those that related to Iowa. **The Hawkeye Ornithologist and Oologist**, published in Cresco by E. B. Webster and F. D. Mead, ran nine issues in 1888-1889 until the printing office was destroyed by fire. Several natural history journals with occasional bird articles flourished briefly: **The Young Collector** (continued as **The Collector**), published in Des Moines by Charles and James Keyes in 1881-1882; **The Hawkeye Observer**, published in Davenport by E. K. Putnam and Gus Finger in 1885-1886; **The Agassiz Record**, published in Oskaloosa by Frank E. Wetherill in 1888; **The Ornithologist and Botanist**, published in Des Moines by Letson Balliet and William S. Sandford in 1891-1892; **The Naturalist**, published in Des Moines by Letson Balliet in 1893; **The American Magazine of Natural Science**, published in Sac City by Fred R. Stevens from 1892 to 1894; **The Iowa Naturalist**, published in Iowa City by T. J. Fitzpatrick from 1905 to 1911; and **The Curio Collector** and **The Curio Bulletin**, published in Osage by F. May Tuttle from 1910 to 1912.

On 15 June 1894 the Iowa Ornithological Association, Iowa's first state bird organization, was formed and with it came a substantial journal, **The Iowa Ornithologist.** The organization lasted for 5 years, with a peak membership of 89 in 1898. The journal was edited by David L. Savage through its 15 issues. Pierce (1933b) speculated that the demise of the organization and the journal were due to the war of 1898, loss of members to other fields, and financial matters. Many early records and much of the early history of Iowa ornithology can be found in the journal pages. **The Western Ornithologist**, published by C. C. Tryon of Avoca, attempted to continue the efforts of **The Iowa Ornithologist** in 1900, but lasted for only three issues. **The Western Ornithologist** was quickly succeeded by **The Bittern**, published by Glen M. Hawthorn of Cedar Rapids, but this journal was also short lived, only four issues in 1900-1901.

From 1901 to 1924 there was no periodical specific to Iowa ornithology. Rudolph M. Anderson collected lists and notes from observers in 34 counties and combined these with all published accounts for his doctoral dissertation, "The Birds of Iowa," which was published in the **Proceedings of the Davenport Academy of Sciences** (Anderson 1907) and represents the first "book" on Iowa birds. Anderson's account of 353 species and 24 hypothetical species is a masterpiece for its completeness and accuracy of citations. Anderson was aided by the master's degree thesis of Paul Bartsch (1899), "The Literature of Iowa Birds," which listed all publications relevant to Iowa ornithology from 1804 to 1899 and cited the references in which each species was mentioned. Anderson, unlike his successor DuMont, made little attempt to evaluate the accuracy of some of the reports he received.

In 1906, Bert Heald Bailey published **200 Wild Birds of Iowa: A Handbook for Use in Schools and as a Guide in Identification for All Who Desire to Become Acquainted with Our Common Birds.** At the end of the book, Bailey listed 300 species, giving data on frequency and season supplied by contributors from 10 locations. Earliest and average migration dates were compiled by high school classes from Cedar Rapids in 1902 to 1905. In a second edition (Bailey 1910) a complete list of 352 species for the state was appended. B. H. Bailey graduated from Rush Medical College in 1900 at age 25. Because a heart condition prevented his becoming a medical missionary, he accepted a position as chairman of zoology and curator of the museum at Coe College in Cedar Rapids until his death 17 years later. He was just completing a doctoral dissertation, **The Raptorial Birds of Iowa** (Bailey 1918), when he died.

Another physician who did not practice medicine, Thomas C. Stephens, was a prominent leader in Iowa ornithology for many years. Stephens became a professor of biology at Morningside College in Sioux City in 1906 and contributed to ornithology until his death in 1948. Stephens was president of the Wilson Ornithological Club in 1914 and editor of the **Wilson Bulletin** from 1925 to 1939. He carried on the work of Bartsch, which was published after his death as **An Annotated Bibliography of Iowa Ornithology** (Stephens 1957), covering the years 1898 to 1947.

Ira N. Gabrielson graduated from Morningside College in 1912 and did graduate work at the Lakeside Laboratory of the University of Iowa at Lake Okoboji in the summers of 1911 and 1913. After teaching biology at Marshalltown High School for 3 years, he entered the service of the federal government, where he carried out many ornithological studies in the West and later became the first director of the Fish and Wildlife Service. While in Iowa, Gabrielson produced nesting studies of several species and lists for three counties.

During the period 1900 to 1930, many Iowa ornithological contributions appeared in the **Wilson Bulletin, Auk,** and **Proceedings of the Iowa Academy of Sciences.** These took the form of reports on interesting observations, county lists, and several seasonal compilations. Winter season reports from the upper Missouri valley were published for the years 1916 to 1930 and 1938 to 1941 (Stephens 1917, 1918, 1920, 1930; Spiker 1926; Youngworth 1931; Laffoon 1941).

At a meeting of the Iowa Conservation Association in Ames on 28 February 1923, T. C. Stephens chaired a meeting that resulted in the formation of the Iowa Ornithologists' Union (Rosene 1932). The first three annual meetings were held in February/March, but subsequent meetings were switched to May in order to include a spring field trip. As well as Stephens, Walter Rosene, president for the first 3 years, and A. J. Palas, president for the next 3 years, were important leaders in the new organization. During the first 7 years of the I.O.U., a series of 24 mimeographed letters were circulated at irregular intervals (Pierce 1936). In 1929 and 1930 the letters became **The Bulletin**, edited by F. L. R. Roberts. In 1931 **Iowa Bird Life** was started as the quarterly publication of the I.O.U. The journal, edited by Fred J. Pierce from 1931 to 1960 and since then by Peter C. Petersen, rapidly became the repository for information on Iowa birds. Until 1961 most of the reports were in the form of short notes and articles except for publication of the Christmas Bird Count starting in 1937 and spring counts from 1943 through 1948. In 1961, reports submitted by various observers were compiled into General Notes Reports, which became Field Reports in 1963 (compiled by Woodward H. Brown from 1961 to 1976, by Nicholas S. Halmi from 1976 to 1979, and by Thomas H. Kent since 1979).

Although the inception of **Iowa Bird Life** in 1931 marked the beginning of the modern era of Iowa ornithology, the reports in the period from Anderson's publication in 1907 to 1933 were incorporated in another landmark publication, **A Revised List of the Birds of Iowa**, by Philip A. DuMont (1933). DuMont was a very active field observer from Des Moines who examined most of the specimens in the state in the process of compiling the second major book on Iowa birds. It is interesting that both Anderson and DuMont compiled county lists, Anderson (1897) in Hancock County and DuMont (1931) in Polk County, prior to undertaking thesis work at the University of Iowa on the state's birds.

Woodward H. Brown (1971) provided a major summary of Iowa bird records, updating the work of DuMont.

Several other books on Iowa birds besides those already mentioned

(Anderson 1907; Bailey 1906, 1910, 1918; DuMont 1933; Stephens 1957) include the following: **How to Know the Wild Birds of Iowa and Nebraska**, by Dietrich Lange (1906), is an identification guide, apparently for schoolchildren, and contains little specific information on Iowa bird distribution and frequency. **Bird Notes from the Journal of a Nature Lover**, by William G. Ross (1938), is the posthumous diary of a lawyer who birded with his family from his home in Fairfield, mostly between 1898 and 1910. Ross gave lucid glimpses of bird life at that time. Interestingly, there is no hint of contact with other birders. **Birds of an Iowa Dooryard**, by Althea R. Sherman (1952), is another posthumous collection of bird studies carried out at a single location, National, in Clayton County. Sherman is most noted for her pioneering studies of the nesting of Chimney Swifts in an especially constructed tower, but she also described in detail other birds she observed in the area over many years. **Birding in Eastern Iowa**, by Frederick W. and Thomas H. Kent (1975), details yearly and seasonal distribution of birds seen in eastern Iowa by the authors over a period of 25 years and displays some of their photographs. **Birds of Iowa**, by Gladys Black (1979), is a collection of popular accounts of some Iowa birds previously published in the **Des Moines Register**. **Waterfowl in Iowa**, by Jack W. and Mary R. Musgrove (1977), was first published in 1943, the fifth edition appearing in 1977. The Musgroves covered Iowa's waterfowl in detail, including identification, distribution, frequency, and specific Iowa records. Two Iowa books covered the biology of single species: **The Blue-winged Teal, Its Ecology and Management**, by Logan J. Bennett (1938a), and **The Ring-necked Pheasant in Iowa**, by Allen L. Farris, Eugene D. Klonglan, and Richard C. Nomsen (1977). The only book on birding localities, **Birding Areas of Iowa**, edited by Peter C. Petersen (1979a), is a compilation of articles by various authors that appeared in **Iowa Bird Life**.

SURVEYS

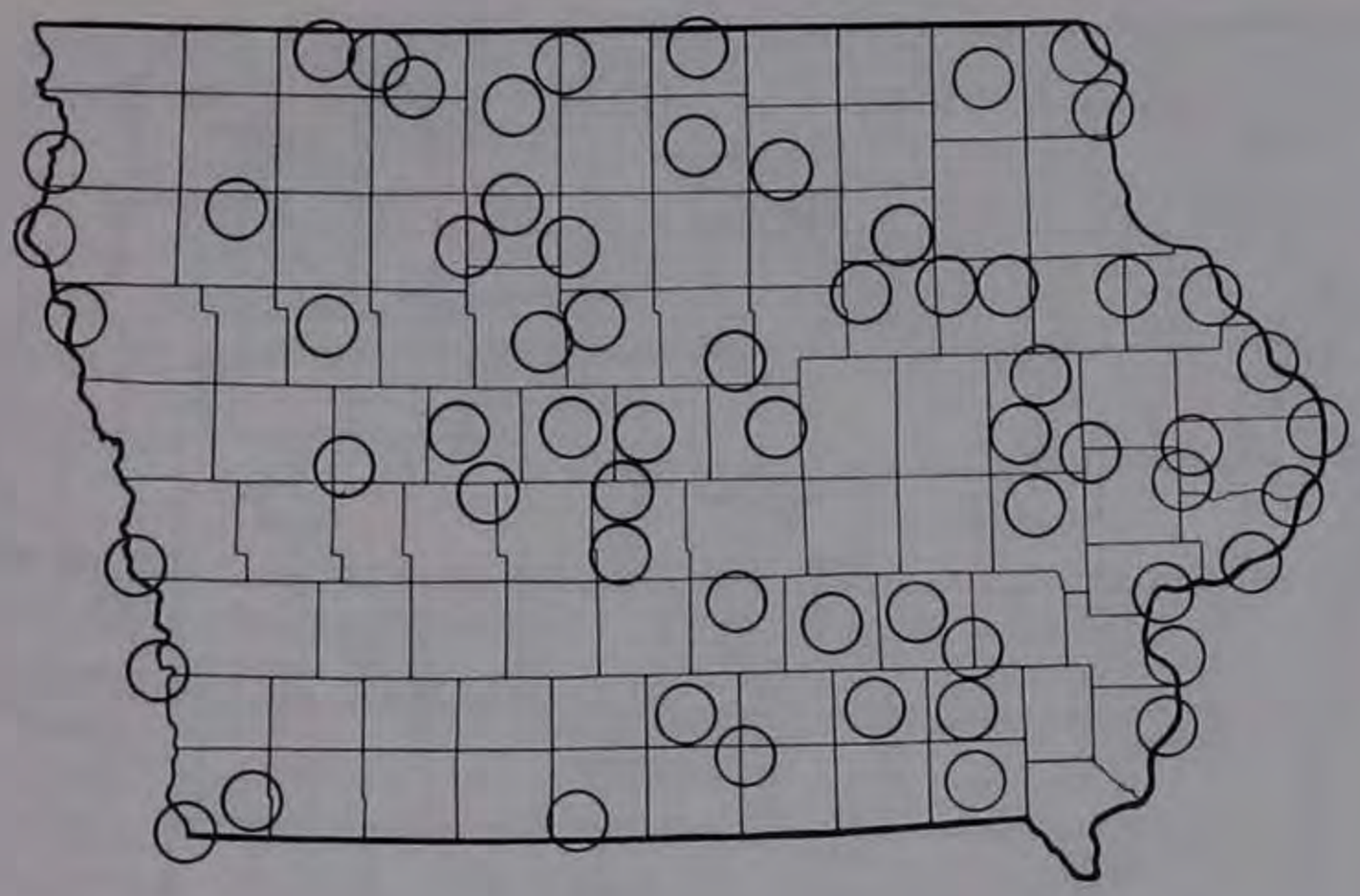
Christmas Bird Count

The first Christmas Bird Count (CBC), conducted on Christmas day 1900 to counteract the traditional Christmas hunt, involved 27 individuals from 25 localities, mostly in the northeastern United States. It grew rapidly and now involves 1,350 localities and 34,000 individuals in North America. Sponsored by the National Audubon Society, the CBC now has as its main purpose the monitoring of early winter bird populations.

Over the years, the conduct of the count has been standardized to achieve accuracy and comparability of data. Each count covers 1 calender day during the official 15- to 18-day period in late December and early January. Counts are at least 8 hours long and are conducted within the 15-mile-diameter count circle. CBC results are published in **American Birds**, and those within or including a portion of Iowa are published in **Iowa Bird Life**.

An objective of the count is to find as many species as possible and to estimate or count the numbers of each in the count area. Conditions that may affect the count, including weather, habitat coverage, number of observers and parties of observers, and number of party hours and miles involved in various modes of travel, are also recorded.

The first CBC in Iowa was at Decorah in 1903. One or more counts have been made in the state since 1906. During the period 1960 to 1981, 655 counts were taken at 63 locations (Map 5.1). Only 11 of 63 locations reported a count every year during the period (Cedar Rapids, Clinton,



Map 5.1 Christmas Bird Count locations, 1960-1981.

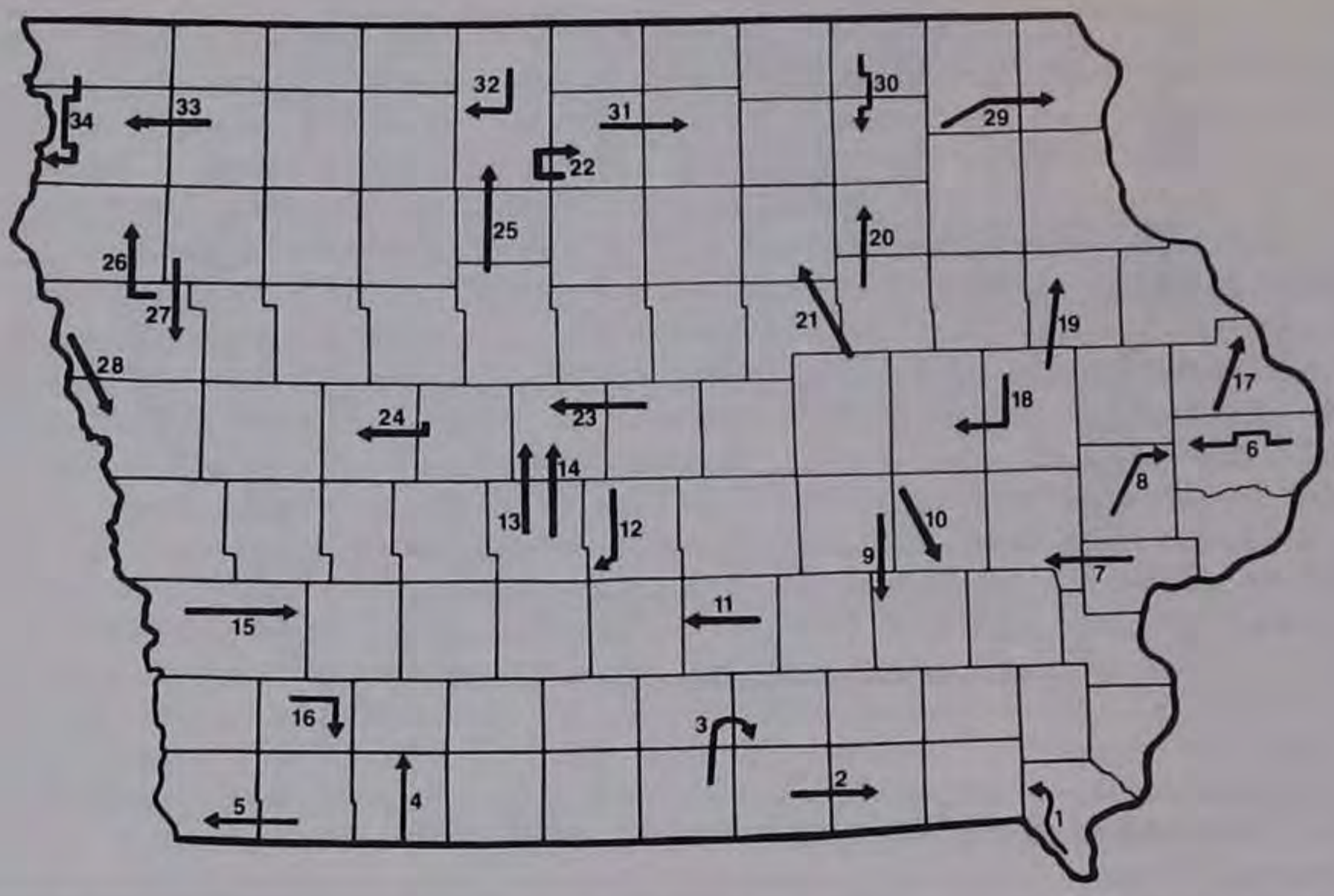
Davenport, Decorah, Des Moines, Dubuque, Iowa City, Lamoni, Shenandoah, Sioux City, and Yellow River Forest).

Brown (1957) reviewed CBC data from 1937 to 1956. Legg and Frye (1981) evaluated human and environmental factors affecting Iowa CBCs from 1958 to 1978. Wind speed was the only environmental factor found to affect counts; human factors were important in affecting the degree of coverage and thus the number of species seen. CBC data have been used to evaluate population trends of hawks (Koenig 1975a, 1975b), woodpeckers (Koenig 1977), and Black-capped Chickadee and Tufted Titmouse (Brown 1975). In addition, CBC data, especially from 1960 to 1982, have been used extensively in preparing species accounts for this book.

Breeding Bird Survey

In June 1966 a Breeding Bird Survey (BBS), which censused the breeding bird populations of the United States and Canada, was initiated (Robbins and Van Velzen 1969). The BBS is based on randomly selected routes following public roads, along which volunteer observers record the number of birds seen or heard. Each route is 24.5 miles long and consists of fifty 3-minute stops spaced at half-mile intervals. At each stop the observer records the number of each species heard (at any distance) or seen (within one-fourth mile) during the 3-minute period. The same routes are censused each year in June, starting one-half hour before local sunrise on a day that is neither foggy nor rainy and with wind speed not exceeding 12 miles per hour. Tabulated summaries are sent to the Migratory Bird Research Laboratory, U.S. Fish and Wildlife Service, Laurel, Md., where the data are checked, entered into a computer, and stored for later use.

The 34 Iowa routes (Map. 5.2) have been censused 389 of a possible 476 times from 1967 to 1980. The BBS provides the main quantitative data available for Iowa on breeding bird populations and is frequently referred to in the species accounts in this book.



Map 5.2 Breeding Bird Survey routes.

Since the routes follow public roads, the BBS samples only the bird population of roadside habitats. Nocturnal species, species inhabiting deep woods and marshes, and shy and secretive species are not well sampled by this technique and are poorly represented in survey results.

Bird Banding

Iowans have been banding birds since the 1930s. Myrle Jones banded over 14,000 birds between 1933 and 1966, mostly in Iowa. **Iowa Bird Life** has included summaries of birds banded in Iowa since 1961, with the first eleven summaries by Dean Roosa and the next nine by Keith and Irene Layton. Just over 426,000 birds were banded from 1961 to 1981. The summaries include the number of each species banded and the total birds banded by each bander. From 15 to 20 banders are active each year, and some have "subpermittees" or licensed helpers. Among the more active of current banders is Peter Petersen, who has banded over 80,000 birds in Iowa from 1958 to 1981. Petersen's records are used in many of the species accounts in this book because they provide many record dates and useful information on peak migration dates and relative abundance. Personnel of the Iowa Conservation Commission band many game birds; their totals are included in the banding summaries.

Although recoveries bring the most exciting results of banding efforts, the information learned from handling, measuring, examining, and weighing the individual birds provides the most data. Each bander must have one or more projects to maintain a permit. Some projects involve only one species; others involve many. Petersen's large project is a 20-year migration study at Pine Hill Cemetery in Davenport, with fall migration work carried out in the years 1959 to 1969 and 1971 to 1979 and spring work from 1965 to 1979. Although the primary aim of the project was to evaluate the effect of habitat growth on migration pattern, the project has provided some of the most objective data on migration volume and migration intervals of certain

Iowa birds, especially warblers and flycatchers. A constant number of nets in fixed locations were used for many years so comparisons over time could be made.

Iowa Bird Banding News is a publication of the Iowa bird banders started by Dean Roosa in 1971 and continued by Keith and Irene Layton since 1973. It includes summaries of projects by Iowa banders and a complete listing of species banded by each participant.

Forays

The term "foray" refers to an intensive, short-term, ecological study of a localized area (Roosa 1977b). Six forays, sponsored by the State Preserves Board, have been conducted under the guidance of Dean Roosa each June since 1977. The ornithological component of the first three forays has been published in **Iowa Bird Life** (Silcock 1977; Koenig 1979; Petersen 1979b). Localities of the forays have been Fremont County (1977), Allamakee County (1978), Lee County (1979), western Lyon and Sioux counties (1980), the loess hills of Plymouth and Woodbury counties (1981), and the loess hills of Monona and Harrison counties (1982).

Winter Raptor Survey

In 1977, Dean Roosa proposed starting a survey of midwinter raptor populations in Iowa. The intent was to determine the number, distribution, and habitats utilized by raptors during January and mid-February. These data could also be used as baseline information to evaluate future changes in winter raptor populations. Surveys were conducted in 1978 to 1980 and in 1982. Each volunteer team selects a township (36 square miles) and attempts to count all raptors in the area, recording a habitat analysis and habitat location of each raptor. Results of the first three surveys have been published by the State Preserves Board (Roosa and Bartelt 1977; Roosa 1978; Roosa et al. 1979).

Nest Cards

Weller (1962) started a program aimed at collecting data on individual bird nests with the intent of better understanding the distribution and nesting habits of breeding birds in Iowa. This program was eventually dropped due to lack of support. In 1976, a second program was started at Iowa State University in conjunction with the North American Nest Record Card Program. Nest records generated within the state are copied and later entered into a computer for storage and retrieval. In recent years the program has been coordinated by David Newhouse of the Iowa Conservation Commission. A summary of this new data, covering nest records from 1961 to 1981 (Newhouse 1982), is based on 2,117 cards for 104 species. Mourning Dove is the most frequent species represented, with 349 nests. So far, 80 percent of the data is from five counties (Cerro Gordo, Clay, Lucas, Mills, and Story), with the greatest number of species from Mills County (42). Only 62 of 99 counties are represented. Increased participation and better distribution are needed to make this program more effective in describing species distribution, nesting sites, and nesting success.

ORGANIZATIONS

Organizations that have contributed heavily to Iowa ornithology include universities and colleges, museums (many of which are contained within universities and colleges), state agencies, and local bird clubs. The roles of the Iowa Ornithological Association and the I.O.U. were detailed earlier in this chapter.

Universities and Colleges

Ornithological contributions from the University of Iowa have centered around the Museum of Natural History, which first began as the "cabinet" of natural history in the Old Capitol building in 1858 (Schrimper 1982). The museum, the second oldest west of the Mississippi River, was largely developed under the curatorship of Charles C. Nutting from 1886 to 1927. Museum training and preparation and display of ornithological specimens were fostered by succeeding curators Homer Dill (1927-1949), Walter C. Thietje (1949-1971), and George D. Schrimper (1971-present). The major collectors of Iowa ornithological specimens were Samuel Calvin, Daniel H. Talbot, Charles Nutting, Paul Bartsch, Rudolf M. Anderson, Frank Bond, Ira N. Gabrielson, Alfred M. Bailey, Homer Dill, Walter Thietje, and John R. Rohner. Most of Iowa's bird species are displayed in Bird Hall on the third floor of Macbride Hall on the University of Iowa campus in Iowa City. The Zoology Department at the University of Iowa, which was physically separated from the museum in 1926, has not had a major interest in ornithological education and research.

In the 1930s Iowa State College (now Iowa State University) became another center of ornithological work in Iowa. At that time, Logan Bennett, Paul Errington, George Hendrickson, and their students began intensive studies of various game species, including waterfowl, Mourning Dove, Northern Bobwhite, and Ring-necked Pheasant. Although most of these studies had a management orientation, they provided much basic biological information. This study orientation was continued in the 1950s by Ed Kozicky, in the 1960s and 1970s by Milton Weller, and currently by Louis Best, James Dinsmore, and Erwin Klaas. Recent studies have focused more attention on nongame species and on habitats in general. Over the 50 years, Iowa State University has been considered one of the leading schools of game management in the United States.

Many of Iowa's colleges have contributed to the study of ornithology in Iowa, although in recent years this contribution has much diminished because of changing educational priorities. Ornithological activities at Iowa's colleges centered around interested professors and small museums. Some of the most active individuals were Bert H. Bailey at Coe College from 1900 to 1918, Thomas C. Stephens at Morningside College from 1906 to 1946, J. Harold Ennis, a sociology professor who taught ornithology, at Cornell College from 1938 to 1965, and Martin L. Grant at the University of Northern Iowa (formerly Iowa State Teachers College) from 1936 to 1968.

Museums and Specimen Collections

Most of the specimens of Iowa birds were obtained many years ago. Some were sent to national museums, but most are housed in Iowa. The Iowa collections are mostly Iowa birds. However, the Univerity of Iowa collection does contain numbers of specimens from other geographic areas. The collections are used for education, answering puzzling identification

problems, and documenting the occurrence of vagrant species in Iowa. The locations of many of the specimens of accidental species are noted in the species accounts in Chapter 6. A recent survey (Banks et al. 1973) provides information on bird collections in North America, including Iowa. The five largest Iowa collections are briefly described below and the others listed, along with some of the more important rare specimens.

The Museum of Natural History at the University of Iowa in Iowa City is the largest of the state collections, with 9,500 skins and 1,500 mounted birds. It includes the Iowa collections of D. H. Talbot, Paul Bartsch, R. M. Anderson, and I. N. Gabrielson. Rarities include Arctic Loon, King Eider, Black Scoter, Black Vulture, American Swallow-tailed Kite, Ferruginous Hawk, Greater Prairie-Chicken, Sharp-tailed Grouse, Whooping Crane, Yellow Rail, Long-billed Curlew, Buff-breasted Sandpiper, Ruff, Parasitic Jaeger, Long-tailed Jaeger, Sabine's Gull, Passenger Pigeon, Black-billed Magpie, and Clark's Nutcracker.

The Iowa State University collection at Ames contains about 1,700 skins, 500 mounted birds, and 600 skins in glass-sided boxes. Included is the O. P. Allert collection of 700 birds (Hendrickson 1944). Most Iowa species are represented, with the major emphasis on waterfowl. Rarities include Red-necked Grebe, Cattle Egret, Snowy Egret, Ross' Goose, Surf Scoter, Sandhill Crane, Yellow Rail, Purple Gallinule, Red Knot, Burrowing Owl, Black-billed Magpie, and Smith's Longspur.

The Coe College Biology Department collection in Cedar Rapids contains 2,000 skins, 300 mounted birds, and 400 egg sets. Rarities include American Swallow-tailed Kite, Whooping Crane, Carolina Chickadee, and Smith's Longspur.

The Putnam Museum in Davenport, which is further described below, contains 625 skins, 570 mounted birds, and 1,500 egg sets. Most of the material is from eastern Iowa and western Illinois. The Iowa Wesleyan College collection is included. Rarities include Arctic Loon, King Eider, Black Scoter, American Swallow-tailed Kite, Greater Prairie-Chicken, Eskimo Curlew, Long-billed Curlew, Sabine's Gull, and Passenger Pigeon.

The Iowa Historical Society collection in Des Moines consists of several hundred skins mostly collected by Jack W. Musgrove. The major emphasis is waterfowl but many raptors and shorebirds are included. Rarities are Prairie Falcon, Common Raven, and Pine Grosbeak.

Other smaller collections are as follows, with rarities in parentheses: Calhoun County Historical Society at Rockwell City, composed of the former Odebolt High School collection (Trumpeter Swan, American Swallow-tailed Kite, Long-billed Curlew, and Clark's Nutcracker); Central College at Pella; Cornell College at Mt. Vernon, including the Morningside College collection; Iowa Conservation Commission Education Center at Springbrook State Park; Luther College at Decorah; Museum of History and Science at Waterloo; Sanford Museum at Cherokee; Sioux City Public Museum; Sogers Museum at Maquoketa; St. Ambrose College at Davenport; University of Northern Iowa at Cedar Falls; Van Wyngarden personal collection at Manson (Eurasian Wigeon, Black Scoter, and Surf Scoter); Wartburg College at Waverly; and Westmar College at Le Mars.

As a private institution, the Putman Museum has played a significant role in Iowa's ornithological history. Started as the Academy of Natural Sciences in 1867, it became known as the Davenport Academy of Sciences until 1927, when the name was changed to the Davenport Public Museum. In 1970 it was renamed the Davenport Museum to remove the misconception that it was public, and in 1974 it became the Putnam Museum in honor of the Putnam family whose endowment of property in downtown Davenport has

sustained the museum and also to allow identification with the entire Quad-city area.

Several employees were noteworthy in Iowa ornithology. J. H. Paarmann, curator from 1902 to 1927, introduced birds to at least one generation of Davenporters through his school programs and started a May Dawn Bird Count in 1924, which is still held on the first Saturday of May. Fred T. Hall, in his short term as Director of the Museum from 1949 to 1951, promoted ornithology through classes at the Museum and hosted the I.O.U. and Wilson Ornithological Society meetings. He was followed in 1953 by another ornithologist, A. Lang Baily, whose career was cut short by his premature death in 1957. One of Iowa's most active ornithologists, Peter C. Petersen, served as curator of education, teaching, and ornithology from 1958 to 1962 and 1971 to 1980.

The Putnam Museum moved from its historic location in downtown Davenport to a new building on the southwest side of town in 1964, where it accommodates over 75,000 visitors per year. From 1876 to 1913 the **Proceedings of the Davenport Academy of Sciences** was published in 13 volumes.

Iowa's institutions of higher learning and museums house a mostly irreplaceable collection of bird specimens. Every attempt must be made to preserve these collections; smaller ones should be combined with the larger ones if the cost of maintainance cannot be met. Small but significant additions can be made if accidentally killed birds are frozen and then delivered to one of the larger collections.

State Agencies

The Iowa Conservation Commission is the major conservation agency in Iowa and as such has a major impact on bird populations. Historically, the major concern of the commission has been hunted species, such as waterfowl, snipe, woodcock, rails, and upland game birds (e.g., Northern Bobwhite, Ring-necked Pheasant, Gray Partridge, and Wild Turkey). Over the years it has conducted numerous studies and surveys of these species, both to better understand their basic biology and to assess populations in order to set suitable hunting seasons. Northern Bobwhite and Ring-necked Pheasant are some of the most studied birds in Iowa. The commission has also played a major role in the reintroduction of Wild Turkey and Canada Goose breeding populations.

In 1977, with the adoption of the state endangered species list, the Iowa Conservation Commission was given authority to work with nongame wildlife. In fact, the commission, through habitat acquisition and management programs, had been benefiting nongame wildlife for many years. The commission manages thousands of acres of wildlife habitat, including most of the marsh habitat left in Iowa, and thus has a major impact on all wildlife. Most of the American Coots, Yellow-headed Blackbirds, Pied-billed Grebes, Least Bitterns, and other marsh nesting birds in Iowa are found in areas managed by the commission for waterfowl. Likewise, most of the state parks, again under commission management, have woodlands that are important habitat for thrushes, vireos, warblers, tanagers, and other woodland species.

Employees of the Iowa Conservation Commission constitute the largest group of trained field biologists working in Iowa. Several are active in ornithological groups in the state and contribute to the Field Reports in **Iowa Bird Life.** Several employees of the commission have made extensive contributions to Iowa ornithology. Carl Fritz Henning, custodian of the Ledges State Park from 1921 to 1941, contributed reports on Iowa birds

since the 1880s and was an active member of the Iowa Ornithological Association. Bruce F. Stiles began his career with the commission as a conservation officer in 1938 and was its director from 1948 to 1959. Myrle L. Jones, after an early teaching career, served in naturalist and park officer positions at Ledges, Dolliver, Waubonsie, Fort Defiance, and Bellevue state parks from 1938 to 1965. He and his wife were active birders and banders.

In 1965 the State Preserves Board was established to set a statewide system of preserves for the management and protection of endangered plants and wildlife. The board is advisory to the various governmental agencies that actually manage the land in the preserves. Implicit in the board's function is the establishment of a list of endangered species. The endangered birds listed by Roosa (1977a) are discussed in Chapter 4. Dean M. Roosa, an employee of the Iowa Conservation Commission and ecologist for the Preserves Board since 1975, has initiated a number of surveys of Iowa's bird life.

Local Bird Clubs

There is no statewide organization of bird clubs in Iowa as there are in other states such as Illinois, Wisconsin, and Minnesota. Thus, information on the history of Iowa bird clubs is difficult to find. In 1936, seven local clubs were listed (Anon. 1936): Sioux City (1913), Des Moines (1923), Atlantic (1924), Dubuque (1929), Cedar Rapids (1929), Fairfield (1933), and Cedar Falls (1936). A bird club was organized in Independence in 1945 (Anon. 1946a). In 1947 (Anon. 1947), reports were given for five clubs: Atlantic, Cedar Falls, Cedar Rapids, Des Moines, and Dubuque. In 1978, bird clubs and Audubon societies were listed for 15 Iowa locations (Rickert 1978): Ames, Burlington, Cedar Falls, Cedar Rapids, Clinton, Davenport, Decorah, Des Moines, Dubuque, Iowa City, Marshalltown, Mt. Pleasant, Ottumwa, Sioux City, and Waterloo.

The Des Moines and Sioux City organizations published mimeographed bulletins, **The Warbler** and **The Dickcissel**, respectively (Anon. 1946b). There are several published lists of birds sponsored by local clubs, including the following: "Birds of Sioux City, Iowa" (Bennett 1931), "Birds of Polk County, Iowa" (DuMont 1931), "Polk County Check-list of Observations of Members of the Des Moines Audubon Society" (Brown 1953, 1959), "A Field List of Birds of the Tri-city Region" (Fawks and Petersen 1961), and "A Field List of Birds of the Quad-city Region" (Petersen and Fawks 1977). In addition, the Cedar Rapids Bird Club published several articles on its history and a list of birds seen by its members (IBL 29:51-69).

CHAPTER SIX

Species Accounts

INTRODUCTION

This chapter contains accounts of all wild, and a few possibly escaped, bird species that have been reported in Iowa, regardless of whether the record has been considered acceptable. Those species for which no records have been accepted by the Records Committee of the Iowa Ornithologists' Union are enclosed in brackets.

The terms used for status have been defined in Chapter 2. The seasons of the year and the symbols used on the maps are as follows:

	prior to 1960	1960-1982
Spring (March through May)	△	▲
Summer (June and July)	○	●
Fall (August through November)	▽	▼
Winter (December through February)	□	■
Nesting (any month)	⬭	⬬
Month unknown	◇	◆

Dates given for spring and fall migration are the three earliest and three latest records, including ties. For regular species, these dates generally are from 1960 to 1982, while for casual and accidental species all records were usually used. Some judgment was required in choosing these early and late dates, especially in separating summer and winter records from early and late migration dates and in eliminating possible misidentifications.

Under "Comment" are included key identification features for difficult-to-identify species, changes in abundance or status, and geographic distribution of many species. For casual and accidental species, records in other states are summarized to better evaluate the likelihood of occurrence in Iowa. This information on occurrence in other states was obtained from boldface records in **Audubon Field Notes** and **American Birds** from 1949 to 1981, and from the following publications from nearby states: Nebraska (Rapp et al. 1971; Johnsgard 1980), South Dakota (Whitney et al. 1978), Minnesota (Green and Janssen 1975), Wisconsin (Kumlien and Hollister 1951; Gromme 1963; Barger et al. 1975), Illinois (Bohlen 1978), and Missouri (Easterla and Anderson 1979). The Nebraska, South Dakota, Minnesota, and Illinois sources are the most extensive and up-to-date. The Missouri

reference is a checklist. Other state sources used were as follows: Oklahoma (Sutton 1967), Kansas (Johnston 1964, 1965), Indiana (Keller et al. 1979), Michigan (Zimmerman and Van Tyne 1959), New York (Bull 1974), Massachusetts (Griscom and Snyder 1955), and Louisiana (Lowery 1974).

References listed at the end of species accounts generally are limited and pertain only to that species. Other more general references are found at the end of the book.

The initials used as references to records refer to personal observations of persons listed in Appendix D. In all cases, these records have been evaluated by one or more of the authors.

Maps are provided for all accidental and casual species. Maps are also used to show summer or nesting distribution for selected species that do not have statewide distribution.

The accounts are arranged in taxonomic order by family and subfamily (American Ornithologists' Union 1982), with introductory information on each family. The number of species worldwide is taken from Van Tyne and Berger (1959). The number of species in the United States and Canada is from the A.B.A. Checklist (Keith et al. 1982) and the number in Iowa from Kent et al. (1982), with a few late 1982 changes.

ORDER GAVIIFORMES

Loons, Family Gaviidae

The loon family contains 4 species, all of which have occurred in North America. In Iowa, 3 species have been recorded, 1 regular and 2 accidental. Loons are inhabitants of shallow ponds and lakes of the northern parts of Europe, Asia, and North America. They have a pointed bill, webbed feet, and legs placed far back on the body. They are best known for their diving ability and their eerie calls.

Common Loon, Taylor Co., 12 May 1981, T. H. Kent.

Red-throated Loon, **Gavia stellata**

STATUS: Accidental. Class III.
RECORDS: There are 2 Class III and 1 Class IV records (Map 6.1).
28 Apr 1873, near Ottumwa, Class III (DuMont 1935b)
ca. 1893, Franklin Co., Class IV (Shoemaker 1896b)
2-4 Sep 1972, Jester P., Polk Co., Class III (Burns and Burns 1972)

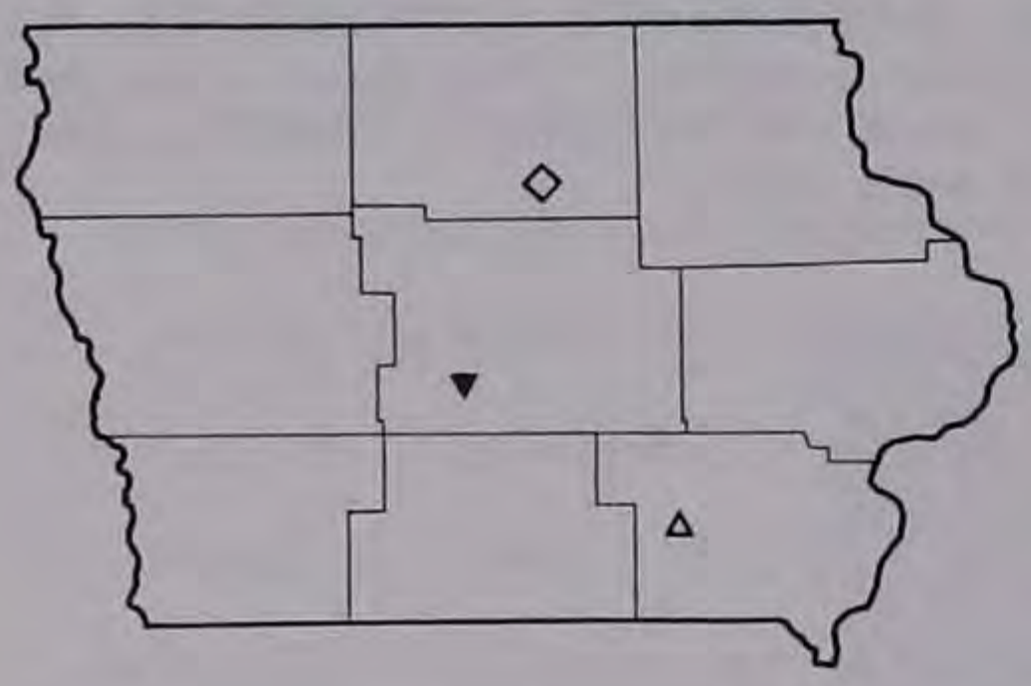
The first record is based on a specimen that was examined by DuMont but is no longer available for review. The probable record is based on a bird killed in Franklin Co. about 1893. There are 8 other records

that lack sufficient detail for evaluation: prior to 1907 in Polk Co. (Anderson 1907); 17 and 27 Apr 1929, 22 Apr 1930, and 22 and 23 Sep 1930 at Carter L., Pottawattamie Co. (DuMont 1933); 13 May 1972 at Council Bluffs (**Am. Birds** 26:766); 23 Oct 1972 at L. Manawa (**Am. Birds** 27:67); 18 Apr 1975 at Union Grove S.P., Tama Co. (**IBL** 45:56); and 15 Apr 1978 at L. Manawa (**IBL** 48:70). Old records from Black Hawk and Jackson counties (Anderson 1907) were found to be erroneous (DuMont 1933). This species was also listed by Allen (1870) without evidence of a specific sighting. There is an Illinois record for 6 Nov 1970 at Lock and Dam 13 opposite Clinton Co. (Bohlen 1978).

COMMENT: Of the 9 Iowa reports with dates, 6 are from Apr and 1 each from May, Sep, and Oct. The Red-throated Loon is listed as regular for E Minnesota where it is more common in spring than fall (Green and Janssen 1975). There are scattered records from other locations in Minnesota and for Illinois, Nebraska (Johnsgard 1980), and Kansas (Johnston 1965). Based on data from surrounding states, the Red-throated Loon would seem more likely to occur in Iowa than the Arctic Loon. This has not been the case to date. Observers should be on the lookout for small loons with upturned bills, especially in late Apr or early May at the same time Common Loons are migrating. It is unclear why the Iowa reports of this species have been from SW and C Iowa rather than along the Mississippi R.

REFERENCE:

Burns, S., and S. Burns. 1972. Red-throated Loons at Jester Park, Des Moines. **Iowa Bird Life** 42:71-72.



Map 6.1 Red-throated Loon records.

Arctic Loon, **Gavia arctica**

STATUS: Accidental. Class I-S.

RECORDS: There are 5 records based on specimens (2 examined by the Records Committee) and 2 well-described sight records (Map 6.2).

ca. 1895, Burlington, specimen at University of Iowa (Anderson 1907)

15 Nov 1895, Sabula, Clinton Co. (Giddings 1896; DuMont 1933)

26 Nov 1899, Sabula, Clinton Co. (Anderson 1907)

8 Dec 1948, Des Moines, specimen at State Historical Museum (Musgrove 1949)

11, 12 Dec 1948, Des Moines (Berkowitz 1949)

winter 1951-1952, Scott Co., specimen at Putnam Museum (Baily 1954)

28 Apr 1981, Amana L., Iowa Co., Class II (Bendorf 1981)

In addition to these records there are 5 sight records without details. One from Polk Co. in Dec 1902 was considered doubtful by DuMont

(1931). The others are all from Des Moines: 6 to 11 Jun 1964 (IBL 34:64; Brown 1971), 22 Oct 1965 (Brown 1971), 11 Nov 1970 (Am. Birds 25:65), and 6 May to 3 Jun 1972 (IBL 42:37, 69).

COMMENT: This species nests in the arctic and winters predominantly along the West Coast and casually along the coast of the NE United States. Records for the C United States are few, with Iowa having more than Illinois (Bohlen 1978) and Minnesota (Green and Janssen 1975). Most of the Iowa records, like those from nearby states, are from Sep-Dec, but a few are from Apr-May.

REFERENCES:

Baily, A. L. 1954. Three records from Scott County. Iowa Bird Life 24:18.

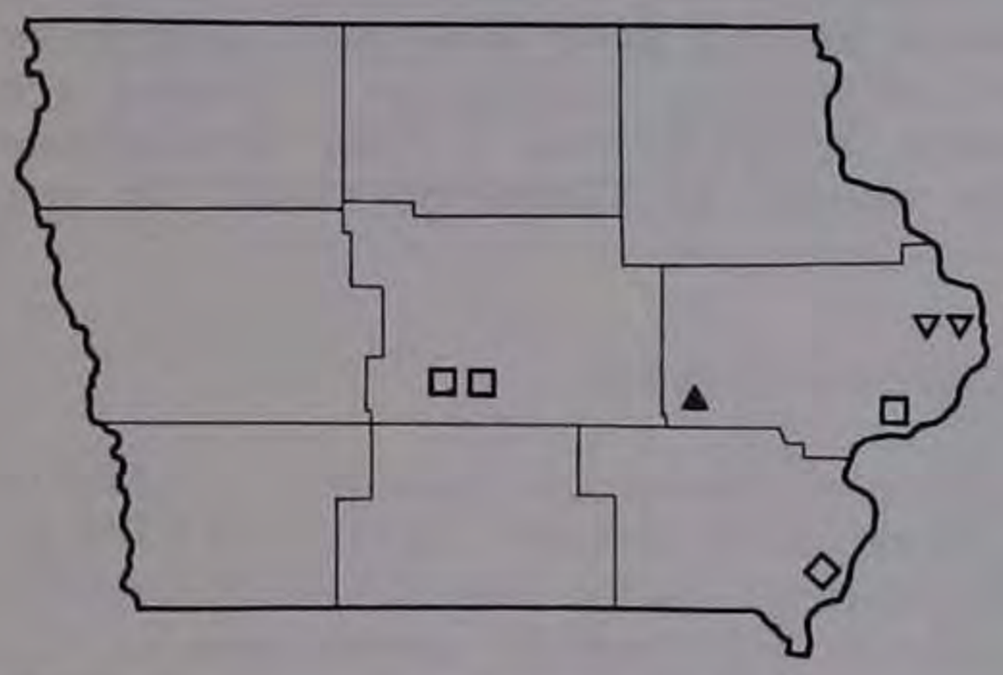
Bendorf, C. J. 1981. Arctic Loon at Amana Lake. Iowa Bird Life 51:76.

Berkowitz, A. C. 1949. Pacific Loon and other water birds at Des Moines Impounding Reservoir. Iowa Bird Life 19:19.

DuMont, P. A. 1933. The Iowa specimen of the Pacific Loon re-examined. Wilson Bull. 45:89-90.

Giddings, J. 1896. Urinator arcticus in Jackson Co. Iowa Orn. 2:73.

Musgrove, J. W. 1949. Pacific Loon in Polk County, Iowa. Iowa Bird Life 19:19.



Map 6.2 Arctic Loon records.

Common Loon, **Gavia immer**

STATUS: Regular; uncommon migrant, rare in summer, extirpated nester. Class I-S N.

HABITAT: Lakes, reservoirs, and larger rivers.

SPRING MIGRATION: Most are seen from mid-Apr through early May, but some linger to late May.

Early dates: 17 Mar 1945 (Amana L., Serbousek 1959)
20 Mar 1977 (Coralville Res., IBL 47:57)
4 Apr 1981 (L. Macbride, IBL 51:63)
4 Apr 1981 (Little Wall L., IBL 51:63)

SUMMER: There are several summer records, such as individuals at Saylorville Res. on 8 Jul 1978 (IBL 48:96), Forney L. on 17 Jun 1979 (IBL 49:81), Cardinal M. on 23 Jun 1979 (IBL 49:81), and Saylorville Res. on 17 Jun 1982 (IBL 52:88). Two summered at Clear L. in 1980 (IBL 50:74) and 1 was at Mormon Trail P. from 4 Jul 1981 to the end of summer (IBL 51:115). Anderson (1907) mentions a nest found in early summer 1893 on Rice L., Winnebago Co., and Spurrell (1917) reports old

records suggesting that loons nested n of Sac City until 1900.
FALL MIGRATION: Most fall birds are seen from late Oct through mid-Nov.
Early dates: 23 Sep 1965 (Des Moines, IBL 35:89)
10 Oct 1982 (Saylorville Res., IBL 52:118)
15 Oct 1972 (Council Bluffs, Am. Birds 27:66)
Late dates: 13 Dec 1970 (Cedar L., IBL 41:25)
12 Dec 1980 (Coralville Res., IBL 51:31)
12 Dec 1981 (Saylorville Res., IBL 52:25)
WINTER: Individuals were reported at Rathbun Res. and Iowa City during the CBC periods of 1975 and 1971, respectively. Another was at Rathbun Res. on 20 Dec 1980 (IBL 51:16). One at L. Macbride on 17 Feb 1976 (IBL 46:55) could have been wintering or a very early spring migrant.
COMMENT: Most reports are of 1 or 2 birds. The largest group reported was 28 at Rock Creek S.P. on 4 Dec 1975 (IBL 46:24).

ORDER PODICIPEDIFORMES

Grebes, Family Podicipedidae

The grebe family contains 18 species worldwide, 6 of which have been reported in North America. Of the 5 Iowa species, 4 are regular and 1 is casual. Grebes typically occur in wetlands having good emergent vegetative cover. Their nests usually are a mound of floating vegetation. Grebes are good divers and feed on fish and aquatic invertebrates. They are seldom seen in flight and are known for their ability to submerge slowly in the water.

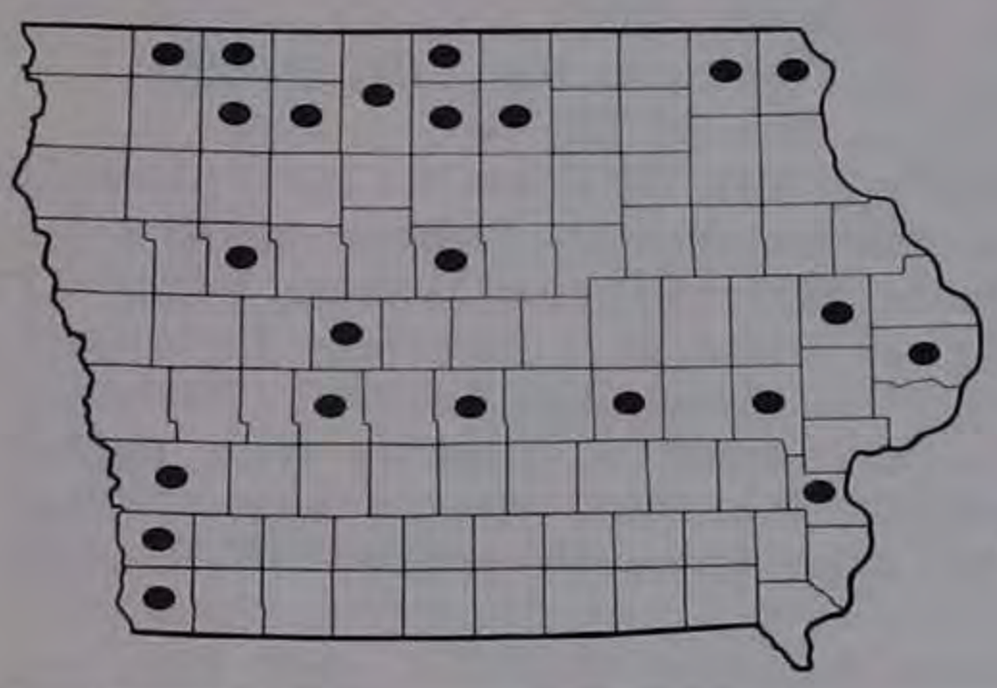
Pied-billed Grebe, 21 Mar 1959, F. W. Kent.

Pied-billed Grebe, **Podilymbus podiceps**

STATUS: Regular; common summer resident in north, common migrant throughout, rare in winter in E Iowa. Class I-S N.
HABITAT: Lakes and reservoirs, nests among emergent vegetation in marshes.
SPRING MIGRATION: Migrants usually appear in mid- or late Mar as soon as open water appears. The peak of migration probably is in Apr.
SUMMER: Pied-bills are common nesters in suitable marsh habitat. Egg-laying starts in late Apr and the peak of hatching is late Jun (Glover 1953). In recent years, most nesting reports are from the northern half of Iowa (Map 6.3).

FALL MIGRATION: Migrants appear in mid- to late Sep and most pass through in Oct. Most are gone by early Nov, but a few persist until freeze-up. At Willow Sl., they dropped from a peak number of 212 on 9 Sep 1980 to 9 on 10 Nov (IBL 51:25).
WINTER: There are numerous winter records, especially on CBCs, and a few birds probably winter in Iowa. In the years 1960-1982, they were reported from 10 different CBCs, all in E and S Iowa and most often from Cedar Rapids. The most seen on any CBC was 3 (Cedar Rapids 1976; Muscatine 1971).
REFERENCE:

Glover, F. A. 1953. Nesting ecology of the Pied-billed Grebe in northwestern Iowa. **Wilson Bull.** 65:32-39.



Map 6.3 Pied-billed Grebe nesting by county, 1960-1982.

Horned Grebe, **Podiceps auritus**

STATUS: Regular; uncommon migrant. Class I-S.
HABITAT: Lakes, rivers, and reservoirs.
SPRING MIGRATION: Most records are from Apr and early May.
Early dates: 20 Mar 1978 (Cedar L., IBL 48:70)
20 Mar 1982 (Lock and Dam 9, IBL 52:53)
22 Mar 1981 (L. Macbride, IBL 51:63)
Late dates: 11 Jun 1928 (Little Wall L., DuMont 1932)
9 Jun 1965 (Goose L., Greene Co., IBL 35:86)
23 May 1967 (Goose L., Greene Co., IBL 37:49)
FALL MIGRATION: Most fall migrants are seen in Oct and early Nov.
Early dates: 18 Aug 1948 (McCausland, Schaefer 1948)
9 Sep 1981 (Little Clear L., IBL 51:115)
19 Sep 1955 (Little Wall L., Carter 1956)
Late dates: 1 Jan 1973 (Cedar Rapids, IBL 43:25)
22 Dec 1965 (Des Moines, Brown 1971)
24 Nov 1979 (Lock and Dam 9, IBL 49:110)
WINTER: One was seen at Lock and Dam 15 on 10 Feb 1951 (Morrissey et al. 1952).
COMMENT: Anderson (1907) mentions an old nesting record from Black Hawk Co., and Krider (1879) says they nested in Iowa but no details are given. There has been no hint of nesting in Iowa in this century. They formerly nested in Jackson Co., Minnesota, just n of Spirit L. (Green and Janssen 1975).
REFERENCES:

Carter, D. L. 1956. Records from the vicinity of Jewell, Hamilton County, during 1955. **Iowa Bird Life** 26:45-46.

Morrissey, T., T. J. Feeney, and E. C. Greer. 1952. Records of unusual birds from the Davenport area during 1951. Iowa Bird Life 22:45-46.
Schaefer, R. 1948. Observations in southeast Iowa. Iowa Bird Life 18:68-69.

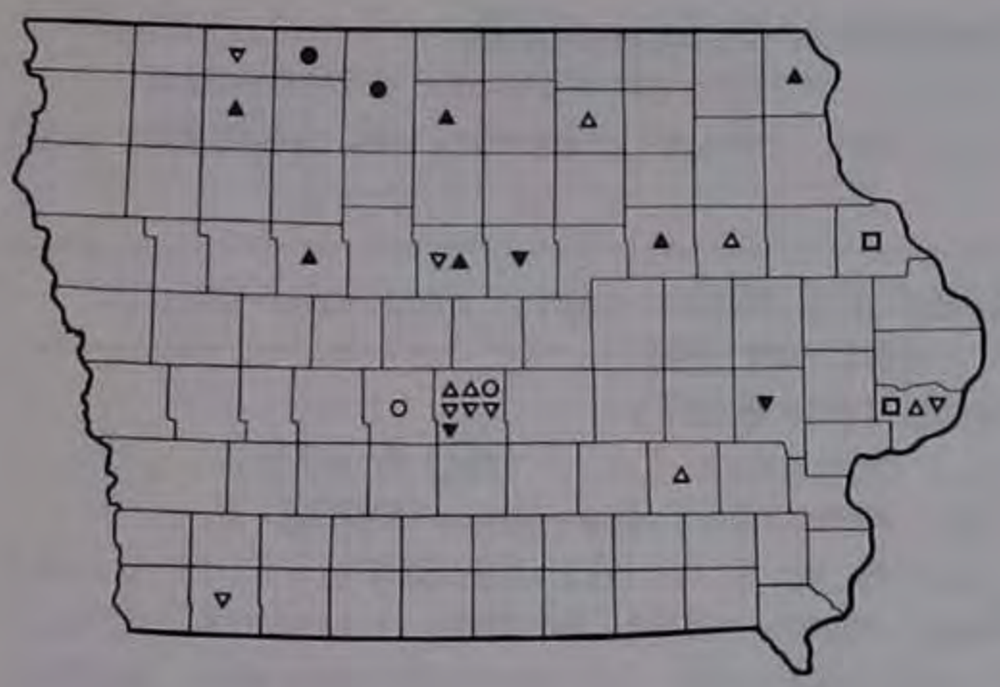
Red-necked Grebe, **Podiceps grisegena**

STATUS: Casual; rare migrant and in summer. Class I-S.
HABITAT: Lakes and rivers.
SPRING MIGRATION: Most records are from mid-Apr through early May.
Early dates: 30 Mar 1957 (Des Moines, Brown 1971)
4 Apr 1948 (Scott Co., Hodges 1949)
7 Apr 1927 (Polk Co., DuMont 1931)
Late dates: 18 May 1964 (W. Twin L., Hancock Co., IBL 34:45)
8 May 1981 (Trumbull L., IBL 51:63)
6 May 1969 (Little Wall L., IBL 39:38)
SUMMER: The 4 summer records (6 Jun 1928 at Perry, DuMont 1932; 6 Jun 1929 at Brenton Sl., Polk Co., DuMont 1932; 23 Jun 1965 at Union Sl. N.W.R., IBL 35:86; and 20 Jul 1966 at Cheever L., Emmet Co., JJD) could be late or early migrants or nonbreeding birds. The only suggestion that this species might have nested in Iowa is from Fenton (1916), who gave secondhand information that they nested near Charles City in the 1860s. Fenton's records have been questioned (Gabrielson 1917b).
FALL MIGRATION: Fall records are from Sep (4), Oct (3), Nov (3), and Dec (2).
Early dates: 9 Sep 1928 (Dickinson Co., DuMont 1933)
11 Sep 1955 (Des Moines, Brown 1971)
20 Sep 1982 (Lower Pine L., IBL 52:118)
Late dates: 17 Dec 1939 (Dubuque, IBL 10:7,8,10)
15 Dec 1953 (Lock and Dam 14, Baily 1954)
18 Nov 1950 (Des Moines, Brown 1971)
COMMENT: Overall, there are about 28 records for this rare migrant since 1900, 11 of them since 1960. They are scattered from throughout Iowa (Map 6.4). Red-necked Grebes nest n of Iowa and winter on the Atlantic and Pacific coasts. Those that migrate to the Atiantic usually are seen on the Great Lakes and generally would not be expected to pass through Iowa.
REFERENCES:

Baily, A. L. 1954. Three records from Scott County. Iowa Bird Life 24:18.
Hodges, J. 1949. Notes on the bird life in the Mississippi valley. Proc. Iowa Acad. Sci. 56:343-345.

Eared Grebe, **Podiceps nigricollis**

STATUS: Regular; uncommon migrant, rare in summer and as nester, more common in western half of state. Class I-S N.
HABITAT: Lakes and marshes.
SPRING MIGRATION: Most migrants are seen from late Apr through May.
Early dates: 22 Mar 1980 (Willow Sl., IBL 50:44)
25 Mar 1971 (Cedar Rapids, IBL 41:49)
25 Mar 1980 (Cedar Rapids, IBL 50:44)



Map 6.4 Red-necked Grebe records.

SUMMER: In recent years there have been several reports of summering birds on several wetlands in Jun and Jul. Nesting records are from NW and NC Iowa (Map 6.5). About 25 adults and 25 young were seen on Eagle L., Emmet Co., on 28 Jul 1981 (IBL 51:99). Eared Grebes formerly nested at Eagle L., Hancock Co. (Anderson 1907); in Clay and Palo Alto counties (Friley and Hendrickson 1937); at West Swan L. (Brown 1971); and Rush L., Osceola Co. (Brown 1971).

FALL MIGRATION: Most migrants are seen from late Sep through Oct.

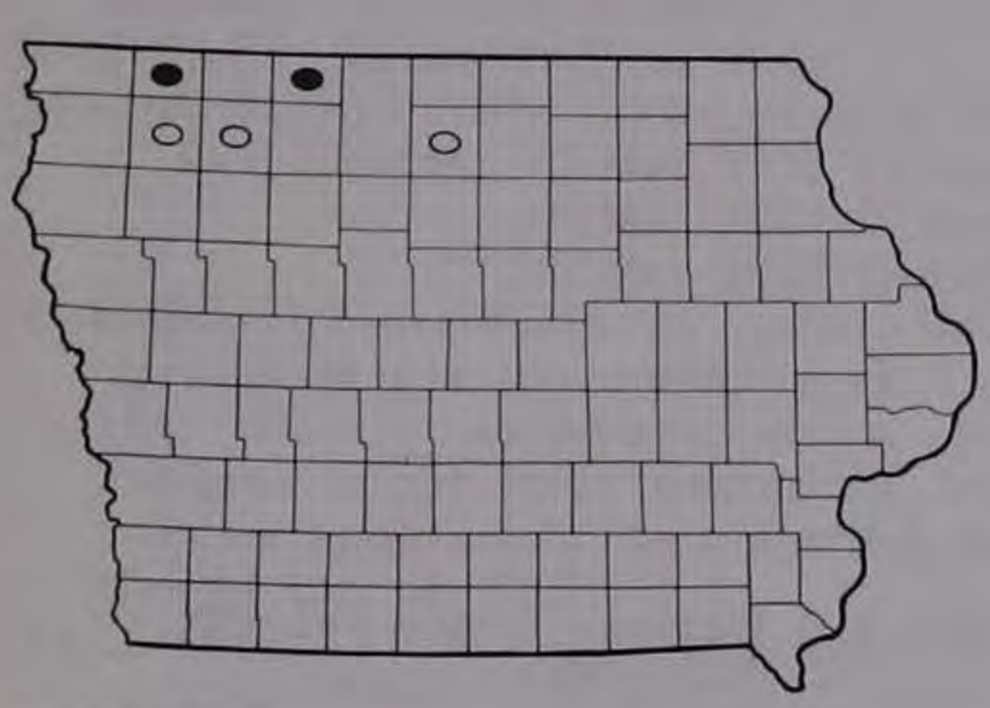
Early dates: 11 Aug 1980 (Little Clear L., IBL 51:25)
22 Aug 1982 (Forney L., IBL 52:118)
24 Aug 1982 (Sioux Center, IBL 52:118)

Late dates: 2 Jan 1966 (Cedar Rapids, IBL 36:4)
23 Dec 1967 (Davenport, IBL 38:8)
16 Dec 1981 (Saylorville Res., IBL 52:25)

COMMENT: Most records are of 1 to 5 birds. The 56 at Storm L. on 13 May 1978 (IBL 48:71) and 24 at Council Bluffs on 30 Oct 1976 (Am. Birds 31:183) are the largest numbers reported. Because of its limited nesting range in Iowa, this species is considered threatened (Roosa 1977a). Winter fish kills on marshes used for nesting may have caused much of the year-to-year movement from one marsh to another.

REFERENCE:

Friley, C. E., and G. O. Hendrickson. 1937. Eared Grebes nesting in northwest Iowa. **Iowa Bird Life** 7:2-3.

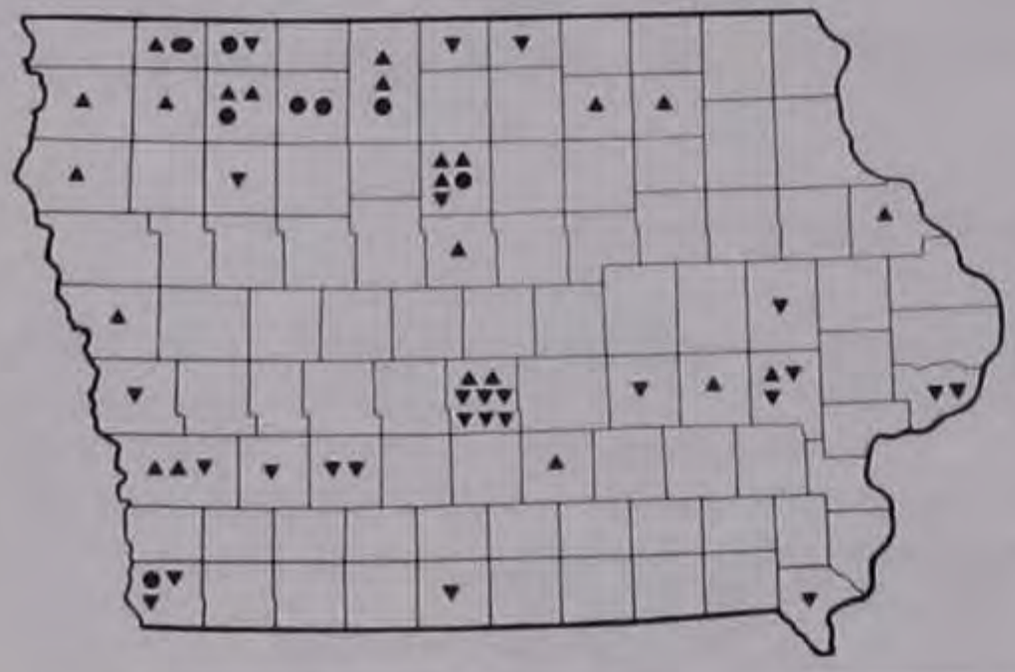


Map 6.5 Eared Grebe nesting by county.

Western Grebe, Aechmophorus occidentalis

STATUS: Regular; rare migrant and nester, more common in western half of Iowa. Class I-S N.
HABITAT: Lakes and marshes.
SPRING MIGRATION: Most spring records are from early and mid-May.
Early dates: 12 Mar 1972 (Blue L., IBL 42:69)
29 Mar 1938 (Cedar L., IBL 8:37)
11 Apr 1936 (Swan L., Johnson Co., IBL 6:42)
Late dates: 30 May 1957 (Union Sl. N.W.R., Burgess 1957)
29 May 1966 (Union Sl. N.W.R., IBL 36:81)
25 May 1981 (Mill Creek S.P., IBL 51:99)
SUMMER: There are several Jun and Jul records in recent years, mostly from NW Iowa; e.g., 17 Jun 1979 at Forney L. (IBL 49:81); 15 Jun 1979 at Trumbull L. and Mud L. (IBL 49:81); 5 Jun 1980 at Trumbull L. (IBL 50:74); and 14 Jul 1981 at West Swan L., Dickinson Co. (IBL 51:99). Two adults and 4 half-grown young were seen at Rush L., Osceola Co., on 29 Jun 1981, the first conclusive evidence of this species nesting in Iowa (Kent 1981). There also are 3 Aug records (16 Aug 1966 at Lamoni, IBL 36:87; 8 Aug 1926 Dickinson Co., DuMont 1933; and 13 Aug 1981 at Bettendorf, IBL 51:115).
FALL MIGRATION: Most are seen from late Oct through mid-Nov.
Early dates: 2 Oct 1980 (De Soto N.W.R., IBL 51:25)
9 Oct 1926 (Carter L., DuMont 1933)
10 Oct 1982 (Saylorville Res., IBL 53:23)
Late dates: early Dec 1970 (Des Moines, IBL 41:25)
27 Nov 1982 (Greenfield, IBL 53:23)
23 Nov 1978 (L. Anita, IBL 48:136)
COMMENT: There are about 58 records since 1960, nearly all of 1 or 2 birds. The records are split almost equally between spring and fall and come from throughout Iowa (Map 6.6). This species has 2 color phases, which may represent 2 distinct species (Ratti 1979). The dark phase (dark coloration around the eye and greenish yellow bill) would be expected to occur in Iowa. It would be worthwhile to record the color phase of all Western Grebes that are seen in Iowa.
REFERENCES:

Burgess, H. H. 1957. Western Grebes at Union Slough Refuge. Iowa Bird Life 27:74.
Kent, T. H. 1981. Western Grebe breeding in Osceola County. Iowa Bird Life 51:105.



Map 6.6 Western Grebe records, 1960-1982.

Ratti, J. T. 1979. Reproductive separation and isolating mechanisms between sympatric dark- and light-phase Western Grebes. Auk 96:573-586.

ORDER PELECANIFORMES

Pelicans, Family Pelecanidae

The 6 species of pelicans are familiar birds along seacoasts and larger lakes throughout much of the world. Two species have been reported in North America and also in Iowa, where 1 is regular and 1 is accidental. They are well known for their long bill and the huge gular pouch. American White Pelicans usually are seen in flocks, the birds feeding communally by herding fish in front of them. Brown Pelicans are usually found on marine waters and feed by plunge-diving from the air.

American White Pelican, Red Rock Res., C. Kurtz.

American White Pelican, **Pelecanus erythrorhynchos**

STATUS: Regular; common migrant in W and C Iowa, especially along the Missouri R., rare in east, rare in summer and winter. Class I-S N?.
HABITAT: Lakes and marshes.
SPRING MIGRATION: The peak of migration is mid-Apr through early May.
Early dates: 10 Mar 1933 (Sioux City, Youngworth 1933)
10 Mar 1969 (Little Wall L., RMH)
30 Mar 1982 (Amana L., IBL 52:53)
SUMMER: Individuals or small flocks have been reported summering at various places in recent years (e.g., 128 at Forney L. on 19 Jul 1980, IBL 50:74), especially in W Iowa. The only indication that White Pelicans might have nested in Iowa is the report by Shimek (1948) that pelican eggs could be collected by the boatload in an area n and nw of Wright Co. in 1882.
FALL MIGRATION: The migration peak is from Sep to early Oct.
Late dates: 18 Nov 1977 (Red Rock Res., IBL 47:143)

14 Nov 1981 (De Soto N.W.R., IBL 51:115)
7 Nov 1982 (Saylorville Res., IBL 52:118)

WINTER: An apparently injured bird remained at Brown's L. as late as 17 Dec 1939 (Laffoon 1941), another injured bird stayed near Cordova on the Mississippi R. from Dec 1975 through Oct 1976, and 1 was at Bays Branch on 23 Dec 1981 (IBL 52:25). Normally this species does not winter in Iowa.

COMMENT: Flocks in fall tend to be larger than those in spring. Most commonly flocks number up to 200-300; but some larger concentrations have been reported, such as 1,000 at Union Sl. N.W.R. on 13 Sep 1977 (IBL 47:143) and 2,500 at Riverton A. on 17 Sep 1979 (IBL 49:110).

REFERENCE:

Shimek, B. 1948. **The plant geography of Iowa.** Univ. Iowa Stud. Nat. Hist., vol. 18, no. 4, 178 p.

Brown Pelican, **Pelecanus occidentalis**

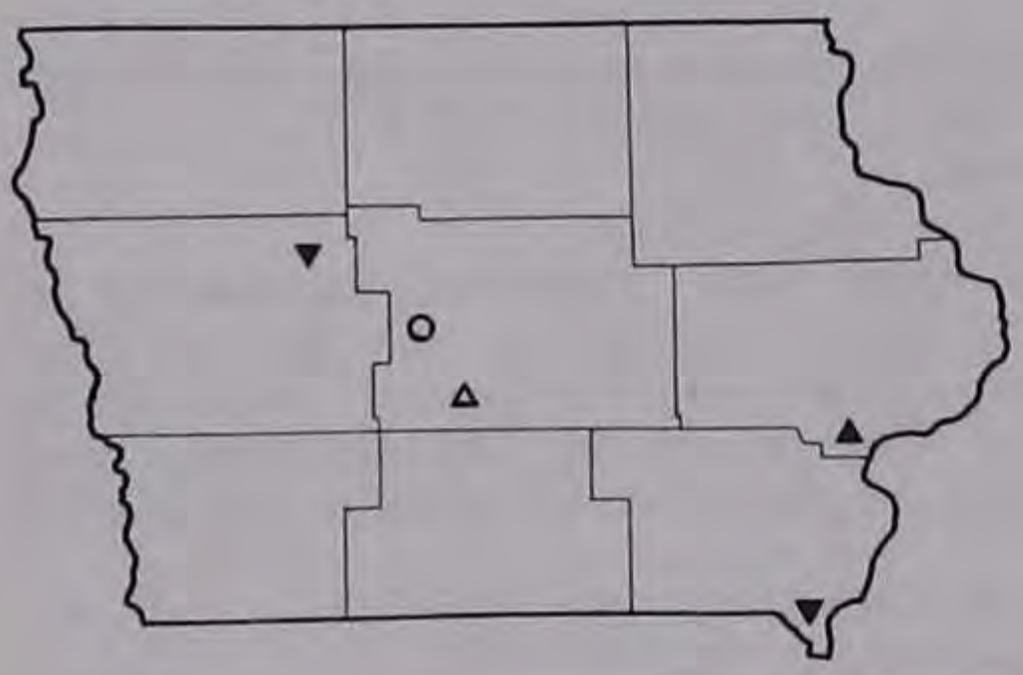
STATUS: Accidental. Class I-P.

RECORDS: The first of 5 records (Map 6.7) was 1 shot by hunters on the Des Moines R. near Boone in early Jul 1900 (Henning 1905). The specimen was examined by DuMont (1933) at the Boone Public Library but can no longer be found.

Jul 1900, Des Moines R. near Boone (Henning 1905; DuMont 1933)
26 Apr to 2 May 1959, near Des Moines (Peasley and Peasley 1960)
14 to 28 Sep 1963, Twin L., Calhoun Co. (IBL 33:86)
10 May 1969, Mississippi R. near Montpelier, photograph (Petersen 1972)
18 Oct 1982, Keokuk, Class III (IBL 52:118)

This species was also listed by Say at Engineer Cantonment n of Omaha in 1819-1820 (James 1823).

COMMENT: This species is a rare but regular straggler to the Midwest, most states having 1 to 5 records, ranging from Mar to Oct, with peaks in Apr-May and Jul-Aug. The subspecies involved breeds on the Gulf and SE Atlantic coasts of the United States and winters from there southward into the Caribbean. The peak of nesting in the Gulf Coast colonies is in Mar-Apr, and the species is well known for coastal postbreeding dispersal. Most midwestern records are pre-1960; this presumably reflects the extirpation of breeding colonies in Texas and Louisiana in the early 1960s as a result of pesticides. Pelicans were restocked in Louisiana in 1968, and, like other species of birds, seem now to be recovering from the effects of chlorinated hydrocarbons.



Map 6.7 Brown Pelican records.

REFERENCES:
Henning, C. F. 1905. A southern bird in central Iowa. **Ann. Iowa** 5:62-63.
Peasley, H. R., and Mrs. H. R. Peasley. 1960. Brown Pelican record near Des Moines. **Iowa Bird Life** 30:47.
Petersen, P. C. 1972. Brown Pelican in Muscatine County. **Iowa Bird Life** 42:51.

Cormorants, Family Phalacrocoracidae

The 30 species of cormorants occur worldwide near fresh or salt water. Six species occur in North America but only 1 has been reported in Iowa, where it is regular. Cormorants are sometimes confused with geese, but they have a hooked bill and they usually swim with their bill tipped up. Their major food is fish, which they capture while diving. They often perch on dead trees or posts over water. They usually nest in colonies, building their nests on the ground, in trees, or on cliff ledges.

Double-crested Cormorant, **Phalacrocorax auritus**

STATUS: Regular; common migrant, rare in summer and winter, formerly nested. Class I-S N.
HABITAT: Larger lakes and rivers.
SPRING MIGRATION: The peak of migration is mid- to late Apr. Most sightings are of fewer than 50 birds, but 600 were seen in Fremont Co. on 24 Apr 1982 (IBL 52:53).
Early dates: 21 Mar 1982 (Cone M., IBL 52:53)
24 Mar 1982 (L. Manawa, IBL 52:53)
26 Mar 1977 (n of Clinton, IBL 47:57)
SUMMER: Scattered individuals or small flocks are seen occasionally in summer (e.g., 20 at Forney L. on 17 Jun 1979, IBL 49:81; 1 at Rush L., Palo Alto Co., on 21 Jun 1978, IBL 48:96; 12 at Forney L. in summer 1980, IBL 50:74). Cormorants occasionally have nested in Iowa. The only records in this century are at Green Bay in 1934 (DuMont 1934) and 1936 (Speaker 1937), near Modale in 1951 (Anon. 1951), n of Lock and Dam 18 in 1954 (PCP), and at Coralville Res. in 1966 (Kent 1966). A small but growing colony is still active n of Clinton on the Illinois side of the Mississippi R., and cormorants may be seen near it throughout the summer.
FALL MIGRATION: The peak is in Oct, with a few lingering into Nov or even Dec. Most sightings are small groups, but 650 were at Saylorville Res. on 10 Oct 1982 (IBL 52:118) and 500 were at Coralville Res. on 12 Oct 1982 (IBL 52:118).
WINTER: Double-crested Cormorants occasionally are seen on CBCs, mostly along the Mississippi R. From 1960 to 1982, they were seen on counts at Clinton, Davenport, Iowa City, Muscatine, and Shenandoah. Some of these may not winter, but 1 was seen as late as 15 Jan 1975 at Bettendorf (IBL 45:20) and 2 wintered at Lock and Dam 14 in 1980-1981 (IBL 51:31). The latest winter record away from the Mississippi R. was at Cedar Rapids on 1 Jan 1951 (Serbousek 1959).
COMMENT: Nest sites at the colony n of Clinton have been augmented by building artificial nest sites. Perhaps colonies could be started in Iowa by using the same method.

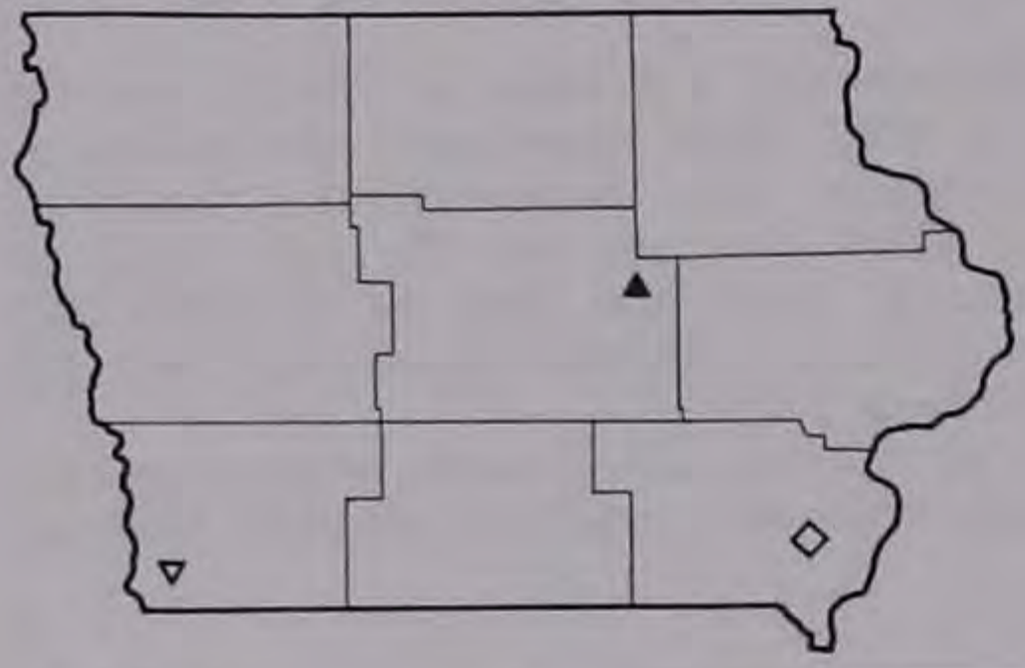
REFERENCES:
Anonymous. 1951. Egrets nesting along Missouri River. Iowa Conserv. 10:146.
DuMont, P. A. 1934. The Double-crested Cormorant nesting in southeastern Iowa. Auk 51:509-510.
Kent, F. W. 1966. Cormorant nesting in Johnson County (Coralville Reservoir). Iowa Bird Life 36:86.
Speaker, E. B. 1937. The nesting of Double-crested Cormorants on Green Bay. Iowa Bird Life 7:10-11.

Anhingas, Family Anhingidae

The 4 species of anhingas are found along wooded shores of rivers and lakes in lower latitudes throughout much of the world. The North American species is native to the S United States and is accidental in Iowa. Anhingas are known for their ability to swim with only the head out of the water and to impale fish with their bill. They commonly perch on posts or stumps and sun themselves with wings outspread. In flight their long tail and their habit of soaring readily identify them.

Anhinga, Anhinga anhinga

STATUS: Accidental. Class III.
RECORDS: One of 3 reports was accepted by the Records Committee, the others judged probable (Map 6.8).
ca. 1889, Henry Co., Class IV (Anderson 1907)
18 to 31 Oct 1953, Riverton A., Fremont Co., Class III (Collins 1953)
5 Apr 1967, Union Grove S.P., Tama Co., Class IV (Ehlers 1967)
COMMENT: This species breeds in swamps and marshes along the coastal plain from North Carolina to Texas. In the Mississippi R. drainage it bred at least formerly north to SE Oklahoma and S Missouri and Illinois, but by the 1950s had largely vanished from tne northern sections of this part of its range. It is a rare straggler north to Kansas, N Nebraska, Wisconsin, Illinois, and Indiana, and more commonly in Oklahoma and Missouri. Records range from Apr to Oct, with peaks in Apr-May and Sep-Oct. The birds in at least the northern portion of the species range are migratory, with movement north to breeding areas in Mar-Apr and fall departure by early Oct. As in the case of the Brown Pelican, it seems likely the spring peak of vagrants represents overmigration and the fall peak represents postbreeding dispersal.



Map 6.8 Anhinga records.

REFERENCES:
Collins, Mrs. W. H. 1953. A sight record of the Anhinga in Fremont County. **Iowa Bird Life** 23:72.
Ehlers, Mrs. J. 1967. Anhinga, third record for Iowa. **Iowa Bird Life** 37:53.

Frigatebirds, Family Fregatidae

The 5 species of frigatebirds normally occur in tropical and subtropical marine areas. Two species have been reported in North America; 1 of these is hypothetical in Iowa. Frigatebirds have long pointed wings, a deeply forked tail, and a long, curved bill. They are known for their superb flying ability and their habit of stealing food from other birds.

[Magnificent Frigatebird, **Fregata magnificens**]

STATUS: Hypothetical. Class IV.
RECORDS: There are 2 probable records from Burlington in 1903 and 1904, which could possibly be the same bird since both accounts are secondhand and were written years later. Bartsch, writing in 1922 about a specimen he saw and photographed (Briggs 1969) at an Illinois club, said that the bird was found exhausted s of Burlington in August 1903. Coale, writing in 1910 about a specimen he saw in a store window, said that the bird was shot at by hunters on the Illinois side of the river and flew across and struck an electric light wire in Burlington in the spring of 1904. There is a report of this species from La Porte City, Black Hawk Co., in 1896 (Shoemaker 1896b), but no details are given. A sight record from Davenport on 1 Apr 1946 reported by Hodges (1949) was considered Class IV by the Records Committee.
COMMENT: Bohlen (1978) also lists the Burlington records as hypothetical for Illinois. Inland records of this species are exceedingly rare but may occur, especially following storms. There are old records for Kansas (Aug 1880), Nebraska (spring 1884), Indiana (Jul 1896), and Wisconsin (Aug 1880). There are recent records for Indiana (Apr 1957), Arkansas (Sep 1961 and 1965, Dec 1967), and Oklahoma (Aug 1980).
REFERENCES:
Bartsch, P. 1922. An inland record for the Man-o'war-bird. **Auk** 39:249-250.
Briggs, S. 1969. Some notes on an early Iowa record and Paul Bartsch. **Iowa Bird Life** 39:85-87.
Coale, H. K. 1910. A new bird for Illinois. **Auk** 27:75.
Hodges, J. 1949. Notes on the bird life in the Mississippi valley. **Proc. Iowa Acad. Sci.** 56:343-345.

ORDER CICONIIFORMES

Bitterns and Herons, Family Ardeidae

The bitterns and herons constitute a family of about 58 species found worldwide, 14 of which have been reported in North America. Of the 10 Iowa species, 9 are regular and 1 is casual. Most species are found near water, although the Cattle Egret usually is found in uplands. They feed on fish, insects, and small vertebrates that they capture with a variety of

foraging methods. Many of the species disperse widely after the breeding season and may be found in areas well beyond their usual nesting range. Although the Tricolored Heron has not been reported in Iowa, it has been seen in Minnesota, Wisconsin, North Dakota, and Illinois and should occur in Iowa.

Least Bittern,
Swan L., Johnson Co.,
17 Jun 1951, T. H. Kent.

Great Egret, New Boston, Ill.,
3 Apr 1977, P. C. Petersen.

Snowy Egret, Coralville Res.,
3 May 1959, F. W. Kent.

American Bittern, **Botaurus lentiginosus**

STATUS: Regular; uncommmon migrant, rare nester. Class I-S N.
HABITAT: Marshes and wet meadows, hayfields.
SPRING MIGRATION: American Bittern usually arrive in mid- to late Apr, with some migrants still in Iowa in early May.
Early dates: 24 Mar 1979 (Ames, IBL 49:57)
5 Apr 1981 (Big M., IBL 51:64)
10 Apr 1982 (Weise Sl., IBL 52:54)
SUMMER: American Bittern still nest in a few marshes, mostly in NW and NC Iowa. Eggs normally are laid in late May or early Jun, but Provost (1947) found a clutch completed by 8 May. Eggs usually hatch in late Jun, although the early nest reported by Provost had hatched by 11 Jun. Young leave the nest by early to mid-Jul.

FALL MIGRATION: The main migration seems to be the last half of Sep and the first half of Oct, but some seem to be moving in Aug and a few stragglers remain in late Oct and early Nov.

Late dates: 17 Nov 1979 (Rolfe, specimen at Iowa State University)
11 Nov 1932 (Spirit L., Errington 1934)
10 Nov 1973 (Mark Twain N.W.R., IBL 43:104)

WINTER: A few individuals may attempt to winter in Iowa. One was seen (in Illinois) on the Clinton CBC on 28 Dec 1974 (IBL 45:5), and another was found near Des Moines from 4 Dec 1954 to 2 Jan 1955 (Brown 1971).

COMMENT: The draining of marshes and the reduction in the number of hayfields has reduced the habitat available for this secretive species and hence has almost certainly reduced its numbers in Iowa. It still is fairly common in a few areas, especially near Ruthven in NW Iowa.

REFERENCE:

Errington, P. L. 1934. A late Iowa record for an American Bittern. **Wilson Bull.** 46:62-63.

Least Bittern, **Ixobrychus exilis**

STATUS: Regular; uncommon nester and migrant. Class I-S N.

HABITAT: Marshes with thick emergent vegetation.

SPRING MIGRATION: The few records available suggest Least Bittern arrive in mid-May.

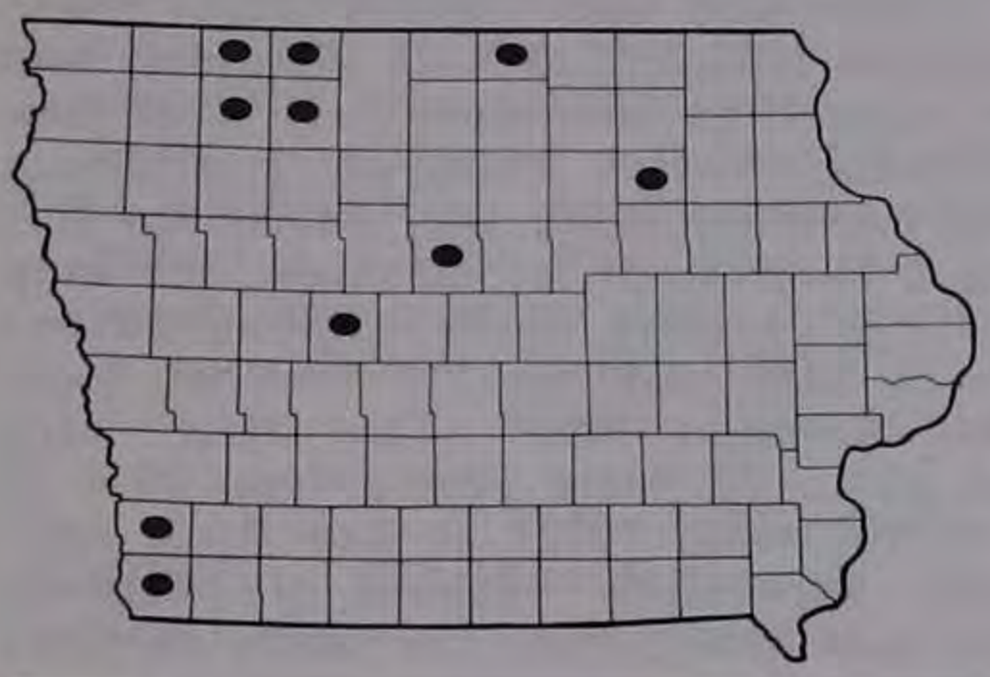
Early dates: 30 Apr 1981 (Muskrat Sl., IBL 51:64)
3 May 1981 (Cone M., IBL 51:64)
7 May 1967 (Cone M., FWK)

SUMMER: Least Bittern are fairly common nesters in thick emergent vegetation in scattered cattail and bulrush marshes in W and NW Iowa (Map 6.9), but they are seldom seen unless one seaches for them. Nests generally are initiated from late May through late Jun and hatch from mid-Jun through early Jul (Kent 1951; Weller 1961).

FALL MIGRATION: Virtually no information is available.

Late dates: 12 Nov 1981 (Goose L., Greene Co., IBL 51:115)
18 Oct 1980 (Rush L., Palo Alto Co., IBL 51:26)
8 Oct 1951 (Iowa City, Kent 1951)

COMMENT: Because of the work by Kent (1951) and Weller (1961), surprisingly good information is available on the breeding biology of Least Bittern in Iowa. More information on migration and distribution throughout the state is needed.



Map 6.9 Least Bittern nesting by county, 1960-1982.

REFERENCES:
Kent, T. 1951. The Least Bitterns of Swan Lake. Iowa Bird Life 21:59-61.
Weller, M. W. 1961. Breeding biology of the Least Bittern. Wilson Bull. 73:11-35.

Great Blue Heron, **Ardea herodias**

STATUS: Regular; locally common breeding bird, rare in winter. Nesting confined to a few colonies, especially along the Mississippi R. Class I-S N.

HABITAT: Nearly always found near water, including rivers, ponds, and lakes.

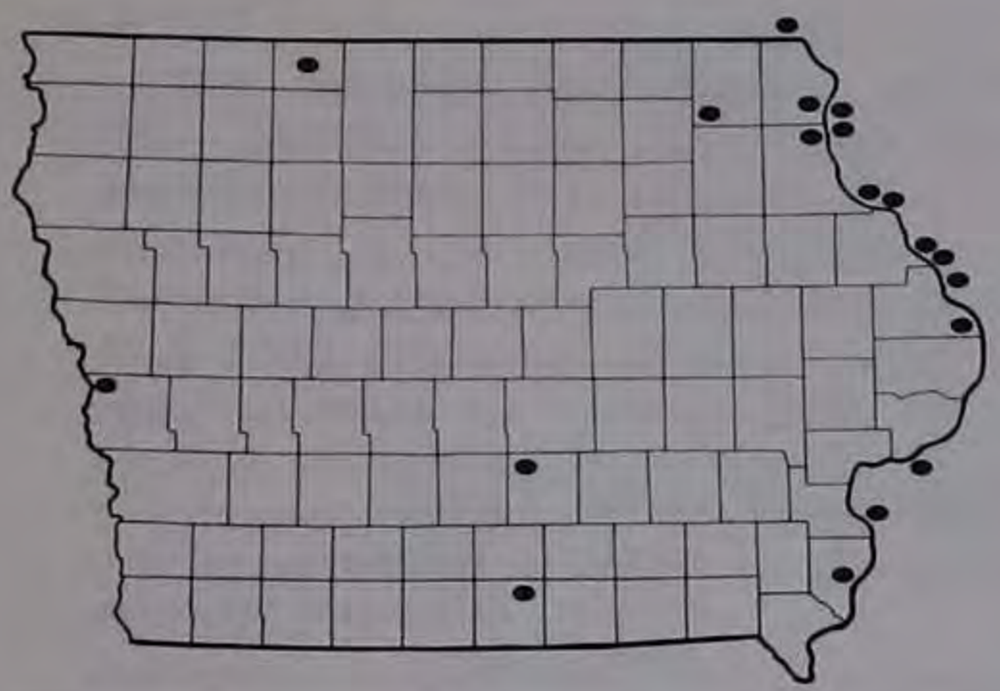
SPRING MIGRATION: Few data are available. Counts of 10 at Sabula on 20 Mar 1976 (IBL 46:55), 40 at Harpers Ferry on 30 Mar 1968 (IBL 38:57), and 68 at Union Sl. N.W.R. in early Apr 1967 (IBL 37:49) suggest that late Mar and early Apr are the peak of migration.

SUMMER: The nesting season lasts from late Mar or early Apr through Jul. Adults begin work on the nest almost immediately upon arrival at the colony (20 Mar 1939, Stiles 1940; 23 Apr 1974, Konermann et al. 1978). Eggs may hatch as early as mid-Apr, but more commonly in mid-May. Young apparently leave the nest in Jul. Nonbreeding birds are found throughout the summer in small numbers.

FALL MIGRATION: The postbreeding dispersal starts in mid- to late Jul and continues into Sep. Large numbers may gather, such as 296 at Coralville Res. on 3 Oct 1982 (IBL 52:118). By late Sep and early Oct, birds start leaving (e.g., a drop from the Sep peak of 238 to 30-40 in Oct at Red Rock Res. in 1973, IBL 43:104), and few remain in Iowa in Nov.

WINTER: Great Blue Herons were reported on CBCs from 25 different localities in 18 of 23 years from 1960 to 1982, most commonly along the Mississippi R. The maximum seen was 15 on the 1963 Burlington CBC (IBL 34:8). Many CBC birds probably do not overwinter. Birds seen on 22 Jan 1969 at Webster City (IBL 39:18), 29 Jan 1978 below Saylorville Res. Dam (IBL 48:47), 1 Feb 1964 at Des Moines (IBL 34:19), and 4 Feb 1967 at Iowa City (FWK), as well as those at Shenandoah, Davenport, and Newton in 1972-1973 (IBL 43:25), apparently overwintered. Great Blue Herons could winter virtually anyplace in Iowa that has open water.

COMMENT: Few data exist to document population changes, but most observers believe the nesting populations of this species have declined in Iowa. In 1977, only 3 colonies, totaling about 470 pairs, were found along the Mississippi R. in Iowa (Thompson and Landin 1978) (Map 6.10). Another 11 Mississippi R. colonies adjacent to Iowa in Illinois and Wisconsin contained about 925 pairs, and 1 in Minnesota just n of New Albin had 500 pairs (Thompson and Landin 1978). Thompson and Landin (1978) believe Great Blue Herons are declining along the Mississippi R., especially s of Clinton. Besides the 3 Mississippi R. colonies, the only other active Iowa colonies are a small, apparently newly established one in Winneshiek Co. containing 4 nests in 1978 (IBL 48:71); 1 on W. Swan L. in 1982 (IBL 52:88); and 2 on Rathbun Res. The latter were established about 1973 and contained 25 to 70 nests yearly from 1974 to 1977. A small colony (35-40 nests in 1971 and 1972) at Red Rock Res. was unsuccessful from 1970 to 1972, apparently because of pesticide residues (Konermann et al. 1978) and was abandoned, the birds perhaps



Map 6.10 Great Blue Heron nesting colonies in and adjacent to Iowa, 1960-1982.

moving to Rathbun Res. Formerly active colonies along the Missouri R. s of Council Bluffs (Swenk 1931) and near Modale are now abandoned. Two subspecies (**Ardea herodias herodias** and **A. h. wardi**) have been reported in Iowa (DuMont 1933).

REFERENCES:

Konermann, A. D., L. D. Wing, and J. J. Richard. 1978. Great Blue Heron nesting success in two Iowa reservoir ecosystems. **In** A. Sprunt, J. C. Ogden, and S. Winckler, eds., **Wading Birds**. Natl. Audubon Soc. Res. Rep. 7, pp. 117-129.

Stiles, B. F. 1940. Nesting of the Great Blue Heron in Pottawattamie County. **Iowa Bird Life** 10:20-22.

Swenk, M. H. 1931. A note on the Gifford heronry near Council Bluffs. **Iowa Bird Life** 1:44

Great Egret, **Casmerodius albus**

STATUS: Regular; common migrant, rare nester. Class I-S N.

HABITAT: Rivers, marshes, and lakes, especially along the Mississippi R. and major reservoirs.

SPRING MIGRATION: Most arrive in mid- to late Apr.

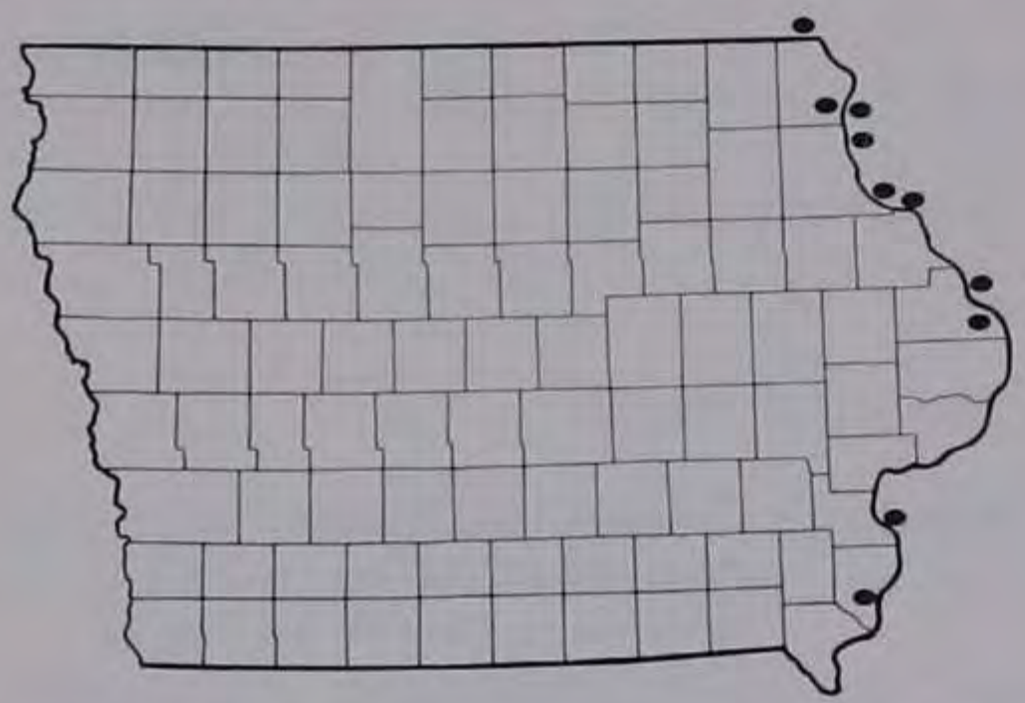
Early dates: 7 Mar 1966 (Vinton, IBL 36:48)
17 Mar 1963 (Credit I., IBL 33:38)
29 Mar 1973 (Victor, IBL 43:46)

SUMMER: Currently the only active Great Egret colonies in Iowa are 3 small ones along the Mississippi R. (Map 6.11), totaling about 50 pairs in 1977 (Thompson and Landin 1978). Another 6 colonies, totaling about 40 pairs, are on the east side of the Mississippi R. They formerly nested along the Missouri R. (Anon. 1951). All the active colonies contain both Great Blue Herons and Great Egrets.

FALL MIGRATION: Postbreeding egrets appear in Jul through Sep, with as many as 105 at Red Rock Res. on 22 Sep 1973 (IBL 43:104). Most egrets are gone by early or mid-Oct.

Late dates 26 Nov 1961 (Guttenberg, **Audubon Field Notes** 16:36)
6 Nov 1963 (Union Sl. N.W.R., **Audubon Field Notes** 18:42)
6 Nov 1963 (Bellevue, IBL 33:86)

COMMENT: Considered rare in Iowa from the late 1800s to about 1930, Great Egrets were reported commonly in the 1930s and 1940s and



Map 6.11 Great Egret nesting colonies in and adjacent to Iowa, 1960-1982.

apparently reoccupied some of their former range (Harlan 1943; Stewart 1949). Currently they persist only at a few small colonies along the Mississippi R. and probably have declined somewhat in numbers.

REFERENCES:

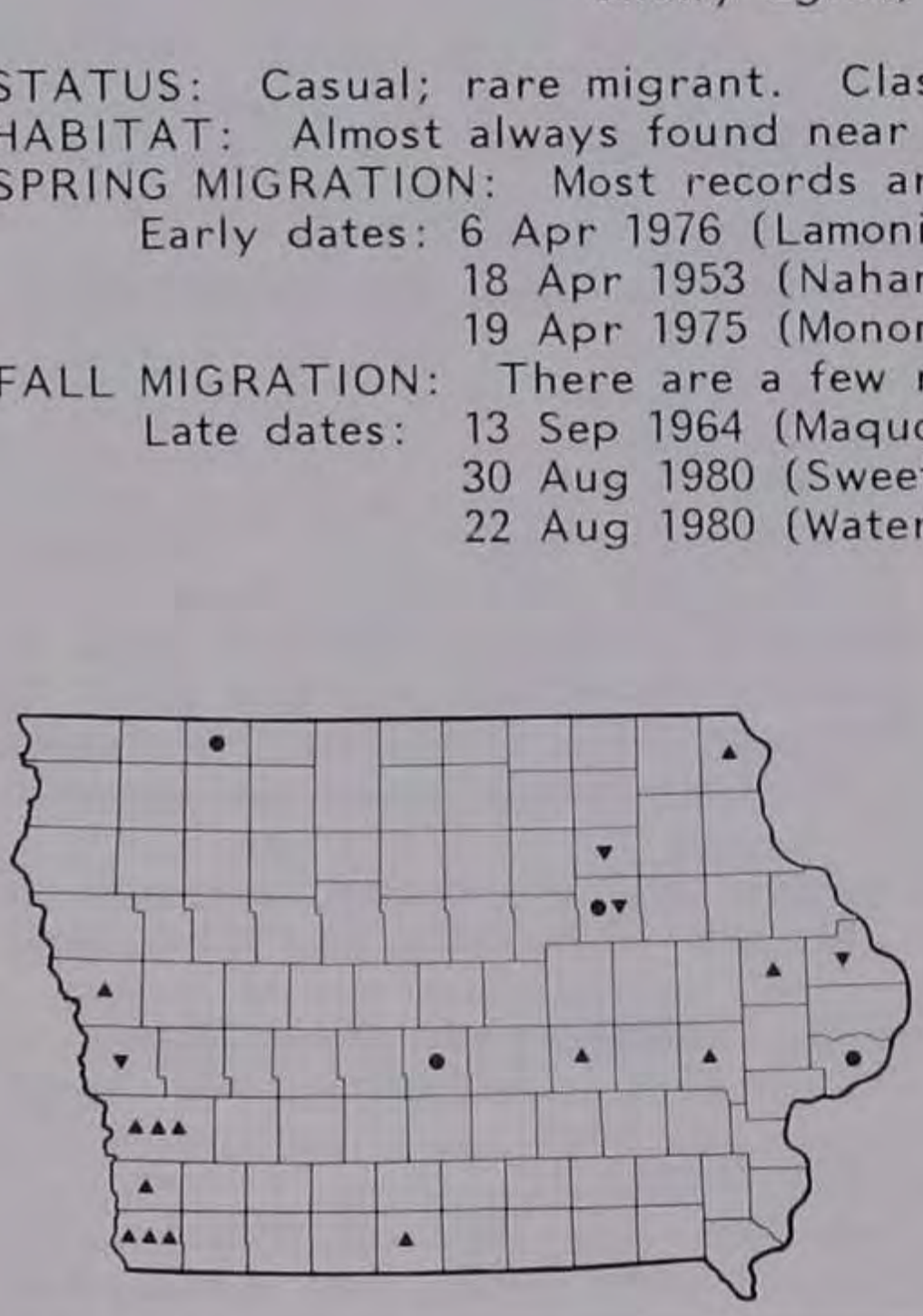
Anonymous. 1951. Egrets nesting along Missouri River. **Iowa Conserv.** 10:146.

Harlan, J. R. 1943. An Iowa nesting colony of the American Egret. **Iowa Bird Life** 13:59-62.

Stewart, C. A. 1949. Observations on the American Egret in Iowa. **Iowa Bird Life** 19:2-5.

Snowy Egret, **Egretta thula**

STATUS: Casual; rare migrant. Class I-S.
HABITAT: Almost always found near a pond, lake, river, or stream.
SPRING MIGRATION: Most records are from May.
Early dates: 6 Apr 1976 (Lamoni, **IBL** 46:56)
18 Apr 1953 (Nahant M., **IBL** 24:19)
19 Apr 1975 (Monona Co., **Am. Birds** 29:859)
FALL MIGRATION: There are a few records from Aug and Sep.
Late dates: 13 Sep 1964 (Maquoketa, **IBL** 34:96)
30 Aug 1980 (Sweet M., **IBL** 51:25)
22 Aug 1980 (Waterloo, **IBL** 51:25)



Map 6.12 Snowy Egret records, 1960-1982.

COMMENT: Since 1960, there are 21 published records, with scattered earlier records. By months, birds were seen in Apr (5), May (8), Jun (2), Jul(2), Aug (3), and Sep (1). Snowy Egret sightings are scattered from throughout Iowa (Map 6.12), but the 7 records in Apr and May in SW Iowa suggest a regular migration through there. The largest concentration reported in Iowa was 30, seen in Des Moines Co. in Aug 1930 (Holland 1930). It is surprising that more Snowy Egrets are seen in Iowa in spring than in late summer, the time when one would expect postbreeding egrets to appear. Two birds collected and originally identified as Little Blue Herons actually are Snowy Egrets (Bennett 1935). There is no evidence of Snowy Egrets nesting in Iowa.

REFERENCES:

Bennett, L. J. 1935. Little Blue Herons in Iowa. **Iowa Bird Life** 5:13.

Holland, H. M. 1930. Snowy Egrets in Des Moines County, Iowa. **Wilson Bull.** 42:289.

Little Blue Heron, **Egretta caerulea**

STATUS: Regular; rare migrant. Class I-P.

HABITAT: Marshes, lakes, and bottomlands along rivers.

SPRING MIGRATION: Most records are from May.

Early dates: 31 Mar 1967 (Iowa City, IBL 37:49)
6 Apr 1971 (n of Harpers Ferry, Lesher 1971)
11 Apr 1981 (New Albin, IBL 51:64)
11 Apr 1982 (L. Manawa, IBL 52:53)

Late dates: 4 Jun 1978 (Forney L., IBL 48:97)
29 May 1981 (Croton, IBL 51:64)
28 May 1981 (Des Moines, IBL 51:64)

FALL MIGRATION: Birds start arriving in Iowa in late Jun or early Jul, with most records from Aug.

Early dates: 30 Jun 1973 (Red Rock Res., IBL 43:74)
7 Jul 1968 (Des Moines, IBL 38:88)
13 Jul 1966 (Des Moines, IBL 36:81)

Late dates: 11 Oct 1977 (Saylorville Res., IBL 47:143)
23 Sep 1976 (Brenton's Sl., IBL 46:112)
12 Sep 1934 (Green Bay, Youngworth 1935)

COMMENT: Although Little Blue Herons were formerly considered rare in Iowa, there have been over 70 sightings since 1960, which suggests an increase in numbers of this species in Iowa (although more extensive observation may account for some of this increase). These sightings, coming from throughout Iowa, are mostly of only 1 bird, rarely as many as 6-8; the only sizable concentration is a report of 125 in Lee Co. in Sep 1934 (Youngworth 1935). The records fall into definite spring and late summer/fall groups. Interestingly, 8 of the 12 spring records in which the age was mentioned were of adults, while 70 of 79 late summer/fall individuals (excluding the 125 reported in 1934) were immatures. There is no evidence that Little Blue Herons have ever nested in Iowa, although they have nested in Illinois, Wisconsin, Minnesota, North Dakota, and South Dakota in recent years. The specimens that were reported taken in Iowa (Bennett 1935) were, in fact, Snowy Egrets. No specimens of this species are available from Iowa, and most records lack descriptive detail. Photos of an adult at Amana L. on 1 May 1982 are on file with the I.O.U. Records Committee.

REFERENCES:

Bennett, L. J. 1935. Little Blue Herons in Iowa. **Iowa Bird Life** 5:13.

Lesher, F. 1971. Little Blue Heron in northeast Iowa. **Iowa Bird Life** 41:91.
Youngworth, W. 1935. Notes on the American Egret and Little Blue Heron in Iowa. **Wilson Bull.** 47:73-74.

Cattle Egret, **Bubulcus ibis**

STATUS: Regular; rare migrant statewide, most often reported in C and SC Iowa. Class I-S.
HABITAT: Usually found in pastures and grasslands, often in association with cattle. Less often found along shores of lakes and ponds.
SPRING MIGRATION: Most records are from late Apr through mid-May.
Early dates: 20 Mar 1977 (Seymour, IBL 47:57)
26 Mar 1966 (Jesup, Brown 1971)
1 Apr 1977 (Gladbrook, Dinsmore 1978)
SUMMER: Cattle Egrets have been reported with increasing frequency in summer months in recent years. One summered near Montrose in 1977 (Dinsmore 1978), 1 was in Mills Co. on 24 Jun and 13 Jul 1981 (IBL 51:99), 18 were at Runnells on 15 Jul 1982 (IBL 52:88), and 3-10 were at Forney L. from 19 Jun to 31 Jul 1982 (IBL 52:88). This increase in summer records suggests that they may soon nest in the state although to date there are no verified records.
FALL MIGRATION: Most birds are seen from late Aug through Sep.
Late dates: last 2 weeks of Nov 1970 (Marion Co., **Audubon Field Notes** 25:65)
26 Nov 1982 (Riverton A., IBL 52:118)
20 Nov 1982 (Forney L., IBL 52:118)
COMMENT: Since first reported in Iowa in 1961 (Weller 1961), Cattle Egrets have been reported in Iowa over 100 times. Although they have now nested in Illinois (1962), Minnesota (1971), Wisconsin (1974), North Dakota (1976), and South Dakota (1977), they have not nested in Iowa. Some 100 to 150 birds were seen entering a roost at Forney L. from late Aug through early Oct 1982 (IBL 52:118), the largest group reported in Iowa. Two specimens are at Iowa State University (Little Wall L., 21 Apr 1961, and Riverton A., 1980).
REFERENCE:
Dinsmore, J. J. 1978. Cattle Egrets in Iowa, 1961-1977. **Iowa Bird Life** 48:119-126.

Green-backed Heron, **Butorides striatus**

STATUS: Regular; common nester. Class I-S N.
HABITAT: Wooded edges of lakes, ponds, streams, and rivers.
SPRING MIGRATION: Little information is available. Most seem to arrive in late Apr or early May.
Early dates: 26 Mar 1968 (location not given, IBL 38:57)
26 Mar 1972 (Des Moines, IBL 42:37)
15 Apr 1966 (Iowa City, FWK)
SUMMER: Green-backed Herons are fairly common in suitable habitat throughout Iowa but are not seen in flocks. Relatively few nest records are available, but they probably nest in thick bushes or trees near most lakes, ponds, and rivers in the state.
FALL MIGRATION: Little information is available. Most birds probably leave Iowa in Sep.
Late dates: 26 Nov 1972 (L. Odessa, IBL 42:96)

21 Oct 1979 (Jester P., IBL 49:110)
14 Oct 1982 (Council Bluffs, IBL 52:118)

COMMENT: This species has been widely overlooked in the state, and more quantitative information on its migration and distribution is needed.

Black-crowned Night-Heron, **Nycticorax nycticorax**

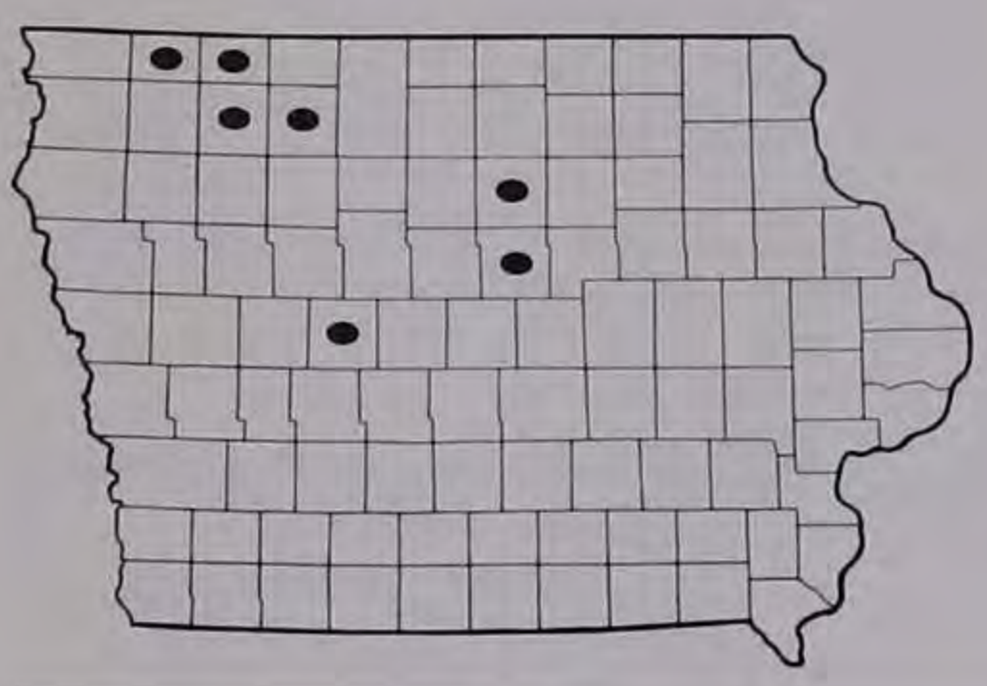
STATUS: Regular; common migrant, uncommon nester. Class I-S N.
HABITAT: Lakes and marshes.
SPRING MIGRATION: Most arrive in mid- to late Apr.
Early dates: 24 Mar 1982 (L. Manawa, IBL 52:54)
26 Mar 1916 (Ames, Spurrell 1918)
3 Apr 1977 (Seymour, IBL 47:57)

SUMMER: Several small nesting colonies of black-crowns are scattered through Iowa (Map 6.13). Nest sites vary: high in trees, in dense farm groves (sometimes several miles from water), or on a platform in dense cattails or bulrushes (Nigus 1977). Eggs are usually laid in mid-May, but Provost (1947) found young hatched by 19 May 1942. Although only a few colonies have been located in Iowa, the species is fairly common in marshes in NW Iowa in the summer and presumably several colonies exist in that area. Colonies active in recent years include the following: 1978, a farm grove near Hubbard (JJD); 1979, near Beeds L. (IBL 49:110); 1982, Rush L., Osceola Co. (DCH), Jemmerson Sl. (DCH), and Grover L. (DCH).

FALL MIGRATION: Little information is available, but most birds seem to leave Iowa by late Sep or early Oct.
Late dates: Nov 1978 (NW Iowa, IBL 48:137)
Nov 1970 (Cedar Rapids, IBL 41:25)
25 Oct 1956 (Sabula, PCP)

WINTER: One was seen in Cedar Rapids on 29 Dec 1957 (IBL 28:14), and another was at Davenport on 16 and 21 Feb 1960 (**Audubon Field Notes** 14:312).

COMMENT: Although this species is probably more common in Iowa than the few known colonies would suggest, it should be carefully monitored, especially since pesticides have been shown to affect its populations elsewhere. Black-crown colonies seem to move around; there were thriving colonies at Goose L., Greene Co., in the 1960s (Faaborg 1967) and at Hottes L. in the 1970s, both sites gradually declining in numbers with changes in water conditions.



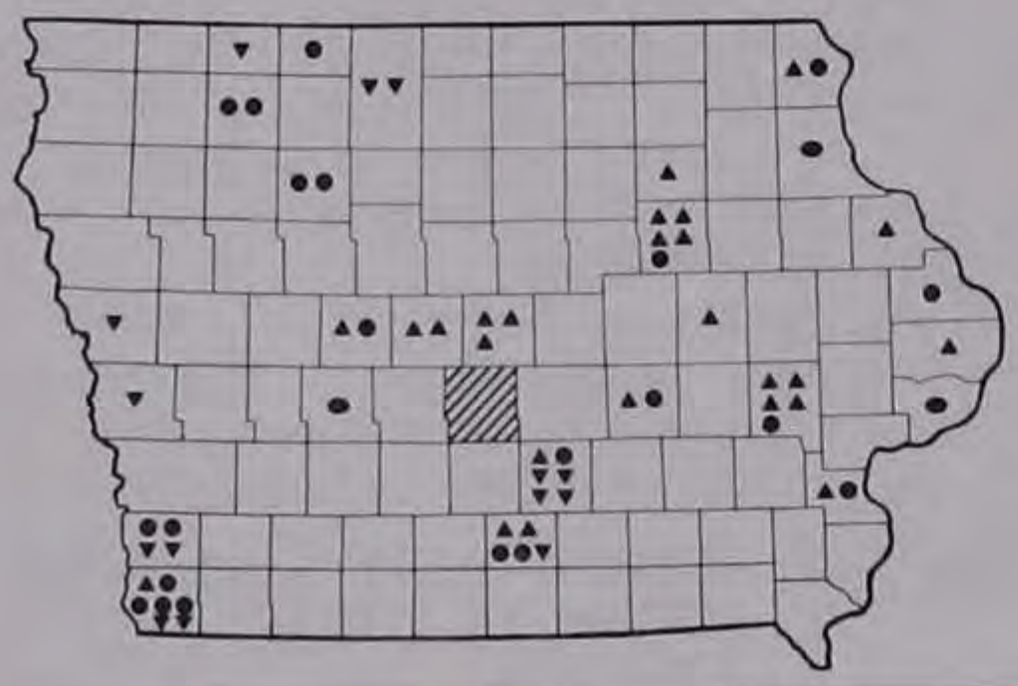
Map 6.13 Black-crowned Night-Heron nesting by county, 1960-1982.

REFERENCES:
Faaborg, J. 1967. Observations among the night herons. Iowa Bird Life 37:27-29.
Nigus, T. A. 1977. A marsh nesting colony of Black-crowned Night Herons. Iowa Bird Life 47:108-109.
Spurrell, J. A. 1918. Local bird notes at Ames, Story County, Iowa. Wilson Bull. 30:93-96.

Yellow-crowned Night-Heron, **Nycticorax violaceus**

STATUS: Regular; rare nester in the southern half of Iowa and along the Mississippi R., rare straggler elsewhere. Class I-S N.
HABITAT: Wooded river bottoms, lakes, and marshes.
SPRING MIGRATION: Most arrive in late Apr or early May.
Early dates: 31 Mar 1963 (Soper's Mill, specimen at Iowa State University)
1 Apr 1963 (Cedar Falls, IBL 33:38)
3 Apr 1963 (Des Moines, IBL 33:38)
SUMMER: Since yellow-crowns were first found nesting in Iowa in 1956 (Brown 1956), a few nests have been located in SC Iowa and along the Mississippi R. No colonies were located in an intensive survey for heronries along the Mississippi R. in 1977 (Thompson and Landin 1978), but the species could be missed easily.
FALL MIGRATION: Little information is available. Most probably leave Iowa in late Aug or Sep.
Late dates: 14 Oct 1960 (Coralville Res., Brown 1961)
4 Oct 1953 (L. Odessa, Brown 1961)
22 Sep 1970 (Fisher L., IBL 40:71)
COMMENT: Most records are from S Iowa (Map 6.14). It probably nests in other localities, but the remoteness of its nesting habitat makes it easy to overlook. No really large concentrations of this species have been noted, most records consisting of only a few individuals. Many of the sightings are reported from late summer and probably involve birds undergoing postbreeding dispersal.
REFERENCES:

Brown, W. H. 1956. Yellow-crowned Night Heron nesting in the city of Des Moines. Iowa Bird Life 26:57-59.
Brown, W. H. 1961. Yellow-crowned Night Heron in Iowa. Iowa Bird Life 31:26-27.



Map 6.14 Yellow-crowned Night-Heron records, 1960-1982. The shaded county has more than 10 records.

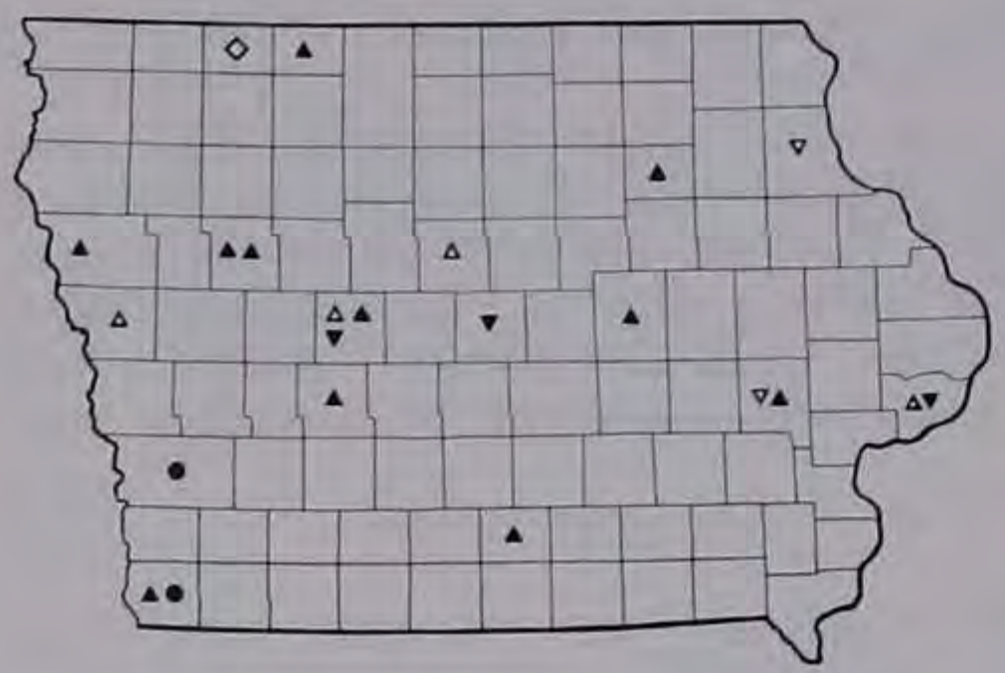
Ibises and Spoonbills, Family Threskiornithidae

This family contains 28 species worldwide, 5 of which have been reported in North America. Of the 3 species reported in Iowa, 2 are accidental and 1 is hypothetical. Ibises have a downward curved bill and generally probe in the mud for food, while the spoonbills have a bill that is flattened and expanded at the end to sift small organisms from the water. Both ibises and spoonbills are colonial nesters and commonly associate with herons and egrets.

White-faced Ibis, Dewey's Pasture, 15 May 1982, M. Conner.

Ibis species, **Plegadis sp.**

STATUS: Casual. Class I-S.
HABITAT: Marshes and shallow lakes.
SPRING MIGRATION: Sixteen of 23 dated reports of ibises (including those accepted as White-faced) are for spring, with 6 in Apr and 10 in May.
Early dates: 18 Apr 1978 (s of Russell, IBL 48:71)
19 Apr 1976 (Lake View, IBL 46:82)
26 Apr 1978 (Sweet M., IBL 48:71)
Late dates: 23 May 1963 (High L., IBL 34:19)
19 May 1963 (Salix, IBL 33:38)
18 May 1977 (Dan Green Sl., Ryan 1977)
18 May 1982 (Forney L., IBL 52:54)
SUMMER: The only record is from Forney L. on 29 and 31 Jul 1982 (IBL 52:88).
FALL MIGRATION: Six of 23 dated reports are for fall, with 1 in Aug, 4 in Sep (1 remaining into Oct, 1 with no date), and 1 in Oct.
Early dates: 10 Aug 1954 (Swan L., Johnson Co., Meyer 1954)
2 Sep 1981 (Eldridge, IBL 51:115)
11 Sep 1981 (Runnells Game A., IBL 51:115)
Late dates: 20 Oct 1964 (Goose L., Greene Co., Faaborg 1964)
1 Oct 1978 (Colo, IBL 48:137)
COMMENT: The distribution of ibis records is spread across the state (Map 6.15). There are 2 specimens: Sep 1905 from McGregor at Iowa State



Map 6.15 Ibis species records.

University (DuMont 1933) and 21 Aug 1954 from Swan L., Johnson Co., at the University of Iowa (immature, mounted, Meyer 1954). Most of the 23 records are Class III for **Plegadis** sp., but 6 are considered definitely identifiable as White-faced Ibis and 2 as probable Glossy Ibis (see the following species accounts). Both species could occur in Iowa, so it is best to consider sightings as **Plegadis** sp. unless a specific identification can be made.

REFERENCES:

Faaborg, J. 1964. An extraordinary day. **Iowa Bird Life** 34:101-102.
Meyer, A. W. 1954. Glossy Ibis at Swan Lake. **Iowa Bird Life** 24:80.
Ryan, M. R. 1977. Spring and summer observations of herons in northwest Iowa, 1977. **Iowa Bird Life** 47:96-98.

[Glossy Ibis, **Plegadis falcinellus**]

STATUS: Hypothetical. Class IV.

RECORDS: Of the many ibis records in Iowa, most cannot be identified as to species and only 2 have been rated as high as probable (Class IV) for Glossy Ibis by the Records Committee. One, seen on 8 May 1957 at Credit Island, Scott Co. (Greer 1957), lacked the red facial skin and adjacent white feathers of the White-faced Ibis. The other, seen on 2 Sep 1981 in Scott Co. (**IBL** 51:115), was said to have blue facial skin, but the light edging to this skin was not noted (Kent 1982).

COMMENT: The Glossy Ibis is more difficult to identify than the White-faced. In breeding plumage the facial skin is plumbaceous with a narrow, pale blue border that is broken behind the eye. This pale border is part of the facial skin and should not be mistaken for the white feathers of the White-faced Ibis. The White-faced does not have a pale border to the facial skin in any plumage. In the Glossy, the pale border fades in winter with the portion above the eye sometimes retained (Pratt 1976). The dark brown to black eye color is not diagnostic (see Whited-faced Ibis). In breeding season, only the ankles are carmine colored, not the whole leg as with the White-faced. Immature Glossy Ibis cannot be separated in the field from White-faced Ibis (although the immature White-faced Ibis can be identified if a red iris is seen). Iowa is in the border zone for Glossy and Whited-faced ibises. The breeding range of the Glossy Ibis includes the East Coast and Gulf Coast west to Louisiana and NE Texas. Ten Glossy and 3 White-faced records are

listed for Illinois (Bohlen 1978). Glossy Ibis is classified as hypothetical in Minnesota on the basis of 1 record (Green and Janssen 1975). Kreba (1981) has reviewed recent records listed in **Am. Birds** (volumes 25-35) for Glossy Ibis north and west of its usual range. There are 15 records for the Middlewestern Prairie Region (Ohio, Indiana, Illinois, Iowa, Missouri, Kentucky); 3 for Wisconsin; 1 for Michigan; 1 for Sioux Falls, S.D.; and Kreba adds a possible one from Saskatchewan. These data suggest Glossy Ibis as possible in Iowa but not as likely as White-faced.

REFERENCES:

Greer, E. T. 1957. Shore-birds and others in Davenport region. **Iowa Bird Life** 27:97-99.

Kreba, R. 1981. Possible sighting of Glossy Ibis in Saskatchewan. **Blue Jay** 39:220-222.

Pratt, H. D. 1976. Field identification of White-faced and Glossy ibises. **Birding** 8:1-5.

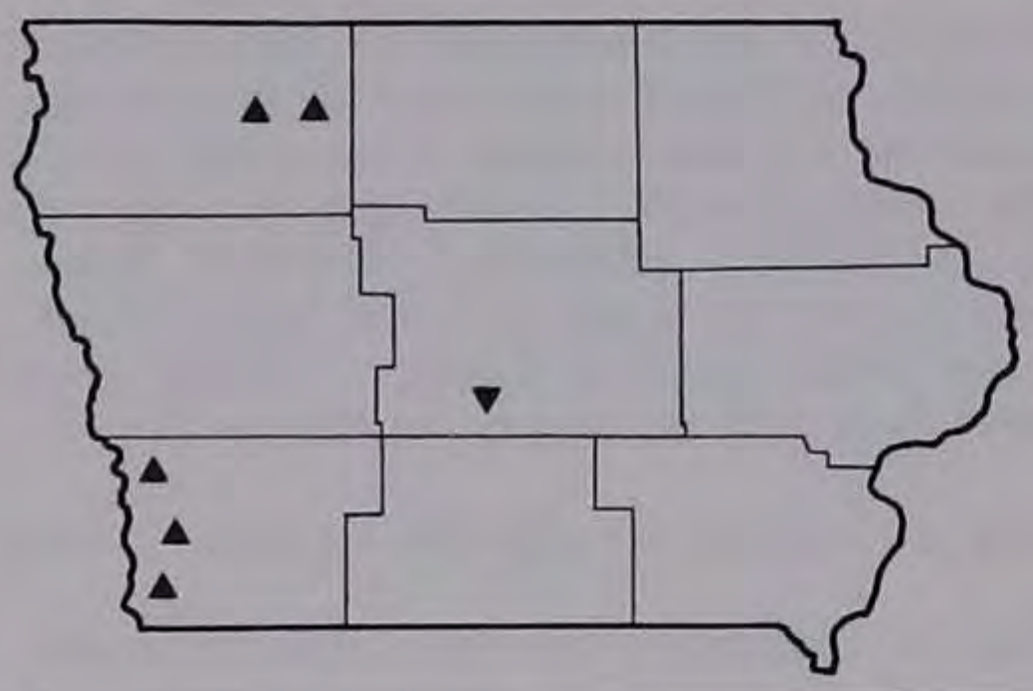
White-faced Ibis, **Plegadis chihi**

STATUS: Accidental. Class I-P.

RECORDS: Of all of the ibis records, only 6 have been judged by the Records Committee to be conclusively identified as White-faced Ibis. The 5 May records are from W Iowa and the Sep record from C Iowa (Map 6.16).

13 May 1981, L. Manawa, Pottawattamie Co., Class I-P (Kent and Silcock 1981)
13 to 18 May 1982, Forney L., Class III (IBL 52:54)
15 May 1982, Dewey's Pasture, Class I-P (IBL 52:88)
18 May 1977, Dan Green Sl., Class III (Ryan 1977)
19 May 1981, Willow Sl., Class III (IBL 51:64)
11 Sep 1981, Runnells Game A., Class III (IBL 51:115)

COMMENT: Most of the ibises seen in Iowa are probably of this species for the following reasons: (1) North and eastward movement of the western and Texas Gulf Coast species (White-faced Ibis) seems more likely than north and westward movement of the East Coast species (Glossy Ibis); (2) the breeding range of the White-faced Ibis formerly extended north to Minnesota, and there is recent evidence of return to these nesting areas (Green and Janssen 1975); and (3) many of the records, although not diagnostic, are more suggestive of White-faced than Glossy Ibis. The White-faced Ibis has reached Manitoba, Saskatchewan, and Alberta and is regularly seen in North Dakota, South Dakota, and Montana (Kreba 1981). It has nested in North and South Dakota (Kreba 1981). These data suggest that the White-faced Ibis should occur in Iowa, especially in the western part of the state. Identification of White-faced Ibis is difficult except for adults in breeding plumage (Pratt 1976). Adults in breeding plumage for both White-faced and Glossy ibis are dark chestnut with metallic green and purple reflections. Immatures and winter adults lack the overall chestnut color and have a dark brown color with metallic green dorsally and head and neck streaked with white. It is not clear how long into fall the breeding plumage is retained, so careful descriptions should be made of all birds to further the understanding of these species. White-faced Ibis in breeding plumage differs from Glossy Ibis in having (1) red facial skin, (2) red irides, (3) white feathers around the facial skin completely encircling the eye, and (4) carmine legs rather than carmine confined to the ankles. After breeding the white facial feathers disappear and the red color of



Map 6.16 White-faced Ibis records.

the facial skin and legs fade. Red irides are said to be diagnostic in both juveniles and adults in all seasons (Pratt 1976), but are difficult to see in the field. Absence of red irides does not exclude White-faced Ibis, as the color may only be evident at some angles and it may fade in some individuals. If the current trend continues, White-faced Ibis may become regular in W Iowa and could nest.

REFERENCES:

Kent, T. H., and W. R. Silcock. 1981. White-faced Ibis at Lake Manawa. **Iowa Bird Life** 51:74.

Kreba, R. 1981. Possible sighting of Glossy Ibis in Saskatchewan. **Blue Jay** 39:220-222.

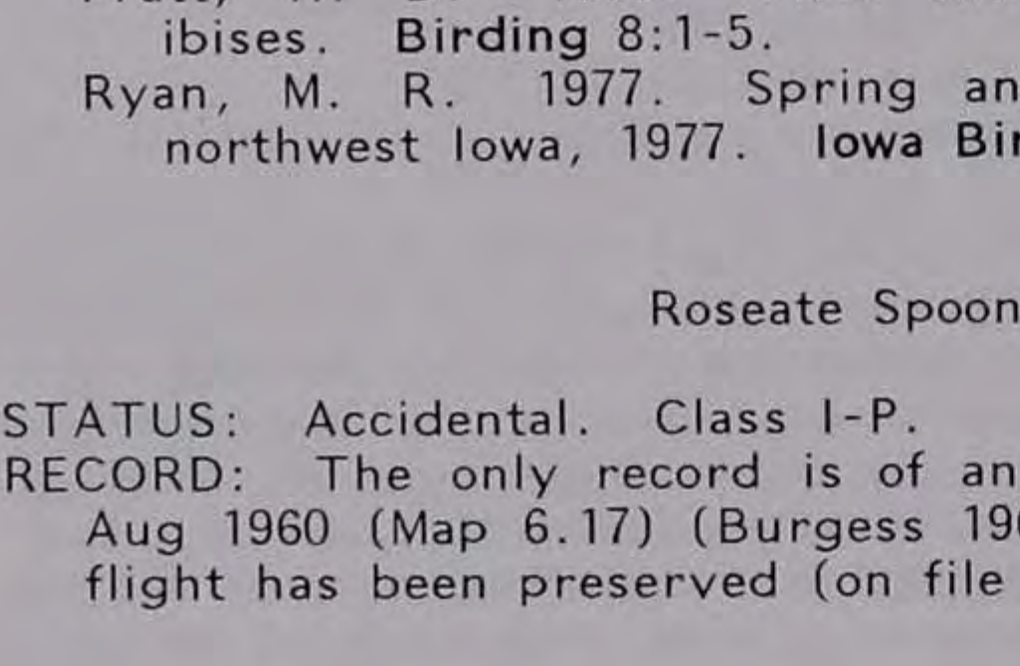
Pratt, H. D. 1976. Field identification of White-faced and Glossy ibises. **Birding** 8:1-5.

Ryan, M. R. 1977. Spring and summer observations of herons in northwest Iowa, 1977. **Iowa Bird Life** 47:96-98.

Roseate Spoonbill, **Ajaia ajaja**

STATUS: Accidental. Class I-P.

RECORD: The only record is of an immature at Union Sl. N.W.R. on 16 Aug 1960 (Map 6.17) (Burgess 1960). A short movie film of the bird in flight has been preserved (on file with Records Committee).



Map 6.17 Roseate Spoonbill record.

COMMENT: This species is an unlikely vagrant to Iowa. The Roseate Spoonbill breeds on the coast of Texas to W Louisiana and in S Florida. It is casual to Oklahoma, N Alabama, and South Carolina. The only recent nearby record is from SC Nebraska in Aug 1966 (Johnsgard 1980). There are no records for Kansas, South Dakota, Minnesota, Wisconsin, Illinois, or Indiana for the last 50 years.

REFERENCE:

Burgess, H. H. 1960. Roseate Spoonbill observed at Union Slough. **Iowa Bird Life** 30:67-68.

Storks, Family Ciconiidae

There are 17 species of storks, 2 of which have been recorded in North America. Only 1 species, the Wood Stork, nests in the United States. It is accidental in Iowa. Found mainly in the Southeast, Wood Storks disperse after the nesting season and occasionally reach the Midwest.

Wood Stork, **Mycteria americana**

STATUS: Accidental. Class III.

RECORDS: One was well described on 25 Sep 1977 in Louisa Co. (Thwaites 1977) (Map 6.18). A report of 200 in flight along the Missouri R. near Mondamin, Harrison Co., on 9 Sep 1931 (Grange 1932) was considered unlikely (Class VI) by the Records Committee. Although the observer was familiar with this species from Florida, the lack of description leaves open the possibility that they were American White Pelicans, a species that occurs at this date and location, often in large flocks. Wood Stork was also mentioned in an early Iowa list (Allen 1870) without reference to an Iowa record.

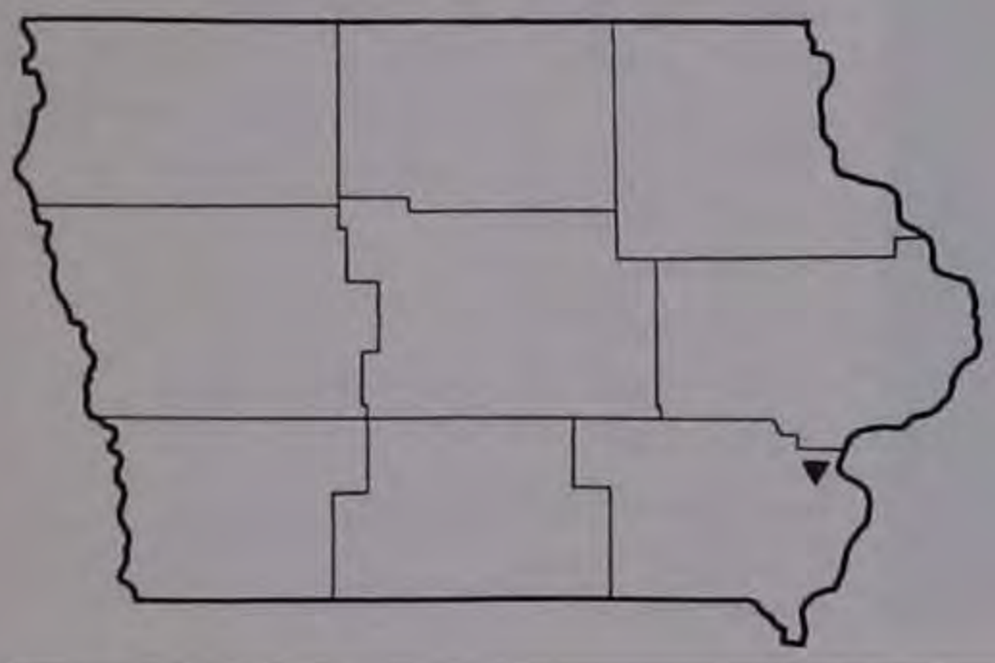
COMMENT: This southeastern species is a very rare northward vagrant to the Midwest, with records from May to Oct (most in Aug-Sep). The few recent records are from South Dakota, Wisconsin, Illinois, Indiana, and Ontario. There is also a well-substantiated 1925 record from s of Omaha (Gifford 1925).

REFERENCES:

Gifford, H. 1925. Occurrence of the Wood Ibis near Omaha, Nebraska. **Wilson Bull.** 37:219.

Grange, W. B. 1932. A large flock of Wood Ibises in Harrison County, Iowa. **Wilson Bull.** 44:43.

Thwaites, M. A. 1977. Report on file with Records Committee.



Map 6.18 Wood Stork record.

ORDER ANSERIFORMES

Ducks, Geese, and Swans, Family Anatidae

This family consists of about 150 species, including 59 species that have been reported in North America. Of the 42 Iowa species, 29 are regular, 1 is casual, 6 are accidental, 1 is extirpated, 1 is hypothetical, 1 is Class V, and 3 are Class VI. They are found worldwide except at very high latitudes. Most are highly aquatic, feeding on aquatic vegetation, invertebrates, and fish; but some species are largely terrestrial and feed on grain and plants. In general, they are heavy bodied and have webbed feet and a flattened bill. Three of the Iowa species are common nesters in the state (Wood Duck, Blue-winged Teal, Mallard) and another 5 (Canada Goose, Northern Pintail, Northern Shoveler, Redhead, Ruddy Duck) nest regularly in fair numbers, especially in NW and NC Iowa. Five other species nest most years but in very small numbers (Gadwall, Green-winged Teal, Hooded Merganser, Canvasback, Ring-necked Duck), while 4 others have been reported nesting in Iowa only very rarely (American Black Duck, American Wigeon, Lesser Scaup, Bufflehead).

There are a number of studies on waterfowl migration in Iowa that have been useful in compiling the species reports (Low 1939, 1941; Provost 1946; Glover 1948, 1951; Teer 1952; Morrissey 1967-1968; Thompson 1973; Thornburg 1973; Musgrove and Musgrove 1977).

Wood Duck,
A. B. Thiermann.

Northern Shoveler,
Central Iowa,
C. Kurtz.

[Fulvous Whistling-Duck, **Dendrocygna bicolor**]

STATUS: Class V.
RECORDS: There are 2 reports, both lacking sufficient descriptive detail to verify the identification. A bird shot in the Estherville-Spirit Lake area in the fall of 1931 was reported on the basis of an incomplete secondhand description (Roberts 1932). The other report was from Dewey's Pasture, Palo Alto Co., on 11 Jun 1963 (Horak and Kaufmann 1965).
COMMENT: Most nearby states have 1 to 3 records of this southern and eastern species, almost half from May and Oct and the rest scattered throughout the year. Since this species is maintained in captivity, it is nearly impossible to establish whether or not the birds seen are escapees (Ryan 1972).
REFERENCES:

Horak, G. J., and G. W. Kaufmann. 1965. Fulvous Tree Duck in Iowa. **Iowa Bird Life** 35:29.
Roberts, F. L. R. 1932. Two Iowa duck records. **Wilson Bull.** 44:180.

[Black-bellied Whistling-Duck, **Dendrocygna autumnalis**]

STATUS: Hypothetical. Class IV.
RECORD: The only Iowa record is a female captured and photographed at Zirbel Sl., Cerro Gordo Co., on 8 May 1977 (Barratt 1977).
COMMENT: This species breeds on the coast of S Texas and both coasts of Mexico. The Texas population is migratory, wintering further south on the Mexican coast. They arrive on the breeding range in Mar-Apr and leave in Oct-Nov. Black-bellied Whistling-Ducks are not frequent vagrants. There are a handful of records for N Texas, Kansas, Missouri, and Illinois, all from Apr to Sep. This species is common in captivity. Although the Iowa bird was said to show no evidence of feather wear or banding, there is no way to exclude the possibility that it was an escapee (Ryan 1972). The frequency in captivity and rarity of vagrancy make it nearly impossible to prove the natural occurrence of this species in Iowa.
REFERENCE:

Barratt, B. 1977. Black-bellied Whistling Duck, a new species for Iowa. **Iowa Bird Life** 47:104-106.

Tundra Swan, **Cygnus columbianus**

STATUS: Regular; uncommon migrant along Mississippi R. in NE Iowa, rare migrant in rest of state. Class I-S.
HABITAT: Rivers, lakes, and marshes.
SPRING MIGRATION: Most are seen from late Mar through mid-Apr.
Early dates: 28 Feb 1975 (Lansing, IBL 45:56)
13 Mar 1976 (Riverton A., IBL 46:56)
16 Mar 1964 (Jefferson, IBL 34:45)
16 Mar 1981 (Willow Sl., IBL 51:64)
Late dates: 30 May 1977 (Dubuque, IBL 47:57)
15 May 1974 (Dan Green Sl., Crawford 1975)
3 May 1977 (Sweet M., IBL 47:57)
FALL MIGRATION: They are generally less common in fall than in spring. Most records are of only a few birds, but 570 were seen at Lock and

Dam 9 on 19 Nov 1982 (IBL 52:119) and 180 were there on 16 Nov 1980 (IBL 51:26). Most are seen from mid- to late Nov.

Early dates: 3 Sep 1961 (n of Clinton, **Audubon Field Notes** 16:36)
4 Oct 1969 (De Soto N.W.R., IBL 39:80)
16 Oct, year not given (Davenport, PCP)

Late dates: 21 Dec 1963 (Buffalo Center, **Audubon Field Notes** 18:237)
17 Dec 1975 (Coralville Res., IBL 46:24)
6 Dec 1979 (Lock and Dam 9, IBL 50:25)

WINTER: One was reported at Clinton on 3 Jan 1981 (IBL 51:10), 3 were at Buffalo Center on 21 Dec 1963 (**Audubon Field Notes** 18:237), 1 was at Red Rock Res. on 19 Jan 1982 (IBL 52:25), and 1 was at Decorah on 19 Dec 1981 (IBL 52:16).

COMMENT: Tundra Swans migrate from their East Coast wintering grounds to the arctic, with flocks commonly stopping in NE Iowa in spring and fall.

Trumpeter Swan, **Cygnus buccinator**

STATUS: Extirpated; formerly uncommon nester. Class I-S N.

RECORDS: Anderson (1907) summarized numerous records from the 1800s including a nesting record from Hancock Co. in 1883. Nesting was said to have occurred at the headwaters of the Des Moines R. as late as 1875. Spurrell (1917) said the last nesting in Sac Co. was about 1870. A nest was reported in Oakland Valley, Pottawattamie Co., in 1871 (Banko 1960). The last record for Iowa was on 20 Sep 1897 along the Missouri R. (Anderson 1907). The only known specimen is from Sac Co. (DuMont 1933) and is now at a museum in Rockwell City. There is a possible recent record of an immature at Riverton A. on 18 Dec 1977 (Silcock 1978).

COMMENT: Trumpeter Swans have been successfully reintroduced into Nebraska, South Dakota, and Minnesota and might be expected to be introduced or be seen as migrants in Iowa. The similarity to Tundra Swan makes identification difficult.

REFERENCES:

Banko, W. E. 1960. **The Trumpeter Swan.** Washington, D.C.: North Am. Fauna 63, 214 p.

Silcock, W. R. 1978. Possible immature Trumpeter Swan in Fremont County. **Iowa Bird Life** 48:52-53.

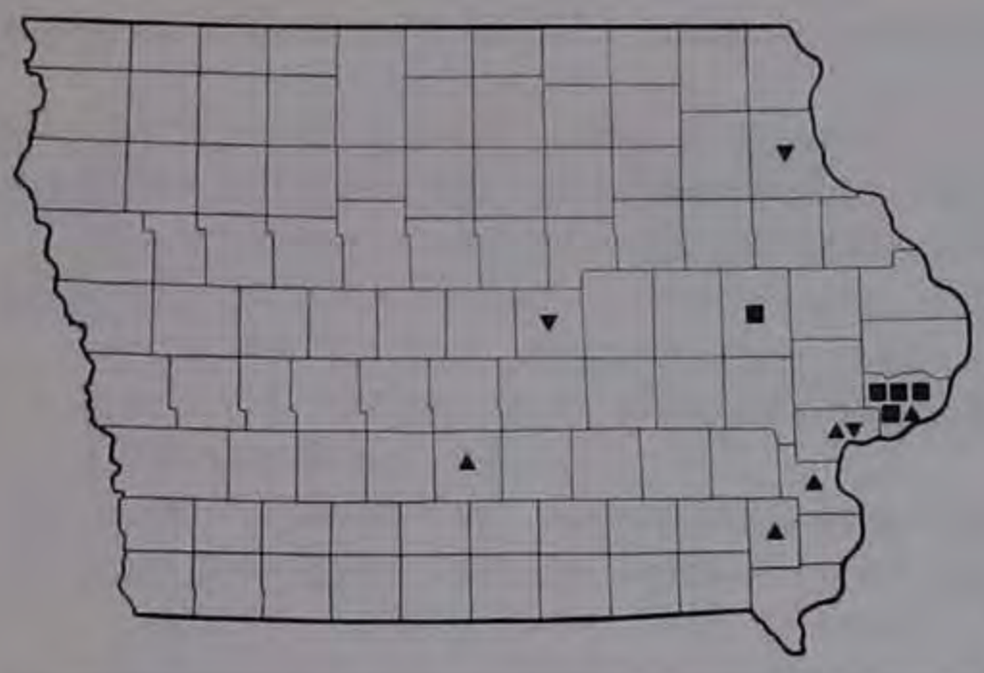
Mute Swan, **Cygnus olor**

STATUS: Regular; rare migrant and winter visitor. Class I-P.

HABITAT: Lakes and rivers.

RECORDS: There are 12 records of Mute Swans in Iowa. The first was 1 shot in Muscatine Co. in 1962 (Musgrove and Musgrove 1977) and the second was a pair that appeared at the New London Country Club, Henry Co., on 24 Mar 1973 and nested, the nest being flooded out (IBL 43:46). The records are mainly for E Iowa (Map 6.19), from Sep to Apr.

Early dates: 11 Sep 1981 (Marshall Co., IBL 51:115)
7 Oct 1978 (Guttenberg, IBL 48:137)
Nov 1962 (Muscatine Co., Musgrove and Musgrove 1977)



Map 6.19 Mute Swan records.

Late dates: 10 Apr 1979 (Warren Co., IBL 49:58)
early Apr 1977 (Cone M., IBL 47:57)
24 Mar 1973 (New London, IBL 43:46)

COMMENT: This species is common in captive collections, and feral populations are well established along the Atlantic Coast and in several midwestern states, notably Michigan. Whether the swans seen in Iowa represent local escapees or true wild birds in unknown. The records are from E Iowa, with most along the Mississippi R. Wintering birds in Scott Co. were singles except for a pair in 1974 (IBL 44:20).

Greater White-fronted Goose, **Anser albifrons**

STATUS: Regular; common migrant in W Iowa, uncommon migrant in the eastern half of the state. Class I-S.

HABITAT: Lakes and reservoirs and nearby agricultural fields.

SPRING MIGRATION: Most are reported from mid-Mar through early Apr.

Early dates: 15 Feb 1976 (SW Iowa, IBL 46:24)
27 Feb 1976 (Iowa City, IBL 46:56)
27 Feb 1981 (Willow Sl., IBL 51:31)

Late dates: 30 May 1966 (Goose L., Greene Co., Brown 1971)
30 May 1977 (Dan Green Sl., JJD)
30 May 1980 (Willow Sl., IBL 50:45)

SUMMER: The only record is a crippled bird at Union Sl. N.W.R. from 29 May to 27 Jul 1966 (Peterson 1967).

FALL MIGRATION: Most records are from Oct. In general, there are fewer fall records than spring records.

Early dates: 24 Aug 1971 (Lamoni, IBL 41:110)
21 Sep 1972 (Red Rock Res., IBL 42:96)
26 Sep 1977 (Red Rock Res., IBL 47:143)

Late dates: 17 Nov 1970 (Des Moines, IBL 41:26)
13 Nov 1978 (L. Odessa, IBL 48:137)

WINTER: The only records are 1 at Amana 6 Jan 1979 (IBL 49:24) and 1 wintering at Rock Valley in 1981-1982 (IBL 52:25). White-fronts also were seen on CBCs at De Soto N.W.R. in 1977, 1979, 1981, and 1982; at Shenandoah in 1978, 1979, and 1981; and at Des Moines in 1982, the dates ranging from 15 to 22 Dec.

COMMENT: This species is sometimes seen mixed in with the large flocks of Snow and Canada geese that migrate through Iowa, especially along the

Missouri R. in W Iowa. Next to the Ross Goose, it is the least common goose in Iowa.

REFERENCE:

Peterson, D. 1967. Summer goose observations at Union Slough National Wildlife Refuge. **Iowa Bird Life** 37:23.

Snow Goose, **Chen caerulescens**

STATUS: Regular; abundant migrant, especially in W Iowa, rare in summer, common some years in winter, especially in SW Iowa. Class I-S.

HABITAT: Lakes, rivers, and marshes; commonly feeds on harvested or flooded fields.

SPRING MIGRATION: Spring migrants usually arrive in early Mar, with a peak in late Mar or early Apr. A few migrants linger on to late Apr or early May.

SUMMER: In recent years, there have been several records of birds summering in Iowa, some probably representing sick or injured birds. These include 2 at Union Sl. N.W.R. on 3 and 6 Jun 1966 (IBL 36:82); 1 at Anderson L. until 26 Jul 1970 and joined by a second bird on 4 Jul (IBL 40:71); 9-15 at Dan Green Sl. from 10 May to 30 Jul 1974 (Crawford 1975); 15 in Fremont Co. on 4 Jun 1978 (IBL 48:97); 1 at Rice L., Worth Co., on 25 Jun 1979 (IBL 49:82); 30 that summered at Forney L. in 1979 (IBL 49:82); and 1 at De Soto N.W.R. on 26 Jul 1981 (IBL 51:99). There is no evidence that Snow Geese have ever nested in Iowa.

FALL MIGRATION: Early migrants start appearing in late Sep or early Oct. Their numbers gradually build up to peak numbers in mid- to late Nov. Huge concentrations are especially noticeable in W Iowa at De Soto N.W.R., Forney L., and Riverton A., where peak numbers commonly exceed 100,000. In mild falls these concentrations may be delayed in their buildup and may remain into Jan.

Early dates: 28 Aug 1963 (Hamburg, IBL 33:86)
21 Sep 1967 (Union Sl. N.W.R., IBL 37:97)
23 Sep 1976 (Hamburg, IBL 46:112)

WINTER: Formerly, Snow Geese probably seldom wintered in Iowa. With the establishment of numerous refuges, flocks have begun to winter in Iowa, especially near Shenandoah in SW Iowa, in years when there is light snow cover. Snow Geese have been reported on CBCs 19 of 23 years, 1960-1982. Most reports are from the southern half of Iowa, especially in the SW corner of the state. Although some of these birds probably move south during severe weather in Jan, the 3,000 in SW Iowa on 21 Jan 1968 (IBL 38:16), 12,000-15,000 in SW Iowa on 15 Feb 1976 (IBL 46:24), and 100,000 in Fremont Co. in mid-Jan 1980 (IBL 50:25) probably represent wintering birds. Small numbers wintered in SW Iowa in 1980-1981 (IBL 51:31).

COMMENT: The concentrations of migrating Snow Geese in spring and especially in fall in W Iowa are a national wildlife spectacle. Musgrove and Musgrove (1947) claimed that the blue form outnumbered the white one 20:1, but the white phase is predominant now. They also mention that few Snow Geese stopped in Iowa in fall, but with the establishment of several large refuges in the Missouri R. valley, the fall migration through Iowa is now much more leisurely.

REFERENCE:

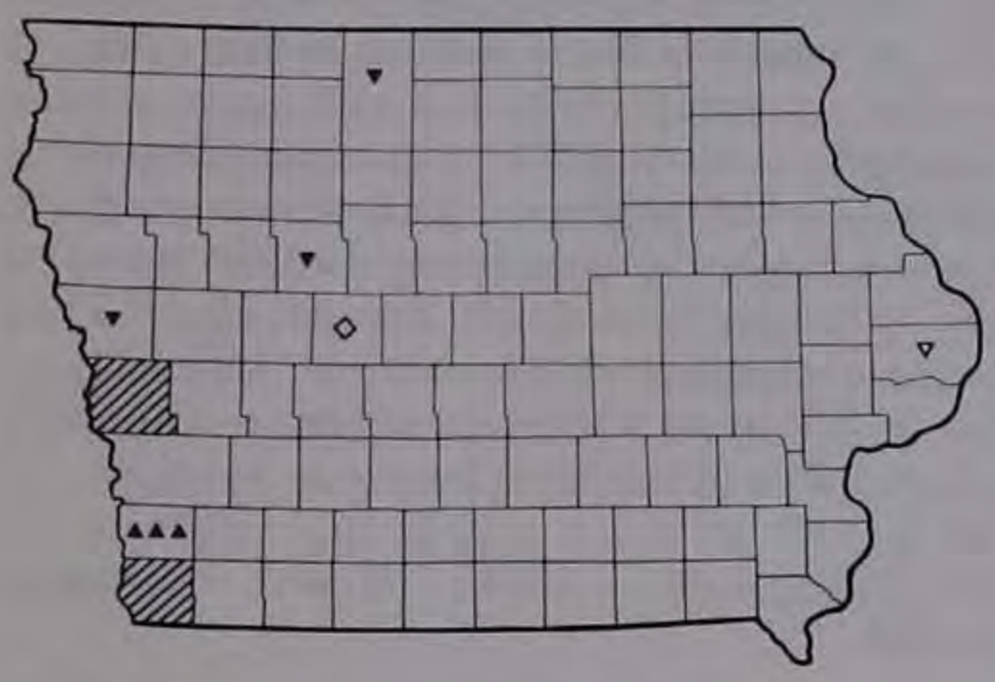
Musgrove, J. W., and M. R. Musgrove. 1947. The goose flight of western Iowa. **Iowa Bird Life** 17:64-70.

Ross' Goose, Chen rossii

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Found in flocks of Snow Geese, especially in refuges and agricultural land along the Missouri R.
SPRING MIGRATION: There are only 8 records, all from SW Iowa and all since 1977, but it probably occurs regularly in late Mar and early Apr. Records range from 26 Feb 1982 (Riverton A., IBL 52:25) to 3 Apr 1982 (Shenandoah, IBL 52:54).
FALL MIGRATION: Over 25 recent records are available, most during Nov and mostly from De Soto N.W.R. and Forney L.

Early dates: Oct 1962 (Forney L., Brown 1971)
31 Oct 1966 (De Soto N.W.R., Brown 1971)
31 Oct 1981 (De Soto N.W.R., IBL 51:116)
Late dates: 23 Dec 1967 (Forney L., Brown 1971)
22 Dec 1979 (De Soto N.W.R., IBL 50:15)
25 Nov 1964 (Union Sl. N.W.R., Brown 1971)
25 Nov 1980 (De Soto N.W.R., IBL 51:26)

COMMENT: This species is regular in W Iowa and rare elsewhere in Iowa (Map 6.20). The only E Iowa record is 1 at Clinton on 7 Nov 1945 (Brown 1971). It is easily overlooked in the large flocks of Snow Geese that concentrate along the Missouri R. Its smaller size, shorter bill, and lack of a "grin patch" on the bill help distinguish it from the Snow Goose (Robinson 1982). Probably the best places to see it are at De Soto N.W.R., Forney L., and Riverton A. in late Oct and Nov. Prevett and MacInnes (1972) estimated that there were about 0.8 Ross' Geese per 1,000 Snow Geese at De Soto N.W.R. in fall 1968 and 1969. A bird shot at Forney L. on 30 Sep 1967 was intermediate between Ross' and Snow goose (Trauger et al. 1971).



Map 6.20 Ross' Goose records. The shaded counties have more than 10 records.

REFERENCES:

Prevett, J. P., and C. D. MacInnes. 1972. The number of Ross' Geese in central North America. **Condor** 74:431-438.

Robinson, J. C. 1982. Mid-continent observations of Ross' Geese. **Iowa Bird Life** 52:3-5.

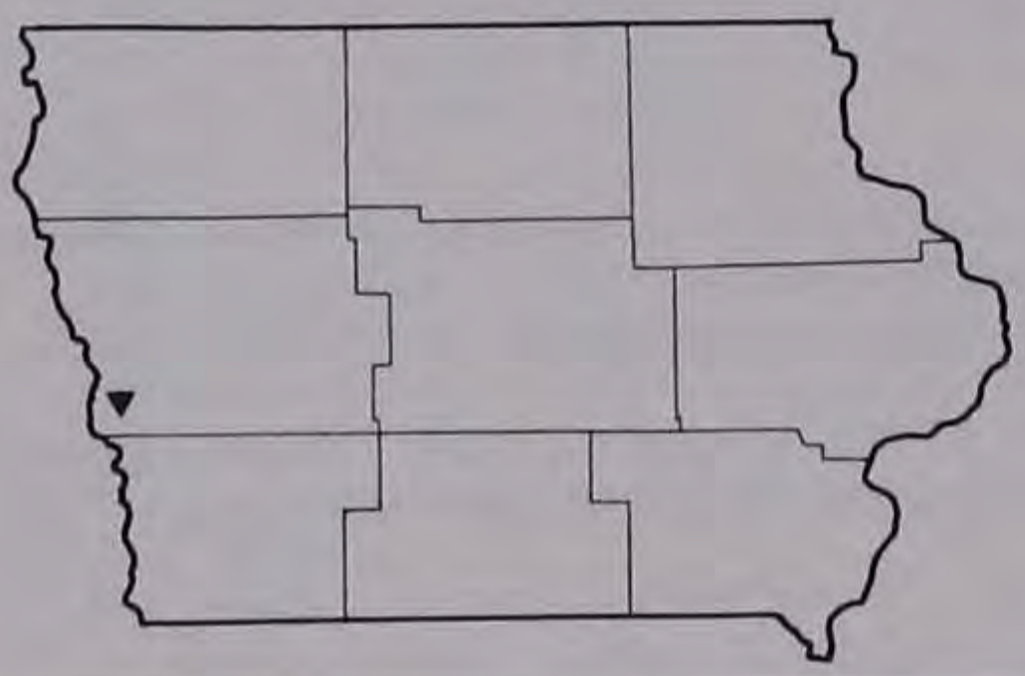
Trauger, D. L., A. Dzubin, and J. P. Ryder. 1971. White geese intermediate between Ross' Geese and Lesser Snow Geese. **Auk** 88:856-875.

[Emperor Goose, Chen canagica]

STATUS: Class VI.
RECORDS: There are 2 old reports, both lacking any description of the bird. One was shot near Algona in the spring of 1881 (Smith 1882) and the other in Johnson Co. in the fall of 1887 (Nutting 1893). Anderson (1907) doubts the second record, as it is based on a secondhand description.
COMMENT: This species is normally confined to coastal Alaska and Siberia. It is a fairly regular vagrant to the West Coast, but is not known to occur in the Midwest.
REFERENCE:
Smith, J. G. 1882. The Emperor Goose in Iowa. **Forest and Stream** 18:107.

Brant, Branta bernicla

STATUS: Accidental. Class I-S.
RECORDS: One of the eastern race, **B. b. hrota**, was shot at De Soto N.W.R., Harrison Co., on 2 Nov 1980 (Map 6.21). The specimen was mounted and a photograph obtained (Dinsmore et al. 1981). Another record at Ingham L., Emmet Co., in Oct 1970 (Musgrove and Musgrove 1977) was judged probable by the Records Committee. There are about 12 references to this species prior to 1930 (James 1823; Allen 1870; Anderson 1907; Spurrell 1917; Fenton 1916; Gabrielson 1917b; DuMont 1931), but DuMont (1933) was doubtful of these records and all were judged to be unsubstantiated or doubtful by the Records Committee.
COMMENT: Brant are rare but regular transients throughout the central states, seen largely in Oct to Dec but sometimes in Mar to Jun as well. Both the eastern pale-bellied form **(B. b. hrota)** and the western dark-bellied form **(B. b. nigricans)** have been recorded in approximately equal numbers. Both breed in the high arctic, overlapping in C Canada where there is some hybridization. The western population migrates coastally around Alaska to the Pacific Northwest and Canada. The eastern form leaves the nesting grounds in Sep-Oct and mostly migrates southeastward via Hudson and James bays to the C Atlantic Coast of the U. S. This route presumably produces most of the midwest vagrants. The dark-bellied vagrants may come from the area of overlap, through hybridization, pairing, or merely socialization with the eastern form.
REFERENCE:
Dinsmore, J. J., S. Dinsmore, and M. Dinsmore. 1981. Brant specimen from Iowa. **Iowa Bird Life** 51:125-126.



Map 6.21 Brant record.

Canada Goose, **Branta canadensis**

STATUS: Regular; abundant migrant throughout, abundant nester in several areas, mainly in N Iowa, common in winter, especially in S Iowa. Class I-S N.

HABITAT: Lakes, marshes, and rivers, commonly feeds in fields.

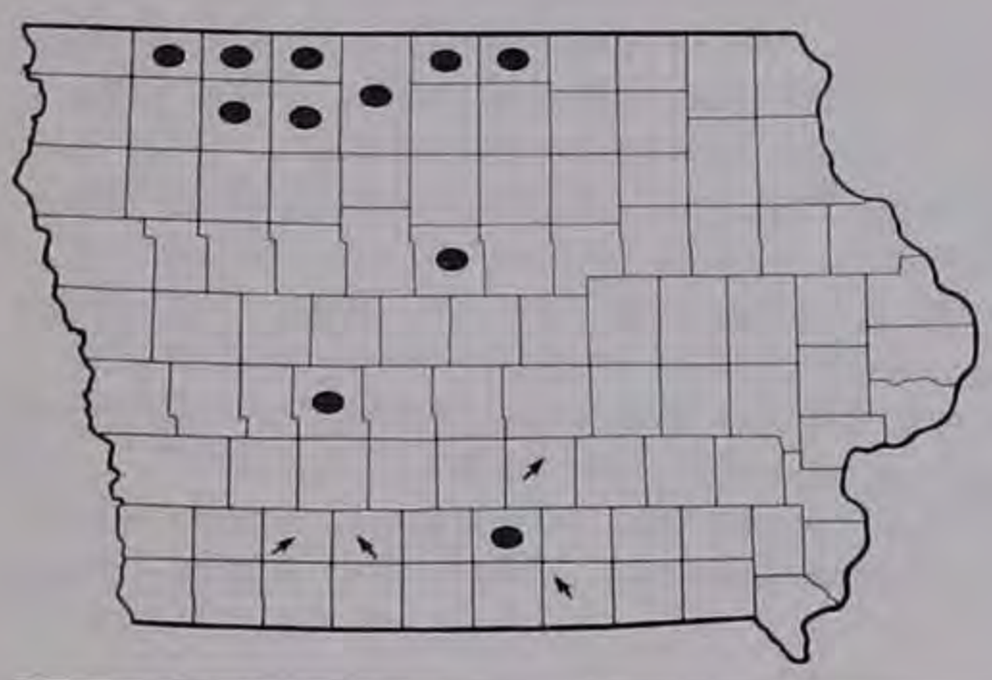
SPRING MIGRATION: Migrants appear as soon as snow starts melting, generally in early to mid-Mar, and usually peak before the end of Mar. It is not uncommon for early migrants to arrive in mid- or late Feb. Most migrants have gone by late Apr, but some may linger into May.

SUMMER: A common nester in several areas, especially near Spirit Lake, Lake Mills, Estherville, and at Colyn A. and Bays Branch in Lucas and Guthrie counties (Map 6.22). Eggs are laid in late Mar or early Apr and usually hatch in early to mid-May (Nigus and Dinsmore 1980). They nest on various artificial nest baskets, barrels, islands, and rafts, as well as on natural islands and muskrat lodges. Nesting success has been high, and the population has expanded rapidly since being reestablished in Iowa in the 1960s (Bishop and Howing 1972; Bishop 1978). A few individuals may summer at locales outside the nesting range.

FALL MIGRATION: Some migrants appear in mid-Sep, with a steady buildup through mid-Oct. Peak numbers usually occur in late Oct, and most migrants are gone by early Dec. Migration peaks commonly number in the thousands.

WINTER: Starting in 1960, Canada Geese have been reported increasingly often, and in larger numbers, on CBCs. Since then, they have been reported on CBCs in 19 of 23 years from all regions of Iowa. Reports are most common from S Iowa and along the Mississippi R. Many of the birds may leave Iowa in Jan, but there are numerous recent reports of Canada Geese wintering in Iowa, including some in N Iowa.

COMMENT: Canada Geese nested in Iowa at the time of settlement but gradually were extirpated, disappearing about 1910 (Bishop 1978). Captive flocks were used to reestablish breeding populations in Iowa in the 1960s and 1970s. Starting with birds introduced near Estherville in 1966, breeding populations have been established at several other locales and have gradually spread out into surrounding land. At least 3 subspecies of Canada Geese occur in Iowa. Nesting birds are the Giant Canada Goose, subspecies **maxima**. Other forms that occur are the medium-sized Interior Canada Goose, **B. c. interior**, and the diminutive Richardson's Canada Goose, **B. c. hutchinsii**. Most of these birds winter near Swan L. N.W.R. in NC Missouri.



Map 6.22 Canada Goose nesting by county, 1960-1982, and recent release sites (arrows).

REFERENCES:
Bishop, R. A. 1978. Giant Canada Geese in Iowa. **Iowa Conserv.** 37 (10):5-12.
Bishop, R. A., and R. G. Howing. 1972. Re-establishment of the Giant Canada Goose in Iowa. **Proc. Iowa Acad. Sci.** 79:14-16.
Nigus, T. A., and J. J. Dinsmore. 1980. Productivity of Canada Geese in northwestern Iowa. **Proc. Iowa Acad. Sci.** 87:56-61.

Wood Duck, **Aix sponsa**

STATUS: Regular; common migrant and nesting species, rare in winter. Class I-S N.
HABITAT: Lakes, rivers, marshes, and wooded bottomlands.
SPRING MIGRATION: Early migrants generally arrive in late Mar, with the peak of migration in early to mid-Apr.
Early dates: 25 Feb 1980 (De Soto N.W.R., JCR)
2 Mar 1973 (Iowa City, FWK)
3 Mar 1966 (Upper Iowa R., **IBL** 36:48)
SUMMER: Wood Ducks are a common nesting species throughout Iowa, especially in the wooded bottomland adjacent to the Mississippi R. and other large rivers. Nests generally are initiated in mid-Apr or early May, and eggs hatch by late May or Jun, but some nests are active in Jun and Jul (Leopold 1951).
FALL MIGRATION: By midsummer, some Wood Ducks begin flocking. Such flocks are still obvious in Sep and Oct (Martin and Haugen 1960; Hein 1961). The peak of migration generally is mid-Oct, and most birds are gone by mid-Nov.
WINTER: Since 1960, Wood Ducks have been reported on CBCs in 19 of 23 years, with most reports coming from E Iowa. Many of these probably do not overwinter, but 2 at Red Rock Res. on 30 Jan 1972 (**IBL** 42:23), 1 at Cedar Rapids on 24 Jan 1973 (**IBL** 43:25), 2 at Des Moines on 28 Jan 1974 (**IBL** 44:20), 1 at Davenport on 9 Feb 1977 (**IBL** 47:18), 1 at De Soto N.W.R. on 25 Feb 1980 (**IBL** 50:25), 2 at Cedar Falls in Jan 1981 (**IBL** 51:31), and singles in Rock Valley and Waterloo in 1981-1982 (**IBL** 52:25) were all probably wintering birds.
COMMENT: Once considered rare in Iowa, the Wood Duck has made a comeback and now is 1 of the 3 most abundant nesting ducks in Iowa. Restrictive hunting laws and nest-box programs both have probably aided the population increase (Schreiner and Hendrickson 1951; Dreis and Hendrickson 1952). Woodies banded in Iowa spread out in all directions after the breeding season, but most are recovered in states to the north or south of Iowa (Stewart 1977).

REFERENCES:
Dreis, R. E., and G. O. Hendrickson. 1952. Wood Duck production from nest-boxes and natural cavities on the Lake Odessa area, Iowa, in 1951. **Iowa Bird Life** 22:19-22.
Hein, D. 1961. Wood Duck roosting flights at Paint Creek, Iowa. **Proc. Iowa Acad. Sci.** 68:264-270.
Leopold, F. 1951. A study of nesting Wood Ducks in Iowa. **Condor** 53:209-220.
Martin, E. M., and A. O. Haugen. 1960. Seasonal changes in Wood Duck roosting flight habits. **Wilson Bull.** 72:238-243.
Schreiner, K. M., and G. O. Hendrickson. 1951. Wood Duck production aided by nesting boxes Lake Odessa, Iowa, in 1950. **Iowa Bird Life** 21:6-10.

Stewart, P. A. 1977. Radial dispersal and southward migration of Wood Ducks banded in Iowa. **Iowa Bird Life** 47:48-50.

Green-winged Teal, **Anas crecca**

STATUS: Regular; common migrant, rare in winter, uncommon summer visitant and occasional nester. Class I-S N.
HABITAT: Lakes, rivers, and marshes.
SPRING MIGRATION: Early migrants usually arrive in mid-Mar, with a peak in migration in early to mid-Apr. Two at Willow Sl. on 20 Feb 1981 (IBL 51:31) were very early. Most migrants are gone by mid-May.
SUMMER: There are numerous records of small numbers seen in various parts of Iowa; e.g., 2 at Sweet M. on 14 Jun 1978 (IBL 48:97), 8 at Forney L. on 2-3 Jun 1978 (IBL 48:97), and 2 at Rush L., Osceola Co., on 23 Jun 1978 (IBL 48:97). Some of these probably are breeding birds, but few actual nest records are available for Iowa. Brown (1971) lists records of broods being seen in Dickinson, Emmet, Fremont, and Greene counties in 1965 and 1966. They also nested at Dewey's Pasture several times from 1965 to 1973 (Weller 1979).
FALL MIGRATION: Early migrants may arrive in late Aug (25 at Iowa City on 27 Aug 1975, IBL 45:92) or early Sep (100 at Big Wall L. and 150 at W. Twin L. on 10 Sep 1963, IBL 33:87), with a gradual buildup to a peak in mid- or late Oct. Most leave by mid-Nov or early Dec.
WINTER: Green-winged Teal have been seen on CBCs at various locations, mainly in S Iowa, in 17 of 23 years, 1960-1982. The most seen was 258 on the 1979 CBC at Shenandoah (IBL 50:16). Some probably winter, such as 1 at Harpers Ferry on 20 Jan 1965 (IBL 35:24), 1 in Fremont Co. on 13 Jan 1981 (IBL 51:31), and 1 at Cedar Falls on 8 Feb 1981 (IBL 51:31).
COMMENT: Although this species is common in Iowa, little data are available on its migration or nesting in the state.
REFERENCE:

Weller, M. W. 1979. Birds of some Iowa wetlands in relation to concepts of faunal preservation. **Proc. Iowa Acad. Sci.** 86:81-88.

American Black Duck, **Anas rubripes**

STATUS: Regular; uncommon in winter, especially in E Iowa, uncommon migrant, rare in summer. Class I-S N.
HABITAT: Lakes, rivers, and marshes.
SPRING MIGRATION: Few records are available. Most generally arrive in mid-Mar, with a peak by late Mar or early Apr. Most are gone by early May, but a few remain to late May, such as 1 at Dan Green Sl. on 28 May 1979 (IBL 49:58) and 1 at Riverton A. on 20 May 1981 (IBL 51:64).
SUMMER: The only nesting records are 2 nests found in Buena Vista Co. in 1888 (Crone 1890), a nest at Trumbull L. in Jun 1933 (Bennett 1934), an adult with young along the Mississippi R. (Musgrove and Musgrove 1977), and an adult with 3 young near Ruthven on 13 Jun 1980 (Schaufenbuel 1981). An adult was seen at Dan Green Sl. on 5 Jun 1980, but there was no evidence it was nesting (IBL 50:74).
FALL MIGRATION: Migration generally starts in Sep, with a gradual buildup during the fall until numbers peak just before freeze-up in Nov or early Dec. The 8 seen near Cambridge on 8 Sep 1966 (IBL 36:103) were very early.

WINTER: American Black Ducks have been reported on CBCs yearly since 1960, most commonly in E Iowa along the Mississippi R. Many of these winter in Iowa; e.g., 2 at Bays Branch on 17 Jan 1980 (IBL 50:25), 1 at De Soto N.W.R. on 25 Feb 1980 (IBL 50:25), 2 at Lansing on 1 Feb 1980 (IBL 50:25), 2 at Davenport on 23 Feb 1980 (IBL 50:25), 20 at Lansing on 10 Jan and 14 Feb 1981 (IBL 51:31), and 10 in Waterloo in 1981-1982 (IBL 52:26).

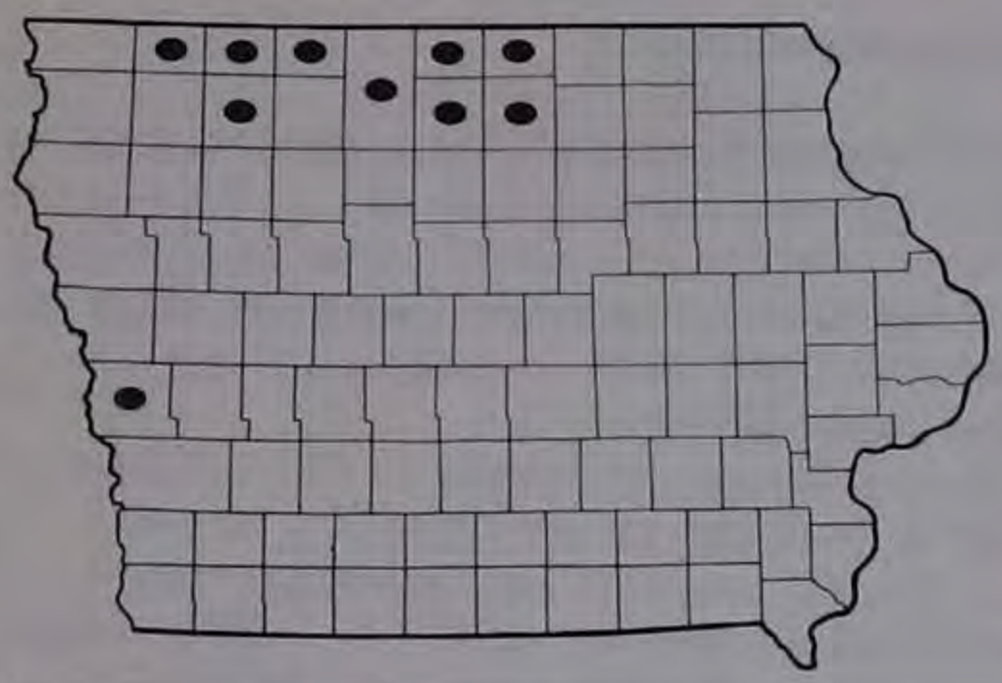
Mallard, **Anas platyrhynchos**

STATUS: Regular; abundant migrant and in winter, common summer resident throughout state, especially in NW and NC Iowa. Class I-S N.
HABITAT: Marshes, lakes, and rivers, commonly feeds in fields.
SPRING MIGRATION: Mallards are one of the earliest arrivals in spring, migrants arriving with the first hint of spring melt anytime from late Feb to mid-Mar. The peak of migration is generally in late Mar or early Apr.
SUMMER: Mallards nest throughout Iowa wherever suitable wetlands are available. Nesting populations are densest in NW and NC Iowa where they utilize roadsides and drainage ditches as well as natural wetlands. Nests are initiated as early as early Apr, with young hatching about a month later. The peak of nest initiation generally is mid-Apr through early May (Humburg et al. 1978). Early nests often are lost, and individuals may renest 2 or 3 times; some nests are active into Jul.
FALL MIGRATION: Early migrants arrive in Sep or early Oct, with a buildup to a peak in early or mid-Nov. At the peak, some areas such as De Soto N.W.R. and Red Rock L. may have 50,000 or more Mallards. Many leave Iowa at freeze-up in Nov or early Dec, but large numbers may winter in Iowa.
WINTER: Easily the most abundant wintering waterfowl species in Iowa, Mallards can be expected to occur almost anyplace where water remains open through winter. They have been reported yearly on CBCs since 1960 from all parts of Iowa. They commonly feed on waste grain in plowed fields during the winter.
COMMENT: The most familiar of the waterfowl in Iowa, Mallards rank with the Wood Duck and Blue-winged Teal as Iowa's most abundant nesting waterfowl. With the appearance of more open water below dams and at city parks in winter, Mallards have become more abundant in winter than they were 20 or 30 years ago.
REFERENCE:

Humburg, D. D., H. H. Prince, and R. A. Bishop. 1978. The social organization of a Mallard population in northern Iowa. J. Wildl. **Manage**. 42:72-80.

Northern Pintail, **Anas acuta**

STATUS: Regular; abundant migrant, uncommon in winter and summer. Class I-S N.
HABITAT: Lakes, rivers, and marshes,
SPRING MIGRATION: Early migrants arrive in late Feb or early Mar, with the peak in late Mar or early Apr. A few migrants linger until May.
SUMMER: Small numbers are seen fairly regularly in N Iowa in summer, with a few nesting (Map 6.23).
FALL MIGRATION: Early migrants may arrive in early Aug (10 at Ames, 5



Map 6.23 Northern Pintail nesting by county, 1960-1982.

Aug 1979, IBL 49:111) or Sep. The peak of migration generally is late Oct or early Nov, with some staying in Iowa into Dec.

WINTER: Pintails have been reported on CBCs 21 of 23 years, 1960 to 1982. Most reports are from S Iowa. The greatest number reported was 1,200 at Rathbun Res. on 20 Dec 1980 (IBL 51:18). Some probably overwinter such as 1 at Lansing on 1 Feb 1980 (IBL 50:25), 4 at Panora on 10 Feb 1979 (IBL 49:24), and perhaps the 5 at De Soto N.W.R. on 25 Feb 1980 (IBL 50:25). One wintered at Cedar Falls in 1980-1981 (IBL 51:31).

COMMENT: This species nests in small numbers in N Iowa but few data are available. It usually nests early, often far from water; both these factors probably discourage data gathering.

Blue-winged Teal, **Anas discors**

STATUS: Regular; abundant migrant, common summer resident and nester, especially in NW and NC Iowa, rare in winter. Class I-S N.

HABITAT: Marshes, lakes, and rivers.

SPRING MIGRATION: Blue-winged Teal are one of the later migrating waterfowl. Early migrants generally arrive in late Mar; the peak of migration is usually early to mid-Apr.

SUMMER: Blue-wings are the most abundant nesting waterfowl species in most of NW and NC Iowa. Nests generally are initiated in mid- to late May, with a peak of hatching in mid- to late Jun. Renesting may continue on into Jun or early Jul (Bennett 1938a).

FALL MIGRATION: Early migrants may arrive in Iowa in mid- or late Aug, with a peak of migration in Sep. Most are gone by mid-Oct, with only a few stragglers remaining in Nov.

WINTER: Blue-winged Teal are rare in winter and probably seldom winter in Iowa. They have been reported on CBCs 12 of 23 years, 1960-1982, from 10 localities scattered throughout the state.

COMMENT: Because of their abundance in Iowa, Blue-winged Teal have received considerable attention, and several studies such as those of Bennett (1938a) and Glover (1956) are classics on the biology of the species.

REFERENCE:

Glover, F. A. 1956. Nesting and production of the Blue-winged teal (**Anas discors** Linnaeus) in northwest Iowa. **J. Wildl. Manage.** 20:28-46.

Cinnamon Teal, Anas cyanoptera

STATUS: Regular; rare spring and fall migrant, most often reported in W Iowa. Class I-P.
HABITAT: Marshes and lakes.
SPRING MIGRATION: There are numerous spring records, with at least 20 since 1960 (Map 6.24). Most records are from Apr, mostly mid-Apr.

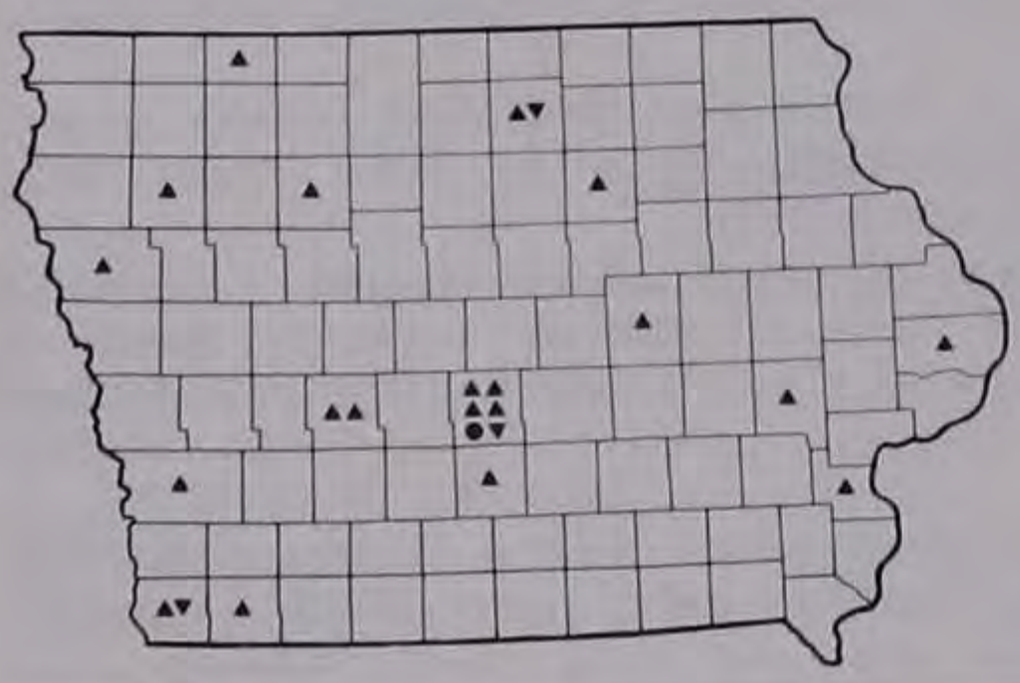
Early dates: 5 Mar 1976 (Cherokee, IBL 46:56)
26 Mar 1897 (L. Manawa, Anderson 1907)
28 Mar 1946 (Big Wall L., Scott et al. 1947)
28 Mar 1976 (Council Bluffs, **Am. Birds** 30:725)

Late dates: 16 May 1981 (Sunken Grove, IBL 51:64)
13 May 1978 (Randolph, IBL 48:72)
9 May 1952 (Little Wall L., Fish et al. 1953)

SUMMER: The only records are 1 at Grover L. on 21 Jun 1942 (King 1944) and 1 at the Red Rock Res. flood pool near Des Moines on 3 and 4 Jul 1973 (Brown 1973a).
FALL MIGRATION: The only fall records are 1 at Folsom W.A. on 16 Oct 1941 (Stiles 1942), 1 at Hamburg on 21 Oct 1968 (Brown 1971), 1 shot on Zirbel Sl. on 19 Oct 1980 (IBL 51:26), and 2 at Big Creek S.P. on 7 Sep 1980 (IBL 51:26).
COMMENT: This western species has been reported in Iowa almost yearly since 1960. Nearly all the records are from spring when the species is most obvious. Several records have mentioned a female with the male, but because of the similarity between female Cinnamon and Blue-winged teal, it is difficult to identify these individuals accurately in the field. Photos are on file for records at Johnson Co. on 19 Apr 1972 (Kent 1972) and at Saylorville Res. on 9 Apr 1981 (IBL 51:99).

REFERENCES:

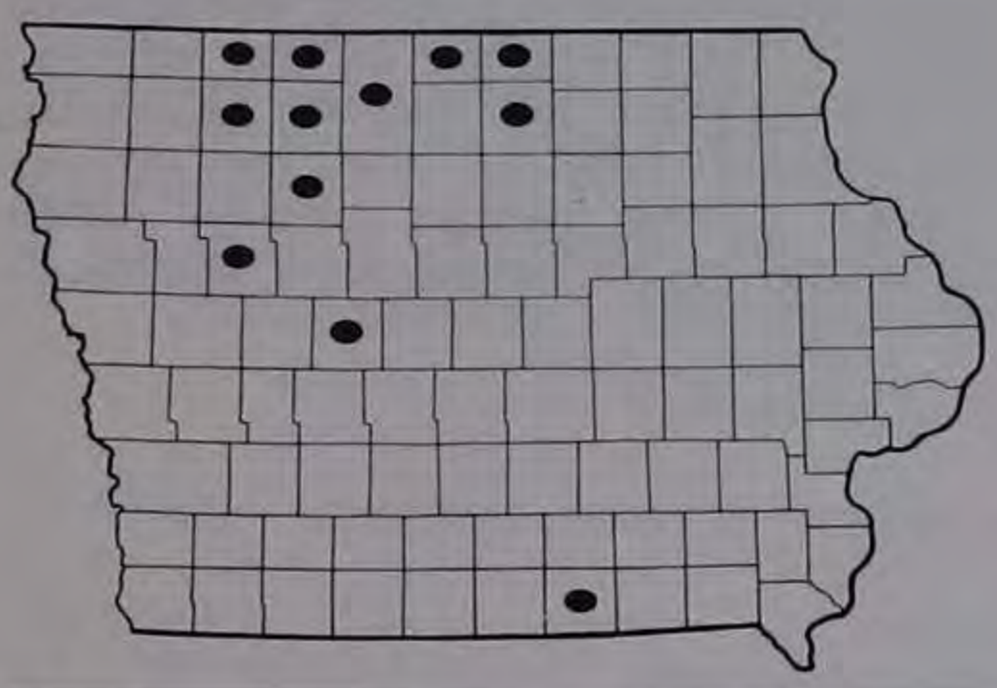
Fish, J. A., D. F. Scott, and G. O. Hendrickson. 1953. Waterfowl migration at Little Wall Lake, Iowa, spring, 1952. **Iowa Bird Life** 23:54.
Kent, F. W. 1972. Cinnamon Teal near Iowa City. **Iowa Bird Life** 42:47.
King, R. L. 1944. Summer birds of the Okoboji region 1938-1942. **Proc. Iowa Acad. Sci.** 51:467-470.
Scott, T. G., C. P . Haight, and T. S. Baskett. 1947. Cinnamon Teal at Wall Lake. **Iowa Bird Life** 17:57.
Stiles, B. F. 1942. Greater Scaup Duck and Cinnamon Teal in western Iowa. **Iowa Bird Life** 12:28.



Map 6.24 Cinnamon Teal records, 1960-1982.

Northern Shoveler, **Anas clypeata**

STATUS: Regular; common migrant, uncommon in summer. Class I-S N.
HABITAT: Lakes, rivers, and marshes.
SPRING MIGRATION: Migrants usually arrive in late Mar or early Apr, with the peak usually in mid-Apr. Most are gone by early May.
Early dates: 21 Feb 1981 (L. Manawa, **IBL** 51:31)
2 Mar 1956 (Iowa City, Serbousek 1959)
SUMMER: Northern Shovelers are an uncommon nesting species in N Iowa (Map 6.25). Iowa in general is on the southern fringe of this species' nesting range.
FALL MIGRATION: Early migrants arrive in early Sep. The peak of migration is generally in mid-Oct, with most birds gone by early Nov.
WINTER: Northern Shovelers are rare in winter. They have been reported on CBCs only 8 of 23 years since 1960, generally at counts in SE Iowa.



Map 6.25 Northern Shoveler nesting by county, 1960-1982.

Gadwall, **Anas strepera**

STATUS: Regular; common migrant, uncommon summer resident in NW and NC Iowa, rare in winter. Class I-S N.
HABITAT: Lakes, rivers, and marshes.
SPRING MIGRATION: Early migrants arrive in mid- to late Mar, with the peak of migration usually in early to mid-Apr. A few linger into May.
SUMMER: A few Gadwalls probably nest in Iowa yearly, especially in NW and NC Iowa (Low 1941; Strohmeyer and Fredrickson 1964). Since 1960, there are breeding records from Clay, Dickinson, Emmet, Greene, Mills, and Palo Alto counties.
FALL MIGRATION: Migrants generally start arriving in Sep, with a peak in mid-Oct to early Nov. A few birds remain into Dec.
WINTER: Gadwalls have been seen on CBCs 16 of 23 years since 1960, mainly in S and E Iowa. A few probably overwinter, such as 10 at Davenport on 15 Feb 1970 (**IBL** 40:18), 4 at Cedar Falls on 8 Feb 1981 (**IBL** 51:31), 4-6 in Waterloo in 1981-1982 (**IBL** 52:25), and 4 at Council Bluffs on 28 Feb 1982 (**IBL** 52:25).
REFERENCES:

Low, J. B. 1941. Gadwall and Franklin's Gull nesting in Iowa. **Iowa Bird Life** 11:31-32.
Strohmeyer, D., and L. H. Fredrickson. 1964. Gadwall nesting in Iowa. **Iowa Bird Life** 34:72-73.

Eurasian Wigeon, **Anas penelope**

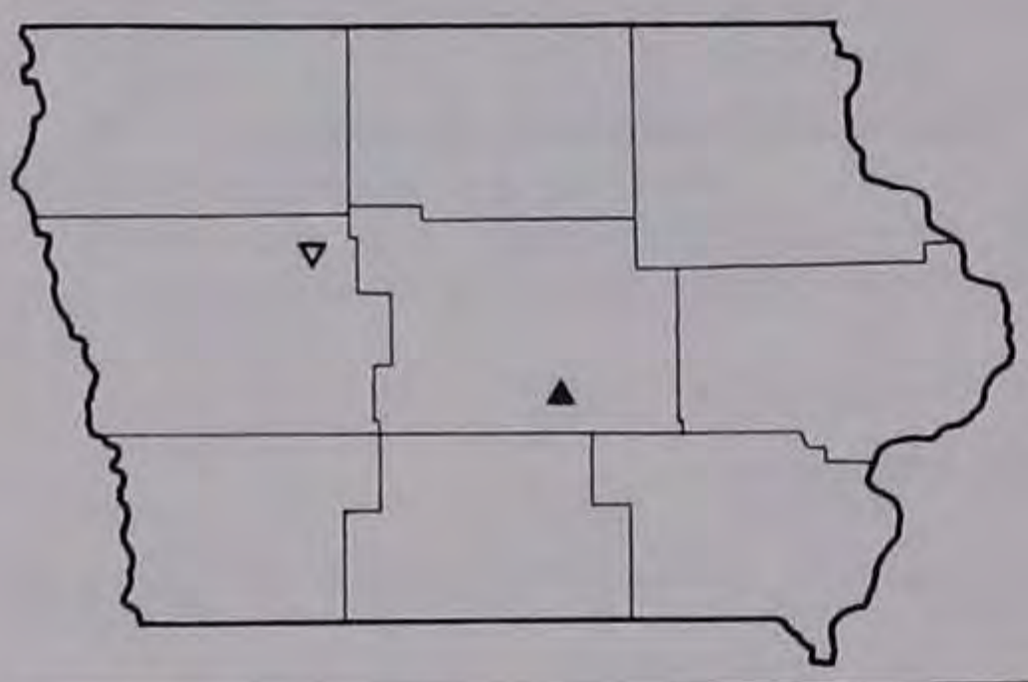
STATUS: Accidental. Class I-S.
RECORDS: Records include 1 based on a specimen and 1 sight record with minimal description (Map 6.26).

Oct 1933, North Twin L., Calhoun Co., a male from a flock of 4; specimen in Van Wyngarden collection, Manson; photograph on file with Records Committee (DuMont 1935)

13 Apr 1972, Rock Creek S.P., Jasper Co., minimal detail (Maish 1972)

Two other records without detail are from spring 1947 at Black Hawk L., Sac Co. (Musgrove and Musgrove 1977) and spring 1961 at Iowa City (**IBL** 31:66; **Audubon Field Notes** 15:414). There is also a record from Spirit L. just over the Minnesota line for 13 May 1939 (Roberts and Musgrove 1939) and 1 for Lock and Dam 13 in Illinois opposite Clinton Co. for 18 Apr 1970 (Bohlen 1978).

COMMENT: Hasbrouck (1944) studied the distribution of Eurasian Wigeon in North America and found evidence for a southward migration along both coasts in fall and a northward migration in the interior in the spring. The first Iowa record was one of the few interior fall records listed by Hasbrouck. All Minnesota and most Illinois records are for spring (Green and Janssen 1975; Bohlen 1978). This species should occur occasionally in Iowa in spring and is likely to be found with American Wigeons.



Map 6.26 Eurasian Wigeon records.

REFERENCES:

DuMont, P. A. 1935. Specimen of European Widgeon taken in northwestern Iowa. **Wilson Bull.** 47:236.

Hasbrouck, E. M. 1944. Apparent status of the European Widgeon in North America. **Auk** 61:93-104.

Maish, Mrs. J. 1972. European Widgeon in central Iowa. **Iowa Bird Life** 42:49.

Roberts, M. E., and J. W. Musgrove. 1939. European Widgeon in the Spirit Lake region. **Iowa Bird Life** 9:29.

American Wigeon, **Anas americana**

STATUS: Regular; common migrant, rare in winter and summer, 2 nesting records. Class I-S N.
HABITAT: Lakes, rivers, and marshes.

SPRING MIGRATION: Early migrants usually arrive in mid- or late Mar, with the peak of migration from early to mid-Apr. Some migrants linger on to early or mid-May.
SUMMER: The only nesting records are a nest with 8 eggs found at Union Sl. N.W.R. on 23 Jun 1961 and later abandoned (Trauger 1962), and a female with 5 to 7 young at Willow Sl. in Aug 1982 (IBL 52:119). American Wigeon, probably nonbreeders, have been reported several times in summer in recent years; e.g., 3 near Ruthven on 10 Jun 1977 (IBL 47:99), 1 at Sweet M. on 28 Jun 1977 (IBL 47:99), several near Ruthven in Jun 1978 (IBL 48:97), and 1 at Willow Sl. on 23 Jul 1979 (IBL 49:82).
FALL MIGRATION: Early migrants arrive in Sep, with the peak of migration in mid-Oct. Most migrants are gone by Nov, but some linger into Dec.
WINTER: American Wigeon have been seen on CBCs yearly since 1964. Most records are from S Iowa and especially in the Cedar Rapids and Davenport areas. Although most of these probably do not winter, some occasionally do, as probably was the case with 1 at Camanche on 17 Jan 1971 (IBL 41:28); 1 at Lock and Dam 14 on 30 Jan 1971 (IBL 41:28); and others at Lock and Dam 14 on 2 Jan 1981 (IBL 51:31), in Fremont Co. on 13 Jan 1981 (IBL 51:31), and in Waterloo in 1981-1982 (IBL 52:25).
REFERENCE:

Trauger, D. L. 1962. American Widgeon nests at Union Slough National Wildlife Refuge. **Iowa Bird Life** 32:26-27.

Canvasback, **Aythya valisineria**

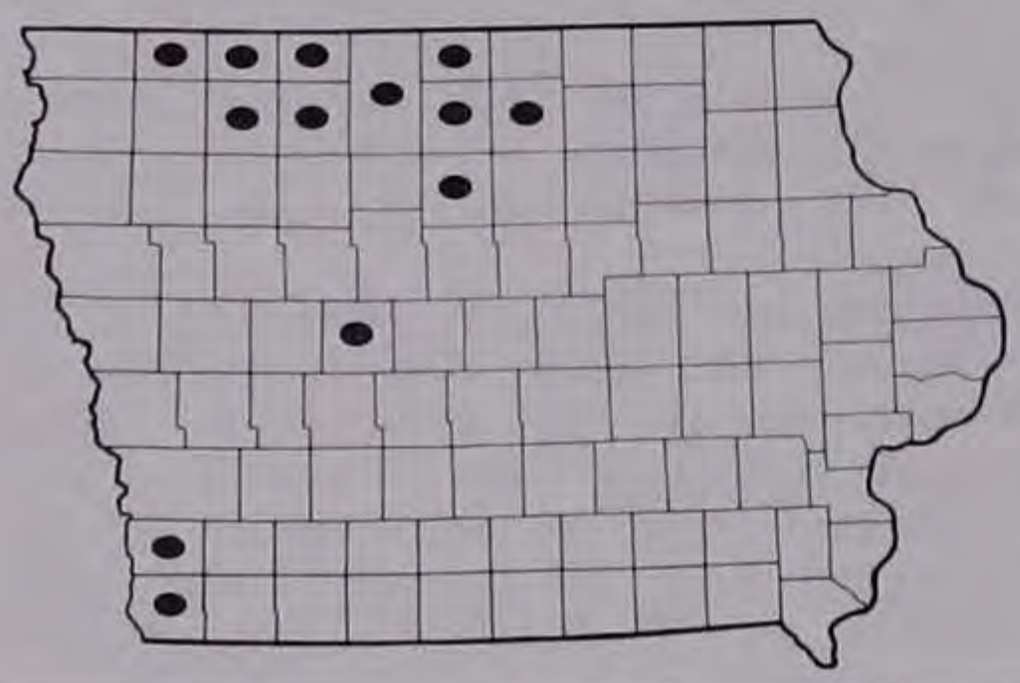
STATUS: Regular; common migrant, rare in winter and summer. Class I-S N.
HABITAT: Lakes, rivers, and marshes.
SPRING MIGRATION: Migrants generally start arriving in early Mar, with the peak of migration in late Mar or early Apr. Most birds are gone by mid-Apr, but a few may remain in May. In mild years, birds may arrive much earlier, such as 10 said to have arrived at Princeton on 17 Feb 1974 (IBL 44:20) and 60 at Council Bluffs on 22 Feb 1976 (**Am. Birds** 30:725).
SUMMER: At most a rare nesting species in NW Iowa, nesting records are available from Clay, Emmet, Greene, Hancock, and Dickinson counties. In 1977 and 1978, 5 and 7 broods were reported in late Jun and early Jul on Mud L. (IBL 47:100, 48:97), suggesting a small breeding population in that area. Occasional birds are seen elsewhere in summer, such as singles at Goose L., Greene Co., on 5 Jul 1970 (IBL 40:71); Union Sl. N.W.R. on 6 Jul 1975 (IBL 45:92); and Montrose on 9 Jun 1979 (IBL 49:82).
FALL MIGRATION: Fall migrants generally arrive in late Oct and remain until freeze-up in Nov or Dec, generally peaking in late Nov. Peak numbers may approach 150,000 on the Mississippi R. at Keokuk (Thornburg 1973).
WINTER: Canvasbacks have been reported on CBCs in Iowa 21 of 23 years, 1960-1982, mostly from Cedar Rapids and along the Mississippi R. The most reported was 5,000 at Rathbun Res. in 1971 (IBL 42:8). Most do not winter in Iowa, but 1 wintered at Lock and Dam 14 and 3 at Des Moines in 1967-1968 (IBL 38:16); the several birds at Montrose on 26 Jan 1975 (IBL 45:21), the 50-200 at Burlington from 10 Jan to 17 Feb 1981 (IBL 51:31), and the 1,500 at Montrose on 10 Jan 1981 (IBL 51:31) probably were wintering.

COMMENT: The Keokuk Pool (Pool 19) of the Mississippi R. is one of the major migration stopover points for Canvasbacks in the Midwest. There the birds feed heavily on fingernail clams (Thompson 1973). Protection of this area is vital to the survival of this species.

Redhead, **Aythya americana**

STATUS: Regular; common migrant, uncommon in summer, rare in winter. Class I-S N.
HABITAT: Marshes, lakes, and rivers.
SPRING MIGRATION: Migrants generally arrive in mid-Mar, with peak numbers present from late Mar to early or mid-Apr. Most migrants are gone by late Apr.
SUMMER: Redheads are a common nesting species on marshes near Ruthven in NW Iowa and are uncommon nesters on several other wetlands in NW, SW, and NC Iowa (Map 6.27). Eggs generally are laid from mid-May to late Jun and hatch from early Jun to mid-Jul, with a peak in mid-Jun (Low 1940,1945).
FALL MIGRATION: Early migrants may arrive in Sep, but most arrive in mid-Oct, with a peak in late Oct or early Nov.
WINTER: Redheads have been reported on CBCs 20 of 23 years, 1960-1982, mostly in S Iowa and especially in the Davenport area. Some of these probably winter, such as birds at Waterloo on 19 Jan 1967 (IBL 37:20), Montrose on 26 Jan 1975 (IBL 45:21), and Panora on 10 Feb 1979 (IBL 49:24).
COMMENT: Redheads are the commonest nesting diving duck in Iowa, but overall Iowa contributes little to the North American population of this species. Weller (1964) notes that the number of Redheads in Iowa has been cyclic, with highs in the late 1930s and early 1960s and a low in the early 1950s.
REFERENCES:

Low, J. B. 1940. Production of the Redhead (Nyroca americana) in Iowa. **Wilson Bull.** 52:153-164.
Low, J. B. 1945. Ecology and management of the Redhead, Nyroca americana, in Iowa. **Ecol. Monogr.** 15:35-69.
Weller, M. W. 1964. Distribution and migration of the Redhead. **J. Wildl. Manage.** 28:64-103.



Map 6.27 Redhead nesting by county, 1960-1982.

Ring-necked Duck, Aythya collaris

STATUS: Regular; common migrant, rare in winter, uncommon summer resident. Class I-S N.
HABITAT: Lakes, rivers, and marshes.
SPRING MIGRATION: Migrants usually arrive in mid-Mar, with a peak of migration in late Mar or early Apr. Some migrants remain as late as early May.
SUMMER: A few ring-necks may be seen scattered throughout Iowa in summer, such as 2 at Cardinal M. on 11 Jun 1977 (IBL 47:99), 3 at Willow Sl. in early Jul 1978 (IBL 48:97), and 1 at Sweet M. on 5 Jul 1981 (IBL 51:99). There are recent nesting records for Hamilton and Clay counties in C and NW Iowa (Weller 1961, 1979; Weller and Spatcher 1965). A few pairs probably nest in Iowa each year, but little specific information is available.
FALL MIGRATION: Migrants generally arrive in Oct, with a peak in late Oct or early Nov.
WINTER: Ring-necks have been reported on CBCs 16 of 23 years, 1960-1982, mostly from along the Mississippi R. and in S Iowa. A few of these may winter, such as 1 at Riverton A. on 7 Jan 1978 (IBL 48:48), 1 at Coralville Res. on 21-22 Jan 1978 (IBL 48:48), 3 at Bays Branch on 17 Jan 1980 (IBL 50:25), 7 at Waterloo on 7 Feb 1981 (IBL 51:31), and 20 at Willow Sl. on 20 Feb 1981 (IBL 51:31).
REFERENCE:

Weller, M. W. 1979. Birds of some Iowa wetlands in relation to concepts of faunal preservation. **Proc. Iowa Acad. Sci.** 86:81-88.

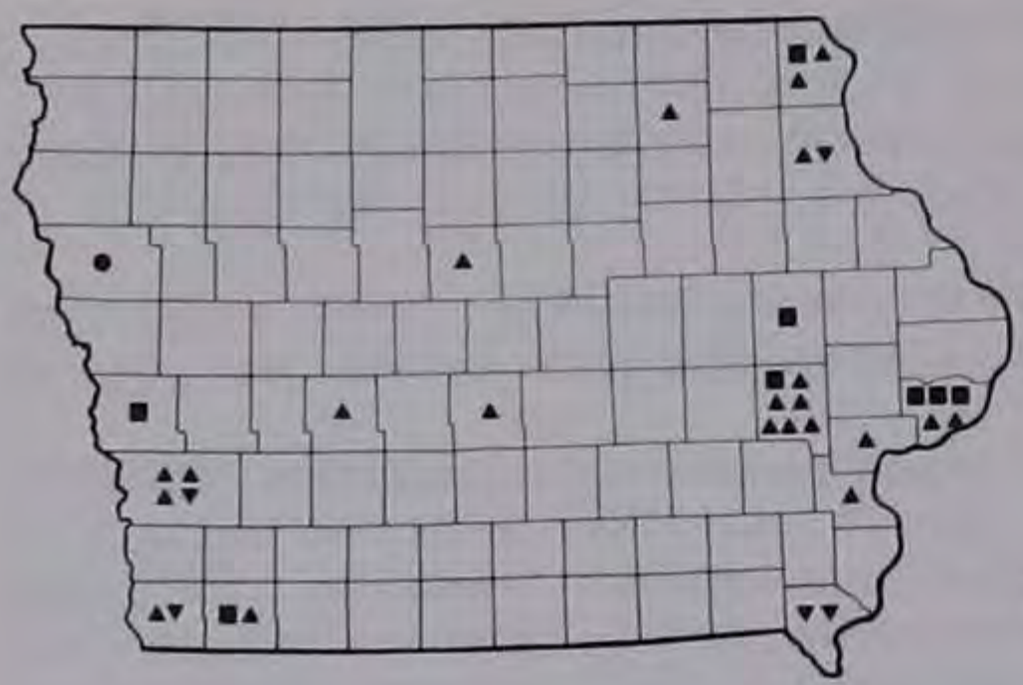
Greater Scaup, Aythya marila

STATUS: Regular; uncommon migrant, rare in winter. Class I-S.
HABITAT: Lakes and rivers.
SPRING MIGRATION: There are about 22 records from 1960 to 1982. Most are from the eastern third of Iowa, but the species should occur throughout the state. Most records are from late Mar and early Apr.

Early dates: 25 Feb 1962 (Credit I., IBL 32:42)
3 Mar 1981 (L. Manawa, IBL 51:64)
5 Mar 1982 (IPL Settling Ponds, IBL 52:54)

Late dates: 20 Apr 1978 (Coralville Res., IBL 48:72)
14 Apr 1979 (New Albin, IBL 49:58)
12 Apr 1982 (Nashua, IBL 52:54)

SUMMER: The only record is a pair seen on New L. on 6 Jun 1982 (IBL 52:89).
FALL MIGRATION: There are only 10 published records, with 5 from 1960 to 1982. These range from 10 Oct 1945 at Rice L., Worth Co. (Musgrove 1946), to 15 Nov 1911 in Johnson Co. (DuMont 1933), with no marked peak, although late Oct or early Nov is probably the peak time. At least 3 were collected in Iowa in fall 1941 (Musgrove 1942; Stiles 1942).
WINTER: One was reported at Cedar L. on 31 Dec 1959 (Kent and Kent 1975), 2 on the Yellow River F. CBC on 31 Dec 1961 (**Audubon Field Notes** 16:225), 2 on the Cedar Rapids CBC on 15 Dec 1979 (IBL 50:16), 2 at Iowa City on 20 Dec 1980 (IBL 51:31), 1 or 2 at Lock and Dam 14 on 2 Jan 1981 (IBL 51:31), 1 at Le Claire on 14 Dec 1981 (IBL 52:26), and birds on CBCs at De Soto N.W.R. and Shenandoah in 1982.
COMMENT: Most recent records are from E Iowa (Map 6.28), but the species is probably more common than the few published records for it



Map 6.28 Greater Scaup records, 1960-1982.

suggest. The first specimen in Iowa was taken in 1911; since then several others have been collected (DuMont 1935; Musgrove 1942; Stiles 1942), and birds are shot each fall. Most birders tend to identify all scaup in Iowa as Lesser Scaup, but the 2 species can be distinguished in the field by the careful individual. The best field mark for identifying the Greater Scaup is the long white wing stripe seen in flight. In the water, the rounder head and larger bill are the best marks (Kent and Shires 1979). A close view and experience are needed to identify this species.

REFERENCES:

DuMont, P. A. 1935. Specimen of Greater Scaup Duck found in northern Iowa. **Wilson Bull.** 47:72-73.

Kent, T. H., and T. K. Shires. 1979. Greater Scaup in Iowa--A challenge. **Iowa Bird Life** 49:35-39.

Musgrove, J. W. 1942. Specimens of Greater Scaup and Old Squaw taken in Iowa. **Iowa Bird Life** 12:15.

Musgrove, J. W. 1946. Iowa specimens taken during the fall migration. **Iowa Bird Life** 16:37.

Stiles, B. F. 1942. Greater Scaup Duck and Cinnamon Teal in western Iowa. **Iowa Bird Life** 12:28.

Lesser Scaup, **Aythya affinis**

STATUS: Regular; abundant migrant, rare in winter and summer. Class I-S N.

HABITAT: Lakes, rivers, and marshes.

SPRING MIGRATION: Migrants generally arrive in early or mid-Mar, with a peak usually in early or mid-Apr. Flocks often remain well into May.

SUMMER: Small numbers are not uncommon at scattered localities throughout Iowa; e.g., 1 in Des Moines on 14 Jul 1971 (IBL 41:89); 3 at Mud L. from 10 to 23 Jun 1977 (IBL 47:100); birds at Forney L., Willow Sl., and Cardinal M. in Jun and Jul 1978 (IBL 48:97); 1 at Eagle L., Emmet Co., on 4 Jun 1981 (IBL 51:99); 1 at the IPL Settling Ponds on 9 Jul 1981 (IBL 51:99); and others at New L., Forney L., and Willow Sl. in summer 1982 (IBL 52:89). These are nearly always nonbreeding birds, and few records even suggest that Lesser Scaup nest in Iowa. Praeger (1925) reported broods from near Keokuk in 1896 and in Clark Co. in 1897, and Shoemaker (1896b) said they nested at Clear L. in the

1800s. A nest was reported from Dickinson Co. in 1934 (Bennett 1934), and a flightless juvenile was banded at Mud L., Clay Co., on 15 Jul 1970. An adult and 2 young were seen in Story Co. in 1979 (IBL 49:82).

FALL MIGRATION: Early migrants usually arrive in early Oct, with a peak in early or mid-Nov.

WINTER: Lesser Scaup are fairly common in winter, having been seen yearly on CBCs from 1960 to 1982. They have been reported from throughout Iowa, most commonly from along the Mississippi R. and at Cedar Rapids. The most reported was 1,000 at Rathbun Res. on 20 Dec 1980 (IBL 51:18). Some of these probably winter, such as 3 at Bays Branch on 17 Jan 1980 (IBL 50:25), but the 300-400 at Le Claire on 17 Feb 1974 (IBL 44:20) probably were early migrants.

COMMENT: Easily the most abundant diving duck in Iowa, flocks of several thousand are commonly reported. As with the Canvasback, the Mississippi R. and especially Pool 19 at Keokuk is very important as a migration stopover, with peak numbers as high as 670,000 being reported there in fall (Thornburg 1973).

Common Eider, **Somateria mollissima**

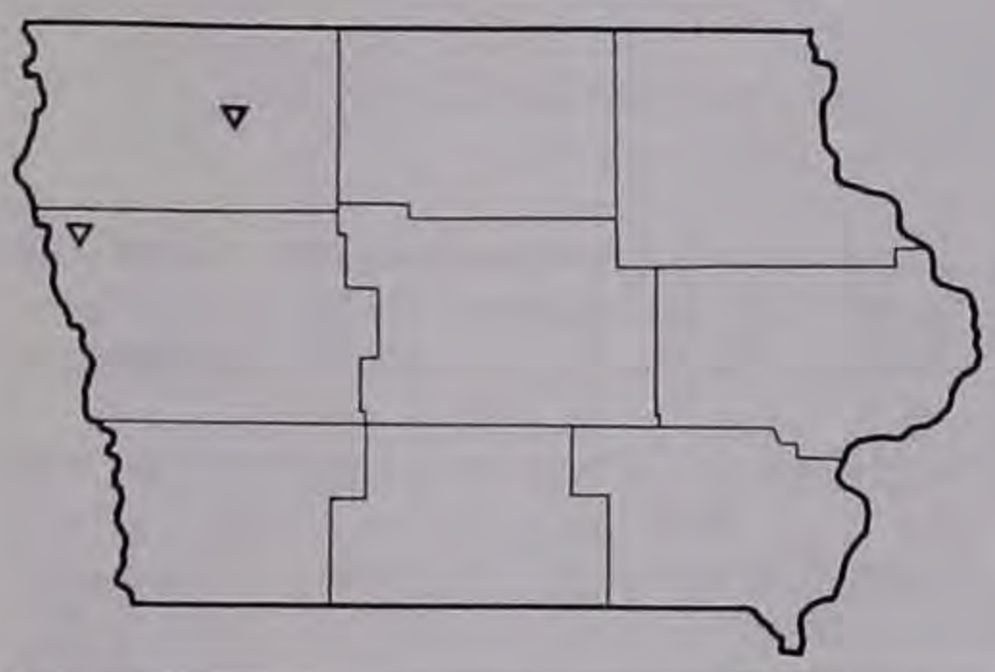
STATUS: Accidental. Class III.

RECORDS: There are 2 records (Map 6.29). One, probably a female, was shot near Sioux City on 1 Nov 1901; the specimen was examined by DuMont (1934). The record is classified as a sight record because the specimen was not available for review. Another record, classified as probable (Class IV), involved 4 birds of a flock of 10 shot at Trumbull L., Clay Co., on 30 Oct 1942 (Musgrove and Musgrove 1977). Two wings acquired from hunters were said to be from Jones and Winnebago counties in the period 1961-1970 (Musgrove and Musgrove 1977). Anderson (1907) cites a report from Linn Co. without reference to specific sightings.

COMMENT: This coastal species is a rare inland vagrant in fall and winter. There are 5 or fewer records from Illinois (Bohlen 1978), Wisconsin (Barger et al. 1975), Minnesota (Green and Janssen 1975), South Dakota (Whitney et al. 1978), Nebraska (Johnsgard 1980), and Kansas (Johnston 1965).

REFERENCE:

DuMont, P. A. 1934. Iowa specimen of "American" Eider re-determined as the Pacific Eider. **Wilson Bull.** 46:203.

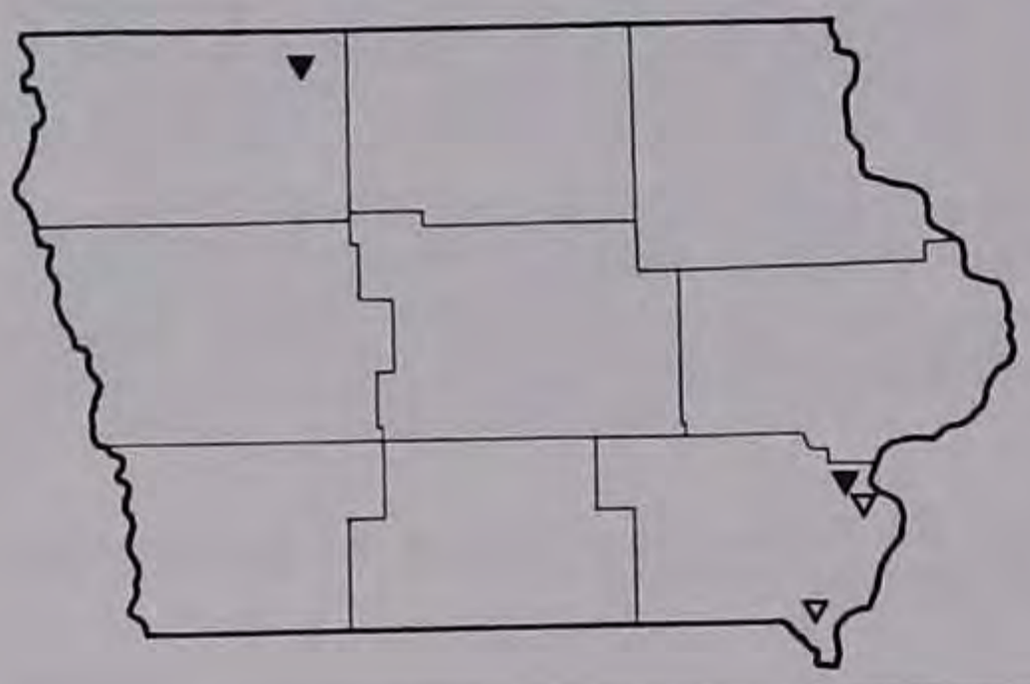


Map 6.29 Common Eider records.

King Eider, **Somateria spectabilis**

STATUS: Accidental. Class I-S.
RECORDS: There are 4 specimen records (Map 6.30).
10 Nov 1894, Keokuk, immature male, University of Iowa specimen (Praeger 1895, 1925)
18 Nov 1950, Mississippi R., Louisa Co., Putman Museum specimen (Morrissey 1951).
8 Nov 1970, L. Odessa, Louisa Co., female or immature, University of Iowa specimen (Newlon and Kent 1981)
8 Nov 1971, Ingham L., Emmet Co., specimen not currently available (Petersen 1972)
There is also a sight record without details for 20 Dec 1964 at Bellevue, Jackson Co. (**IBL** 35:8, 24).
COMMENT: There are about 30 King Eider records for Iowa, Illinois, Indiana, Minnesota, Wisconsin, and Michigan, which extend from Oct to Mar with two-thirds from Nov and Dec (Newlon and Kent 1981). Most of these vagrants frequent large bodies of water, particularly the Great Lakes. Most are immatures.
REFERENCES:

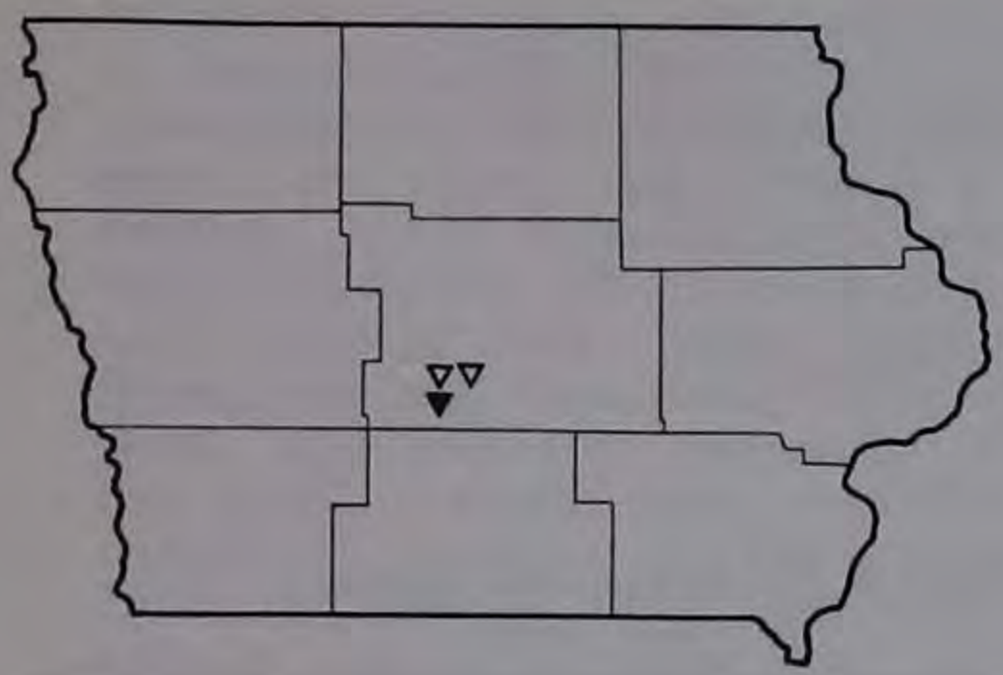
Morrissey, T. 1951. Another Iowa record of the King Eider. **Iowa Bird Life** 21:41-42.
Newlon, M. C., and T. H. Kent. 1981. Fifth record of the King Eider for Iowa. **Iowa Bird Life** 51:126-129.
Petersen, P. C. 1972. Another King Eider record for Iowa. **Iowa Bird Life** 42:50.
Praeger, W. E. 1895. Two records from Keokuk, Iowa. **Auk** 12:85-86.



Map 6.30 King Eider records.

Harlequin Duck, **Histrionicus histrionicus**

STATUS: Accidental. Class III.
RECORDS: Of 3 records (Map 6.31), 2 based on specimens are listed as sight records because the specimens could not be located.
27 Dec 1932, Des Moines R., Polk Co., male in breeding plumage, Class III (DuMont 1934)
5 Nov 1957, Des Moines, juvenile male shot, Class IV (Musgrove and Musgrove 1977)
31 Oct 1976, Big Creek S.P., Polk Co., juvenile male, Class III (Musgrove and Musgrove 1977)
Anderson (1907) lists additional records from Sioux Co. in 1886,



Map 6.31 Harlequin Duck records.

Pottawattamie Co. on 26 Sep 1895, and Van Buren Co. ca. 1896 without sufficient details for evaluation. Another indefinite record is from High L., Emmet Co., ca. 1910 (Wolden 1930). There is also a record from Lock and Dam 13 on the Illinois side opposite Clinton Co. for 13 Nov 1971 (**Am. Birds** 26:71).

COMMENT: This species is irregularly encountered in small numbers on Lake Michigan (Bohlen 1978) and Lake Superior (Green and Janssen 1975) from Oct to May but is quite unusual at other locations in nearby states.

REFERENCES:

DuMont, P. A. 1934. The Western Harlequin Duck in central Iowa. **Wilson Bull.** 46:63-64.

Wolden, B. O. 1930. Some old records. **Bull. Iowa Orn. Union** 7:25.

Oldsquaw, **Clangula hyemalis**

STATUS: Regular; rare spring and fall migrant and in winter. Class I-S.

HABITAT: Lakes and rivers.

SPRING MIGRATION: Spring records are split about evenly between Mar and Apr.

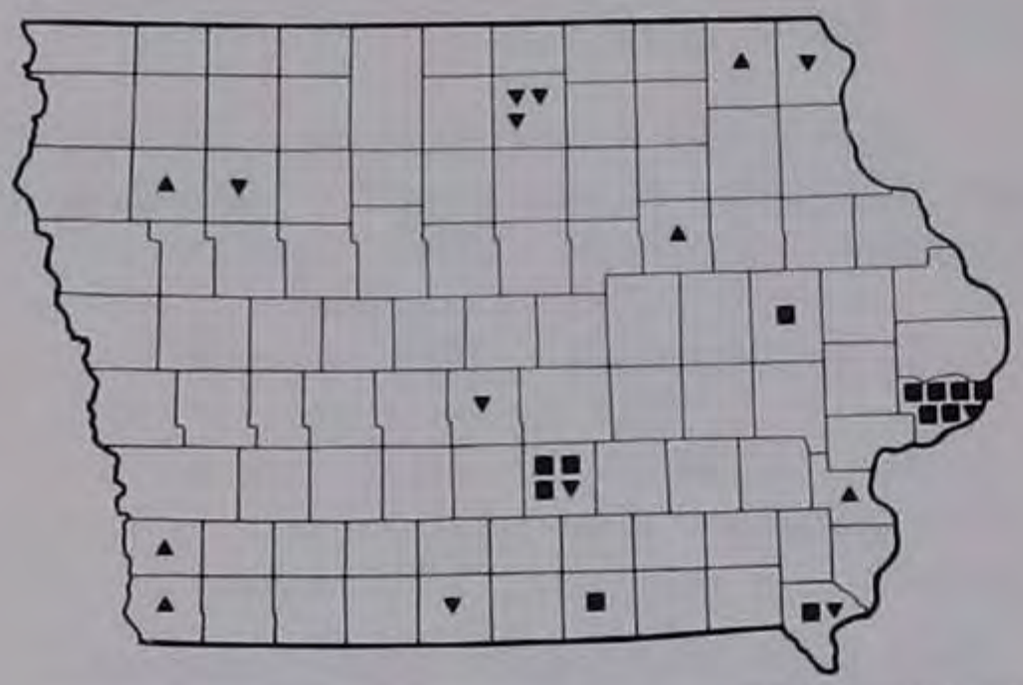
Late dates: 19 Apr 1975 (Webster City, IBL 45:56)
18 Apr 1980 (Waterloo, IBL 50:45)
16 Apr 1979 (Cherokee, IBL 49:58)

FALL MIGRATION: Oldsquaws are most commonly seen in Iowa in fall, with most records from Nov. A few remain in Dec or overwinter.

Early dates: 24 Oct 1959 (Union Grove S.P., Brown 1960)
27 Oct 1972 (Lamoni, IBL 43:25)
5 Nov 1948 (L. Macbride, Kent and Kent 1975)

WINTER: There are several winter records, including reports of Oldsquaws from 6 CBCs (Davenport 1966, 1969, 1970; L. Rathbun 1973; Cedar Rapids 1976; Red Rock 1982) since 1960. At least some of these overwinter, such as 2 at Le Claire from Jan to 23 Feb 1974 (IBL 44:20), 5 at Rathbun Res. in winter 1973-1974 (**Am. Birds** 28:646), 1 at Cedar Rapids from 19 Dec 1959 to 8 Apr 1960 (Serbousek 1960), and 1 at Lock and Dam 14 on 2 Jan 1981 (IBL 51:31).

COMMENT: There are at least 28 records of Oldsquaws from throughout Iowa from 1960 to 1982 (Map 6.32). Several have been shot; but



Map 6.32 Oldsquaw records, 1960-1982.

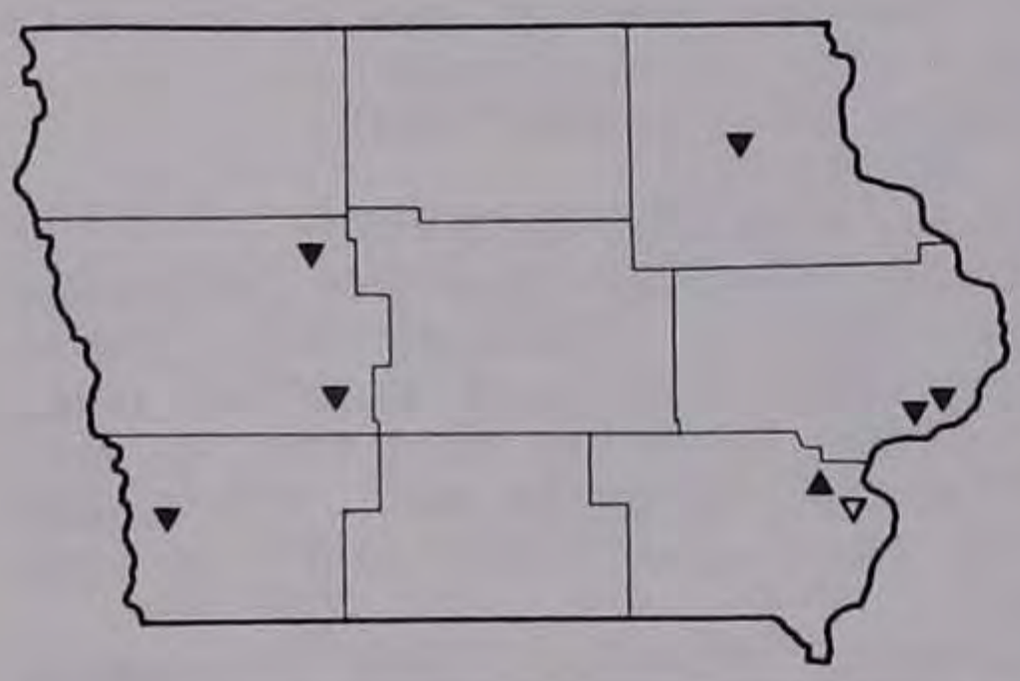
because it is a late migrant and usually found on open water, it is not often encountered by birders or hunters.

REFERENCES:
Brown, Mrs. H. B. 1960. Oldsquaw at Union Grove Lake, Gladbrook. **Iowa Bird Life** 30:21.
Serbousek, L. 1960. Oldsquaw at Cedar Rapids. **Iowa Bird Life** 30:61.

Black Scoter, **Melanitta nigra**

STATUS: Accidental. Class I-S.
RECORDS: There are 8 acceptable records (Map 6.33).

23 Nov 1952, Mississippi R., Louisa Co., female shot (Morrissey 1954)
4 Nov 1960, Willow Sl., Mills Co., immature male specimen at University of Iowa (Musgrove and Musgrove 1977)
fall 1967, Princeton, Scott Co., specimen at Putnam Museum
fall 1975, Lock and Dam 14, Scott Co. (IBL 46:22)
Oct or Nov 1975, Bays Branch, Guthrie Co. (IBL 46:22; Musgrove and Musgrove 1977)
fall 1977, near Manson, Calhoun Co., Van Wygarten collection, photograph on file with Records Committee
31 Mar 1979, Cone M., Louisa Co., female, Class III (IBL 49:58)
21 Nov 1980, Volga River A., Fayette Co., female, Class III (IBL 51:26)



Map 6.33 Black Scoter records.

An earlier specimen, not available for review, was obtained in a market at Keokuk on 31 Oct 1894 by Praeger (1925) and was still in his possession in 1934 (DuMont 1935b). Old reports unsubstantiated by details are from Black Hawk Co. in 1884 or 1885 (Cooke 1888); from Jackson, Linn, Pottawattamie, and Black Hawk counties without specific dates (Anderson 1907); from s of Omaha on the Missouri R. on 16 Jan 1927 (DuMont 1933); from Black Hawk L., Sac Co., "some years ago" (Musgrove and Musgrove 1977); from Credit I. on 15 Feb 1948 (Hodges 1949); and from Des Moines on 16 Nov to 28 Dec 1959 (Willcockson 1959; IBL 30:6). Wings were recorded from Dallas, Humboldt, Des Moines, and Scott counties in the period 1961-1970 (Musgrove and Musgrove 1977). There is an Illinois record from Lock and Dam 19 across from Lee Co. on 27 Oct 1974 (**Am. Birds** 29:65).

COMMENT: Five of the 8 definite records have occurred since 1975. Most reports have been of singles, but 4 are of flocks of 3 to 6. Of 6 birds identified by sex, 5 were females and 1 an immature male. Of 8 reports giving dates, 1 is from Oct, 5 from Nov (1 remaining into Dec), 1 from Jan, and 1 from Mar (the only spring record). Of the 3 scoters, the Black is the least common in the Midwest. It occurs with some regularity on the Great Lakes from Oct to Dec and Mar to Jun, but interior records in states surrounding Iowa show a similar pattern of occurrence, with a predominance of fall records.

REFERENCES:

Hodges, J. 1949. Notes on the bird life in the Mississippi valley. **Proc. Iowa Acad. Sci.** 56:343-345.

Morrissey, T. 1954. Another record for the American Scoter in Iowa. **Iowa Bird Life** 24:15.

Willcockson, L. 1959. Bad weather brings good birding to Des Moines. **Iowa Bird Life** 29:101.

Surf Scoter, **Melanitta perspicillata**

STATUS: Casual; rare migrant. Class I-S.

HABITAT: Lakes, rivers, and marshes.

SPRING MIGRATION: Surf Scoters generally are seen from late Apr through mid-May.

Early dates: 28 Mar 1893 (Burlington, Anderson 1907)
25 Apr 1975 (Waterloo, IBL 45:56-57)
25 or 27 Apr 1916 (Estherville, Wolden 1930; DuMont 1933)

Late dates: 19 May 1972 (New Albin, Mullen 1972)
19 May 1975 (Iowa City, IBL 45:57)
17 May 1958 (Little Wall L., Weller 1961)

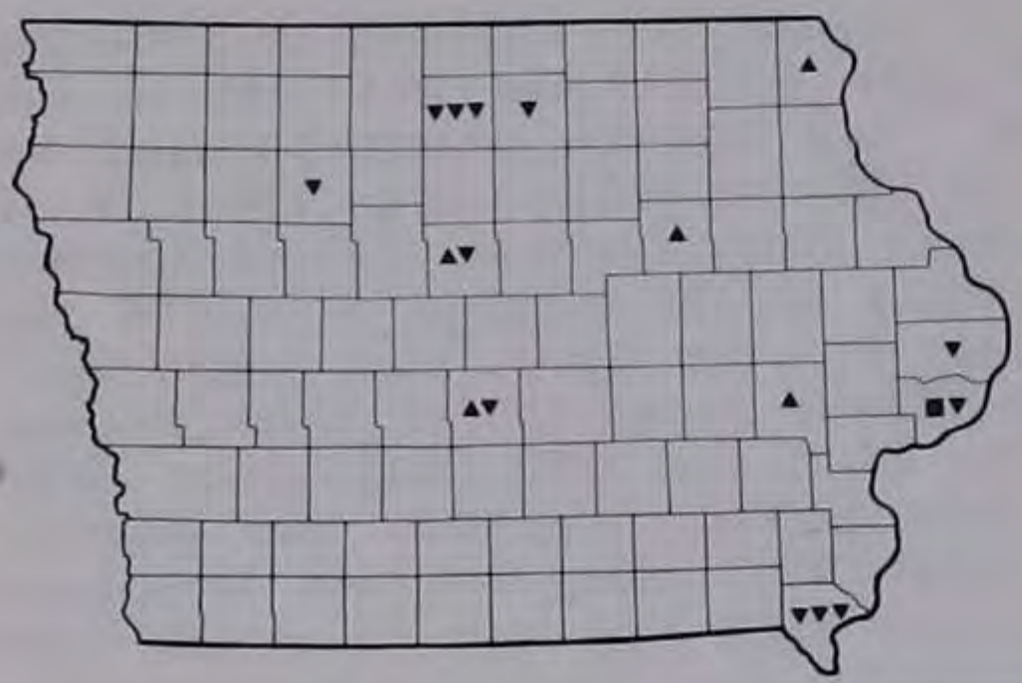
FALL MIGRATION: Fall migrants generally are seen from late Oct through mid-Nov.

Early dates: 5 Oct 1980 (Lizard L., IBL 51:26)
17 Oct 1959 (Des Moines, Brown 1971)
20 Oct 1895 (Keokuk, Praeger 1925)

Late dates: 22 Nov 1895 (Burlington, Anderson 1907)
18 Nov 1978 (Little Wall L., IBL 48:137)
16 Nov 1919 (Blue L., Stephens 1920)

WINTER: Up to 4 were seen at Davenport several times during the winter of 1967-1968 (IBL 38:16).

COMMENT: Surf Scoters are seen almost yearly in Iowa and seem to be more common in Iowa in spring than White-winged Scoters. Of 18



Map 6.34 Surf Scoter records, 1960-1982.

records from 1960 to 1982, 5 are from spring, 12 from fall, and 1 from winter (Map 6.34).

REFERENCES:
Mullen, D. M. 1972. Spring Surf Scoter record for northeast Iowa. **Iowa Bird Life** 42:73.
Wolden B. O. 1930. Some old records. **Bull. Iowa. Orn. Union.** 7:25.

White-winged Scoter, **Melanitta fusca**

STATUS: Regular; rare migrant and in winter. Class I-S.
HABITAT: Lakes, rivers, and marshes.
SPRING MIGRATION: The few spring records usually are from the last half of Mar or early Apr.
Late dates: 25 Apr, year not given (Emmetsburg, Weeks 1934)
22 Apr 1982 (Booneville, **IBL** 52:54)
8 Apr 1982 (Saylorville Res., **IBL** 52:54)
FALL MIGRATION: There are at least 17 fall records since 1960 (Map 6.35), ranging from late Oct to early Dec. Most reports are of 1 or 2 birds, with the 200 at Davenport in late Oct 1966 (**Audubon Field Notes** 21:44) by far the largest group reported.
Early dates: 10 Oct 1932 (Johnson Co., **IBL** 2:54)
16 Oct 1930 (Delaware Co., **IBL** 1:11)
19 Oct 1929 (Brown's L., Youngworth 1931)

Map 6.35 White-winged Scoter records, 1960-1982.

WINTER: White-winged Scoters have been reported on 6 CBCs from 3 different locales in Iowa since 1960 (Davenport 1968, 1969, 1974, 1980; Clinton 1969; Princeton 1975), all from along the Mississippi R. One at Keokuk on 26 Jan 1975 (IBL 45:21) probably was wintering.
COMMENT: This is the commonest scoter in Iowa, with 33 records from 1960 to 1982 (Map 6.35). It is not unusual for one to be shot during the hunting season.
REFERENCE:

Weeks, L. T. 1934. Data on migrant birds at Emmetsburg, Iowa. **Iowa Bird Life** 4:31-33.

Common Goldeneye, **Bucephala clangula**

STATUS: Regular; common migrant and in winter. Class I-S.
HABITAT: Lakes, rivers, and marshes.
SPRING MIGRATION: Migrants appear as soon as open water is available, generally in mid- or late Mar and peak in late Mar or early Apr. Most migrants are gone by mid-Apr.

Late dates: 17 May 1975 (Iowa City, IBL 45:56)
14 May 1982 (Forney L., IBL 52:54)
11 May 1982 (SE Clay Co., IBL 52:54)

SUMMER: The only record is a male at Davenport from 16 Jun to 17 Jul 1982 (IBL 52:89).
FALL MIGRATION: Little information is available. Migrants generally arrive in early Nov and peak in late Nov.

Early date: 8 Oct 1981 (Lock and Dam 9, IBL 51:116)

WINTER: After the Mallard, Common Goldeneyes are the most regularly reported wintering waterfowl in Iowa, having been reported yearly on CBCs since 1960 from throughout Iowa. They are most common in E Iowa in counties adjacent to the Mississippi R. The most reported is 5,000 on Rathbun Res. in 1974 (IBL 45:8). In years when some water remains open, many of these birds overwinter in Iowa.

[Barrow's Goldeneye, **Bucephala islandica**]

STATUS: Class VI.
RECORDS: A female was found in a Keokuk market on 27 Mar 1888, but later the observer had doubts about the identification (Praeger 1925). A specimen obtained at Independence on 11 Oct 1892 (Nutting 1893) was later determined to be a female Common Goldeneye (DuMont 1933). Anderson (1907) mentioned occurrences in Pottawattamie and Linn counties that were not associated with specific sightings. A wing was submitted from Greene Co., but no other details are available (Musgrove and Musgrove 1977). A female with an all-yellow bill at Cedar Rapids in late Dec 1981 (IBL 52:7, 10, 43) was judged to be a Common Goldeneye.
COMMENT: This coastal species is seen from Nov to Mar somewhere in the Midwest nearly every year, most often on the Great Lakes. It might be occasionally recorded from Iowa. There is a 14 Mar 1968 record from Nauvoo, Ill., opposite Lee Co., Iowa (**Audubon Field Notes** 22:444). Identification of females is difficult and is based on head shape. Occasional Common Goldeneyes have all-yellow bills.

Bufflehead, **Bucephala albeola**

STATUS: Regular; uncommon migrant, rare in winter. Class I-S N.
HABITAT: Lakes, rivers, and marshes.
SPRING MIGRATION: Migrants generally appear in late Mar with the peak usually in late Mar or early Apr. Most migrants are gone by late Apr, but a few linger on into early May.
Late dates: 16 May 1971 (Cardinal M., DK)
13 May 1980 (Fremont Co., THK)
12 May 1979 (Johnson Co., THK)
SUMMER: Cooke (1888) reported nesting at Clear L. A nonflying immature banded at McCray Sl., Sac Co., on 26 Jul 1962 must have been from a nearby nest (Sieh 1962). The only other summer record is one at Goose L., Clinton Co., on 23 Jul 1977 (IBL 47:100).
FALL MIGRATION: Few records are available, but Oct or early Nov probably are the peak of migration.
Early date: 8 Oct 1950 (Forney L., Teer 1952)
WINTER: Buffleheads have been reported on CBCs 15 of 23 years, 1960-1982, mostly from SE Iowa. The most reported was 500 at Rathbun Res. in 1974 (IBL 45:8). Some of these probably overwinter, such as 2 at Le Claire on 23 Feb 1974 (IBL 44:20).
REFERENCE:
Sieh, J. 1962. Bufflehead breeding in Iowa. **Iowa Bird Life** 32:85.

Hooded Merganser, **Lophodytes cucullatus**

STATUS: Regular; uncommon spring and fall migrant, rare nester and in winter. Class I-S N.
HABITAT: Lakes, rivers, and marshes; in summer usually found in wooded bottomlands.
SPRING MIGRATION: Migrants generally arrive in late Mar or early Apr, with a peak generally in mid-Apr.
Early dates: 6 Mar 1966 (Sweet M., IBL 36:48)
11 Mar 1963 (Iowa City, FWK)
13 Mar 1982 (s of Council Bluffs, IBL 52:54)
SUMMER: Small numbers of Hooded Mergansers nest in Iowa, especially in the flooded river bottom areas along the Mississippi R. They nest in cavities and will use Wood Duck nest boxes (Dreis and Hendrickson 1952). Nesting probably starts in late Apr or early May, but little specific information is available. A few summering individuals are seen outside the normal nesting range (e.g., several at Trumbull L. on 24 Jun 1954, 7 and 29 Jul 1958, Weller 1961; 1 at Lylah's M. on 21 Jun 1981, IBL 51:100; and 1 at the IPL Settling Ponds on 7 Jul 1981, IBL 51:100). Nests or broods have been reported in Allamakee, Butler, Jackson, Johnson, Louisa, Polk, Scott, and Winneshiek counties in recent years.
FALL MIGRATION: The little information available suggests migrants arrive in late Oct or early Nov, and most are gone by early Dec.
WINTER: Hooded Mergansers have been reported on CBCs in 18 of 23 years, 1960-1982, but usually only a few birds are seen on 1 or 2 counts per year. Nearly all of these are from E Iowa. A few may winter, such as 1 on 17 Jan 1971 at Davenport (IBL 41:28) and 1 that wintered at Le Claire in 1973-1974 (IBL 44:20).
COMMENT: Hooded Mergansers apparently are uncommon throughout most of their range. Parts of E Iowa have suitable nesting habitat; further

information on nesting populations and possible competition with Wood Ducks for nest sites would be useful.

REFERENCE:

Dreis, R. E., and G. O. Hendrickson. 1952. Wood Duck production from nest-boxes and natural cavities on the Lake Odessa area, Iowa, in 1951. **Iowa Bird Life** 22:19-22.

Common Merganser, **Mergus merganser**

STATUS: Regular; common migrant and in winter, rare in summer. Class I-S.

HABITAT: Lakes, rivers, and marshes.

SPRING MIGRATION: Migrants generally start arriving in SE Iowa in late Feb or early Mar as soon as the ice melts on lakes and rivers. Migration peaks in late Mar or early Apr (e.g., 600 on the Missouri R. on 20 Mar 1980, IBL 50:46, and 150 at Cherokee on 24-25 Mar 1980, IBL 50:46).

Late dates: 22 May 1942 (Ruthven, Provost 1946)
13 May 1980 (Forney L., THK)
6 May 1957 (Little Wall L., Petersen and Sears 1957)

SUMMER: There are several records of birds in summer, including 1 in Clay Co. on 28 Jun 1979 (IBL 49:82), 1 at Blue L. on 23 Jul 1964 (IBL 34:64), and 1 at L. Manawa on 23 Jun and 5 Jul 1941 (Stiles 1941). All of these appear to be nonbreeding birds; there is no indication any have ever nested in Iowa.

FALL MIGRATION: Early migrants usually appear in early Oct, but most arrive in early Nov, with a peak in mid- or late Nov. One at Credit I. from early Aug to 10 Sep 1965 (IBL 35:89) was unusually early.

WINTER: After the Mallard and Common Goldeneye, this is the most abundant and widely reported duck species on CBCs in Iowa. They have been reported yearly since 1960 and have been found at 25 locales from throughout Iowa but most commonly along the Mississippi R. By far the most reported was 2,625 on the 1975 Burlington CBC (IBL 46:8). Some of these overwinter, such as 75-80 at Davenport in 1976-1977 (IBL 47:18), 25 at Bellevue on 11 Jan 1964 (IBL 34:19), and several near Sioux City on 19 Jan 1962 (IBL 32:17).

REFERENCES:

Petersen, P., and W. Sears. 1957. Water-bird migration at Little Wall Lake, Hamilton County, Iowa, spring of 1957. **Iowa Bird Life** 27:93-94.

Stiles, B. F. 1941. A summer record of the American Merganser. **Iowa Bird Life** 11:49.

Red-breasted Merganser, **Mergus serrator**

STATUS: Regular, uncommon migrant, rare in winter and summer. Class I-S.

HABITAT: Lakes, rivers, and marshes.

SPRING MIGRATION: Migrants generally arrive in late Mar or early Apr, with a peak in mid- or late Apr. It generally is one of the latest duck migrants.

Late dates: 17 May 1942 (Ruthven, Provost 1946)
14 May 1979 (SW Iowa, THK)
14 May 1982 (Forney L., IBL 52:54)

SUMMER: There are several recent summer records, e.g., 2 at Dewey's Pasture on 1 Jun 1977 (IBL 47:100), 1 at Willow Sl. on 4 Jun 1978 (IBL 48:97), 2 at Lizard L. on 27 Jun 1978 (IBL 48:97), and 1 at Forney L. on 6 Jun 1980 (IBL 50:74); but there is no indication that the species nests in Iowa.

FALL MIGRATION: Few data are available. Migrants probably arrive in early Nov and peak in late Nov.

WINTER: Red-breasted Mergansers have been reported on CBCs at only 9 different locales, all in E Iowa, in 18 of 23 years, 1960-1982. The most seen on any count was 150 at Rathbun Res. on 20 Dec 1980 (IBL 51:18). Some of these probably overwinter, such as 2 at Cedar L. on 18 Feb 1974 (IBL 44:20), 30 at Credit I. on 15 Feb 1945 (Morrissey 1967-1968), and 8 at Bellevue on 11 Jan 1935 (Youngworth 1935).

REFERENCE:

Youngworth, W. 1935. The American and Red-breasted Mergansers wintering in Iowa. **Iowa Bird Life** 5:7.

Ruddy Duck, **Oxyura jamaicensis**

STATUS: Regular; common migrant, common summer resident in NC and NW Iowa, rare in winter. Class I-S N.

HABITAT: Lakes, rivers, and marshes.

SPRING MIGRATION: Migrants generally arrive in late Mar or early Apr and peak in mid- or late Apr.

Early dates: 11 Mar 1972 (Iowa City, FWK)
12 Mar 1961 (Iowa City, FWK)
13 Mar 1964 (Iowa City, FWK)

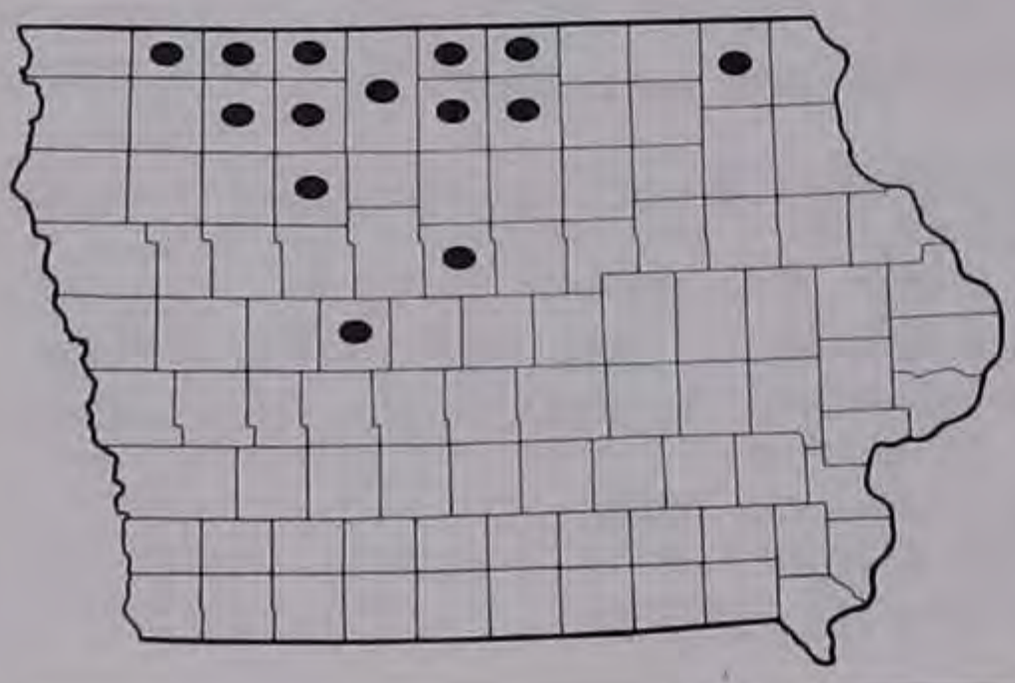
SUMMER: Ruddy Ducks are a fairly common nesting species on the marshes of NC and NW Iowa, probably ranking fifth in abundance behind the Blue-winged Teal, Mallard, Wood Duck, and Redhead (Map 6.36). Nesting begins in mid-May and peaks by early Jun, with most nests hatching from mid-Jun to mid-Jul (Bennett 1938; Low 1941).

FALL MIGRATION: Migrants generally arrive in early Oct, and most are gone by early Nov.

WINTER: Ruddy Ducks have been reported on CBCs only 6 of 23 years, 1960-1982 (Cedar Rapids 1966, 1967, 1977; Davenport 1975; Jamaica 1979; Shenandoah 1977, 1978). These probably all leave Iowa at freeze-up, and the species seldom if ever winters in Iowa.

REFERENCES:

Bennett, L. J. 1938. Redheads and Ruddy Ducks nesting in Iowa. **Trans. North Am. Wildl. Conf.** 3:647-650.



Map 6.36 Ruddy Duck nesting by county, 1960-1982.

Low, J. B. 1941. Nesting of the Ruddy Duck in Iowa. **Auk** 58:506-517.

[Masked Duck, **Oxyura dominica**]

STATUS: Class VI.
RECORD: One was reported from Forney L., Fremont Co., on 14 Mar 1965 (Whitmus 1966). The record was judged doubtful by the Records Committee based on likelihood and the features observed.
COMMENT: This species is a regular vagrant to Gulf Coast states, especially Florida and Texas. There are a few East Coast records, a Nov 1870 Wisconsin specimen (Kumlien and Hollister 1951), and an Apr 1974 Tennessee record (**Am. Birds** 28:812).
REFERENCE:

Whitmus, Mrs. H. V. 1966. Masked Duck in Iowa, a sight record. **Iowa Bird Life** 36:55-56.

ORDER FALCONIFORMES

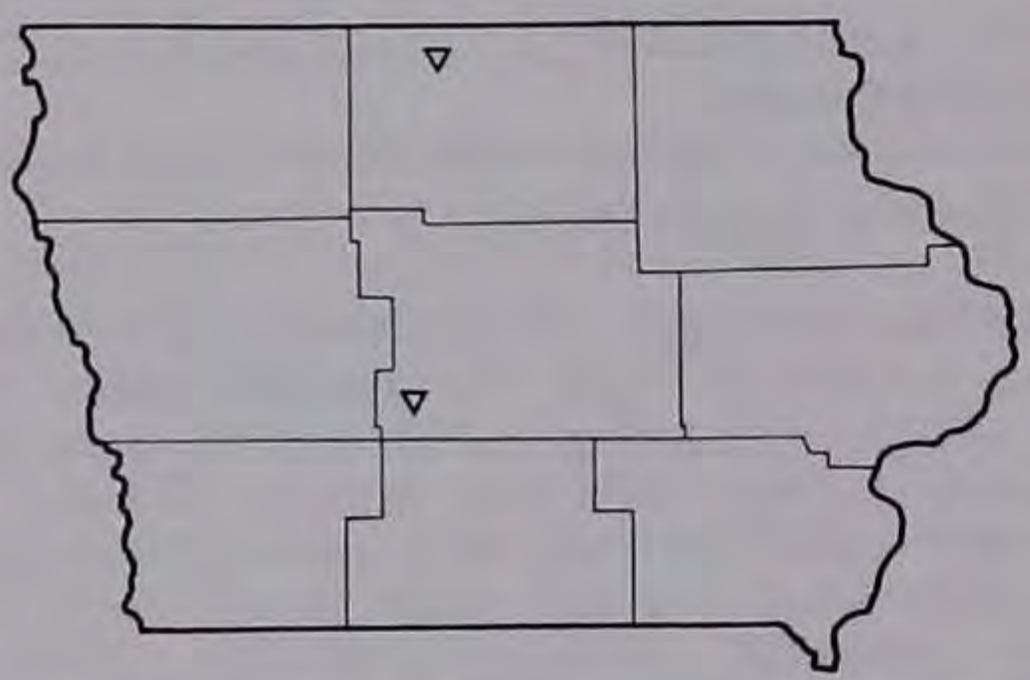
American Vultures, Family Cathartidae

Three of the 6 members of this New World family are known from North America. Two species have been reported in Iowa, 1 regular and 1 accidental. The Cathartidae are very efficient soaring birds and include 2 of the largest living birds, the California Condor and the Andean Condor. Members of this family are noted for their keen eyesight and well-developed olfactory sense. They have hooked but weak beaks, toes that are not strongly adapted for grasping, and a somewhat elevated hind toe. They are ground nesters, preferring caves but sometimes using hollow trees, rock overhangs, or crevices where they lay 2 eggs.

Turkey Vulture, Ledges S.P., C. Kurtz.

Black Vulture, **Coragyps atratus**

STATUS: Accidental. Class I-S.
RECORDS: There are 2 acceptable records (Map 6.37). One was shot in Dallas Co. on 17 Sep 1933 (Dill 1933) and is displayed at the University of Iowa Museum. The second was shot in Winnebago Co. on 29 Aug 1959 and described but not preserved (Burgess 1959). Another was reported but not described at Ledges S.P. on 28 May 1961 (IBL 31:68).
COMMENT: This species is not highly migratory. The area of regular occurrence nearest to Iowa is in SE Missouri and extreme S Illinois. It is a regular vagrant northward along the Atlantic Coast to New England in all seasons. In the Midwest, it is an unusual vagrant, with 5 or fewer records from N Indiana, N Illinois, Iowa, and Nebraska. There are single records from Michigan and Wisconsin, but none from Minnesota. Based on East Coast records, this species might be seen at any time of year, although about half the records from nearby states have been in Mar to May.



Map 6.37 Black Vulture records.

REFERENCES:

Burgess, H. H. 1959. Black Vulture in Winnebago County. **Iowa Bird Life** 29:98.
Dill, H. R. 1933. The Black Vulture in Dallas County, Iowa. **Wilson Bull.** 45:203.

Turkey Vulture, **Cathartes aura**

STATUS: Regular; common nonnesting summer resident in the wooded portions of the state; uncommon breeding bird. Class I-S N.
HABITAT: For nesting, this species prefers caves or crevices in rock outcrops but will also use hollow trees, hollow logs, or abandoned buildings. For roosting, it utilizes dead trees in or near a wooded area where the sun will strike fairly early in the morning. Nesting and roosting sites are almost exclusively limited to woodlands along larger streams.
SPRING MIGRATION: The bulk of the population usually arrives in S Iowa in early Apr and in N Iowa in mid-Apr.
Early dates: 21 Feb 1971 (Burlington, PCP)
8 Mar 1981 (Polk Co., IBL 51:65)
10 Mar 1974 (Ames, DMR)
SUMMER: Egg-laying normally occurs in late Apr or May, the clutch

normally consisting of 2 eggs. The young hatch in June and require an 8- to 10-week period of parental care. Since 1960, the following nest records have been published: 1960, Jones Co., nest with 2 eggs (Vane 1960); 1961, Jones Co., nest with 2 young (IBL 31:66); 1976, Marion Co., nest with 2 young (IBL 46:82); 1978, Davis Co., nest with 2 young (Schaefer 1978); 1978, Mills Co., nest with 2 young (IBL 48:97); 1978, Allamakee Co., nest with 2 young (IBL 49:72); 1980, Marion Co., 2 nests at Red Rock Res. (IBL 50:74); and 1981, Wayne Co., nest with 2 young (Scott 1981). Several nesting studies of the Turkey Vulture (Scott and Moorman 1940; Vane 1960; Schaefer 1978) have been conducted in Iowa.

FALL MIGRATION: Migration peaks in late Sep in N Iowa and in early Oct in S Iowa, with a large buildup at historical roosts such as at Red Rock Res. where 90 to 300 have been reported in different years in early Oct (IBL 42:96, 43:104, 46:22, 47:144). There are large fluctuations in numbers at a roost, beginning in Aug and continuing through Oct (Black 1969). Late dates are seldom reported, probably because the species tends to leave the state en masse in early Oct, after which only a few stragglers remain.

Late dates: 24 Oct 1971 (Red Rock Res., IBL 41:26).
23 Oct 1969 (Red Rock Res., Black 1974)
20 Oct 1973 (Red Rock Res., IBL 43:104)

WINTER: The Turkey Vulture was observed for the first time on a CBC in 1965 at Cedar Rapids (IBL 36:4). Since then, it has been seen on the following counts: 1971, Ogden (IBL 42:8); 1973, Rathbun Res. (IBL 44:8); 1975, Rathbun Res. (IBL 46:8); and 1982, Oakville (IBL 53:12). Additionally, a flock of 15 were seen at Red Rock Res. on 27 Jan 1975 (IBL 45:21).

COMMENT: The winter status and general biology of this species need study, for example, questions about the food of wintering individuals and the age structure of the nonbreeding populations.

REFERENCES:

Black, G. B. 1969. Turkey Vulture observations at Red Rock Refuge. **Iowa Bird Life** 39:78-80.

Schaefer, J. M. 1978. Observations at a Turkey Vulture nest in southern Iowa. **Iowa Bird Life** 48:87-93.

Scott, C. 1981. Turkey Vulture nest in southern Iowa. **Iowa Bird Life** 51:105.

Scott, T. G., and R. Moorman. 1940. Turkey Vultures in central Iowa. **Iowa Bird Life** 10:34-37.

Vane, R. F. 1960. A nesting of the Turkey Vulture in Jones County. **Iowa Bird Life** 30:54-56.

Osprey, Kites, Harriers, and Hawks, Family Accipitridae

This large heterogeneous family contains over 200 species in several subfamilies, with 27 species reported from North America. Of the 17 species that have been reported from Iowa, 12 are regular, 1 is casual, 2 are extirpated, 1 is Class V, and 1 is Class VI. They range in size from the Sharp-shinned Hawk to the Golden Eagle. All are flesh eaters and capture living prey. Sexual dimorphism is universal, with the female the largest; this is more pronounced in some species than others. All have a hooked beak and strong, curved talons. All build their own nests, and most share incubation duties. Most have been persecuted, and this continues in Iowa in spite of current complete legislative protection.

Osprey, Coralville Res., 1 May 1961, F. W. Kent.

Red-shouldered Hawk, Iowa City, 3 May 1952, T. H. Kent.

Osprey, **Pandion haliaetus**

STATUS: Regular; uncommon migrant, rare summer and winter. Class I-S.

HABITAT: Utilizes river corridors for migration; found around aquatic habitats and their associated communities.

SPRING MIGRATION: A migration peak occurs in late Apr to early May.

Early dates: 4 Mar 1981 (Upper Iowa R., IBL 51:65)
17 Mar 1971 (Des Moines, IBL 41:50)
24 Mar 1977 (Red Rock Res., IBL 47:58)

Late dates: 16 June 1976 (Cardinal M., IBL 46:82)
11 Jun 1978 (Fremont Co. IBL 48:98)
9 Jun 1982 (De Soto N.W.R., IBL 52:89)

SUMMER: In addition to the late dates above, there have been several late summer sightings: 15 Jul 1982 at Lansing, Allamakee Co. (IBL 52:89); 21 Jul 1972 at Red Rock Res. (IBL 42:69); 27 Jul 1977 in Clinton Co. (IBL 47:100); 1 Aug 1982 at Nashua (JPS); and 5 Aug 1978 at Coralville Res. (IBL 48:137). The only report of nesting, which was not considered to be beyond doubt by the Records Committee, is a report of an addled egg taken from a nest containing 3 young along the Cedar R. n of Cedar Rapids in 1892 (Bailey 1918).

FALL MIGRATION: Osprey are seen along Iowa's waterways in Sep and Oct. A few arrive in late Aug and some stay into Nov.

Early dates: 17 Aug 1975 (Iowa City, IBL 45:92)
18 Aug 1967 (Waterloo, IBL 37:98)
18 Aug 1982 (Davenport, IBL 52:119)
Late dates: 21 Nov 1981 (De Soto N.W.R., IBL 51:116)
11 Nov 1979 (Little Wall L., IBL 49:111)
7 Nov 1974 (Red Rock Res., IBL 44:101)

WINTER: It has been observed on 5 CBCs from 1960 to 1982. Additionally, 3 were seen on 15-16 Jan 1977 at Red Rock Res. (IBL 47:19) and one at Riverton A. on 17 Jan 1980 (IBL 50:25).

COMMENT: This species has rebounded from a low in the early 1960s, when only a few per migration season were reported, to the 30-40 per season in recent years. With the increased presence of summer Ospreys and appropriate habitat at reservoirs, the construction of nest platforms might induce this species to nest in Iowa.

American Swallow-tailed Kite, **Elanoides forficatus**

STATUS: Extirpated; formerly summer resident. Class I-S N.

RECORDS: This species was apparently a fairly common summer resident throughout Iowa (Anderson 1907; Bailey 1918). The reasons for its decline are unknown. It became an increasingly rare migrant in the late 1800s and there are only 10 records after 1900 (DuMont 1933). The last dates were 28 May 1916 in Cerro Gordo Co. (Fenton 1923-24) and July 1931 in Pottawattamie Co. (Swenk 1933). Specimens are located at the University of Iowa, Coe College, Putnam Museum, and Rockwell City.

COMMENT: This species is currently a summer resident of Florida and localized areas of the lower Atlantic and E Gulf coasts, with vagrants appearing north along the Atlantic Coast, in Texas, and rarely in the central United States. Over the last 30 years there are about 10 records from Ohio, Ontario, Wisconsin, Minnesota, Missouri, Colorado, and Oklahoma from late May to early Sep.

REFERENCE:

Swenk, M. H. 1933. The Swallow-tailed Kite in Pottawattamie County, Iowa. **Wilson Bull.** 44:182.

Mississippi Kite, **Ictinia mississippiensis**

STATUS: Extirpated; formerly casual or accidental. Class III.

RECORDS: DuMont (1933) lists this species as "formerly a casual visitor," but the evidence is scanty. The only records judged acceptable by the Records Committee are 2 specimens examined by Bailey (1918) at Iowa Wesleyan College and said to have been taken in the fall 1887 near Burlington. DuMont (1933) examined the same specimens and found 1 labeled 26 Aug 1884. The specimens can no longer be located. Two other old records from Black Hawk and Webster counties (no dates given, Anderson 1907) were judged probable (Class IV). Other old records without supporting data are from Sioux City on 1 Jul 1884 (DuMont 1933), Grinnell on 4 Oct 1886 (Bent 1937), and the Van Buren-Henry county line (no date given, Anderson 1907). There is also an indefinite reference to occurrence in Linn Co. (Anderson 1907). This species was listed by Say at Engineer Cantonment n of Omaha (James 1823) and by Allen (1870) without reference to specific sightings. There are 3 recent reports judged Class IV by the Records Committee: 24 May

1978 at Cardinal M., Winneshiek Co. (IBL 48:72), 12 Apr 1979 at George Wyth S.P. (IBL 49:58), and 14 May 1980 at Waubonsie S.P. (IBL 50:46). The Apr date would be very unusual for this migratory species.

COMMENT: Iowa was formerly on the northern edge of the range for Mississippi Kite. This species was probably casual and may have nested (Parker and Ogden 1979). By 1900 there was a dramatic decline in Mississippi Kites in the East and the central Mississippi valley. There were no Iowa reports during the period of decline. Recovery began gradually in the 1950s, and recently there have been several reports in northerly locations, including Minnesota, Wisconsin, Illinois, and Nebraska. This species is common in S Kansas and has nested recently in S Illinois. If the present pattern continues, occasional sightings should be expected in Iowa. Riparian habitat is preferred. Most northerly records are for mid- and late May, but may occur anytime into Sep.

REFERENCES:

Bent, A. C. 1937. **Life Histories of North American Birds of Prey (Part 1)**. Washington, D.C.: U.S. National Museum Bull. no. 167.

Parker, J. W., and J. C. Ogden. 1979. The recent history and status of the Mississippi Kite. **Am. Birds** 33:119-129.

Bald Eagle, **Haliaeetus leucocephalus**

STATUS: Regular; common migrant and winter resident, rare summer. Class I-S N.

HABITAT: Winters near open water, especially along the Mississippi R.; migrates along major waterways; nests in the floodplain of the Mississippi R. in NE Iowa.

SPRING MIGRATION: Normally leaves Iowa by late Mar.

Late dates: 5 May 1979 (Sweet M., IBL 49:59)
2 May 1982 (Pottawattamie Co., IBL 52:55)

SUMMER: Formerly the Bald Eagle was a regular nesting bird in Iowa. The last nesting was considered to have occurred in 1864 (Orr 1937). However, DuMont (1934) gave evidence of nesting in 1872, 1873, 1882, and 1905. Nesting has been known to occur in recent years along the Mississippi R. in SW Wisconsin, SE Minnesota, and Illinois. Recently, an Iowa nest was discovered along the Mississippi R. in Allamakee County (press release of Iowa Conservation Commission, 11 Dec 1980), and young were produced in 1979 and 1980. The nest is in refuge status from 1 Mar through 30 Jun each year to prevent disturbance. In 1982, an unoccupied nest was discovered on federal lands several miles from the nest mentioned above. At least 1 young was produced in 1982 (IBL 52:89). All recent summer sightings are from Allamakee Co. except for an immature near DeWitt, Clinton Co., on 21 Jun 1982 (IBL 52:89).

FALL MIGRATION: Normally arrives in Iowa by late Sep or early Oct.

Early dates: 4 Aug 1979 (Coralville Res., IBL 49:111)
8 Aug 1976 (Lock and Dam 9, IBL 46:82)
late Aug 1974 (Red Rock Res. IBL 44:72)

WINTER: It has been reported on an Iowa CBC every year since 1960, with a low of 71 in 1970, a high of 489 in 1977, and an average of 209. Brown (1975) documented this species' steady decline from 1957 through 1970. Since then, the numbers reported on winter surveys of the Mississippi R. have increased steadily and the percentage of immatures has risen from an average of 20 percent in 1962-1966 to 29 percent in 1972-1976, indicating improved nesting success (Fawks 1976).

COMMENT: This species is nesting with more regularity along the Mississippi R. in the upper Midwest. With a little care and good management, it should eventually nest along our larger reservoirs. Most locks and dams along the Mississippi R. provide an ideal place to observe wintering eagles roosting and feeding.

REFERENCES:

Brown, W. H. 1975. Winter population trends in the Bald Eagle. **Am. Birds** 29:12-14.

DuMont, P. A. 1934. The Bald Eagle as an Iowa Bird. **Iowa Bird Life** 4:2-4.

Fawks, E. 1976. One day Bald Eagle count--February 14, 1976. **Iowa Bird Life** 46:60-61.

Orr, E. 1937. Notes on the nesting of the Bald Eagle in Allamakee County, Iowa. **Iowa Bird Life** 7:18-19.

Northern Harrier, **Circus cyaneus**

STATUS: Regular; common migrant, uncommon winter visitant, rare nester. Class I-S N.

HABITAT: Open fields, especially grassy areas; nests in moist prairies or pastures.

SPRING MIGRATION: Usually appears in Iowa during late Mar, with a peak in mid-Apr.

SUMMER: Once a common nester in Iowa prairies, this species is now one of Iowa's rarest nesting birds. The following nesting reports exist since the late 1950s: Johnson Co., 1957 (Kent and Vane 1957); Sioux Co., 1967 (JLA); Appanoose Co., 1976 (RRG); Johnson Co., 1977 (Halmi 1977); Howard Co., 1981 (IBL 51:65); and Emmet Co., 1982 (IBL 52:119).

FALL MIGRATION: The late season records are difficult to assess due to the presence of winter visitants and permanent residents, but the Northern Harrier seems to begin migration in early Sep with a peak in mid-Oct.

WINTER: It has been reported on Iowa CBCs every year since 1960, with a low of 6 birds to a high of over 140 birds reported per census period. Extreme SW Iowa counts yield the most birds.

COMMENT: This species, as with other ground-nesting raptors, should be afforded the least disturbance possible when nests are found.

REFERENCES:

Halmi, N. S. 1977. Nest of Northern Harrier on Williams Prairie, Johnson Co. **Iowa Bird Life** 47:106.

Kent, F. W., and R. F. Vane. 1957. Late spring birding in Johnson County, with studies at a Marsh Hawk nest. **Iowa Bird Life** 27:78-83.

Sharp-shinned Hawk, **Accipiter striatus**

STATUS: Regular; uncommon migrant and winter visitant. Class I-S N.

HABITAT: Woodlands and edge; often roosts in evergreen groves.

SPRING MIGRATION: The migration period is long, beginning in late Mar and continuing through early May, with the bulk of the population passing in mid- to late Apr. Presence of wintering birds obscures early dates, but the earliest birds banded at Davenport were on 18 Mar 1978 and the latest on 23 May 1978 (PCP).

SUMMER: No recent nesting records exist, but there are the following

sightings: 4 Jun 1982 at Iowa City (IBL 52:89), 12 Jul 1958 in Scott Co. (Morrissey 1968a), 20 Jul 1974 at Iowa City (IBL 44:72), and 23 Jun 1981 at Amana (IBL 51:100). Additionally, 2 immature birds scarcely capable of sustained flight were seen in the loess hills of Monona Co. in 1978 (SD). There is little concrete evidence, other than that given by Bartsch (1897) in NE Iowa, of actual nesting records of this species for Iowa. Fenton (1923-1924) reported nesting near Charles City in 1917 and perhaps 1918.

FALL MIGRATION: Migration is from late Aug through Nov, with a peak in late Sep to early Oct. Observations during 3 years of banding operations in NE Iowa along the Mississippi R. show a peak around 20 Sep and another around 10 Oct (DMR). Early and late banding dates at Davenport are 2 Sep 1968 and 8 Nov 1972 (PCP).

WINTER: It has occurred on at least 1 Iowa CBC each year since 1960, with a high of 26 in 1978. The bulk of these reports are from SE Iowa. Brown (1973b) showed that winter populations of this species decreased from 1952 to the early 1960s and then increased slightly to 1973.

COMMENT: At the turn of the century it was considered fairly common and a regular summer resident by Keyes (1897) and common by Bartsch (1897). Sufficient nesting habitat yet occurs in NE Iowa and in the loess hills of W Iowa. Field identification of this species is difficult and may be unreliable, particularly by people who lack considerable experience with accipiters (Mueller et al. 1979).

REFERENCES:

Keyes, C. R. 1897. The Iowa raptores. **Iowa Orn.** 3:1-4.

Mueller, H. C., D. D. Berger, and G. Allez. 1979. The identification of North American accipiters. **Am. Birds** 33:236-240.

Cooper's Hawk, **Accipiter cooperii**

STATUS: Regular; uncommon migrant, rare winter, rare nester. Class I-S N.

HABITAT: Wooded tracts; for nesting, prefers a dry upland oak-hickory community.

SPRING MIGRATION: Migration peak occurs in mid-Apr and is spread from late Mar through early May.

SUMMER: Nests sparingly in heavily wooded parts of Iowa, particularly in the Paleozoic Plateau of NE Iowa. A nest found in Lucas Co. hatched in early Jun 1980 (Crim 1981).

FALL MIGRATION: Fall records are clumped during mid- to late Sep, with a few in Oct. During flyway counts, late Sep is most favorable for viewing this raptor.

WINTER: A few winter in Iowa, usually during mild winters and near a constant food source. The Cooper's Hawk has been seen on at least 1 CBC in Iowa each year since 1960, the numbers ranging from 1 in 1967 to 17 in 1973, with an average of 6. Brown (1973b) showed a decline in the winter population of this species from 1952 through the early 1960s, when a leveling off occurred.

COMMENT: This species needs wooded areas as a migration corridor and remote wooded tracts for nesting. Although it has been on the Blue List since 1972, its status is improving in part of its range (Tate 1981). As recently pointed out (Mueller et al. 1979), accurate evaluation of size and experience are needed for reliable identification. The more rounded tail of the Cooper's Hawk is not reliable for distinguishing this species

from the Sharp-shinned Hawk. Records of accipiters should not be considered absolutely reliable.

REFERENCES:

Crim, G. B. 1981. Cooper's Hawk nesting in Stephens State Forest. **Iowa Bird Life** 51:130-131.

Mueller, H. C., D. D. Berger, and G. Allez. 1979. The identification of North American accipiters. **Am. Birds** 33:236-240.

Tate, J., Jr. 1981. The Blue List for 1981. **Am. Birds** 35:3-10.

Northern Goshawk, **Accipiter gentilis**

STATUS: Regular; rare cyclic winter visitant. Class I-S.

HABITAT: This woodland species needs fairly large tracts for hunting; however, during winter it will often appear near dwellings or in town where food is plentiful.

WINTER: Goshawks first appear in Iowa in mid- to late Sep; Nov is the peak month for reports. Mueller and Berger (1967) in Wisconsin found a peak in late Oct for juveniles and late Nov for adults. Most are gone from Iowa by late Mar. Goshawks have been reported on 14 CBCs from 1960 to 1982, with most from SE Iowa.

Early dates: 6 Sep 1980 (Sunken Grove, IBL 51:26)
9 Sep 1966 (Worth Co., IBL 36:103)
16 Sep 1966 (Lucas Co., IBL 36:103)

Late dates: 21 May 1967 (Waterloo, IBL 37:50)
19 Apr 1975 (Webster City, IBL 45:57)
11 Apr 1969 (Lamoni, IBL 39:39)
11 Apr 1982 (Bays Branch, IBL 52:55)

SUMMER: There is an 11 Jul 1964 report from Akron in Plymouth Co. (IBL 34:64). No comparable sightings exist for SE South Dakota, NE Nebraska, or S Minnesota.

COMMENT: This species is well known for its periodic invasions into the continental United States following the decline of its food base (Mueller and Berger 1967). The major eruption of 1972-1973 (Mueller et al. 1977) was marked by increased reports in Iowa, with 9 in 1972 and 12 in 1973, compared with the average of about 3 reports per year. Musgrove (1946) reported on a number of sightings in 1945-1946. There were about 15 sightings in 1981-1982 and even more in 1982-1983.

REFERENCES:

Mueller, H. C., and D. D. Berger. 1967. Some observations and comments on the periodic invasions of Goshawks. **Auk** 84:183-191.

Mueller, H. C., D. D. Berger, and G. Allez. 1977. The periodic invasion of Goshawks. **Auk** 94:652-663.

Musgrove, J. W. 1946. The Eastern Goshawk in Iowa. **Iowa Bird Life** 16:2-4.

[Harris' Hawk, **Parabuteo unicinctus**]

STATUS: Class V.

RECORD: The only record is of 1 caught in a trap in Van Buren Co. about 1895 (Anderson 1907). The bird was identified by Walter Savage and painted by his father; however, neither the painting nor a description is available for review.

COMMENT: This southwestern species normally is found near the Mexican

border, occasionally straying to Oklahoma. There is an Oct 1922 record from E Nebraska, a 1963 nesting record from E Kansas, and an Aug-Sep 1973 record from C Kansas.

[Gray Hawk, **Buteo nitidus**]

STATUS: Class VI.
RECORDS: Two were reported as shot in Van Buren Co. (Anderson 1907) and at least 1 on 25 May 1895 (Henning 1895); a painting of the latter was made by Walter Savage (DuMont 1933). At the time, this species of Mexico and the SW United States was known as Mexican Goshawk or Gray Star Buzzard. DuMont interpreted the painting as a juvenile Broad-winged Hawk.
COMMENT: There are no definite records from the Midwest.
REFERENCE:

Henning, C. F. 1895. Notes and news. **Iowa Orn.** 1:89.

Red-shouldered Hawk, **Buteo lineatus**

STATUS: Regular; uncommon migrant and rare permanent resident. Class I-S N.
HABITAT: Woodland and woodland edge. For nesting, it needs a medium-aged floodplain woodland (Bednarz and Dinsmore 1981, 1982).
SPRING MIGRATION: The presence of permanent residents obscures evaluation of migration intervals. The bulk of birds pass through Iowa in mid-Mar.
SUMMER: This species formerly nested throughout Iowa, especially the central and eastern portions. It is now confined to a few territories along the Mississippi R. in NE Iowa (Bednarz and Dinsmore 1981). A nest site is used repeatedly, and clutches of 5-7 eggs are laid.
FALL MIGRATION: Most pass through Iowa in early Oct.
WINTER: In the period 1960-1982, it has appeared on CBCs for all except 2 years. In the early 1960s, about 22 birds were reported per year on CBCs. Since 1965, the average has dropped to less than 5 per year.
COMMENT: The decline of the Red-shouldered Hawk in Iowa began in the mid-1950s (Brown 1964). This trend continued nationally until at least 1969 (Brown 1971). Increased reports in recent years in Iowa may indicate the beginning of a recovery.
REFERENCES:

Bednarz, J. C., and J. J. Dinsmore. 1981. Status, habitat use, and management of Red-shouldered Hawks in Iowa. **J. Wildl. Manage.** 45:236-241.

Bednarz, J. C., and J. J. Dinsmore. 1982. Nest-sites and habitat of Red-shouldered and Red-tailed hawks in Iowa. **Wilson Bull.** 94:31-45.

Brown, W. H. 1964. Population changes in the Red-shouldered and Red-tailed hawks. **Iowa Bird Life** 34:82-88.

Brown, W. H. 1971. Winter population trends in the Red-shouldered Hawk. **Am. Birds** 25:813-817.

Broad-winged Hawk, **Buteo platypterus**

STATUS: Regular; common migrant, rare nester, very rare winter. Class I-S N.

HABITAT: Deciduous woodlands; often found nesting in a deeper part of the woodland than the Red-tailed Hawk.

SPRING MIGRATION: Generally appears in Iowa in mid-Apr, with peak migration occurring in mid- to late Apr. Stragglers are found into May, but some may be summer residents. There is a 3 Mar 1940 record from Amana (Serbousek 1959), which is an unlikely date for this species.

Early dates: 6 Apr 1965 (Waterloo, IBL 35:50)
11 Apr 1978 (Johnson Co., THK)

Late dates: 15 May 1982 (Fremont Co., THK)
14 May 1974 (Davenport, PCP)
14 May 1982 (Ames, IBL 52:55)

SUMMER: Since 1956, nesting is known for the following Iowa counties: Allamakee, 1977 (SD); Boone, 1966 (IBL 36:82); Delaware, 1978 (DMR); Hamilton, 1976 (IBL 46:82); Linn, 1956 (Kline 1956); Monona, 1978 (SD); Polk, 1955 to 1960 (WHB), 1966 (**Am. Birds** 17:464); Pottawattamie, 1977 (nest card data); and Story, 1967 (IBL 37:50).

FALL MIGRATION: The classic kettles occur in mid- to late Sep, with a peak period from 15 to 18 Sep and a secondary peak from 10 to 14 Oct.

Early dates: 27 Aug 1976 (Iowa City, IBL 46:82)
7 Sep 1975 (Johnson Co., IBL 45:92)
11 Sep 1982 (Coralville Res., THK)

WINTER: It has appeared on 10 CBCs since 1959. Additional winter records are: 9 Jan 1960 at Wheatland (IBL 30:16) and 11 Jan 1969 in Des Moines (IBL 39:19).

COMMENT: The largest daily numbers published are 5,000 at Waterloo on 26 Sep 1965 (IBL 35:89) and 2,000-3,000 near Cedar Rapids in 1911 (Bailey 1912). More data are needed on early and late migration dates. There is a general skepticism of any wintering Broad-winged Hawk records n of C Florida; future winter sightings should be carefully documented.

REFERENCES:

Bailey, B. H. 1912. A remarkable flight of Broad winged Hawks. **Proc. Iowa Acad. Sci.** 19:195-196.

Kline, P. D. 1956. Bird records in Iowa, 1956. **Iowa Bird Life.** 26:84-85.

Swainson's Hawk, **Buteo swainsoni**

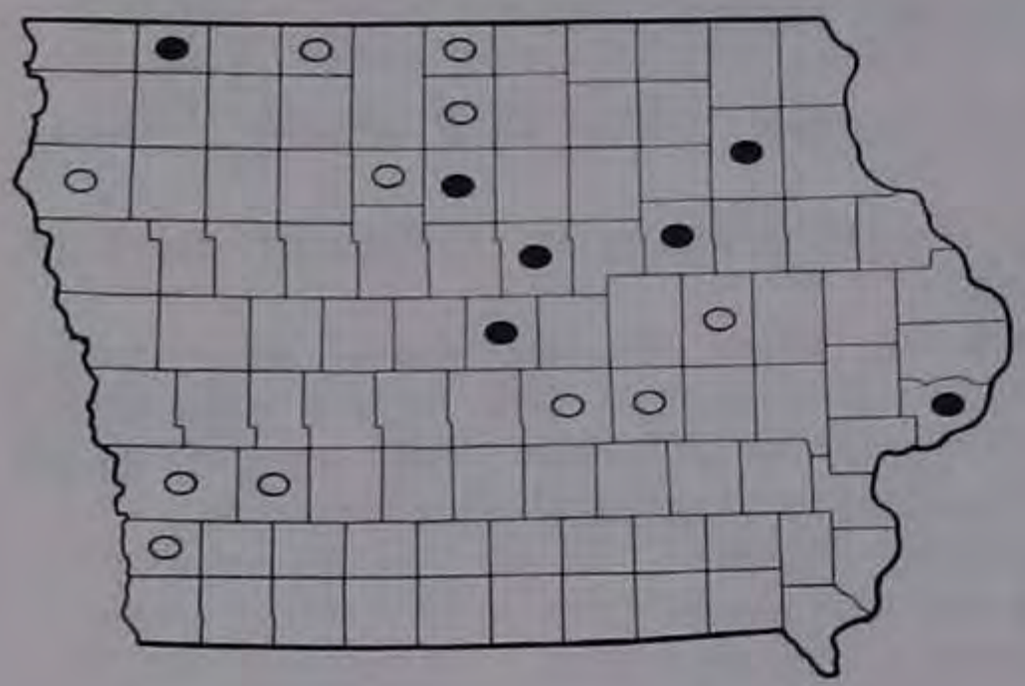
STATUS: Regular; rare migrant and summer resident. Class I-S N.

HABITAT: Prefers sparsely wooded area for nesting and often chooses a solitary tree.

SPRING MIGRATION: Generally arrives in Iowa in mid-Apr, with a peak in late Apr.

Early dates: 18 Mar 1972 (Black Hawk Co., IBL 42:38)
2 Apr 1978 (Fayette Co., IBL 48:72; JPS)
8 Apr 1978 (Sweet M., IBL 48:72; JPS)
8 Apr 1979 (Fayette Co., IBL 49:59)

SUMMER: Nesting in Iowa appears to be cyclic; nests were found in the mid-1950s, mid-1960s, and late 1970s. Nesting occurs about a month later than for Red-tailed Hawk, with young ready to leave the nest in mid-Jul.



Map 6.38 Swainson's Hawk nesting by county, 1960-1982.

FALL MIGRATION: Migration peaks in late Sep. Individuals or small groups of birds may be seen. On 5 Oct 1940 a flock of 200-300 birds thought to be Swainson's Hawks roosted overnight in trees in Dickinson Co. along the Little Sioux R. (Williams 1941). Several were shot, and 2 were later identifiable as Swainson's.

Late dates: 11 Nov 1972 (Fremont Co, IBL 42:96)
10 Nov 1973 (Fremont Co., IBL 43:104)
26 Oct 1977 (Fremont Co., IBL 47:144)

WINTER: There are 7 reports on CBCs from the period 1960-1982, some by competent observers in good light (Peasley and Peasley 1962; IBL 37:9, 42:6). There is some skepticism concerning winter sightings of this species in latitudes as far north as Iowa (IBL 48:31-32, 49:9; Browning 1974).

COMMENT: Winter sightings should be treated with considerable skepticism and rigorous documentation. Because this is a bird of the Great Plains, it is surprising to note that the bulk of nests have been found NC and NE Iowa (Map 6.38). However, there are known remnant populations in SE Minnesota (Green and Janssen, 1975) and NE Illinois.

REFERENCES:

Browning, M. R. 1974. Comments on the winter distribution of the Swainson's Hawk (**Buteo swainsoni**) in North America. **Am. Birds** 28:865-867.

Peasley, H., and H. Peasley. 1962. Wintering Swainson's Hawk at Des Moines. **Iowa Bird Life** 32:44-45.

Williams, N. J. 1941. Migration of Swainson's Hawks in western Iowa. **Iowa Bird Life** 11:35.

Red-tailed Hawk, **Buteo jamaicensis**

STATUS: Regular; common migrant and winter resident, common to uncommon summer resident. Class I-S N.

HABITAT: Woodland edge, especially near a grassland, which is utilized for hunting (Bednarz and Dinsmore 1982).

SPRING MIGRATION: Migration peaks in S Iowa in mid-Mar and in N Iowa in late Mar.

SUMMER: Eggs are normally laid by late Mar, and young leave the nest in early Jun. The normal number of eggs is 2. Red-tails were found on 23 percent of BBS routes from 1967 to 1980, with an average of 0.3

birds per route. Highest counts came from the Paleozoic Plateau and extreme S Iowa.

FALL MIGRATION: Migration peaks in late Sep to mid-Oct but continues until early Nov.

WINTER: On CBCs from 1960 to 1982, an average of 291 birds were reported yearly, with a range from 158 in 1968 to 588 in 1982. The Paleozoic Plateau and the loess hills of W Iowa are especially good wintering areas for Red-tailed Hawks. Koenig (1975b) noted that Red-tails were more common on CBCs in S and E Iowa and increased in density in the early 1950s and then declined very slightly up to 1973.

COMMENT: There are 4 subspecies of the Red-tailed Hawk in Iowa: the Western Red-tailed Hawk (**B. j. calurus**), the Eastern Red-tailed Hawk (**B. j. borealis**), Krider's Red-tailed Hawk (**B. j. kriderii**), and Harlan's Hawk (**B. j. harlani**). Most of the birds trapped and banded in W Iowa are the Western Red-tail, and a portion of those trapped along the Mississippi R. are of this race also; the rest are of the eastern race. Youngworth (1948) described identification problems in the western race. The Krider's Hawk formerly nested in Winnebago and Hancock counties (Anderson 1897). Anderson (1907) also mentioned breeding records from Lee, Linn, and Kossuth counties. It is now restricted to the southern prairie provinces of Canada and adjacent states, south to Colorado and Nebraska (Brown and Amadon 1968), so it could conceivably nest in N Iowa. Harlan's Hawk, now restricted to N Alberta and British Columbia and S Alaska, is reported to have nested at the Amanas in Iowa from 1898 to 1902 (Keyes 1907). The races that occur in Iowa have been discussed by DuMont (1933, 1934).

REFERENCES:

Anderson, R. M. 1897. Nesting habits of Krider's Hawk. **Iowa Orn.** 3:31-34.

Bednarz, J. C., and J. J. Dinsmore. 1982. Nest-sites and habitat of Red-shouldered and Red-tailed hawks in Iowa. **Wilson Bull.** 94:31-45.

Brown, L., and D. Amadon. 1968. **Eagles, Hawks, and Falcons of the World**. New York: McGraw-Hill.

DuMont, P. A. 1933. The Iowa Red-tailed Hawks. **Iowa Bird Life** 3:5-7.

DuMont, P. A. 1934. Additional observations on Harlan's, Krider's and Western Red-tailed Hawk in Iowa. **Iowa Bird Life**. 4:51-52.

Keyes, C. R. 1907. Breeding of Harlan's Hawk in Iowa. **The Warbler** 3:41-45.

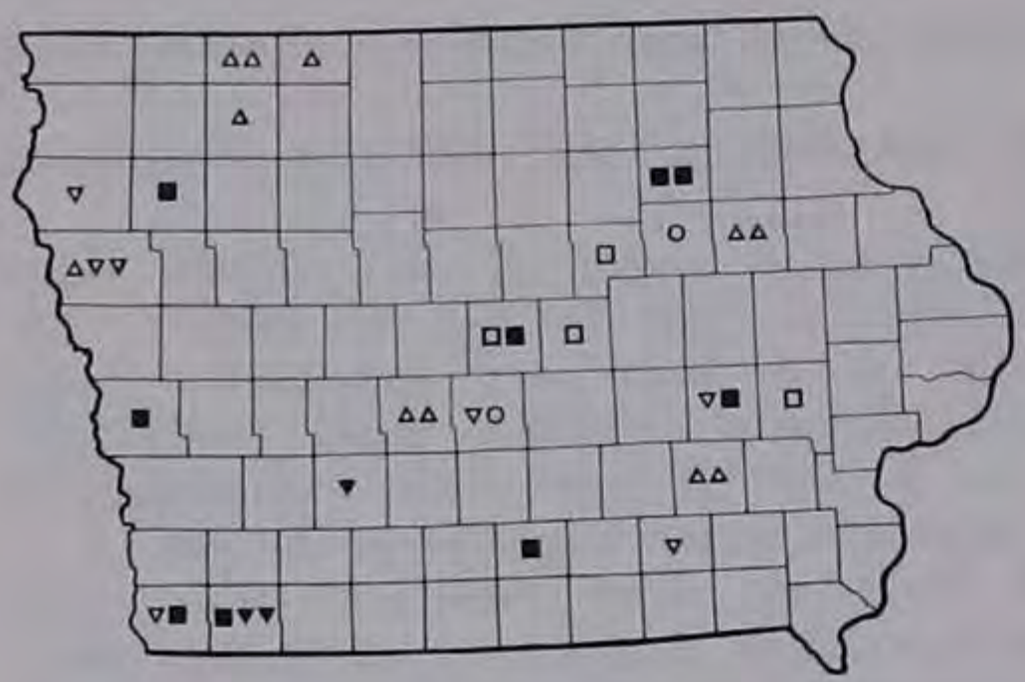
Youngworth, W. 1948. Notes on the color phases of the Western Red-tailed Hawk. **Iowa Bird Life.** 18:2-3.

Ferruginous Hawk, **Buteo regalis**

STATUS: Casual; predominantly migrant. Class I-S.

HABITAT: Open country; similar to Red-tailed Hawk in migration.

RECORDS: The 35 records with dates, which are scattered over the years, show a wide geographic and seasonal distribution (Map 6.39). The monthly distribution of records (Aug-1, Sep-2, Oct-4, Nov-3, Dec-8, Jan-1, Feb-3, Mar-5, Apr-5, May-1, Jun-2) suggests that this species is predominantly a spring and fall migrant, with peaks in Dec and Mar-Apr. There is a specimen at the University of Iowa from Iowa Co. dated 21 Aug 1936, collector unknown.



Map 6.39 Ferruginous Hawk records.

Early dates: 21 Aug 1936 (Iowa Co., University of Iowa)
8 Sep 1946 (Ankeny, Stiles 1946)
17 Sep 1917 (Brown's L., Stephens 1918)
Late dates: 25 Jun 1901 (Cedar Falls, DuMont 1933)
6 Jun 1929 (Brenton's Sl., DuMont 1929)
13 May 1946 (Dickinson/Emmet counties, Musgrove et al. 1947)

COMMENT: Ferruginous Hawks breed in the grasslands of the western plains, including W Nebraska and W South Dakota. Most migrate south in winter, but some remain in the north or move eastward. Migrants wander as far east as Iowa and very rarely to Illinois and Indiana. The distribution pattern in Iowa suggests that the species is more common in W Iowa, especially when one considers that the eastern part of the state is birded more intensively. This species is easily overlooked, so it may be more common than the records indicate. However, it is also likely that some of the published records represent misidentified light phase Red-tailed Hawks. Diagnostic marks of an adult, light phase Ferruginous Hawk include dark (rufous) feathered legs, rufous back and shoulders, and a white patch on the inner primaries as seen from above (Eckert 1982). Other marks, which are not diagnostic, include long wingspan, white or pink tail, light-colored head, white underparts, and wings held in a dihedral. Immatures may lack rufous coloration but can be identified by the specific location of the white wing patches (Red-tails may have a white patch crossing the outer primaries) and by the white feathered legs (if Rough-legged Hawk can be excluded).

REFERENCES:

DuMont, P. A. 1929. (no title.) **Bull. Iowa Orn. Union** 7:23.

Eckert, K. R. 1982. Field identification of the Ferruginous Hawk. **Loon** 54:161-164.

Musgrove, J. W., Mrs. J. W. Musgrove, M. F. Reece, and Mrs. M. F. Reece. 1947. Shore birds in the Spirit Lake area. **Iowa Bird Life** 17:17-18.

Stiles, B. F. 1946. Ferruginous Rough-leg in Polk County. **Iowa Bird Life** 16:65.

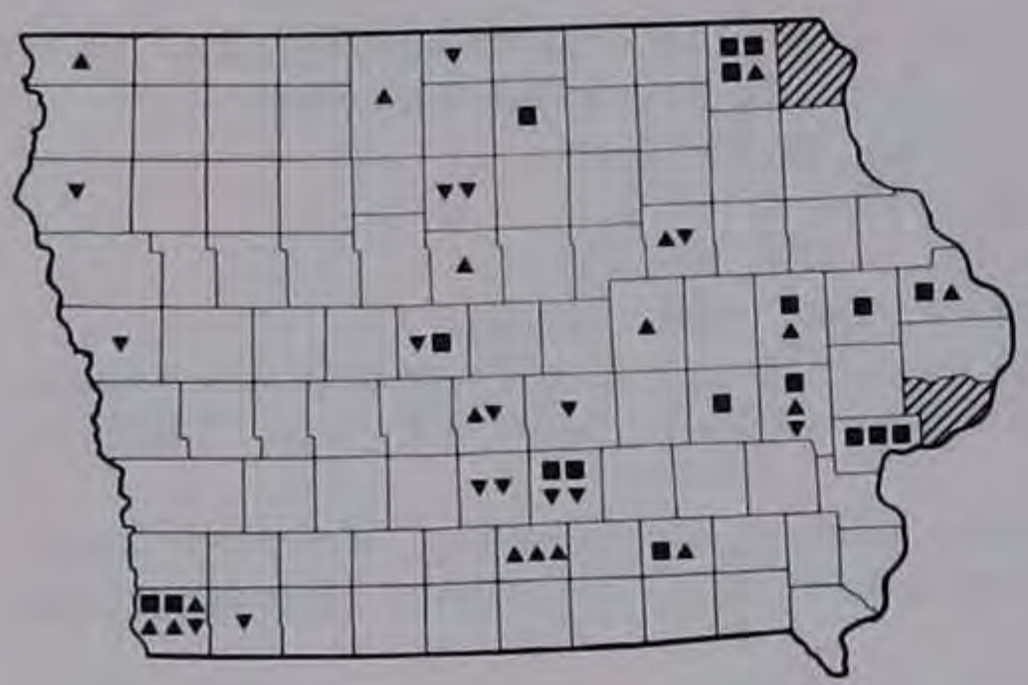
Rough-legged Hawk, **Buteo lagopus**

STATUS: Regular; common winter visitant. Class I-S.
HABITAT: Hunts in open fields where it is commonly seen hovering.

Roosts in groves of trees, especially conifers, surrounded by open fields; often in the company of other hawks of the same species.
SPRING MIGRATION: Most have left Iowa by early Apr.
Late dates: 11 May 1982 (Linn Co., IBL 52:55)
9 May 1976 (Johnson Co., IBL 46:56)
30 Apr 1979 (Pocahontas Co., IBL 49:59)
SUMMER: There are 2 Jun records: 6 Jun 1978 on the Fremont Co. Foray (IBL 48:98) but not listed by Silcock (1979) and 13 Jun 1982 in Pocahontas Co. (IBL 52:89).
FALL MIGRATION: Peak migration usually occurs in late Oct through early Nov. The population seems to decline after Dec, probably due to birds moving farther south.
Early dates: 1 Sep 1981 (Clayton Co., LAS)
12 Sep 1977 (Cherokee Co., IBL 47:144)
29 Sep 1976 (Coralville Res., IBL 46:112)
WINTER: CBCs from 1959 through 1980 showed a low of 13 in 1959 and a high of 166 in 1977, with an average of about 79 birds reported per year. Counts in the southern half of Iowa are the highest, with consistently high counts coming from Davenport and Oakville. Certain counts have reported high numbers for several successive years and then dropped back to normal low numbers. This happened at Buffalo Center in the early 1960s with a surprising total of 46 in 1964, and Waterloo, which had high counts in the early 1960s.
COMMENT: Iowa is a fairly important wintering ground for this species. Weller (1964) elaborated on their habitat utilization.
REFERENCES:
Silcock, W. R. 1979. Fremont County Foray, June 2-7, 1978. **Iowa Bird Life** 49:47-52.
Weller, M. W. 1964. Habitat utilization of two species of Buteos wintering in central Iowa. **Iowa Bird Life** 34:58-62.

Golden Eagle, **Aquila chrysaetos**

STATUS: Regular; rare migrant and winter visitant. Class I-S.
HABITAT: Found along the waterfowl migration paths; winters in areas where bluffs and scattered timber occur, especially in NE Iowa.
WINTER: Golden Eagles are rare migrants and winter visitants from Oct to Apr. Monthly records from 1960 to 1982 are distributed as follows: Sep-1, Oct-7, Nov-10, Dec-16, Jan-8, Feb-8, Mar-12, Apr-5. Allamakee and Scott counties have the most records. In the last few years the Upper Iowa River valley in the hills of the Paleozoic Plateau region has been a consistent wintering location. Scott Co. birds are more likely to be found in the Mississippi R. valley with Bald Eagles. The pattern of distribution appears to follow the Mississippi, Des Moines, and Missouri rivers, with scattered other E Iowa sightings (Map 6.40).
Early dates: 15 Sep 1914 (Jefferson Co, Bailey 1918)
30 Sep 1970 (Red Rock Res., IBL 41:26)
5 Oct 1962 (Wright Co., IBL 32:82)
Late dates: 30 Apr 1963 (Des Moines, IBL 33:38)
12 Apr 1980 (Green I., IBL 50:46)
12 Apr 1980 (Black Hawk Co., IBL 50:46)
12 Apr 1982 (Lyon Co., IBL 52:55)
SUMMER: The only summer report is of 1 killed in June in 1930 in Clay Co. (Youngworth 1933). One reported at Coralville Res. on 28 Jul 1979 (IBL 49:82) was probably a Bald Eagle (IBL 49:111).



Map 6.40 Golden Eagle records, 1960-1982. The shaded counties have more than 10 records.

COMMENT: Adults of this species are often confused with immature Bald Eagles, particularly by persons not well acquainted with eagles. Valid field marks are the feathered tarsi, golden feathers on the neck, sharply defined terminal tail-band, and less massive bill of the Golden Eagle. They are generally separated by habitat, and experienced field ornithologists can detect differences in wing beat, general contour, and length of tail. Immatures have white at the base of the primaries and base of the tail. Immature Bald Eagles also show white areas, but they are patchy in the wing coverts and tail. The Golden Eagle is very rare in Iowa and should always be documented.

REFERENCE:
Youngworth, W. 1933. Migration records of eagles and Snowy Owls in the upper Missouri valley. **Wilson Bull.** 45:32-33.

Falcons, Family Falconidae

This family contains about 56 species worldwide, 8 of which have been reported in North America. Of the 5 species reported from Iowa, 3 are regular, 1 is casual, and 1 is hypothetical. Falcons have long, pointed wings; a malar stripe; a notched upper mandible; and a baffle in their nostrils that may control air pressure during dives. The larger members prey on birds, while the small members prey on small mammals and insects. All are exciting to watch hunt; the larger species will dive or "stoop" from above, and the small species will perch on a utility pole or tree and dart forth to pounce on prey. Falcons build no nests of their own; the larger ones nest on cliff ledges and the smaller species utilize holes in trees or occasionally nest in buildings.

American Kestrel, **Falco sparverius**

STATUS: Regular; common migrant, uncommon summer and winter. Class I-S N.
HABITAT: During migration, utilizes utility wires and poles along roadways; nests in cavities and trees in open areas and will utilize buildings and bridges in urban areas.
SPRING MIGRATION: Evidence of migration usually is detected in late Feb, continuing through early May, with most birds passing through in mid-Mar through early Apr.

SUMMER: It nests throughout Iowa, most frequently in the loess hills of W Iowa and less frequently in the wooded parts of E Iowa. It has been detected on each Iowa BBS at least once since 1967, with an average of about 0.4 birds per route. The highest 4 counts have come from routes in the western half of the state. In recent years more have been found in industrial urban areas of large cities.
FALL MIGRATION: The first migrating birds are often seen in late Aug and continue through late Oct, with the bulk of birds passing through from mid-Sep to early Oct.
WINTER: Kestrels commonly winter in S Iowa, especially in the loess hills of SW Iowa and eastern urban areas. They are uncommon in the north. They have been detected on all CBCs since 1960; the low of 40 was in 1962 and the high of 317 in 1982, with an average of 90 birds per year. The highest counts have come from Davenport and Shenandoah, with averages of over 10 birds.
COMMENT: This species has adapted well to human activities and often nests in close proximity to human habitation. It would benefit from a nest-box program.

Merlin, **Falco columbarius**

STATUS: Regular; rare migrant, former rare summer resident. Class I-S N.
HABITAT: Tends to follow wooded streams across Iowa during migration but may be seen over open fields and perched on utility poles.
SPRING MIGRATION: There are approximately an equal number of Mar and Apr sightings, with a peak during late Mar and early Apr.
Early dates: 8 Mar 1975 (Davenport, IBL 45:57)
10 Mar 1963 (Waterloo, IBL 33:38)
11 Mar 1979 (Coralville Res., IBL 49:59)
Late dates: 11 May 1969 (Webster City, IBL 39:39)
5 May 1974 (Denison, IBL 44:43)
3 May 1963 (Marble Rock, IBL 33:38)
3 May 1970 (Jesup, IBL 40:48)
SUMMER: Bailey (1918) reported nesting records from Linn Co. in 1908 and from Poweshiek Co. in the late 1800s. Youngworth (1963) reported a 14 Jun 1963 record.
FALL MIGRATION: By far the best time to see a Merlin in Iowa is in the last half of Sep.
Early dates: 21 Aug 1975 (Hamburg, IBL 45:92)
2 Sep 1978 (Johnson Co., IBL 48:137)
9 Sep 1969 (Beed's L., IBL 39:80)
Late dates: 28 Oct 1979 (Hardin Co., IBL 49:111)
23 Oct 1982 (Johnson Co., IBL 52:120)
21 Oct 1972 (Red Rock Res., IBL 42:96)
WINTER: It has been seen on CBCs in 1959 at Davenport (IBL 30:8), 1963 at Burlington (IBL 34:8), 1976 at Clinton (IBL 47:6), 1978 at Dubuque (IBL 49:14), 1979 at Red Rock Res. and Spirit Lake (IBL 50:16), and 1982 at Dubuque and Waterloo (IBL 53:12). Additionally, the following winter records exist: 9 Jan 1961 in Woodbury Co. (Youngworth 1961), 5 Jan 1975 at Decorah (IBL 45:21), 30 Dec 1976 at Davenport (IBL 47:19), 7 Feb 1978 in Clinton Co. (IBL 48:48), and 20 Feb 1981 in Fremont Co. (IBL 51:32). Youngworth (1963), summarizing his observations since 1926, reported 14 records for Dec, 9 for Jan, 6 for Feb, and 5 for Mar.
COMMENT: Two subspecies of Merlin migrate through Iowa (DuMont 1933), although Iowa observers generally do not separate them. The eastern

Merlin, **F. c. columbaris**, and Richardson's Merlin, **F. c. richardsoni**, may occur in approximately equal numbers. The latter is paler and should occur mainly in W Iowa. The distribution of these subspecies as Iowa migrants has not been elaborated.

REFERENCES:

Youngworth, W. 1961. Some winter raptores in the Sioux City area. **Iowa Bird Life** 31:42-43.

Youngworth, W. 1963. The Pigeon Hawk in western Iowa. **Iowa Bird Life** 33:72-73.

Peregrine Falcon, **Falco peregrinus**

STATUS: Regular; rare migrant, extirpated summer resident. Class I-S N.

HABITAT: In migration it tends to follow waterfowl migration corridors. For nesting, it historically utilized ledges on sheer bluffs along rivers.

SPRING MIGRATION: Dates range from early Mar to late May, with most of the records occurring from 16 Apr to 5 May.

Early dates: 9 Mar 1974 (Riverton A., IBL 44:42)
10 Mar 1963 (Waterloo, IBL 33:38)
28 Mar 1965 (Forney L., IBL 35:50)

Late dates: 11 May 1969 (Dunbar Sl., IBL 39:39)
11 May 1978 (Waterloo, IBL 48:72)
10 May 1964 (Cardinal M., IBL 34:46)

SUMMER: It formerly nested in the palisades along the Cedar R. in S Linn and N Johnson counties (Bailey 1902; Keyes 1906) and along the Mississippi R. in Allamakee, Clayton, and Dubuque counties (Allert 1939; Pierce 1940).

FALL MIGRATION: Fall sightings occur from early Sep to mid-Oct, with a peak in late Sep.

Early dates: 3 Aug 1963 (Parkersburg, IBL 33:87)
1 Sep 1969 (Red Rock Res., IBL 39:80)
3 Sep 1969 (Red Rock Res., IBL 39:80)

Late dates: 14 Nov 1978 (Hamburg, IBL 48:137)
7 Nov 1964 (L. Ahquabi, Knight 1965)
20 Oct 1964 (Goose L., Greene Co., IBL 34:98)

WINTER: Peregrines have been reported on 5 CBCs since 1960, all in the southern half of Iowa. Another report is from Akron on 24 Dec 1962 (IBL 33:8).

COMMENT: The general belief that this species is recovering from its drastic decline is not supported by Iowa sightings, as the number seen in the 1970s was lower than in the 1960s. In 1981, however, 9 were reported. Restocking from captive-reared birds is a possibility.

REFERENCES:

Allert, O. P. 1939. Notes on certain raptores in Allamakee, Clayton and Dubuque counties, Iowa. **Iowa Bird Life** 9:34-36.

Bailey, B.H. 1902. The Duck Hawk--(**Falco peregrinus anatum**)--in Iowa. **Proc. Iowa Acad. Sci.** 10:93-98.

Keyes, C. R. 1906. Prolific Duck Hawk. **Auk** 23:99-100.

Knight, D. 1965. Lake Ahquabi: A weekend of birding. **Iowa Bird Life** 35:54-55.

Pierce, F. J. 1940. Kentucky Warbler, Carolina Wren and Duck Hawk in Allamakee County. **Iowa Bird Life** 10:27.

[Gyrfalcon, **Falco rusticolus**]

STATUS: Hypothetical. Class IV.
RECORDS: The description of one reported at Cheever L., Emmet Co., on 27 Oct 1946 (Musgrove 1949) is strongly suggestive but not beyond doubt as judged by the Records Committee. The only other published sightings are an undocumented report from Guthrie Co. in 1978 or 1979 (IBL 49:24) and mention of seeing them in NW Iowa (Duecker 1978). An injured dark phase Gyrfalcon found near Akron around 22 Nov 1981 was in South Dakota, not Iowa as originally reported (Dinsmore 1983; JJD).
COMMENT: This arctic falcon winters south to C Canada and casually to S Canada and N United States. The majority of Minnesota records are from the north, but some wander as far south as the Iowa border (Green and Janssen 1975). There are scattered Illinois and Nebraska records and one from NW Missouri on 18 Dec 1977 (**Am. Birds** 32:358).
REFERENCES:

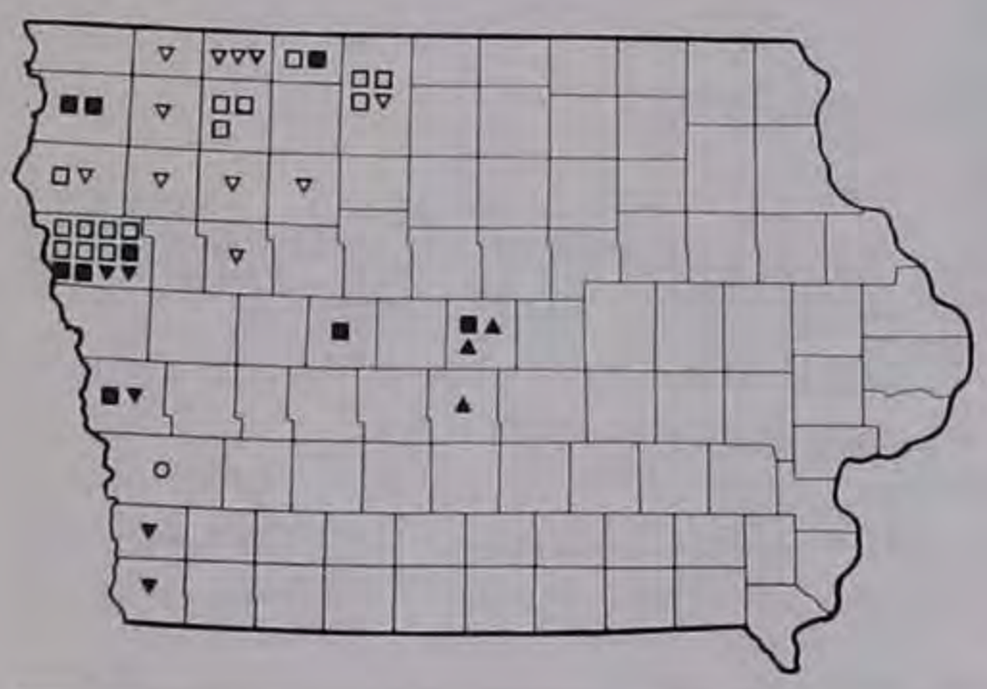
Dinsmore, J. J. 1983. Gyrfalcon in Iowa. **Iowa Bird Life** 53:28-29.
Duecker, S. 1978. Two visitors. **Iowa Bird Life** 48:80.
Musgrove, J. W. 1949. A 1946 record of the Gyrfalcon in Emmet County. **Iowa Bird Life** 19:22-23.

Prairie Falcon, **Falco mexicanus**

STATUS: Casual; fall and winter visitant in the north and west. Class I-S.
HABITAT: Open plains.
RECORDS: This species wanders eastward from its breeding range and may appear as early as Aug. Most Iowa records have been from Oct (7), Nov (5), Dec (12), Jan (7), and Feb (5). There are 3 spring records and 1 old summer record from Pottawattamie Co. on 4 Jul 1892 (Anderson 1907). Old records were strikingly localized to NW Iowa, while records since 1960 are from the western edge of the state and from C Iowa (Map 6.41). A specimen from Dickinson Co. on 25 Sep 1943 is in the State Historical Museum, Des Moines.

Early dates: 23 Aug 1963 (Sioux City, Youngworth 1963)
31 Aug 1949 (Larrabee, Cherokee Co., Youngworth 1958)
20 Sep 1944 (Dickinson Co., Musgrove and Musgrove 1945)

Late dates: 1 May 1978 (Story Co., IBL 48:72)
26 Apr 1979 (Polk Co., IBL 49:59)
20 Apr 1973 (Story Co., DMR)



Map 6.41 Prairie Falcon records.

COMMENT: The pattern of fall migrants in NW Iowa fits with a similar pattern in SW Minnesota up to 1938. (Green and Janssen 1975). Recent sightings in Minnesota have been few and in summer. This species does not tend to move further east than Iowa, with only 1 recent unsubstantiated record from Illinois (Bohlen 1978). There are only 2 Iowa records from 1964 through 1976, but since then there have been about 14 records, with 9 in the fall and winter of 1981-1982.

REFERENCES:

Musgrove, J. W., and M. R. Musgrove. 1945. Bird records for northern Iowa. **Iowa Bird Life** 15:12.

Youngworth, W. 1958. The Prairie Falcon in the Sioux City area. **Iowa Bird Life** 28:33-34.

Youngworth, W. 1963. The Prairie Falcon in late summer. **Iowa Bird Life** 33:93.

ORDER GALLIFORMES

Pheasants, Grouse, Turkeys, and Quail, Family Phasianidae

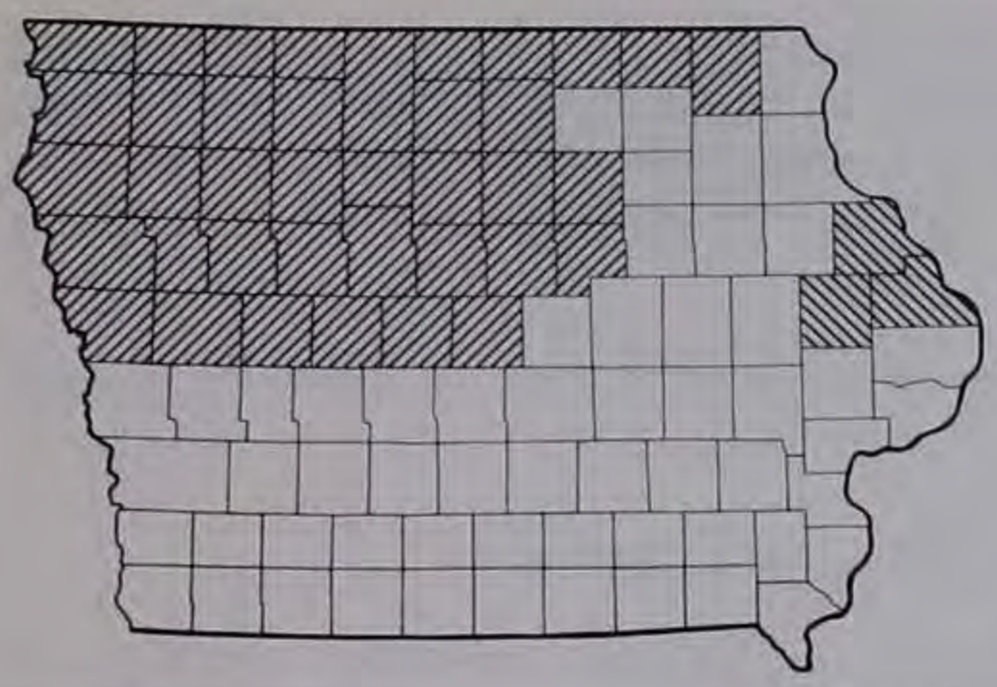
The pheasant family has about 195 species, with 21 reported from North America. Of the species reported from Iowa, 5 are regular, 1 is accidental, 1 is extirpated, and 2 are Class VI. This family contains species that formerly were placed in several separate families. They are found over most of the world and include many of the most popular game species. Two of the Iowa species are introduced and another was formerly extirpated but has been reestablished from introduced birds. They are largely terrestrial and often gregarious. They have a short, chickenlike bill and rounded wings. Most of them feed on seeds, fruits, and some insects.

Northern Bobwhite, Johnson Co., June 1969, F. W. Kent.

Gray Partridge, **Perdix perdix**

STATUS: Regular; introduced; common permanent resident in NW and NC Iowa, uncommon to absent in the rest of the state. Increasing in numbers and range. Class I-S N.

HABITAT: Cultivated fields and roadsides.



Map 6.42 Gray Partridge approximate range.

SUMMER: Partridge nest throughout their range in Iowa. They were found on 11 of 34 BBS routes, with a yearly average ranging from zero to 2.1 birds per route. The 1967-1980 average was 0.7 birds per route.
WINTER: They winter throughout their range in Iowa.
COMMENT: Partridge were introduced into NW Iowa from Europe during the period 1905-1913 (Spiker 1929; Leopold 1931; DuMont 1933). Partridge spread slowly at first, but the population has expanded rapidly in the last 20 years and they are now found throughout the northern two-thirds of Iowa (Map 6.42), although published records by birders are few. Wild-trapped birds have recently been released in Des Moines, Louisa, and Henry counties in SE Iowa (Wooley and George 1980). Partridge seem to be well-adapted for existence in areas of intensive agriculture, increasing in areas where the Ring-necked Pheasant and Northern Bobwhite have decreased or disappeared due to habitat loss (Green and Hendrickson 1938).

REFERENCES:

Green, W. E., and G. O. Hendrickson. 1938. The European Partridge in north-central Iowa. **Iowa Bird Life** 8:18-22.

Leopold, A. 1931. **Report on a Game Survey of the North Central States**. Madison, Wis.: Sporting Arms and Ammunition Manufacturers Institute, 299 p.

Spiker, C. J. 1929. The Hungarian Partridge in northwest Iowa. **Wilson Bull.** 41:24-29.

Wooley, J. B., and R. R. George. 1980. Huns in southeast Iowa. **Iowa Conserv.** 39(5):13.

[Chukar, **Alectoris chukar**]

STATUS: Class VI.
RECORDS: Published reports of this species are from Pleasantville, Marion Co., in 1966, 1967, and 1968 (IBL 36:82, 37:50, 38:16); from Plymouth Co. (presumably) in 1967 (IBL 37:50); and from Davenport in 1974 (IBL 44:72). The latter record was of a bird sitting on a nest; the bird was banded (IBL 45:49) and photographed (on file with the Records Committee). In 1970, 100 Chukars were released in the Davenport area and have been reported 1 to 3 per year through 1981 (PCP) and reportedly nested in a yard for 3 years (Petersen 1981).
COMMENT: Chukar is an introduced species that has been established in

the W United States. Attempts to introduce this species in the Midwest and prairie states have generally failed. Chukars have been introduced in several locations in Iowa, but there is insufficient evidence to indicate that they have been established, except, perhaps, at Davenport where they have nested.

REFERENCE:

Petersen, P. C. 1981. Chukars in the Quad-Cities. **Iowa Bird Life** 51:131.

Ring-necked Pheasant, **Phasianus colchicus**

STATUS: Regular; introduced; abundant permanent resident throughout Iowa. Class I-S N.

HABITAT: Farm fields, brushy areas, and dry sloughs.

SUMMER: Pheasants nest throughout Iowa and were found on all 34 BBS routes. The yearly average varied from 24.3 to 57.3 birds per route, and the 1967-1980 average was 37.4 birds per route. Nesting generally extends from Apr through Jul, and many nests are lost to predators, weather, and farming activites (Baskett 1947). Hens commonly renest if the first nest is lost.

WINTER: The number of pheasants found per party hour on CBCs in the 1970s averaged only one-third the number found during the 1960s.

COMMENT: Ring-necked Pheasants were introduced into Iowa in 1900 or 1901 (Farris et al. 1977). Numerous other introductions were made, and the bird spread rapidly over N Iowa. Hunting seasons were established in 1925, and the pheasant now is the top game bird in Iowa. Until the mid-1960s, NC and NW Iowa had the highest population densities. Changing land use patterns have shifted the pheasant populations around considerably. Currently SW and EC Iowa have the highest densities, the extreme NE and SE corners of the state the lowest.

REFERENCE:

Baskett, T.S. 1947. Nesting and production of the Ring-necked Pheasant in north-central Iowa. **Ecol. Monogr.** 17:1-30.

Ruffed Grouse, **Bonasa umbellus**

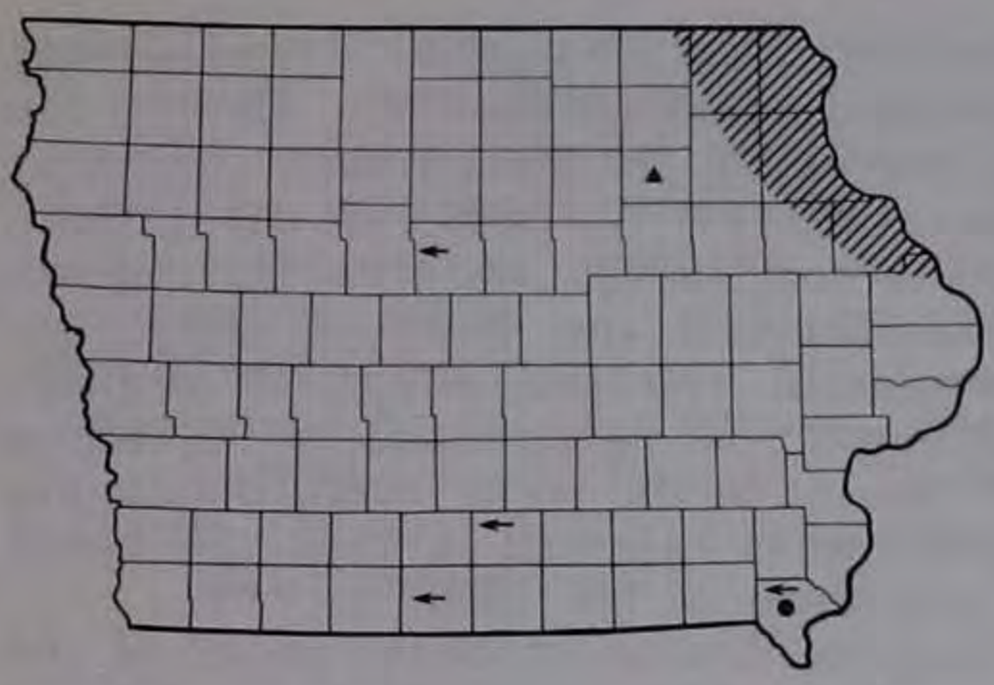
STATUS: Regular; common permanent resident in the Paleozoic Plateau Region in NE Iowa (Map 6.43), rare along the fringe of the Paleozoic Plateau and in Shimek S.F., Lee and Van Buren counties, where it was stocked in 1970. Class I-S N.

HABITAT: Brushy margins and overgrown clearings of woodlands.

SUMMER: Ruffed Grouse nest throughout their range in Iowa. Egg-laying probably begins in late Apr and early May, and the peak of hatching is from late May to early Jun (Porath 1968).

WINTER: They winter throughout their range in Iowa.

COMMENT: Grouse were common in forested areas throughout Iowa, except in the NW and NC regions, at the time of settlement. The population has remained relatively stable in recent years (Klonglan and Hlavka 1969; Little 1980). Ruffed Grouse were stocked in Shimek S.F., Lee Co., in 1962, 1965, and 1971 and in Stephens F., Lucas Co., in 1972 (Klonglan and Hlavka 1969; Little and Sheets 1982) (Map 6.43). Those in Shimek S.F. seem to be established (Little and Sheets 1982). In 1982, grouse were released in Decatur, Hamilton, Lucas, Monroe, and Webster counties (Map 6.43).



Map 6.43 Ruffed Grouse range and extralimital records, 1960-1982, and recent release sites (arrows).

REFERENCES:

Klonglan, E. D., and G. Hlavka. 1969. Recent status of Ruffed Grouse in Iowa. **Proc. Iowa Acad. Sci.** 76:231-240.

Little, T. W. 1980. Twelve years of Iowa Ruffed Grouse hunting. **Iowa Conserv.** 39(10):6-8.

Little, T. W., and R. Sheets. 1982. Transplanting Iowa Ruffed Grouse. **Proc. Iowa Acad. Sci.** 89:172-175.

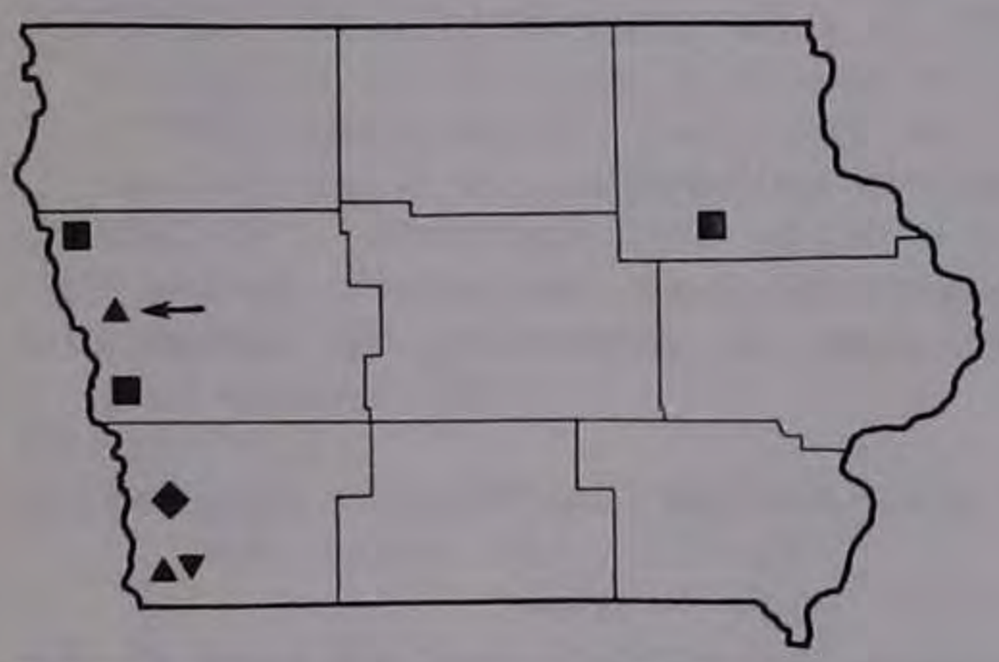
Porath, W. R. 1968. Population Ecology of Ruffed Grouse in Northeast Iowa. M.S. thesis, Iowa State University.

Greater Prairie-Chicken, **Tympanuchus cupido**

STATUS: Accidental; formerly abundant permanent resident throughout most of the state. Stocked in Monona Co. in 1980 and 1982. Class I-S N.

RECORDS: There have been 6 sightings in the period 1960-1979 (Map 6.44):

28 Jan 1960, Buchanan Co. (Bordner 1960)
1960, Mills Co. (Stempel and Rodgers 1961)
13 Jan 1962, Sioux City (Youngworth 1962)
late Nov 1965, Fremont Co. (IBL 36:19)
27 and 29 Mar and 10 Apr 1971, Fremont Co. (IBL 41:50)
7 Feb 1979, Harrison Co. (Schaufenbuel 1979)



Map 6.44 Greater Prairie-Chicken records, 1960-1979, and release site 1980 and 1982 (arrow).

The prairie-chicken was a common breeding bird throughout Iowa, except for the extreme northwest corner, at the time of settlement. During the early settlement period, it actually increased its range and numbers, peaking in the 1870s (Crane and Olcott 1933). By 1900, it was greatly restricted in numbers and range (Anderson 1907), and the last known nesting was in Appanoose Co. in 1952 (Stempel and Rodgers 1961). In Feb 1980 the Iowa Conservation Commission released about 53 prairie-chickens in Monona Co. in an attempt to reintroduce a breeding population (George 1981). Two of those birds were seen displaying nearby in spring 1982. Additional birds were released in 1982. A brood was reported in summer, and a bird was seen in fall 1982.

COMMENT: There are breeding populations of prairie-chickens in all of the states bordering Iowa, and the recent Iowa records are probably of stray migrants from those states.

REFERENCES:

Bordner, Mrs. R. 1960. Records from several localities in Iowa. **Iowa Bird Life** 30:61-62.

George, R. 1981. Prairie boomers. **Iowa Conserv.** 40(12):6-7.

Schaufenbuel, J. 1979. Greater Prairie Chicken in Harrison County. **Iowa Bird Life** 49:26-27.

Stempel, M., and S. Rodgers. 1961. History of prairie chickens in Iowa. **Proc. Iowa Acad. Sci.** 68:314-322.

Youngworth, W. 1962. A prairie hen in Sioux City. **Iowa Bird Life** 32:20.

Sharp-tailed Grouse, **Tympanuchus phasianellus**

STATUS: Extirpated; formerly resident in NW Iowa. Class I-S.

RECORDS: At the time of settlement, the Sharp-tailed Grouse was probably a regular breeding species in NW Iowa, although there is no acceptable evidence of a nesting. It may have occurred as far southeast as Poweshiek Co. (Cooke 1888). It disappeared rapidly after settlement, being replaced by the Greater Prairie-Chicken. The breeding population was probably gone by 1892 (Crane and Olcott 1933). It may have persisted as a winter visitant until 1931 (DuMont 1933). Two reports from Fremont Co. in Nov 1974 and Jun 1975 (IBL 44:101, 45:92) are unsubstantiated and were judged unlikely by the Records Committee. A specimen from 10 Feb 1883 taken in Hardin Co. is at the University of Iowa.

COMMENT: Breeding populations exist in states bordering Iowa, including Nebraska, South Dakota, Minnesota, and Wisconsin, all at a considerable distance from Iowa.

Wild Turkey, **Meleagris gallopavo**

STATUS: Regular; locally common in parts of Iowa, especially in the SE. Distribution is spotty, but the population is increasing in range and numbers. Class I-S N.

HABITAT: Woodlands.

SUMMER: Turkeys nest throughout their range in Iowa. Egg-laying usually begins in late Apr.

WINTER: Turkeys winter throughout their range in Iowa.

COMMENT: Turkeys were found in numbers throughout most of Iowa at the time of settlement. By 1910, however, they were extirpated (DuMont

1933). In the winter of 1960-1961 the Iowa Conservation Commission released some wild-trapped birds in Allamakee Co. (Klonglan et al. 1970). Restocking in other areas throughout the state followed and is still in process (Little 1981). The restocking efforts generally have been successful, and the turkey is increasing in numbers and range within the state.

REFERENCES:

Klonglan, E. D., G. Hlavka, and H. L. Gladfelter. 1970. Recent Wild Turkey introductions into Iowa. **Proc. Iowa Acad. Sci.** 77: 86-92.

Little, T. W. 1981. Restoration of the Wild Turkey to Iowa--Part III. **Iowa Conserv.** 40(6):18-19.

Northern Bobwhite, **Colinus virginianus**

STATUS: Regular; common permanent resident in S Iowa, uncommon to absent in N Iowa. Class I-S N.

HABITAT: Cropland interspersed with woody fencerows and brushy areas.

SUMMER: Bobwhite nest throughout their range in Iowa. The nesting period extends from late Apr to mid-Aug (Klimstra 1949). They were found on 31 of 34 BBS routes, the highest average on a route being 43.5 birds. The yearly average varied from 6.7 to 15.6 birds per route, and the 1967-1980 average was 10.0 birds per route.

WINTER: Bobwhite winter throughout their range in Iowa. Numbers found per party hour on CBCs increased slightly during the 1970s.

COMMENT: The Northern Bobwhite increased in numbers and range after settlement, becoming common to abundant throughout Iowa. The loss of habitat has eradicated most of the population in N Iowa. The bobwhite is susceptible to harsh winter weather (Errington 1941); prolonged deep snow and cold usually causes sharp population declines.

REFERENCES:

Errington, P. 1941. Notes on winter-killing of central Iowa bob-whites. **Iowa Bird Life** 11:46-49.

Klimstra, W. D. 1949. Some Factors Influencing Ecology and Management of the Interior Bob-white Quail (**Colinus virginianus mexicanus** L.) on Marginal Lands in Southeastern Iowa. Ph.D. dissertation, Iowa State University.

[Scaled Quail, **Callipepla squamata**]

STATUS: Class VI.

RECORD: One reportedly shot at Tabor, Fremont Co., on 20 May 1889 was exhibited at an Iowa Academy of Science meeting (Todd 1890). Osborn (1892) considered the bird to be a straggler, and DuMont (1933) considered it an escapee.

COMMENT: Although this southwest species is a resident as near as SW Kansas, it is not a known vagrant to other nearby states. It was released in Nebraska in the 1950s but did not become established (Johnsgard 1980).

REFERENCE:

Todd, J. E. 1890. The Blue Quail (**Callipepla squamata**) in Iowa. **Proc. Iowa Acad. Sci.** 1(1):63.

ORDER GRUIFORMES

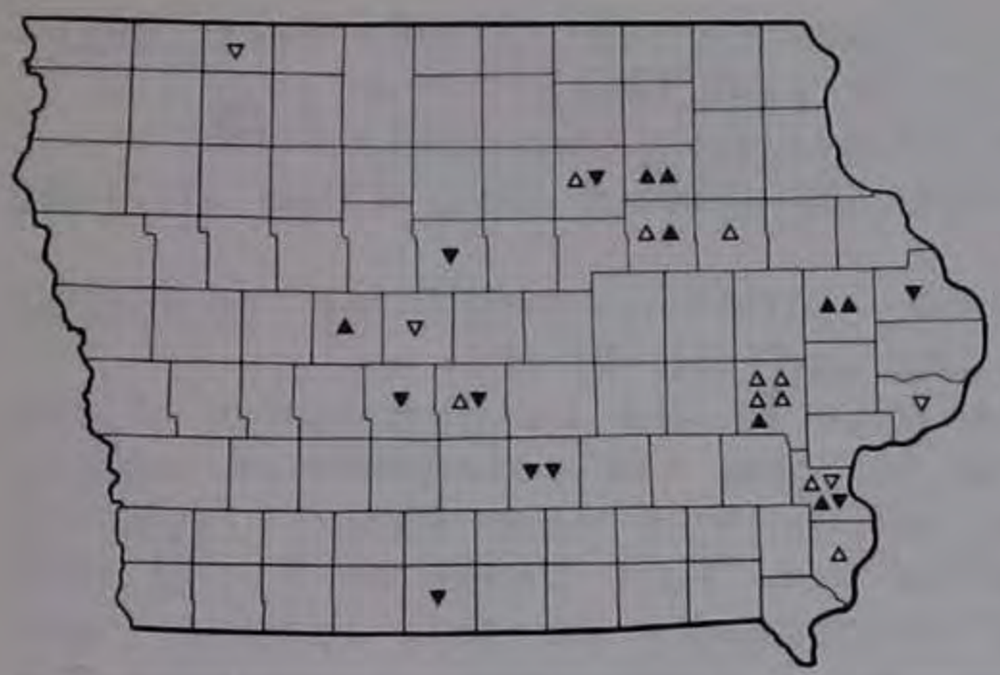
Rails, Gallinules, and Coots, Family Rallidae

This large family of about 130 species is found on all continents except Antarctica and also is found on many oceanic islands. The 14 North American species generally are found in marshes and wet meadows; like rails elsewhere, they are largely secretive, being heard more often than seen. Of the 8 species reported from Iowa, 4 are regular, 2 are casual, and 2 are accidental. One species, the American Coot, is one of the most intensively studied birds in Iowa. In contrast, several species, especially the King, Black, and Yellow rails, are very poorly known in the state.

Sora, Iowa City,
8 May 1982, T. H. Kent.

Yellow Rail, **Coturnicops noveboracensis**

STATUS: Casual; migrant. Class I-S.
HABITAT: Thickly vegetated uplands, prairies, and shallow areas of marshes.
SPRING MIGRATION: Most records are from late Apr through mid-May.
Early dates: 15 Apr 1886 (Burlington, DuMont 1933)
15 Apr 1974 (Ledges S.P., Bass 1974)
22 Apr 1923 (Homestead, DuMont 1933)
Late dates: 27 May 1892 (near Iowa City, Anderson 1907)
19 May 1963 (Muskrat Sl., IBL 33:39)
18 May 1933 (Iowa City, DuMont 1933)
18 May 1980 (Sweet M., IBL 50:47)
SUMMER: Krider (1879) mentioned finding a nest but presented no evidence. There are no other summer records.
FALL MIGRATION: Almost all records are from Sep.
Early dates: 31 Aug 1970 (Pleasantville, IBL 41:26)
20 Sep 1890 (Scott Co., Anderson 1907)
21 Sep 1980 (Big M., IBL 51:27)
Late dates: early Nov 1964 (an injured bird at Bellevue, IBL 35:25)
1 Oct 1973 (Alleman, Bass 1974)
30 Sep 1960 (Lamoni, IBL 31:90)
30 Sep 1974 (Booneville, IBL 44:101)



Map 6.45 Yellow Rail records.

COMMENT: There are 17 published records of Yellow Rails from 1960 to 1982 and several older records (Map 6.45). All involve 1 or 2 birds, but the species may be much commoner than the records suggest. Recently a number have been flushed when prairies were burned as part of the management of the area (Bass 1974). There are 2 specimens available (18 May 1933, Iowa City, female at University of Iowa; and 1 Oct 1973, Polk Co., female at Iowa State University).

REFERENCE:

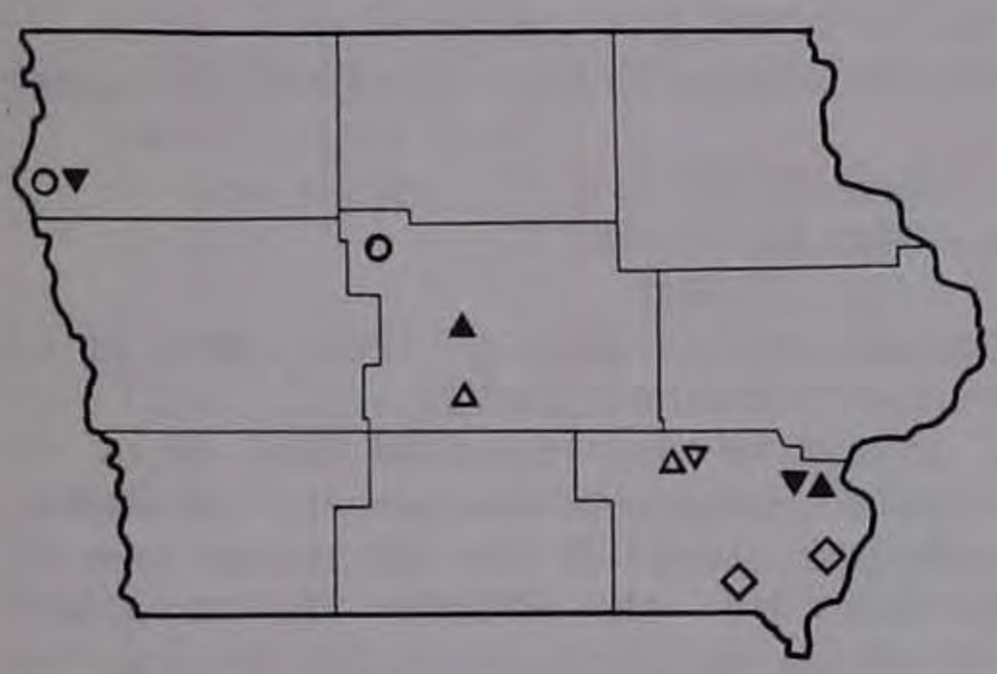
Bass, G. 1974. Yellow Rail sightings. **Iowa Bird Life** 44:53.

Black Rail, **Laterallus jamaicensis**

STATUS: Accidental. Class II.

RECORDS: There are 6 Class III sight records and 5 Class IV records. These records range from 24 Apr to 5 Oct and are scattered about the state (Map 6.46).

1889, Burlington, Class IV (Nutting 1893)
ca. 1890, Hillsboro, Van Buren Co., Class IV (Anderson 1907)
11 Jul 1899, Fort Dodge, Class III (Anderson 1907)
5 May 1914, Sigourney, Class IV (Nauman 1927)
1 Oct 1925, Sigourney, Class IV (Nauman 1927)
17 May 1952, Fisher's L., Polk Co., Class III (McCabe 1952)
summer 1959, Plymouth Co., Class III (Bryant 1962)



Map 6.46 Black Rail records.

13 May 1961, Cone M., Louisa Co., Class III (IBL 31:66; Kent 1980)
5 Oct 1962, Plymouth Co., Class IV (Bryant 1962)
29 Aug 1981, Cone M., Louisa Co., Class III (Kent 1981)
24 Apr and 1 May 1982, Hendrickson M., Story Co., Class III (IBL 52:56)

There are 5 other records that lack sufficient detail for evaluation (Cooke 1888; Anderson 1907; IBL 38:58; and IBL 40:48).

COMMENT: Iowa appears to be on the edge of the nesting range of the Black Rail (Todd 1977). Two records suggest the possibility of nesting in Iowa: 1 seen several times in an alfalfa field near Akron, Plymouth Co., in 1959 (Bryant 1962) and 1 killed near Fort Dodge on 11 Jul 1899 (Anderson 1907). A set of eggs, supposedly of this species, was collected in Linn Co. in 1899, but the identification is questionable (Anderson 1907). Because of its secretive behavior and tendency not to flush, it is quite possible that the Black Rail is an undiscovered regular species in Iowa. There is no evidence that anyone has made a concerted effort to locate this species by listening for it at night in appropriate marshy habitat.

REFERENCES:

Bryant, E. J. 1962. Black Rail in western Plymouth County. **Iowa Bird Life** 32:87.

Kent, T. H. 1980. Note to Records Committee.

McCabe, O. 1952. A record of the Black Rail near Des Moines. **Iowa Bird Life** 22:42-43.

Nauman, E. D. 1927. Notes on the rails. **Wilson Bull.** 39:217-219.

Todd, R. L. 1977. Black Rail, Little Black Rail, Black Crake, Farallon Rail (**Laterallus jamaicensis**). In G. C. Sanderson, ed., **Management of Migrating Shore and Upland Game Birds in North America**. Washington D.C.: Int. Assoc. Fish & Wildl. Agencies, pp. 71-83.

King Rail, **Rallus elegans**

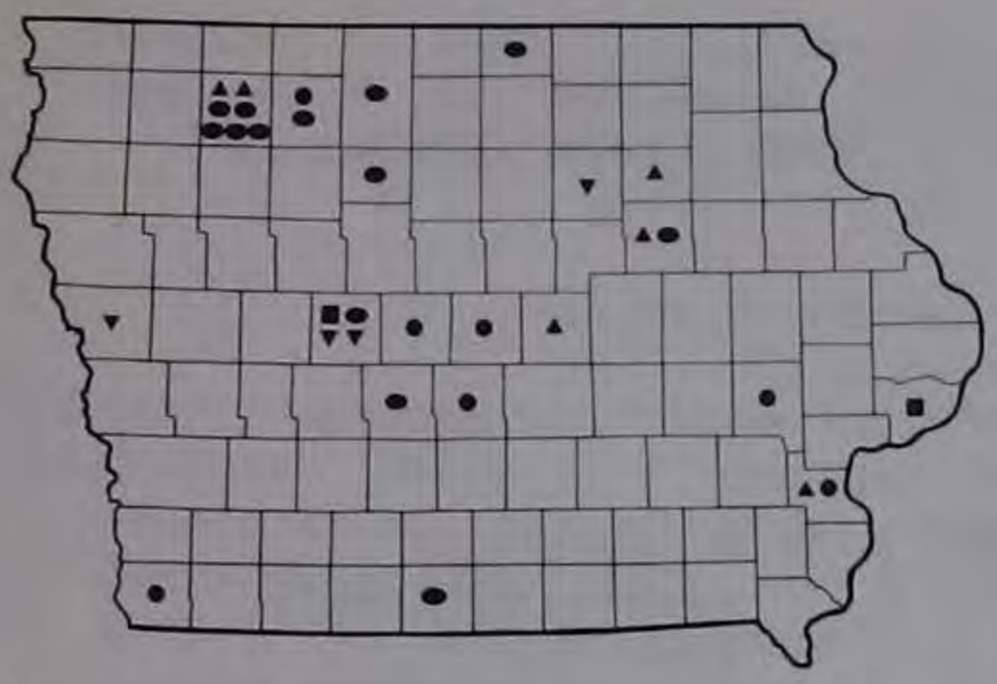
STATUS: Casual; formerly rare summer resident. Class I-S N.
HABITAT: Marshes and wet meadows.
SPRING MIGRATION: Most records are from early or mid-May.
Early dates: 15 Apr 1909 (National, Sherman 1909)
17 Apr 1921 (Sigourney, Nauman 1927)
20 Apr 1952 (Swan L., Johnson Co., Serbousek 1959)

SUMMER: King Rails have been reported nesting from scattered locales throughout the state but most often in the marshes of NW Iowa (e.g., an adult and 2 young at Dewey's Pasture on 22 Jun 1981, IBL 51:100). They start nesting by mid-May, and the last nests hatch by late Jun (Tanner and Hendrickson 1956).

FALL MIGRATION: Little information is available. Most probably migrate through Iowa in Sep.
Late dates: 14 Oct 1962 (Big M., IBL 32:83)
4 Oct 1909 (Ruthven, Tinker 1914)
14 Sep 1969 (Blue L., IBL 39:80)

WINTER: The only records are 1 at Davenport on 26 Dec 1960 (IBL 31:8) and 1 at Goose L., Greene Co. on 9 Jan 1966 (IBL 36:22).

COMMENT: While probably never as abundant in Iowa as the Sora or Virginia Rail, King Rails formerly were reported frequently in Iowa. Bennett and Hendrickson (1939) reported some 30 to 40 nests yearly near Ruthven in the mid-1930s, but by the 1950s Tanner and Hendrickson (1956) could find only 6 nests in 3 years. There are few



Map 6.47 King Rail records, 1960-1982.

recent records from Iowa (Map 6.47). Clearly this species is much less abundant in Iowa now than it was 40 years ago.

REFERENCES:

Bennett, L. J., and G. O. Hendrickson. 1939. Adaptability of birds to changed environment. **Auk** 56:32-37.

Nauman, E. D. 1927. Notes on the rails. **Wilson Bull.** 39: 217-219.

Sherman, A. R. 1909. Five notes from the upper Mississippi valley. **Wilson Bull.** 21:155-158.

Tanner, W. D., and G. O. Hendrickson. 1956. Ecology of the King Rail in Clay County, Iowa. **Iowa Bird Life** 26:54-56.

Tinker, A. D. 1914. Notes on the ornithology of Clay and Palo Alto counties, Iowa. **Auk** 31:70-81.

Virginia Rail, **Rallus limicola**

STATUS: Regular; uncommon migrant and summer resident. Class I-S N.

HABITAT: Marshes.

SPRING MIGRATION: Most migrants are in Iowa in early May.

Early dates: 17 Apr 1982 (Dewey's Pasture, IBL 52:55)
20 Apr 1947 (Swan L., Johnson Co., Vane 1947)
20 Apr 1952 (Marble Rock, Knoop 1953)

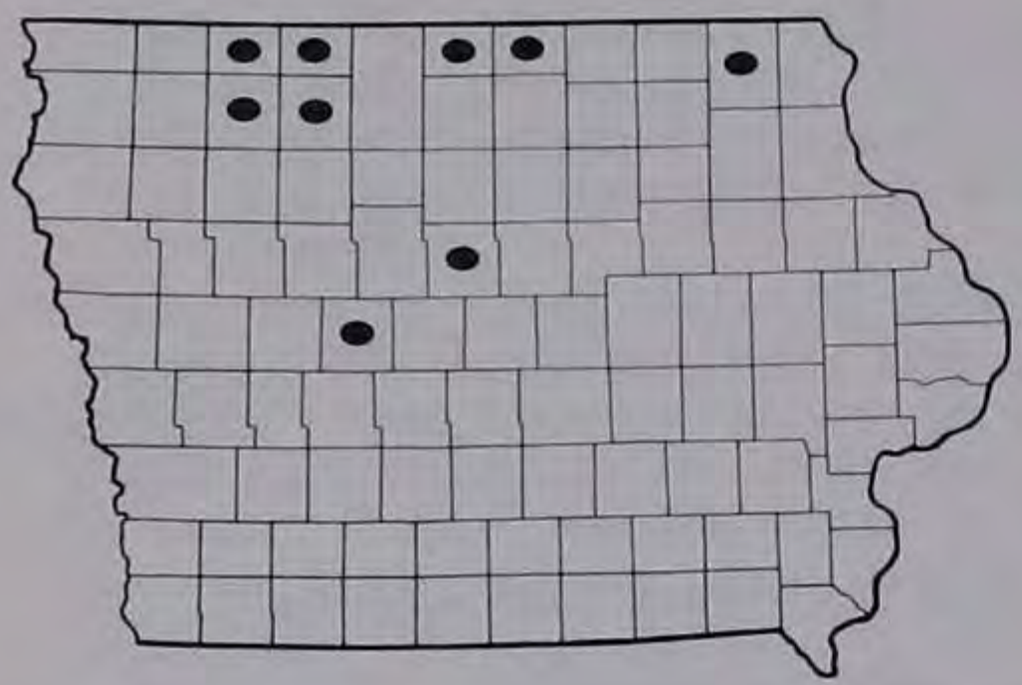
SUMMER: All nest records are from N Iowa, especially near Ruthven in Clay and Palo Alto counties (Map 6.48). The nesting season lasts from mid-May through early Jul, with most nests starting in late May and early Jun (Tanner and Hendrickson 1954).

FALL MIGRATION: Little information is available, but most seem to leave Iowa by late Sep.

Late dates: 5 Oct 1973 (Cedar Rapids, IBL 43:104)
3 Oct 1952 (Dewey's Pasture, Tanner and Hendrickson 1954)
3 Oct 1959 (Davenport, PCP)

WINTER: One bird was seen at Camp Dodge near Des Moines from 30 Jan to 27 Feb 1955 (Brown 1956).

COMMENT: Like most rails, little information is available. Although most workers consider it to be less abundant than the Sora in Iowa, there are more nest records for the Virginia Rail. Perhaps its tendency to inhabit somewhat opener portions of marshes accounts for this.



Map 6.48 Virginia Rail nesting by county, 1960-1982.

REFERENCES:
Brown, W. H. 1956. Winter record of the Virginia Rail in Polk County. **Iowa Bird Life** 26:19.
Knoop, P. 1953. Bird notes from northern Iowa. **Iowa Bird Life** 23:37.
Tanner, W. D., and G. O. Hendrickson. 1954. Ecology of the Virginia Rail in Clay County, Iowa. **Iowa Bird Life** 24:65-70.
Vane, R. F. 1947. Observations in the Cedar Rapids region. **Iowa Bird Life** 17:36-37.

Sora, **Porzana carolina**

STATUS: Regular; common migrant, uncommon summer resident. Class I-S N.
HABITAT: Marshes and wet meadows.
SPRING MIGRATION: The peak of migration seems to be early May (Tanner and Hendrickson 1956).
Early dates: 4 Apr 1948 (Swan L., Johnson Co., Serbousek 1959)
14 Apr 1921 (Sigourney, Nauman 1927)
16 Apr 1966 (Johnson Co., FWK)
16 Apr 1970 (Johnson Co., FWK)
16 Apr 1982 (Iowa City, IBL 52:56)
SUMMER: Soras nest in numerous marshes in the northern half of Iowa and perhaps also in S Iowa, although the only record seems to be from Forney L. in Jul 1982 (IBL 52:89). Nesting starts as early as mid-May, with the peak in late May or perhaps early Jun. Most nests have hatched by the end of Jun (Tanner and Hendrickson 1956).
FALL MIGRATION: Little information is available, but most probably leave Iowa by late Sep.
Late dates: 4 Nov 1979 (Humboldt Co., IBL 49:112)
19 Oct 1982 (Coralville, IBL 52:120)
14 Oct 1951 (Marble Rock, Knoop 1952)
WINTER: One apparently healthy bird was seen at Ventura M. on 30 Dec 1982 (IBL 53:25).
COMMENT: Although most authors consider the Sora to be common, few data are available to evaluate that claim. Most reports are of migrants; other than the studies done near Ruthven in NW Iowa, almost no nest or brood records are available.
REFERENCES:
Knoop, P. 1952. Barn Owl and other records. **Iowa Bird Life** 22:11.

Nauman, E. D. 1927. Notes on the rails. **Wilson Bull.** 39:217-219.
Tanner, W. D., and G. O. Hendrickson. 1956. Ecology of the Sora in Clay County, Iowa. **Iowa Bird Life** 26:78-81.

Purple Gallinule, **Porphyrula martinica**

STATUS: Accidental. Class I-S.

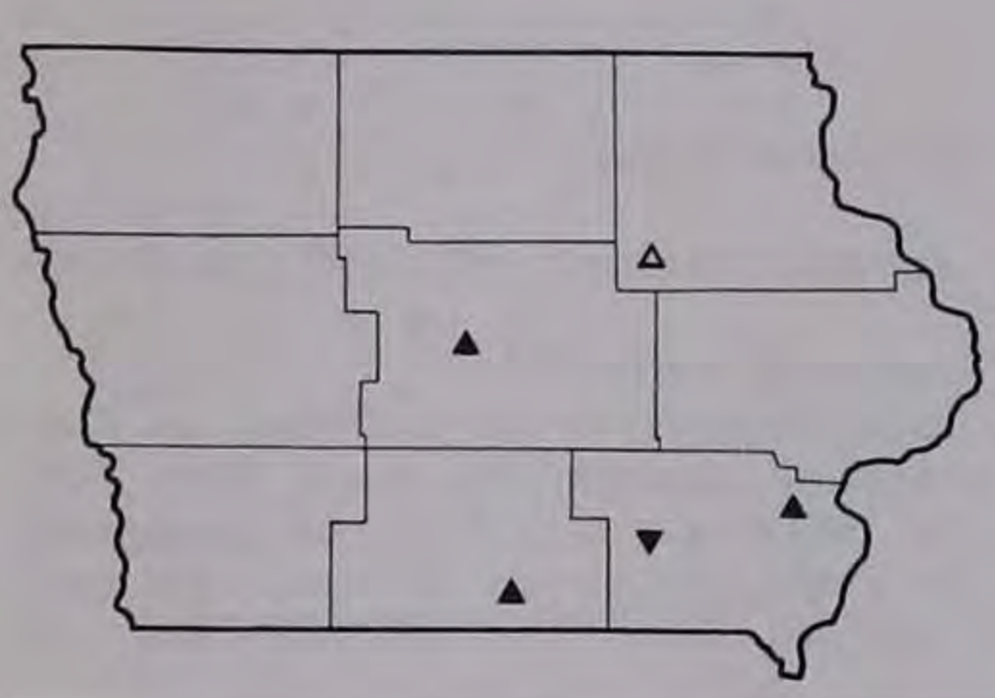
RECORDS: There is 1 specimen record (Dinsmore and Graham 1979), 1 photographic record (Kent 1964), and 1 sight record with some description (Dix 1937), and 2 other recent records without details (Map 6.49). In addition, there are 5 old records that lack detail. The species was also mentioned by Allen (1870) without evidence of a specific sighting. Five records are from spring, 2 from fall, and 1 from summer. Although some of the old records have been doubted (Gabrielson 1917b; DuMont 1931), they are all listed here.

Jun, year not given, nest with 8 eggs (Krider 1879)
1891, Floyd Co. (Fenton 1916, 1923-24; Gabrielson 1917b)
date not given, Black Hawk Co. (Anderson 1907; DuMont 1933)
spring 1915, Des Moines (DuMont 1931)
9 Sep 1915, Floyd Co. (Fenton 1916, 1923-24; Gabrielson 1917b)
13 May 1937, Cedar Falls (Dix 1937)
7 May 1964, Iowa River near Cone M., Louisa Co. (Kent 1964)
late summer/early fall 1974, s of Ottumwa (Heusinkveld et al. 1975)
10 May 1975, Promise City, Wayne Co. (IBL 45:57)
22 May 1978, Ames (Dinsmore and Graham 1979)

COMMENT: Purple Gallinules have a tendency to wander northward, especially in spring, as overmigrants. There are many Illinois records, including nesting in S Illinois (Bohlen 1978) and 3 Minnesota records (Green and Janssen 1975). Vagrants tend to occur in Apr-Jun and sometimes Sep-Nov.

REFERENCES:

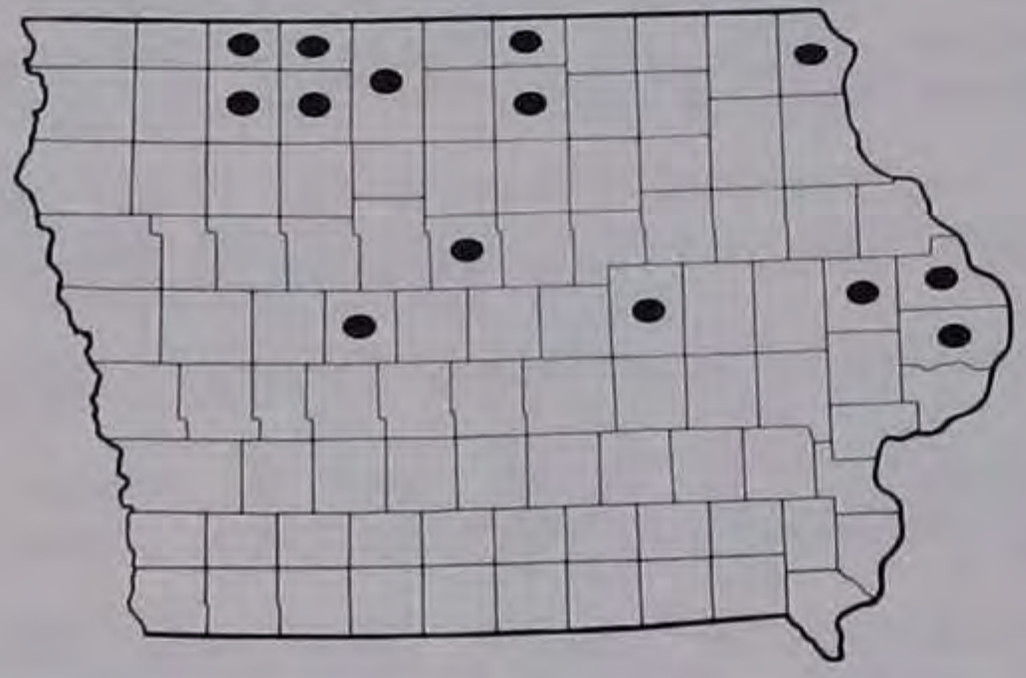
Dinsmore, J. J., and D. L. Graham. 1979. Purple Gallinule in Ames. **Iowa Bird Life** 49:87-88.
Dix, Mrs. R. S. 1937. Purple Gallinule in Black Hawk County. **Iowa Bird Life** 7:34.
Heusinkveld, B., C. Scott, P. Evans, C. C. Ayres, and D. Ayres. 1975. Six county area including Ottumwa and Rathbun Lake. **Iowa Bird Life** 45:82-86.
Kent, F. W. 1964. A Purple Gallinule in Iowa. **Iowa Bird Life** 34:50-51.



Map 6.49 Purple Gallinule records.

Common Moorhen, **Gallinula chloropus**

STATUS: Regular; uncommon migrant and summer resident. Class I-S N.
HABITAT: Marshes.
SPRING MIGRATION: Most apparently arrive in late Apr or early May.
Early dates: 5 Apr 1942 (Clear L., Serbousek 1959)
26 Apr 1967 (Rice L., Worth Co., IBL 37:50)
26 Apr 1980 (Swan L., Johnson Co., IBL 50:47)
SUMMER: Common Moorhens have nested in marshes throughout Iowa, especially in NW Iowa (Map 6.50). Nesting starts in mid-May; most clutches hatch by late Jun (Fredrickson 1971), although some nesting continues into Aug (Kent 1952).
FALL MIGRATION: Little information is available. Most probably leave Iowa by late Sep.
Late dates: 23 Oct 1982 (Riverton A., IBL 52:120)
17 Oct 1914 (Marshalltown, Gabrielson 1918)
15 Oct 1978 (Iowa City, IBL 48:138)
COMMENT: The secretive nature of this species makes it difficult to assess its abundance in Iowa. In general there seem to be fewer reports of it in recent years, and it probably has declined with the loss of the marshes it inhabits.
REFERENCES:
Fredrickson, L. H. 1971. Common Gallinule breeding biology and development. Auk 88:914-919.
Kent, F. W. 1952. Notes on gallinules at Swan Lake in 1952. Iowa Bird Life 22:58-59.



Map 6.50 Common Moorhen nesting by county, 1960-1982.

American Coot, **Fulica americana**

STATUS: Regular; abundant migrant, common summer resident, uncommon in winter. Class I-S N.
HABITAT: Marshes and wetlands with emergent vegetation.
SPRING MIGRATION: Spring migrants generally arrive in mid-Mar, as soon as open water appears. Large concentrations appear by early Apr; mid- to late Apr is the peak of migration in most years. It is not uncommon to have concentrations of hundreds or even thousands of coots on some wetlands. An unusually early bird was at Swan L., Johnson Co., 28 Feb 1981 (IBL 51:32).

SUMMER: American Coots are common nesters in marshes throughout N Iowa and also in some marshes elsewhere in Iowa (Map 6.51). Nesting starts in early May and peaks in mid- to late May (Fredrickson 1970). Most nests have hatched by late Jun, with late nests usually belonging to younger birds (Crawford 1980).

FALL MIGRATION: Concentrations start building up by late Sep, and Oct is the peak of migration in most years. Generally most coots have left Iowa by early Nov. In some years large numbers may remain into Dec, such as 1,500 at Iowa City on 6 Dec 1953.

WINTER: Coots have been reported on CBCs yearly since 1960. They have been reported from counts from throughout Iowa but most commonly in E Iowa. The most reported was 300 at Estherville in 1967 (**IBL** 38:6); most counts total only a few coots. Although some of these probably leave Iowa or die after the CBC, at least a few probably winter in Iowa, such as 1 at Cedar L. on 24 Jan 1974 (**IBL** 44:20).

COMMENT: The American Coot is one of the most thoroughly studied birds in Iowa; numerous studies of various aspects of its breeding biology and behavior have been done in Iowa (Hendrickson 1936; Friley et al. 1938; Sooter 1942; Fredrickson 1970; Weller 1971; Ryan and Dinsmore 1979, 1980; Crawford 1980).

REFERENCES:

Crawford, R. D. 1980. Effects of age on reproduction in American Coots. **J. Wildl. Manage.** 44:183-189.

Fredrickson, L. H. 1970. Breeding biology of American Coots in Iowa. **Wilson Bull.** 82:445-457.

Friley, C. E., L. J. Bennett, and G. O. Hendrickson. 1938. The American Coot in Iowa. **Wilson Bull.** 50:81-86.

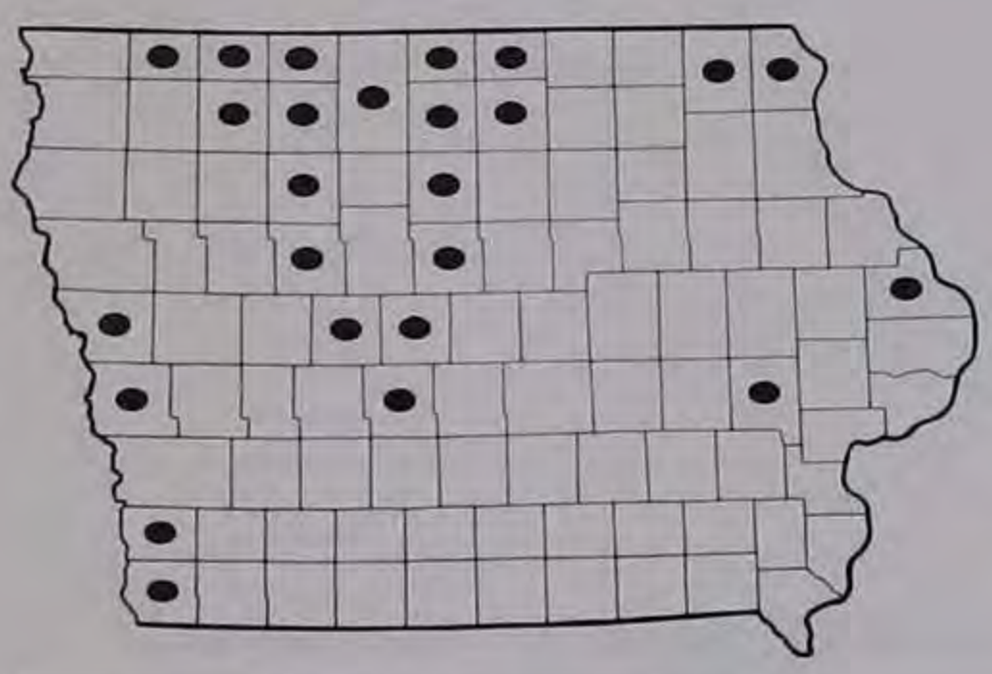
Hendrickson, G. O. 1936. Observations on nests and young of the coot. **Wilson Bull.** 48:216-218.

Ryan, M. R., and J. J. Dinsmore. 1979. A quantitative study of the behavior of breeding American Coots. **Auk** 96:704-713.

Ryan, M. R., and J. J. Dinsmore. 1980. The behavioral ecology of breeding American Coots in relation to age. **Condor** 82:320-327.

Sooter, C. A. 1942. Ecology and management of the American Coot **Fulica americana americana** Gmelin. **Iowa State Coll. J. Sci.** 17:126-128.

Weller, M. W. 1971. Experimental parasitism of American Coot nests. **Auk** 88:108-115.



Map 6.51 American Coot nesting by county, 1960-1982.

Cranes, Family Gruidae

The 14 species of cranes inhabit wetlands and open environments on all continents except South America. Three species have been reported in North America, 2 of them in Iowa. Both Iowa species formerly nested in Iowa but disappeared soon after settlement; now 1 is regular and 1 is accidental in the state. Often confused with the herons, cranes fly with their legs and neck extended. They feed on various small vertebrates and small grains.

Sandhill Crane, **Grus canadensis**

STATUS: Regular; rare migrant, formerly nested. Class I-S N.
HABITAT: Marshes, flooded fields, and open cropland.
SPRING MIGRATION: Most records are from Apr or early May. Spurrell's (1917) records for 8 years between 1904 and 1915 from Sac Co. have an average date of 5 Apr. Most records are of 1 or 2 birds; the most reported were 250 s of Inwood on 10 Apr 1982 (IBL 52:55).

Early dates: 2 Mar 1974 (Glenwood, **Am. Birds** 28:647)
25 Mar 1979 (Dubuque, RS)
1 Apr 1913 (Marshall Co., Gabrielson 1918)

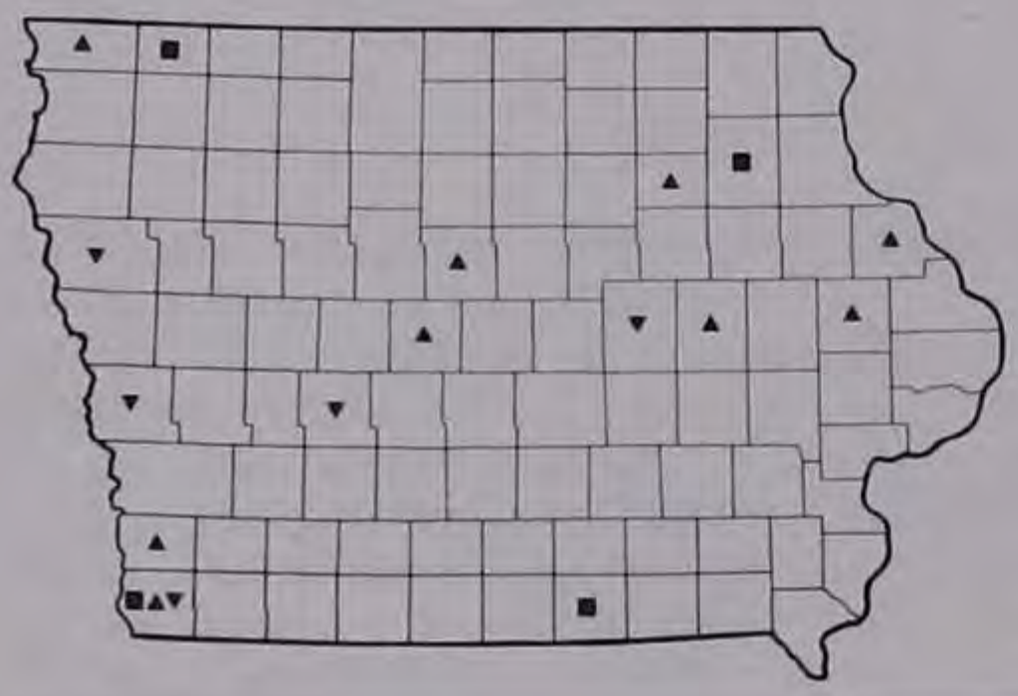
Late dates: 13 May 1945 (Woodbury Co., IBL 15:45)
11 May 1978 (Hamburg, IBL 48:73)
9 May 1958 (Muskrat Sl., Ennis 1958)

SUMMER: There are no recent summer records. Sandhill Cranes formerly nested in N and C Iowa. Spurrell (1917) noted them nesting in Sac Co. as late as 1878, and Anderson (1907) listed nesting records for Hancock Co. as late as 1894.
FALL MIGRATION: Most records are in Oct or early Nov. Several fall sightings have involved flocks; 50-60 were seen near Sioux City on 25 Sep 1964 (IBL 34:98) and 75-80 over Estherville on 6 Nov 1948 (Wolden 1948).

Early dates: 15 Sep 1918 (Sioux City, Stephens 1920)
25 Sep 1964 (Sioux City, IBL 34:98)
3 Oct 1974 (Riverton A., IBL 44:101)

Late dates: 22 Nov 1980 (De Soto N.W.R., IBL 51:27)
13 Nov 1979 (Otter Creek M., IBL 49:112)
6 Nov 1948 (Estherville, Wolden 1948)

WINTER: One was seen near Randalia from mid-Nov to at least 8 Jan 1980 (Schaufenbuel 1980), 2 were near Ocheyedan on 17 Dec 1980 (IBL 51:32), 1 was at Riverton A. from 20 Dec 1980 to 7 Jan 1981 (IBL



Map 6.52 Sandhill Crane records, 1960-1982.

51:32), and 1 was seen in Appanoose Co. in winter 1980-1981 until at least 13 Feb (JCC).

COMMENT: The 17 recent records are widely distributed in the state (Map 6.52). DuMont (1933) reported 2 subspecies, the Greater (**G. c. tabida**) and Lesser Sandhill Crane (**G. c. canadensis**) from Iowa. A third subspecies, the Canadian Sandhill (**G. c. rowani**), migrates with Lesser Sandhill Cranes through the central Great Plains (Johnson and Stewart 1973). Both it and Lesser Sandhills might occur in W Iowa. Greater Sandhills formerly nested in Iowa, and some still nest in S Wisconsin. This subspecies would be expected to occur in E Iowa.

REFERENCES:

DuMont, P. A. 1933. A mensural study of a collection of **Grus canadensis** from Iowa and Nebraska. **Wilson Bull.** 45:13-15.

Ennis, J. H. 1958. A record of the Sandhill Crane in Iowa. **Iowa Bird Life** 28:41-43.

Johnson, D. H., and R. E. Stewart. 1973. Racial composition of migrant populations of Sandhill Cranes in the northern plains states. **Wilson Bull.** 85:148-162.

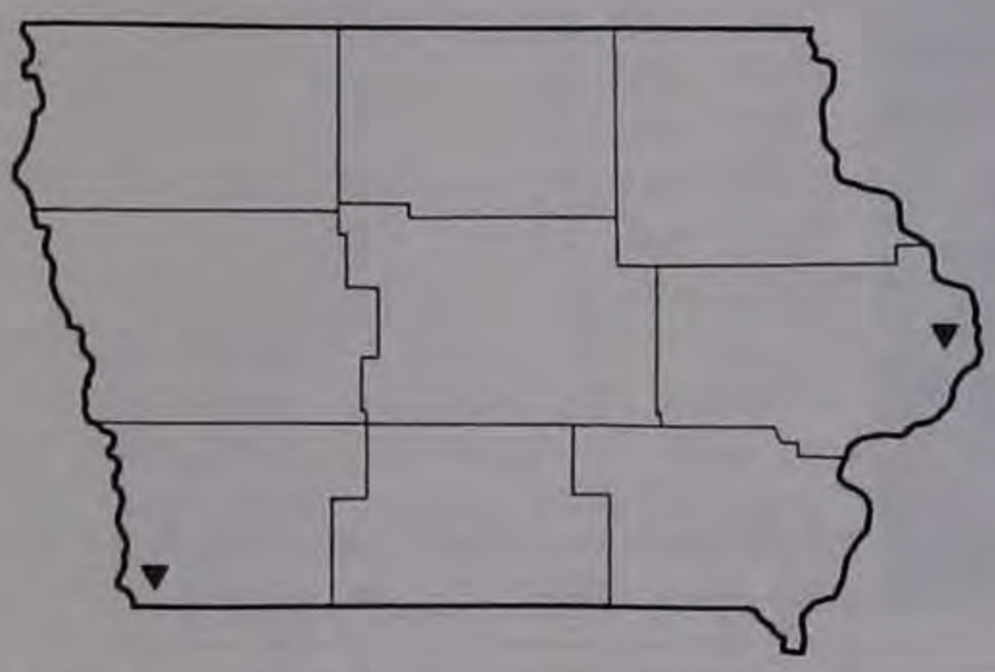
Schaufenbuel, J. 1980. Sandhill Crane wintering in Fayette County. **Iowa Bird Life** 50:54.

Wolden, B. O. 1948. Sandhill Cranes at Estherville. **Iowa Bird Life** 18:68.

Whooping Crane, **Grus americana**

STATUS: Accidental; formerly nested. Class I-S N.

RECORDS: Whooping Cranes formerly nested on some of the larger marshes of N Iowa and also migrated through the state (Allen 1952). The last nest was found in Hancock Co. in 1894 (Anderson 1894). The only records in this century include very old records from 24 Mar 1904 in Sac Co. (Spurrell 1917) and 9 Apr 1911 near Webb, Clay Co. (Gabrielson 1917a), and 4 more recent ones. Records since 1960 (Map 6.53) include 2 birds reported near Riverton, Fremont Co., on 23 Oct 1963 (Matherly 1964) and 1 reported 10 miles n of Clinton on 31 Oct 1972 (Petersen 1972). The former was judged a Class IV and the latter a Class III record by the I.O.U. Records Committee. Two other recent records from near Adel, Dallas Co., on 21 Sep 1972 (Harvey 1973) and 11 Apr 1975 (IBL 45:57) are less satisfactory in providing details. Hahn (1963) lists 7 Iowa specimens available in various museums, including 3 at the University of Iowa.



Map 6.53 Whooping Crane modern records.

REFERENCES:
Allen, R. P. 1952. **The Whooping Crane.** Natl. Audubon Soc. Res. Rep. 3, 246 p.
Anderson, R. M. 1894. Nesting of the Whooping Crane. **The Oologist** 11:263-264.
Hahn, P. 1963. **Where Is That Vanished Bird?** Royal Ontario Museum. 347 p.
Harvey, A. M. 1973. Whooping Cranes observed near Adel. **Iowa Bird Life** 43:28.
Matherly, C. W. 1964. Whooping Crane in Iowa. **Iowa Bird Life** 34:26.
Petersen, P. C. 1972. Whooping Crane in Clinton County. **Iowa Bird Life** 42:98.

ORDER CHARADRIIFORMES

Plovers, Family Charadriidae

This family contains about 63 species found worldwide, including 14 reported in North America. Of 6 Iowa species, 5 are regular and 1 is accidental. Two species have nested in Iowa but 1, the Piping Plover, no longer nests. Plovers are often confused with the sandpipers because both inhabit mud flats, flooded fields, and shorelines. Plovers tend to be stockier in build and to have shorter, thicker bills than most sandpipers. In general, they utilize more upland habitats than sandpipers, and several species are as likely to be seen on uplands as on mud flats. Most plovers lay 4 eggs in a simple scrape on the ground and depend on the cryptic colors of the eggs to protect them from predators.

Several workers have systematically studied shorebirds in Iowa. These include studies in Clay, Palo Alto, and Kossuth counties in NW Iowa (Bennett 1935, 1938b; Spawn 1935; Low 1939; Peterson 1967); Hamilton Co. in C Iowa (Scott and Sooter 1937); the Des Moines/Red Rock Res. area in SC Iowa (Brown 1973a; Black 1974); and Johnson Co. and Cone M. in SE Iowa (Halmi 1976, 1977).

Killdeer on nest, Muskrat Sl., 12 May 1961, F. W. Kent.

Black-bellied Plover, **Pluvialis squatarola**

STATUS: Regular; uncommon migrant. Class I-S.
HABITAT: More likely than Lesser Golden-Plover to be found on mud flats with other shorebirds but may also be found in wet fields with Lesser Golden-Plovers.
SPRING MIGRATION: Two-thirds of the recent records are from mid-May, with other reports from mid-Apr to late May.
Early dates: 18 Apr 1976 (Iowa City, IBL 46:56)
25 Apr 1982 (Trumbull L., IBL 52:56)
28 Apr 1972 (Le Claire, IBL 42:38)
Late dates: 22 May 1979 (Coralville Res., IBL 49:59)
21 May 1961 (Little Wall L., IBL 31:66)
21 May 1967 (Iowa City, IBL 37:50)
SUMMER: There is 1 record from 26-27 Jun 1973 at Red Rock Res. (Brown 1973a), which cannot be classified as either a late spring or early fall migrant.
FALL MIGRATION: Fall reports are nearly as numerous as spring reports but are evenly spread from early Aug to mid-Nov.
Early dates: 1 Aug 1982 (Nashua, IBL 52:120)
10 Aug 1966 (Browns Sl., Lucas Co., IBL 36:103)
14 Aug 1974 (Red Rock Res., IBL 44:72)
Late dates: 19 Nov 1975 (location not given, IBL 46:22)
13 Nov 1973 (Des Moines, IBL 43:105)
3 Nov 1975 (Goose L., Greene Co., IBL 46:22)
COMMENT: Black-bellied Plovers migrate singly or in small flocks from the Gulf Coast and further south, with a much narrower migration interval in spring than the Lesser Golden-Plover. The maximum number recorded is 40-50 in Black Hawk Co. in fall 1966 (IBL 36:103). Winter plumage birds may be difficult to distinguish from Lesser Golden-Plover at a distance. The best field marks are seen in flying birds: black axillaries, white rump, and prominent white wing stripe.

Lesser Golden-Plover, **Pluvialis dominica**

STATUS: Regular; abundant spring, rare fall migrant. Class I-S.
HABITAT: Most often in wet plowed or grassy fields or flying overhead in tight flocks; may be found on shores.
SPRING MIGRATION: The peak of migration is in mid-May, but many are also seen in late Apr and early May. There are occasional reports from mid-Mar to mid-Apr and 3 from Jun but none from late May. Flock size varies greatly, the largest being 1,200 on 11 May 1980 near Waterloo (IBL 50:47).
Early dates: 13 Mar 1982 (Cone M., IBL 52:56)
20 Mar 1963 (Iowa City, IBL 33:39)
21 Mar 1981 (Cone M., IBL 51:66)
Late dates: 28 Jun 1973 (Red Rock Res., Brown 1973)
17 Jun 1966 (Union Sl. N.W.R., IBL 36:82)
3 Jun 1978 (Riverton A., IBL 48:98)
FALL MIGRATION: Fall reports extend from mid-Jul to mid-Nov, with the greatest number of reports from mid-Sep to mid-Oct. Fall flocks are usually 1-10 birds. The largest fall counts are 200 in Bremer Co. on 12 Oct 1980 (IBL 51:27) and 139 at Red Rock Res. in Sep 1973 (Black 1974).
Early dates: 19 Jul 1965 (Union Sl. N.W.R., Peterson 1967)

26 Jul 1974 (Red Rock Res., IBL 44:72)
26 Jul 1981 (Sweet M., IBL 51:100)
Late dates: 22 Nov 1980 (Coralville Res., IBL 51:27)
14 Nov 1967 (Lamoni, IBL 38:17)
7 Nov 1981 (Hudson, IBL 51:117)

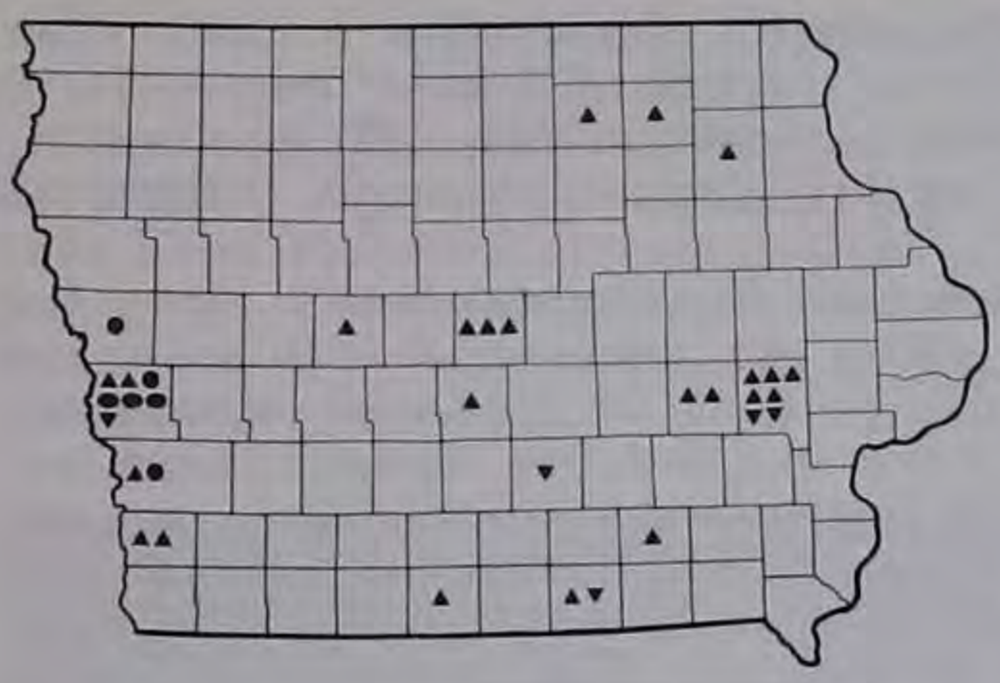
COMMENT: In spring Lesser Golden-Plover migrate in flocks from South America through the Midwest. Although classified as abundant, they are not necessarily easy to find. With considerable time in the field, one can expect to see several flocks in moist fields or flying overhead near marshy areas. The major fall flight is to the East Coast and over the Atlantic Ocean to South America. However, small numbers are reported in Iowa in about 2 of every 3 fall seasons. Most birds migrating south through the Midwest are thought to be first-year birds.

Semipalmated Plover, **Charadrius semipalmatus**

STATUS: Regular; common migrant. Class I-S.
HABITAT: Prefers mud flats at the water's edge.
SPRING MIGRATION: There is a wide migration interval with a peak in early and mid-May.
Early dates: 3 Apr 1982 (w of Shenandoah, IBL 52:56)
13 Apr 1980 (Cone M., IBL 50:47)
19 Apr 1964 (Swan L., Johnson Co., FWK)
Late dates: 14 Jun 1978 (Sweet M., IBL 48:98)
10 Jun 1977 (Dan Green Sl., IBL 47:100)
8 Jun 1977 (Sweet M., IBL 47:100)
FALL MIGRATION: The fall migration extends from mid-Jul to Oct.
Early dates: 12 Jul 1980 (Coralville Res., IBL 50:75)
18 Jul 1980 (Cone M., IBL 50:75)
27 Jul 1974 (Coralville Res., Halmi 1976)
Late dates: 6 Nov 1970 (Des Moines, IBL 41:26)
20 Oct 1973 (Red Rock Res., Black 1974)
19 Oct 1979 (Waterloo, IBL 49:112)
COMMENT: This small plover has a wide migration interval in both spring and fall and is usually seen in small numbers with other shorebirds. The largest numbers reported are 180 at Coralville Res. on 13 May 1980 (IBL 50:47); 100 at Britt, Hancock Co., in spring 1970 (IBL 40:48); and 100 at Cardinal M. on 21 May 1972 (IBL 42:69). The largest fall concentration was 50 at Coralville Res. on 1 Aug 1973 (IBL 43:75).

Piping Plover, **Charadrius melodus**

STATUS: Regular; rare migrant, former summer resident. Class I-S N.
HABITAT: Found on mud or sandy flats in migration; nests on sandy beaches.
SPRING MIGRATION: There are 3 times as many spring records as fall records (Map 6.54). Migration peaks in early May but extends from mid-Apr to mid-May. A reference to a Mar record (Brown 1971) is an error (THK).
Early dates: 11 Apr 1977 (Fayette Co., IBL 47:59)
17 Apr 1982 (Council Bluffs, IBL 52:56)
18 Apr 1976 (Coralville Res., IBL 46:56)
Late dates: 21 May 1980 (Willow Sl., IBL 50:47)
19 May 1979 (Amana L., IBL 49:59)



Map 6.54 Piping Plover records, 1960-1982.

17 May 1973 (location not given, IBL 43:75)

SUMMER: Near Council Bluffs, 2 nests with eggs were photographed on 7 and 18 Jun 1940 (Stiles 1940) and 5 nests with eggs were found there on 17 Jun 1944 (Ennis 1944). At De Soto N.W.R. a nest with eggs was found in 1967, several adults and an immature were seen on 4 Jul 1968, and a nest with eggs was located on 21 Jun 1969 (Brown 1971). No details were given for nesting reports at De Soto N.W.R. in 1972 and 1973 (IBL 42:69, 43:75).

FALL MIGRATION: Recent records are at Nashua on 21 Aug 1982 (IBL 52:120), from De Soto N.W.R. on 2 Aug 1975 (IBL 45:93), from Coralville Res. on 13 and 16 Aug 1979 (IBL 49:112) and 16 Aug and 7-8 Sep 1974 (IBL 44:72), from Red Rock Res. on 8 Sep 1973 (IBL 43:105), and from Rathbun Res. on 22 Sep 1977 (WMH). Old fall records are for 17 Jul 1952 at Ottumwa (Ayres 1952) and 30 Jul 1945 in Scott Co. (Brown 1971). Brown also lists a late date of 14 Sep (no year given).

COMMENT: Migrating birds are seen almost every year, so this species is considered regular. Numbers have ranged from 1 to 3. Channelization of the Missouri R. and the resultant loss of sandbars has destroyed most of the Iowa nesting habitat of this species. Recently, a sandy area at De Soto N.W.R. has been cleared in hopes of attracting and reestablishing nesting of this species in Iowa.

REFERENCES:

Ayres, C. C. 1952. Piping Plover in Wapello County, Iowa. **Iowa Bird Life** 22:43.

Ennis, J. H. 1944. Observations in western Iowa. **Iowa Bird Life** 14:57.

Stiles, B. F. 1940. Nesting of the Piping Plover in Iowa. **Iowa Bird Life** 10:48-49.

Killdeer, **Charadrius vociferus**

STATUS: Regular; common migrant and summer resident, rare winter. Class I-S N.

HABITAT: Varied, may be found on mud flats, near large bodies of water, or in open farm country with minimal water.

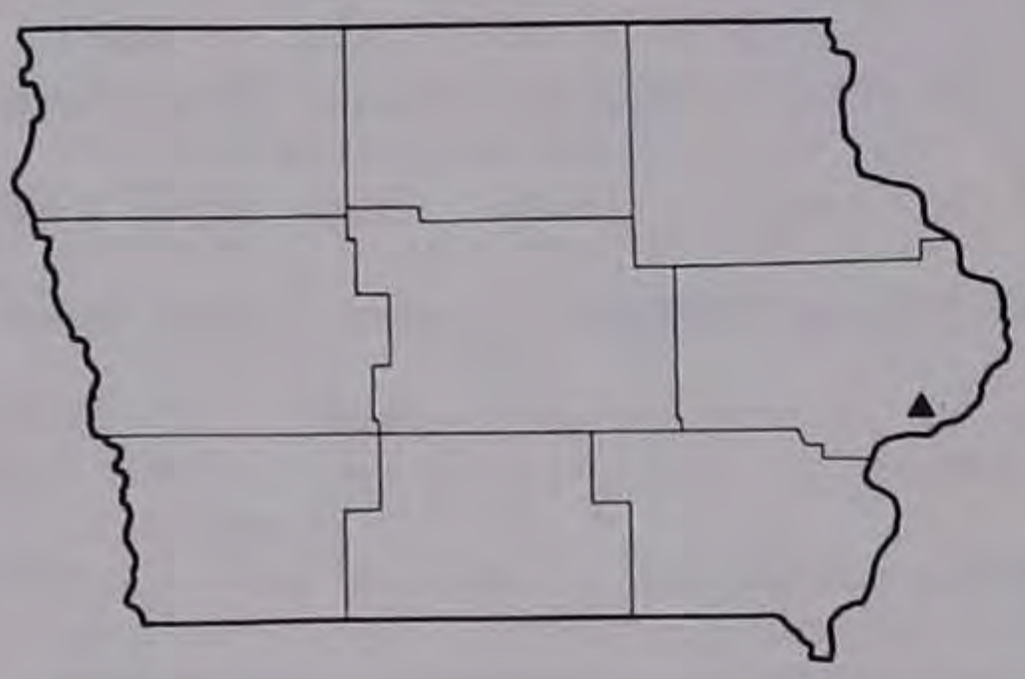
SPRING MIGRATION: Killdeers are one of the earliest spring migrants, with the first birds arriving by late Feb or early Mar. No data are available to indicate migration peaks.

SUMMER: Nesting occurs throughout the state. BBSs show a fairly even distribution throughout the state with an average of 4 birds per route.
FALL MIGRATION: Large flocks are more common in fall; 200 at Cone M. in Sep 1962 (IBL 32:83) was the largest number reported. Numbers decrease sharply in Nov.
WINTER: Wintering birds are most common in E Iowa, especially along the Mississippi R. They are seen on about 70 percent of CBCs in the Davenport-Clinton area and on 30-60 percent of CBCs at Muscatine, Dubuque, Iowa City, Cedar Rapids, Decorah, and Des Moines. None are found in SW or SC Iowa. It is not known whether Killdeers seen on CBCs are late migrants or wintering birds. Few are reported in Jan and early Feb, but the coverage then is not comparable to the CBCs.
COMMENT: Perhaps the most familiar of all shorebirds in Iowa, Killdeers seem to have adapted well to modern agriculture.

Mountain Plover, **Charadrius montanus**

STATUS: Accidental. Class III.
RECORD: One bird in full breeding plumage was observed at Credit I., Scott Co., on 25-26 Mar 1964 (Petersen 1964) (Map 6.55). Strong southwest winds occurred the day before the bird was seen.
COMMENT: The Mountain Plover breeds on the high short-grass prairie east of the Rocky Mountains, from Montana to New Mexico, and east to the western parts of North Dakota, South Dakota, Kansas, Oklahoma, and the Texas panhandle. The winter range extends from C California and SE Texas south into Mexico. This species is not a frequent vagrant. A few have been recorded north to Idaho, Alberta, and Saskatchewan, and east of its Texas range along the Gulf Coast to Florida, and on the Atlantic Coast in Virginia and Maine. In the Midwest, there are single records for Missouri, Arkansas (Dec), Minnesota (May), and Iowa (Mar).
REFERENCE:

Petersen, P. C. 1964. Mountain Plover at Davenport. Iowa Bird Life 34:49.



Map 6.55 Mountain Plover record.

Stilts and Avocets, Family Recurvirostridae

The recurvirostrid family has 7 species found mainly in tropical and subtropical regions over much of the world. Both North American species have been reported in Iowa. One is regular in the state, and the other is Class V. Recurvirostrids are relatively large shorebirds and have extremely long legs and bills. Their bill shape varies from straight to decurved or recurved.

American Avocet, Coralville Res. 4 Oct 1969, F. W. Kent.

[Black-necked Stilt, **Himantopus mexicanus**]

STATUS: Class V.

RECORDS: There are 6 specific sightings, all of which lack descriptions of the birds; 2 specimens that are inadequately labeled; and 4 other references to this species in Iowa. The specific sightings are as follows:

1890, Hawarden, Sioux Co., female shot (Anderson 1907)
summer 1898, Fort Dodge, several killed (Anderson 1907)
20 Apr 1902, Sioux City (DuMont 1933)
Aug to 8 Sep 1924, Buchanan Co., pair (Pierce 1930)
9 May 1928, Carter L., Pottawattamie Co. (DuMont 1933)
10 May 1954, Goose L., Hamilton Co. (King 1954)

The 2 specimens at the Putnam Museum from the Barton W. Smith collection were presumably taken in Cedar Co. about 1900. Other references include Allen's list of 1870, indefinite references to Pottawattamie and Wayne counties (Anderson 1907), and a questionable secondhand report from Floyd Co. (Fenton 1916; Gabrielson 1917b).

COMMENT: Even though it seems highly likely that this easily identified species has occurred in Iowa, the sight records lack descriptions and the specimens cannot be tied to a previously published account of their occurrence. This species of the southwest and coastal states in the east is a rare vagrant to the Midwest. There are more records to the west of Iowa (as far north as Saskatchewan) than to the east. It is not listed for Minnesota. Sightings are scattered from Apr to Oct.

REFERENCE:
King, Mrs. J. R. 1954. Bird notes from central Iowa. Iowa Bird Life 24:59.

American Avocet, Recurvirostra americana

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Found in shallow open water.
SPRING MIGRATION: One-third of recent records are from spring, half of them in early May and the others in late Apr and mid-May.
Early dates: 15 Apr 1956 (Little Wall L., Carter 1956)
18 Apr 1982 (Amana L., IBL 52:56)
19 Apr 1981 (McIntosh Woods, IBL 51:65)
Late dates: 25 May 1981 (Cherokee, IBL 51:65)
19 May 1981 (Saylorville Res., IBL 51:65)
15 May 1979 (Riverton A., IBL 49:60)
SUMMER: There is a nesting report from Sioux Co. in 1900 without substantiating details (Anderson 1907).
FALL MIGRATION: Two-thirds of recent records are from fall and extend from early Jul to late Oct, with more in Sep-Oct than Jul-Aug.
Early dates: 6 Jul 1973 (Red Rock Res., IBL 43:75)
7 Jul 1982 (Amana L., IBL 52:89)
17 Jul 1980 (Davenport, IBL 50:75)
Late dates: 10 Nov 1931 (Burlington, Allert 1945)
9 Nov 1956 (Little Wall L., Carter 1956)
27 Oct 1972 (Lamoni, IBL 43:25)
COMMENT: Avocets are seen in the state almost every year. Nearly half the sightings are from Coralville Res. and Red Rock Res. The other records are scattered throughout the state. Numbers vary from zero to 5 per year, with an average of 2-3. More than half the sightings involve single birds; there are only 7 recent reports of more than 10 birds. The largest numbers were 42 at McIntosh Woods on 19 Apr 1981 (IBL 51:65), 38 at L. Manawa on 28 Apr 1981 (IBL 51:65), and 35 near Chariton on 23 Oct 1966 (IBL 36:104). Although avocets are usually considered a western species, many winter in Florida and these may be the source of Iowa migrants. A few have nested in WC Minnesota since 1960 (Green and Janssen 1975).
REFERENCES:
Allert, O. P. 1945. A 1931 avocet record for Burlington. Iowa Bird Life 15:12.
Carter, D. L. 1956. Avocet in Hamilton County. Iowa Bird Life 26:90.

Sandpipers and Phalaropes, Family Scolopacidae

This large family has about 90 species and is worldwide in distribution. About 61 species have been reported in North America and 33 from Iowa. Of the species reported from Iowa, 24 are regular, 1 is casual, 4 are accidental, 2 are extirpated, and 2 are hypothetical. Seven species have nested in Iowa, but the Marbled Godwit and Long-billed Curlew no longer nest in the state and the Common Snipe and Wilson's Phalarope only nest occasionally. Sandpipers generally are found in open habitats, especially on mud flats, flooded fields, and along shorelines, where they feed on various invertebrates. Most species are very cryptically colored and lay their eggs in a simple ground nest. Many of the species found in Iowa

nest in arctic and subarctic North America and pass through Iowa on their migration. This migration is especially confusing in June, when it is unclear whether birds are late spring migrants, early fall migrants, or summering individuals. The references listed in the plover family account also apply to sandpipers.

Upland Sandpiper, Johnson Co., 1961, F. W. Kent.

Common Snipe, Johnson Co., 18 Apr 1959, F. W. Kent.

Greater Yellowlegs, **Tringa melanoleuca**

STATUS: Regular; common migrant. Class I-S.
HABITAT: Shallow ponds and mud flats.
SPRING MIGRATION: Most are seen from mid-Apr to early May.
Early dates: 18 Mar 1972 (Iowa City, IBL 42:38)
18 Mar 1972 (Waterloo, IBL 42:38)

22 Mar 1980 (Cone M., IBL 50:47)
Late dates: 23 May 1982 (Harrison Co., IBL 52:57)
20 May 1974 (Cardinal M., DK)
14 May 1979 (Riverton A., THK)

SUMMER: A record from 23 Jun 1977 at Rush L., Osceola Co. (IBL 47:101) cannot be classified as either a spring or fall migrant.

FALL MIGRATION: This species may be seen from Jul to Nov, but it tends to be later than the Lesser Yellowlegs.
Early dates: 7 Jul 1977 (Hottes L., Dickinson Co., JJD)
13 Jul 1980 (Coralville Res., IBL 50:75)
21 Jul 1981 (Forney L., TB)
Late dates: 16 Nov 1975 (Davenport, IBL 46:23)
12 Nov 1981 (Keokuk Co., IBL 51:117)
9 Nov 1979 (Lock and Dam 9, IBL 49:112)

COMMENT: Little information is available on yellowlegs because they are not often reported. The Greater Yellowlegs is much less common than the Lesser and usually occurs in small numbers mixed in with other shorebirds or sometimes alone. The largest flocks reported are 30 on 20 Apr 1980 and 20 on 20 Oct 1979 at Coralville Res. (IBL 50:47, 49:112). Greater Yellowlegs are difficult to identify when seen at a distance with no Lessers available for comparison. Individual Lesser Yellowlegs may appear to be nearly the size of the less common Greater Yellowlegs. In mixed flocks the size difference of several birds is a valid identification feature, but an isolated Greater Yellowlegs should only be identified on the basis of a slightly upturned bill that is definitely longer than the head and thicker than the needlelike bill of the Lesser Yellowlegs or by the harsher 3 to 5 syllable call (compared with the softer 1- to 3-syllable call of the Lesser Yellowlegs).

Lesser Yellowlegs, Tringa flavipes

STATUS: Regular; common migrant. Class I-S.
HABITAT: Shallow ponds, sometimes wet grassy areas.
SPRING MIGRATION: Some may arrive in Mar, but most are seen from early Apr through mid-May.
Early dates: 5 Mar 1955 (Cone M., FWK)
14 Mar 1980 (Forney L., IBL 50:47)
22 Mar 1970 (Cone M., FWK)
22 Mar 1978 (Cone M., THK)
22 Mar 1980 (Cone M., THK)
Late dates: 6 Jun 1981 (Hendrickson M., PWM)
28 May 1960 (Coralville Res., FWK)
27 May 1961 (Cone M., FWK)

FALL MIGRATION: There is a long migration interval from mid-Jul to mid-Oct.
Early dates: 25 Jun 1977 (Virgin L., IBL 47:101)
26 Jun 1973 (Red Rock Res., Brown 1973a)
1 Jul 1976 (Cardinal M., DK)
1 Jul 1981 (Dickinson Co., IBL 51:100)
1 Jul 1982 (Nashua, IBL 52:90)
Late dates: 12 Nov 1967 (L. Macbride, FWK)
31 Oct 1982 (Coralville Res., IBL 52:120)
24 Oct 1980 (Cone M., IBL 51:27)

COMMENT: Lesser Yellowlegs is one of the commonest species of shorebird in Iowa. The migration interval is broad in both spring and fall. Birds

may be found singly or in small or large loose flocks, often mixed with other shorebirds. The largest reported spring and fall flocks are 1,100 at Riverton A. on 24 Apr 1982 (IBL 52:57) and 150 in Pocahontas Co. on 20 Sep 1979 (IBL 49:112).

Solitary Sandpiper, **Tringa solitaria**

STATUS: Regular; common migrant. Class I-S.
HABITAT: Often found in wooded ponds and small streams but may be found with other shorebirds.
SPRING MIGRATION: Most are seen from late Apr to mid-May.
Early dates: 5 Apr 1981 (Cone M., IBL 51:66)
12 Apr 1953 (McCausland, PCP)
16 Apr 1976 (Scott Co., PCP)
16 Apr 1982 (Story Co., IBL 52:57)
Late dates: 28 May 1972 (Cardinal M., IBL 42:69-70)
22 May 1978 (Coralville Res., THK)
21 May 1981 (Johnson Co., IBL 51:66)
FALL MIGRATION: Of the shorebirds, this species is the earliest fall migrant with some birds returning to Iowa by late Jun. Most leave by mid-Sep.
Early dates: 23 Jun 1961 (Coralville Res., FWK)
26 Jun 1977 (Winneshiek Co., IBL 47:101)
29 Jun 1972 (Winneshiek Co., IBL 42:69-70)
29 Jun 1980 (Coralville Res., IBL 50:75)
29 Jun 1981 (Plymouth Co., IBL 51:100)
Late dates: 11 Oct 1981 (Ames, IBL 51:117)
3 Oct 1982 (Ames, IBL 52:120)
26 Sep 1981 (Lost Island L., IBL 51:117)
26 Sep 1982 (Ames, IBL 52:120)
COMMENT: Solitary Sandpipers do indeed tend to be solitary. The largest number encountered was 71 at Cone M. on 13 Jul 1980 (IBL 50:75), but these were not in a single flock.

Willet, **Catoptrophorus semipalmatus**

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Shallow ponds and mud flats.
SPRING MIGRATION: About 70 percent of the reports are from spring, with a sharp peak in late Apr extending into early and mid-May.
Early dates: 2 Apr 1972 (Marble Rock, IBL 42:38)
6 Apr 1974 (Webster City, IBL 44:44)
19 Apr 1980 (Sweet M., IBL 50:47)
Late dates: 2 Jun 1962 (Cardinal M., IBL 32:57)
1 Jun 1979 (Forney L., IBL 49:83)
29 May 1963 (location not given, IBL 33:39)
SUMMER: A nest with 4 eggs was reported near Hawarden for 2 Jun 1900 (Anderson 1907), but there is no other evidence to confirm this species as having nested in Iowa.
FALL MIGRATION: Most reports are from early Jul to mid-Aug.
Early dates: 25 Jun 1982 (Willow Sl., IBL 52:90)
28 Jun 1981 (Wilson Island, IBL 51:100)
1 Jul 1978 (Willow Sl., IBL 48:98)
Late dates: 19 Oct 1974 (Coralville Res., IBL 44:102)

31 Aug 1973 (Cedar Rapids, IBL 43:75)
20 Aug 1979 (Willow Sl., IBL 49:112)

COMMENT: Willets are found singly or in flocks of 2-20 birds. More than 100 were at Coralville Res. on 9 Aug 1975 (IBL 45:93). The maximum spring count is 25-30 at Sweet M. on 1 May 1977 (IBL 47:59).

Spotted Sandpiper, **Actitis macularia**

STATUS: Regular; common summer resident. Class I-S N.
HABITAT: Found along rivers, wooded ponds, dikes, and roadways near water; does not usually associate with other shorebirds except in fall when it may be found on mud flats.
SUMMER: Spotted Sandpipers usually arrive in early May and leave by late Sep. Although they are considered regular nesters throughout the state, there are few data on their frequency, distribution, or nesting except for an old study of 2 nests at Lake Okoboji (Smith 1914). They are found in pairs in the spring and in family groups in the fall.

Early dates: 2 Apr 1981 (Ames, JCR)
18 Apr 1982 (Lacey-Keosauqua S.P., IBL 52:57)
23 Apr 1960 (Swan L., Johnson Co., FWK)

Late dates: 16 Nov 1953 (Iowa City, FWK)
30 Sep 1978 (Coralville Res., THK)
26 Sep 1981 (Ledges S.P., IBL 51:117)

WINTER: The only winter record is at Dubuque from 7 Dec 1976 to 14 Jan 1977 (Rooks and Heathcote 1977).
REFERENCES:

Rooks, J. D., and P. Heathcote. 1977. Wintering Spotted Sandpiper at E. B. Lyon Prairie-Woodland Preserve, Dubuque. Iowa Bird Life 47:22.
Smith, A. F. 1914. Notes on the Spotted Sandpiper. Wilson Bull. 26:81-86.

Upland Sandpiper, **Bartramia longicauda**

STATUS: Regular; uncommon summer resident. Class I-S N.
HABITAT: Pasture and grassy areas, frequently near wet meadows.
SUMMER: Nesting occurs in all sections of Iowa but in localized areas. Nests are difficult to find because of the adults' deceptive behavior. Recent reports of nesting include a nest with 4 eggs on 27 May 1961 near Lamoni (Gillaspey 1961), 4 downy young in 1964 in Marshall Co. (Rinehart and Rinehart 1964), a nest with 4 eggs near Lamoni in 1971 (IBL 41:89), and 3 young in Muscatine Co. on 11-12 Jul 1979 (Kock 1979). Upland Sandpipers were found on about 20 percent of BBSs from 1967 to 1978, with no apparent change in numbers over that period.

Early dates: 26 Mar 1968 (location not given, IBL 38:58)
7 Apr 1963 (Lamoni, IBL 33:39)
11 Apr 1965 (Lamoni, IBL 35:50-51)

Late dates: 15 Oct 1978 (Waterloo, IBL 48:138)
13 Oct 1976 (Fayette Co., JPS)
15 Sep 1979 (Johnson Co., IBL 49:112)

COMMENT: Brown (1960) summarized the data and opinions up to 1960, which suggest a great decline in this species over the first part of this century. Upland Sandpipers used to be common. Although the BBSs do not indicate a further decline in recent years, the sampling may be

inadequate for evaluation of this uncommon species. The decline in grasslands, the favored habitat of Upland Sandpipers, has become profound in the last 20 years because of extensive cultivation brought about by increased demand and by fertilizers that allow repeated planting of row crops. The best time to search for this species is just after dawn by listening for its characteristic whistle.

REFERENCES:

Brown, W. H. 1960. Former abundance and present status of the Upland Plover in Iowa: A cooperative study. **Iowa Bird Life** 30:31-37.

Gillaspey, J. D. 1961. Second nest of the Upland Plover at Lamoni. **Iowa Bird Life** 31:70-71.

Kock, L. 1979. Nesting Upland Sandpipers in eastern Iowa. **Iowa Bird Life** 49:107-109.

Rinehart, H., and N. Rinehart. 1964. Banding experiences. **Iowa Bird Life** 34:102-104.

Eskimo Curlew, **Numenius borealis**

STATUS: Extirpated; formerly spring migrant. Class I-S.

RECORDS: Very little is known about the former status of this species in Iowa. The only specific records follow:

20 Apr (or May?) 1874, N Iowa, 2 specimens at Putnam Museum (DuMont 1933)

ca. 1892, Johnson Co., specimen, later not found (Nutting 1893; DuMont 1933)

ca. 1893, Polk Co., 2 specimens, later not found (DuMont 1933)

5 Apr 1893, Burlington, specimen examined by DuMont but cannot now be found (DuMont 1933)

10 Apr 1900, Grinnell, 3 specimens at Harvard University (Hahn 1963)

3 May 1901, Davenport, specimen at Charleston Museum, Charleston, S.C. (Hodges 1950)

This species was listed by Allen (1870) and Krider (1879). Anderson (1907) noted indefinite records from Jackson and Van Buren counties.

COMMENT: The period of rapid decline, due to shooting, loss of habitat, or perhaps climatic change (Banks 1977), was from 1870 to 1885. This was the period when ornithology in Iowa was just becoming established. The earlier pioneer ornithologists in Iowa may have missed this species because of its limited migration interval in Apr and May and its upland habitat preference. Iowa was probably on the eastern edge of the spring migration route. This once abundant species was near extinction by 1900. However, recent sightings in Texas, Louisiana, Manitoba, and Massachusetts raise the remote hope that the Eskimo Curlew may again be seen in Iowa.

REFERENCES:

Banks, R. C. 1977. The decline and fall of the Eskimo Curlew, or why did the curlew go extaille? **Am. Birds** 31:127-134.

Hahn, P. 1963. **Where Is That Vanished Bird?** Toronto: Royal Ontario Museum, 347 p.

Hodges, J. 1950. Specimen of the Eskimo Curlew for Iowa discovered. **Iowa Bird Life** 20:26.

Whimbrel, Numenius phaeopus

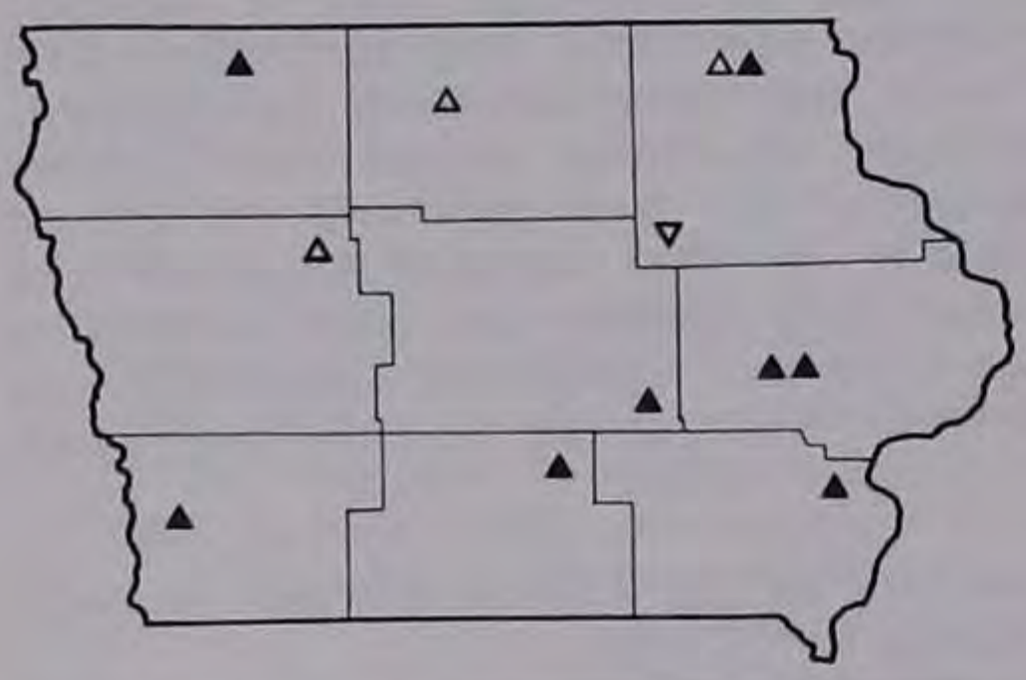
STATUS: Accidental; spring migrant. Class I-P.
RECORDS: Ten of 12 records (Map 6.56) are from mid- to late May, the others from late Apr and Sep. Numbers have varied from 1 to 5 except for 15 at Red Rock Res. in 1973. Five records are well substantiated. This species was also listed by Allen (1870) and reported from Linn Co. (Anderson 1907).

25 May 1895, Crystal L., Hancock Co., specimen collected (Anderson 1907)
16 May 1943, Winneshiek Co., described (Cuthbert and Cuthbert 1943)
14 Sep 1952, Black Hawk Co. (PCP)
25 May 1958, Twin Lakes S.P., Calhoun Co. (Brown 1971)
26 May 1960, Coralville Res., photograph (Laude and Kent 1961)
22 Apr 1961, Dickinson Co. (IBL 31:41)
17 May 1963, Coralville Res., photograph (IBL 33:39)
17 May 1964, Cardinal M. (IBL 34:41)
19 May 1965, Cone M. (IBL 35:50)
21 May 1968, Rock Creek L. (IBL 38:88)
22-23 May 1973, Red Rock Res. (IBL 43:75)
19 May 1981, Willow SI., Class III (Wilson 1981)

COMMENT: The eastern population of Whimbrels winters on the East Coast and migrates northwesterly across the Great Lakes to areas w of Hudson Bay. Iowa birds are probably westward strays from the eastern population, as the western population winters on the West Coast and nests in Alaska and NW Canada. The first record was based on a specimen that was not available for review.

REFERENCES:

Cuthbert, N. L., and M. E. Cuthbert. 1943. Hudsonian Curlew in Winneshiek County. **Iowa Bird Life** 13:64.
Laude, P., and F. Kent. 1961. Observation of Whimbrels. **Iowa Bird Life** 31:20-22.
Wilson, B. L. 1981. Whimbrel in southwest Iowa. **Iowa Bird Life** 51:105-106.



Map 6.56 Whimbrel records.

Long-billed Curlew, Numenius americanus

STATUS: Extirpated; formerly summer resident. Class I-S N.
RECORDS: Comments of early ornithologists (Preston 1893; Anderson 1907) suggest that this species was a fairly common nester, mainly in N and W

Iowa. The last mentioned nesting date was about 1885 (Spurrell 1917). By the late 1800s the species was a rare migrant, and there are only 4 records after 1900.

25 Oct 1914, W Iowa border (DuMont 1933)
14 Apr 1918, Floyd Co. (Fenton 1923-24)
14 May 1921, Woodbury Co. (DuMont 1933)
15 May 1932, Boone Co. (DuMont 1933)

Specimens are located at the University of Iowa, Putnam Museum, and Rockwell City.

COMMENT: The nearest nesting areas are now in W Nebraska and South Dakota, and there are few records of eastward vagrants. In the last 25 years there are records from Minnesota (2), Wisconsin, Illinois, and Ontario in Apr, May, Jul, and Oct.

REFERENCE:

Preston, J. W. 1893. Some prairie birds. **Ornithologist and Oologist** 18:81-82.

Hudsonian Godwit, **Limosa haemastica**

STATUS: Regular; uncommon spring, rare fall migrant. Class I-S.
HABITAT: Shallow ponds and mud flats.
SPRING MIGRATION: Some are seen almost every year, with two-thirds of the sightings in mid-May and half of the remaining sightings in early May.

Early dates: 20 Mar 1976 (Forney L., IBL 46:57)
3 Apr 1970 (Webster City, IBL 40:48)
14 Apr 1979 (Amana, IBL 49:60)
Late dates: 4 Jun 1978 (Forney L., IBL 48:98)
3 Jun 1979 (Ames, IBL 49:83)
1 Jun 1979 (Willow Sl., IBL 49:83)

FALL MIGRATION: There are only 6 recent fall records.

Early dates: 4 Aug 1979 (Coralville Res., IBL 49:112)
10 Aug 1980 (Union Sl. N.W.R., IBL 51:27)
19 Sep 1976 (Cedar Rapids, IBL 46:72)
Late dates: 5 Oct 1974 (Cedar Rapids, IBL 44:102)
18 Oct 1964 (Ogden, IBL 34:99)
23 Oct 1966 (Russell, IBL 36:104)

COMMENT: Spring migrants are found in flocks of 1-20, with a narrow migration interval. An unusual concentration of 100 occurred at Riverton A. on 15 May 1979 (IBL 49:60). Gray, basic (winter) plumage birds are mixed with alternate (summer) plumage birds in spring and can be mistaken for Marbled Godwits. The best distinguishing field mark is the white rump of the Hudsonian, which can be missed if the bird is not flushed. In fall, Hudsonian Godwits migrate from N Canada to the East Coast and over the Atlantic Ocean to wintering grounds in Argentina. Thus few are likely to be seen in Iowa in the fall.

Marbled Godwit, **Limosa fedoa**

STATUS: Regular; rare migrant, extirpated summer resident. Class I-S N.
HABITAT: Shallow ponds and mud flats.
SPRING MIGRATION: About 70 percent of sightings are from spring and range from early Apr to late May, with the peak in mid-May. There are

about half as many spring reports as for Hudsonian Godwit.
Early dates: 3 Apr 1982 (w of Shenandoah, IBL 52:56)
5 Apr 1981 (Big M., IBL 51:66)
10 Apr 1978 (Missouri Valley, IBL 48:73)
Late dates: 27 May 1978 (Amana, IBL 48:73)
25 May 1967 (Greene Co., IBL 37:50)
23 May 1979 (Amana L., IBL 49:60)
SUMMER: Marbled Godwits apparently nested sparingly in the prairie areas of NW Iowa but disappeared soon after settlement (Anderson 1907)
FALL MIGRATION: There are 10 recent reports from early Aug to late Sep.
Early dates: 2 Aug 1975 (Coralville Res., IBL 45:93)
10 Aug 1980 (Union Sl. N.W.R., IBL 51:27)
15 Aug 1982 (Colo, IBL 52:120)
Late dates: 23 Sep 1973 (Red Rock Res., IBL 43:105)
16 Sep 1978 (Cone M., IBL 48:138)
3 Sep 1968 (Goose L., Greene Co., IBL 38:125)
COMMENT: Almost all reports for Marbled Godwits are of 1 or 2 birds. The maximum reported is 20-25 at Blue L. on 19 Aug 1973 (IBL 43:75). Separation of Marbled Godwit from basic plumage Hudsonian Godwit is best accomplished by flushing the bird to determine if it has a white rump. Data are not available to determine the reliability of most sightings that have been reported in the past.

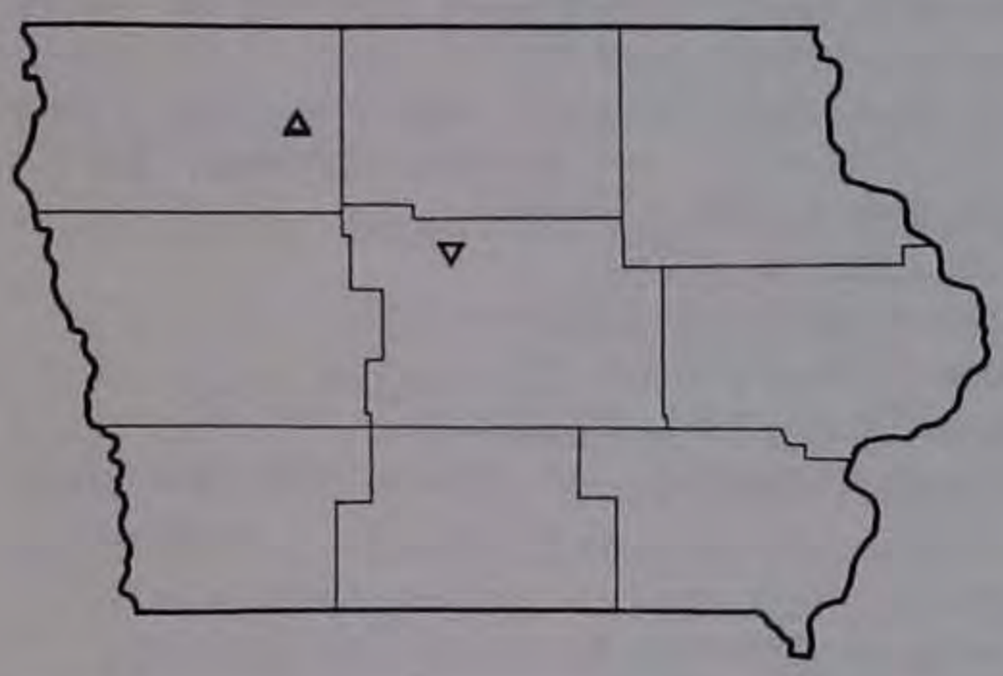
Ruddy Turnstone, **Arenaria interpres**

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Mud flats.
SPRING MIGRRATION: Turnstones are late migrants, with the majority of records from mid-May and most of the rest from late May. More than three-fourths of the records are from spring.
Early dates: 6 May 1956 (Davenport, PCP)
7 May 1967 (Ames, IBL 37:50)
12 May 1974 (Cardinal M., DK)
Late dates: 15 Jun 1966 (Union Sl. N.W.R., IBL 36:82)
11 Jun 1928 (Little Wall L., DuMont 1932)
1 Jun 1982 (Cherokee, IBL 52:57)
FALL MIGRATION: Most recent fall records are from Sep, suggesting that this species is also a late fall migrant.
Early dates: 2 Aug 1975 (Iowa City, IBL 45:93)
late Aug 1973 (Red Rock Res., Black 1974)
5 Sep 1970 (Des Moines, IBL 40:72)
Late dates: 29 Sep 1973 (Red Rock Res., IBL 43:105)
21 Sep 1968 (Rock Creek L., IBL 38:125)
14 Sep 1966 (Marble Rock, IBL 36:104)
14 Sep 1967 (Browns Sl., Lucas Co., IBL 37:98)
WINTER: One was photographed at Keokuk in Feb 1980 (IBL 50:47).
COMMENT: Ruddy Turnstone, first recorded in 1892 (Bartsch 1898), is seen almost every year, usually as singles or groups of 2-5. The maximum number seen was 30 on 20 May 1966 at Elk Creek M. (Sutter 1966). There is a surprisingly sharp migration interval in the spring between 15 and 23 May.
REFERENCES:
Bartsch, P. 1898. First record of the turnstone. **Iowa Orn.** 4(3):3.
Sutter, B. 1966. A twist in turnstone feeding tactics. **Iowa Bird Life** 36:57.

Red Knot, **Calidris canutus**

STATUS: Accidental. Class I-S.
RECORDS: There are 2 old substantiated records (Map 6.57). A specimen taken at Goose L. (now Anderson L.), Hamilton Co., on 10 Sep 1937 (Scott 1938) is at Iowa State University. There is also a description of 14 birds in breeding plumage at Lost Island L., Palo Alto Co., on 21 May 1934 (Bennett 1935). No details are provided for 3 recent reports: 5 May 1967 from Greene Co. (Brown 1971), 20 May 1967 from Big Wall L., Wright Co. (Brown 1971), and 22 May 1973 from Des Moines (Brown 1973a). This species also appeared on Allen's list (1870) and was reported by Krider (1879).
COMMENT: The predominant migration of this species is along the East Coast and then inland across the E Great Lakes. A few are seen along W Lake Michigan and at Duluth. There are scattered records from nearby states away from the Great Lakes in May-Jun and Jul to Sep, with fall records predominating. This species would be difficult to miss in breeding plumage but could be overlooked in winter plumage.
REFERENCE:

Scott, T. C. 1938. American Knot in Iowa. **Auk** 55:275-276.



Map 6.57 Red Knot records.

Sanderling, **Calidris alba**

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Mud or sandy flats.
SPRING MIGRATION: Most reports (80 percent) are for spring and half of these are from mid-May.
Early dates: 8 Apr 1981 (Waterloo, IBL 51:66)
20 Apr 1975 (Waterloo, IBL 45:57)
24 Apr 1982 (s of Council Bluffs, IBL 52:57)
Late dates: 2 Jun 1979 (Lee Co., IBL 49:83)
1 Jun 1979 (Willow Sl., IBL 49:83)
30 May 1981 (Hendrickson M., IBL 51:66)
FALL MIGRATION: There are only 10 recent fall records.
Early dates: 26 Jul 1980 (Waterloo, IBL 50:75)
2 Aug 1975 (Iowa City, IBL 45:93)
8 Aug 1980 (Red Rock Res., IBL 51:27)
Late dates: 10 Nov 1963 (Credit I., IBL 33:88)
29 Oct 1982 (Saylorville Res., IBL 52:121)
20 Oct 1974 (Iowa City, IBL 44:102)

COMMENT: There were few reports of this species in the 1960s and early 1970s; however, it has been found in 8 of 10 years since 1972. Sanderlings occur in small numbers, usually less than 10. The largest flock reported was 30 at Coralville Res. on 23 May 1979 (IBL 49:60). This species is noted for its rapid and continuous running.

Semipalmated Sandpiper, **Calidris pusilla**

STATUS: Regular; abundant migrant. Class I-S.
HABITAT: Mud flats with other shorebirds.
SPRING MIGRATION: Most are seen in May, particularly in the latter part of May when Semipalmated outnumber Least Sandpipers. Numbers vary from a few to hundreds, usually in mixed flocks.
Early dates: 11 Apr 1981 (Coralville Res., IBL 51:66)
19 Apr 1964 (Coralville Res., FWK)
21 Apr 1963 (Coralville Res., FWK)
Late dates: 8 Jun 1978 (New Albin, DK)
6 Jun 1981 (Hendrickson M., IBL 51:100)
5 Jun 1960 (Coralville Res., FWK)
SUMMER: Records from 19 Jun 1982 at Forney L. (IBL 52:90) and 24 Jun 1977 at Sweet M. (IBL 47:101) do not fit with either late spring or early fall migrants.
FALL MIGRATION: Most are found from late Jul through Sep.
Early dates: 11 Jul, year not given (location not given, Brown 1971)
12 Jul 1980 (Coralville Res., IBL 50:75)
14 Jul 1975 (Iowa City, Halmi 1976)
Late dates: 21 Nov 1982 (L. Manawa, IBL 52:121)
23 Oct 1982 (Coralville Res., IBL 52:121)
COMMENT: This common species is seldom reported, so there are few data to evaluate migration patterns.

Western Sandpiper, **Calidris mauri**

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Mud flats with other shorebirds.
SPRING MIGRATION: More than half the spring records are from mid-May. There are about half as many spring as fall records.
Early dates: 10 Apr 1977 (Coralville Res., Halmi 1977)
16 Apr 1955 (Swan L., Johnson Co., Serbousek 1959)
26 Apr 1981 (Riverton A., IBL 51:66)
Late dates: 2 Jun 1978 (Riverton A., IBL 48:98)
23 May 1979 (Coralville Res., IBL 49:60)
21 May 1977 (Davenport, IBL 47:59)
FALL MIGRATION: Three-fourths of fall records are from Aug and early Sep.
Early dates: 23 Jul 1979 (Willow Sl., IBL 49:83)
25 Jul 1976 (Iowa City, IBL 46:83)
25 Jul 1982 (Forney L., IBL 52:121)
Late dates: 1 Oct 1965 (Dunbar Sl., IBL 36:19)
27 Sep 1973 (Red Rock Res., IBL 43:105)
20 Sep 1981 (Little Wall L., IBL 51:117)
COMMENT: Western Sandpipers occur regularly in small numbers and are difficult to distinguish from Semipalmated Sandpipers. The Western

usually has a longer, slightly decurved bill; often probes straight down in shallow water (the Semiplamated preferring to stay on the mud); and has rusty feathers at the shoulder and on the back. Most records have not been documented, so their accuracy is unknown. One was photographed and banded at Davenport (Petersen and Lonnecker 1966).

REFERENCE:

Petersen, P., and W. Lonnecker. 1966. Western Sandpipers at Davenport. **Iowa Bird Life** 36:87.

Least Sandpiper, **Calidris minutilla**

STATUS: Regular; abundant migrant. Class I-S.
HABITAT: Mud flats and wet fields with other shorebirds.
SPRING MIGRATION: Most of the migration is from late Apr to mid-May. Least tend to be earlier than Semipalmated sandpipers and are often associated with pectorals.
Early dates: 19 Mar 1977 (Cone M., IBL 47:59; Halmi 1977)
10 Apr 1971 (Ames, IBL 41:51)
16 Apr 1955 (Swan L., Johnson Co., Serbousek 1959)
Late dates: 3 Jun 1978 (Riverton A., IBL 48:98)
30 May 1960 (Coralville Res., FWK)
27 May 1961 (Coralville Res., FWK)
FALL MIGRATION: Least Sandpipers return by mid-Jul, and most are gone by late Sep.
Early dates: 26 Jun 1977 (NE Iowa, IBL 47:101)
4 Jul 1977 (Union Grove S.P., DK)
7 Jul 1972 (NE Iowa, IBL 42:70)
Late dates: 23 Nov 1982 (L. Manawa, IBL 52:121)
10 Nov 1963 (Credit I., IBL 33:88)
7 Nov 1981 (Waterloo, IBL 51:118)
COMMENT: Least Sandpipers travel in small to large flocks mixed with other shorebirds. The light-colored legs, brown feathers, and habit of staying on the mud or wet grassy areas help to distinguish this species from other small peeps.

White-rumped Sandpiper, **Calidris fuscicollis**

STATUS: Regular; uncommon spring migrant, rare fall migrant. Class I-S.
HABITAT: Mud flats or grassy edges of ponds.
SPRING MIGRATION: White-rumps are characteristically late spring migrants, occurring during the last 3 weeks of May and first week of Jun. They usually occur in small flocks, often with Semipalmated and Baird's sandpipers.
Early dates: 10 Apr 1977 (Coralville Res., Halmi 1977)
19 Apr 1969 (Waterloo, IBL 39:39)
2 May 1976 (Iowa City, IBL 46:57)
Late dates: 10 Jun 1979 (Rock Creek S.P., IBL 49:112)
6 Jun 1980 (Forney L., IBL 50:75)
6 Jun 1981 (Hendrickson M., PWM)
FALL MIGRATION: Following are the recent fall records:
15 Aug 1982 (Credit I., IBL 52:121)
26 Aug 1978 (Coralville Res., IBL 48:138)
2 Sep 1974 (Des Moines, IBL 44:72)

10 Sep 1960 (Iowa City, Kent and Kent 1975)
10 Sep 1963 (Union Sl. N.W.R., IBL 33:88)
fall 1974 (Shenandoah, IBL 44:72)

COMMENT: When mud flats are available in mid- to late May, White-rumped Sandpipers can usually be found. They have been found on 60 percent of I.O.U. May convention field trips. Based on general migration patterns, occasional sightings should be expected from Aug to Oct. This species has a long migration route from S South America to its arctic breeding grounds, which range from Alaska to the mouth of Hudson Bay. This accounts for its late arrival in Iowa. It is rare in fall because the majority of birds migrate east to the Atlantic Coast from New England north and then take an oceanic flight over Bermuda and the West Indies to South America. White-rumps are large peeps that are not very distinctive when on the ground but are easily identified by their white rumps when in flight. They also have a characteristic disyllabic "jeet-jeet" call reminiscent of a pipit.

Baird's Sandpiper, **Calidris bairdii**

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Said to prefer grassy areas but also found on mud flats.
SPRING MIGRATION: Three-fourths of spring records are from mid-May. As one of the later migrants, it is often found with White-rumped and Semipalmated sandpipers.

Early dates: 24 Mar 1982 (s of Council Bluffs, IBL 52:57)
2 Apr 1981 (Willow Sl., IBL 51:66)
3 Apr 1982 (w of Shenandoah, IBL 52:57)
Late dates: 6 Jun 1981 (Hendrickson M., IBL 51:100)
4 Jun 1978 (Forney L., IBL 48:98)
2 Jun 1977 (Dan Green Sl., JJD)

FALL MIGRATION: Fall records are as common as spring; most are for Aug and Sep.

Early dates: 15 Jul 1977 (Big Creek S.P., IBL 47:101)
17 Jul 1976 (Coralville Res., IBL 46:83)
28 Jul 1982 (N Fremont Co., IBL 52:90)
Late dates: 21 Nov 1982 (L. Manawa, IBL 52:121)
21 Oct 1979 (Coralville Res., IBL 49:112)
20 Oct 1973 (Red Rock Res., Black 1974)

COMMENT: This species has been reported more frequently in recent years, with 5 to 10 reports per year. Experience allows more frequent identification of this late spring and fall migrant. Baird's Sandpiper often travels with other sandpipers in small numbers. The largest flock reported was 50 at Des Moines on 23 May 1969 (IBL 39:39).

Pectoral Sandpiper, **Calidris melanotos**

STATUS: Regular; abundant migrant. Class I-S.
HABITAT: Mud flats and wet grassy fields.
SPRING MIGRATION: Pectorals may arrive as early as Mar and reach peak numbers by late Apr or early May. Kent and Kent (1975) show many Mar records, but few are recorded in **Iowa Bird Life**.

Early dates: 5 Mar 1977 (Cone M., THK)
15 Mar 1981 (Mills Co., TB)
18 Mar 1972 (Iowa City, IBL 42:38)

Late dates: 8 Jun 1978 (Dan Green Sl., JJD)
2 Jun 1974 (Cardinal M., DK))
28 May 1972 (Cardinal M., DK)

SUMMER: A record for 19 Jun 1977 at Cardinal M. (DK) does not fit with spring or fall migration dates.

FALL MIGRATION: Pectorals are commonly present from mid-Jul through Oct.

Early dates: 1 Jul 1982 (Nashua, IBL 52:90)
5 Jul 1955 (McCausland, PCP)
8 Jul 1975 (Coralville Res., Halmi 1976)
8 Jul 1977 (Virgin L., JJD)
8 Jul 1980 (Willow Sl., IBL 50:75)

Late dates: 25 Nov 1976 (Coralville Res., IBL 46:113)
21 Nov 1982 (L. Manawa, IBL 52:121)
16 Nov 1975 (Davenport, IBL 46:23)

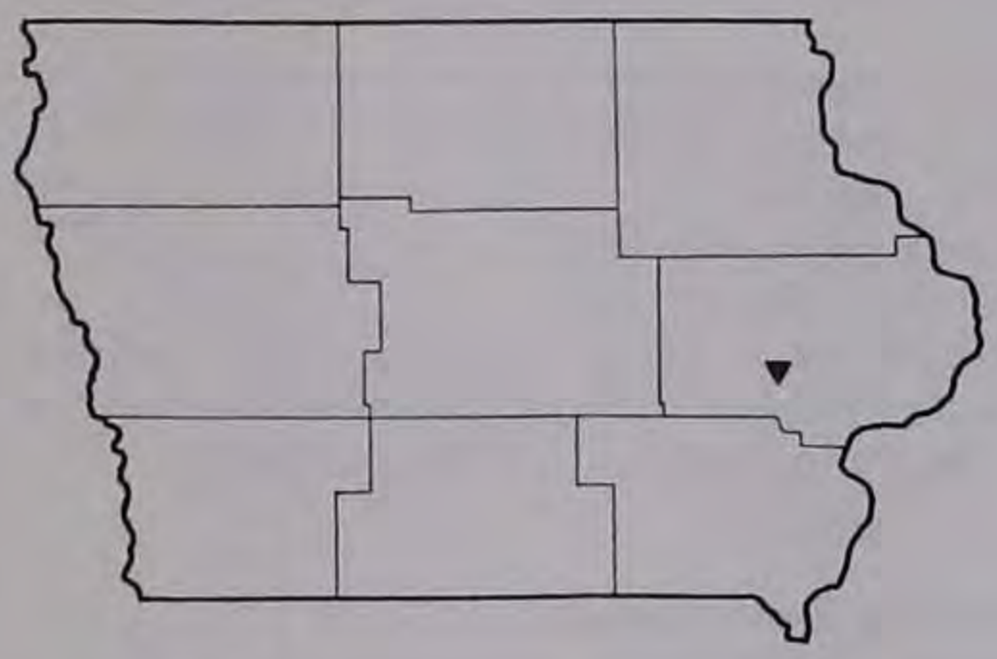
COMMENT: Pectorals, probably the most abundant shorebird in Iowa, often occur in large flocks by themselves or mixed with other shorebirds. An estimated 1,000 were at Coralville Res. on 22 Apr 1980 (IBL 50:48).

Sharp-tailed Sandpiper, **Calidris acuminata**

STATUS: Accidental. Class III.

RECORD: There is 1 sight record for this Asiatic vagrant on 3 Oct 1974 from Coralville Res. (Halmi 1974) (Map 6.58).

COMMENT: This species breeds in NE Siberia (and possibly in Alaska), and most of the migration is on the Asiatic side of the Pacific Ocean. However, the species is regular in small numbers in fall from W Alaska to S California, decreasing in abundance southward. On the West Coast south of Alaska there are only a few winter records and no spring records, suggesting that the fall migrants return by a different route or not at all. To 1980, there have been only 15 records away from the West Coast (i.e., from Alberta, Saskatchewan, Arizona, Colorado, Ontario, Maine, Connecticut, New York, Maryland, Florida, Illinois, and Iowa). Four are in late spring (May-Jun) and 9 in fall (Sep to early Dec, with peak in Oct-Nov). The lateness of the fall migration suggests that most of these birds are juveniles, as are most of the West Coast birds. The field marks of the adults are not given in the standard field guides, so it is possible they are being missed. The spatial pattern of the interior and eastern records suggests that these birds, like some individuals of other Alaskan shorebirds (e.g., Long-billed Dowitcher),



Map 6.58 Sharp-tailed Sandpiper record.

may be migrating from N Alaska via the Canadian prairie provinces and the American Midwest to the Atlantic and Gulf coasts.

REFERENCE:

Halmi, N. S. 1974. Sight record of Sharp-tailed Sandpiper near Iowa City. **Iowa Bird Life** 44:106.

[Purple Sandpiper, **Calidris maritima**]

STATUS: Hypothetical. Class IV.

RECORDS: There is a probable sight record from New Albin, Allamakee Co., on 12 May 1946 (Stewart 1946). A report from Pocahontas Co. on 30 Apr 1979 (**IBL** 49:59) was considered doubtful by the Records Committee. Allen (1870) listed Purple Sandpiper without evidence of a specific sighting.

COMMENT: This species winters along the rocky coasts and jetties of the NE United States and is a rare vagrant as far west as L. Michigan. There are a few records from Texas and Minnesota and solitary records from Arkansas (**Am. Birds** 31:341), Oklahoma (**Am. Birds** 32:370), and Tennessee (**Audubon Field Notes** 21:566). Dates range from Oct to Jun, with Nov-Dec most frequent. The New Albin bird was in appropriate habitat but seen by only 1 observer and not described in detail.

REFERENCE:

Stewart, C. A. 1946. A sight record of the Purple Sandpiper in Iowa. **Iowa Bird Life** 16:70.

Dunlin, **Calidris alpina**

STATUS: Regular; common migrant. Class I-S.

HABITAT: Mud flats with other shorebirds.

SPRING MIGRATION: This moderately common species is usually seen in May.

Early dates: 2 Apr 1981 (Willow Sl., **IBL** 51:67)
13 Apr 1982 (L. Manawa, **IBL** 52:57)
19 Apr 1981 (Coralville Res., **IBL** 51:67)

Late dates: 5 Jun 1977 (Dan Green Sl., date wrong in **IBL** 47:101)
5 Jun 1981 (Cardinal M., **IBL** 51:100)
4 Jun 1978 (Forney L., **IBL** 48:98)

FALL MIGRATION: Dunlins appear to be less common in fall, but this may be due to their drab fall appearance and late migration in Oct and Nov, when habitat is less favorable and often occupied by duck hunters rather than birdwatchers.

Early dates: 27 Jul 1975 (Iowa City, Halmi 1976)
28 Jul 1973 (Iowa City, Halmi 1976)

Late dates: 22 Nov 1968 (Credit I., PCP)
21 Nov 1982 (L. Manawa, **IBL** 52:121)
18 Nov 1970 (Des Moines, **IBL** 41:26)

COMMENT: Dunlins occur in small flocks, often mixed with other shorebirds. The highest numbers recorded are 100 at Cardinal M. on 16 May 1974 (DK) and 53 at Red Rock Res. in Oct 1973 (**IBL** 43:105).

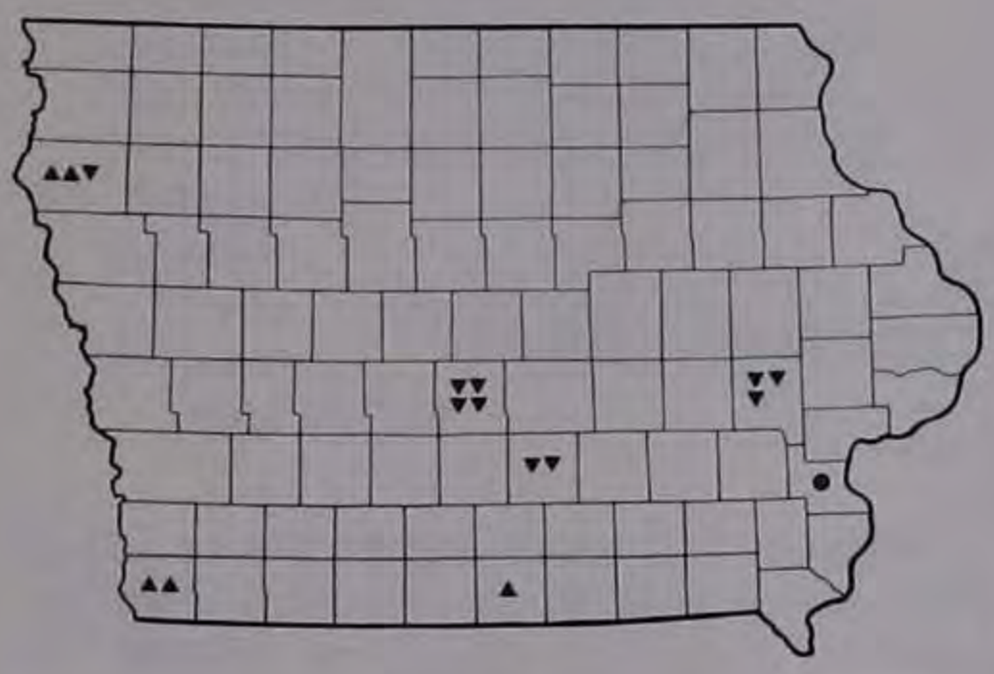
Stilt Sandpiper, **Calidris himantopus**

STATUS: Regular; uncommon migrant. Class I-S.

HABITAT: Mud flats and shallow ponds.
SPRING MIGRATION: Stilt Sandpipers are seen from late Apr to early Jun, with the peak in mid-May.
Early dates: 22 Apr 1969 (Easter L., Polk Co., IBL 39:39)
28 Apr 1977 (Big Creek S.P., IBL 47:59)
29 Apr 1981 (Mills Co., IBL 51:67)
Late dates: 10 Jun 1979 (Council Bluffs, IBL 49:83)
2 Jun 1979 (Lee Co., IBL 49:83)
30 May 1980 (Ames, JHZ)
FALL MIGRATION: This species tends to migrate early, with some appearing in mid-Jul. Few stay until Sep.
Early dates: 3 Jul 1972 (Red Rock Res., IBL 42:69)
10 Jul 1982 (IPL Settling Ponds, IBL 52:90)
11 Jul 1975 (Coralville Res., Halmi 1976)
11 Jul 1976 (Coralville Res., IBL 46:83)
Late dates: 23 Oct 1982 (Coralville Res., IBL 52:121)
20 Oct 1973 (Red Rock Res., Black 1974)
5 Oct 1980 (Little Wall L., IBL 51:28)
COMMENT: Stilt Sandpipers are usually present in small numbers, often with dowitchers. An extremely large concentration of 1,500 was at Union Sl. N.W.R. on 10 Sep 1963 (IBL 33:88). On 8 Sep 1973 there were 150 at Red Rock Res. (Black 1974), and on 17 Aug 1979 there were 56 at Coralville Res. (IBL 49:112).

Buff-breasted Sandpiper, **Tryngites subruficollis**

STATUS: Casual; migrant. Class I-S.
HABITAT: Prefers dry grassy areas but may be found on mud flats.
SPRING MIGRATION: Most records have been from mid-May.
Early dates: 26 Apr 1981 (Forney L., IBL 51:67)
6 May 1956 (Swan L., Johnson Co., IBL 26:64)
12 May 1981 (Fremont Co., IBL 51:67)
Late dates: 19 May 1940 (Ogden, IBL 10:30)
19 May 1953 (Shenandoah, Brown 1971)
19 May 1954 (Swan L., Johnson Co., IBL 24:52; FWK)
FALL MIGRATION: There are about twice as many fall records as spring records (Map 6.59), most from Aug and Sep.
Early dates: 22 Jul 1980 (Cone M., IBL 50:76)
2 Aug 1974 (Coralville Res., IBL 44:73)
2 Aug 1975 (Coralville Res., IBL 45:93; Halmi 1976)



Map 6.59 Buff-breasted Sandpiper records, 1960-1982.

Late dates: 13 Oct 1973 (Red Rock Res., Black 1974)
28 Sep 1974 (Coralville Res., MCN)
23 Sep 1964 (Polk Co., Brown 1971)

COMMENT: This species probably passes through Iowa every year, but it has not been seen every year. The main migration route is west of Iowa.

Ruff, **Philomachus pugnax**

STATUS: Accidental. Class I-S.

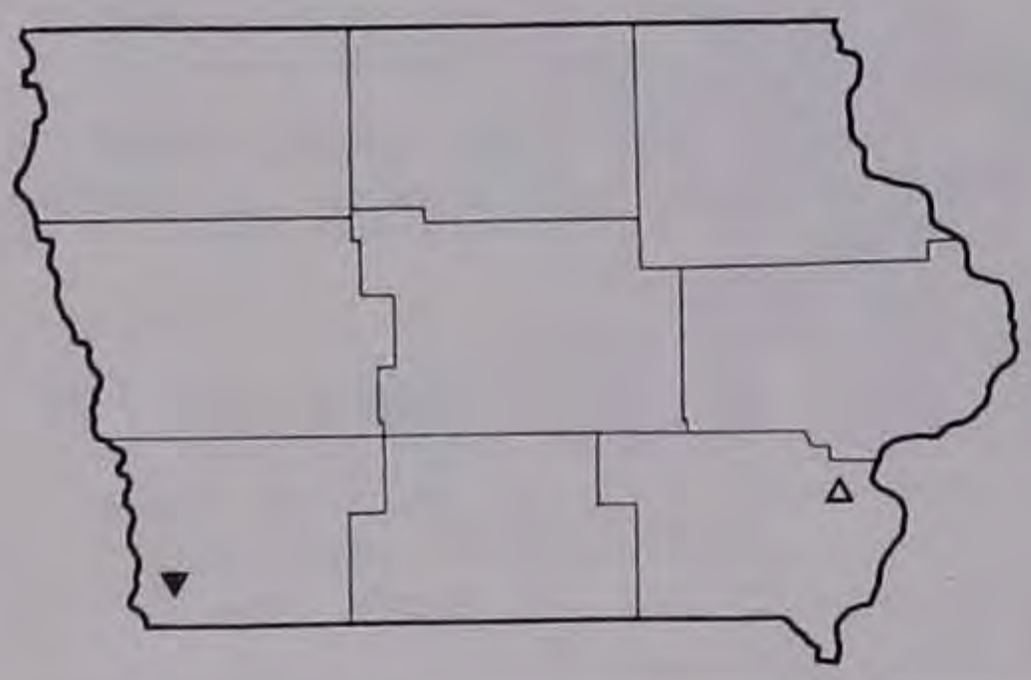
RECORDS: The first of 2 records (Map 6.60) was a female collected in Louisa Co. on 10 May 1940 (Dill 1941). The mounted specimen is at the University of Iowa. One in juvenal plumage, probably a male based on size, was seen and photographed near Tabor, Fremont Co., from 8 to 12 Sep 1982 (IBL 52:121).

COMMENT: This species breeds across N Eurasia. In the New World there is a single nesting record from N Alaska. However, in the United States and Canada it occurs far too frequently to be termed a vagrant, leading to the suspicion that there is an unknown breeding population in the New World arctic (Peakall 1965). It is an uncommon but regular transient along both the Atlantic and Pacific coasts, decreasing in abundance southward to S California and the Gulf Coast. In the Midwest it is recorded annually, most commonly in Illinois, and as often in the spring (Apr-May) as in the fall (Jul to Sep). There are also single records for Jun, Oct, and Nov. It is extremely rare in the high plains from Alberta to Colorado.

REFERENCES:

Dill, H. R. 1941. Ruff in Iowa in spring. **Auk** 58:257.

Peakall, D. B. 1965. The status of the Ruff in North America. **Wilson Bull.** 77:294-296.



Map 6.60 Ruff records.

Short-billed Dowitcher, **Limnodromus griseus**

STATUS: Regular; common migrant. Class I-S.

HABITAT: Mud flats and shallow ponds.

SPRING MIGRATION: Because of the difficulty of separating Short-billed and Long-billed dowitchers in the field, there are relatively few data on migration dates by species. The dates listed below are based on

specimens or recent sight records with sufficient description for specific identification as outlined by Newlon and Kent (1980). For Dowitcher sp. there are 2 Mar dates: 20 Mar 1966 (Jefferson, IBL 36:49) and 25 Mar 1978 (Cone M., THK). The latest spring date for Dowitcher sp. is 26 May 1973 (Red Rock Res, Black 1974)

Early dates: 1 May 1982 (Hardin Co., IBL 52:57)
6 May 1980 (Princeton A., IBL 50:47)
8 May 1954 (Johnson Co., University of Iowa specimens 32478 and 32550)
8 May 1981 (Coralville Res., IBL 51:66)

Late dates: 24 May 1940 (Louisa Co., University of Iowa specimens 30266 and 30269)
23 May 1940 (Swan L., Johnson Co., University of Iowa specimens 30276 and 30277)
18 May 1980 (Coralville Res., IBL 50:47)

FALL MIGRATION: Short-bills should arrive in Jul and leave in Sep. The early dates for Dowitcher sp. are 3 Jul 1972 (Red Rock Res., IBL 42:69) and 8 Jul 1975 (Iowa City, IBL 45:93), and the late dates are 5 Nov 1970 (Red Rock Res., IBL 41:26) and early Nov 1976 (Red Rock Res., Stravers 1976).

Early date: 12 Jul 1980 (Coralville Res., IBL 50:75)

Late dates: 21 Sep 1980 (Dunbar Sl., IBL 51:27)
11 Sep 1982 (Coralville Res., IBL 52:121)

COMMENT: The expected migration times for short-bills are later in the spring (early to mid-May) and earlier in the fall (Jul to Sep) than for the long-bill (Newlon and Kent 1980). Most, if not all, short-bills in Iowa are of the subspecies **L. g. hendersoni**, which migrates through the Mississippi valley and nests in C Canada w of Hudson Bay. Many dowitchers are identifiable in the field, but this requires knowledge of their plumages and calls plus experience and a very close view. Fortunately, dowitchers tend to be tame and allow close approach with a telescope. Short-bills are in alternate (breeding) plumage by the time they reach Iowa in spring, and many are still in this plumage when they return in Jul and Aug. The alternate plumage short-bill is recognized by its pale salmon underparts mixed with patchy white areas on the abdomen, by discrete black dots on the sides of the breast (as well as on other areas of the breast and abdomen), and by wide buffy edging on the wing feathers (see Newlon and Kent 1980 for more detail and photographs). Juveniles have a buffy, finely streaked breast, a white abdomen, and buffy edging to the wing feathers, with diagnostic internal markings (see photograph, IBL 51:27). Basic (winter) plumage birds are overall gray and are not safely separated from long-bills except by voice. The song is a mellow "tu-tu-tu" reminiscent of a yellowlegs. Dowitchers are common and a distinct diagnostic challenge. Currently available field guides do not present enough information for identification. The largest number of dowitchers reported is 150 at Sioux City on 24 Oct 1969 (IBL 39:81).

REFERENCES:

Newlon, M. C., and T. H. Kent. 1980. Speciation of dowitchers in Iowa. **Iowa Bird Life** 50:59-68.

Stravers, J. 1976. Fall migration at Red Rock. **Iowa Bird Life** 46:118-119.

Long-billed Dowitcher, Limnodromus scolopaceus

STATUS: Regular; common migrant. Class I-S.
HABITAT: Mud flats and shallow ponds.
SPRING MIGRATION: Dates given are for specimens or recent sight records with sufficient detail for identification as outlined by Newlon and Kent (1980). A few long-bills might be expected in Mar or Apr, but the peak of migration should be in early May.
Early dates: 22 Apr 1982 (Coralville Res, IBL 52:57)
26 Apr 1934 (Louisa Co., University of Iowa specimen 30366)
1 May 1982 (Riverton A., IBL 52:57)
Late date: 13 May 1980 (Riverton A., IBL 50:48)
SUMMER: One described and heard at Riverton A. on 11 Jun 1982 is very unusual (IBL 52:90).
FALL MIGRATION: Returning adults are not expected until Aug and occasional late juveniles or basic plumage birds could occur into Nov. The peak migration is probably in Aug and Sep.
Early date: 3 Aug 1980 (Coralville Res., IBL 50:75)
Late dates: 7 Nov 1982 (Coralville Res., IBL 52:121)
28 Sep 1941 (Louisa Co., University of Iowa specimen 30370)
21 Sep 1980 (Diamond L., IBL 51:27)
COMMENT: Long-billed Dowitchers nest in NW Alaska, far north and west of the range of short-bills, so it is not surprising that most pass through Iowa earlier in spring and return later in fall. However, there is considerable overlap in the migration intervals. Spring birds are usually in alternate plumage, although an occasional early one could be in basic plumage. Compared with the Short-billed Dowitcher, the alternate plumage long-bill has deep cinnamon underparts without patchy white areas; bars rather than spots on the sides of the breast (long, short, or equivocal); and darker wing feathers with narrower, rustier edging. The throat tends to be heavily spotted compared with the relatively clear throat of the short-bill. Juvenile long-bills are distinguished from juvenile short-bills by the gray underparts without buffy breast and wing feathers that have a narrow, rusty edge without internal markings. The song of the long-bill is a harsh "keek" note.
REFERENCE:
Newlon, M. C., and T. H. Kent. 1980. Speciation of dowitchers in Iowa. **Iowa Bird Life** 50:59-68.

Common Snipe, **Gallinago gallinago**

STATUS: Regular; common migrant, uncommon winter, rare summer. Class I-S N.
HABITAT: Marsh edge and wet fields; also on mud flats, especially in fall; along open streams and ditches in winter.
SPRING MIGRATION: Spring migration occurs from mid-Mar to early May. Early spring dates overlap with wintering birds.
Late dates: 28 May 1966 (Johnson Co., FWK)
24 May 1981 (Council Bluffs, IBL 51:66)
21 May 1981 (Swan L., Johnson Co., IBL 51:66)
SUMMER: There are several older nesting records and 3 recent ones: 3 May 1901 in Kossuth Co. (Anderson 1907); 15 May 1927, a nest with 4 eggs near Des Moines (DuMont 1933); 2 Jun 1978, a nest with 1 egg in

N Winnebago Co. (Ohde 1979); 5 May 1979, a nest with 4 eggs at Hayden Prairie (IBL 49:59); and 11 May 1979, a nest with 2 eggs at Sweet M. (Schaufenbuel 1979).

FALL MIGRATION: Fall migration extends from Aug through Nov with some birds lingering into winter.

Early dates: 13 Jul 1980 (Cone M., IBL 50:75)
21 Jul 1982 (Forney L., IBL 52:90)
3 Aug 1962 (Des Moines, IBL 32:83)

WINTER: Based on CBC data, wintering snipe are most consistently found along the Mississippi R. and in Fremont Co. in SW Iowa. None are found in NW Iowa, and CBC reports are rare from the entire western two-thirds of the state. Although there are few other winter reports of snipe, Kent and Kent (1975) show them occcurring in Jan and Feb in E Iowa.

COMMENT: Snipe may be found singly or in small groups. The largest spring and fall concentrations are 100 at Otter Creek M. on 6 Apr 1968 (IBL 38:58) and 160 at Union Sl. N.W.R. in the fall of 1964 (IBL 34:99). Ground songs and flight noises may be heard in spring.

REFERENCE:

Ohde, B. 1979. Common Snipe nesting in Winnebago County. **Iowa Bird Life** 49:91-92.

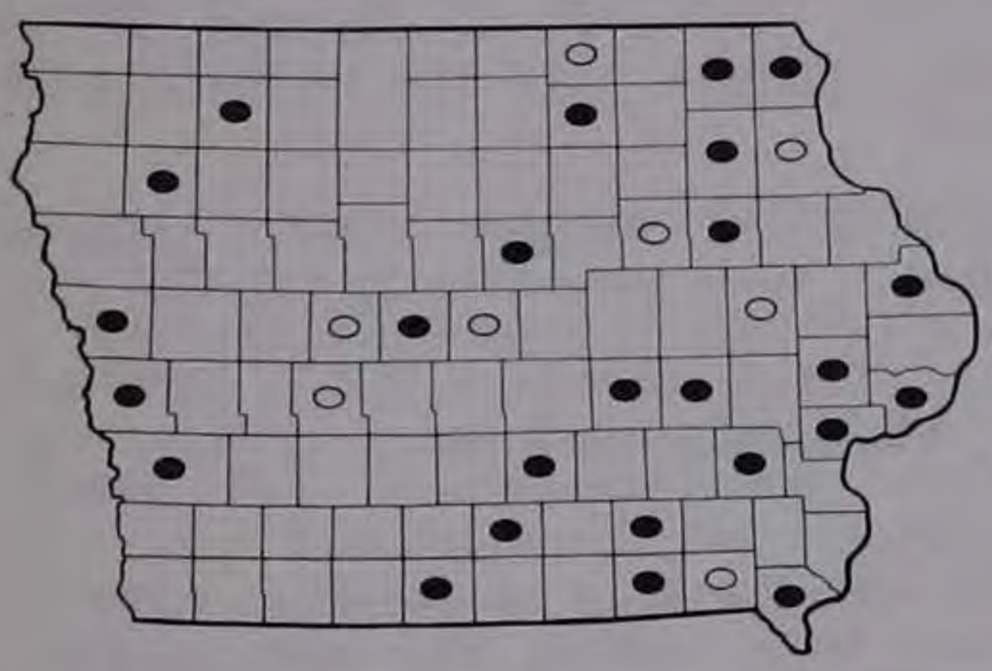
American Woodcock, **Scolopax minor**

STATUS: Regular; common summer resident east, uncommon west. Class I-S N.

HABITAT: Moist timber or timber edge and brushy areas.

SUMMER: Woodcock may be found in all areas of the state, especially in the more wooded eastern parts. Information is lacking on the abundance of this species because the birds are difficult to find. Breeding surveys are possible but must be done at dawn or dusk when the males put on their aerial displays. Koenig (1976) and Klonglan et al. (1976) reviewed the status of this species in Iowa. Nesting records are predominantly from E Iowa (Map 6.61). The earliest nest record is for 21 Mar, the latest for 20 Jun. Woodcock arrive in Mar and leave in Nov.

Early dates: 28 Feb 1976 (Riverton A., IBL 46:56)
5 Mar 1974 (Davenport, IBL 44:44)
8 Mar 1974 (Des Moines, IBL 44:44)
8 Mar 1974 (Iowa City, IBL 44:44)



Map 6.61 American Woodcock nesting by county.

Late dates: 27 Nov 1977 (Seymour, IBL 48:48)
11 Nov 1971 (Davenport, IBL 41:111)
6 Nov 1974 (Davenport, IBL 44:102)
6 Nov 1965 (Hamburg, IBL 36:19)

COMMENT: More areas of the state should be surveyed for this species.

REFERENCES:

Klonglan, E. D., H. L. Gladfelter, R. G. Sheets, and G. Hlavka. 1976. Current status of the Woodcock in Iowa. **Proc. Iowa Acad. Sci.** 82:191-193.

Koenig, D. 1976. The American Woodcock in Iowa. **Iowa Bird Life** 46:75-79.

Wilson's Phalarope, **Phalaropus tricolor**

STATUS: Regular; common migrant, casual summer resident. Class I-S N.
HABITAT: Found with other shorebirds, often in shallow water.
SPRING MIGRATION: Most are seen from late Apr through May.

Early dates: 15 Apr 1972 (Lamoni, IBL 42:39)
19 Apr 1970 (Coralville Res., FWK)
20 Apr 1963 (Coralville Res., FWK)
20 Apr 1975 (Lock and Dam 9, DK)

Late dates: 16 Jun 1977 (Dan Green Sl., IBL 47:101)
14 Jun 1979 (Big M., IBL 49:83)
6 Jun 1981 (Hendrickson M., IBL 51:100)

SUMMER: Prior to 1900 this species was a common summer resident in N Iowa (DuMont 1933). In 1968, 2 nests, each with 4 eggs, were found near Ruthven, Clay and Palo Alto counties on 2 and 18 Jun. The first nest was destroyed, but the other hatched successfully (Bergman et al. 1968). Wilson's Phalaropes were present all summer at Union Sl. N.W.R. in 1965, and young were seen in Aug (Peterson 1967). In 1980, 1 was present at Silver L., Dickinson Co., in late Jun and early Jul and may have been nesting (IBL 50:75).

FALL MIGRATION: This species is less frequently found in fall and occurs in smaller flocks from late Jul to mid-Sep.

Early dates: 15 Jul 1976 (Coralville Res., IBL 46:83)
22 Jul 1977 (Cone M., IBL 47:101)
22 Jul 1977 (Elk L., Clay Co., IBL 47:101)

Late dates: 24 Sep 1969 (Coralville Res., FWK)
19 Sep 1982 (Coralville Res., IBL 52:120)
14 Sep 1974 (Lamoni, IBL 44:73)

COMMENT: Wilson's Phalarope is usually seen in small flocks in association with other shorebirds, but occasionally large flocks are encountered, such as the 200-300 at New L. in May 1967 (IBL 37:50) and 250 at Cherokee on 11 May 1978 (IBL 48:74). N Iowa is on the southern edge of the species' potential nesting range.

REFERENCE:

Bergman, R. D., L. C. Bates, and D. K. Voigts. 1968. Wilson's Phalaropes nesting in northwest Iowa. **Iowa Bird Life** 38:132-133.

Red-necked Phalarope, **Phalaropus lobatus**

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Shallow ponds and mud flats, often wading or swimming.
SPRING MIGRATION: There are slightly fewer spring than fall records,

with over half the spring records from mid-May and the others from late Apr to early Jun.

Early dates: 26 Apr 1980 (Riverton A., IBL 50:47)
30 Apr 1978 (Sweet M., IBL 48:74)
9 May 1978 (Fremont Co., IBL 48:74)

Late dates: 2 Jun 1977 (Dan Green Sl., IBL 47:101)
2 Jun 1979 (Fort Madison, IBL 49:83)
30 May 1982 (Cherokee, IBL 52:57)

FALL MIGRATION: Most records are from mid-Aug to late Sep, with the peak in early Sep.

Early dates: 15 Aug 1975 (Iowa City, Halmi 1976)
15 Aug 1976 (Davenport, IBL 46:83)
16 Aug 1979 (Coralville Res., IBL 49:112)

Late dates: early Nov 1969 (Red Rock Res., IBL 40:19)
7 Oct 1982 (Cherokee, IBL 52:120)
29 Sep 1981 (Hardin Co., IBL 51:117)

COMMENT: Red-necked Phalarope is seen almost every year, mostly as singles or small flocks. The highest number is 110 at Okoboji on 13 Sep 1934 (DuMont 1935). This species nests on the arctic tundra and migrates predominantly along coastal routes, but a few regularly migrate over land.

REFERENCE:

DuMont, P. A. 1935. Northern Phalaropes in northwestern Iowa. **Wilson Bull.** 47:72.

[Red Phalarope, **Phalaropus fulicaria**]

STATUS: Hypothetical. Class IV.

RECORDS: Three were reported at Amana L., Iowa Co., on 17 May 1940 (Serbousek 1940). According to Serbousek (1981), they were "females in their breeding plumage, which helped to make identification certain." This species appears on Allen's 1870 list without evidence of an Iowa sighting, and there is an indefinite reference to occurrence in Sioux County (Anderson 1907).

COMMENT: Although lacking sufficient detail for a state record, the Amana sighting appears highly probable. This species is well substantiated in all adjacent states, and a few are seen yearly in the central portion of United States from the Great Lakes to Texas. More than 85 percent of the sightings are from fall, with 75 percent of the total from Sep to Nov and a few from Jul, Aug, Dec, and May.

REFERENCES:

Serbousek, L. 1940. Shore birds at Amana Lake. **Iowa Bird Life** 10:27.

Serbousek, L. 1981. Letter to Records Committee.

Jaegers, Gulls, and Terns, Family Laridae

Of some 86 species of jaegers, gulls, and terns worldwide, 49 have been reported in North America and 21 in Iowa. Of those reported from Iowa, 10 are regular, 7 are accidental, 2 are hypothetical, and 2 are Class VI in the state. Four species have been recorded nesting in Iowa in this century, but only 2 continue to do so and 1 of these nests only in a few small colonies. All larids generally are found near water. The gulls tend to be more opportunistic in their food habits, feeding in plowed fields and dumps

as well as near water, while the terns generally feed on small fish and insects that they catch in or over water. The jaegers and skuas have hooked bills and long pointed wings and are known for their predatory habits. Most larids are colonial, nesting on islands, sandbars, or marshes. The Arctic Tern has been reported in several states adjacent to Iowa and might be expected to stray to Iowa.

Ring-billed and Herring gulls, Coralville Res., 7 Nov 1981, T. H. Kent.

Black Tern, Coralville Res., 20 May 1966, F. W. Kent.

Parasitic Jaeger, **Stercorarius parasiticus**

STATUS: Accidental. Class I-S.

RECORDS: There are 2 old records based on examination of specimens and 2 recent sight records with descriptions (Map 6.62).

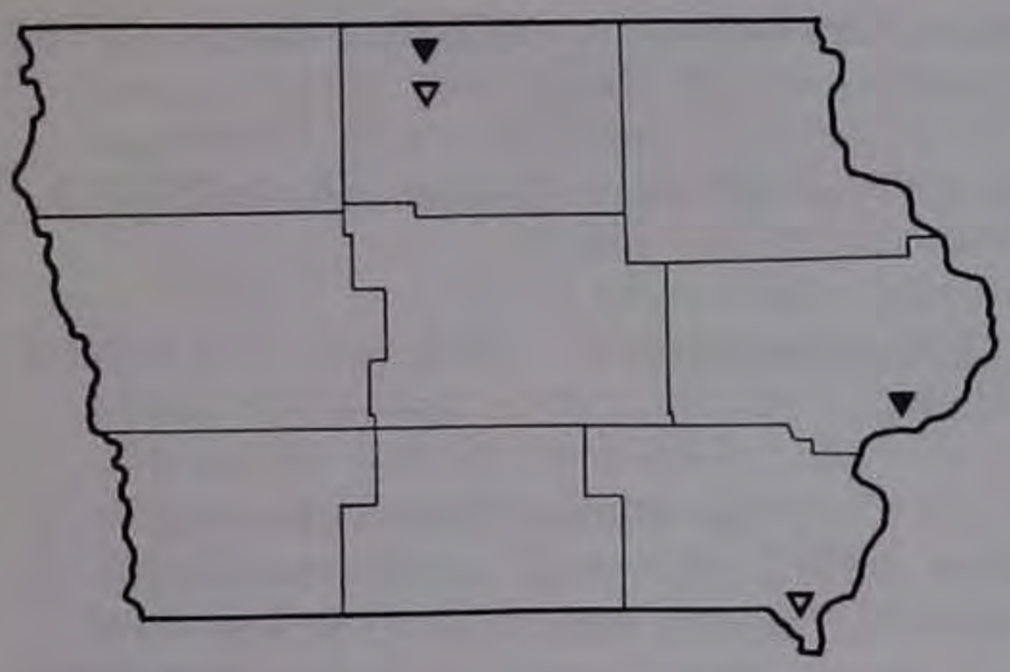
6 Oct 1896, Keokuk, immature male specimen at University of Iowa (Anderson 1907; Praeger 1925)

20 Sep 1905, Eagle L., Hancock Co., immature specimen at Coe College that is no longer available (Anderson 1907)

6 to 8 Dec 1963, Lock and Dam 14, Scott Co., immature dark phase (Petersen 1964)

4 Sep 1966, Rice L., Winnebago Co., adult (Sutter 1966)

There are 2 other reports of Parasitic Jaeger, which lack details: 28 May 1934 in Palo Alto Co. (Bennett 1938b) and 15 May 1971 at Sweet M., Bremer Co. (IBL 41:89-90).



Map 6.62 Parasitic Jaeger records.

COMMENT: This species is a rare fall migrant at Duluth and Chicago and is occasionally found along large rivers and lakes with gulls. Spring records are very unusual. Most of the fall birds are immatures and occur from Aug to Nov.

REFERENCES:

Sutter, B. E. 1966. Parasitic Jaeger in Winnebago County. **Iowa Bird Life** 36:109-110.

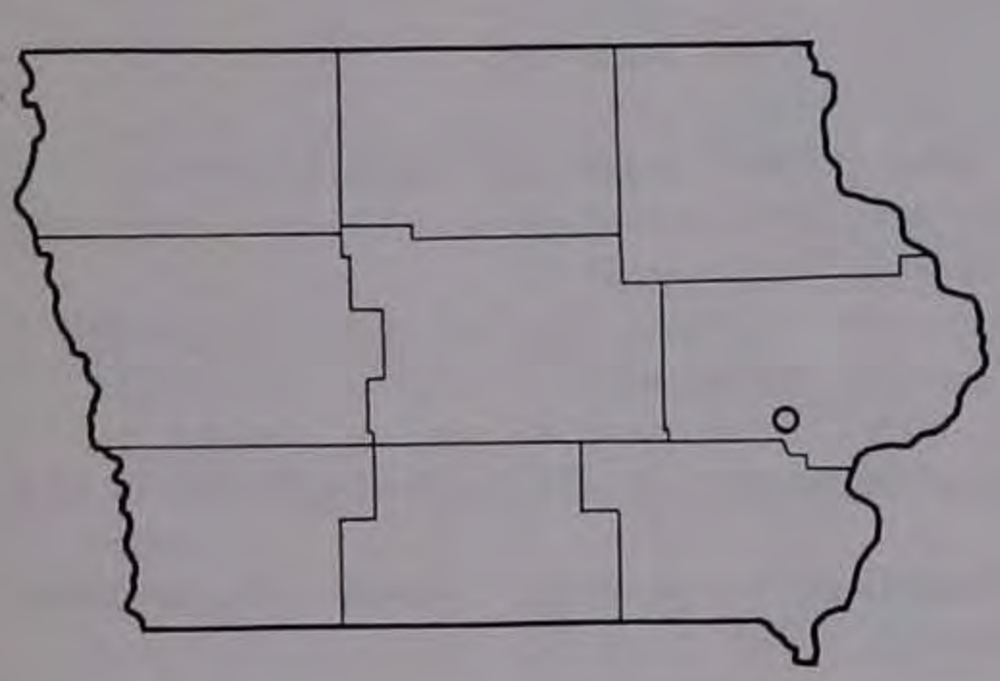
Petersen, P. 1964. Parasitic Jaeger in eastern Iowa. **Iowa Bird Life** 34:26.

Long-tailed Jaeger, **Stercorarius longicaudus**

STATUS: Accidental. Class I-S.

RECORD: The only record is a female collected near Lone Tree, Johnson Co., on 15 Jun 1907 (Anderson 1908) (Map 6.63). The mounted specimen is at the University of Iowa.

COMMENT: In the nearctic this species breeds on montane tundra from Alaska to Greenland. In migration, it is the least likely of the jaegers to be seen from or near shore. Its wintering areas are poorly known but probably comprise the S Atlantic and Pacific oceans. Despite its pelagic habits, it has been widely, although rarely, recorded in the interior plains, most states having at least 1 record. Records extend from Apr to Nov, with a strong peak in Sep-Oct. Many of the published



Map 6.63 Long-tailed Jaeger record.

records are of adults; immatures may be underrepresented because of difficulty in identification.

REFERENCE:

Anderson, R. M. 1908. An addition to the birds of Iowa. Auk 25:215.

Laughing Gull, **Larus atricilla**

STATUS: Accidental. Class III.

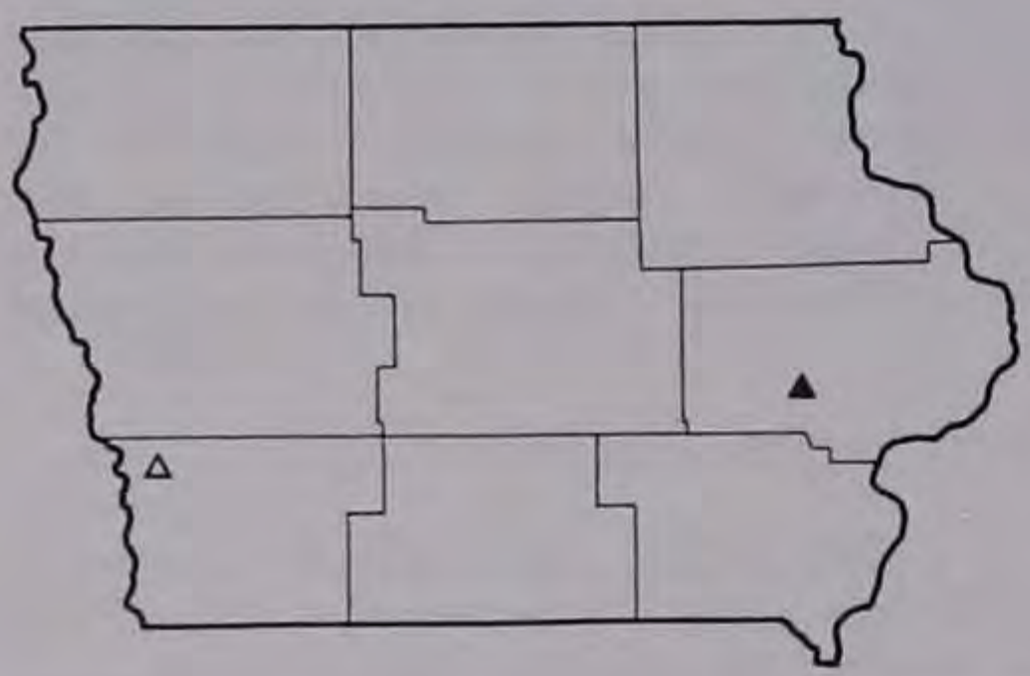
RECORDS: Of 2 records (Map 6.64), 1 is a Class III record from Coralville Res. on 26 Mar 1977 (Halmi 1977) and the other a Class IV record from L. Manawa, Pottawattamie Co., on 25 Mar 1941 (Stiles 1941). Anderson (1907) listed an old record from Monona Co. on 10 Oct 1894 and indefinite records from Pottawattamie and Mills counties. Say listed the species from Engineer Cantonment n of Omaha (James 1823).

COMMENT: A few Laughing Gulls are reported nearly every year in the Midwest, particularly around L. Michigan in Wisconsin, Illinois, Indiana, and Michigan. A few have reached Duluth and 1 is recorded from Churchill, Man. There are 2 Illinois records from the Iowa border: New Boston on 19 May 1971 and Nauvoo on 12 Jun 1971 (Bohlen 1978). There are very few inland records between the Gulf Coast and L. Michigan in Arkansas, Oklahoma, Kansas, Nebraska, South Dakota, Illinois, Indiana, and Tennessee. Most of the records are from May, Jun, and Aug, with fewer in Jul and Sep. Most are adults. The adult Laughing Gull is distinguished from Franklin's Gull by the gray mantle shading to black at the tips of the primaries without the intervening white line seen in Franklin's Gull. This field mark is not reliable in immatures.

REFERENCES:

Halmi, N. S. 1977. Sight record of a Laughing Gull by the Coralville Reservoir. **Iowa Bird Life** 47:64.

Stiles, B. F. 1941. The Laughing Gull in Pottawattamie County. **Iowa Bird Life** 11:36.



Map 6.64 Laughing Gull records.

Franklin's Gull, **Larus pipixcan**

STATUS: Regular; abundant migrant in the west, uncommon migrant in the east; nested in 1940. Class I-S N.

HABITAT: Marshes, lakes, and reservoirs; commonly feeds on plowed fields during migration.

SPRING MIGRATION: A few arrive in Mar, but most appear in mid-Apr or later, with the peak of migration in late Apr or early May. Few are reported after 10 May.
Early dates: 27 Feb 1977 (Davenport, IBL 47:59)
5 Mar 1977 (Davenport, IBL 47:59)
12 Mar 1966 (Mississippi R., IBL 36:49)
SUMMER: Summer records are not unusual. In recent years they have been reported most often from the Spirit L. region (e.g., 81 at Dan Green Sl. on 3 Jun 1981, IBL 51:101) and the large reservoirs, but they might be found almost anywhere in Iowa. On 1 Jun 1940, 800 were at Barringer Sl., Clay Co., and on 6 Jun 3 nests were found there, 1 of which hatched eggs (Low 1941). This is the only nesting record for Franklin's Gulls in Iowa.
FALL MIGRATION: Early migrants begin to appear in mid-Sep. The peak of migration seems to be mid-Oct, with few birds remaining into Nov. Some years the fall flight is earlier, such as 100,000 reported at Storm L. on 21 Sep 1934 (DuMont 1934) and an estimated 100,000 to 500,000 at Red Rock Res. in the first week of Oct 1970 (IBL 41:26).
Late dates: 27 Nov 1982 (Coralville Res., IBL 52:121)
20 Nov 1955 (Cedar L., Serbousek 1956)
14 Nov 1958 (West Okoboji L., Carter 1959)
WINTER: The only winter records are individuals in Scott Co. on 8 Dec 1953 (Morrissey 1954) and 21 Dec 1952 (IBL 23:15,16).
REFERENCES:

Carter, D. L. 1959. Late fall records in 1958. **Iowa Bird Life** 29:27.
DuMont, P. A. 1934. Franklin's Gulls on Storm Lake. **Iowa Bird Life** 4:50.
Low, J. B. 1941. Gadwall and Franklin's Gull nesting in Iowa. **Iowa Bird Life** 11:31-32.
Morrissey, T. 1954. Glaucous Gulls in the Davenport area. **Iowa Bird Life** 24:18-19.
Serbousek, L. 1956. Noteworthy birds in the Cedar Rapids region. **Iowa Bird Life** 26:70-71.

Bonaparte's Gull, **Larus philadelphia**

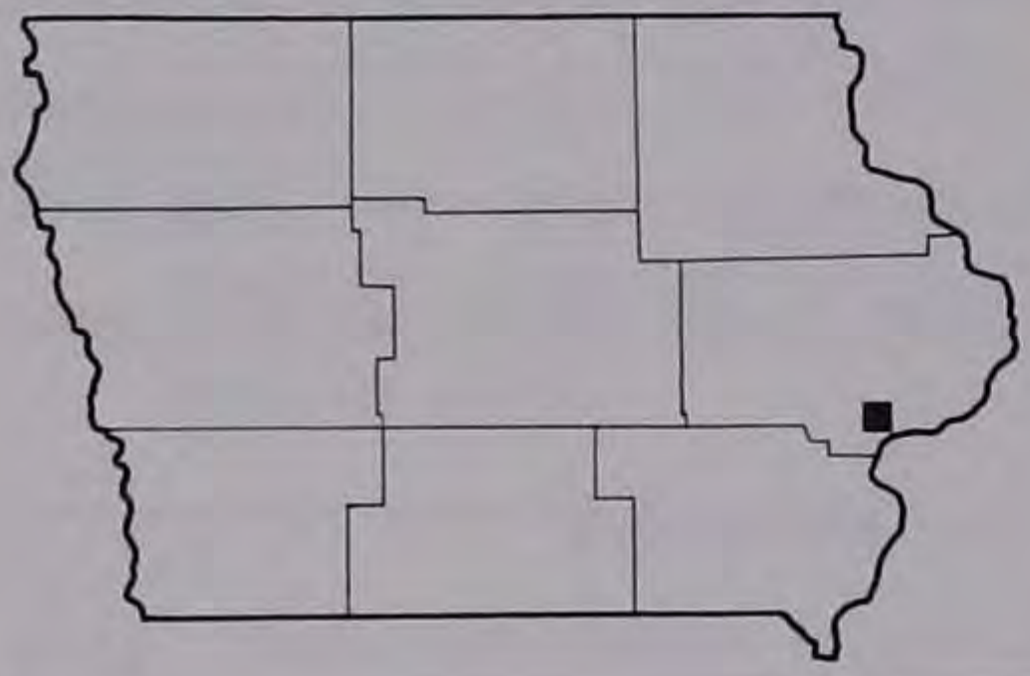
STATUS: Regular; uncommon migrant, rare in summer and winter. Class I-S.
HABITAT: Usually found on larger rivers, lakes, and reservoirs.
SPRING MIGRATION: Most are seen from mid-Apr through mid-May.
Early dates: 20 Mar 1982 (Lock and Dam 13, IBL 52:58)
24 Mar 1976 (Coralville Res., IBL 46:57)
31 Mar 1967 (Goose L., Hamilton Co., IBL 37:50)
31 Mar 1977 (Coralville Res., IBL 47:59)
31 Mar 1981 (Red Rock Res., IBL 51:67)
Late dates: 21 May 1966 (Swan L., Johnson Co., IBL 36:49)
16 May 1946 (Spirit L., IBL 17:18)
16 May 1976 (Davenport, IBL 46:57)
SUMMER: The only summer records are 1 in Dallas Co. on 6 Jun 1928 (DuMont 1932), 1 at Cedar L. on 23 Jun 1958 (Serbousek 1958), and 2 at Spirit L. on 13 Jun 1933 (IBL 3:39).
FALL MIGRATION: Most records are from late Sep through Oct and early Nov.
Early dates: 12 Aug 1967 (Mississippi R., IBL 37:99)
14 Aug 1977 (Coralville Res., IBL 47:145)

22 Aug 1973 (Hamburg, IBL 43:75)
Late dates: 16 Dec 1981 (Saylorville Res., IBL 52:27)
5 Dec 1982 (L. Macbride, IBL 53:25)
4 Dec 1981 (Red Rock Res., IBL 52:27)

WINTER: Three were seen at Davenport on 26 Dec 1966 (IBL 37:4).
COMMENT: Most reports are of 1-5 birds. There were 150 at Red Rock Res. on 6 Nov 1982 and 120 at Coralville Res. on 7 Nov 1982 (IBL 52:121).
REFERENCE:
Serbousek, L. 1958. Notes from Cedar Rapids. Iowa Bird Life 28:64.

Mew Gull, **Larus canus**

STATUS: Accidental. Class I-P.
RECORD: A second winter bird of the Alaskan subspecies, **L. c. brachyrhynchus**, was at Lock and Dam 14, Scott Co., from 19 to 31 Dec 1982 (Map 6.65) and was photographed (Kent 1983).
COMMENT: This species of Eurasia and Alaska/Western Canada winters on the West Coast of the United States and is a rare vagrant to the East Coast. There are only a few midcontinent records, the nearest at Denver, L. Superior, and L. Huron (Kent 1983).
REFERENCE:
Kent, T. H. 1983. Mew Gull at Lock and Dam 14. Iowa Bird Life 53:45-46.



Map 6.65 Mew Gull record.

Ring-billed Gull, **Larus delawarensis**

STATUS: Regular; abundant migrant, common in winter along Mississippi R., uncommon in summer. Class I-S.
HABITAT: Usually found on larger rivers, lakes, and reservoirs. Ring-bills will feed in freshly plowed fields.
SPRING MIGRATION: Early arrivals may appear in late Feb (e.g., 300 at L. Manawa on 25 Feb 1981, IBL 51:32), but the peak of migration is mid- to late Mar through Apr as open water appears. Thousands may concentrate on lakes with fish kills. A few migrants remain into May.
SUMMER: A few birds may summer in Iowa, especially in the Spirit L. region, along the Mississippi R., and at some of the large reservoirs. There is no evidence that ring-bills have ever nested in Iowa.
FALL MIGRATION: By Aug, a few early migrants appear (e.g., 40-60 at Le Claire on 15 Aug 1976, IBL 46:83; 55 at Bellevue on 15 Aug 1979,

THK; and 20 at Red Rock Res. on 30 Aug 1975, IBL 45:93) Some migrants continue to appear in Sep, but Oct and Nov are peak migration months. Again the Spirit L. region, the Mississippi R., and some of the larger lakes and reservoirs are major concentration areas. Some large flocks remain through Nov, but with freeze-up by late Nov, most have moved from inland sites to near the eastern border of Iowa. The 2,000 at Saylorville Res. on 6 Dec 1981 (IBL 52:26-27) and the 600-700 still there on 14 Dec 1981 (IBL 52:27) were late for an inland location. On 3 Dec 1982, 4,000 were still at Red Rock Res. (IBL 53:25).

WINTER: Ring-bills generally are confined to locations along the Mississippi, Cedar, and Des Moines rivers where there is open water. From 1960 to 1982, they were reported every year on CBCs, mainly from along the Mississippi R. Ring-bills were reported yearly from Davenport with 4 of those counts exceeding 1,000, and a peak of 2,025 in 1973. They usually leave Iowa in late Dec or early Jan when the large rivers freeze. In 1980, some remained at Davenport through Jan. They are less abundant in winter than Herring Gulls.

COMMENT: In general, ring-bills are more common than Herring Gulls in Iowa, except during winter when the latter usually predominate. Totals of ring-bills seen on CBCs have averaged 634 per year compared with an average of 1,003 Herring Gulls per year. The Great Lakes and inland populations of ring-bills have increased in recent years, and more are seen now in Iowa than in the past.

Herring Gull, **Larus argentatus**

STATUS: Regular; common migrant, common in winter along Mississippi R. Class I-S.

HABITAT: Usually found on larger rivers, lakes, and reservoirs.

SPRING MIGRATION: One of the earliest migrants, Herring Gulls generally arrive as soon as the ice melts on lakes and rivers. In years when they do not winter in Iowa, they usually reappear first along the Mississippi R. in SE Iowa and gradually move north and west. At inland sites, they generally arrive by mid-Mar. Most migrate through Iowa in late Mar and early Apr.

Late dates: 23 May 1967 (Burlington, IBL 37:50)
22 May 1973 (Red Rock Res., IBL 43:75)
21 May 1972 (Waterloo, IBL 42:36)

SUMMER: Herring Gulls have been reported from Red Rock Res. on 26 Jul 1973 (IBL 43:75), McIntosh Woods on 16 Jun 1980 (Schaufenbuel 1981), and Bettendorf on 19 Jun 1982 (IBL 52:90).

FALL MIGRATION: A few arrive in Sep, but more commonly migration extends from Oct through Nov. As inland lakes and rivers freeze, most Herring Gulls leave Iowa or move toward the Mississippi R. and other areas that have open water.

Early dates: 12 Aug 1982 (Bettendorf, IBL 52:121)
6 Sep 1980 (Bettendorf, IBL 51:28)
13 Sep 1964 (Bellevue S.P., IBL 34:96)

WINTER: From 1960 to 1982, Herring Gulls were seen yearly on CBCs with most of the reports coming from along the Mississippi R. and the rest mainly from along the Des Moines, Cedar, and other major rivers. They were seen yearly at Davenport, with 4 counts exceeding 1,000, and a maximum of 2,045 in 1976. Herring Gulls usually leave Iowa in late Dec or early Jan when the rivers freeze, but some may winter, as in 1970-1971 (IBL 41:28).

[Thayer's Gull, **Larus thayeri**]

STATUS: Class VI.
RECORDS: Two first-year birds were identified and photographed at L. Manawa, Pottawattamie Co., from 18 to 28 Mar 1981 (Silcock 1981), and several were reported in the fall of 1981. Four expert consultants to the Records Committee could not confirm the identifications. The birds were thought to be Herring Gulls.
COMMENT: Thayer's Gull was given species status by the American Ornithologist's Union in 1973 when it was separated from Herring Gull. It nests in the arctic, and most of the population winters on the West Coast. Migrant and winter birds have been seen on the Great Lakes and along the Mississippi R. It is quite possible that this species has been overlooked in Iowa because first-year birds, the ones most likely to occur in Iowa, resemble Herring Gulls. The identifying features are well described and illustrated by Lehman (1980). Female Herring Gulls can have heads and bills that resemble those of Thayer's Gull. From beneath, the primaries of Thayer's Gull should be all white.
REFERENCES:

Lehman, P. 1980. The identification of Thayer's Gull in the field. **Birding** 12:198-210.
Silcock, W. R. 1981. First Iowa record of Thayer's Gull. **Iowa Bird Life** 51:72-74.

[Iceland Gull, **Larus glaucoides**]

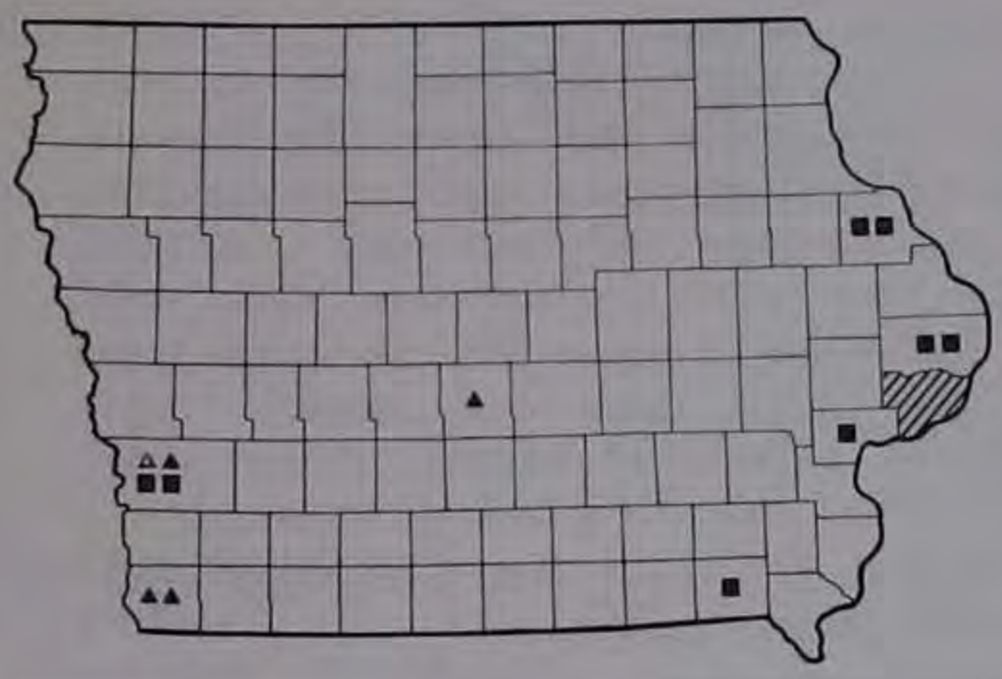
STATUS: Hypothetical. Class IV.
RECORD: The only record is of an all-white gull seen at Lock and Dam 14, Scott Co., on 15 Dec 1974 and 28 Jan 1975. The bird was also seen several times from 2 Dec 1974 to 18 Feb 1975 at Campbell's Island, East Moline, Ill. (Petersen 1975).
COMMENT: After review of the published account and 2 documentations, the Records Committee considered this record probable (Class IV). Iceland Gull winters on the NE coast of North America and is uncommon on the E Great Lakes. It is a rare Dec-Apr vagrant to the W Great Lakes with very few records further west and south. Iceland Gull might occur accidentally in Iowa, but its identification is difficult. Retrospectively, it is difficult to exclude Thayer's Gull.
REFERENCE:

Petersen, P. C. 1975. First Iceland Gull for Iowa. **Iowa Bird Life** 45:23.

Glaucous Gull, **Larus hyperboreus**

STATUS: Regular; rare migrant and in winter. Class I-P.
HABITAT: All reports are from along or near the Mississippi, Missouri, or Des Moines rivers (Map 6.66).
RECORDS: Glaucous Gulls are seen most frequently in Dec (23 reports) and Mar (7), with a few records in Jan, Feb, and Apr. Most Dec records are from CBCs while the Mar records are usually late in the month, suggesting migration through Iowa at that time. Apparently few winter in Iowa.

Early dates: 25 Nov 1971 (Bettendorf, PCP)
3 Dec 1972 (Lock and Dam 14, PCP)



Map 6.66 Glaucous Gull records. The shaded county has more than 10 records.

5 Dec 1978 (L. Manawa, IBL 49:56)
Late dates: 3 Apr 1979 (Hamburg, IBL 49:60)
31 Mar 1973 (Des Moines, IBL 43:47)
27 Mar 1941 (L. Manawa, Stiles 1941)

COMMENT: First recorded in Iowa in 1941 when 1 was collected at L. Manawa (Stiles 1941), Glaucous Gulls have been seen with increasing frequency in recent years. There are about 33 records from Iowa, 28 of those coming from 1960 on. Most reports are of 1 or 2 birds, the 10 at Hamburg from 28 Mar to 3 Apr 1979 (IBL 49:60) being by far the largest group reported. Of those reports mentioning the bird's age, most have been of first- or second-year birds. The 1941 specimen cannot be located. One was photographed at Davenport in Jan 1981 (M. C. Newlon, on file with I.O.U. Records Committee).

REFERENCE:

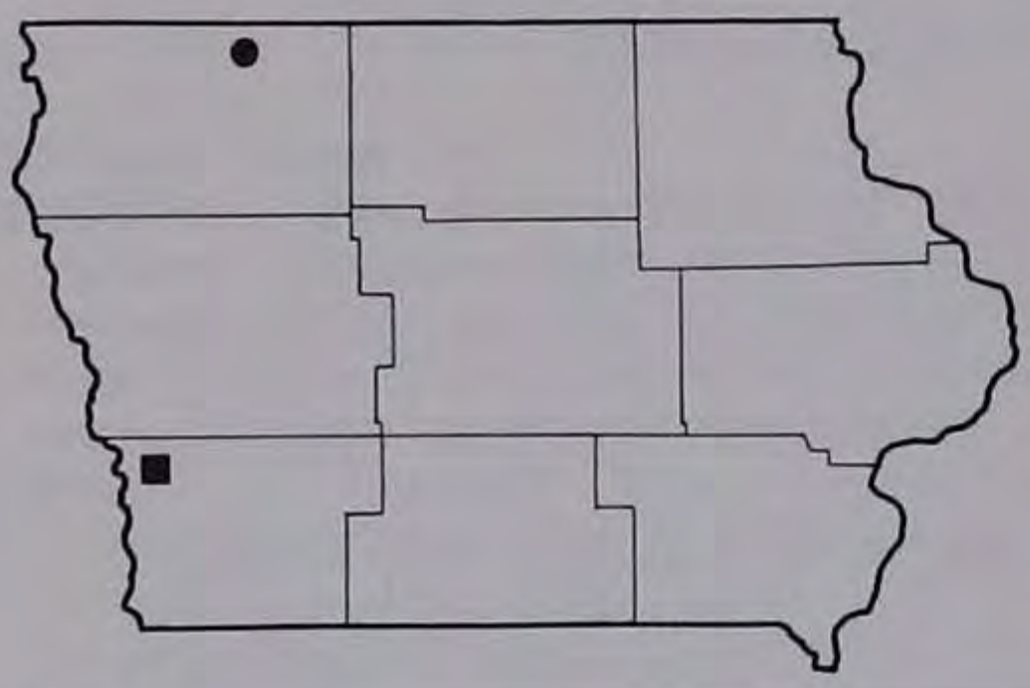
Stiles, B. F. 1941. The Glaucous Gull is taken in Iowa. **Iowa Bird Life** 11:36.

Great Black-backed Gull, **Larus marinus**

STATUS: Accidental. Class I-P.

RECORDS: There are 2 recent well-documented records (Map 6.67). One is from L. Manawa, Pottawattamie Co., on 6-7 Dec 1978 (IBL 49:56) and the other from West Okoboji L. on 14 Jul 1982 (Harr 1982). This species also appeared on an early Iowa list (Allen 1870) without evidence of a specific sighting. Two were reported from the Mississippi R. at Moline, Ill., opposite Scott Co., on 10 Feb 1963 (**Audubon Field Notes** 17:328).

COMMENT: In the New World, this species breeds from Greenland and Labrador south to North Carolina and winters from Newfoundland to South Carolina and casually to the Gulf Coast. Originally it was strictly a winter visitor to the East Coast, but for nearly a century it has been increasing in numbers and expanding its breeding range. It first nested in Maine in 1931, Long Island in 1942, New Jersey in 1966, Virginia in 1970, and North Carolina in 1972. In the N Midwest it is a rare but regular winter visitor, mostly on the W Great Lakes and Mississippi and Missouri rivers. Records extend from Sep to Jul, but most are from Nov to Apr. It has been regular on L. Erie since 1941 or 1942, and there are breeding records from the shores of L. Huron in 1954 and L. Ontario in 1962 (Bull 1974). There is as yet no sign that the expansion



Map 6.67 Great Black-backed Gull records.

of this species has stopped, and in the future it may well become established on the W Great Lakes.

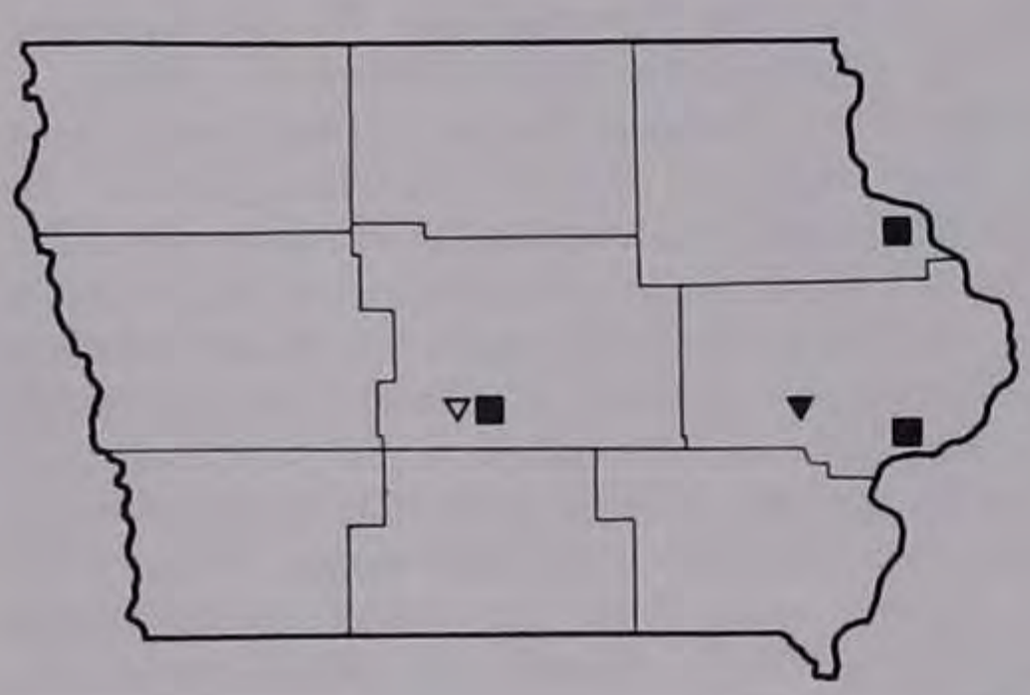
REFERENCE:
Harr, D. C. 1982. Great Black-backed Gull in Iowa lakes region. **Iowa Bird Life** 52:127-128.

Black-legged Kittiwake, **Rissa tridactyla**

STATUS: Accidental. Class I-P.
RECORDS: There are 5 well-substantiated fall records of immature birds (Map 6.68).

22 Nov 1931, Des Moines, specimen taken (DuMont 1933)
17 to 29 Dec 1967, Locks and Dams 14 and 15, Scott Co., photographs (Petersen 1968)
27-28 Oct 1976, Coralville Res. (Halmi 1976)
6-7 Dec 1981, Dubuque (Myers 1982)
12 Dec 1981, Saylorville Res. (Schaufenbuel 1982)

An undescribed immature was reported from the Cordova Nuclear Plant in Illinois opposite Scott Co. (IBL 47:19). An adult at George Wyth S.P. on 23 Nov 1978 (IBL 48:138) is a doubtful record because adults are quite unlikely and may be difficult to identify. Identification as a summer resident in Dickinson Co. (Anderson 1907) is undoubtedly in error.



Map 6.68 Black-legged Kittiwake records.

COMMENT: The Black-legged Kittiwake is seen every year in the middle part of the continent from Ontario and Manitoba to Louisiana and Texas. Almost all must be immatures, as adults are not mentioned in the references. Sep records have been from Ontario, Minnesota, and North Dakota. The few Oct records are scattered from Ontario to Mississippi. The peak months are Nov and Dec and Illinois and Michigan have the most records although some birds have reached Texas and Louisiana in Nov. Fewer are seen from Jan to Apr, in widely scattered locations from North Dakota to Illinois south to Louisiana and Texas. May records are from Louisiana, Illinois, and Ontario.

REFERENCES:

DuMont, P. A. 1933. The Atlantic Kittiwake taken in central Iowa. **Auk** 50:102-103.

Halmi, N. S. 1976. Black-legged Kittiwake on the Coralville Reservoir. **Iowa Bird Life** 46:117.

Myers, B. 1982. Black-legged Kittiwake at Dubuque. **Iowa Bird Life** 52:33.

Petersen, P. 1968. Black-legged Kittiwake at Davenport. **Iowa Bird Life** 38:20-21.

Schaufenbuel, J. 1982. Black-legged Kittiwake at Saylorville Reservoir. **Iowa Bird Life** 52:32-33.

Sabine's Gull, **Xema sabini**

STATUS: Accidental. Class I-S.

RECORDS: There are 3 old records, all with existing specimens (Map 6.69).

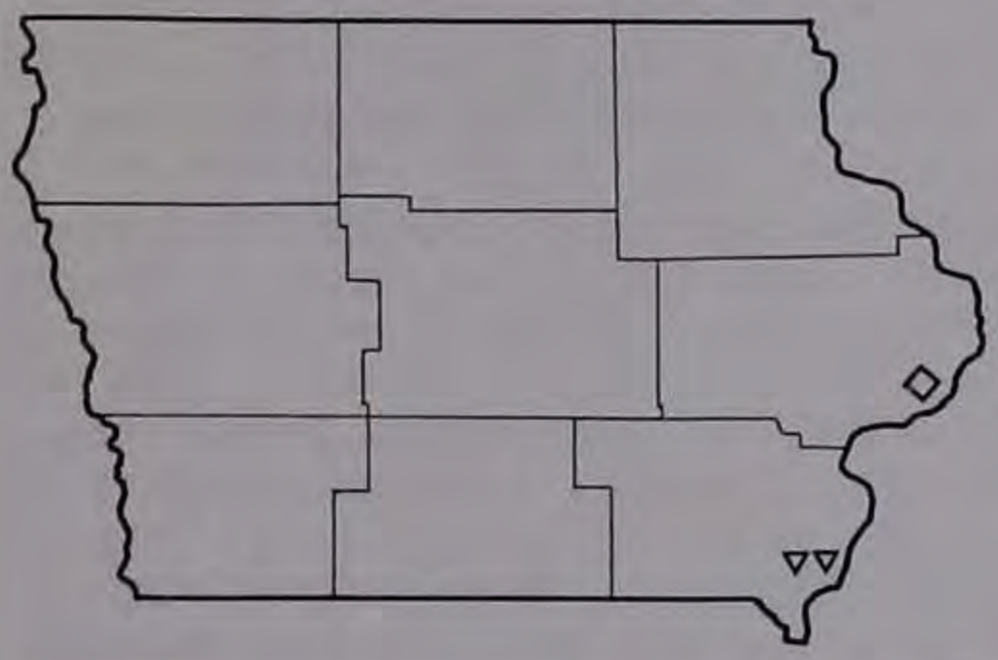
15 Oct 1891, Burlington, immature male at University of Iowa (Bartsch 1899)

12 Oct 1894, Burlington, immature female at University of Iowa (Bartsch 1899)

no date given, Scott Co., specimen at Putnam Museum (DuMont 1933)

There is also mention of a possible bird of this species at Clear L. in fall 1970, but no details were provided (IBL 41:27).

COMMENT: Several (1-8) are seen every year in midcontinent from Saskatchewan to Ontario south to Louisiana and Texas, with the vast majority in Sep-Oct and a few in Nov-Dec. There have been a few Mar-Apr and Jun-Jul records. Most are immatures, but unlike the Black-legged Kittiwake, there are some adults. L. Michigan may be the most frequent midwestern location of this oceanic species, but a few have



Map 6.69 Sabine's Gull records.

been seen in most nearby states. Early and late fall dates show no pattern from north to south.

REFERENCE:

Bartsch, P. 1899. **Xema sabinii** and **Chordeiles virginianus sennetti**--Two additions to the Iowa avifauna. **Auk** 16:86.

[Ivory Gull, **Pagophila eburnea**]

STATUS: Hypothetical. Class IV.

RECORD: There is a sight record of an immature bird from Rathbun Res. on 20 Dec 1975 (Ayres 1976). Unfortunately, this exceedingly rare bird did not sit long enough to be photographed and was not found again. Based on the description, the Records Committee considered the record probable in spite of its rarity.

COMMENT: This arctic coastal species has been recorded about 6 times in Minnesota from Oct to Apr. There are 3 records from Wisconsin (Barger et al. 1975) and a hypothetical record from Illinois (Bohlen 1978).

REFERENCE:

Ayres, C. C. 1976. A rare Ivory Gull at Rathbun Lake. **Iowa Bird Life** 46:15-16.

[Gull-billed Tern, **Sterna nilotica**]

STATUS: Class VI.

RECORDS: This species appeared on Say's list of birds seen at Engineer Cantonment in 1819-1820 (James 1823). Its appearance on Allen's list (1870) may have reflected Say's observation.

COMMENT: This coastal species is not a definite vagrant to the Midwest, although there is a hypothetical record from Illinois (Bohlen 1978) and a record from Ohio (**Am. Birds** 25:752).

Caspian Tern, **Sterna caspia**

STATUS: Regular; uncommon migrant, rare in summer. Class I-S.

HABITAT: Usually found on large lakes, rivers, and reservoirs throughout Iowa.

SPRING MIGRATION: Most spring records are from late Apr through mid-May. Most reports are of 1-5 birds, but a few large flocks (e.g., 75 on 8 May 1970 at Red Rock Res., **IBL** 40:49) have been reported.

Early dates: 26 Apr 1976 (Lock and Dam 9, **IBL** 46:57)
29 Apr 1962 (Lock and Dam 15, **IBL** 32:43)
1 May 1976 (Swan L., Johnson Co., **IBL** 46:57)
1 May 1982 (Hendrickson M., **IBL** 52:58)

SUMMER: There are numerous Jun and Jul records, especially in recent years. Most involve 1 or a few birds seen for a few days, probably nonbreeding birds rather than early migrants. There is no evidence of Caspian Terns ever nesting in Iowa.

FALL MIGRATION: Most fall records are from Sep, with a few being reported in early Oct. Again most reports are of 1-5 birds but there are more large flocks reported in fall than in spring (e.g., 85 at Davenport on 13 Sep 1977, **Am. Birds** 32:213; 75 at Red Rock Res. in fall 1973, **Am. Birds** 28:61; and 60 at Coralville Res. on 19 Sep 1981, **IBL** 51:118).

Late dates: 1 Nov 1965 (Parkersburg, IBL 36:19)
16 Oct 1973 (L. Manawa, Am. Birds 28:61)
15 Oct 1974 (Coralville Res., IBL 44:102)

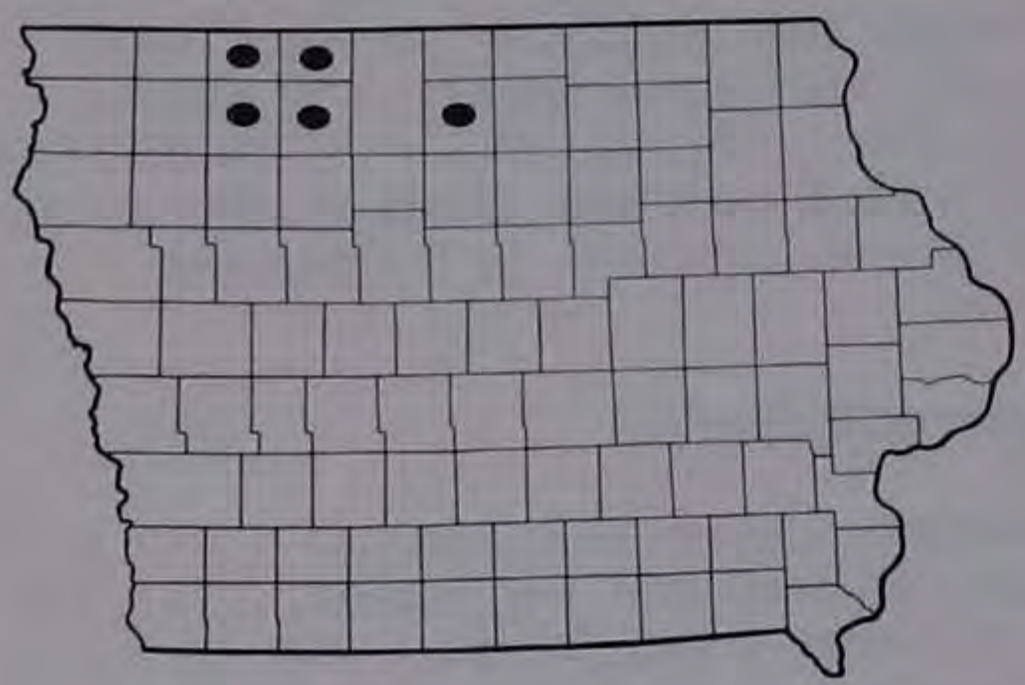
WINTER: Two were reported on the Des Moines R. at Bentonsport on 31 Dec 1975 (IBL 46:5).

Common Tern, **Sterna hirundo**

STATUS: Regular; rare migrant and summer. Class I-S.
HABITAT: Usually found on larger lakes, rivers, and reservoirs.
SPRING MIGRATION: Most records are between 5 and 20 May.
Early dates: 14 Apr 1952 (Cedar L., Serbousek 1959)
20 Apr 1980 (Cedar Rapids, IBL 50:48)
23 Apr 1950 (Sioux City, Youngworth 1952b)
Late dates: 2 Jun 1982 (Decatur Bend, IBL 52:121)
1 Jun 1978 (Lock and Dam 9, JPS)
31 May 1982 (Cardinal M., IBL 52:58)
SUMMER: There are several reports of 1 or 2 birds being seen in midsummer from throughout Iowa. There is no evidence of Common Terns nesting in Iowa however.
FALL MIGRATION: Most fall records are from 5 to 25 Sep.
Early dates: 11 Aug 1982 (Forney L., IBL 52:121)
22 Aug 1974 (Coralville Res., IBL 44:73)
8 Sep 1973 (Red Rock Res., IBL 43:105)
Late dates: 13 Oct 1973 (Red Rock Res., IBL 43:105)
5 Oct 1919 (Le Mars, Stephens 1920)
22 Sep 1970 (Fisher L., IBL 40:72)
COMMENT: A major problem in determining the status of this species is the confusion in distinguishing it from the similar Forster's Tern. There probably is a tendency to identify most "white" terns as Forster's Terns even though the Common Tern is regular in Iowa. There is a need for counts of carefully identified Common and Forster's terns during both spring and fall.

Forster's Tern, **Sterna forsteri**

STATUS: Regular; common migrant, uncommon summer resident. Class I-S N.
HABITAT: In migration, lakes, rivers, and marshes. Nests on shallow marshes and lakes with interspersed emergent vegetation and open water.
SPRING MIGRATION: Most probably move through Iowa in late Apr or early May but counts of carefully identified Forster's and Common terns are needed.
Early dates: 12 Apr 1981 (Coralville Res., IBL 51:67)
12 Apr 1953 (Cedar L., Serbousek 1959)
13 Apr 1982 (L. Manawa, IBL 52:58)
SUMMER: Forster's Tern colonies are found regularly on several marshes and lakes in NW and NC Iowa (Map 6.70). Nest initiation may start as early as 10 May (Provost 1947) but more commonly starts during the last week of May and the first week of Jun (Bergman et al. 1970). Most eggs hatch by late Jun. A few birds are seen throughout the summer at wetlands not known to be used for nesting.
FALL MIGRATION: As with spring migration, few data exist. Most



Map 6.70 Forster's Tern nesting by county, 1960-1982.

probably migrate through Iowa in late Aug and Sep.
Late dates: 9 Nov 1977 (Shenandoah, IBL 47:145)
20 Oct 1965 (Hamburg, IBL 36:19)
12 Oct 1977 (Coralville Res., IBL 47:145)
12 Oct 1982 (Coralville Res., IBL 52:121)

COMMENT: DuMont (1933) does not mention this species nesting in Iowa although suitable habitat must have been available. They were reported nesting in Osceola Co. in 1932 (Harris 1933) and have been found in suitable habitat in most years since then when people have looked for them. They tend to be more colonial and to occur in smaller numbers than the Black Tern. Several pairs were found in Wisconsin across from Lansing in 1977, and they may nest in marshes in the Mississippi R. floodplain in Iowa (Thompson and Landin 1978).

REFERENCES:

Bergman, R. D., P. Swain, and M. W. Weller. 1970. A comparative study of nesting Forster's and Black terns. **Wilson Bull.** 82:435-444.
Harris, A. T. 1933. The Forster Tern. **Oologist** 50:31-34.

Least Tern, **Sterna antillarum**

STATUS: Regular; rare migrant, formerly rare summer resident. Class I-P N.

HABITAT: Usually found near open sandbars or beaches along large rivers and streams, especially the Missouri R. In migration, may be found at lakes and marshes.

SPRING MIGRATION: Least Terns are one of the last migrants to arrive, usually appearing in late May or early Jun.
Early dates: 22 Apr 1978 (L. Manawa, IBL 48:74)
15 May 1977 (Des Moines, IBL 47:59)
19 May 1929 (Sioux City, Youngworth 1933)

SUMMER: Least Terns formerly nested on sandbars along major rivers, especially the Missouri R. near Sioux City and De Soto N.W.R. A small sandy area at De Soto N.W.R. used through 1973 apparently held the last nesting colony in Iowa. At Sioux City, nesting started the last week of Jul and lasted through Aug (Youngworth 1930; Stiles 1939). In recent years, there have been summer records from widely scattered points, almost always involving single birds (e.g., Willow Sl. on 2 Aug 1979, IBL 49:113; Forney L. on 6 Jun 1980, IBL 50:76; De Soto N.W.R.

on 5 and 8 Aug 1981, IBL 51:118; 3 to 6 Jun 1982 at Decatur Bend, Monona Co., IBL 52:90; s of Westfield on 24 Jun 1982, IBL 52:90; IPL Settling Ponds on 17 Jul 1982, IBL 52:90; and Riverton A. on 31 Jul 1982, IBL 52:90). These probably represent postbreeding dispersal and early migrants.

FALL MIGRATION: Least Terns usually leave Iowa in late Aug (Youngworth 1961).

Late dates: 13 Sep 1974 (Hamburg, IBL 44:73)
8 Sep 1932 (Sioux City, Youngworth 1932)
8 Sep 1959 (Sioux City, Youngworth 1961)

COMMENT: Most Least Tern nesting habitat along the Missouri R. has been destroyed in recent years, and the species is considered endangered in Iowa (Roosa 1977a). Recently De Soto N.W.R. has cleared brush from an area formerly used for nesting by Least Terns in an attempt to reestablish a breeding population there.

REFERENCES:

Stiles, B. F. 1939. The Least Tern in Iowa. **Iowa Bird Life** 9:19-21.

Youngworth, W. 1930. Breeding of the Least Tern in Iowa. **Wilson Bull.** 42:102-103.

Youngworth, W. 1961. Leave-taking of the silver ternlet. **Iowa Bird Life** 31:30-32.

Black Tern, **Chlidonias niger**

STATUS: Regular; common migrant throughout state; locally common nester in northern half of Iowa, uncommon nester elsewhere. Class I-S N.

HABITAT: Marshes and lakes with emergent vegetation.

SPRING MIGRATION: The peak of migration is mid-May, when flocks numbering in the hundreds have been reported.

Early dates: 12 Apr 1914 (Marshalltown, Gabrielson 1918)
29 Apr 1981 (L. Manawa, IBL 51:67)
1 May 1982 (Coralville Res., IBL 52:58)

SUMMER: Black Terns are semicolonial nesters on lakes and marshes with emergent vegetation. In Clay and Palo Alto counties, nests were initiated in late May through late Jun, with the peak in early Jun (Bergman et al. 1970).

FALL MIGRATION: Small flocks are reported by Jul; by Aug some large flocks have been reported. Most probably leave Iowa in mid-Aug.

Late dates: 1 Oct 1947 (Goose L., Hamilton Co., Glover 1948)
28 Sep 1982 (Willow Sl., IBL 52:121)
27 Sep 1953 (Le Claire, PCP)

COMMENT: In recent years, several observers have mentioned the lack of the large concentrations that were reported a few years ago. Whether these reports represent a real decline in numbers, a cyclic decline, or a lack of observers is not known. Survey counts, especially on nesting areas, are needed.

REFERENCES:

Bergman, R. D., P. Swain, and M. W. Weller. 1970. A comparative study of nesting Forster's and Black terns. **Wilson Bull.** 82:435-444.

Glover, F. A. 1948. The 1947 fall migration of aquatic birds through central Iowa. **Iowa Bird Life** 18:43-47.

Auks and Puffins, Family Alcidae

The auks and puffins are found along rugged coastlines in the northern hemisphere. Of 22 species, 21, including the extinct Great Auk, have been reported in North America. The only species reported from Iowa is accidental. Occasionally alcids get blown inland by storms. This apparently is the source of both Iowa records of the Thick-billed Murre.

Thick-billed Murre, Uria lomvia

STATUS: Accidental. Class III.

RECORDS: There are 2 records, both based on examination of specimens that can no longer be found and both from the winter of 1896-1897 (Map 6.71).

16 Dec 1896, Atlantic, Cass Co., immature specimen in Stephens collection examined by Ludlow Griscom (Brown 1897; Stephens 1932; DuMont 1933)

Jan 1897, Johnson Co. (Hoover 1897; DuMont 1933)

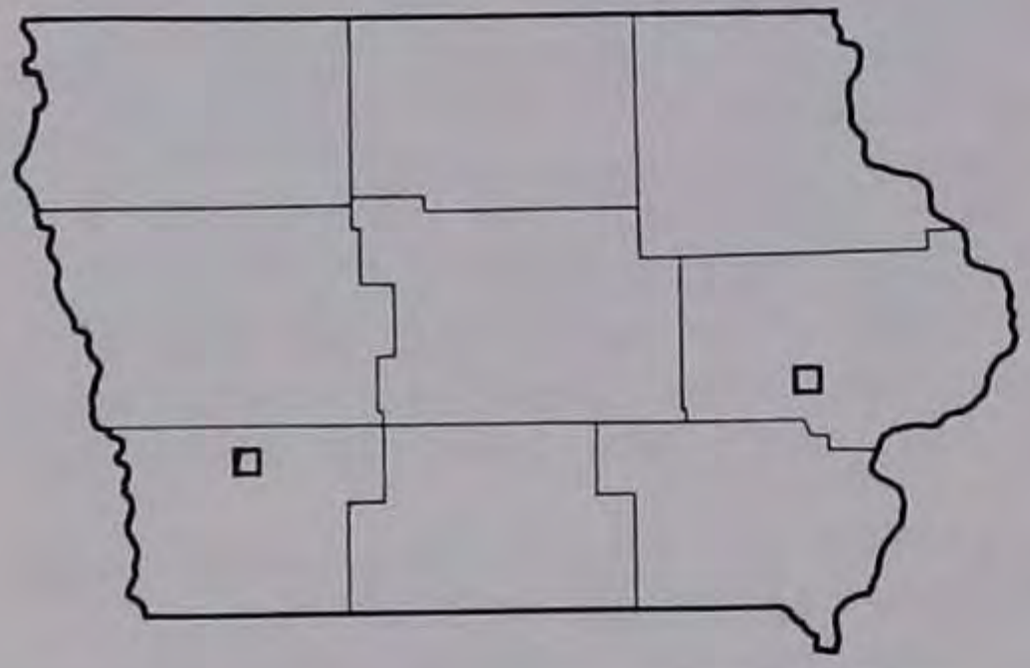
COMMENT: There were at least 10 Midwest records during the winter of 1896-1897 (Keller et al. 1979), apparently due to a storm (Stephens 1932). There are no recent records for the area.

REFERENCES:

Brown, J. H. 1897. An accidental visitor. **Iowa Orn.** 3:11.

Hoover, G. C. 1897. Notes and news. **Iowa Orn.** 3:24.

Stephens, T. C. 1932. Brunnich's Murre in Iowa. **Wilson Bull.** 44:239.



Map 6.71 Thick-billed Murre records.

ORDER COLUMBIFORMES

Pigeons and Doves, Family Columbidae

There are 289 species of pigeons and doves worldwide, including 17 reported in North America. Of the 6 species reported from Iowa, 2 are regular, 1 is extinct, and 3 are Class VI. All are stout birds with short necks and short, slender, rounded bills, usually thickening toward the tip. The family has two peculiarities: they feed their young a milklike material produced by the lining of the crop and they drink by sucking rather than tipping the head backward. They are powerful flyers. Generally they lay 2 eggs in a poorly constructed nest.

Mourning Doves,
F. W. Kent.

Rock Dove, **Columba livia**

STATUS: Regular; abundant permanent resident in all parts of Iowa. Class I-S N.

HABITAT: Barns and other buildings on farms, under bridges, and large, seldom-used buildings in towns and cities; occasionally crevices in sandstone or limestone outcrops.

SUMMER: Rock Doves nest from early spring to late fall throughout Iowa in barns and buildings and under bridges. Feral populations nest in rock outcrops, particularly in the Iowa Falls area and near Anamosa (Spiker 1933; Ennis 1949). It has been reported on each BBS every year, with an average of 18 birds per route. A low of 14.5 birds occurred in 1972, a high of 21.8 in 1975. This species is widely distributed across the state.

WINTER: Since the Rock Dove is nonmigratory, the winter population is the same as the breeding population. Only since 1974 have CBC records included this species. Numbers reported on CBCs have generally increased, over 8,000 birds were reported in 1980. Counts that are centered on larger cities record the highest numbers.

COMMENT: The spread of the Rock Dove across Iowa is not documented. It very likely arrived early in the settlement of Iowa and soon spread over the entire state.

REFERENCES:

Ennis, J. H. 1949. Rock Doves and Cliff Swallows at Iowa Falls. **Iowa Bird Life** 19:22.

Spiker, C. J. 1933. Naturalization of the Rock Dove in Iowa. **Iowa Bird Life** 3:10-11.

[Band-tailed Pigeon, **Columba fasciata**]

STATUS: Class VI.
RECORD: A bird of this species was described in Webster Co. on 5 Sep 1970 associating with a flock of Rock Doves from summer to late Sep (Crawford 1971). Unfortunately, the bird was not collected or photographed. The description was not considered diagnostic by the Records Committee.
COMMENT: There are about 15 vagrant records of this western species, from widely scattered locations from Louisiana to Florida and Saskatchewan to Maine and from variable times of the year (Apr to Jun, Sep to Oct, and Dec to Feb).
REFERENCE:
Crawford, J. A. 1971. First Iowa Band-tailed Pigeon. **Iowa Bird Life** 41:30.

[Ringed Turtle-Dove, **Streptopelia risoria**]

STATUS: Class VI.
RECORDS: This species has been reported from Des Moines in 1976 and 1977 (Peasley 1977; Brown 1978), from the Davenport area in 1977 and 1981 (**IBL** 47:19, 51:67, 101), from Cedar Rapids in 1980-1981 (**IBL** 51:4), and from Clinton in 1981 (**IBL** 51:101). Petersen (1981) reported "In the spring of 1971 a windstorm resulted in the escape of about 35 Ringed Turtle-Doves in E Davenport. Since then they have been seen regularly in the E part of town. In 1978 a pair nested in NC Davenport and raised 1 young to fledging. . . . At least 1 report is received each year."
COMMENT: It is probable that all the Iowa Ringed Turtle-Doves are escapees rather than birds that have migrated from other locations. The Davenport population may be on its way to becoming established. Documentation of sightings and further evidence of nesting would be useful to better determine the distribution of this species and perhaps the origin of the birds. There are a few records from Illinois, Wisconsin, and Indiana.
REFERENCES:
Brown, W. H. 1978. That Ringed Turtle Dove again. **Iowa Bird Life** 48:143.
Peasley, H. M. 1977. Ringed Turtle Dove in Des Moines. **Iowa Bird Life** 47:112.
Petersen, P. C. 1981. Note to Records Committee.

Mourning Dove, **Zenaida macroura**

STATUS: Regular; abundant summer resident; common winter resident. Class I-S N.
HABITAT: During nesting season, it prefers secondary successional areas where trees with low, horizontal branches occur; in winter it congregates in flocks in a protected spot, especially near a food source. Hanson and Kossack (1963) stated that the largest numbers are found in areas adjacent to streams.
SPRING MIGRATION: Mourning Doves arrive in S Iowa in late Mar and in N Iowa in early Apr.
SUMMER: It nests throughout the state, almost invariably with 2 eggs in a

flimsy nest. It prefers to nest on low, horizontally growing branches. In W Iowa, it often nests on the ground. Nests have been reported in Iowa from late Mar to mid-Sep. Late dates for nesting are 13 Sep 1981 in Guthrie Co. (Laubach 1981), 19 Sep 1971 at Sioux City (IBL 41:90), and 20 Sep 1963 in Webster Co. (IBL 33:88). On BBSs from 1967 to 1980, an overall average of 32.9 birds per route was reported, with a low of 25.7 in 1973 and a high of 40.5 in 1977. Averages from routes in the western one-third of the state were higher, with an average of over 61 birds per route.

FALL MIGRATION: Flocking begins in mid-Jul (Hanson and Kossack 1963). Generally, most of the population has left Iowa by mid-Sep.

WINTER: The Mourning Dove has been found on at least 1 CBC in Iowa every year since 1937. Since 1960, numbers have ranged from 279 in 1965 to a high of over 1,500 in 1970. In 10 of the last 13 counts, totals have been greater than 1,000 doves, with an average of 1,075. It has been detected on 78 percent of the counts since 1960. Counts in SE Iowa have higher totals than elsewhere; Davenport has averaged 190, Muscatine 95, and Des Moines 30. McClure (1943) estimated that about 2 percent of the dove population in SW Iowa does not migrate.

COMMENT: Iowa has a large, healthy dove population. The highest concentration seems to occur in the loess hills of W Iowa and in S Iowa where fencerows and farm ponds are common.

REFERENCES:

Hanson, H. C., and C. W. Kossack. 1963. **The Mourning Dove in Illinois**. Ill. Dept. Conserv. Tech. Bull. no. 2. Carbondale: Southern Illinois University Press, 133 p.

Laubach, R. 1981. New late nesting records for the Field Sparrow and Mourning Dove in Iowa. **Iowa Bird Life** 51:129-130.

McClure, H. E. 1943. Ecology and management of the Mourning Dove, **Zenaidura macroura** (Linn.) in Cass County, Iowa. Iowa Agric. Exp. Stn. Res. Bull. no. 310, pp. 355-415.

Passenger Pigeon, **Ectopistes migratorius**

STATUS: Extinct; formerly abundant migrant and summer resident. Class I-S N.

RECORDS: The Passenger Pigeon was predominantly a woodland species that migrated northward in huge flocks and nested in N Iowa, especially the northeast (Anderson 1907). McGee (1910) estimated seeing 600,000,000 from a single location in Dubuque Co. in 1 day in the 1860s. He noted the decline in migration by the early 1860s, only occasional flocks and decreased nesting by the early 1870s, and disappearance by 1876. Bond (1921) witnessed intermittent flights in Johnson Co. from 1872 to 1876 and illustrated the vast extent of the flocks in a painting. Nauman (1933) described flocks in SE Iowa so dense that they obscured the sun and noted their disappearance by 1880. Orr (1936) described colonial nesting in Winneshiek and Allamakee counties and recounted how the birds would leapfrog through a newly sown wheat field extracting all the seed. He described commercial trapping and the packing of birds in barrels for shipment to market. He noted that scattered pairs were fairly common in the 1870s with final disappearance in the late 1880s or early 1890s. DuMont (1933) lists all Iowa records after 1880 until the last report in 1903. The last Passenger Pigeon died in captivity in 1914 in Cincinnati.

COMMENT: There are numerous other references to the Passenger Pigeon in Iowa.

REFERENCES:
Bond, F. 1921. The later flights of the Passenger Pigeon. Auk 38:523-527.
DuMont, P. A. 1933. The Passenger Pigeon as a former Iowa bird. Proc. Iowa Acad. Sci. 40:205-211.
McGee, W. J. 1910. Notes on the Passenger Pigeon. Science 32:958-964.
Nauman, E. D. 1933. Iowa's vanishing hosts. Iowa Bird Life 3:47-48.
Orr, E. 1936. The Passenger Pigeon in northeastern Iowa. Iowa Bird Life 6:22-26.

[Common Ground-Dove, **Columbina passerina**]

STATUS: Class VI.
RECORD: One was reported from Des Moines on 10 Jun 1922 (Pangburn 1922). There is no description, and the observer considered the bird to be an escapee.
COMMENT: This southern species is a rare fall vagrant north as far as Indiana, Illinois, Wisconsin, Missouri, and Nebraska. There are only a few records for each state, with most from Oct-Nov, a few from Dec-Jan, and 1 from May.
REFERENCE:

Pangburn, C. H. 1922. The Ground Dove in central Iowa. Auk 39:566.

ORDER PSITTACIFORMES

Parrots, Family Psittacidae

The parrot family contains about 315 species, 5 of which occur in North America. Of the 2 species reported from Iowa, 1 is extinct and 1 is Class VI. The parrots are a largely southern hemisphere group, but several species, including the now extinct Carolina Parakeet, lived in northern areas. A number of species have been introduced into the southern United States, and several are now established there. Most parrots have bright, often green plumage. Their bill is short and strongly hooked. They usually feed on fruits, grains, and other vegetation. Most build their nests in a cavity in a tree or bank.

[Monk Parakeet, **Myiopsitta monachus**]

STATUS: Class VI.
RECORD: One was seen in Davenport from 22 Dec 1973 to 15 Jan 1974 and photographed (Petersen 1974).
COMMENT: This bird may have reached Iowa on its own, but this species has not yet been accepted as established in the United States. There are several records for Illinois and Indiana.
REFERENCE:

Petersen, P. C. 1974. First Monk Parakeet record for Iowa. Iowa Bird Life 44:22-23.

Carolina Parakeet, **Conuropsis carolinensis**

STATUS: Extinct; formerly resident in SW Iowa. Class III.
RECORDS: The evidence for this species in Iowa is meager. The only

sight record considered acceptable by the Records Committee is that of Audubon in 1843 along the Missouri R. in SW Iowa (Audubon and Coues 1897; Anderson 1907). The species was listed from the same area by Say in 1819-1820 (James 1823) and by Maximillian in 1834 (Anderson 1907). Other indefinite records were from Webster Co. in the 1850s and 1860s (McKinley 1965), in Decatur Co. prior to 1873 (Trippe 1873), and in Dickinson Co. (no date given, Bartsch 1895).

COMMENT: The records of this species in the upper Missouri and Mississippi valleys are detailed by McKinley (1965). The evidence suggests that the Carolina Parakeet was resident in the riparian habitat along the Missouri R. and in the southern half of Iowa. It may have occurred in other areas of Iowa and along the Mississippi R., but the evidence is weak. It probably disappeared from Iowa in the 1860s.

REFERENCES:

Bartsch, P. 1895. Birds extinct in Iowa and those becoming so. **Iowa Orn.** 2:1-3.

McKinley, D. 1965. The Carolina Parakeet in the upper Missouri and Mississippi river valleys. **Auk** 82:215-226.

ORDER CUCULIFORMES

Cuckoos, Roadrunners, and Anis, Family Cuculidae

This large worldwide family has 127 species, 8 of which occur in North America. Of the 4 species reported from Iowa, 2 are regular, 1 is accidental, and 1 is Class VI. They are all slender-bodied, long-tailed birds with rather stout, down-curved bills; pointed wings; and fairly short legs. Most are forest dwellers and live on a diet of insect larvae, including fuzzy caterpillars. Some members of this family are strictly parasitic in breeding habits, but none of the Iowa members have this trait. The cuckoos that inhabit Iowa perform a valuable service by destroying tent caterpillars; cuckoo abundance in an area commonly varies with the abundance of these larvae. Both Iowa species winter in Central and South America.

Yellow-billed Cuckoo, Iowa City, 14 Jul 1956, F. W. Kent.

Black-billed Cuckoo, **Coccyzus erythropthalmus**

STATUS: Regular; common nester. Class I-S N.
HABITAT: Young woodland, parks, and farm groves; selects secondary successional areas for nesting.
SUMMER: BBSs for 1967 to 1980 yielded an average of 0.5 birds per route, with a low of 0.1 in 1974 and a high of 1.4 in 1979. It has been found on 30 percent of individual BBSs. Smith (1979), studying this species in S Iowa, found 2.6 birds fledged per nest and an average nest height of 1.3 meters. Black-bills usually arrive in mid-May and leave by late Sep, but a few linger into Oct.

Early dates: 4 May 1950 (Iowa City, Serbousek 1959)
8 May 1960 (Iowa City, FWK)
8 May 1979 (Ames, MSG)

Late dates: 25 Oct 1975 (Lamoni, **IBL** 46:23)
13 Oct 1974 (Davenport, **IBL** 44:102)
12 Oct 1963 (Ames, **IBL** 33:88)

COMMENT: The BBS data in Iowa show no evidence of decline. The rather cyclic population fluctuations are probably related to outbreaks of tent caterpillars, a major food source for this species. This species, the "rain crow" of folklore, seems to require fairly specific atmospheric conditions before calling.
REFERENCE:
Smith, L. M. 1979. Some aspects of cuckoo nesting ecology in Lucas County, Iowa. **Iowa Bird Life** 49:63-64.

Yellow-billed Cuckoo, **Coccyzus americanus**

STATUS: Regular; common summer resident. Class I-S N.
HABITAT: Parks and farm groves; prefers secondary successional areas for nesting.
SUMMER: BBSs for 1967-1980 yielded an average of 1.3 birds per route, with a low of 0.6 in 1975 and a high of 2.1 in 1978. Yellow-bills were found on just over half the individual surveys, with by far the highest average of 4.1 in Lee County in SE Iowa. Nesting begins in late May and continues through Sep. In Lucas Co., 3.2 young fledged per nest (Smith 1979). Most arrive in mid-May and leave by early Oct.

Early dates: 7 May 1975 (Shenandoah, **IBL** 45:58)
9 May 1962 (Iowa City, FWK)
9 May 1974 (Davenport, **IBL** 44:44)

Late dates: 28 Oct 1981 (Pleasantville, **IBL** 51:118)
26 Oct 1981 (Des Moines, **IBL** 51:118)
22 Oct 1966 (Marble Rock, **IBL** 36:104)

COMMENT: The Yellow-billed Cuckoo is considered by most birders to be more common than the Black-billed, but the more frequent calling of the yellow-bill may have created a somewhat distorted impression. Of all cuckoos banded from 1961 to 1981, 406 were Yellow-billed and 225 Black-billed. Like the Black-billed, the Yellow-billed is cyclic, with populations increasing after erruptions of tent caterpillars.
REFERENCE:
Smith, L. M. 1979. Some aspects of cuckoo nesting ecology in Lucas County, Iowa. **Iowa Bird Life** 49:63-64.

[Greater Roadrunner, **Geococcyx californianus**]

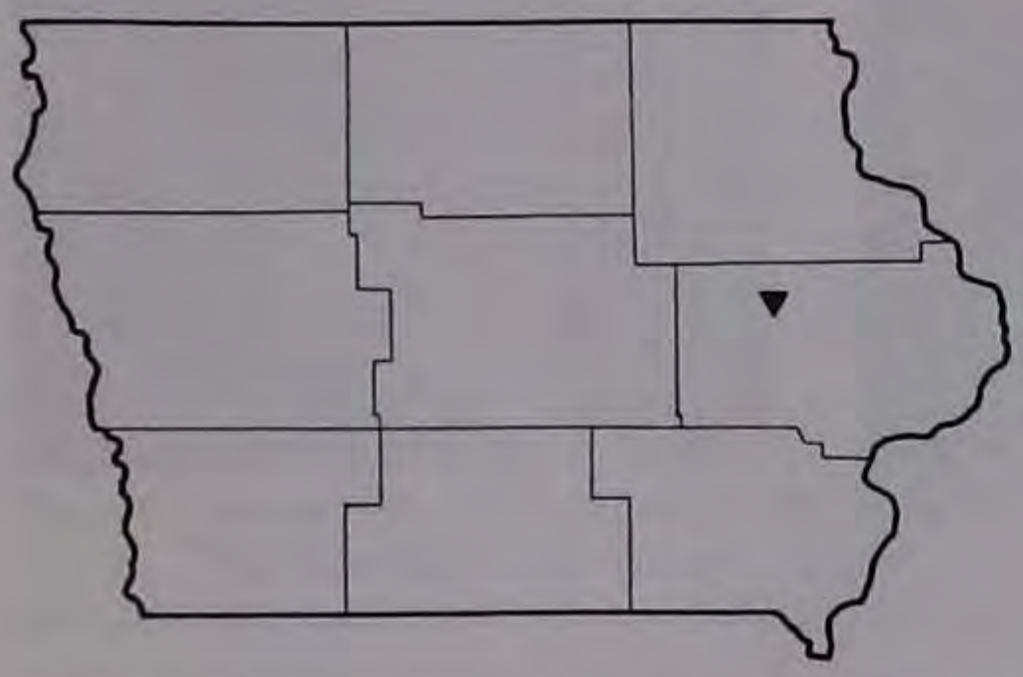
STATUS: Class VI.
RECORD: There is a secondhand report of 1 near Delta, Keokuk Co., on 25 Apr 1970 (**Audubon Field Notes** 24:614; Black 1970), but no details were provided.
COMMENT: This species is listed as rare in SW Missouri and is not reported from other states bordering Iowa. There was an expansion into SW Missouri from 1956 to 1976 that reached as far north as the Missouri R. in C Missouri. This expansion was partially reversed after the cold winters of 1976-1977 and 1978-1979 (Norris and Elder 1982).
REFERENCES:

Black, J. D. 1970. Letter to National Audubon Society. On file with I.O.U. Records Committee.
Norris, D. J., and W. H. Elder. 1982. Decline of the Roadrunner in Missouri. **Wilson Bull.** 94:354-355.

Ani Species, **Crotophaga** sp.

STATUS: Accidental; fall. Class III.
RECORDS: An ani was observed in Cedar Rapids on 22 Oct 1966 (Vane 1981) (Map 6.72). This bird had been erroneously classified as a Smooth-billed Ani (Brown 1971). The description is suggestive of the Groove-billed Ani. This, along with the fact that the Smooth-billed Ani is not a known vagrant to the Midwest, makes it likely that this was a Groove-billed Ani, but the description is not sufficient for definite identification. A specimen of a Groove-billed Ani said to have been shot in Osceola Co. was identified by Musgrove (1948). The information provided was secondhand, and no date was given.
COMMENT: The Groove-billed Ani is an uncommon resident of the W Gulf Coast, particularly the southern part. Some birds migrate up the coast in fall, making it more common on the upper Texas and Louisiana coast in winter. Since the mid-1960s a few (1-5) vagrants have been recorded n of Texas and Louisiana almost every year. Most of these have been from the central states north to Minnesota, Wisconsin, and Michigan. Almost all records are for Oct-Nov, with two-thirds in Oct.
REFERENCES:

Musgrove, J. W. 1948. The Groove-billed Ani and Mountain Bluebird, specimens in Iowa collection. **Iowa Bird Life** 18:70.
Vane, R. 1981. Note to Records Committee.



Map 6.72 Ani species record.

ORDER STRIGIFORMES

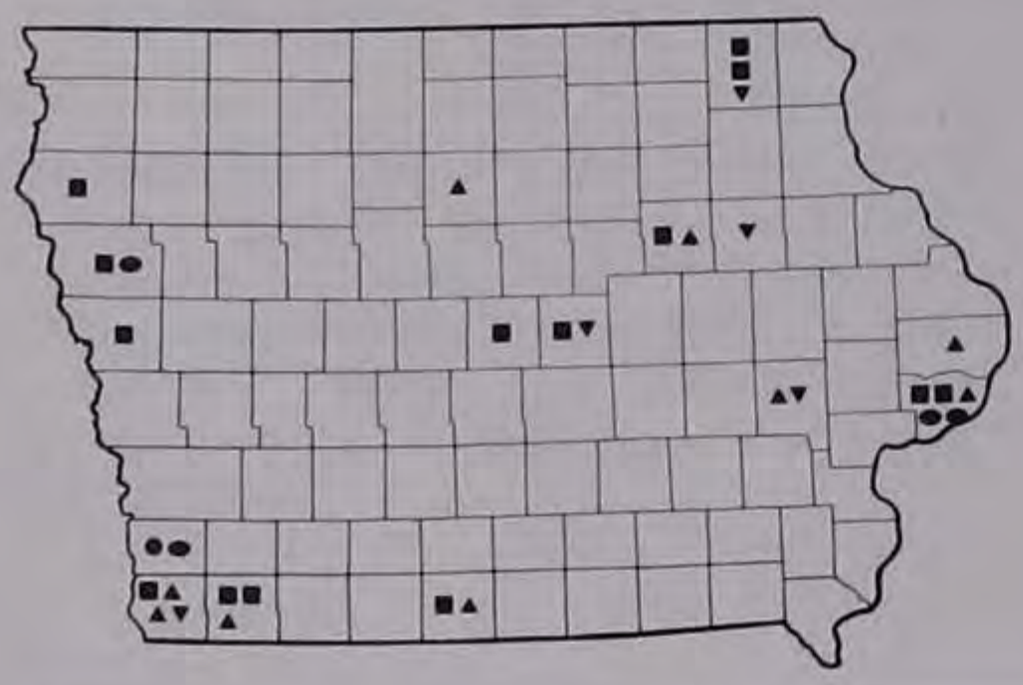
Barn-Owls, Family Tytonidae

Of the 11 members of this worldwide family, only the Common Barn-Owl occurs in North America; in Iowa it is regular but rare. The barn-owls have long legs, long wings, an elongate beak, a serrated talon on the middle toe, and a heart-shaped facial disc. The Common Barn-Owl is worldwide in distribution and prefers to inhabit old buildings. It is nearly completely nocturnal and hunts largely by sound. Its prey is generally rats or mice.

Common Barn-Owl, Tyto alba

STATUS: Regular; rare permanent resident. Class I-S N.
HABITAT: Nests and roosts in abandoned buildings, and occasionally in hollow trees or caves.
RECORDS: Reports since 1960 are few (Map 6.73) and widely dispersed except for a cluster of records in SW Iowa. Nearly half the records are from winter, and some of these birds were found dead, probably from starvation.
SUMMER: At least 7 nests have been reported since 1950: 19 Jul 1950, Clinton Co., nest with 4 young (FWK); 1952, Cerro Gordo Co., nest with young (Knoop 1952); 1960, Lisbon, Linn Co., young in nest in maple tree (FWK); 1967, Scott Co., 2 nests with young (Morrissey 1968b); 1977, Woodbury Co., 4 young in nest at generating station (NH); 1979, S Mills Co., nest with young in hollow tree (IBL 49:83).
COMMENT: It is difficult to judge how many Common Barn-Owls might be present in Iowa. The rural location and nocturnal nature of this species make it difficult to locate unless a nest is found or a starving bird appears in winter. This species appears to have decreased in Minnesota (Green and Janssen 1975) and Illinois (Bohlen 1978) and may be retreating from the northern part of its range. Although a permanent resident, apparently there is considerable movement or migration of individual birds. A young owl banded in Scott Co. was recovered at Baton Rouge, La., the following winter (PCP).
REFERENCE:

Knoop, P. 1952. Barn Owl and other records. Iowa Bird Life 22:11.



Map 6.73 Common Barn-Owl records, 1960-1982.

Typical Owls, Family Strigidae

This worldwide family has 123 species, 19 of which occur in North America. Of the 11 species reported from Iowa, 7 are regular, 1 is casual, 2 are accidental, and 1 is Class VI. Most are cavity nesters and lay clutches of 1 to 7 white, nearly spherical eggs. Usually both sexes incubate the eggs and feed the young. The Short-eared, Long-eared, and Burrowing owls formerly were fairly frequent nesting birds in Iowa but now are reduced to a few known nesting attempts per decade. Some owls are highly migratory, while others are permanent residents in Iowa. They feed on small rodents and other small vertebrates and generally are very beneficial species.

Great Horned Owl, Iowa City, 27 Nov 1963, T. H. Kent.

Long-eared Owl, C. Kurtz.

Short-eared Owl, A. B. Thiermann

Northern Saw-whet Owl, A. B. Thiermann.

Eastern Screech-Owl, **Otus asio**

STATUS: Regular; common permanent resident. Class I-S N.
HABITAT: Fairly mature deciduous forest, particularly near open edges; will frequent towns and farmsteads that have mature trees or orchards.
SUMMER: Nesting begins in mid-Apr, with young fledging in early to mid-Jun. Because of its nocturnal nature, this species can nest undetected in close proximity to inhabited dwellings.
WINTER: In the 1960s, usually less than 10 were reported from the CBCs. The use of recorders has greatly increased the detection of this species, and more than 50 were reported each year in the 1970s and nearly 100 were reported on the 1980 counts. The greatest numbers are reported from SE Iowa.
COMMENT: This species is rarely detected by standard census techniques. Night surveys using tape recordings are needed to monitor population trends. The 2 color phases seem to be about equal in numbers in the midlatitude region, which includes Iowa, while the gray phase dominates elsewhere (Owen 1963).
REFERENCE:

Owen, D. F. 1963. Polymorphism in the Screech Owl in eastern North America. **Wilson Bull.** 75:183-190.

Great Horned Owl, **Bubo virginianus**

STATUS: Regular; common permanent resident. Class I-S N.
HABITAT: It is found in or near all stages of woodland succession. It is often seen perched on utility poles or tops of trees just after sunset as it begins hunting.
SUMMER: This is the earliest nesting species in Iowa, with eggs laid by mid-Feb. It prefers cavities for nesting but will often claim old hawk nests and rarely old squirrel nests. Petersen (1979) showed old hawk nests to be used most frequently.
WINTER: It has been reported on CBCs every year since 1960; a low of 16 birds was reported in 1961, and approximately 200 were found each year from 1979 through 1982. This dramatic increase is likely due to more observers and the use of tape-recorded calls to evoke a vocal response.
COMMENT: There have been several detailed studies of this species in or near Iowa (Errington 1932, 1938; Errington et al. 1940; LeDuc 1970; Petersen 1979). It seems to be one of the few raptors increasing in numbers, perhaps at the expense of other raptors. The pale arctic race (**Bubo virginianus subarcticus**) of this species enters Iowa in the winter; observers in NW Iowa should distinguish them from the resident owls (**B. v. virginianus**). Several have been taken to the veterinary clinic at Iowa State University (DLG) and 1 was seen in Sioux Co. on 29 Dec 1981 (IBL 52:27). Another subspecies (**B. v. occidentalis**) has also been recorded in winter (DuMont 1933).
REFERENCES:

Errington, P. L. 1932. Food habits of southern Wisconsin raptors. Part I. Owls. **Condor** 34:176-186.
Errington, P. L. 1938. The Great Horned Owl as an indicator of vulnerability in prey populations. **J. Wildl. Manage.** 2:190-205.
Errington, P. L., F. Hamerstrom, and F. N. Hamerstrom. 1940. The Great Horned Owl and its prey in north-central United States. Iowa State Coll. Agri. Exp. Stn. Res. Bull. no. 277, pp. 757-850.
LeDuc, P. 1970. The nesting ecology of some hawks and owls in

southeastern Minnesota. Loon 42:48-62.
Petersen, L. 1979. **Ecology of Great Horned Owls and Red-tailed Hawks in Southeastern Wisconsin.** Madison, Wis.: Dept. Nat. Resour. Tech. Bull. no. 111, 63 p.

Snowy Owl, **Nyctea scandiaca**

STATUS: Regular; rare winter visitant. Class I-S.
HABITAT: Open fields and near lakes and reservoirs, often seen perched on posts or utility poles.
WINTER: Despite its fairly regular occurrence in Iowa, the Snowy Owl is infrequently reported on CBCs. It was reported on 13 of the counts from 1961 to 1982, with a maximum of 4 reported in a year. It normally arrives in Iowa in early Nov, peaks in Dec and Jan, and leaves by mid-Mar.

Early dates: 1 Oct 1963 (Union Sl. N.W.R., IBL 33:87)
7 Oct 1961 (Scott Co., Petersen 1961)
14 Oct 1980 (Iowa City, IBL 51:28)

Late dates: 28 Apr 1977 (Pleasantville, IBL 47:60)
2 Apr 1977 (Rockwell City, IBL 47:60)
25 Mar 1982 (Nevada, IBL 52:58)

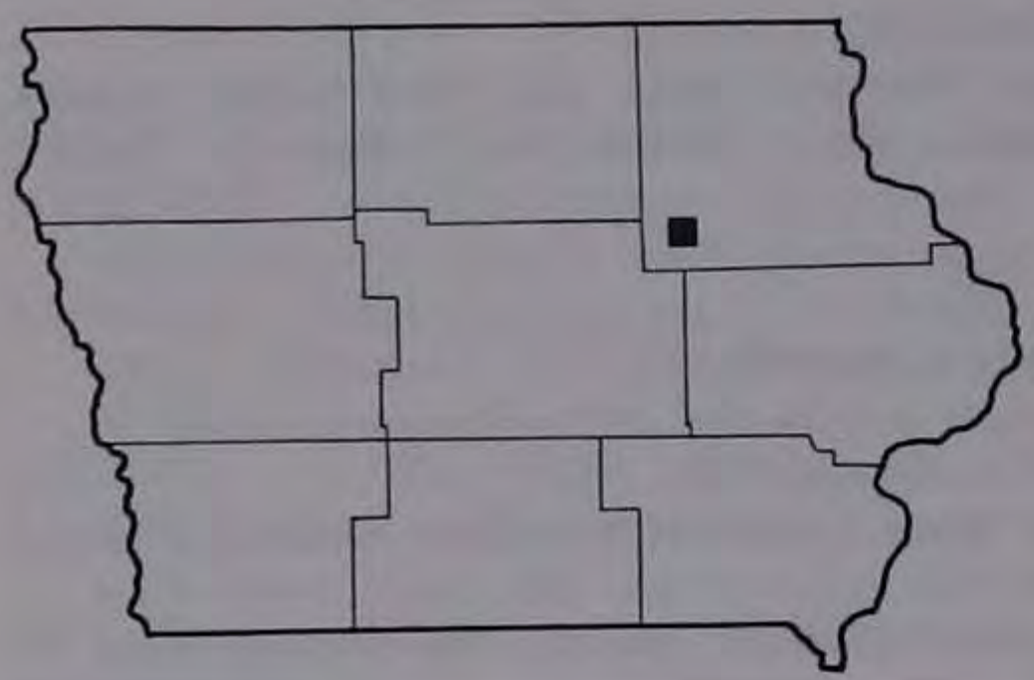
COMMENT: This species is very cyclical in its occurrence in Iowa. DuMont (1933) mentioned the following as invasion years: 1876-1877, 1882-1883, 1889-1890, 1892-1893, 1896-1897, 1901-1902, 1905-1906, 1917-1918, 1926-1927, and 1930-1931. Stephens (1933) listed 1905-1906 and 1909-1910 as invasion years. More recently, the following years have had increased observations: 1949-1950, at least 19 sightings (IBL 20:20-23); 1974-1975, 77 observations (Black 1975); 1976-1977, 206 observations (IBL 47:60); 1978-1979, 19 reports (IBL 49:25); 1980-1981, 35 reports (IBL 51:32). It is likely that the increased reports of the late 1970s are partly due to increased media coverage through the efforts of Gladys Black and to an increased public awareness. However, many of these records were made by unskilled observers and are subject to question.

REFERENCES:

Black, G. 1975. Snowy Owl sightings in Iowa, winter of 1974-1975. **Iowa Bird Life** 45:61-62.
DuMont, P. A. 1933. The Snowy Owl in Iowa. **Wilson Bull.** 45:82-83.
Petersen, P. C. 1961. Snowy Owls in eastern Iowa. **Iowa Bird Life.** 31:89.
Stephens, T. C. 1933. Early Snowy Owl records from Nebraska, Iowa, South Dakota, and Minnesota. **Wilson Bull.** 45:83-85.

Northern Hawk-Owl, **Surnia ulula**

STATUS: Accidental. Class I-P.
RECORDS: On 25 Dec 1981 1 was photographed at Waterloo (Myers 1982) (Map 6.74). It had apparently set up a wintering territory in town and stayed until 25 Feb 1982 (IBL 52:27). There are 2 old reports from Linn Co., 1 based on a specimen (no date given) and 1 on a sight record from 1903 (Anderson 1907). This species was also listed by Say at Engineer Cantonment n of Omaha in 1819-1820 (James 1823).
COMMENT: The old records lack sufficient information to judge the accuracy of identification. Hawk-Owls are rare winter visitants in N



Map 6.74 Northern Hawk-Owl record.

Minnesota, except in invasion years (about once a decade), when they are uncommon and are occasionally seen in S Minnesota (Green and Janssen 1975). There are 5 records for Illinois (Bohlen 1978) and 1 old record for Nebraska (Johnsgard 1980). None are listed for South Dakota (Whitney et al. 1978).

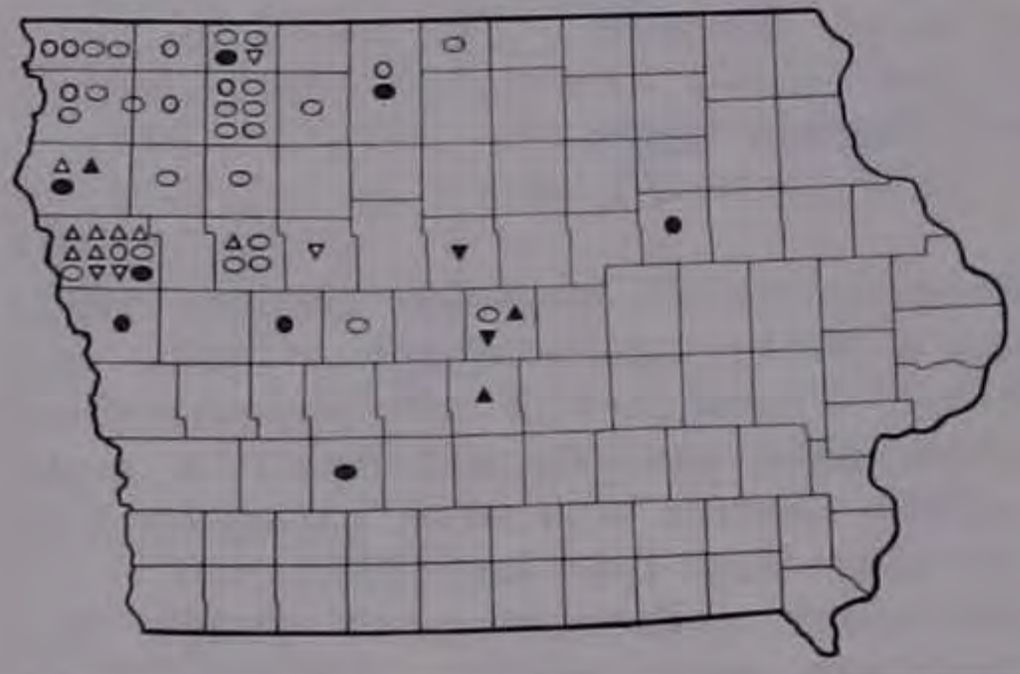
REFERENCE:
Myers, B. 1982. Iowa's first Hawk Owl (**Surnia ulula**). Iowa Bird Life 52:31-32.

Burrowing Owl, **Athene cunicularia**

STATUS: Casual; summer resident. Class I-S N.

HABITAT: Grasslands and pastures.

SUMMER: NW Iowa is on the eastern edge of the range of this migratory species of owl (Map 6.75). There is no indication that it was ever common, as there are only 5 records prior to 1900. The records increased from 3 in the period 1900-1909 to at least 16 in 1930 to 1938, almost all from NW Iowa. Apparently they suddenly disappeared, as there are only 2 records from 1939 to 1959. In the 1960s there were 7 records including nesting, but in the 1970s there were only 2. However, in 1980-1981 there were 4 records with further evidence of nesting. A number of birds, probably migrants, have been observed in Apr and Sep, and there are 2 records from Mar and 3 from Oct. Most of the summer records are associated with evidence of nesting. Studies of colonies near Ruthven (Errington and Bennett 1935; Scott 1940)



Map 6.75 Burrowing Owl records.

revealed that the owls have a varied diet of mice, frogs, ground squirrels, birds, and insects. Two specimens taken in Clay Co. on 13 Jul 1933 (Youngworth 1958) are at Iowa State University.

Early dates: 20 Mar 1916 (Sioux City, DuMont 1933)
29 Mar 1936 (Sioux City, Youngworth 1958)
1 Apr 1981 (Ames, Zaletel et al. 1981)

Late dates: 15 Oct 1964 (Plymouth Co., IBL 34:99)
9 Oct 1956 (Rockwell City, Jones 1957)
5 Oct 1924 (Woodbury Co., DuMont 1933)

COMMENT: There is little to suggest that this species was ever common; the pattern of occurrence suggests periods of range extension and regression. It is gratifying that some birds have returned to nest in the 1960s and 1980s. There are scattered vagrant records of both the Western and Florida subspecies to E Canada and NE United States from Apr to Dec. There are a few records from Illinois and Indiana, but none from E Iowa.

REFERENCES:

Errington, P. L., and L. J. Bennett. 1935. Food habits of Burrowing Owls in northwestern Iowa. **Wilson Bull.** 47:125-128.

Jones, M. L. 1957. Bird notes of Fort Defiance State Park and vicinity. **Iowa Bird Life** 27:40-41.

Scott, T. G. 1940. The Western Burrowing Owl in Clay County, Iowa, in 1938. **Am. Midl. Nat.** 24:585-593.

Youngworth, W. 1958. The Burrowing Owl as a vanishing species. **Iowa Bird Life** 28:56-57.

Zaletel, H., L. Zaletel, and S. Coats. 1981. Burrowing Owl in Story County. **Iowa Bird Life** 51:74-76.

Barred Owl, **Strix varia**

STATUS: Regular; common resident except in NW Iowa. Class I-S N.

HABITAT: Requires extensive, fairly mature woodlands with hollow trees for nesting.

SUMMER: In Iowa, Barred Owls prefer a tree cavity for nesting but will utilize an abandoned hawk nest rarely. Bent (1938) reports a high incidence of Barred Owls utilizing old hawk nests, especially those of the Red-shouldered Hawk. Nesting begins in early Mar, with a normal clutch of 2. Hatching occurs in Apr, and young are fledged by late May. Their nest cycle nearly coincides with that of the Red-shouldered Hawk.

WINTER: It has been reported on CBCs in Iowa each year since 1960, from a low of 9 in 1961 to a high of 106 in 1982, with an average of 38 birds per year.

COMMENT: This species is one of our commonest owls, with a voice familiar to all birders, but its nest is difficult to locate and no studies have been conducted in Iowa. No reliable census techniques exist, so we have few data on population levels. Barred Owls eat a variety of birds, mammals, insects, and other small animals (Errington and McDonald 1937).

REFERENCES:

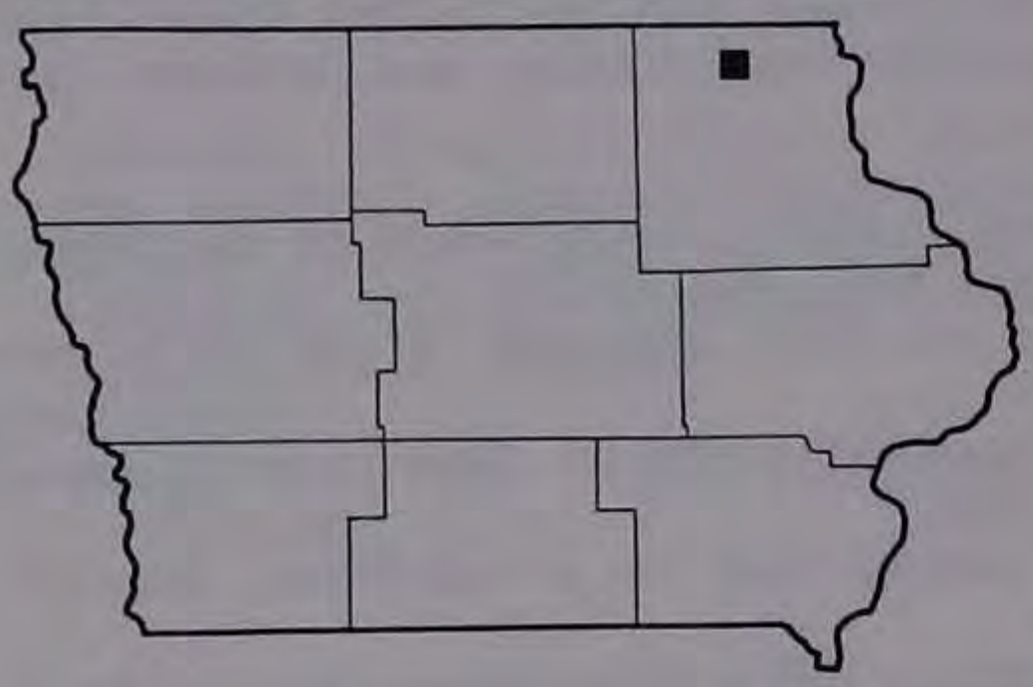
Bent, A. C. 1938. **Life Histories of North American Birds of Prey. Part 2.** Washington, D.C.: U. S. National Museum Bull. no. 170, 482 p.

Errington, P. L., and M. McDonald. 1937. Conclusions as to the food habits of the Barred Owl in Iowa. **Iowa Bird Life** 7:47-49.

Great Gray Owl, **Strix nebulosa**

STATUS: Accidental. Class I-P.

RECORDS: The only definite record is 1 photographed near Decorah, Winneshiek Co., on 15 Feb 1974 (Berg 1974) (Map 6.76). Two probable sight records are for Feb 1921 at Sigourney (Nauman 1934) and near Marshalltown on 12 May 1959 (Mitchem 1968). Four old records, which lack details, include 2 from Van Buren Co. ca. 1860 and 1890 (Anderson 1907), a secondhand report from Mahaska Co. (Trippe 1873), and 4 birds on a CBC at Des Moines on 24 Dec 1922 (**Bird-Lore** 25:36). This species was also listed by Allen (1870) without evidence of a specific sighting.



Map 6.76 Great Gray Owl record.

COMMENT: The Great Gray Owl breeds in open boreal forest from Alaska east to S Quebec and south in the Sierra Nevada and Rocky Mountains to C California, Montana, and Wyoming. The closest breeding population to Iowa is in S Manitoba, N Minnesota (Aitkin, Roseau, and St Louis counties), N Wisconsin (Douglas Co.), and possibly N Michigan. In most years it is very rare outside of its breeding range. Vagrants have been recorded south to Iowa, Illinois (hypothetical), and Nebraska. This species, like many other arctic animals, undergoes periodic population increases followed by major migrations southward in winter if the food supply fails. The 1890, 1922, and 1974 Iowa records were in years when there were moderate to large invasions to S Canada. Such invasions have increased markedly in size and frequency since the mid-1960s (Vickery and Yunick 1979). The flights of 1977-1978 to Manitoba and Minnesota and 1978-1979 from Manitoba east to the Maritime Provinces, New England, and New York were the largest since 1890-1891. This may portend future sightings in Iowa. It is not clear whether the change in behavior reflects a population increase, an instability of vole population, or a change in migratory habits (Nero 1980).

REFERENCES:

Berg, E. O. 1974. Great Gray Owl in N. E. Iowa. **Iowa Bird Life** 44:75.

Mitchem, L. E. 1968. The Great Gray Owl in Iowa? **Iowa Bird Life** 28:127-128.

Nauman, E. D. 1934. Notes on owls in southeastern Iowa. **Iowa Bird Life** 4:6-7.

Nero, R. W. 1980. **The Great Gray Owl, Phantom of the Northern Forest.** Washington, D.C.: Smithsonian Institution Press.

Vickery, P. D., and R. P. Yunick. 1979. The 1978-1979 Great Gray Owl incursion across northeastern North America. **Am. Birds** 33:242-244.

Long-eared Owl, **Asio otus**

STATUS: Regular; uncommon winter visitant; rare nester. Class I-S N.
HABITAT: Winters in evergreen groves adjacent to grassy hunting areas; occasionally pairs will stay to nest; often nests in old crow nests.
WINTER: During the period 1960-1982 numbers on CBCs varied from 8 to 60, with an average of 22 birds per year. SE Iowa yielded the highest counts. Long-eared Owls normally arrive in Iowa by mid-Oct and depart in late Mar or early Apr.

Early dates: 31 Aug 1978 (Waterloo, **IBL** 48:138)
21 Sep 1964 (Akron, **IBL** 34:99)
11 Oct 1979 (Story Co., **IBL** 49:113)

Late dates: 21 Apr 1980 (Osceola, **IBL** 50:48)
7 Apr 1961 (Iowa City, **IBL** 31:67)
6 Apr 1980 (George Wyth S.P., **IBL** 50:48)

SUMMER: Nesting occurs sparingly in Iowa but probably more regularly than records indicate. The following nestings have occurred since the late 1950s: 1959, Calhoun Co. (DMR); 1977, Marion Co. (Voight and Moore 1977); 1978, Allamakee Co. (Koenig 1979); 1979 to 1981, Page Co. (**IBL** 49:60; DV); 1979, Lucas Co. (**IBL** 49:113); 1980, Page Co. (nest card data); 1982, Marion Co., near Pella (JS); 1982, Winneshiek Co. (**IBL** 52:58, 91). Additionally, the following summer records are known: 18-19 May 1978 at St. Lucas, Fayette Co. (**IBL** 48:74); and 16 Jul 1971 at Wheatland, Clinton Co. (**IBL** 41:90).
COMMENT: This species has been detected nesting in Iowa in the past 6 years, perhaps reflecting more intensive efforts to find it. There is no easy way to survey for Long-eared Owls in summer. Iowa is well within the nesting range of this species, but most birds undoubtedly move north to nest. Long-ears feed almost exclusively on small rodents (Weller et al. 1963; Voight and Glenn-Lewin 1978).
REFERENCES:

Voight, J. R., and D. C. Glenn-Lewin. 1978. Prey availability and prey taken by Long-eared Owls in Iowa. **Am. Midl. Nat.** 99:162-171.
Voight, J. R., and K. R. Moore. 1977. Long-eared Owl nesting in Marion County. **Iowa Bird Life** 47:67.
Weller, M. W., L. H. Fredrickson, and F. W. Kent. 1963. Small mammal prey of some owls wintering in Iowa. **Iowa State J. Sci.** 38:151-160.

Short-eared Owl, **Asio flammeus**

STATUS: Regular; uncommon winter visitant, rare nester. Class I-S N.
HABITAT: Winters in moist lowlands and low agricultural fields; nests in wet pastures or low prairies.
WINTER: Short-eared Owls have been reported each year on CBCs from 1960 to 1982, with counts averaging 27 birds per year and varying from 5 to 70. In general, winter numbers appear to vary considerably from year to year. Short-eared Owls return in late Oct to early Nov and leave by early Apr.

Early dates: 15 Sep 1974 (Iowa City, **IBL** 44:73)
22 Sep 1979 (Sioux Center, **IBL** 49:113)

12 Oct 1977 (St. Lucas, IBL 47:145)
Late dates: 30 Apr 1970 (Lyon Co., IBL 40:49)
19 Apr 1978 (Seymour, IBL 48:74)
18 Apr 1967 (Lamoni, IBL 37:51)

SUMMER: The demise of the prairie has made this species one of Iowa's rarest nesting birds. Only 3 nest records exist for the past 2 decades: 1961, Johnson Co., possibly feeding young (Kent 1961); 1964, Benton Co., near Dysart, nest with young (BRO); 1981, Hayden Prairie, Howard Co., nest with 7 eggs (Dunnette 1981; IBL 51:118). Additionally, the following summer records exist: 29 Aug 1965, Greene Co. (IBL 36:20); 'all summer' 1974, Iowa City (IBL 44:102); 7 Jul 1977, Guthrie Co. (IBL 47:101); 9 Aug 1975, Iowa City (IBL 45:93); 11 Aug 1979, Hamburg (IBL 49:113).

COMMENT: The Short-eared Owl has been on the Blue List since 1976, and its decline continues in the northern and eastern portions of its range (Tate and Tate 1982).

REFERENCES:

Dunnette, J. 1981. Letter to Dean M. Roosa.
Kent, F. W. 1961. A probable nesting of Short-eared Owls in Johnson County. **Iowa Bird Life** 31:70.

[Boreal Owl, **Aegolius funereus**]

STATUS: Class VI.

RECORDS: There are 3 reports from Floyd Co.: in 1914, 14 Jul 1915, and 25 Mar 1916 (Fenton 1916). One of these specimens was identified by Bailey as a Screech Owl (Gabrielson 1917b). A flock was reported near What Cheer, Keokuk Co., in 1890 (Nauman 1934). The identification is probably erroneous, as they were flushed regularly from a grassy ravine, an unlikely habitat and behavior for this species. Boreal Owl was also listed by Allen (1870), by Cooke (1888), and from Linn and Webster counties by Anderson (1907) without evidence of specific sightings.

COMMENT: This northern owl is regular in winter in N Minnesota but is accidental in S Minnesota (Green and Janssen 1975). There are a few old records for N Illinois (Bohlen 1978), 3 records from South Dakota (Whitney et al. 1978), and 1 from SC Nebraska (Johnsgard 1980).

REFERENCE:

Nauman, E. D. 1934. Notes on owls in southeastern Iowa. **Iowa Bird Life** 4:6-7.

Northern Saw-whet Owl, **Aegolius acadicus**

STATUS: Regular; rare winter visitor. Class I-S.

HABITAT: Distinctly prefers conifer stands, especially younger ones, but may be found in protected deciduous woodland edge.

WINTER: Northern Saw-whet Owls have been reported on 14 CBCs in the period 1960-1982, with an average of 1.6 per year and a high of 4. Peak fall return dates are from mid-Oct to early Nov, and most have left Iowa by late Mar.

Early dates: 5 Oct 1959 (Davenport, IBL 29:108)
6 Oct 1977 (Davenport, IBL 47:145)
7 Oct 1981 (Mason City, Iowa State University specimen)
Late dates: 4 May 1972 (Pella, IBL 42:39)

22 Apr 1975 (Davenport, IBL 45:58)
11 Apr 1969 (Davenport, PCP)

SUMMER: One was reported at Sharon, Johnson Co., on 11 Jul 1967 (IBL 37:65). Breeding was said to occur across the river from Omaha (Anderson 1907), but there is no substantiating evidence for this. In Minnesota, nesting occurs south to Minneapolis (Green and Janssen 1975).

COMMENT: This diminutive owl is probably more frequent than records indicate. Its tame nature and preference for fairly heavy vegetation make it difficult to detect. One can walk by a Northern Saw-whet Owl without flushing it, and sometimes it may be caught by hand. Of 165 banded at Davenport, only 6 were from spring (PCP).

ORDER CAPRIMULGIFORMES

Goatsuckers, Family Caprimulgidae

This family has 67 species worldwide, 9 of which occur in North America. Of the 4 species reported from Iowa, 3 are regular and 1 is Class V. Caprimulgids are known for their persistent calls at night, and to many people, the call is more familiar than the birds themselves, as they normally rest or sleep during the day and become active at dusk. All use their disproportionately large mouths and long facial bristles to capture insects in flight. Their feet and legs are very small and of little use on the ground. They nest on the ground or a flat surface but construct no nest. The eggs are as well camouflaged as the birds themselves, and detection is nearly impossible unless the bird is flushed from the nest.

Common Nighthawk, **Chordeiles minor**

STATUS: Regular; common migrant and summer resident. Class I-S N.
HABITAT: Nearly exclusively associated with towns and cities, where it utilizes flat roofs for nesting.
SPRING MIGRATION: Arrives in S Iowa in early May and N Iowa in mid-May.
Early dates: 2 May 1964 (Iowa City, FWK)
2 May 1969 (Iowa City, FWK)
3 May 1965 (Iowa City, FWK)
SUMMER: Normally lays 2 eggs on a flat roof.
FALL MIGRATION: Most leave by early Sep. Large, loose groups of migrating nighthawks are notable in late Aug and early Sep.
Late dates: 15 Oct 1967 (Waterloo, IBL 37:99)
15 Oct 1982 (Sioux Center, IBL 52:122)
14 Oct 1963 (Davenport, IBL 33:88)
14 Oct 1977 (Iowa City, IBL 47:145)
COMMENT: Special dawn or dusk surveys of towns will be needed if the nighthawk population of Iowa is to be assessed.

[Common Poorwill, **Phalaenoptilus nuttallii**]

STATUS: Class V.
RECORDS: A set of 2 eggs and a bird shot almost to pieces were reported

from Pottawattamie Co. on 5 May 1895 (Anderson 1907). One was heard at Mud L., Clay Co., on 29 May 1935 (Ammann 1936). These records are possible but insufficiently substantiated for confirmation of the identification. One was also said to have been taken at Grinnell, Poweshiek Co., in 1880 (Cooke 1888) and was listed for that location by Kelsey (1891). Lynds Jones doubted Kelsey's record (Anderson 1907).

COMMENT: This western species is normally found in W Kansas and W Nebraska but is not a regular eastward vagrant. There is 1 record for W Minnesota (Green and Janssen 1975) but none from states to the east of Iowa. Nesting occurred in E Nebraska (Lancaster Co.) in 1976 (Johnsgard 1980).

REFERENCE:
Ammann, G. A. 1936. Nuttall's Poor-will in Clay County. Iowa Bird Life 6:7.

Chuck-will's-widow, **Caprimulgus carolinensis**

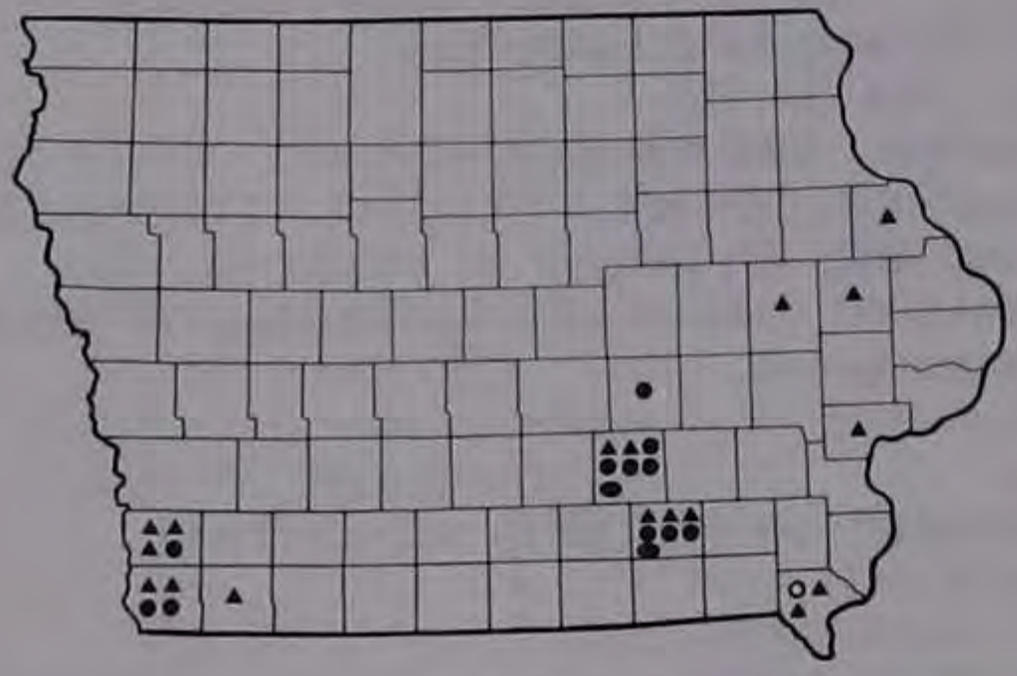
STATUS: Regular; rare summer resident south. Class I-P N.

HABITAT: In SE and SC Iowa, in undisturbed woodland with leaf litter; in SW Iowa, seems to prefer ecotone between prairie and wooded gullies.

SUMMER: All but 1 of the records are recent (Map 6.77). The first record on 17 Jun 1933 is from Lee Co., where a specimen was taken but not preserved (DuMont 1935). The next report was from Wildcat Den S.P. on 9 May 1964 (Petersen 1964). The banding of 1 at Camp Arrowhead se of Ottumwa in 1969 was the first of a regular series of findings of this species. A nest with 2 eggs on 21 May 1970 and young on 11 Jun was photographed at Camp Arrowhead (Ayres and Ayres 1970). Summering birds, reported every year since 1970, have been located at Shimek F., s of Ottumwa (Camp Arrowhead and Forest Lake Baptist Camp), Quercus Wilderness A. in S Mahaska Co., in Poweshiek Co., and in the loess hills n of Waubonsie S.P. and in NW Mills Co. Of the more northerly records, 1 was a transient at Dubuque on 22 May 1975 (Crossley 1975) and those in Jones and Linn counties were found from May to Jul (IBL 43:75, 44:73).

Early dates: 24 Apr 1970 (s of Ottumwa, Ayres and Ayres 1970)
7 May 1971 (Shenandoah, IBL 41:51)
9 May 1964 (Wildcat Den S.P., Petersen 1964)
9 May 1981 (Mills Co., IBL 51:67)

Late dates: mid-Sep 1969 (s of Ottumwa, Ayres and Ayres 1970)
30 Jul 1974 (Stone City, Jones Co., IBL 44:73)



Map 6.77 Chuck-will's-widow county locations by year; some of the spring birds summered.

21 Jul 1980 (Waubonsie S.P., IBL 50:76)

COMMENT: A South Dakota record along the Big Sioux R. opposite Plymouth Co. on 27 May 1979 (Bryant 1979), Minnesota's first record in 1982 nw of Minneapolis (Breckenridge 1982), and 3 recent Wisconsin records (Barger et al. 1975), indicate that this species may extend further north. It is not clear whether the recent regularity of Chuck-will's-widow in Iowa is due to more observer awareness or to range expansion. Dawn and dusk surveys in S Iowa should uncover more regular locations.

REFERENCES:

Ayres, C. C., and D. J. Ayres. 1970. A first banding and nesting record for Iowa, the Chuck-will's-widow. **Iowa Bird Life** 40:59-65.

Breckenridge, W. J. 1982. Chuck-will's-widow--First known occurrence in Minnesota. **Loon** 54:139-140.

Bryant, E. 1979. Chuck-will's-widow near Akron, Iowa. **Iowa Bird Life** 49:91.

Crossley, G. 1975. Chuck-will's-widow at Dubuque. **Iowa Bird Life** 45:78.

DuMont. P. A. 1935. Chuck-will's-widow collected in southeastern Iowa. **Wilson Bull.** 47:239.

Petersen, P. C. 1964. Chuck-will's-widow at Wildcat Den State Park. **Iowa Bird Life** 34:49-50.

Whip-poor-will, **Caprimulgus vociferus**

STATUS: Regular; common summer resident. Class I-S N.

HABITAT: Requires moist woods with a buildup of leaf litter.

SUMMER: Whip-poor-wills can be heard at dusk in heavily wooded areas in Iowa, but there is no survey or other data to define their distribution and frequency. Eggs, normally 2, are laid on the ground in a well-drained site, often near woodland edge. A newly laid clutch was discovered in the Amana Woods on 25 Jun 1958 and followed until hatching about 16 Jul (Kent and Vane 1958). Whip-poor-wills arrive in S Iowa in late Apr; most appear to be gone by early Sep, but cessation of singing makes late dates hard to determine.

Early dates: 11 Apr 1971 (Ames, IBL 41:51)
12 Apr 1968 (Davenport, IBL 38:58)

Late dates: 20 Oct 1973 (Davenport, IBL 43:105)
8 Oct 1967 (Sioux City, IBL 37:99)
6 Oct 1975 (Davenport, PCP)

COMMENT: Nesting and abundance data are scarce. Nests are difficult to find, but surveys at dusk could be used to evaluate frequency and distribution in the state.

REFERENCE:

Kent, F. W., and R. F. Vane. 1958. A nesting of the Whip-poor-will in Iowa County. **Iowa Bird Life** 28:70-79.

ORDER APODIFORMES

Swifts, Family Apodidae

There are 79 species of swifts found in the world, with 9 reported from North America. Only 1 species has been reported in Iowa, where it is regular. Swifts are gregarious, swallowlike birds with long, pointed wings,

short tail and neck, and rapid flight. The Iowa species nests and roosts in chimneys. Their food is insects captured while flying. The sexes are alike.

Chimney Swift, **Chaetura pelagica**

STATUS: Regular; common summer resident. Class I-S N.
HABITAT: Open sky over urban areas and farmsteads.
SPRING MIGRATION: Few data are available to indicate the peak period.
Early dates: 11 Apr 1965 (Iowa City, FWK)
12 Apr 1971 (Davenport, IBL 41:51)
13 Apr 1954 (Iowa City, FWK)
13 Apr 1955 (Iowa City, FWK)
13 Apr 1958 (Davenport, PCP)
SUMMER: Swifts breed throughout Iowa. Their nest is usually placed in a chimney. They were found on all BBSs, the yearly average varying from 5.3 to 15.4 birds per route. The average number per route declined 33 percent during the period 1967-1980.
FALL MIGRATION: The peak period is early Sep to early Oct.
Late dates: 15 Oct 1962 (Des Moines, IBL 32:83)
15 Oct 1967 (Waterloo, IBL 37:99)
13 Oct 1962 (Sioux City, IBL 32:83)
COMMENT: The largest number of swifts reported was 1,500 in Iowa City on 8 Sep 1976 (IBL 46:114). Sherman (1952) made a comprehensive study of Chimney Swift nesting in Iowa, building a special tower for study purposes (Daubendiek 1969).
REFERENCE:
Daubendiek, M. S. 1969. The Sherman swift tower. **Iowa Bird Life** 39:46-48.

Hummingbirds, Family Trochilidae

This large, neotropical family contains 319 species, 21 of which have been reported in North America. The only Iowa species is regular in the state. Hummingbirds are the smallest birds, with long needlelike bills for sipping the nectar from flowers. They are very maneuverable fliers and are able to hover and fly backward. Their food is mainly nectar but may include insects. Although not recorded in Iowa, the Rufous Hummingbird has been reported from several states bordering Iowa and may occasionally stray into the state during fall migration.

Ruby-throated Hummingbird, Iowa City, 1 Aug 1957, F. W. Kent.

Ruby-throated Hummingbird, **Archilochus colubris**

STATUS: Regular; uncommon migrant and summer resident. Class I-S N.
HABITAT: Woodlands and flower gardens.
SPRING MIGRATION: Few data are available to indicate the peak period.
Early dates: 25 Apr 1975 (Webster City, IBL 45:58)
27 Apr 1964 (Sioux City, IBL 34-47)
28 Apr 1962 (Davenport, IBL 32:43)
SUMMER: This species nests throughout Iowa, but the breeding population has been decreasing in recent years. Hummingbirds are much more common in NE Iowa because of the deep woods found there.
FALL MIGRATION: The peak period is mid-Aug to mid-Sep.
Late dates: 27 Nov 1977 (Waterloo, IBL 47:145)
20 Nov 1980 (Ledges S.P., IBL 51:28)
10 Oct 1982 (Iowa City, IBL 52:122)

ORDER CORACIIFORMES

Kingfishers, Family Alcedinidae

The kingfisher family contains 87 species worldwide, 3 of which have been reported in North America. The only Iowa species is regular in the state. Kingfishers are large-headed birds with massive straight-pointed bills. Most are solitary and nest in burrows dug into embankments. They are usually found perched on exposed vantage points over water. The North American species feed mostly on fish.

Belted Kingfisher, **Ceryle alcyon**

STATUS: Regular; uncommon migrant and summer resident, rare in winter along open water. Class I-S N.
HABITAT: Rivers, streams, ponds, and lakes.
SPRING MIGRATION: The kingfisher returns with the breakup of the ice on streams, usually in late Mar.
SUMMER: Kingfishers nest throughout Iowa. The nest is in a burrow that is dug into a dirt bank and is usually but not necessarily near water. Kingfishers were found on 24 of 34 BBS routes, the yearly average varying from 0.1 to 0.5 birds per route. The overall average, 0.2 birds per route, remained steady during the period 1967-1980.
FALL MIGRATION: Kingfishers remain until the streams freeze over, usually in Nov or early Dec.
WINTER: Small numbers regularly winter wherever there is sufficient open water. The average numbers found on CBCs have remained steady during the last 20 years.
COMMENT: Little is known about the kingfisher in Iowa, especially its migratory movements and nesting.

ORDER PICIFORMES

Woodpeckers, Family Picidae

This large family has 210 species worldwide, 22 of which have been reported in North America. Of the 10 Iowa species, 7 are regular and 3 are accidental. Five regular species are common breeding birds; 2 are rare to uncommon breeding birds. Four species are nonmigratory, and the rest migrate to some extent in the winter. Woodpeckers have straight, chisellike bills and stiff spiny tail feathers. Their principal foods are insects, nuts, berries, and sap. In Iowa species, the sexes are dimorphic except for the Red-headed Woodpecker. Winter population changes have been studied by using CBC data (Koenig 1977).

Downy and Hairy woodpeckers,
Iowa City, 12 Sep 1953,
F. W. Kent.

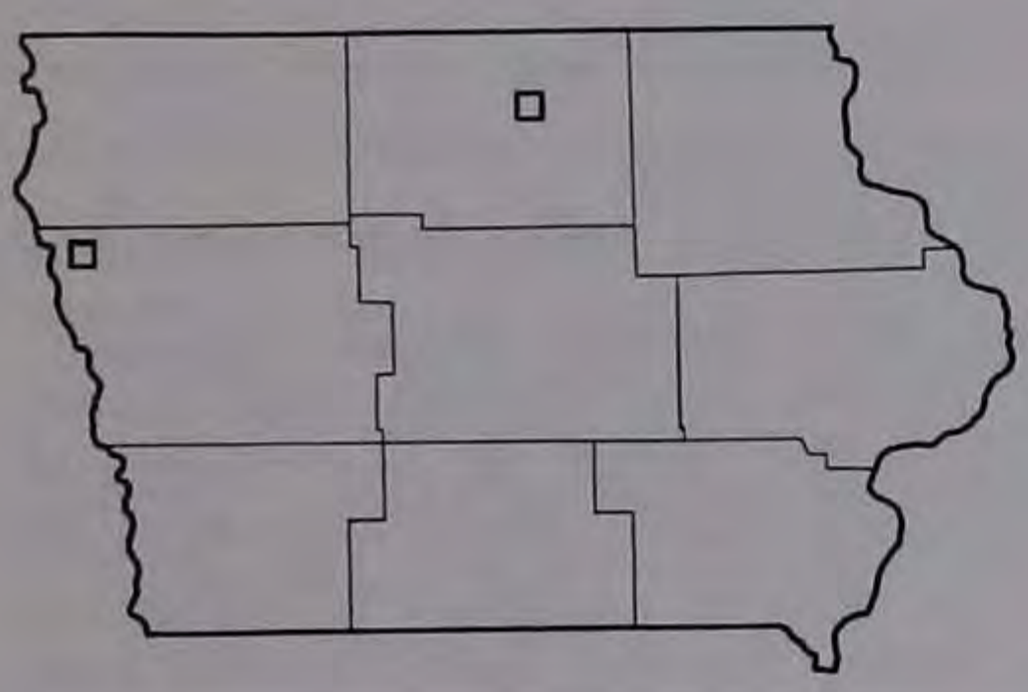
Pileated Woodpecker,
A. B. Thiermann.

Lewis' Woodpecker, **Melanerpes lewis**

STATUS: Accidental. Class III.
RECORDS: There are 2 old records for this western woodpecker (Map 6.78). One was in Sioux City from 28 Nov 1928 to 20 Mar 1929 (Bailey 1929; Youngworth 1929, 1931) and the other at Clear Lake, Cerro Gordo Co., from 10 Nov 1935 to 10 Mar 1936 (Davis 1936a, 1936b).
COMMENT: Lewis' Woodpecker nests from British Columbia and Montana south to S California and New Mexico and east to C Colorado and locally and/or irregularly to the western parts of South Dakota, Nebraska, and Oklahoma. In E Colorado its habitat is open riparian woodland in the foothills of the Rockies. It is migratory, wintering from C Colorado south. In the winter it is casual on the plains to E Nebraska, Kansas, and Oklahoma. Farther east it is a rare winter vagrant with records from Missouri, Iowa, Minnesota, Wisconsin, Illinois, Michigan, Ontario, and Rhode Island. Records extend from Oct to May, with the peak Dec to Apr. As in Iowa, several of these birds spent a large part of a winter at 1 location.

REFERENCES:

Bailey, M. L. 1929. (No title.) **Bull. Iowa Orn. Union** 7:3.
Davis, F. H. 1936a. Lewis's Woodpecker at Clear Lake. **Iowa Bird Life** 6:12.
Davis, F. H. 1936b. Lewis's Woodpecker at Clear Lake. **Iowa Bird Life** 6:28.
Youngworth, W. 1929. (No title.) **Bull. Iowa Orn. Union** 7:3.



Map 6.78 Lewis' Woodpecker records.

Red-headed Woodpecker, **Melanerpes erythrocephalus**

STATUS: Regular; abundant summer resident, rare to locally common winter resident. Class I-S N.
HABITAT: Open woodlands, woodland edges, and farm shelterbelts.
SPRING MIGRATION: Due to the number overwintering, it is difficult to determine the start of spring migration. The peak period is from mid-Apr to early May.
SUMMER: Red-heads nest throughout Iowa. They were found on all 34 BBSs with the yearly average varying from 7.8 to 12.2 birds per route. The overall average was 10.7 birds per route, and the average increased from 1967 to 1980.
FALL MIGRATION: Migration starts in mid-Aug and peaks in early Sep, but 204 were seen along the Chariton R. on 2 Oct 1982 (IBL 52:122).

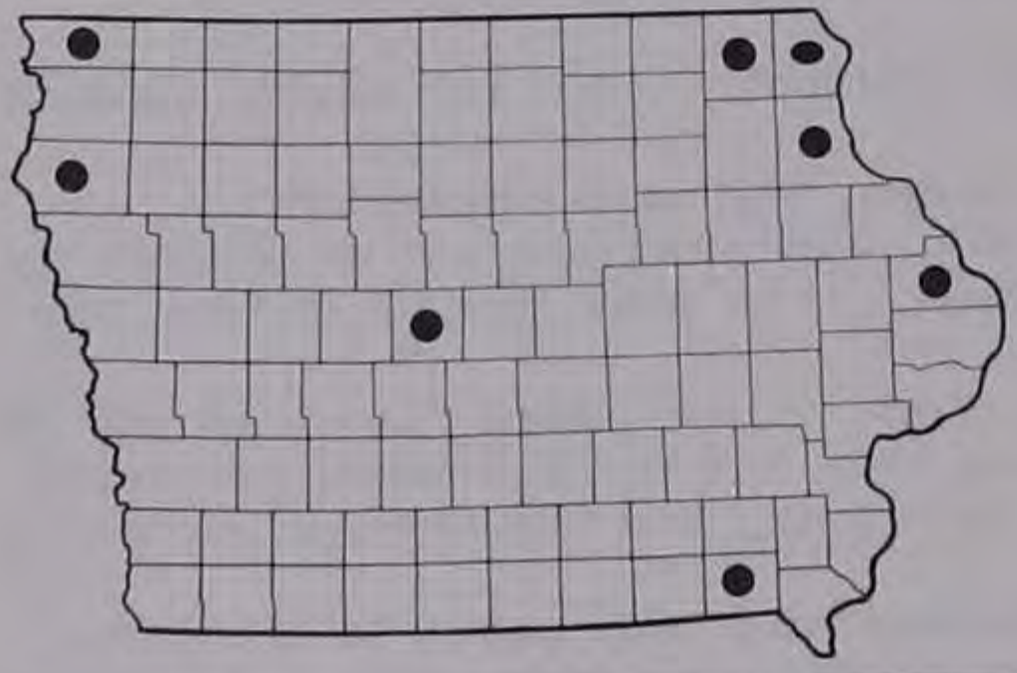
WINTER: Red-heads regularly winter in Iowa, but numbers fluctuate widely from year to year. The largest numbers are found in E Iowa, the fewest in NW and NC Iowa. The number reported per party hour on CBCs has been increasing since the early 1950s (Koenig 1977).
COMMENT: Although this species merits special concern (Tate and Tate 1982), it is still abundant in Iowa. The spread of Dutch elm disease through Iowa in the 1960s and 1970s probably contributed to this by providing many nest sites.

Red-bellied Woodpecker, **Melanerpes carolinus**

STATUS: Regular; common permanent resident. Class I-S N.
HABITAT: Woodlands.
SUMMER: Red-bellies nest throughout Iowa, being most abundant in the east and least abundant in NW and NC Iowa. They were found on 32 of 34 BBS routes, with the yearly average varying from 0.4 to 1.3 birds per route. The 1967-1980 average of 0.6 birds per route remained steady over that period.
WINTER: Red-bellies become more conspicuous in winter when they tend to frequent more open areas and bird feeders. The average number seen per party hour on CBCs has increased slightly since the late 1950s (Koenig 1977).

Yellow-bellied Sapsucker, **Sphyrapicus varius**

STATUS: Regular; common migrant, rare summer and winter resident. Class I-S N.
HABITAT: Wooded areas, orchards, and pine groves.
SPRING MIGRATION: Migration begins in late Mar, peaks in mid-Apr, and ends in late May.
SUMMER: Anderson (1907) considered it a common summer resident, especially in the north, but it soon became rare (DuMont 1933; Brown 1971). Youngworth (1952) found a nest with young on 15 Jun 1951 in Wanata S.P., Clay Co. There are 3 recent records of nesting, all from Allamakee Co.: 20 Jun 1975 (Koenig 1976), 11 Jun 1977 (IBL 47:101; DK), and 19 Jun 1982 (IBL 52:91). All 3 nests contained young at the time of discovery. There are also recent Jun-Jul sight records from Boone, Clayton, Jackson, Lyon, Van Buren, Winneshiek, and Woodbury counties (Map 6.79). Fenton (1923-24) said it nested in Floyd Co. from 1917 to 1923.



Map 6.79 Yellow-bellied Sapsucker summer and nesting by county, 1960-1982.

FALL MIGRATION: Migration begins in late Aug and peaks in late Sep to early Oct.
WINTER: Sapsuckers winter in small numbers, especially in SE Iowa. They have occurred on CBCs throughout Iowa, the average number per party hour on the CBCs increasing since the early 1950s (Koenig 1977).
COMMENT: Intensive searching in riparian woodlands in N and E Iowa during the breeding season probably would reveal the sapsucker to be a more numerous nesting bird than is currently reported.
REFERENCE:
Youngworth, W. 1952. Yellow-bellied Sapsucker nesting in northwest Iowa. **Iowa Bird Life** 22:59-60.

Downy Woodpecker, **Picoides pubescens**

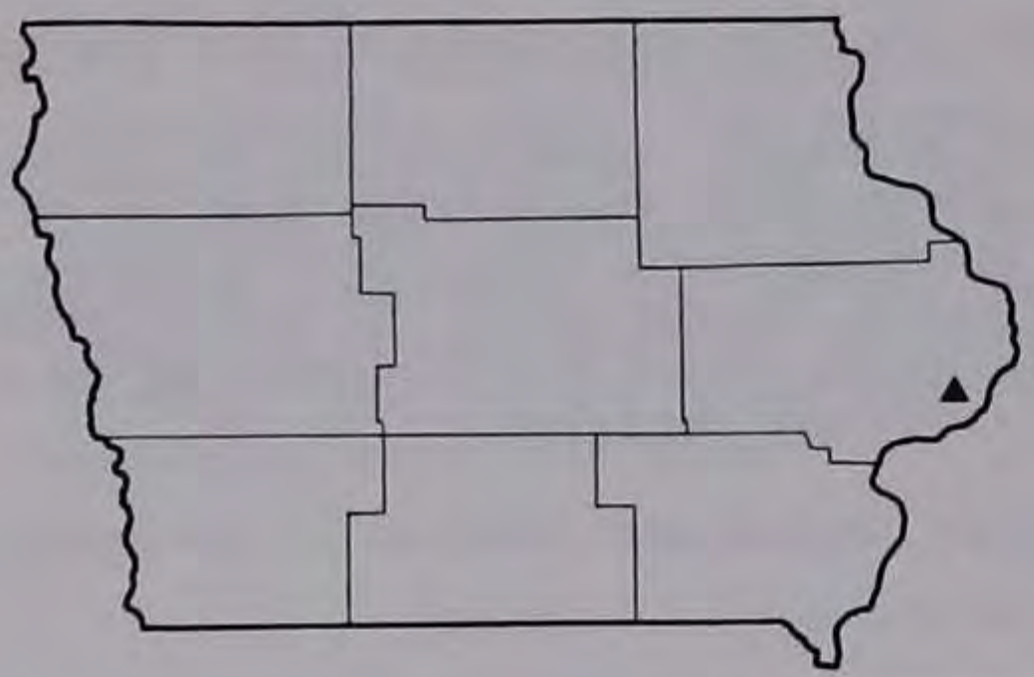
STATUS: Regular; abundant permanent resident. Class I-S N.
HABITAT: Woodlands, suburban areas, orchards, and shelterbelts.
SUMMMER: Downies nest throughout Iowa. They were found on 31 of 34 BBS routes, with the yearly average varying from 0.5 to 1.2 birds per route. The overall average, 0.8 birds per route, remained steady during the period 1967-1980.
WINTER: Like the Hairy Woodpecker, the Downy is more conspicuous in winter as it tends to frequent more open areas and feeding stations. The average number per party hour on CBCs has decreased slightly since the early 1950s (Koenig 1977).

Hairy Woodpecker, **Picoides villosus**

STATUS: Regular; common permanent resident throughout Iowa. Class I-S N.
HABITAT: Woodlands, especially along river bottoms.
SUMMER: Hairies nest throughout Iowa and were found on 24 of 34 BBS routes. The yearly average varied from 0.1 to 0.6 birds per route, and the 1967-1980 average was 0.2 birds per route.
WINTER: Hairies become more conspicuous in winter as they move into more open areas and as they frequent feeding stations. The average number per party hour on CBCs has declined slightly since the early 1950s (Koenig 1977).

Three-toed Woodpecker, **Picoides tridactylus**

STATUS: Accidental. Class III.
RECORD: The only record of this northern woodpecker is from Bettendorf, Scott Co., on 28 to 31 May 1975 (Fredericksen 1976) (Map 6.80). The bird died and was taken to the Putnam Museum but was destroyed by a freezer failure before it could be mounted (Petersen 1981).
COMMENT: This species breeds in boreal forest from Alaska to E Canada and south in the mountains of the W United States to C California, Arizona, and New Mexico. In the C United States it is a rare breeder in the Rocky Mountains and Black Hills. It is a rare winter visitor to the northern parts of Minnesota, Wisconsin, and Michigan, and a very rare to casual winter visitor to the more southern parts of these states. South of these states there is only the Iowa record. There are 2 records from Nebraska, which may be strays from the Black Hills.

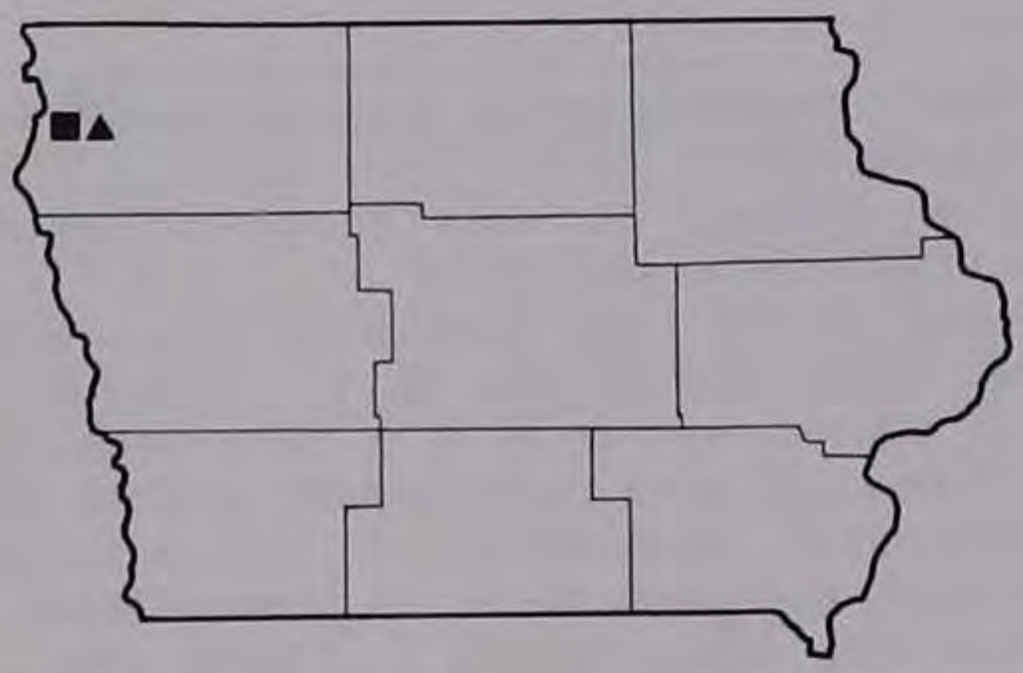


Map 6.80 Three-toed Woodpecker record.

REFERENCES:
Fredericksen, M. 1976. Northern Three-toed Woodpecker in Iowa. **Iowa Bird Life**. 46:27.
Petersen, P. C. 1981. Note to Records Committee.

Black-backed Woodpecker, **Picoides arcticus**

STATUS: Accidental. Class III.
RECORDS: There are 2 well-substantiated reports (Map 6.81): 23 Dec 1978 at Boyden, Sioux Co. (IBL 49:25, 56), and 13 May 1979 at Hull, Sioux Co. (Blankenspoor 1979). It is possible that these Sioux Co. records could be of the same individual. There is also an undocumented report from Mason City on 7 Jan 1978 (IBL 48:40). Anderson (1907) gives a record for Henry Co. ca. 1885 and DuMont (1931, 1933) lists an 18 Feb 1924 record from Des Moines.
COMMENT: This species breeds in boreal forest from Alaska and N California to Labrador and N Maine. In the NC United States it is an uncommon breeder in the Rocky Mountains, in the Black Hills, and in NE Minnesota, N Wisconsin, and N Michigan. In winter it is rare to casual (with much year-to-year fluctuation) in S and C Minnesota, in Wisconsin, and in Michigan. South of these states it is a rare winter visitor. Records are from Iowa, Illinois, Indiana, Missouri, and Nebraska from Sep to May, with a strong peak in Dec to Feb and a smaller one in May.



Map 6.81 Black-backed Woodpecker records.

As a breeder this species is mobile and opportunistic, moving in numbers to areas where stands of trees have been killed by storm, fire, avalanche, or insect infestation. They prefer to forage on dead trees on which the bark is loose but still present, uncovering the tunnels of insect larvae by stripping off bark.

REFERENCE:

Blankenspoor, G. W. 1979. Black-backed Three-toed Woodpecker in northwest Iowa. **Iowa Bird Life** 49:86.

Northern Flicker, **Colaptes auratus**

STATUS: Regular; abundant summer resident, common in winter in S and uncommon in N Iowa. Class I-S N.

HABITAT: Edges of woods, orchards, windbreaks, and urban areas.

SPRING MIGRATION: Due to the number of flickers overwintering, it is difficult to determine when spring migration starts. It probably begins in late Mar and peaks about a month later.

SUMMER: Flickers nest throughout Iowa and were found on all 34 BBS routes. The yearly average varied from 3.9 to 8.7 birds per route; the overall average was 5.5. There was a 35 percent decrease in the average number per route from 1967 to 1980.

FALL MIGRATION: The peak is between mid-Sep and mid-Oct.

WINTER: Flickers were reported on CBCs throughout Iowa, with the largest numbers in the south. The average number per CBC party hour has been increasing since the late 1950s (Koenig 1977).

COMMENT: In 1973, the A.O.U. Committee on Classification and Nomenclature reclassified all the North American flickers into a single species, **Colaptes auratus**. The Yellow-shafted Flicker (**C. auratus auratus**) is a common nesting and wintering bird throughout Iowa and the western Red-shafted Flicker (**C. a. cafer**) is rare but reported regularly during winter, mostly along the western border of Iowa.

Pileated Woodpecker, **Dryocopus pileatus**

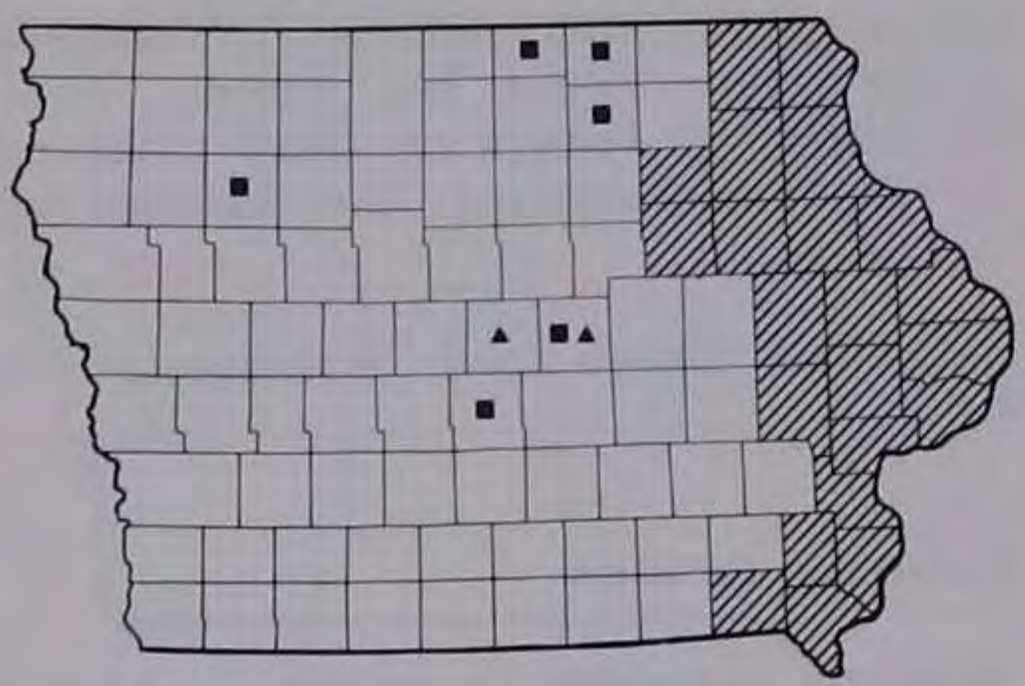
STATUS: Regular; uncommon permanent resident in eastern third of Iowa, rare or absent in the remainder of the state (Map 6.82). Class I-S N.

HABITAT: Extensive stands of mature timber, espcially river bottom timber.

SUMMER: Pileated Woodpecker could be expected to nest throughout its range in Iowa, but the few published references to nesting are from the northeast quarter of the state (Polderboer and Polderboer 1948; Ennis 1955; Hays 1959). The westernmost record is from Mitchell Co. (Coe 1947), the southernmost record from Scott Co. (**IBL** 34:47). Other counties with nest records include Allamakee, Cedar, and Winneshiek. The few known nesting dates range from late Apr to mid-Jul.

WINTER: Although the Pileated Woodpecker is not known to migrate, there is some evidence of a shifting of the population during fall and winter, possibly involving the young dispersing from their natal areas. Most of the recent sightings of Pileated Woodpeckers from the western two-thirds of Iowa were from Sep to Feb. The average number seen per CBC party hour has been increasing since the early 1950s (Koenig 1977; **IBL** 49:11).

COMMENT: Graber et al. (1977) stated that the Pileated Woodpecker has undergone a complete population cycle in Illinois since settlement. The



Map 6.82 Pileated Woodpecker range and extralimital records, 1960-1982.

same is true in Iowa, where it was considered rare by Anderson (1907), although it had been more numerous at the arrival of the settlers. It has been increasing since the early 1900s (DuMont 1933; Brown 1971; Koenig 1977; IBL 49:11). However, there are still very few records away from the Mississippi R. counties, even in the southeastern quarter of the state where there appear to be large areas of adequate habitat.

REFERENCES:

Coe, A. 1947. Notes on Woodcock and Pileated Woodpecker. **Iowa Bird Life** 17:56.

Ennis, J. H. 1955. The Pileated Woodpecker in Iowa, with nesting notes on Jones County. **Iowa Bird Life** 25:50-53.

Graber, J., R. Graber, and E. Kirk. 1977. Illinois birds: Picidae. Ill. Nat. Hist. Surv. Biol. Notes 102, 73 p.

Hays, R. 1959. Pileated Woodpecker nesting in Waterloo, Iowa. **Iowa Bird Life** 29:93-96.

Polderboer, E. B., and E. H. Polderboer. 1948. A nesting record of the Pileated Woodpecker in Dubuque County. **Iowa Bird Life** 18:15-16.

ORDER PASSERIFORMES

Tyrant Flycatchers, Family Tyrannidae

This New World family of 365 species includes 39 that are found in North America. Of the 14 Iowa species, 12 are regular, 1 is casual, and 1 is accidental. Flycatchers are usually solitary and migratory. They are typically found on exposed perches from which they sally forth to catch insects. The sexes are usually alike. Most species have loud and distinctive calls. The species in the genus **Empidonax** (Yellow-bellied, Acadian, Willow, Alder, and Least flycatchers) are almost impossible to identify in the field except by song. Peter C. Petersen's banding records from Pine Hill Cemetery, Davenport, provide a basis for comparing the abundance of **Empidonax** during the migration period in Iowa. During the period 1959-1980, Petersen banded the following: 995 Yellow-bellied, 214 Acadian, 548 Traill's (Willow and Alder), and 996 Least.

Western Kingbird, Johnson Co., 27 May 1962, F. W. Kent.

Eastern Kingbird, Johnson Co., 30 May 1960, F. W. Kent.

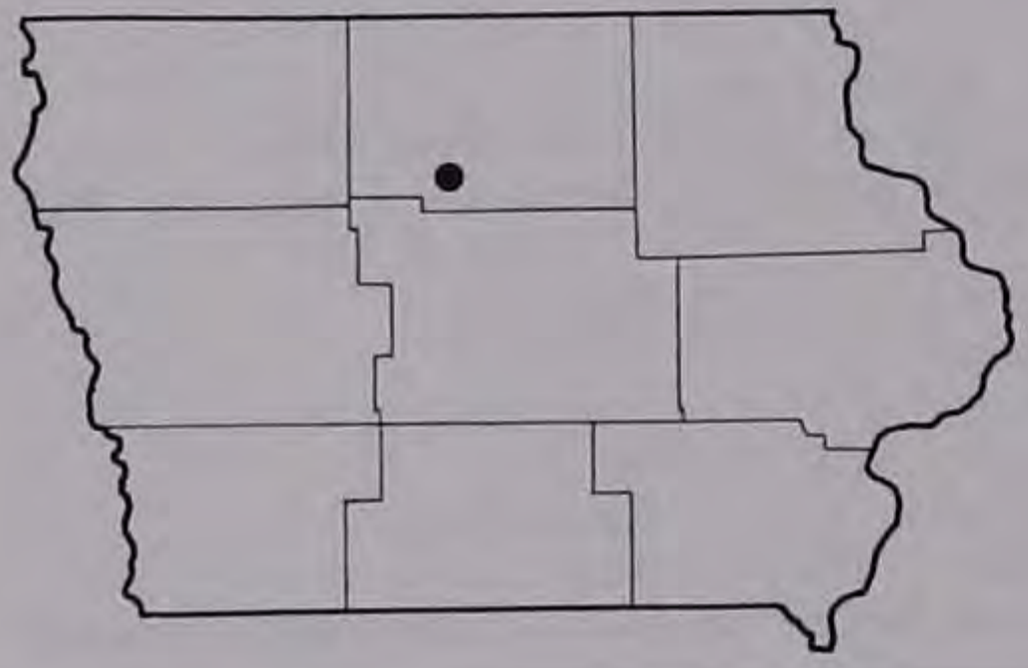
Olive-sided Flycatcher, **Contopus borealis**

STATUS: Regular; uncommon migrant. Class I-S.
HABITAT: Woodland edge; usually perches at the top of dead trees.
SPRING MIGRATION: The migration peak probably occurs in mid- to late May.
Early dates: 28 Apr 1965 (Des Moines, IBL 35:51)
3 May 1978 (Ames, JJD)
4 May 1977 (Ames, JJD)
Late dates: 13 Jun 1982 (Davenport, IBL 52:91)
11 Jun 1979 (Union Grove S.P., IBL 49:84)
8 Jun 1977 (Fayette Co., IBL 47:102)
SUMMER: Olive-sided Flycatchers do not breed in Iowa. The only summer record is one on 4 Jul 1962 in N Clayton Co. (IBL 49:74).

FALL MIGRATION: The migration peak probably occurs in late Aug to early Sep.
Early dates: 25 Jul 1977 (Iowa City, IBL 49:102)
4 Aug 1978 (Marquette, DK)
6 Aug 1976 (Yellow River F., IBL 46:83)
Late dates: 20 Oct 1968 (Davenport, IBL 38:125)
23 Sep 1973 (Burlington, IBL 43:70)
22 Sep 1973 (Waterloo, IBL 43:105)
22 Sep 1970 (Cedar Rapids, IBL 41:27)
COMMENT: This species is often overlooked, and more information is needed on its migratory movements through Iowa.

Western Wood-Pewee, **Contopus sordidulus**

STATUS: Accidental. Class III.
RECORD: The only record of this western species is of a single singing bird at Elm L., Wright Co., on 21 Jun 1979 (Schaufenbuel 1979) (Map 6.83).
COMMENT: The Western Wood-Pewee breeds from Alaska and Manitoba south through W United States and Mexico to Guatemala and perhaps Colombia. It breeds throughout the higher portions of W United States east to W North Dakota, W South Dakota, E Colorado, W Oklahoma, W Kansas, and NE New Mexico. At higher elevations it breeds in open pine or aspen forest; on the plains it is found in mature riparian woodland and shady urban areas. In migration, it occurs east to the central Dakotas, Nebraska, Kansas, and C (and casually SE) Texas. East of its regular migration routes it is not a frequently reported vagrant, but silent birds would be impossible to distinguish from the Eastern Wood-Pewee. There are fall records from Mississippi and Louisiana, possibly from the casual movement to the SE Texas coast. There are also fall records from Minnesota and Wisconsin and spring records from Massachusetts and Ontario. More relevant to the Iowa record are possible old nesting records from Wisconsin, including 1 in which the birds were collected and verified by Coues (Kumlien and Hollister 1951) and a well-documented nesting record from Minnesota in 1977 (**Am. Birds** 31:1144). At this last location birds were seen again in 1978 and 1979 (**Am. Birds** 32:1165, 33:865), with nest building observed in 1978.
REFERENCE:
Schaufenbuel, J. 1979. First Western Pewee for Iowa. **Iowa Bird Life** 49:86.



Map 6.83 Western Wood-Pewee record.

Eastern Wood-Pewee, **Contopus virens**

STATUS: Regular; common summer resident. Class I-S N.
HABITAT: Woodlands.
SPRING MIGRATION: Few data are available to indicate a peak period.
Early dates: 7 May 1961 (Ottumwa, IBL 31:40)
7 May 1964 (Cone M., FWK)
7 May 1981 (Ames, JCR)
SUMMER: Pewees nest throughout Iowa and have been found on all 34 BBSs. The yearly average of 1.1 birds per route has remained steady during the period 1967-1980.
FALL MIGRATION: Few data are available to indicate a peak period.
Late dates: 13 Oct 1982 (Ames, IBL 52:122)
10 Oct 1973 (Davenport, IBL 43:105)
10 Oct 1982 (Lacey-Keosauqua S.P., IBL 52:122)
COMMENT: There are few data available on the nesting and migratory movements of this species in Iowa.

Yellow-bellied Flycatcher, **Empidonax flaviventris**

STATUS: Regular; uncommon migrant. Class I-S.
HABITAT: Edges of woodland.
SPRING MIGRATION: The peak period is late May to early Jun.
Early dates: 4 May 1977 (Davenport, IBL 47:60)
7 May 1972 (Waterloo, IBL 42:39)
9 May 1972 (Shenandoah, IBL 42:39)
Late dates: 7 Jun 1977 (St. Lucas, IBL 47:102)
7 Jun 1981 (Shimek F., IBL 51:101)
5 Jun 1978 (Waubonsie S.P., IBL 49:49)
SUMMER: Krider (1879) and Anderson (1907) indicated that the Yellow-bellied nested in Iowa, but tangible proof is lacking and there are no nesting records for this century. The 1 recent summer report is from Hamburg on 29 Jun 1969 (IBL 39:62).
FALL MIGRATION: The peak period is late Aug to early Sep.
Early dates: 5 Aug 1981 (Davenport, IBL 51:119)
13 Aug 1968 (Davenport, IBL 38:89)
14 Aug 1977 (Davenport, IBL 47:145)
Late dates: 12 Oct 1969 (Davenport, PCP)
10 Oct 1961 (Davenport, PCP)
7 Oct 1967 (Davenport, PCP)
COMMENT: The status of this species is somewhat misleading. It is not as easy to observe as other species of **Empidonax** because it is less vocal and usually perches near the ground within the canopy of shrubs and small trees. Consequently, it is seldom reported by field observers, although it is commonly captured in the nets of bird banders. The song is a spiritless "per-wee" rising on the second note. The call note is an abrupt "killik." The nesting range is far to the north of Iowa so summer sightings need careful evaluation.

Acadian Flycatcher, **Empidonax virescens**

STATUS: Regular; rare to locally common summer resident in east and south, rare or absent elsewhere. Class I-S N.
HABITAT: Large tracts of moist, mature woodlands, especially along streams or deep ravines within those woodlands.

SPRING MIGRATION: The peak period is late May.
Early dates: 8 May 1968 (Davenport, IBL 38:59)
9 May 1972 (Shenandoah, IBL 42:39)
11 May 1975 (Dubuque, IBL 45:40)
11 May 1978 (Davenport, PCP)
SUMMER: Acadians nest locally throughout E and S Iowa and are probably absent from NW and NC Iowa. Published nest dates range from late May to late Jun.
FALL MIGRATION: The peak period is late Aug to early Sep.
Late dates: 26 Sep 1964 (Davenport, PCP)
25 Sep 1963 (Davenport, IBL 33:89)
15 Sep 1971 (Davenport, PCP)
COMMENT: The Acadian is best located and identified by its sharp, explosive, two-syllable "pit-see" song.

Alder Flycatcher, **Empidonax alnorum**

STATUS: Regular; uncommon migrant, possibly rare summer resident. Class I-R.
HABITAT: Thickets along streams and marshes.
SPRING MIGRATION: A peak period is probably in late May.
Early dates: 15 May 1974 (Iowa City, IBL 44:44)
18 May 1979 (Nine Eagles S.P., DK)
20 May 1979 (Lovilia, DK)
SUMMER: Anderson (1907) recorded it (then a subspecies) as nesting in Linn Co. There are no recent nest records for the state. However, there are 14 recent mid-Jun to early Jul records, all from the eastern half of Iowa, which suggests possible breeding. These include Cedar Falls on 15 Jun 1979 (DK), Rice L. on 25 Jun 1979 (DK), Sweet M. on 21 Jun 1980 (IBL 51:113), Shimek F. on 13 Jun 1981 (IBL 51:101), and Lacey-Keosauqua S.P. on 12 Jul 1981 (IBL 51:101).
FALL MIGRATION: One was at Forney L. on 17 Aug 1982 (IBL 52:122).
COMMENT: In the field, this species can be identified only by song. Extensive fieldwork needs to be undertaken to determine its breeding status and migratory movements in Iowa. There are few well-substantiated records for this species, which was split from Traill's Flycatcher in 1973.

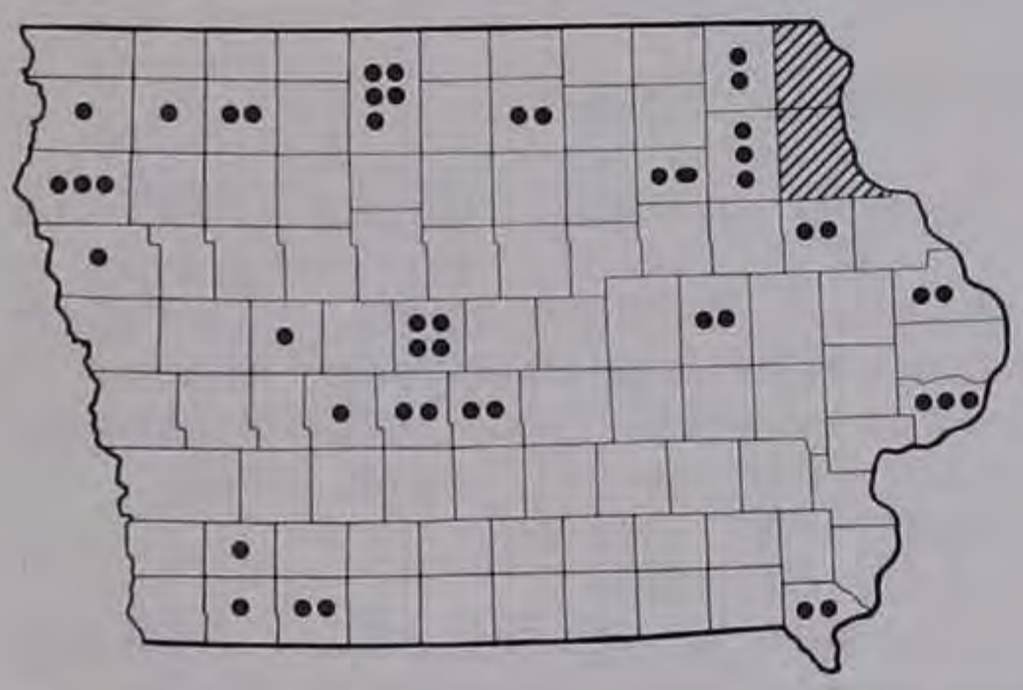
Willow Flycatcher, **Empidonax traillii**

STATUS: Regular; common summer resident. Class I-S N.
HABITAT: Dry brushy fields, thickets along streams and roads.
SPRING MIGRATION: No data are available on the migration peak. However, using Traill's Flycatcher data, the peak period probably is late May.
Early dates: 5 May 1964 (Davenport, PCP)
5 May 1965 (Davenport, PCP)
6 May 1966 (Davenport, PCP)
6 May 1975 (Iowa City, IBL 45:93)
SUMMER: Willow Flycatchers nest throughout Iowa. The numbers reported on BBSs decreased 40 percent during the period 1967-1980.
FALL MIGRATION: Using Traill's Flycatcher data, the peak period is probably late Aug.
Late dates: 25 Sep 1979 (Davenport, PCP)
21 Sep 1978 (Davenport, PCP)

COMMENT: In 1973 the American Ornithologists' Union Committee on Classification and Nomenclature decided to split Traill's Flycatcher, **E. traillii**, into 2 species: Willow Flycatcher, **E. traillii**, and Alder Flycatcher, **E. alnorum**. Field identification of the 2 species is impossible except by song. The song of the Willow Flycatcher is usually described as "fitz-bew" and that of the Alder Flycatcher as "wee-bee-o."

Least Flycatcher, **Empidonax minimus**

STATUS: Regular; abundant migrant, rare summer resident north. Class I-S N.
HABITAT: Open woodland, orchards, and woodland edges.
SPRING MIGRATION: The peak period is mid- to late May.
Early dates: 27 Apr 1981 (Ames, JCR)
30 Apr 1975 (Davenport, PCP)
1 May 1967 (Davenport, PCP)
1 May 1969 (Davenport, PCP)
SUMMER: The Least Flycatcher was an abundant breeding bird in N Iowa in the early 1900s (Anderson 1907; DuMont 1933). Brown (1971) recorded it as nesting in Linn and Emmet counties. The only recent nesting record is of adults feeding fledged young at Sweet M. on 5 Jul 1981 (IBL 51:101). It has been found every summer since 1973 in Allamakee, Clayton, Fayette, and/or Winneshiek counties. Other recent summer observations that indicate possible nesting were in Clay, Guthrie, Plymouth, and Scott counties. It also has been reported at least once on 18 BBS routes (Map 6.84).
FALL MIGRATION: The peak period is mid-Aug to early Sep.
Late dates: 16 Oct 1949 (McCausland, PCP)
5 Oct 1964 (Davenport, PCP)
5 Oct 1978 (Davenport, PCP)
COMMENT: Intensive fieldwork is needed to better delineate the nesting range and habits of this species in Iowa.



Map 6.84 Least Flycatcher summer records by county, 1960-1982. The shaded counties have more than 10 records.

Eastern Phoebe, **Sayornis phoebe**

STATUS: Regular; common summer resident northeast, uncommon to rare elsewhere. Class I-S N.
HABITAT: Wooded areas along streams.
SPRING MIGRATION: The peak of migration probably occurs in mid-Apr.

Early dates: 15 Mar 1936 (Boone Co., IBL 6:27)
18 Mar 1968 (Davenport, IBL 38:59)
20 Mar 1972 (Davenport, PCP)

SUMMER: Phoebes nest throughout Iowa. The nest is usually placed on beams underneath bridges or under overhanging rocky stream banks. Known nesting dates range from early May to mid-Jul. They were found on 29 of 34 BBSs. The yearly average varied from 0.4 to 2.2 birds per route, with an overall average of 0.9 birds. The average number per route declined 53 percent during the period 1967-1980.

FALL MIGRATION: The peak period is from late Sep to mid-Oct.

Late dates: 5 Nov 1972 (Davenport, IBL 42:97)
4 Nov 1972 (Iowa City, IBL 42:97)
3 Nov 1975 (Davenport, PCP)

WINTER: The only record is 1 on 3 Jan 1981 at Yellow River F. (IBL 51:3).

Say's Phoebe, **Sayornis saya**

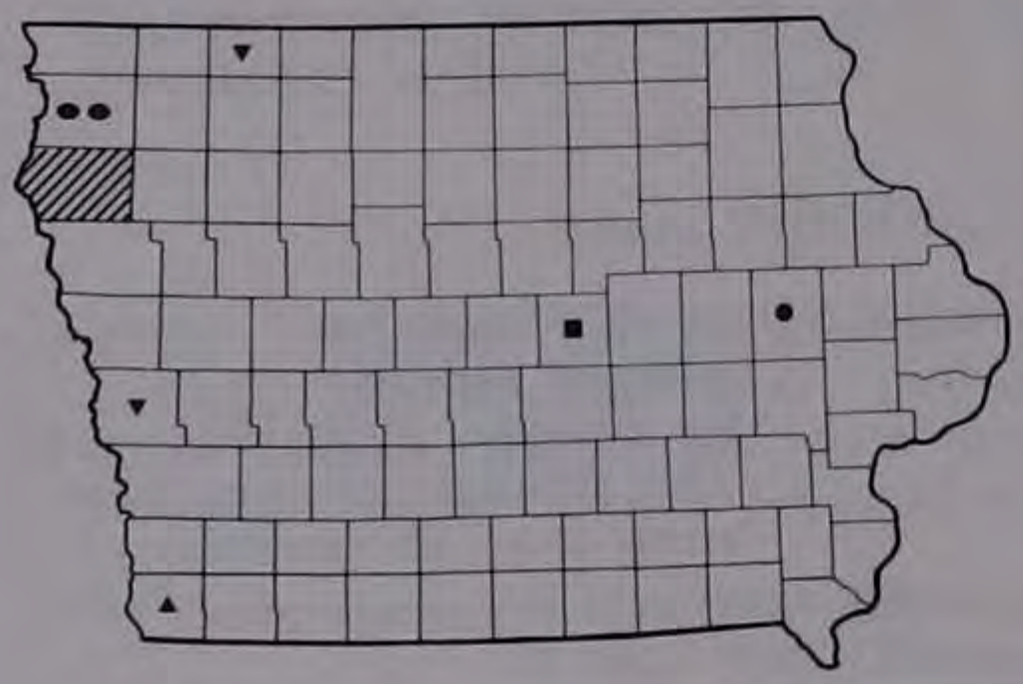
STATUS: Regular; rare summer resident in Plymouth and Sioux counties, very rare elsewhere. Class I-P N.

HABITAT: Open fields, pastures, and farmsteads.

SUMMER: Nests have been found only in Plymouth and Sioux counties (Bryant and Youngworth 1962; Bryant 1969). The only summer report of this species away from these two counties was of 2 individuals near Waubeek in Jun 1978 (IBL 48:99) (Map 6.85). Anderson (1907) reported this species to be a rare summer resident in Mills Co. They usually nest under bridges or in farm buildings. Known nesting dates range from late May to late Jul.

Early dates: 24 Mar 1963 (Akron, EJB)
7 Apr 1966 (Akron, EJB)
9 Apr 1964 (Akron, EJB)

Late dates: 29 Sep 1963 (Akron, IBL 33:89)
20 Sep 1964 (Akron, EJB)
20 Sep 1975 (L. Okoboji, IBL 46:23)



Map 6.85 Say's Phoebe range and extralimital records.

WINTER: One photographed on 22 Dec 1979 in Marshall Co. (IBL 50:26) was probably a late fall migrant.

COMMENT: The population of this species in Iowa apparently increases

during a series of dry years and decreases during a series of wet years (Bryant 1977).

REFERENCES:

Bryant, E. 1969. Present status of the Say's Phoebe in Plymouth County. **Iowa Bird Life** 39:74-75.

Bryant, E. 1977. The Say's Phoebe returns to Plymouth County. **Iowa Bird Life** 47:110-111.

Bryant, E. J., and W. Youngworth. 1962. Say's Phoebe in western Iowa. **Iowa Bird Life** 32:75-77.

Great Crested Flycatcher, **Myiarchus crinitus**

STATUS: Regular; common summer resident. Class I-S N.

HABITAT: Open, mature woodland.

SPRING MIGRATION: The peak migration probably occurs in mid-May.

Early dates: 22 Apr 1979 (Davenport, PCP)
26 Apr 1964 (Cone M., FWK)
27 Apr 1964 (Davenport, PCP)

SUMMER: They nest throughout Iowa and were found on all 34 BBSs. The yearly average varied from 0.8 to 1.9 birds per route with the overall average 1.3 birds. The average number per route remained steady during the period 1967-1980. Gabrielson (1915) studied the nesting biology of this species in Iowa.

FALL MIGRATION: The peak period is from late Aug to early Sep.

Late dates: 9 Oct 1952 (Davenport, PCP)
24 Sep 1978 (Ames, IBL 48:130)
22 Sep 1974 (Ames, IBL 44:64)
22 Sep 1979 (Keosauquà, IBL 49:80)

COMMENT: More information is needed on the nesting habits and migratory movements of this species in Iowa.

REFERENCE:

Gabrielson, I. 1915. The home life of the Great Crest. **Wilson Bull.** 27:421-434.

Western Kingbird, **Tyrannus verticalis**

STATUS: Regular; common summer resident in western column of counties, rare elsewhere. Class I-S N.

HABITAT: Open country, such as pastures and hayfields; often found around farmsteads and edges of towns.

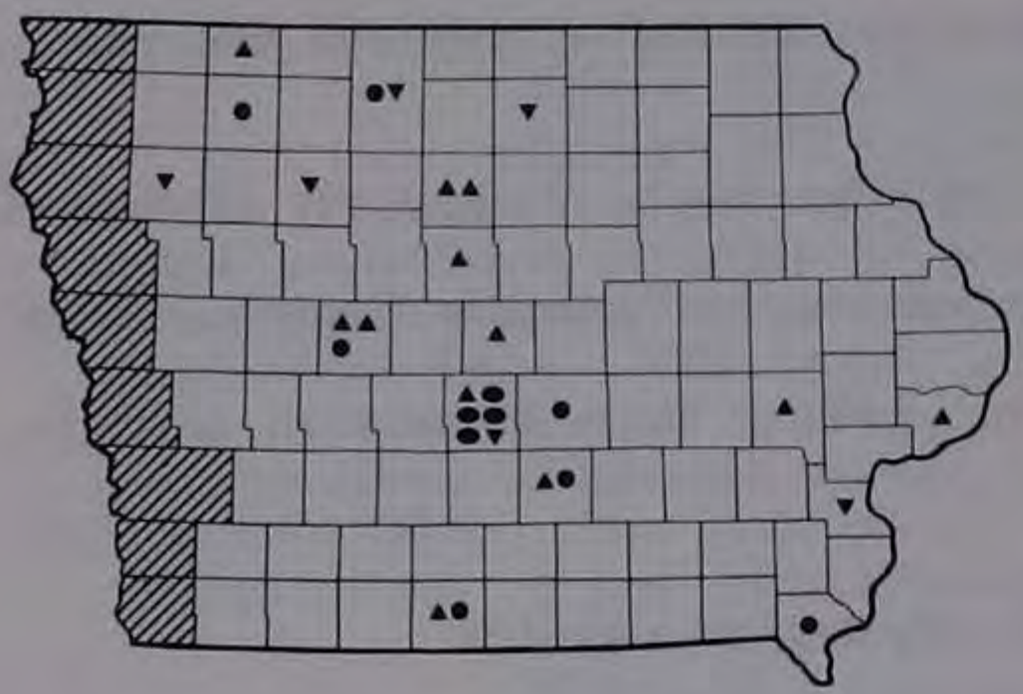
SPRING MIGRATION: No information on migration peaks is available.

Early dates: 21 Apr 1964 (Hamburg, IBL 34:47)
1 May 1981 (Pleasantville, IBL 51:68)
2 May 1965 (Sioux City, IBL 35:51)

SUMMER: The majority of the breeding population is found in the western column of counties, but nesting has occurred locally as far east as Polk Co. (IBL 46:57)(Map 6.86). The few nest dates range from late Jun to mid-Jul. Western Kingbirds have been found on only 9 BBS routes, with the yearly average varying from 0.25 to 2.25 birds per route; the 1967-1980 average was 1.1 birds per route. The average number per route decreased during the period 1967-1980.

FALL MIGRATION: No peaks can be discerned from the available information.

Late dates: 13 Oct 1967 (Mason City, IBL 37:99)



Map 6.86 Western Kingbird range and extralimital records, 1960-1982.

20 Sep 1978 (Lizard L., IBL 48:139)
18 Sep 1973 (Des Moines, IBL 43:105)

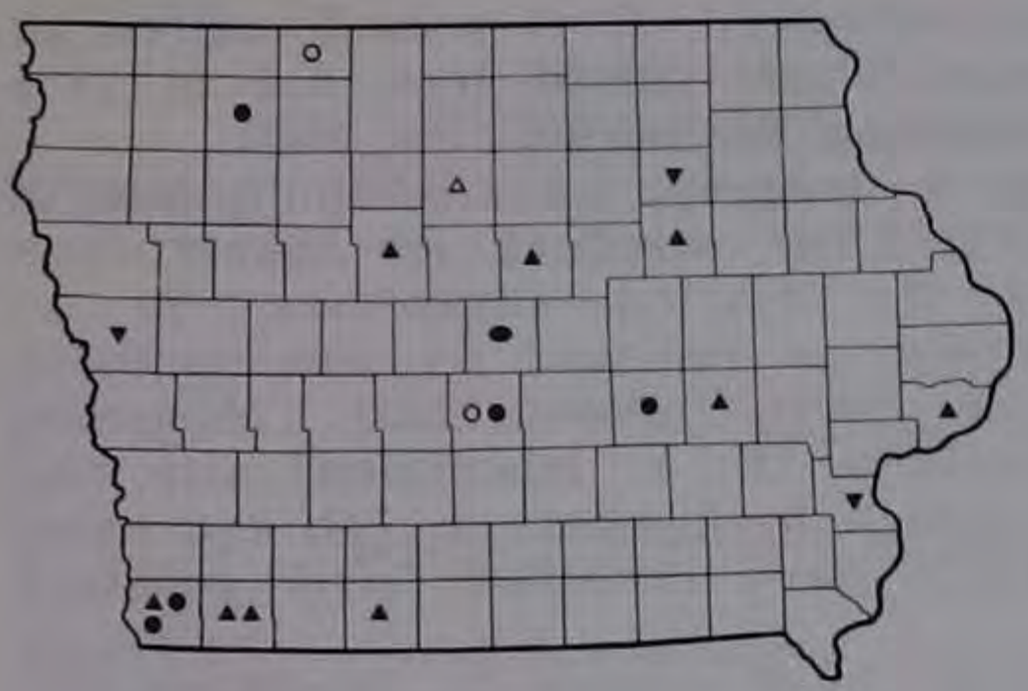
COMMENT: The largest number reported was 15 on 29 Jun 1981 from De Soto N.W.R. to Gitchie Manitou S.Pr. (IBL 51:101) and on 5 Aug 1981 in Fremont Co. (IBL 51:119).

Eastern Kingbird, **Tyrannus tyrannus**

STATUS: Regular; common summer resident. Class I-S N.
HABITAT: Open areas interspersed with trees; edges of woodlands.
SPRING MIGRATION: The peak period is early to mid-May.
Early dates: 6 Apr 1964 (Polk Co., IBL 34:47)
21 Apr 1960 (Johnson Co., FWK)
22 Apr 1979 (Johnson Co., THK)
SUMMER: Eastern Kingbirds nest throughout Iowa. Nesting dates range from early Jun to early Aug. They were found on all 34 BBSs with yearly averages varying from 4.9 to 9.7 birds per route. The overall average, 7.8 birds per route, remained steady over the period 1967-1980.
FALL MIGRATION: The peak period is from late Aug to early Sep.
Late dates: 8 Oct 1974 (Pikes Peak S.P., IBL 44:102)
4 Oct 1952 (McGregor, PCP)
30 Sep 1953 (Lock and Dam 14, PCP)
COMMENT: The largest number reported was 500 on 16 Aug 1962 in Sioux City (IBL 32:83).

Scissor-tailed Flycatcher, **Tyrannus forficatus**

STATUS: Casual; spring and summer visitant, 1 nesting record. Class I-P N.
HABITAT: Open fields and pastures.
RECORDS: There are 22 records, the first on 18 May 1946 (Brown 1946) and 19 since 1960. The monthly distribution of records is Apr (5), May (4), Jun (4), Jul (3), Aug (4, 2 carried over from Jul), and Sep (1). There is 1 record of a nest with 1 young near Ames on 31 Jul 1979 (Zaletel et al. 1979).
Early dates: 15 Apr 1964 (Black Hawk Co., IBL 34:51)
22 Apr 1974 (Dolliver S.P., Barlow 1964)



Map 6.87 Scissor-tailed Flycatcher records.

24 Apr 1982 (Waubonsie S.P., IBL 52:59)
Late dates: 10 Sep 1969 (Sweet M., IBL 39:81)
29 Aug 1981 (Marshall Co., IBL 52:27)
17 Aug 1958 (Polk Co., Binsfeld 1959)

COMMENT: The majority of the records are from W Iowa and especially SW Iowa (Map 6.87). The species apparently is extending its breeding range to the northeast (Graber and Graber 1965; Warner 1966) and the 1979 nesting may be the harbinger of more in the future.

REFERENCES:

Barlow, Mrs. J. M. 1964. Scissor-tailed Flycatcher in Cedar Falls. **Iowa Bird Life** 34:51.

Binsfeld, Mrs. A. J. 1959. Scissor-tailed Flycatcher in Polk County. **Iowa Bird Life** 29:26.

Brown, H. 1946. A sight record of the Scissor-tailed Flycatcher in Wright County. **Iowa Bird Life** 16:68.

Graber, J., and R. Graber. 1965. Occurrence of Scissor-tailed Flycatcher in Illinois. **Audubon Bull.** 136:5-7.

Warner, A. C. 1966. Breeding-range expansion of the Scissor-tailed Flycatcher into Missouri and in other states. **Wilson Bull.** 78:289-300.

Zaletel, H., A. Thiermann, and G. Burns. 1979. First nesting of Scissor-tailed Flycatcher in Iowa. **Iowa Bird Life** 49:77-78.

Larks, Family Alaudidae

Of 75 species of larks found worldwide, only 2 are found in North America. Only 1 is found in Iowa, where it is regular. Larks are terrestrial birds, inhabiting open, bare areas. They are gregarious except during the nesting season. They build their nests on the ground and feed mainly on seeds and insects.

Horned Lark, Eremophila alpestris

STATUS: Regular; abundant migrant and summer and winter resident. Class I-S N.

HABITAT: Open areas such as pastures, bare fields, golf courses, and roadsides.

SUMMER: Horned Lark nest dates range from mid-Mar to late Jun, making

them one of the earliest nesting birds in Iowa. They were found on all 34 BBS routes. The yearly average, which varied from 8.2 to 21.4 birds per route, declined 25 percent during the period 1967-1980.

WINTER: They occur throughout Iowa, usually in flocks ranging from a few individuals to several thousand. Their numbers are lowest from mid-Dec to late Jan. Apparently the nesting subspecies, **E. a. praticola**, migrates south in winter and is replaced by the northern subspecies, **E. a. alpestris**, and **E. a. hoyti** (DuMont 1933). Musgrove (1944) suggests that a western subspecies (**E. a. leucolaema**) also may occur in Iowa. The breeding birds return in numbers in Feb and early Mar. The numbers reported on CBCs have remained fairly constant during the last 15 years.

COMMENT: Modern agricultural practices have apparently benefited the Horned Lark. Graber and Graber (1963) found that Horned Larks showed the greatest increase in numbers of all Illinois birds they surveyed, when comparing the periods 1906-1909 and 1956-1958. The same was probably true in Iowa. However, the recent decline in numbers of Horned Larks in Iowa found on BBSs may indicate that intensive agriculture is adversely affecting them, perhaps by destroying their nests.

REFERENCES:

Graber, R. R., and J. W. Graber. 1963. A comparative study of bird populations in Illinois, 1906-1909 and 1956-1958. **Ill. Nat. Hist. Surv. Bull.** 28:383-528.

Musgrove, J. W. 1944. The Horned Larks in Iowa. **Iowa Bird Life** 14:63-64.

Swallows, Family Hirundinidae

The swallow family contains 75 species, 13 of which have been reported in North America. All 6 Iowa species are regular in the state, and all nest in Iowa. The family is characterized by graceful flight, long pointed wings, and insectivorous food habits. They generally feed on the wing, but some may also eat fruits and berries. They are very gregarious birds, and most species nest in colonies. Little has been published about their nesting habits or migration in Iowa.

Purple Martin, **Progne subis**

STATUS: Regular; common summer resident. Class I-S N.

HABITAT: Open areas near human habitation.

SPRING MIGRATION: Migrants generally arrive in early to mid-Apr.

Early dates: 23 Mar 1964 (Lamoni, IBL 34:47)
23 Mar 1976 (Ankeny, IBL 46:57)
23 Mar 1981 (Elkhart, IBL 51:68)

SUMMER: Martins nest throughout Iowa wherever nesting houses are provided. They were found on 33 of 34 BBS routes, with a yearly average varying from 1.5 to 3.6 birds per route. The overall average, 2.1 birds per route, remained steady during the period 1967-1980.

FALL MIGRATION: Migration begins in late Jul and peaks in early Aug to early Sep.

Late dates: 2 Nov 1970 (Sioux City, IBL 41:27)
14 Oct 1962 (Waterloo, IBL 32:83)
10 Oct 1952 (Davenport, PCP)

COMMENT: The largest number reported was 6,000 on 8 Sep 1970 at Sioux City (IBL 40:73) and in fall 1978 at L. Manawa (IBL 48:139).

Tree Swallow, **Tachycineta bicolor**

STATUS: Regular; abundant migrant, uncommon summer resident. Class I-S N.

HABITAT: Wooded wetlands, ponds, lakes, marshes, or rivers bordered with trees.

SPRING MIGRATION: The peak is from late Mar to late Apr.

Early dates: 18 Mar 1971 (Davenport, IBL 41:51)
20 Mar 1976 (Le Claire, PCP)
20 Mar 1982 (Riverton A., IBL 52:59)
20 Mar 1982 (Hendrickson M., IBL 52:59)

SUMMER: Tree Swallows nest throughout Iowa but are most numerous in the north, especially the northeast. Breeding has been reported south to Fremont Co. (IBL 47:102, 127), Red Rock Res. (IBL 42:70), and Rathbun Res. (IBL 47:110). They were found on 12 of 34 BBS routes, with the highest average on a route 4.1 birds, the yearly average varying from zero to 4.7 birds per route, and the overall average 0.7 birds.

FALL MIGRATION: Migration starts in late Jul and peaks from mid-Sep to mid-Oct.

Late dates: 14 Nov 1976 (Mark Twain N.W.R., IBL 46:114)
5 Nov 1977 (Coralville Res., THK)
1 Nov 1975 (Davenport, IBL 46:23)

COMMENT: They are found in large flocks during migration, especially in fall. The largest flock reported was 3,000 on 9 Oct 1966 near Burlington (IBL 36:104).

Northern Rough-winged Swallow, **Stelgidopteryx serripennis**

STATUS: Regular; common summer resident. Class I-S N.

HABITAT: Open areas with vertical banks of dirt, sand, or gravel; along rivers.

SPRING MIGRATION: Most generally arrive in mid- to late Apr.

Early dates: 4 Apr 1981 (Coralville Res., IBL 51:68)
8 Apr 1981 (Polk Co., IBL 51:68)
12 Apr 1980 (Hamburg, IBL 50:49)

SUMMER: Rough-wings nest throughout Iowa. They were found on 33 of 34 BBS routes. The yearly average ranged from 0.6 to 2.1 birds per route, with an overall average of 1.3 birds. The average number per route almost doubled during the period 1967-1980.

FALL MIGRATION: Few data are available to indicate the migration peak.

Late dates: 16 Oct 1954 (Sabula, PCP)
23 Sep 1979 (Keosauqua, IBL 49:80)
22 Sep 1963 (Waterloo, IBL 33:83)

Bank Swallow, **Riparia riparia**

STATUS: Regular; common summer resident. Class I-S N.
HABITAT: Vertical banks of dirt, sand, or gravel; usually found along streams.
SPRING MIGRATION: Few data are available to indicate the peak period.
Early dates: 12 Apr 1980 (Hamburg, IBL 50:49)
18 Apr 1970 (Iowa City, FWK)
19 Apr 1962 (Iowa City, FWK)
19 Apr 1976 (Ledges S.P., JJD)
SUMMER: Bank Swallows nest thoughout Iowa. Apparently 2 broods are raised per year, with the first brood usually leaving the nest in the first week of Jul (Stoner 1928). They were found on 30 of 34 BBS routes; the yearly average varied from 0.2 to 3.9 birds per route, and the overall average was 1.2 birds. The average number per route decreased 50 percent during the period 1967-1980.
FALL MIGRATION: Migration starts in late Jul and peaks from early Aug to early Sep.
Late dates: 11 Oct 1952 (Davenport, PCP)
30 Sep 1978 (Iowa City, THK)
24 Sep 1978 (Ames, IBL 48:130)
COMMENT: The largest number reported was 2,000 at Davenport on 18 Aug 1951 (PCP).
REFERENCE:
Stoner, D. 1928. Observations and banding notes on the Bank Swallow--III. **Auk** 45:41-45.

Cliff Swallow, **Hirundo pyrrhonota**

STATUS: Regular; common summer resident. Class I-S N.
HABITAT: Open areas near bridges, farmsteads, or rock outcrops along streams.
SPRING MIGRATION: Few data are available to indicate the migration peak.
Early dates: 18 Apr 1970 (Iowa City, FWK)
24 Apr 1982 (Iowa City, IBL 52:59)
26 Apr 1979 (Iowa City, THK)
SUMMER: Cliff Swallows nest in colonies on bridges, under eaves of buildings, and on cliffs throughout Iowa. They were found on 13 of 34 BBS routes. The yearly average, which varied from 0.1 to 2.6 birds per route, increased during the period 1967-1980.
FALL MIGRATION: Migration begins in late Jul and peaks from early Aug to early Sep. They may form large flocks during migration (Gillaspey 1957).
Late dates: 29 Oct 1974 (Oskaloosa, IBL 44:102)
13 Oct 1962 (Sioux City, IBL 32:83)
4 Oct 1959 (Muskrat Sl., PCP)
COMMENT: Stiles (1941) described a nesting colony of Cliff Swallows that contained 2,600 nests on 13 Jun 1937. This colony, along the Missouri R. in Woodbury Co., had been in existence since Audubon's trip up the Missouri R. in 1843 and probably earlier. Otherwise, the largest number of Cliff Swallows reported was 3,000 at Brenton's Sl. on 7 Sep 1931 (DuMont 1931).
REFERENCES:
Gillaspey, J. D. 1957. Mass migration of Cliff Swallows. **Iowa Bird Life** 27:37-38.

Stiles, B. 1941. The Northern Cliff Swallow in western Iowa. Iowa Bird Life 11:59-61.

Barn Swallow, **Hirundo rustica**

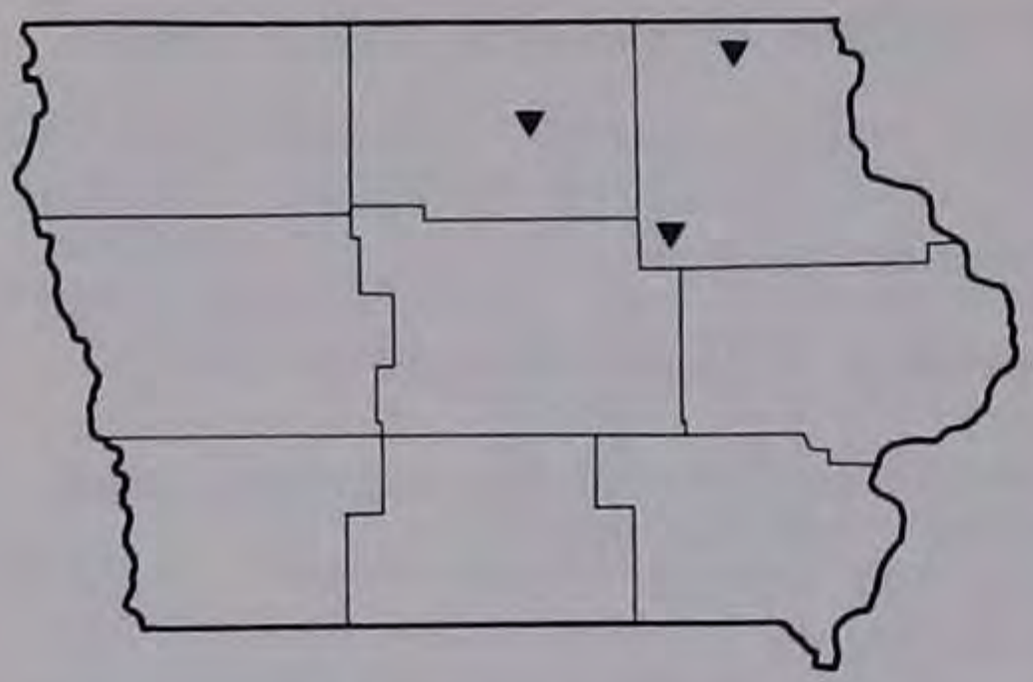
STATUS: Regular; abundant summer resident. Class I-S N.
HABITAT: Open fields around farmsteads.
SPRING MIGRATION: Few data are available to indicate the migration peak.
Early dates: 20 Mar 1982 (Riverton A., IBL 52:59)
22 Mar 1975 (Westfield, IBL 45:58)
12 Apr 1964 (Iowa City, FWK)
SUMMER: Nesting occurs thoughout Iowa. Two or 3 broods per pair are usually raised during the summer. They were found on all 34 BBS routes. The yearly average varied from 16.8 to 46.2 birds per route, with an overall average of 34.1 birds. The average number per route increased 39 percent during the period 1967-1980.
FALL MIGRATION: Migration starts in late Jul and peaks from late Aug to late Sep.
Late dates: 29 Oct 1974 (Oskaloosa, IBL 44:102)
28 Oct 1962 (Des Moines, IBL 32:83)
25 Oct 1980 (Onawa, JJD)
COMMENT: The highest number reported was 1,000 at Pleasantville on 16 and 17 Sep 1974 (IBL 44:102)

Jays, Magpies, and Crows, Family Corvidae

The corvid family contains about 100 species, 17 of which have been reported in North America. Of the 7 Iowa species, 2 are regular and 5 are accidental. The corvids include some of the largest of the passerine birds and are known for their bold habits and raucous vocalizations. Most species are at least somewhat gregarious. They feed on a wide variety of items, including insects, small vertebrates, grains, and plant material. Two species nest regularly in Iowa; 1 of the accidental species, the Black-billed Magpie, has nested in the state twice.

Gray Jay, **Perisoreus canadensis**

STATUS: Accidental. Class I-P.
RECORDS: There are 3 records from the winter of 1976-1977, 1 photographed and the others documented (Map 6.88).
30 Oct 1976 to Jan 1977, e of Decorah, Winneshiek Co., photographed (Koenig 1977)
early Nov 1976, Mason City (Halmi 1977)
Nov 1976, Cedar Falls (Halmi 1977)
In addition, there is a specimen at the University of Iowa from Linn Co. on 2 Dec 1918, but its authenticity has been doubted (Halmi 1977).
COMMENT: The Gray Jay breeds in boreal and montane coniferous forest from Alaska to Newfoundland and south in the mountains of the W United States to N California and C Arizona. Closer to Iowa, the species is a permanent resident in the Black Hills and coniferous forests of N Minnesota, Wisconsin, and Michigan. In winter, it is normally rare south of its permanent range but has straggled to NW Nebraska, Iowa, and C Minnesota, Wisconsin, and Michigan. It also undergoes periodic and



Map 6.88 Gray Jay records.

irregular fall (Sep to Nov) irruptions, during which it is more common than usual in its permanent range and may occur farther south. The recent Iowa records were associated with a major fall movement to S and W Minnesota (**Am. Birds** 31:181, 335).

REFERENCES:

Halmi, N. S. 1977. More Gray Jays in Iowa. **Iowa Bird Life** 47:65.

Koenig, D. 1977. First Gray Jay record for Iowa. **Iowa Bird Life** 47:23.

Blue Jay, **Cyanocitta cristata**

STATUS: Regular; common permanent resident. Class I-S N.

HABITAT: Woodlands, woodlots, cities and towns, and other forested areas.

SPRING MIGRATION: Because Blue Jays are found in Iowa throughout the year, little specific information is available on their spring migration. Migrants move through Iowa in Apr and early May.

SUMMER: Blue Jays nest throughout Iowa wherever suitable wooded areas occur. Nesting starts in late Apr and extends through Jun. From 1967 to 1980, an average of 6.0 Blue Jays was reported per BBS in Iowa. There was a slight downward trend in numbers reported over that time.

FALL MIGRATION: Flocks of migrating Blue Jays are quite obvious in fall, especially in mid-Sep and Oct. Whether local birds move south or these are just northern birds moving through Iowa is not known.

WINTER: Blue Jays are common throughout Iowa and have been reported on virtually every CBC in the state. Bock and Lepthien (1976) noted that from 1962 to 1971 the number of Blue Jays reported on CBCs increased and the numbers that migrated seemed to decrease.

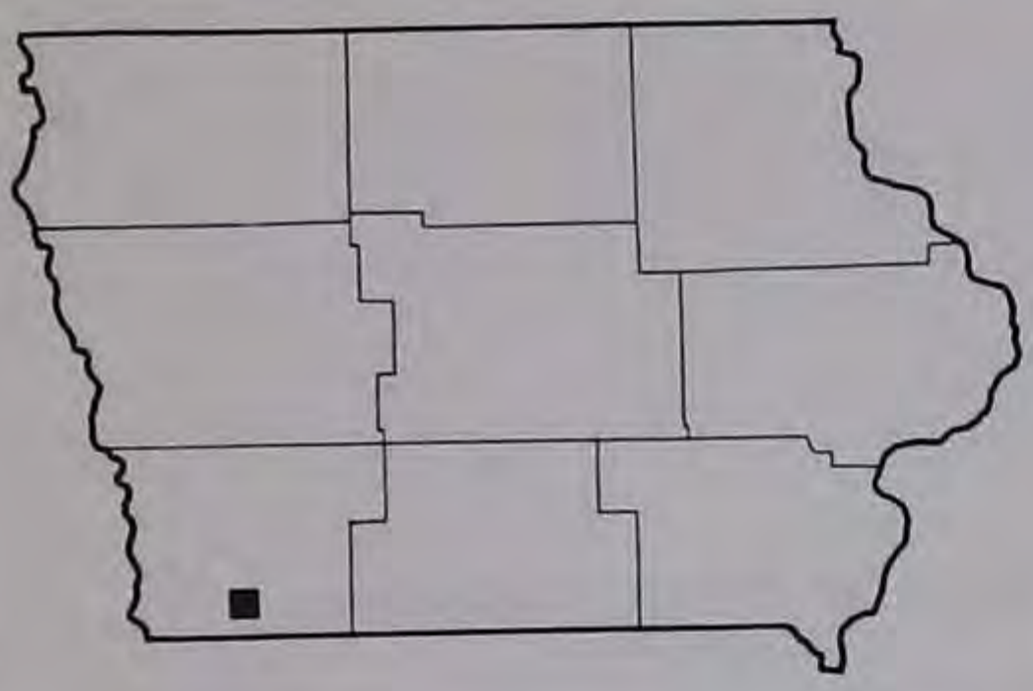
REFERENCE:

Bock, C. E., and L. W. Lepthien. 1976. Changing winter distribution and abundance of the Blue Jay, 1962-1971. **Am. Midl. Nat.** 96:232-236.

Pinyon Jay, **Gymnorhinus cyanocephalus**

STATUS: Accidental. Class III.

RECORD: There is a sight record at Shenandoah from 17 Dec 1972 to early Jan 1973 (Zollars 1973) (Map 6.89).



Map 6.89 Pinyon Jay record.

COMMENT: This species breeds in pinyon-juniper woodland from Oregon south to Baja California, NE New Mexico, and extreme W Oklahoma. The closest breeding populations to Iowa are in W South Dakota, extreme W Nebraska, SE Colorado, and W Oklahoma. The Pinyon Jay is well known for its wanderings outside the breeding season. It regularly occurs on the east slope of the Rocky Mountains and, less commonly, eastward on the plains, even rarely reaching the central and eastern parts of the Dakotas, Nebraska, Kansas, and Oklahoma. The Iowa record may be the only one east of these states. In the winter of 1972-1973, which produced the Iowa record, Pinyon Jays were widespread in the plains of Colorado, Oklahoma, and Texas (**Am. Birds** 27:81, 94). This movement was probably brought on by failure of the pinyon cone crop and severe weather in the Rocky Mountains and Great Basin. That winter saw unprecedented irruptions of nearly every species of corvid in the United States (**Am. Birds** 27:20, 579, 610, 620, 624, 631, 635, 638, 641, 645, 664): Clark's Nutcrackers reached Wisconsin, Minnesota, Iowa, and Missouri (**Am. Birds** 27:69, 620, 624); magpies invaded Ontario and the W Great Lakes region; Scrub Jays and Steller's Jays moved into the lowlands east and west of the western mountains; Common Ravens and American Crows moved into the N Great Plains; Gray Jays moved into the NE United States; and Blue Jays moved into the Deep South.

REFERENCE:

Zollars, R. 1973. Pinyon Jay in Shenandoah. **Iowa Bird Life** 43:28-29.

Clark's Nutcracker, **Nucifraga columbiana**

STATUS: Accidental. Class I-S.

RECORDS: There are well-substantiated individual sightings from 1894 and 1919, a report of a specimen prior to 1933, and evidence of a massive invasion in 1972-1973 (Map 6.90). Sight records without substantiating details are from 1969 (Black 1973) and 1974 (IBL 44:44).

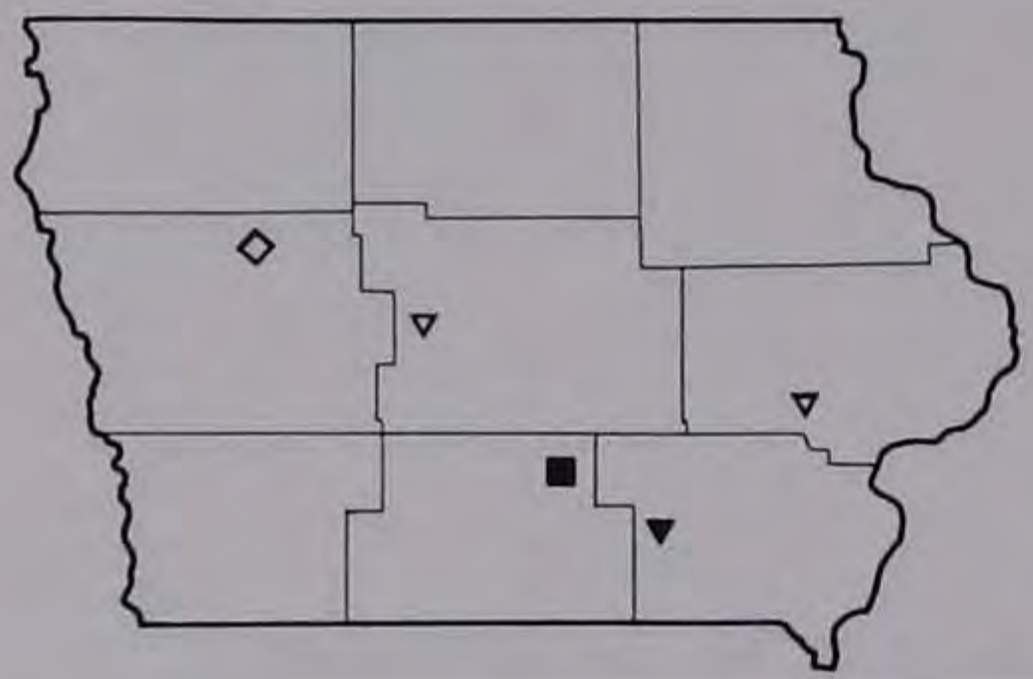
23 Sep 1894, near Boone, University of Iowa specimen 10753 (Nutting 1895; Henning 1895; DuMont 1933)

30 Nov 1919, Tiffin, Johnson Co., University of Iowa mounted specimen (Stoner 1920)

prior to 1933, Sac Co., specimen at Rockwell City (Spurrell 1919; DuMont 1933)

14-15 Oct 1972, Ottumwa (Ayres 1973)

16 to 19 Dec 1972, Pleasantville (Dorow 1973)



Map 6.90 Clark's Nutcracker records.

winter 1972-1973, 28 counties, 33 reports (Black 1973)

COMMENT: Nutcrackers inhabit the Rocky Mountains and are occasionally found in the Black Hills (Whitney et al. 1978) and NW Nebraska (Johnsgard 1980). They irrupt eastward at unpredictable intervals and appear in several states, usually in fall. In 1894 there were several Minnesota records (Green and Janssen 1975) and the only Illinois record (Bohlen 1978). In 1969 there were several Minnesota records and 1 from E South Dakota (Whitney et al. 1978). In 1972-1973 there were several records for Minnesota and a number in the E Black Hills but none in Illinois.

REFERENCES:

Ayres, C. G. 1973. First Clark's Nutcracker for Wapello County. **Iowa Bird Life** 43:14-17.

Black, G. B. 1973. Clark's Nutcracker sightings in Iowa, winter 1972-73. **Iowa Bird Life** 43:51.

Dorow, H. 1973. Another Clark's Nutcracker visits Iowa. **Iowa Bird Life** 43:27.

Henning, C. F. 1895. Clark's Crow or Nutcracker. **Iowa Orn.** 1:62-63.

Stoner, D. 1920. Bird records for the season 1919-1920 in the vicinity of Iowa City. **Proc. Iowa Acad. Sci.** 27:379-384.

Black-billed Magpie, **Pica pica**

STATUS: Accidental; formerly casual. Class I-S N

RECORDS: There are only five recent records (Map 6.91) which show little pattern as to location and date.

spring 1972, Waubonsie S.P. (IBL 42:40)

15 Aug 1972, Indianola (IBL 42:70)

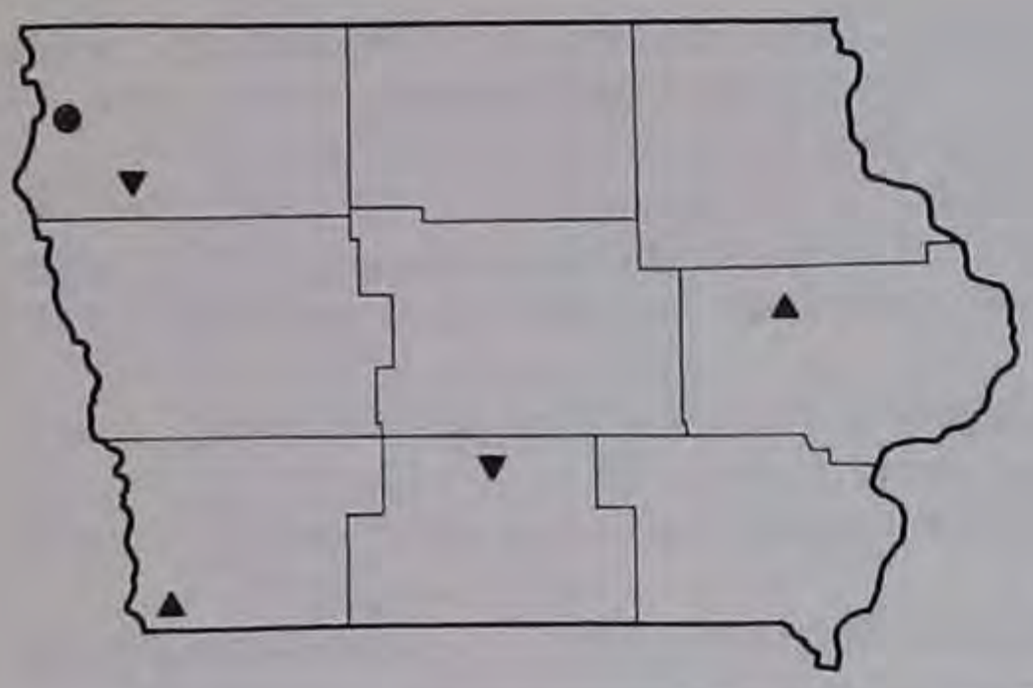
19 May 1973, Linn Co. (IBL 43:76)

24 Oct 1976, Cherokee Co. (IBL 46:114)

1 Jun 1980, Fairview Conservation A., Sioux Co. (EB)

From 1820 to 1913 there were only 9 reports of magpies in Iowa, suggesting that the species was accidental at that time. However, Say noted them wintering at Engineer Cantonment until 23 Mar 1820 (James 1823).

Fall and winter records in Dickinson, Plymouth, and Woodbury



Map 6.91 Black-billed Magpie records, 1960-1982.

counties in 1914; in Plymouth Co. in 1915; and in Woodbury Co. in 1918 portended the massive fall invasion of 1921. Many birds were reported from at least 16 counties, mostly in the northwest but also including Boone, Floyd, Linn, Story, and Madison counties. Stephens (1930) and Stoner (1922) described the scope of the invasion. Winter birds were noted in Sioux, Woodbury, and Polk counties in 1924 to 1926; no more reports appeared until 1934 when another massive fall/winter invasion occurred (DuMont 1935) involving 20 counties, mostly in the west but also including Allamakee, Floyd, and Polk counties. A smaller invasion in 1936 was followed by 1 to 5 reports per fall/winter from 1937 to 1943. From 1943 to 1959 the only reports of magpies were on CBCs in Sioux City in 1949, 1951, and 1958, and 1 near Sioux City on 17 Oct 1948 (Nicholson 1948).

Thus, during the period 1914-1943, Black-billed Magpie was a casual and cyclic late fall and early winter visitor, mostly in NW Iowa, with early and late dates as follows:

Early dates: 20 Sep 1934 (Butler Co., specimen at Iowa State University)
1 Oct 1939 (Pierson, Woodbury Co., Mills 1940)
1 Oct 1939 (Brown's L., Laffoon 1941)

Late dates: 11 Mar 1940 (Union and Woodbury counties, Laffoon 1941)
10 Feb 1918 (Sioux City, Stephens 1918)
2 Feb 1941 (Stone P., Laffoon 1941)

A pair of magpies that first arrived in Bremer Co. during December of the 1936 invasion remained and nested in 1937 and 1938, with young being taken by farm children (Dix 1937, 1938). One of the pair survived until at least 10 Jan 1939, the other allegedly having been shot (Pierce 1939).

COMMENT: Black-billed Magpie is regular on the Great Plains extending more than halfway across Nebraska and South Dakota (Johnsgard 1980; Whitney et al. 1978). Further north it extends eastward to NW Minnesota (Green and Janssen 1975). It often strays eastward in fall to E Nebraska and South Dakota, but now rarely reaches Iowa or SW Minnesota. During the period of casual occurrence, except for the nesting pair in Bremer Co., there were no records outside of the fall/winter period. Thus, some of the recent out-of-season records, which are not described in detail, could be of escapees. Otherwise, the pattern of straying has become more haphazard than occurred in the

past. In the late 1950s and early 1960s occasional vagrants were reported from Illinois to New York, mostly in fall/winter, but only 4 reports e of Iowa have occurred since 1965.

REFERENCES:

Dix, Mrs. R. S. 1937. The nesting of the American Magpie (**Pica pica hudsonia**) in Bremer County, Iowa, summer of 1937. **Iowa Bird Life** 7:34.

Dix, Mrs. R. S. 1938. American Magpies nest in Bremer County, Iowa, the second successive year. **Iowa Bird Life** 8:56.

DuMont, P. A. 1935. The 1934-'35 magpie invasion into Iowa. **Iowa Bird Life** 5:46.

Mills, W. R. 1940. Winter birds in western Iowa. **Iowa Bird Life** 10:13.

Nicholson, B. 1948. Magpies in the Sioux City area. **Dickcissel** 8(2):8.

Pierce, F. J. 1939. Further notes on the American Magpie in Bremer County, Iowa. **Iowa Bird Life** 9:10.

Stoner, D. 1922. On the eastward movement of magpies. **Wilson Bull.** 34:44-45.

American Crow, **Corvus brachyrhynchos**

STATUS: Regular; abundant permanent resident. Class I-S N.

HABITAT: Farmland, cities and towns, woodlots and farm groves; commonly forages over open farmland.

SPRING MIGRATION: Winter roosts generally break up in late Feb or Mar, and birds from northern areas migrate through or out of Iowa at that time.

SUMMER: Crows are an abundant nesting species throughout Iowa although more were reported on BBSs in N than S Iowa. From 1967 to 1980, an average of 22.2 crows were reported per BBS in Iowa. They generally nest in conifers or thick stands of trees, often in farm groves or other areas adjacent to open cropland. Nesting starts in early Apr, and most hatch in early May. Renesting extends into Jun. After the nesting season, crows generally stay in family groups until late Jul or Aug when they start forming flocks.

FALL MIGRATION: Large roosting flocks are evident by Oct and persist through winter. These contain both local birds and birds from n of Iowa.

WINTER: Crow winter roosts range in size from small family groups to several thousand birds. They usually roost in a thick grove of trees, especially conifers, and often in a town or city. Crows have been reported on virtually every CBC in Iowa and averaged 160 per count from 1956 through 1979.

Common Raven, **Corvus corax**

STATUS: Accidental. Class I-S.

RECORDS: There are 7 reports since 1952, all from N Iowa (Map 6.92). One from Potter's Sl., Dickinson Co., on 7 Oct 1956 is well documented by photographs (Sieh 1957) and a specimen at the State Historical Museum. Of the others, 3 are sight records and 3 based on examination of dead birds.

prior to 1952, Dickinson Co., identified from beak and skull (Sieh 1957)

7 Oct 1956, Potter's Sl., Dickinson Co., specimen at State Historical Museum (Sieh 1957)
18 Oct 1956, Clayton Co., sight record (Burgess 1958)
5 Oct 1957, Emmet Co., secondhand report based on killed bird (Burgess 1958)
18 Oct 1957, Union Sl. N.W.R., sight record based on size and voice (Burgess 1958)
20 Oct 1959, Silver L., Dickinson Co., juvenile female specimen (Sieh 1960)
28 Dec 1966, w of Mason City, sight record based on size and tail (Roosa 1967)

There is also a report from 27 Jun 1970 (location not given, IBL 42:70) that lacks details and is unlikely by date. There are several reports prior to 1900. Ravens were reported by early explorers, including Say in 1819-1820, Prince Maximillian in 1833, and Audubon in 1843 (Anderson 1907). They were also reported from Decatur Co. prior to 1872, and from Floyd Co. in 1900 (Anderson 1907) and 1914 (Fenton 1923-1924). None of the old records supply enough detail to verify their accuracy.

COMMENT: Five of 6 recent dates are from Oct and the other from Dec. All are from the northern 2 tiers of counties. Ravens are resident in N Minnesota and undertake some southward migration in winter. There are scattered records from S Minnesota from Sep to Dec (Green and Janssen 1975) and South Dakota from Oct to Dec (Whitney et al. 1978). They are regular in parts of C Wisconsin and could wander to Iowa. There are no recent records from Illinois (Bohlen 1978). Four recent Nebraska records from 31 Mar to 26 May are suspect (Johnsgard 1980). Observers in N Iowa should look for this species in fall and document the size, head shape, tail shape, flight behavior, and voice in order to distinguish a raven from a crow.

REFERENCES:

Burgess, H. H. 1958. Raven sighted at Union Slough Refuge. Iowa Bird Life 28:26-27.
Roosa, D. M. 1967. Raven sighted near Mason City. Iowa Bird Life 37:52.
Sieh, J. G. 1957. First authentic record of raven in Iowa. Iowa Bird Life 27:21-22.
Sieh, J. G. 1960. Raven taken in Dickinson County. Iowa Bird Life 30:16.

Map 6.92 Common Raven records.

Chickadees and Titmice, Family Paridae

The parid family contains 64 species worldwide, 12 of which have been reported in North America. Of the 4 species reported in Iowa, 2 are regular, 1 is accidental, and 1 is hypothetical. They are small, active, vocal birds that frequent wooded and brushy areas. The sexes are almost identical, and all species are cavity nesters. In the winter, they commonly form small flocks with several other species of woodland birds. Banding studies in Iowa indicate that they remain within a limited area except for movement to winter feeders.

Black-capped Chickadee, Marshall Co., C. Kurtz.

Black-capped Chickadee, **Parus atricapillus**

STATUS: Regular; abundant permanent resident. Class I-S N.
HABITAT: Woodlands, edge, and residential areas.
SUMMER: Chickadees breed throughout the state. They were found on 31 of 34 BBS routes. The average number of birds per route varied from 0.9 to 2.6, with an overall average of 1.5. Nesting has been recorded from early Apr until late Jul.
WINTER: Black-capped Chickadees are regular visitors at bird feeders. In most years they are found on all Iowa CBCs in numbers up to 200 per count.
COMMENT: This species seems to have adapted well to human environmental changes. Normally nonmigratory, chickadees may move several miles to feeders in winter. One individual was captured 15 times over a 7-year period at Pine Hill Cemetery (PCP).

[Carolina Chickadee, **Parus carolinensis**]

STATUS: Hypothetical. Class IV.
RECORDS: A specimen labeled 4 May 1888, Keokuk, was examined by Anderson (1907) and Oberholser (DuMont 1933). The specimen, now at Coe College, has the following measurements: length 100 mm, wing chord 58 mm, tail 47 mm, culmen 7.5 mm, and tarsus 16 mm. These measurements are those of a Carolina Chickadee, probably a female. One

was heard in Buchanan Co. on 7 Oct 1929 (DuMont 1933) by reliable observers, but there is no description of the bird or song. A report from Fremont Co. on 22 Jan 1961 (Brown 1961) gives no descriptive details. Others reported as banded were apparently in Missouri (Diggs and Diggs 1975; Silcock 1977; IBL 45:49, 46:54, 47:55, 48:68).

COMMENT: The occurrence of this species in Iowa needs to be documented with a sound recording and careful description, photograph, or specimen. The Keokuk specimen is correctly identified; the only question can be the accuracy of the label. The specimen was obtained from the collection of George Berry, whose reputation has been questioned. The border zone between the ranges of Black-capped and Carolina chickadees tends to be sharp, with little if any northward vagrancy of the Carolina Chickadee. The nearest normal location of Carolina Chickadee to Iowa is C Missouri. There are 1969 and 1974 records from Fontenelle Forest in E Nebraska (Johnsgard 1980) and an old specimen record from Michigan (Zimmerman and Van Tyne 1959).

REFERENCES:

Brown, W. 1961. Carolina Chickadee in southwest Iowa. **Iowa Bird Life** 32:19-20.

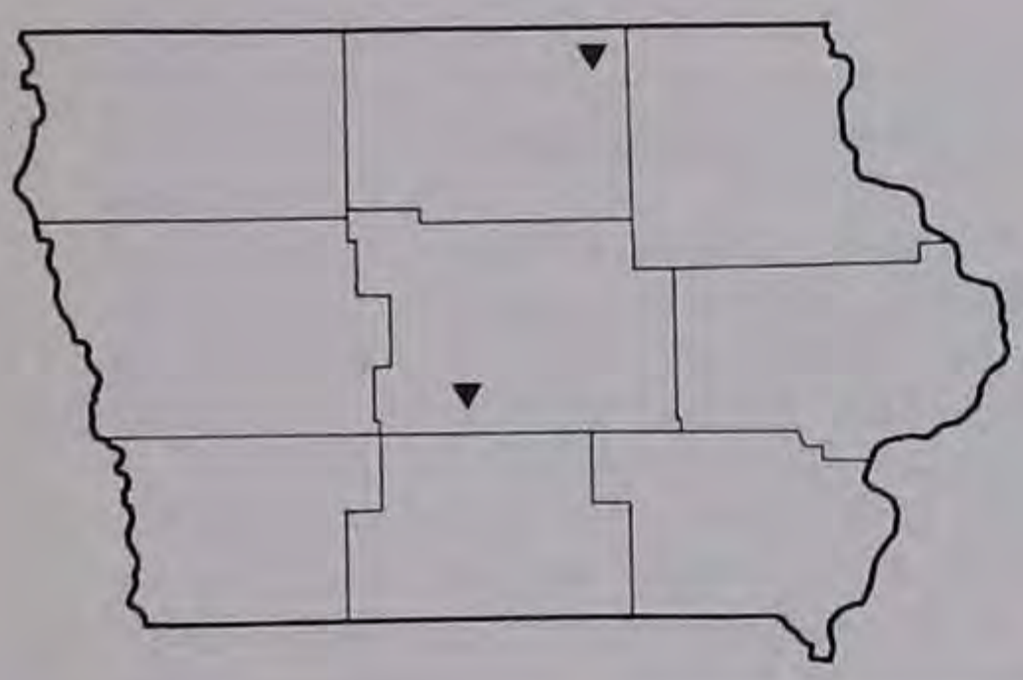
Diggs, H., and F. Diggs. 1975. Specials in our 1974 banding activity. **Iowa Bird Life** 45:86-88.

Boreal Chickadee, **Parus hudsonicus**

STATUS: Accidental. Class I-P.

RECORDS: There are 2 well-documented reports of this northern chickadee (Map 6.93). One at Des Moines from 17 Nov 1976 to 7 Mar 1977 was photographed (Brown 1976, photograph by Halmi on file with Records Committee). The other was at Osage, Mitchell Co., on 23 to 25 Nov 1978 (IBL 49:25). Two other reports are unsubstantiated: 26 Dec 1966 at Dubuque (IBL 37:5) and 17-18 Mar 1972 at Ames (Crawford 1975).

COMMENT: This species breeds in boreal forest from Alaska to E Canada, south to N Montana, N Minnesota, N Wisconsin, and N Michigan. In winter, it is a casual visitor to the central parts of Minnesota, Wisconsin, and Michigan but is very rarely recorded further south. Vagrant individuals have reached NE North Dakota, C South Dakota, E Nebraska, Iowa, N Illinois, and Indiana. Records extend from Oct to Apr, with 1 May-Jun record from Indiana. Like many other species of the boreal forest, the Boreal Chickadee undergoes periodic irruptions in winter. In these years it becomes more common in its permanent range



Map 6.93 Boreal Chickadee records.

and is seen more frequently to the south. The 1972 Iowa record was in a winter with an invasion of unprecedented size that also brought birds to Nebraska and South Dakota. In the winter of 1977-1978 there was apparently a modest influx into Minnesota (**Am. Birds** 31:335).

REFERENCE:
Brown, W. H. 1976. Boreal Chickadee in Des Moines. **Iowa Bird Life** 46:117.

Tufted Titmouse, **Parus bicolor**

STATUS: Regular; common permanent resident in S and E Iowa, uncommon in NW Iowa. Class I-S N.
HABITAT: Woodland and wooded residential areas.
SUMMER: Although titmice have bred throughout the state, they were found on only 22 of 34 BBS routes from 1967 to 1980, with a maximum of 18 on 1 route. The average number of birds on these 22 routes has varied from 0.6 to 1.6, with an overall average of 1.1. Nesting usually occurs between early May and Jul.
WINTER: Titmice are frequent feeder visitors. They are recorded on about 75 percent of CBCs, but seldom in the northwest. On SE Iowa CBCs, 25 to 100 are recorded per count area. The number of titmice per party on CBCs at Davenport, Cedar Rapids, Iowa City, Des Moines, and Lamoni declined by about 50 percent from 1955-1959 to 1970-1974 (Brown 1975).
COMMENT: This species spread northward into Iowa in the early 1900s. Severe winter weather does not seem to reduce the population of this nonmigratory species.

REFERENCE:
Brown, W. H. 1975. Population changes in the Tufted Titmouse and Black-capped Chickadee. **Iowa Bird Life** 45:97.

Nuthatches, Family Sittidae

The nuthatch family contains 22 species, 4 of which occur in North America. In Iowa, 2 species are regular, 1 is accidental, and 1 is Class VI. Members of this family are generally small, stocky, short-necked birds. The bill is thin and sharp-pointed, and the legs are short and stout with sharp nails for climbing on trees. They climb with short, jerky hops, either up or down the tree trunk. They derive their common name from their habit of lodging seeds in the bark of a tree and hammering with their bill until the seed is broken.

Red-breasted Nuthatch, **Sitta canadensis**

STATUS: Regular; uncommon winter visitant. Class I-S N.
HABITAT: Mature wooded areas, especially conifer stands.
FALL MIGRATION: Most arrive in late Sep and early Oct.
Early dates: 11 Aug 1968 (Waterloo, **IBL** 38:89)
12 Aug 1975 (Des Moines, **IBL** 45:94)
16 Aug 1968 (Davenport, PCP)
16 Aug 1976 (Yellow River F., **IBL** 46:84)
WINTER: The Red-breasted Nuthatch is a very erratic species, occurring in large numbers some winters and nearly absent in others. Flight

years seem to be correlated with failure of pine cone crops, their normal food (Bock and Lepthien 1972). This species has been found on every CBC in the period 1960-1982, with numbers ranging from 1 in 1960 to 133 in 1982.

SPRING MIGRATION: Most leave Iowa by mid-Apr, but a few are typically found in early May.

Late dates: 30 May 1982 (Cedar Rapids, IBL 52:59)
24 May 1967 (Davenport, IBL 37:51)
19 May 1978 (Davenport, IBL 48:74)

SUMMER: The only nesting record is from Des Moines, where a pair nested in a cavity in a post (Warters 1960). Young were present on 20-24 May, and an adult was photographed at the nest. The only other summer record is also from Des Moines on 9 and 17 Jul 1978, with 3 present on the later date, suggesting possible nesting (IBL 48:99).

COMMENT: Red-breasted Nuthatches normally nest as far south as Minneapolis (Green and Janssen 1975).

REFERENCES:

Bock, C. E., and L. W. Lepthien. 1972. Winter eruptions of Red-breasted Nuthatches in North America, 1950-1970. Am. Birds 26:558-561.

Warters, M. E. 1960. Red-breasted Nuthatches nest in Des Moines. Iowa Bird Life 30:17

White-breasted Nuthatch, Sitta carolinensis

STATUS: Regular; common permanent resident. Class I-S N.

HABITAT: Fairly mature deciduous forest; bird feeders in winter.

SUMMER: The normal nesting period is May and Jun. On BBSs from 1969 to 1980, numbers per route ranged from 0.2 in 1969 to 1.0 in 1972. Averages were below 0.5 per route from 1973 to 1980. The White-breasted Nuthatch breeds more commonly in the Paleozoic Plateau than elsewhere in the state.

WINTER: Nuthatches usually begin appearing at feeders in late Oct. Total numbers on CBCs have increased from about 350 in the early 1960s to 2,100 in 1982.

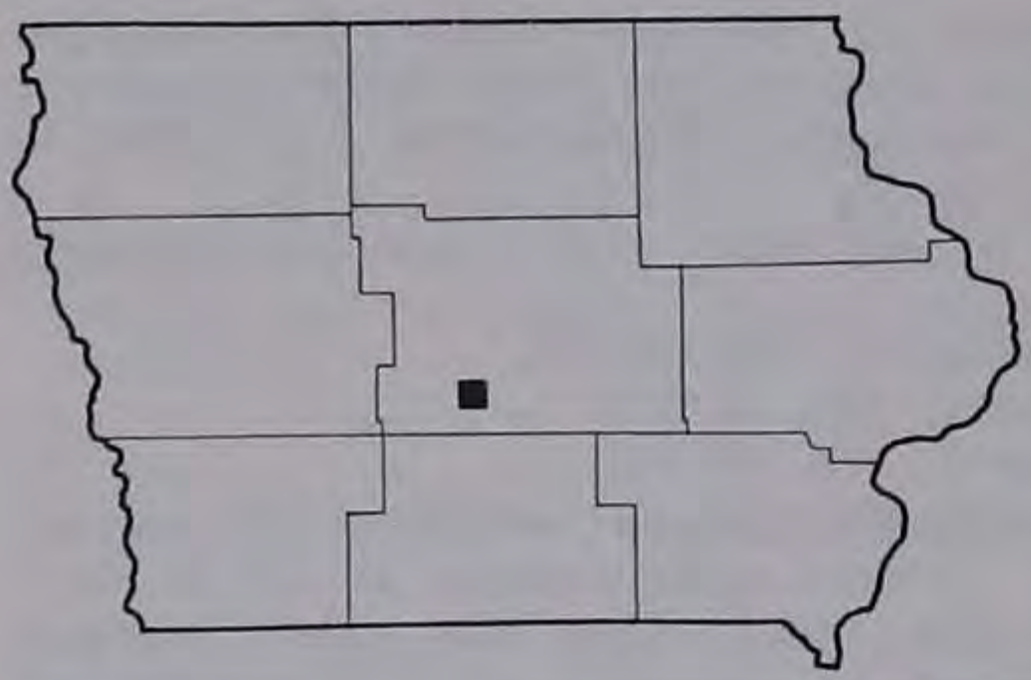
COMMENT: This species is adaptable to human activities and is maintaining a stable winter population but may be declining in rural areas with destruction of woodlands.

Pygmy Nuthatch, Sitta pygmaea

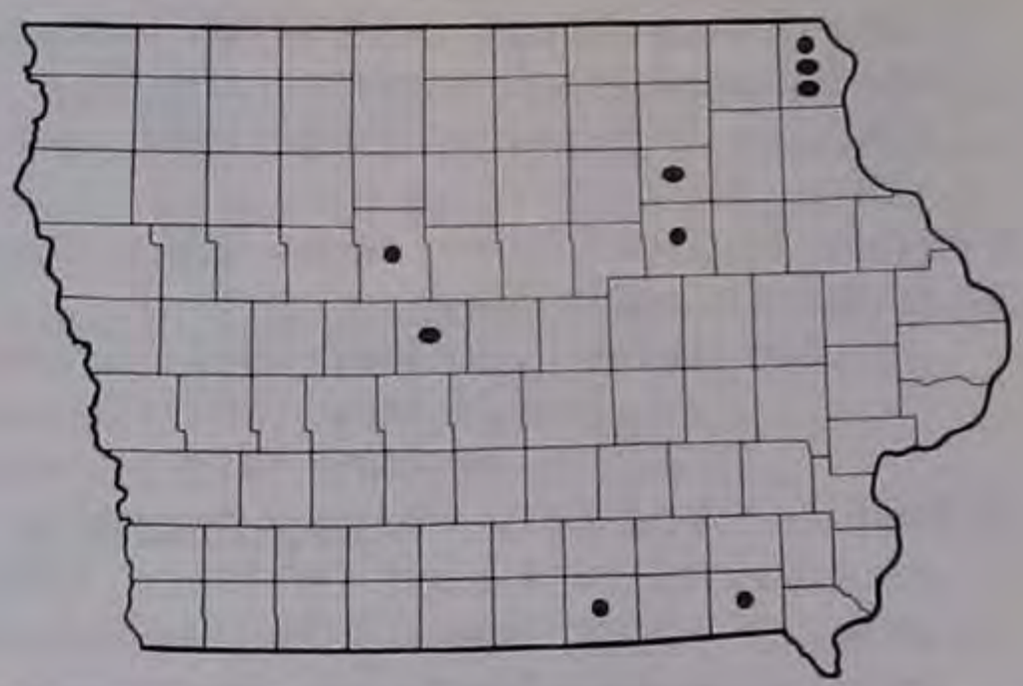
STATUS: Accidental. Class I-P.

RECORD: One photographed at Des Moines was observed from 26 Jan to 15 Apr 1977 (Brooke 1977; Petersen and Halmi 1977) (Map 6.94). The documentations and photographs were reviewed by an expert on nuthatches who agreed that this was the western species, Pygmy Nuthatch, rather than the similar appearing southern species, Brown-headed Nuthatch (Norris 1977).

COMMENT: The Pygmy Nuthatch breeds in open montane pine forest from S British Columbia and SW South Dakota south to Baja California, Arizona, NW Texas, and south into Mexico. East of the Rocky Mountains it is found in the Black Hills and is a rare local breeder in W Nebraska and Oklahoma. The species is largely nonmigratory and is not given to major irruptions, but in winter some birds move from the mountains to



Map 6.94 Pygmy Nuthatch record.



Map 6.95 Brown Creeper summer and nesting records by county, 1960-1982.

riparian woodland at lower elevations. It is presumably this movement that produces the rather infrequent winter records on the plains away from the mountains, where it has been recorded east to C Montana, E Nebraska, C Kansas, Iowa, and C Texas. The Iowa record is thus at the extreme eastern edge of the region of winter vagrancy.

REFERENCES:

Brooke, M. 1977. A new Iowa record: A Pygmy Nuthatch (**Sitta pygmaea**) in Des Moines. **Iowa Bird Life** 47:24.

Norris, B. 1977. Letter to P. C. Petersen.

Petersen, P. C., and N. S. Halmi. 1977. Editor's and Field Reports Editor's comments on the Pygmy Nuthatch. **Iowa Bird Life** 47:24-25.

[Brown-headed Nuthatch, **Sitta pusilla**]

STATUS: Class VI.

RECORDS: Several were reported at Keokuk on 9-13 May 1893; 2 were shot but mutilated (DuMont 1935). These were reported to DuMont 38 years after the sighting, and there was no description of the birds.

COMMENT: This southeastern species is a very rare vagrant. One in Milwaukee, Wis., in Oct-Dec 1971 was seen by many (**Am. Birds** 26:69). It is listed as hypothetical in Illinois on the basis of the same reference as for the Iowa report (Bohlen 1978) and in Indiana on the basis of a sight record from N Indiana on 6 Apr 1932 (Keller et al. 1979).

REFERENCE:

DuMont, P. A. 1935. An old record of the Brown-headed Nuthatch in Iowa and Illinois. **Wilson Bull.** 47:240.

Creepers, Family Certhiidae

The creeper family contains 6 species worldwide; the only one that occurs in North America is regular in Iowa. Creepers are small, slim birds with rather thin, decurved bills. They creep about trunks and limbs of trees foraging in the crevices of the bark for their insect food. Creepers have a stiff tail like that of woodpeckers. The sexes are alike in coloration.

Brown Creeper, Certhia americana

STATUS: Regular; common migrant, uncommon in winter and rare in summer. Class I-S N.
HABITAT: Woodlands, especially along river bottoms.
SPRING MIGRATION: The peak period is mid-Apr to early May. Early arrival and late departure dates are obscured by winter/summer residency, but first arrivals appear in late Mar and migrants are gone by late May.
SUMMER: Creepers are probably rare local nesters, with a few summer records mostly from the north (Map 6.95). There are 4 recent nesting observations: New Albin on 4 Jun 1978, nest with 1 young and 3 fledged young nearby (Schaufenbuel 1979); Waukon Junction on 4 Jun 1978, 2 fledged young (Schaufenbuel 1979); Boone on 12 Jun 1968, adult feeding young (Faaborg 1969; Brown 1971); and Sweet M. on 17 Jun 1978, adult feeding a fledgling (Schaufenbuel 1979). There is 1 old record from Scott Co. on 30 May 1891 of a nest with 3 young (Wilson 1906).
FALL MIGRATION: The peak period is late Sep to late Oct. Migrants may start appearing in late Aug.
WINTER: Creepers are regularly found on CBCs from all parts of the state. The average number per party on CBCs increased slightly in the 1970s compared with the 1960s. The highest number reported was 74 at Davenport on 21 Dec 1980 (IBL 51:19).
REFERENCE:

Faaborg, J. 1969. Notes on the summer birds of Boone County. Iowa Bird Life 39:45.

Wrens, Family Troglodytidae

Of 59 species of wrens found worldwide, 9 have been reported in North America and 7 in Iowa. Of the Iowa species, 5 are regular, 1 is casual, and 1 is accidental. All may have nested in Iowa at one time, but only 5 do so regularly now. Wrens are small, brownish birds with slender, slightly decurved bills. They are very active and vocal. Insects form the greatest part of their diet. The sexes look alike.

Sedge Wren, Hayden Prairie, 6 Jun 1981, T. H. Kent.

Rock Wren, Salpinctes obsoletus

STATUS: Accidental. Class III N.

RECORDS: There is 1 sight record judged acceptable by the Records Committee from Stone P., Sioux City, on 1 Apr 1910 (Bennett 1925). There are several other W Iowa reports (Map 6.96). Apparently a small breeding population became established in the Sioux City region during the late 1890s and early 1900s. Anderson (1907) quotes information supplied by Rich, who found a nest with "badly incubated" eggs on 25 Jun 1898 (see also Bennett 1925) and saw birds on 28 May 1899, 2 or possibly 3 birds on 1 Jun 1899 (singing), and birds at a different location on 10 Jun 1900. In addition, he examined a bird brought to him on 15 Sep 1901 and saw measurements on 2 birds shot on 22 Jun 1898. Later W Iowa reports are 10 Aug 1941 e of Hornick, Woodbury Co. (Laffoon 1942) and 16 Jun 1958 n of Sioux City, Plymouth Co. (Youngworth 1958). An early report from Decatur Co. (Trippe 1873) was judged unlikely by the Records Committee, and a bird described in Clayton Co. on 27-28 Sep 1914 (Sherman 1915) had features that were inconsistent with a Rock Wren. DuMont (1931) cites a nesting record from Des Moines for 30 Jun 1902 but does not include this record in his later publication (DuMont 1933).

COMMENT: Rock Wren is a summer resident of W Kansas, Nebraska, and South Dakota. There are a few records from the eastern parts of these states, 2 from NW Missouri (Easterla and Ball 1973), and a few from Minnesota and Illinois. The W Iowa records were from appropriate habitat by knowledgeable observers, so they probably indicate vagrancy of this species into Iowa. A systematic search of appropriate habitat such as quarries and rock outcroppings between Apr and Oct might produce more records of this species.

REFERENCES:

Bennett, W. W. 1925. The Rock Wren in Iowa. **Wilson Bull.** 37:93.

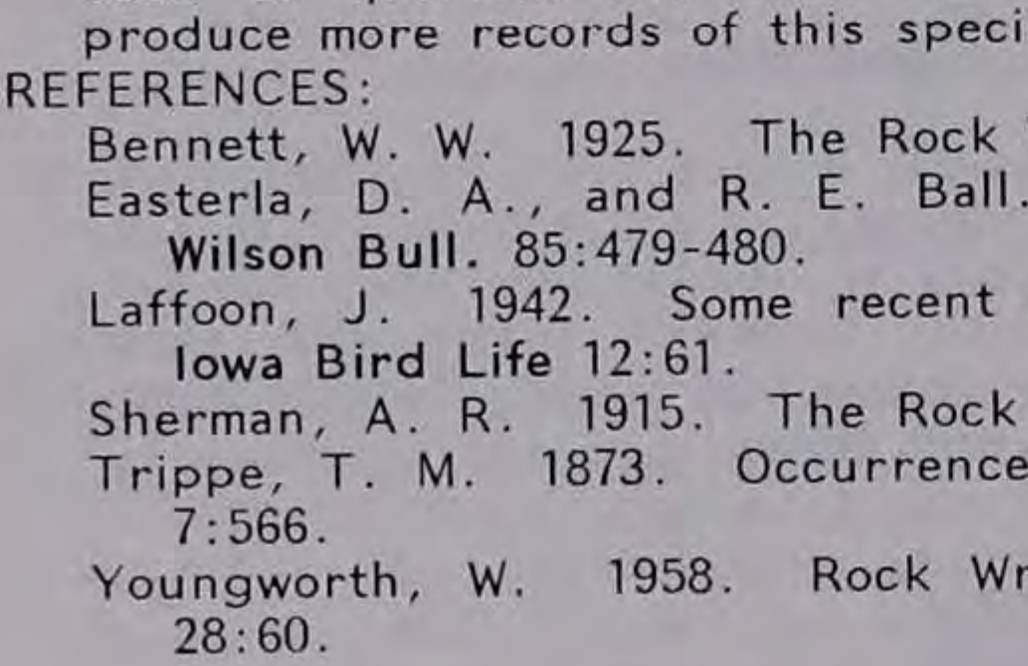
Easterla, D. A., and R. E. Ball. 1973. The Rock Wren in Missouri. **Wilson Bull.** 85:479-480.

Laffoon, J. 1942. Some recent bird records in the Sioux City area. **Iowa Bird Life** 12:61.

Sherman, A. R. 1915. The Rock Wren at National, Iowa. **Auk** 32:234.

Trippe, T. M. 1873. Occurrence of the Rock Wren in Iowa. **Am. Nat.** 7:566.

Youngworth, W. 1958. Rock Wren near Sioux City. **Iowa Bird Life** 28:60.



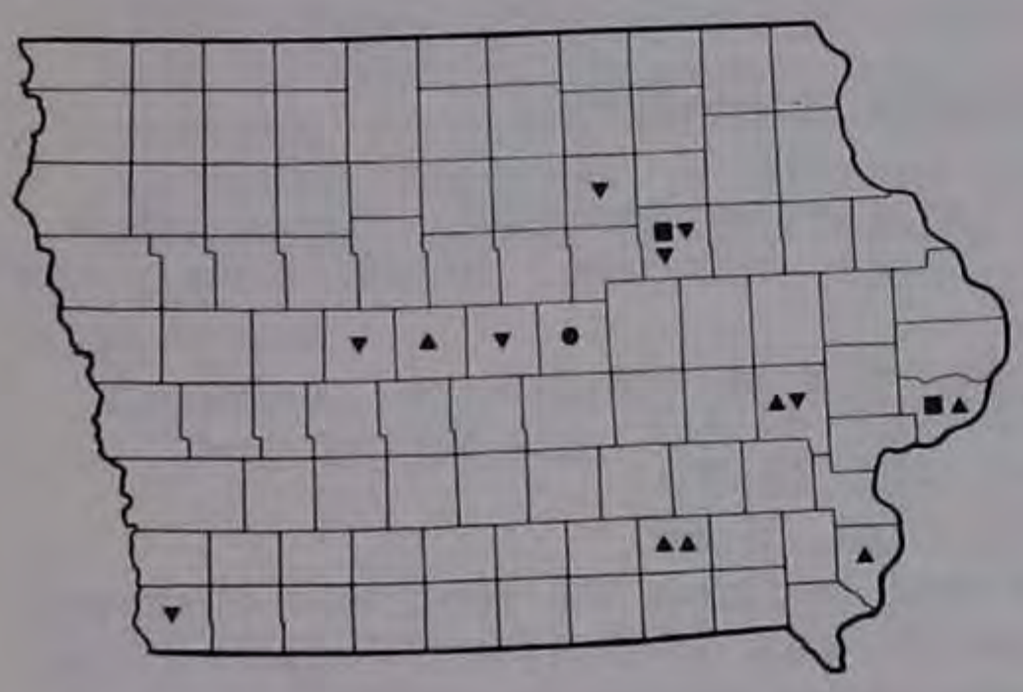
Map 6.96 Rock Wren records.

Carolina Wren, Thryothorus ludovicianus

STATUS: Regular; rare permanent resident south and east. Class I-S N.
HABITAT: Woodland thickets, bottomland forests, farmsteads, and urban areas.
SUMMER: Carolina Wrens probably nest throughout their range in Iowa, but the few nest records are only from S and E Iowa. Nesting dates range from late Apr through Jul.
WINTER: They winter throughout their range in Iowa.
COMMENT: The Carolina Wren apparently was very rare and restricted to S Iowa early in this century (Anderson 1907; DuMont 1933) but moved northward over much of the state by 1954 (Brown 1971). The population in Iowa fluctuates greatly, gradually increasing in numbers and range during years with mild winters and abruptly disappearing during years in which the winters have prolonged heavy snow cover and low temperatures. There were dramatic declines after severe winters in the early 1960s (Kent and Kent 1975; IBL 32:58) and 1978-1979.

Bewick's Wren, Thryomanes bewickii

STATUS: Casual; summer resident in S and E Iowa. Class I-P N.
HABITAT: Thickets, brushpiles, and fencerows around farmsteads and residential areas; scrubby woodland with dense undergrowth.
SPRING MIGRATION: Few data are available to indicate the peak period.
Early dates: 15 Mar 1939 (Fairfield, Dole 1939)
23 Mar 1964 (Pleasantville, IBL 34:47)
31 Mar 1967 (Iowa City, IBL 37:51)
SUMMER: They probably nest throughout their range in Iowa, but the only definite nesting records are from S Iowa. The few known nest dates range from early May to early Jul (Burk 1938; Kent 1950).
FALL MIGRATION: No peak is discernible.
Late dates: 29 Oct 1925 (Sigourney, DuMont 1933)
14 Oct 1962 (Heery Woods S.P., IBL 32:84)
28 Sep 1977 (Waterloo, IBL 47:146)
WINTER: Bewick's Wrens do not winter in Iowa. However, individuals were found at Cedar Falls on 28 Dec 1973 (Konig 1974) and during the 1960 CBC period at Davenport (IBL 31:10).
COMMENT: The Bewick's Wren is decreasing in Iowa, with few records since 1960 (Map 6.97). There were 10 reports during the 1960s and



Map 6.97 Bewick's Wren records, 1960-1982.

only 6 in the 1970s. However, the extreme SE corner of Iowa, which has historically been the area of greatest abundance, has not been extensively studied by birders in recent years.

REFERENCES:

Burk, W. 1938. Bewick's Wren and other birds at Vinton. **Iowa Bird Life** 8:26.

Dole, J. W. 1939. Bewick's Wren at Fairfield in March. **Iowa Bird Life** 9:28.

Kent, F. 1950. Nesting Bewick's Wren near Iowa City. **Iowa Bird Life** 20:62.

Konig, M. 1974. A wintering Bewick's Wren in Cedar Falls. **Iowa Bird Life** 44:25.

House Wren, **Troglodytes aedon**

STATUS: Regular; abundant summer resident. Class I-S N.

HABITAT: Woodlands, farmsteads, and residential areas.

SPRING MIGRATION: The peak period is early to mid-May.

Early dates: 7 Apr 1980 (Hamburg, **IBL** 50:49)
16 Apr 1959 (Davenport, PCP)
16 Apr 1977 (Des Moines, **IBL** 47:60)
16 Apr 1977 (Iowa City, **IBL** 47:60)

SUMMER: House Wrens were found on all 34 BBSs. The yearly average varied from 10.1 to 19.3 birds per route, with an overall average of 14.9 birds. The average number per route remained steady during the period 1967-1980.

FALL MIGRATION: The peak period is mid-Sep to early Oct.

Late dates: 7 Nov 1974 (Davenport, **IBL** 44:102)
31 Oct 1980 (Red Rock Res., **IBL** 51:28)
25 Oct 1971 (Davenport, **IBL** 41:111)
25 Oct 1972 (Davenport, **IBL** 42:97)

WINTER: The only records are 22 Dec 1979 at Yellow River F. (**IBL** 50:11) and 4 Jan 1975 at Keokuk (**Am. Birds** 29:699). Both probably were very late migrants.

COMMENT: House Wrens commonly use bluebird nest boxes for nest sites and may limit bluebird reproduction (Patterson 1967, 1969).

REFERENCES:

Patterson, S. 1967. A study of bluebird nesting in central Iowa--1965. **Iowa Bird Life** 37:36-40.

Patterson, S. 1969. Nesting box utilization by the Eastern Bluebird and the House Wren--1968. **Iowa Bird Life** 39:55-58.

Winter Wren, **Troglodytes troglodytes**

STATUS: Regular; uncommon migrant, rare winter resident. Class I-S N.

HABITAT: Banks of wooded streams, rock outcrops, brush piles, and ravines in woodlands.

SPRING MIGRATION: The peak period is early to late Apr.

Late dates: 13 May 1979 (Waterloo, **IBL** 49:41)
10 May 1963 (Waterloo, **IBL** 33:40)
10 May 1981 (Sweet M., **IBL** 51:68)

SUMMER: A juvenile pursuing an adult and begging for food was observed at Pikes Peak S.P., Clayton Co., on 30 Jun 1979 (Christiansen et al. 1980). A nest under construction was observed in the Yellow River F.

on 19 Jun 1975 (Koenig 1976). Breeding was reported from C Iowa (Cooke 1888), but no details were given. There are also these recent summer observations: 13 Jun and 11 Jul 1975 in Floyd Co. (IBL 45:94); 30 Jun and 1 Jul 1976 at Yellow River F. (IBL 46:84); 20 Jun 1979 at Pikes Peak S.P. and Effigy Mounds (DK); and 19 Jun 1979 at White Pine Hollow (DK).

FALL MIGRATION: The peak period is early to late Oct.
Early dates: 8 Sep 1961 (Davenport, IBL 31:87)
10 Sep 1967 (Davenport, IBL 37:99)
14 Sep 1965 (Davenport, IBL 35:89)

WINTER: Winter Wrens were found on CBCs throughout the eastern third of Iowa with a high of 7 at Clinton on 28 Dec 1974 (IBL 45:9). There are few reports from the western two-thirds of Iowa. The average number per party on CBCs increased 43 percent in the 1970s compared with the 1960s.

REFERENCE:

Christiansen, P., H. Harlow, and E. Hinman. 1980. Natural Resources Inventory of Pikes Peak/Point Ann State Park, Clayton County, Iowa. Report submitted to Iowa Conservation Commission.

Sedge Wren, **Cistothorus platensis**

STATUS: Regular; uncommon to locally common migrant and summer resident in north. Class I-S N.

HABITAT: Sedge meadows and moist grassy areas.

SPRING MIGRATION: The peak period is mid-May.
Early dates: 25 Apr 1982 (Willow Sl., IBL 52:60)
29 Apr 1977 (Boone Co., LAB)
3 May 1980 (location unknown, IBL 50:49)

SUMMER: Sedge Wrens probably nest throughout Iowa, but nest records are few. Nest dates range from early Jun to late Jul (Gabrielson 1914; Sherman 1952; Crawford 1977). They were found on 9 of 34 BBS routes. The highest average on a route was 2.0 birds. The average number per route of 0.6 birds remained steady during the period 1967-1980.

FALL MIGRATION: The peak period is early Sep to early Oct.
Late dates: 15 Nov 1977 (Booneville, IBL 47:146)
30 Oct 1982 (Doolittle Prairie, IBL 52:122)
16 Oct 1954 (Davenport, PCP)

WINTER: One was reported from Cedar Rapids on 20 Dec 1980 (IBL 51:3).

COMMENT: This late-nesting species is more common in N Iowa. Sherman (1952) noted that although migrants were seen in mid-May, the birds then seemed to disappear until Jul when they nested. Although the numbers reported on the BBSs have remained fairly constant, the continued drainage of sloughs and wet meadows is bound to have a detrimental effect on the future breeding population of this species in Iowa.

REFERENCE:

Crawford, R. 1977. Polygynous breeding of Short-billed Marsh Wrens. Auk 94:359-362.

Marsh Wren, **Cistothorus palustris**

STATUS: Regular; common summer resident in N Iowa, uncommon to rare in S Iowa. Class I-S N.
HABITAT: Cattail areas in marshes, lakes, and rivers.
SPRING MIGRATION: The peak period is early to mid-May.
Early dates: 17 Apr 1981 (Little Clear L., IBL 51:68)
22 Apr 1961 (Iowa City, FWK)
25 Apr 1981 (Cone M., IBL 51:68)
SUMMER: Marsh Wrens nest predominantly in the marshes of N Iowa. The peak of the nesting period is probably in Jul and Aug (Kent 1952), but nest records are few.
FALL MIGRATION: The peak period is Sep.
Late dates: 23 Nov 1979 (Guthrie Co., IBL 49:113)
31 Oct 1982 (Cooper's M., IBL 52:122)
30 Oct 1982 (Doolittle Prairie, IBL 52:122)
WINTER: Marsh Wrens are not known to overwinter in Iowa, but there are 2 records, probably of late migrants: 2 Jan 1955 at Des Moines (IBL 25:7) and 16 Dec 1978 at Shenandoah (IBL 49:17).
REFERENCE:
Kent, F. 1952. Notes on the Prairie Marsh Wren at Swan Lake in 1951. **Iowa Bird Life** 22:12-13.

Dippers, Family Cinclidae

Only 1 of the 4 species of dippers occurs in North America. There it is found in W North America and is hypothetical in Iowa. Dippers are small, stocky birds with a short tail, short wings, and a straight bill. They are found near water, where they commonly swim or walk on the bottom of a stream. They feed on insects and small invertebrates. Their nest is domed and usually is placed near a stream.

[American Dipper, **Cinclus mexicanus**]

STATUS: Hypothetical. Class IV.
RECORD: An unlabeled specimen examined at Macedonia, Pottawattamie Co., was said to have been taken in Fremont Co. in the spring of 1895 or 1896 (Hendrickson 1957). The information on the origin of the specimen was secondhand and, therefore, the record is considered hypothetical.
COMMENT: This species occurs in the Black Hills of South Dakota and has occurred as a vagrant in W and C Nebraska (Johnsgard 1980). There is a Jan-Apr 1970 record from the north shore of Lake Superior (Green and Janssen 1975) but no records from states to the east of Iowa.
REFERENCE:
Hendrickson, G. O. 1957. A Dipper specimen at Macedonia, Iowa. **Iowa Bird Life** 27:72.

Kinglets, Gnatcatchers, and Thrushes, Family Muscicapidae

This huge family of over 1,300 species ranges over much of the world. It includes the thrushes, kinglets, old world warblers, old world flycatchers, and babblers, groups that all commonly have been considered

separate families. These birds have 10 primaries, share a number of anatomical characteristics, and have similar egg-white proteins. Two subfamilies of this family are found in Iowa: Sylviinae and Turdinae.

Old World Warblers, Subfamily Sylviinae

This large, mainly Old World group has about 390 species, of which about 10 have been reported in North America. All 3 species found in Iowa are regular in the state. The North American species are small, active, and somewhat gregarious birds. Their food is mainly insects and insect larvae. Except for the Ruby-crowned Kinglet, they have a high-pitched, weak song.

Golden-crowned Kinglet, **Regulus satrapa**

STATUS: Regular; common migrant, rare in winter. Class I-S.
HABITAT: Woodlands, brushy areas, and conifer groves.
FALL MIGRATION: The peak period is early Oct to early Nov.
Early dates: 31 Aug 1972 (Iowa City, IBL 42:97)
21 Sep 1969 (Shenandoah, IBL 39:60)
23 Sep 1979 (Lacey-Keosauqua S.P., IBL 49:80)
23 Sep 1982 (Ames, IBL 52:123)
WINTER: Golden-crowns winter in small numbers throughout the state. The average number per party found on CBCs decreased 33 percent in the 1970s, compared with the 1960s.
SPRING MIGRATION: The peak period is early to late Apr. Males predominate early and females later (Crim 1976). Early dates are obscured by overwintering birds.
Late dates: 15 May 1960 (Waterloo, IBL 30:46)
6 May 1961 (Ottumwa, IBL 31:40)
30 Apr 1968 (Davenport, PCP)
REFERENCE:
Crim, G. 1976. Kinglets in Iowa. **Iowa Bird Life** 46:45-47.

Ruby-crowned Kinglet, **Regulus calendula**

STATUS: Regular; abundant migrant, rare in winter. Class I-S.
HABITAT: Woodlands, brushy areas, and willows along streams.
SPRING MIGRATION: The peak period is mid-Apr to early May. Males predominate early and females later (Crim 1976).
Early dates: 21 Mar 1972 (Davenport, PCP)
22 Mar 1980 (Ames, IBL 50:50)
28 Mar 1980 (Iowa City, IBL 50:50)
Late dates: 29 May 1974 (Davenport, PCP)
25 May 1976 (Davenport, PCP)
25 May 1982 (Davenport, IBL 52:60)
SUMMER: The only summer records are 24 and 25 Jun and 24 Jul 1972 at Shenandoah and 23 and 24 Jul 1972 at Iowa City (IBL 42:70)
FALL MIGRATION: The peak period is late Sep to mid-Oct. Late dates are obscured by early winter birds.
Early dates: 16 Aug 1965 (Ogden, IBL 35:90)
24 Aug 1977 (Davenport, IBL 47:146)
25 Aug 1973 (Waterloo, IBL 43:76)
WINTER: A few have been found on CBCs in 21 of the last 23 years from

all parts of the state. Most of the CBC records are probably of late migrants. There are no records of the Ruby-crowned Kinglet between 10 Jan and 21 Mar.

COMMENT: Due to lack of field activity in midwinter it is difficult to determine if any actually overwinter in Iowa, but this species is much rarer in winter than the Golden-crowned Kinglet and sightings should be documented.

REFERENCE:

Crim, G. 1976. Kinglets in Iowa. **Iowa Bird Life** 46:45-47.

Blue-gray Gnatcatcher, **Polioptila caerulea**

STATUS: Regular; uncommon to locally common summer resident S and E Iowa, rare elsewhere. Class I-S N.

HABITAT: Open woodlands.

SPRING MIGRATION: Gnatcatchers arrive as early as mid-Apr.

Early dates: 5 Apr 1981 (Pocahontas Co., IBL 51:68)
14 Apr 1982 (Ledges S.P., IBL 52:60)
16 Apr 1981 (Ames, JCR)

SUMMER: Nest dates range from early May to Jul (DeLong 1943; Polder and Polder 1963).

FALL MIGRATION: Gnatcatchers are relatively uncommon in fall, and no peaks have been noticed.

Late dates: 13 Nov 1964 (Jefferson, IBL 35:26)
24 Sep 1978 (Ames, IBL 48:130)
22 Sep 1982 (Iowa City, IBL 52:123)

REFERENCES:

DeLong, Mrs. W. C. 1943. Nesting of the Blue-gray Gnatcatcher. **Iowa Bird Life** 13:51.

Polder, E. B., and E. H. Polder. 1963. Blue-gray Gnatcatcher notes. **Iowa Bird Life** 33:19-20.

Thrushes, Subfamily Turdinae

The thrush subfamily contains some 306 species found over most of the world except Antarctica. About 20 species have been found in North America, including 11 reported from Iowa. Of the species reported from Iowa, 9 are regular, 1 is accidental, and 1 is Class VI. Thrushes usually are found in woodlands or near the edge of wooded areas. They are somewhat omnivorous in food habits, taking a variety of fruits and insects as well as other items. The thrushes are probably best known for the strong "musical" songs of many species.

Wood Thrush, Iowa City, 13 Aug 1951, T. H. Kent.

Eastern Bluebird, **Sialia sialis**

STATUS: Regular; uncommon summer resident, rare in winter. Class I-S N.
HABITAT: Open country and wooded edge.
SPRING MIGRATION: Migration begins in early Mar and extends into Apr. They usually migrate as singles or small flocks.
SUMMER: Once a widespread nester in Iowa, the bluebird has been reduced in numbers and locations. Competition with House Sparrows and House Wrens is one factor limiting reproduction (Patterson 1967, 1969). Large numbers of bluebird houses have been built to overcome loss of normal nesting sites, not always with success (Petersen 1969). It is not known whether pesticides have also contributed to the decline of the bluebird. On BBSs, bluebirds are more common in the southern and eastern thirds of the state. The number per route declined from 1.0 in the period 1967-1972 to 0.3 in 1973-1978. This compares with an unchanged value of 32 for robins over the same routes.
FALL MIGRATION: The fall migration is similar to the spring migration and occurs in Oct and Nov.
WINTER: Since 1960, bluebirds have been found on 24 percent of CBCs south of a line from Council Bluffs to Dubuque but only 4 percent north of this line. The most frequent locations are along the lower portions of the Mississippi and Missouri rivers. In contrast to nesting declines, wintering bluebirds are on the increase. In the 1960s 98 were seen, representing 10 percent of the counts; in the 1970s 337 were seen, representing 22 percent of the counts.
COMMENT: The bluebird may be a bellwether of environmental change. It would be nice to know the relative extent to which pesticides, destruction of nest sites, and competition for nest sites have affected the bluebird decline.
REFERENCES:

Patterson, S. 1967. A study of bluebirds nesting in central Iowa--1965. **Iowa Bird Life** 37:36-40.
Patterson, S. 1969. Nesting box utilization by the Eastern Bluebird and the House Wren--1968. **Iowa Bird Life** 39:55-58.
Petersen, P. 1969. Summary of an eight year survey of bluebird nesting boxes in eastern Iowa. **Iowa Bird Life** 39:75-78.

[Western Bluebird, **Sialia mexicana**]

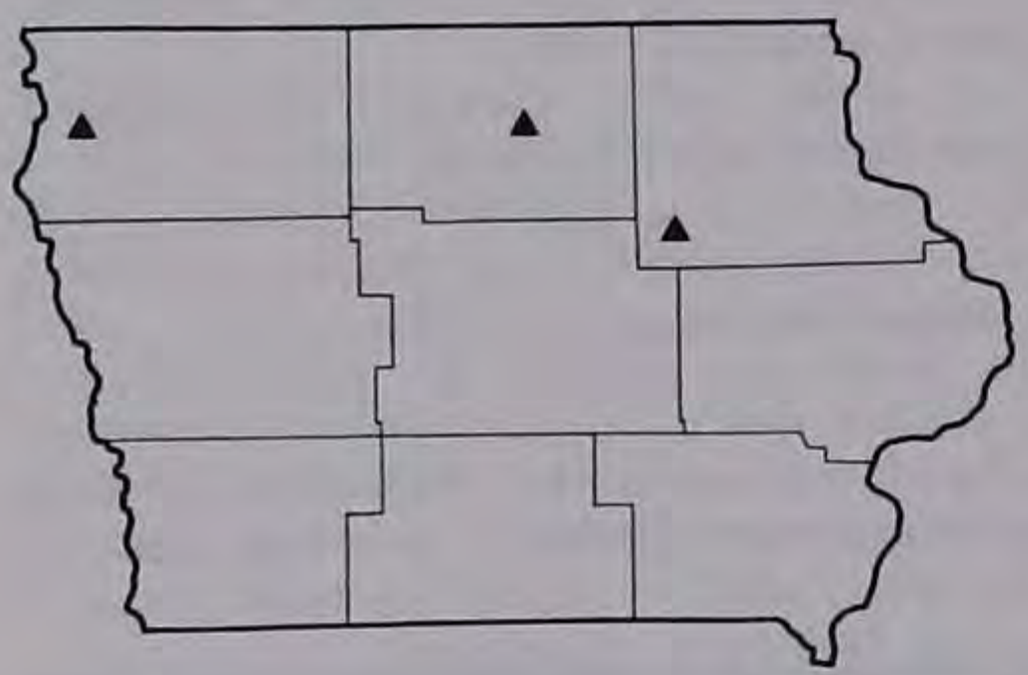
STATUS: Class VI.
RECORDS: A bird was attributed to W Iowa prior to 1875 by several authorities, but no data are available (Anderson 1907). A bird seen in Cedar Rapids in the spring of 1903 was said to have a blue breast (Anderson 1907), a finding suggestive of Mountain Bluebird.
COMMENT: Unlike the Mountain Bluebird, this species is not a frequent eastward vagrant. There are 5 records for Nebraska, 2 of which are from eastern counties (Johnsgard 1980) and 1 record from Wichita, Kans., Jan 1976 (**Am. Birds** 30:737). There are no other records from adjacent states.

Mountain Bluebird, Sialia currucoides

STATUS: Accidental. Class I-P.

RECORDS: Musgrove (1948) identified a mounted specimen said to have been caught by a cat in Osceola Co. in the mid-1940s. Three recent records (Map 6.98) are from Cedar Falls on 10 Apr 1975 (Dowell 1975), W Sioux Co. on 7 Apr 1979 (IBL 49:61; Van Dyk 1981), and near Mason City on 16 Mar 1980 (IBL 50:49). The first 2 records are well described and the third documented by a color photograph (by C. Nelson, on file with Records Committee). There is a questionable old nesting record from Apr 1914 from Floyd Co. (Fenton 1923-1924).

COMMENT: The Mountain Bluebird breeds from Alaska and Manitoba south to C California and New Mexico, mostly in open montane forest and less commonly in riparian woodland, parks, and farmland at lower elevations. It is common throughout the Rocky Mountains and a rare to uncommon breeder east of them in the Turtle Mountains of NC North Dakota, the Black Hills and Badlands of South Dakota, Pine Ridge and the Wildcat Hills of the Nebraska panhandle, the eastern slope foothills of Colorado, the Black Mesa of extreme W Oklahoma, C Oklahoma, and the Texas panhandle. It is partially migratory, withdrawing in winter from the northern parts of its range. Migration occurs in Mar to May and Sep-Oct. It is a hardy species, in winter ranging from British Columbia and Montana south into Mexico. In the central United States it is found east to W South Dakota, Kansas, Oklahoma, and C and SE Texas, and rarely to Louisiana. As a vagrant, it has been recorded east to Ontario (8 records), Minnesota (19 records), Iowa, and Missouri. There is 1 doubtful record from Illinois. Recently there have been a few records from eastern states: Pennsylvania, New York, and Massachusetts. The Iowa and Minnesota records are about equally distributed between fall/winter (12 records from Sep to Feb) and early spring (15 records from Mar to Apr). This pattern suggests that the birds are disoriented migrants.



Map 6.98 Mountain Bluebird records.

REFERENCES:

Dowell, V. E. 1975. Mountain Bluebird at Cedar Falls. **Iowa Bird Life** 45:96.

Musgrove, J. W. 1948. The Groove-billed Ani and Mountain Bluebird, specimens in Iowa collection. **Iowa Bird Life** 18:70.

Van Dyk, J. 1981. Mountain Bluebird in northwest Iowa. **Iowa Bird Life** 51:132.

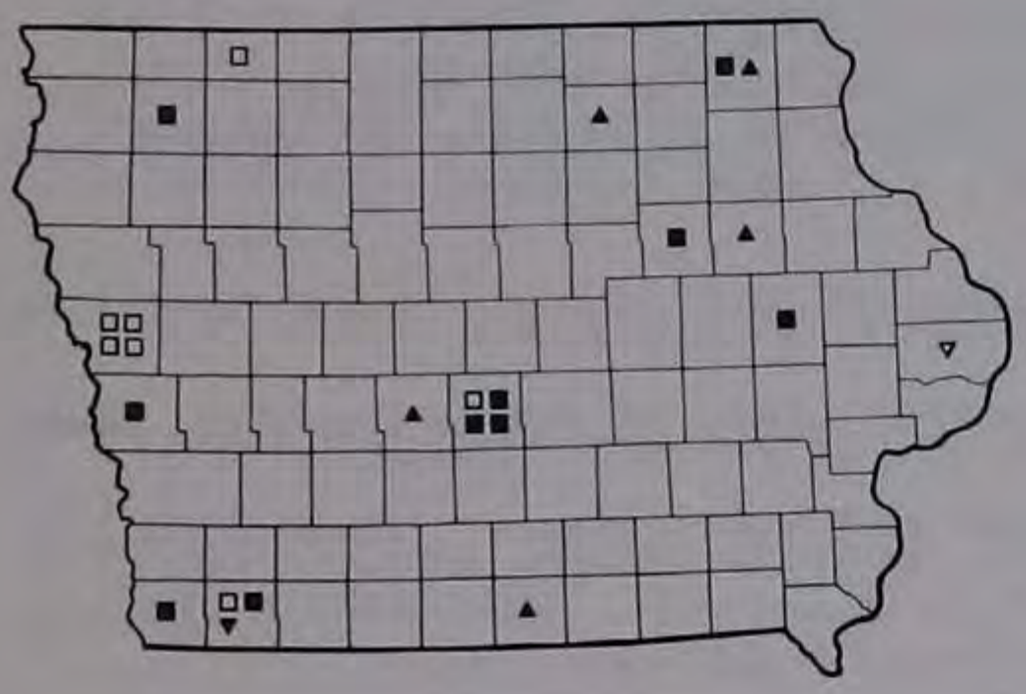
Townsend's Solitaire, **Myadestes townsendi**

STATUS: Regular; rare winter visitant. Class I-P.
HABITAT: Prefers conifers such as found in cemeteries and cedar groves.
WINTER: This western species, which tends to wander eastward in winter, was first recorded at Clinton in 1954 (Brown 1971) and has been reported 24 times through 1981 (Map 6.99). It was recorded in 8 of 10 years since 1972. Sightings are widely scattered throughout the state and have been of single birds except for 2 at Cedar Rapids in 1961-1962 and 2 in Winneshiek Co. in 1977. There are no specimens, but 1 was netted and photographed (DeLong 1969). There are several other accounts of sightings (Jones 1958; Serbousek 1962; Youngworth 1957, 1959; DeLong 1971).

Early dates: 6 Oct 1968 (Page Co., DeLong 1969)
17 Oct 1970 (Page Co., DeLong 1971)
25 Nov 1954 (Clinton, Brown 1971)

Late dates: 16 May 1972 (Buchanan Co., **IBL** 42:39)
7 Apr 1971 (Page Co., DeLong 1971)
27 Mar 1977 (Corydon, Wayne Co., **IBL** 47:61)

COMMENT: This species has just attained regular status. Perhaps careful search of juniper (red cedar) groves might produce it more often, since juniper cones are one of the principal food sources of wintering solitaires (Bock 1982).



Map 6.99 Townsend's Solitaire records.

REFERENCES:

Bock, C. E. 1982. Factors influencing winter distribution and abundance of Townsend's Solitaire. **Wilson Bull.** 94:297-302.

DeLong, Mrs. W. C. 1969. When you set your trap. **Iowa Bird Life** 39:41-43.

DeLong, Mrs. W. C. 1971. Western birds at feeders in southwest Iowa. **Iowa Bird Life** 41:59-60.

Jones, M. L. 1958. Townsend's Solitaire near Estherville. **Iowa Bird Life** 28:83-84.

Serbousek, L. 1962. Townsend's Solitaire in Cedar Rapids. **Iowa Bird Life** 32:20.

Youngworth, W. 1957. Townsend's Solitaire in Monona County. **Iowa Bird Life** 27:24-25.

Youngworth, W. 1959. Townsend's Solitaire in western Iowa. **Iowa Bird Life** 29:23-24.

Veery, Catharus fuscescens

STATUS: Regular; uncommon migrant, rare summer resident. Class I-S N.

HABITAT: Open wooded areas or deep woods.

SPRING MIGRATION: The average arrival date for this species tends to be later than for other thrushes (11 May in Iowa City, FWK), with peak migration in mid-May. It is also less common than the gray thrushes.

Early dates: 30 Apr 1976 (Davenport, IBL 46:57)
1 May 1966 (Davenport, PCP)
3 May 1969 (Iowa City, FWK)

SUMMER: In recent years there have been a number of Jun and Jul records (Map 6.100) which suggest nesting. Nests have been found at Ledges S.P. in 1968 (Faaborg 1969) and at Brush Creek Canyon, Fayette Co., in 1977 (Koenig 1979). Regular locations of summer birds include Yellow River F., Brush Creek Canyon, White Pine Hollow, Palisades-Kepler S.P., Amana Woods, and Ledges S.P. Only 3 summer records were noted prior to 1967 (Brown 1968).

FALL MIGRATION: There are more fall records than for Gray-cheeked Thrush. The migration occurs in late Aug through Sep.

Early dates: 16 Aug 1976 (Davenport, IBL 46:84)
17 Aug 1968 (Davenport, PCP)
17 Aug 1977 (Davenport, PCP)

Late dates: 16 Oct 1966 (Des Moines, IBL 36:104)
1 Oct 1976 (Davenport, IBL 46:114)
30 Sep 1970 (Davenport, PCP)

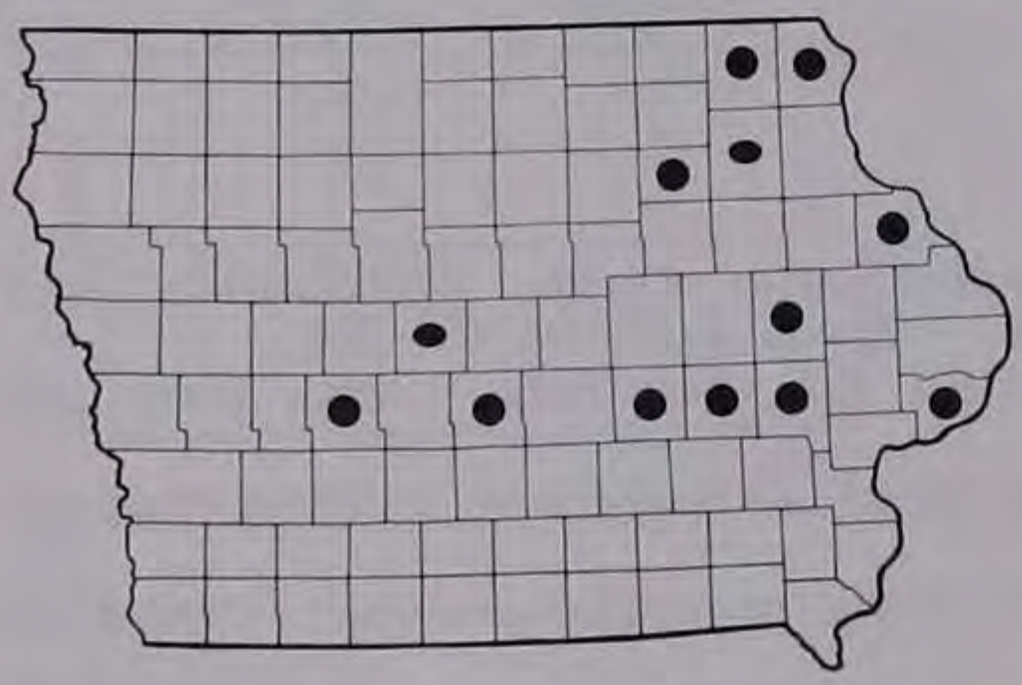
COMMENT: More data are needed on the nesting of this species in Iowa. Peak numbers netted at Pine Hill Cemetery in Davenport for spring and fall are 14 on 14 May 1974 and 12 on 5 Sep 1973 (PCP).

REFERENCES:

Brown, W. H. 1968. Possible nesting of the Veery. Iowa Bird Life 38:20.

Faaborg, J. 1969. Notes on the summer birds of Boone County. Iowa Bird Life 39:45.

Koenig, D. 1979. Acadian Flycatcher and Veery nests. Iowa Bird Life 49:27-28.



Map 6.100 Veery summer and nesting records by county, 1960-1982.

Gray-cheeked Thrush, **Catharus minimus**

STATUS: Regular; common spring migrant, rare fall migrant. Class I-S.
HABITAT: Open wooded areas or deep woods.
SPRING MIGRATION: This species is less common than Swainson's Thrush and migrates at the same time in early to mid-May. A peak number was 30 at Waterloo on 7 May 1965.
Early dates: 22 Apr 1970 (Davenport, PCP)
26 Apr 1964 (Iowa City, FWK)
29 Apr 1978 (Davenport, PCP)
Late dates: 2 Jun 1967 (Davenport, PCP)
1 Jun 1968 (Davenport, PCP)
31 May 1966 (Davenport, PCP)
FALL MIGRATION: Very few fall sightings have been reported.
Early dates: 14 Aug 1977 (Winneshiek Co., IBL 47:146)
29 Aug 1972 (Davenport, PCP)
Late dates: 12 Dec 1973 (Davenport, IBL 44:21)
19 Oct 1971 (Des Moines, IBL 41:112)
14 Oct 1969 (Davenport, PCP)
COMMENT: More data are needed on migration dates and numbers to better define the migration of this species. Although similar in color to Swainson's Thrush, the cheek patch and lack of eye ring serve to distinguish the Gray-cheeked Thrush. Based on netting data at Pine Hill Cemetery in Davenport, Swainson's Thrush outnumbers Gray-cheeked by 4 to 1 (PCP). Peak spring and fall numbers at Pine Hill Cemetery are 18 on 14 May 1974 and 10 on 21 Sep 1978 (PCP). Spring field observations, however, in E Iowa from 1977 to 1980 reveal 54 Swainson's to 44 Gray-cheeks (THK).

Swainson's Thrush, **Catharus ustulatus**

STATUS: Regular; common spring migrant, uncommon fall migrant. Class I-S.
HABITAT: Open wooded areas or deep woods.
SPRING MIGRATION: The peak migration occurs in early and mid-May. In late Apr there may be a problem in distinguishing Swainson's from Hermit thrushes. The average first arrival day in Iowa City was 4 May (FWK), 3 days earlier than that for Gray-cheeked Thrush.
Early dates: 20 Apr 1967 (Davenport, PCP)
22 Apr 1966 (Davenport, PCP)
22 Apr 1970 (Davenport, PCP)
Late dates: 3 Jun 1966 (Davenport, PCP)
3 Jun 1967 (Davenport, PCP)
2 Jun 1965 (Davenport, PCP)
2 Jun 1971 (Davenport, PCP)
FALL MIGRATION: Although this species may arrive in considerable numbers in the spring, in the fall they pass through mostly unnoticed except by the banders who catch them in their nets. Most migrate through Iowa in Sep and early Oct.
Early dates: 19 Aug 1975 (Davenport, PCP)
24 Aug 1966 (Davenport, PCP)
25 Aug 1964 (Davenport, PCP)
25 Aug 1971 (Davenport, PCP)
Late dates: 6 Nov 1977 (Davenport, IBL 47:146)
30 Oct 1976 (Davenport, IBL 46:114)

21 Oct 1979 (Iowa City, IBL 49:114)

WINTER: One was reported at Clinton on 29 Dec 1973 (IBL 44:21).

COMMENT: In winter and early spring Hermit Thrush is much more likely to occur than Swainson's Thrush, so care should be taken to distinguish these similar appearing species. The peak numbers netted for spring and fall at Pine Hill Cemetery in Davenport are 28 on 26 May 1968 and 74 on 4 Sep 1975 (PCP). No published data are available on peak numbers seen in the field in 1 day.

Hermit Thrush, **Catharus guttatus**

STATUS: Regular; common migrant, rare winter. Class I-S.

HABITAT: Open wooded areas.

SPRING MIGRATION: Almost all the migration occurs in Apr, with the peak in mid-Apr.

Early dates: 26 Mar 1973 (Cedar Falls, IBL 43:47)
28 Mar 1972 (Des Moines, IBL 42:39)
31 Mar 1974 (Davenport, IBL 44:44)

Late dates: 29 May 1975 (Davenport, PCP)
10 May 1967 (Davenport, PCP)
10 May 1973 (Davenport, PCP)

FALL MIGRATION: The bulk of the migration occurs in Oct. Some birds linger into winter, so late dates are unreliable.

Early dates: 15 Sep 1964 (Davenport, PCP)
25 Sep 1975 (Davenport, PCP)
26 Sep 1962 (Davenport, IBL 32:84)

Late dates: 26 Nov 1970 (Waterloo, IBL 41:27)
17 Nov 1963 (Des Moines, IBL 33:89)
14 Nov 1981 (Yellow River F., IBL 51:120)

WINTER: Singles were seen at 1 or 2 locations on CBCs in 8 of 10 years in the 1970s. Other recent winter records are 7 Jan 1969 at Bettendorf (IBL 39:20), 2 Jan 1972 at Des Moines (IBL 42:23), 18 Feb 1973 at Cedar Rapids (IBL 43:47), 24 Dec 1973 at Davenport (IBL 44:21), 5 Jan 1976 at Davenport (IBL 46:25), 9 Feb 1980 in Boone Co. (IBL 50:27), and 28 Feb 1980 at Cedar Rapids (IBL 50:27).

COMMENT: In late Apr Hermit Thrushes are difficult to distinguish from the similar appearing Swainson's Thrush. Usually Hermit Thrushes are gone when Swainson's arrive. Hermit Thrushes are usually present in small numbers with little tendency to flock. The highest count recorded is 10 on 19 Apr 1966 at Iowa City (IBL 36:50). Fall birds are even less conspicuous; thus there are fewer fall records. However, 3 times as many are netted in the fall as in the spring at Pine Hill Cemetery in Davenport (PCP). The peak numbers netted on 1 day were 27 on 12 Oct 1974 and 22 Oct 1979 (PCP).

Wood Thrush, **Hylocichla mustelina**

STATUS: Regular; common summer resident in E Iowa, uncommon C and W Iowa. Class I-S N.

HABITAT: Large tracts of deep woods.

SUMMER: Wood Thrushes arrive in early May and leave by early to mid-Oct.

Early dates: 19 Apr 1973 (Davenport, IBL 43:47)
24 Apr 1982 (Davenport, IBL 52:60)

28 Apr 1964 (Davenport, PCP)
28 Apr 1978 (Davenport, PCP)
Late dates: 24 Oct 1977 (Davenport, IBL 47:146)
14 Oct 1975 (Davenport, PCP)
13 Oct 1962 (Decorah, IBL 32:84)

COMMENT: Wood Thrushes are present in small numbers in selected habitat. Little is recorded of their distribution, although one would expect them to be more common in the wooded eastern portions of the state.

American Robin, **Turdus migratorius**

STATUS: Regular; abundant summer resident, uncommon winter. Class I-S N.

HABITAT: BBSs demonstrate that robins are uniformly spread across the state and occur in all types of habitat. They are found in rural and urban areas, in fields and farmsteads, around marshes, and at the edge of deep woods. In winter they favor river bottoms and other protected areas.

SPRING MIGRATION: Migration usually begins in early Mar and peaks in late Mar but varies somewhat with the weather. The peak number was 1,000 at Des Moines on 11 Mar 1973 (IBL 43:47).

SUMMER: BBSs average 32 robins per route, with uniform distribution across the state and no significant yearly fluctuation from 1967 through 1979. Nesting may start in early Apr, with a peak of first nests in late Apr and early May. Second nests peak in late May and some nests are initiated later in Jun and even Jul (Willson 1978).

FALL MIGRATION: Robins flock in late summer; most leave in Oct, but some linger. In 1914 a flock numbering up to 761 roosted in Sioux City from early Aug to mid-Oct (Abel 1914). A migrating flock of 500 was seen near Coralville Res. on 20 Oct 1979 (IBL 49:113).

WINTER: The highest frequencies of robins on CBCs are from urban areas, southern areas, and along the Mississippi R. Total numbers on CBCs have varied from 13 to 3,180. The following table shows the dramatic increase in robins on CBCs from the 1960s to the 1970s.

	1960s	1970s
Total CBCs	258	263
% reporting robins	33	63
Total robins	683	5,472

COMMENT: Robins appear to have recovered from the fatalities caused by pesticides in the 1950s and 1960s, with stable nesting and increased wintering populations. A series of studies on the Iowa State University campus (Klimstra and Stieglitz 1957; Weller 1971; Willson 1978) showed a dramatic decrease in robin numbers in the 1960s associated with the DDT spraying used in an attempt to control Dutch elm disease. A recovery in numbers occurred by the mid-1970s.

REFERENCES:

Abel, A. R. 1914. Notes on a northern robin roost. **Wilson Bull.** 26:164-172.

Klimstra, W. D., and W. O. Stieglitz. 1957. Notes on reproductive activities of robins in Iowa and Illinois. **Wilson Bull.** 69:333-337.

Weller, M. W. 1971. Robin mortality in relation to Dutch elm disease control programs on the Iowa State University campus. **Iowa State J. Res.** 45:471-475.

Willson, G. D. 1978. Reproductive biology of American Robins following a Dutch elm disease control program. Proc. Iowa Acad. Sci. 85:91-96.

Varied Thrush, Ixoreus naevius

STATUS: Regular; rare winter visitant. Class I-P.

HABITAT: This far-western species strays eastward in the winter, stopping in urban areas to frequent bird feeders. Once a favorable spot with evergreen cover and feeders is found, a Varied Thrush may remain for the winter. This species is quite shy and difficult to find except when feeding.

RECORDS: There are 3 records from the 1960s, 10 from the 1970s, and 3 from 1980 to 1982 (Map 6.101). Three have been photographed (P. C. Petersen, IBL 50:27; Waterloo, 1980-1981, Ruth Buck, on file with Records Committee; and Maysville, Scott Co., 16 Jan 1982, P. C. Petersen, on file with Records Committee). There are several published accounts of sightings (Crocker 1969, 1973; Serbousek 1971; Coltman 1975; Dowell 1977) as well as documentations of recent sightings.

Early dates: 17 Nov 1972 (Storm Lake, Crocker 1973)
19 Nov 1978 (Cedar Falls, IBL 48:139)
20 Nov 1981 (Storm Lake, IBL 51:120)

Late dates: 16 May 1976 (Davenport, IBL 46:57)
11 Apr 1982 (Waterloo, IBL 52:60)
10 Apr 1971 (Cedar Rapids, Serbousek 1971)

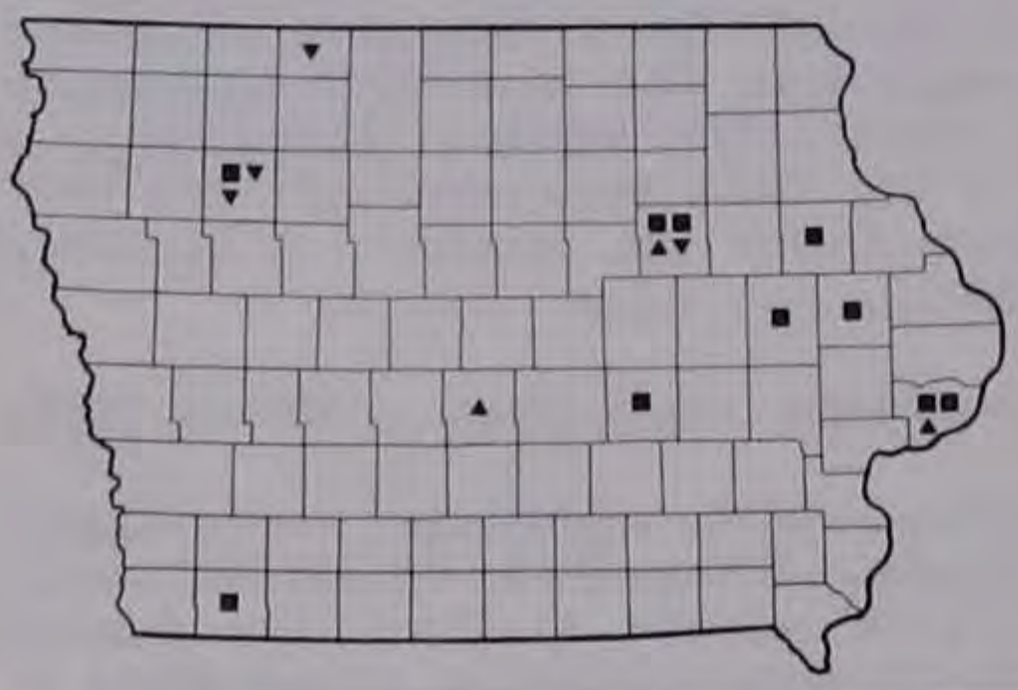
COMMENT: The Varied Thrush nests in Alaska, W Canada, and the Pacific Northwest and winters along the Pacific Coast. Some birds take aberrant migration routes and end up in Utah/Colorado/Wyoming, the Midwest, and the East Coast, apparently by different routes (Keith 1968). Although this species is out of its "normal" range in Iowa, it is classified as regular on the basis of being seen almost every year. Perhaps increased winter bird feeding has induced this species to find winter locations in Iowa in recent years.

REFERENCES:

Crocker, V. R. 1969. Fall and winter visitors at Storm Lake. Iowa Bird Life 39:43-44.

Crocker, V. 1973. Varied Thrush in northwest Iowa. Iowa Bird Life 43:27-28.

Coltman, Mrs. K. L. 1975. Varied Thrush at Manchester. Iowa Bird Life 45:97-98.



Map 6.101 Varied Thrush records.

Dowell, V. E. 1977. Varied Thrush at Cedar Falls. Iowa Bird Life 48:102.
Keith, A. R. 1968. A summary of the extralimital records of the Varied Thrush, 1848 to 1966. Bird-Banding 34:245-276.
Serbousek, L. 1971. Varied Thrush in Cedar Rapids. Iowa Bird Life 41:58-59.

Thrashers and Mockingbirds, Family Mimidae

The mimids are a New World family containing about 30 species, 11 of which occur in North America. Of the 5 Iowa species, 3 are regular and 2 are accidental. Mimids have long tails and strong bills that vary from straight to sharply curved. Iowa species generally are found in woodlands or thick shrubby areas. They build a bulky, cup-shaped nest in low shrubs and trees. The family is known for the ability to mimic the vocalizations of other birds.

Brown Thrasher, C. Kurtz.

Gray Catbird, **Dumetella carolinensis**

STATUS: Regular; abundant summer resident, rare winter. Class I-S N.
HABITAT: Rural and urban areas with trees and shrubs; tends to favor denser cover than Brown Thrasher.
SUMMER: Catbirds usually begin arriving during the first week of May and remain until Oct. They tend to be more suspicious around their nests than Brown Thrashers. Nesting begins in mid-May and extends into Jul, with most pairs attempting 2 clutches (Gabrielson 1913; Johnson and Best 1980).
Early dates: 20 Apr 1980 (Springbrook S.P., JJD)
23 Apr 1965 (Davenport, PCP)
25 Apr 1964 (Iowa City, FWK)
Late dates: 28 Nov 1980 (Volga River A., IBL 51:28)
28 Nov 1981 (Sweet M., IBL 51:120)
13 Nov 1981 (Pleasantville, IBL 51:120)
WINTER: There are 8 recent records, all from CBCs. DuMont (1933) lists

4 Dec records, and Anderson (1907) cites an overwintering bird in Black Hawk Co. in 1902-1903.

COMMENT: Little data are available on arrival, departure, and nesting dates. First arrivals in Iowa City were in Apr in only 4 of 25 years (FWK).

REFERENCES:

Gabrielson, I. N. 1913. Nest life of the Catbird (**Dumetella carolinensis** Linn.). **Wilson Bull.** 25:166-187.

Johnson, E. J., and L. B. Best. 1980. Breeding biology of the Gray Catbird in Iowa. **Iowa State J. Res.** 55:171-183.

Northern Mockingbird, **Mimus polyglottos**

STATUS: Regular; rare permanent resident with some migration, more common in S Iowa. Class I-S N.

HABITAT: Prefers open areas with brushy shrubs, especially multiflora rose. In Iowa this species is more commonly found in rural than in urban areas, especially in the spring and summer.

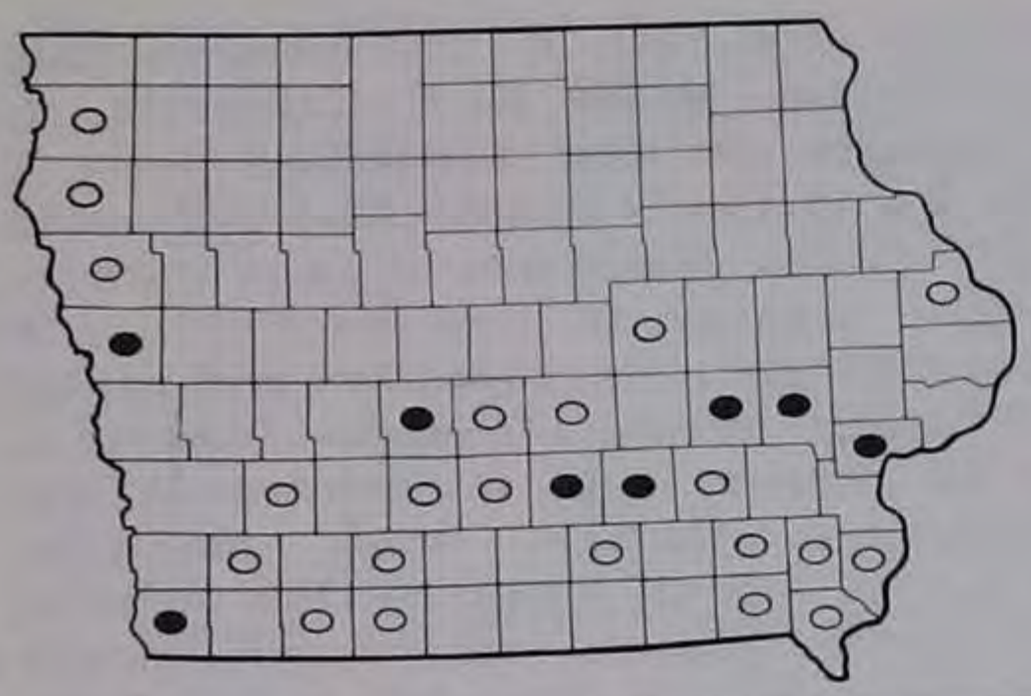
SPRING MIGRATION: Mockingbirds are rare in Mar and are 3 times as common in May as Apr. Ordinarily mockingbirds are nonmigratory; but in the northern rim of their range, including Iowa, there is a definite seasonal fluctuation. Spring reports are widely scattered across the state and tend to be more northerly than summer and winter sightings. The paucity of Feb and Mar reports suggests that those seen in Apr and May are migrants.

SUMMER: Nesting occurs predominantly in the southern half of the state (Map 6.102). Mockingbirds have been found in the same areas over a number of years, such as those found near Pleasantville in Marion Co. (Summy 1967). BBSs have regularly demonstrated the presence of mockingbirds in several S Iowa counties and in Jackson Co. in NE Iowa. Adults were photographed at a nest near Iowa City (Kent 1958).

FALL MIGRATION: There are few fall reports, suggesting that the birds may migrate south or become inconspicuous. They have been seen at only 1 fall I.O.U. convention in the 1960s and 1970s as compared with 8 spring conventions.

WINTER: CBC records are almost all from the extreme south and southeast parts of the state. The most consistent locations are Burlington (15 of 19 years), Lamoni (11 of 20 years), and Davenport (5 of 20 years).

COMMENT: Mockingbirds were rare until the 1930s with 10 reported prior to 1900, 8 from 1900 to 1919, and 16 from 1920 to 1929. The frequency of reports increased during the 1930s with a total of 53. In the succeeding decades the number of reports were 46, 34, 62, and 77. Records up to 1946 are listed in Keck (1946), those in the 1950s tabulated by season and location in Brown (1961). A survey of I.O.U. members for sightings in the years 1961 to 1965 produced yearly counts of 69 to 102 (Summy 1967). These data are insufficient to analyze trends in mockingbird populations since their northward extension in the 1930s. There may have been a decrease in 1979 following several severe winters. Mockingbirds are most commonly encountered in May, Jun, and Dec and least frequently in Mar, Aug, Sep, and Oct. Perhaps the large number of Dec reports are related to birding activity and reporting associated with CBCs. Most reports are of single birds, but colonies of up to 5 nesting pairs have been encountered. Stiles (1938) and Youngworth (1963) have written on the occurrence in NW Iowa.

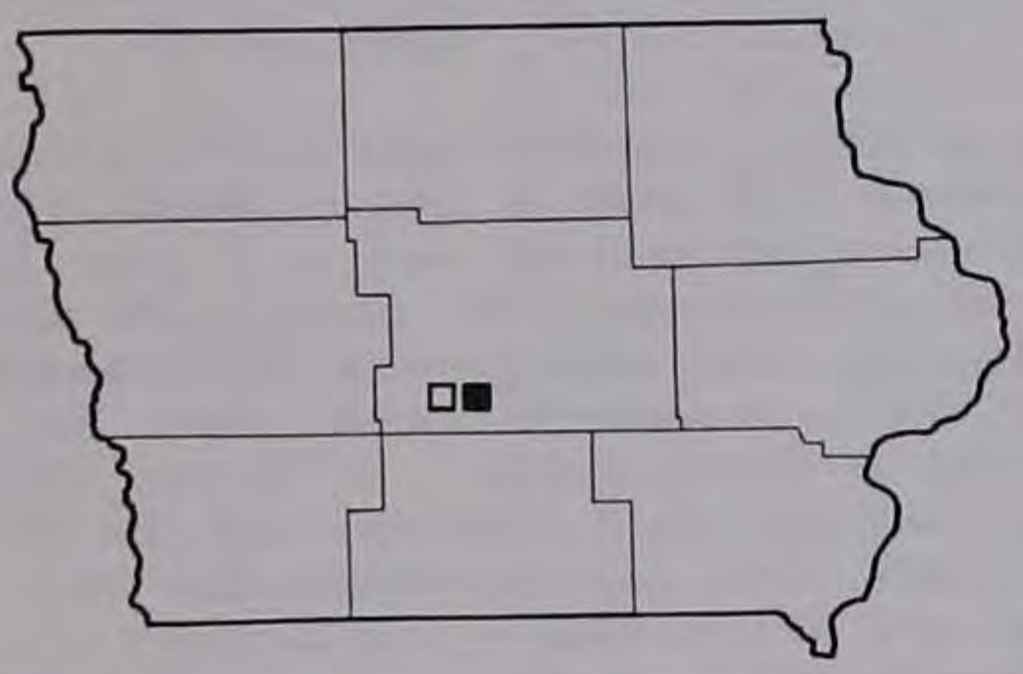


Map 6.102 Northern Mockingbird nesting by county.

REFERENCES:
Brown, W. H. 1961. Mockingbirds in Iowa. **Iowa Bird Life** 31:32-33.
Keck, W. N. 1946. The Mockingbird in Iowa. **Iowa Bird Life** 16:23-27.
Kent, F. W. 1958. Mockingbird nesting in the Iowa City area. **Iowa Bird Life** 28:60-62.
Stiles, B. F. 1938. Breeding of the Mockingbird in northwestern Iowa. **Wilson Bull.** 50:202-203.
Summy, R. 1967. The northward advance in range of the Mockingbird (**Mimus polyglottos**) in Iowa, 1961-1965. **Iowa Bird Life** 37:14-20.
Youngworth, W. 1963. The Mockingbird in northwest Iowa. **Iowa Bird Life** 33:33-35.

Sage Thrasher, **Oreoscoptes montanus**

STATUS: Accidental. Class III.
RECORDS: There are 2 sight records (Map 6.103), 1 judged acceptable by the Records Committee and the other probable. The first, supported by an incomplete description, was found in Des Moines from 20 Dec 1952 to 10 Jan 1953 (Stiles 1953). Another was reported from the same city from 26 Dec 1964 to 2 Jan 1965 (Brown 1971). One of the observers was able to supply diagnostic details from notes taken at the time (Kennedy 1981).



Map 6.103 Sage Thrasher records.

COMMENT: The Sage Thrasher breeds in sagebrush in the intermountain west from C British Columbia and Montana south to C California, N Arizona, and N New Mexico. It winters in arid brushland from C California across Arizona and New Mexico to the S Texas coast and south into Mexico. On the plains e of the Rocky Mountains it is a rare to uncommon migrant and a rare or local breeder in the Black Hills, W Kansas, W Oklahoma, and the Texas panhandle. In migration and winter it is rarely found further east to W North Dakota, C South Dakota, C Nebraska, C Kansas, and C and SE Texas. As a vagrant it has occurred in E South Dakota, Wisconsin, Ontario, Iowa, Missouri, Arkansas, on the Gulf Coast east to NW Florida, and on the Atlantic Coast from Long Island to North Carolina. Vagrant records are mostly from Sep to Feb, with a strong peak from Nov to Jan, but a few occur from Mar to Jun.

REFERENCES:

Kennedy, J. C. 1981. Letter to Records Committee.

Stiles, B. F. 1953. Sage Thrasher in Iowa: A sight record. **Iowa Bird Life** 23:22-23.

Brown Thrasher, **Toxostoma rufum**

STATUS: Regular; abundant summer resident; rare winter. Class I-S N.

HABITAT: Rural and urban areas. It is more likely than catbirds to be found in open areas. BBSs, which mainly sample open farm country, show uniform distribution throughout the state averaging 9 birds per route, compared with an average of 3 catbirds.

SUMMER: Brown Thrashers arrive in early to mid-Apr and remain until late Oct. Little data are available on early and late dates. Late dates could represent wintering birds.

Early dates: 1 Apr 1967 (Iowa City, FWK)
6 Apr 1980 (Big Creek S.P., JHZ)
8 Apr 1963 (Iowa City, FWK)

Late dates: 28 Nov 1981 (Polk Co., IBL 51:120)
23 Nov 1972 (Davenport, IBL 42:97)
8 Nov 1971 (Davenport, IBL 41:111)

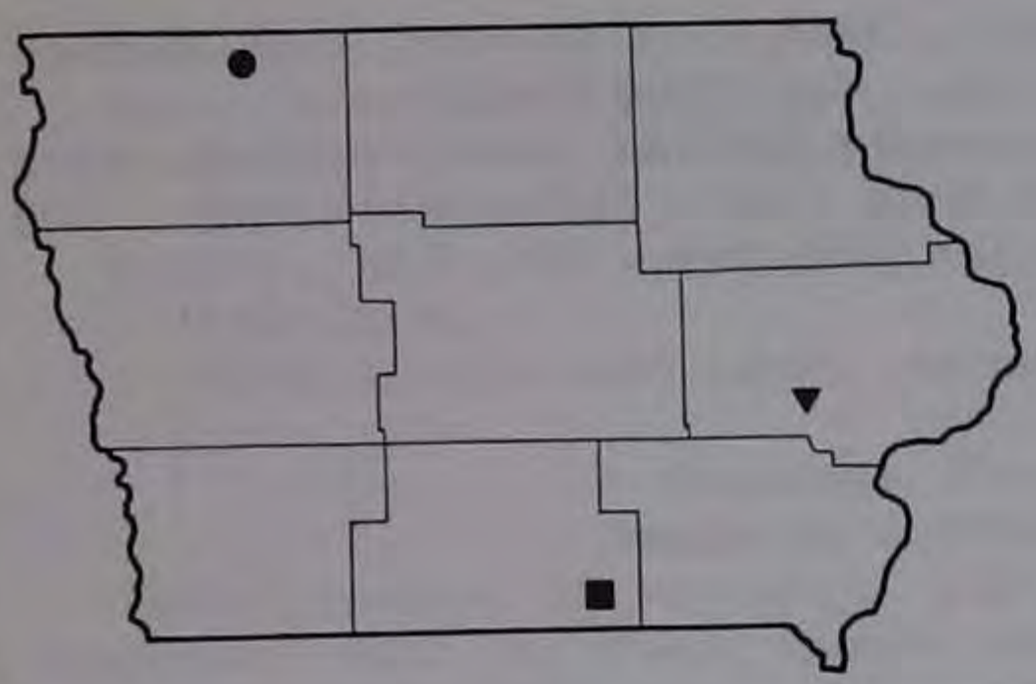
WINTER: There are 13 recent reports of overwintering birds and numerous CBC records. Most wintering birds are found in urban locations, most frequently in Davenport.

Curve-billed Thrasher, **Toxostoma curvirostre**

STATUS: Accidental. Class I-P.

RECORDS: There are 3 records (Map 6.104). The first was a bird found on 25 Jun 1975 at Spirit Lake covered with mud 24 hours following a hailstorm (Wallace 1975). Washing revealed the red eye and gray to black body and wings suggestive of this species. No photograph was taken. On 17 Nov 1980 one was identified and photographed at a feeder w of Solon, Johnson Co. (Newlon 1981). Another, said to have been present since Sep 1980, was identified at Rathbun Res. on 28 Jan 1981 (Scott 1981; Newlon 1981) and photographed (W. M. Heusinkveld, on file with Records Committee). The 1980-1981 birds were not seen after Mar.

COMMENT: This resident of SW Texas and S New Mexico and Arizona is a fall and winter visitor to SE Colorado, N Texas, and W Kansas and Oklahoma. It is a vagrant to Nebraska, South Dakota, Manitoba,



Map 6.104 Curve-billed Thrasher records.

Minnesota, Wisconsin, and New Hampshire (Newlon 1981).

REFERENCES:
Newlon, M. C. 1981. Curve-billed Thrashers in Iowa. Iowa Bird Life 51:21-24.
Scott, C. 1981. The Curve-billed Thrasher at Rathbun. Iowa Bird Life 51:35.
Wallace, L. 1975. Curve-billed Thrasher at Spirit Lake. Iowa Bird Life 45:96-97.

Wagtails and Pipits, Family Motacillidae

There are 54 species of wagtails and pipits worldwide, of which 10 have been reported in North America. Of the 2 species found in Iowa, 1 is regular and the other is accidental. Pipits are gregarious, sparrow-sized brownish birds found in bare, open areas. They walk when on the ground, and the Water Pipit constantly wags its tail. They feed on insects and seeds. The sexes are alike.

Water Pipit, Anthus spinoletta

STATUS: Regular; uncommon migrant. Class I-S.
HABITAT: Open fields, mud flats, and beaches.
SPRING MIGRATION: The peak period is late Mar to early May.
Early dates: 3 Mar 1956 (Fairfax, Serbousek 1959)
15 Mar 1964 (Jefferson, IBL 34:48)
15 Mar 1964 (Brenton's Sl., IBL 34:48)
Late dates: 27 May 1962 (La Porte City, Burk 1962)
13 May 1979 (Waterloo, IBL 49:41)
12 May 1962 (Lamoni, IBL 32:43)
FALL MIGRATION: The peak period is late Sep to late Oct.
Early dates: 20 Aug, year not given (location not given, Brown 1971)
28 Aug 1972 (Cedar Rapids, IBL 42:70)
12 Sep 1982 (Johnson Co., IBL 52:123)
Late dates: 13 Dec 1981 (Saylorville Res., IBL 52:28)
16 Nov 1978 (St. Lucas, IBL 48:139)
13 Nov 1976 (Red Rock Res., IBL 46:115)
WINTER: Pipits are not known to overwinter in Iowa; however, the

following are late Dec CBC records: 1964 Des Moines; 1963 Buffalo Center; 1969 Shenandoah and Sioux City; 1971 Red Rock Res.

COMMENT: Water Pipits may be more common in Iowa than reported; there is a vast amount of unsearched available habitat (plowed fields). The highest number reported was 500 on the 1969 Sioux City CBC.

REFERENCE:

Burk, M. 1962. Both pipits at Waterloo. **Iowa Bird Life** 32:58-59.

Sprague's Pipit, **Anthus spragueii**

STATUS: Accidental. Class III.

RECORDS: Among 15 reports of this species in Iowa, 1 was judged acceptable as a sight record by the Records Committee and 4 were judged Class IV (Map 6.105).

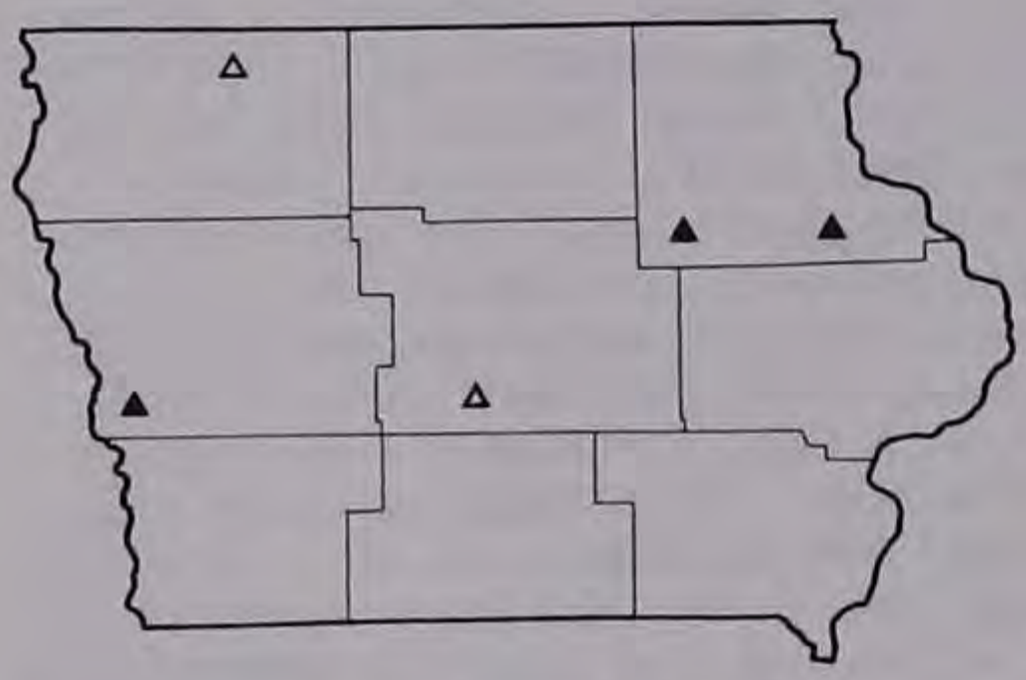
23 Apr 1949, Dickinson Co., Class IV (Roberts 1949)
4 May 1958, Polk Co., Class III (Brown 1958)
27 May 1962, La Porte City, Black Hawk Co., Class IV (Burk 1962)
1 May 1977, Ryan, Delaware Co., Class IV (IBL 47:61)
11 Apr 1978, Missouri Valley, Harrison Co., Class IV (IBL 48:75)

The other records, which lack details of identification, are from L. Manawa on 14 Sep 1895 (Anderson 1907); Ogden, Boone Co., on 11 Oct 1949, 29 Sep 1959, 30 Oct to 1 Nov 1959, and 13 and 22 Sep 1961 (Brown 1962, 1971); Amana on 16 Apr 1950 (Serbousek 1959); Polk Co. on 16 May 1954 (IBL 24:42); Sioux City in 1964 (IBL 34:48); Shenandoah on 4 Apr 1968 (Brown 1971); and Hamburg, Fremont Co., on 6 Jun 1968 (IBL 38:89).

COMMENT: Although Sprague's Pipit is more common in the western part of the Great Plains, some should migrate through Iowa. This species is both difficult to locate and to identify because it is drab and stays out of sight. Based on its migration dates in the western plains, one would expect Sprague's Pipit in Iowa from mid-Apr to mid-May and from Sep to early Oct. It would be expected to occur in grassy fields where it might be flushed only to fly high and drop down again at a distance and become concealed in the grass. The light leg color and streaking on the back of the head and back should separate this species from the much more common Water Pipit. See King (1981) for an excellent detailed analysis of pipit identification.

REFERENCES:

Brown, W. H. 1958. A sight record of Sprague's Pipit. **Iowa Bird Life** 28:41.



Map 6.105 Sprague's Pipit records.

Brown, W. H. 1962. Sprague's Pipit in Iowa. **Iowa Bird Life** 32:20.
Burk, M. 1962. Both pipits at Waterloo. **Iowa Bird Life** 32:58-59.
King, B. 1981. The field identification of North American pipits. **Am. Birds** 35:778-788.
Roberts, F. L. R. 1949. Sprague's Pipit in northwest Iowa. **Iowa Bird Life** 19:34.

Waxwings, Family Bombycillidae

Three species of waxwings are found in the world and 2 in North America. Both of these species occur in Iowa, 1 as a regular nesting species and 1 as a casual winter visitant. Waxwings are sleek, crested birds that are very gregarious and erratic in their local distribution. The sexes are alike. They feed primarily on berries and insects.

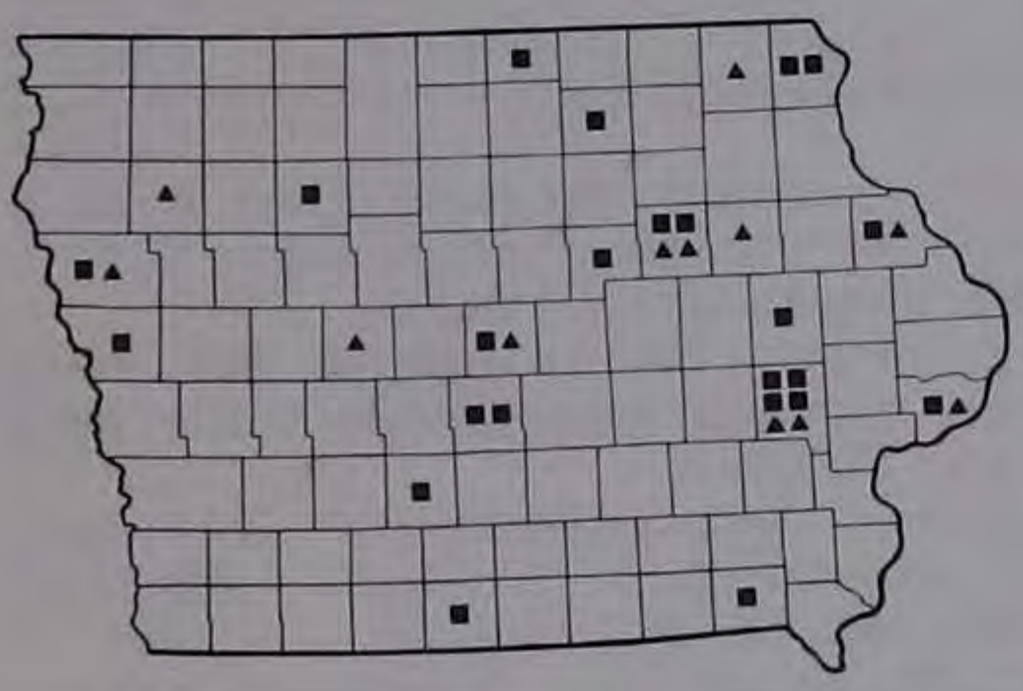
Bohemian Waxwing, **Bombycilla garrulus**

STATUS: Casual; erratic winter resident. Class I-S.
HABITAT: Cedar groves, orchards, and areas with fruit and berry trees.
WINTER: An erratic wanderer, this species does not have a migration pattern, as such, in Iowa. The majority of the sightings have been in Dec and Mar.

Early dates: 27 Sep 1945 (Floyd Co., IBL 16:37)
21 Nov 1958 (Dickinson Co., Jones 1958)
4 Dec 1963 (Floyd Co., IBL 34:21)

Late dates: 4 May 1920 (Woodbury Co., Stephens 1920)
mid-Apr 1972 (Johnson Co., IBL 42:39)
28 Mar 1964 (Black Hawk Co., IBL 34:48)

COMMENT: Bohemian Waxwings have been found during 13 of the last 21 years; the records are widely scattered over the state (Map 6.106).



Map 6.106 Bohemian Waxwing records, 1960-1982.

They usually are found in flocks varying from a few to hundreds of individuals. The largest number reported was 5,000 in Des Moines on 18 Mar 1923 (IBL 1:8). The Bohemian is slightly larger and grayer than the Cedar Waxwing, with more white on the wings, but the most diagnostic mark is the rusty undertail coverts of the Bohemian.

REFERENCE:

Jones, M. L. 1958. Bohemian Waxwings in Iowa. **Iowa Bird Life** 28:79-81.

Cedar Waxwing, Bombycilla cedrorum

STATUS: Regular; abundant migrant, uncommon in summer and winter with erratic fluctuations in numbers. Class I-S N.
HABITAT: Orchards, open woodlands, parks, and cedar groves.
SPRING MIGRATION: Few data are available to indicate migration patterns. Spring migrants may start arriving in late Jan or Feb.
SUMMER: Cedar Waxwings nest throughout Iowa. Their known nest dates range from late May to late Aug. They were found on 17 of 34 BBS routes, the yearly average varying from 0 to 1.1 birds per route. The 1967-1980 average was 0.3 birds per route.
FALL MIGRATION: There is little information available to indicate the patterns of fall migration.
WINTER: Waxwings are found in varying numbers throughout Iowa, often around cedar groves. The average numbers found on CBSs increased 36 percent in the 1970s, compared with the 1960s.
COMMENT: They usually are found in flocks ranging in size from a few to several hundred individuals, with 1,000 the largest number reported (IBL 35:26).

Shrikes, Family Laniidae

The shrike family has 65 species, 3 of which have been reported in North America. Both species found in Iowa are regular, although 1 is only a winter resident. Shrikes are solitary, robin-sized birds with black face masks and hooked bills. They are usually found sitting on exposed perches and impale their prey on thorns or barbed wire. The winter distribution of shrikes in Iowa needs careful study. It is doubtful that Loggerhead Shrikes occur in the northern half of Iowa in winter. All Loggerhead Shrikes in N Iowa and Northern Shrikes in S Iowa in winter should be documented. The field guides do not adequately differentiate between the 2 species (see species accounts).

Northern Shrike, Lanius excubitor

STATUS: Regular; rare winter resident, numbers decrease from N to S Iowa, and very rare in southern 3 tiers of counties. Class I-S.
HABITAT: Open areas interspersed with hedgerows or thickets.
WINTER: Since 1960, 75 percent of the Northern Shrike records have been from the northern half of Iowa. The numbers reported on CBSs have remained about the same during the last 20 years.

Early dates: 2 Oct 1970 (Red Rock Res., IBL 41:27)
18 Oct 1980 (Waterloo, IBL 51:29)
19 Oct 1980 (Cherokee, IBL 51:29)

Late dates: 1 Apr 1979 (Ankeny, IBL 49:61)
31 Mar 1979 (Decorah, IBL 49:61)
28 Mar 1979 (Winneshiek Co., DK)

COMMENT: The following field marks separate the Northern Shrike from the Loggerhead Shrike: (1) a larger, longer, heavier, more strongly hooked bill; (2) light color on the bill after mid-Feb; (3) light color on the upper mandible (any month); (4) a white spot below the eye; (5) white or gray nasal tufts; and (6) much white or gray in the lores (creating a broken mask effect) with conspicuous whitish feathers at the base of the upper mandible (Zimmerman 1955; Balch 1978). Two

subspecies (**Lanius excubitor borealis** and **L. e. invictus**) have been reported in Iowa (DuMont 1933).

Loggerhead Shrike, **Lanius ludovicianus**

STATUS: Regular; uncommon permanent resident in S Iowa, rare summer and very rare in winter in N Iowa. Class I-S N.
HABITAT: Pastures and other open areas interspersed with hedgerows and scattered thickets; often found perched on utility wires.
SPRING MIGRATION: In areas where loggerheads do not overwinter, migrants start arriving in the last week of Mar or early Apr.
SUMMER: Loggerheads nest throughout Iowa, but the bulk of the nesting population is in the southern 4 tiers of counties. They are early nesters, with egg-laying usually starting in late Apr or early May. The breeding population is declining; BBSs show a 50 percent decrease in numbers during the period 1967-1980.
FALL MIGRATION: Most fall migrants are gone by late Oct.
WINTER: Loggerheads are much more common in S than in N Iowa. Of 288 loggerheads reported from 1 Oct to 7 Apr during the period 1960-1981, 93 percent were from southern localities and 7 percent from the north (none of which were documented). In contrast to the nesting population, the average numbers reported on CBSs were 2.5 times greater in the 1970s than in the 1960s.
COMMENT: The field marks that distinguish the Loggerhead from the Northern Shrike are (1) a smaller, stubbier bill; (2) black nasal tufts; (3) black feathers at the base of the upper mandible; and (4) an all-dark bill before mid-Mar (Zimmerman 1955; Balch 1978).

Starlings, Family Sturnidae

Only 2 of the 111 species of starlings have been reported in North America. One of these occurs in Iowa, having been introduced from Europe. Starlings are gregarious, chunky, blackbirdlike birds, with short tails and rather long, sharp bills. Their food is mainly insects, seeds, and berries.

European Starling, **Sturnus vulgaris**

STATUS: Regular; introduced; abundant permanent resident. Class I-S N.
HABITAT: Urban areas and farmsteads.
SUMMER: Starlings nest throughout Iowa. They were found on all BBS routes. The yearly average varied from 37.2 to 73.6 birds per route, and the overall average was 60.5 birds. The average number per route increased 18 percent during the period 1967-1980. This is the fifth most numerous species reported in Iowa on BBSs.
WINTER: Starlings winter throughout Iowa, often in very large flocks. The average number per party found on CBSs decreased during the 1970s compared with the 1960s.
COMMENT: Starlings were introduced into New York City from Europe in 1890 and were first reported in Iowa in Decatur Co. in Dec 1922. By 1936 they had been reported from all of Iowa's 99 counties (DuMont 1945).

REFERENCE:
DuMont, P. 1945. The invasion of the Starling into Iowa. Iowa Bird Life 15:30-33.

Vireos, Family Vireonidae

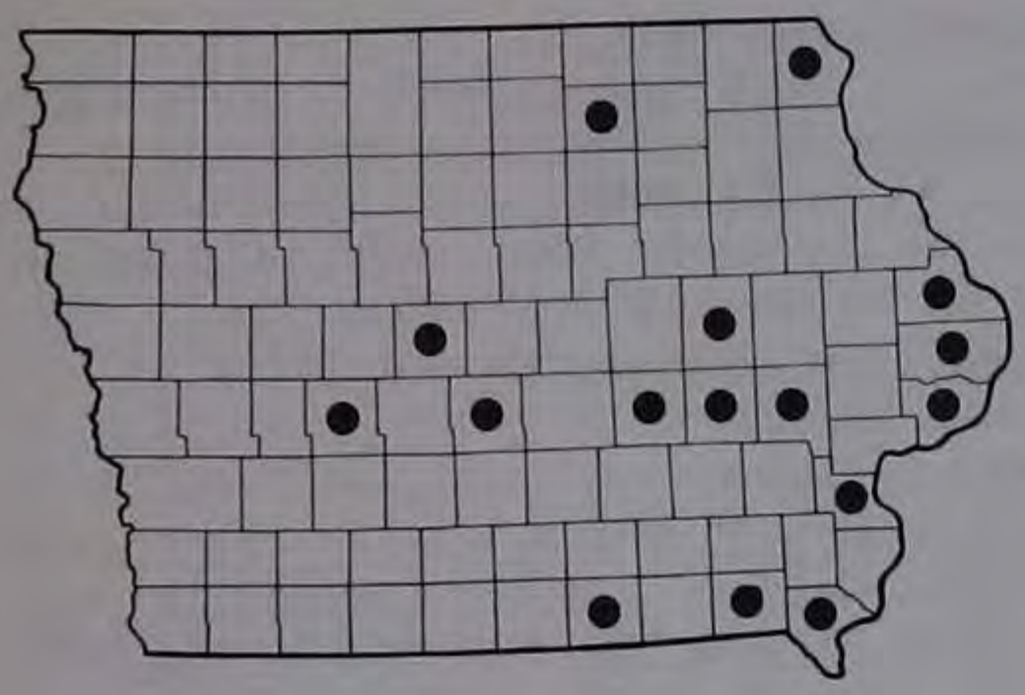
This New World family of 38 species is represented in North America by 12 species. In Iowa, 7 species have been reported; all are regular, with 5 nesting in the state. Vireos usually are arboreal and solitary. They are highly insectivorous and migrate from the state in the fall. Migrants are found in any forested or brushy area. Most arrive in early May and move through quickly. Fall migrants return in late Aug, with some lingering well into Oct. No vireo has ever been recorded in Iowa in winter. In spring and summer, vireos vocalize frequently and can usually be identified readily by call. Since most are rather drab and frequent treetops, their calls aid greatly in detecting their presence.

As an additional index to their abundance, the Comment section includes the number banded by Petersen in Iowa from 1960 to 1980. The number banded in spring shows the seasonal variation. Most of the banding was done at Pine Hill Cemetery, Davenport.

White-eyed Vireo, Pine Hill Cemetery, 21 May 1976, P. C. Petersen.

White-eyed Vireo, **Vireo griseus**

STATUS: Regular; rare summer resident E and C Iowa. Class I-P N.
HABITAT: Woodland edge, brushy areas.
SPRING MIGRATION: White-eyes usually arrive in early May.
Early dates: 5 Apr 1981 (Sunken Grove, IBL 51:68)
18 Apr 1977 (Echo Valley S.P., IBL 47:61)
19 Apr 1976 (Iowa City, IBL 46:58)
SUMMER: Summer sightings tend to be in E and C Iowa (Map 6.107).
FALL MIGRATION: Most depart by early Sep.
Late dates: 26 Sep 1982 (Ottumwa, IBL 52:123)



Map 6.107 White-eyed Vireo summer records by county, 1960-1982.

25 Sep 1976 (Iowa City, IBL 46:115)
24 Sep 1977 (Iowa City, IBL 47:146)

COMMENT: This southern bird has been much more frequently reported since 1970. It has a very distinctive call and should be expected along the edge of large woodland areas, especially in SE Iowa. Of the 12 since 1970, all are from spring (PCP). This species has never been banded, all are recorded on a BBS in Iowa.

Bell's Vireo, **Vireo bellii**

STATUS: Regular; uncommon resident, locally common in SW Iowa. Class I-S N.
HABITAT: Overgrown pasture, willow thickets, wood margins.
SPRING MIGRATION: Most arrive in mid-May.
Early dates: 25 Apr, year not given (Des Moines, Brown 1971)
2 May 1964 (Iowa City, FWK)
8 May 1980 (Iowa City, THK)
SUMMER: Bell's Vireos are recorded from throughout the state, but only 0 to 5 per year have been found on BBSs. A special effort to locate singing males during a foray in Fremont Co. in 1977 produced 29 in a 7-mile stretch (Roosa 1977). Nesting usually starts in early or mid-Jun (Bennett 1917).
FALL MIGRATION: Most have left the state by early Sep.
Late dates: 24 Sep 1969 (Davenport, PCP)
23 Sep 1955 (Sioux City, Brown 1971)
16 Sep, year not given (Sioux City, Bennett 1917)
COMMENT: Like the White-eyed Vireo, Bell's Vireo has a very distinctive call and is usually located by hearing the bird. Bell's Vireos tend to be very regular in a location until the vegetation grows higher than about 15 feet tall, and then they move on. There has been some concern for this frequently overlooked bird in the Midwest, but data are lacking to determine whether it has decreased in Iowa. Bennett (1917) noted that their nests were often parasitized by Brown-headed Cowbirds. Of 13 banded, 12 were from spring (PCP).
REFERENCES:

Bennett, W. W. 1917. Bell's Vireo studies (**Vireo belli** Aud.). **Proc. Iowa Acad. Sci.** 24:285-293.
Roosa, D. M. 1977. Bell's Vireo singing male counts. **Iowa Bird Life** 47:137-138.

Solitary Vireo, **Vireo solitarius**

STATUS: Regular; common migrant. Class I-S.
HABITAT: Open woodlands, thickets, and brushy areas.
SPRING MIGRATION: They usually arrive in early May, with a peak in mid-May. A peak of 14 were banded on 10 May 1967 (PCP).
Early dates: 24 Apr, year not given (Des Moines, Brown 1971)
24 Apr 1982 (Ames, IBL 52:60)
25 Apr 1978 (Iowa City, THK)
Late dates: 14 Jun 1966 (Sioux City, IBL 36:83)
28 May 1968 (Davenport, PCP)
FALL MIGRATION: Most move through Iowa in late Sep and early Oct, with a peak of 13 banded 20 Sep 1977 (PCP).
Early dates: 16 Jul 1980 (Hamburg, IBL 50:77)
20 Aug, year not given (Des Moines, Brown 1971)
24 Aug 1977 (Davenport, IBL 47:146)
Late dates: 1 Nov 1973 (Decorah, IBL 43:106)
31 Oct 1973 (Davenport, IBL 43:106)
27 Oct 1982 (Ames, IBL 52:123)
COMMENT: Solitary Vireos prefer upland forest and edge, feeding at middle heights. A total of 344 were banded, with only 88 from spring (PCP).

Yellow-throated Vireo, **Vireo flavifrons**

STATUS: Regular; common summer resident in E Iowa and uncommon in W Iowa. Class I-S N.
HABITAT: Deciduous forest and mature shade trees.
SPRING MIGRATION: They usually arrive in early May.
Early dates: 22 Apr, year not given (Des Moines, Brown 1971)
24 Apr 1974 (Davenport, IBL 44:45)
28 Apr 1975 (Davenport, PCP)
SUMMER: From 0 to 18 per year have been found on BBSs.
FALL MIGRATION: Most depart by mid-Sep.
Late dates: 19 Oct 1966 (Ogden, IBL 36:105)
13 Oct 1951 (Davenport, PCP)
3 Oct 1982 (Lacey-Keosauqua S.P., IBL 52:123)
COMMENT: Yellow-throated Vireos are usually seen in small numbers. They prefer treetops. Like most vireos, they are frequently identified by call. Of 38 banded, 25 were from spring (PCP).

Warbling Vireo, **Vireo gilvus**

STATUS: Regular; common summer resident. Class I-S N.
HABITAT: Stream edge, especially fond of cottonwood trees; forages high in trees.
SPRING MIGRATION: They arrive in late Apr and early May, with a peak in mid-May.
Early dates: 23 Apr 1964 (Davenport, PCP)
26 Apr 1964 (Iowa City, FWK)
28 Apr 1972 (Davenport, PCP)
SUMMER: From 16 to 51 per year have been found on BBSs.
FALL MIGRATION: Most leave by mid-Sep.
Late dates: 19 Oct 1966 (Ogden, IBL 36:105)

11 Oct 1952 (Davenport, PCP)
COMMENT: There are few records after they cease singing in Jul. Because they remain high in trees, few are netted. Of 45 banded, 40 were from spring (PCP).

Philadelphia Vireo, **Vireo philadelphicus**

STATUS: Regular; uncommon migrant. Class I-S.
HABITAT: Deciduous forest and edge, scrubby areas.
SPRING MIGRATION: Philadelphias usually arrive in early to mid-May, peak in mid- to late May, and depart rapidly. The peak number netted was 8 on 14 May 1975 (PCP).
Early dates: 2 May 1959 (Iowa City, FWK)
2 May 1964 (Iowa City, FWK)
5 May 1972 (St. Lucas, IBL 47:61)
Late dates: 4 Jun 1949 (Davenport, PCP)
31 May 1968 (Davenport, PCP)
31 May 1973 (Davenport, PCP)
FALL MIGRATION: Most arrive in early Sep and reach a peak in mid-Sep, with some lingering into early Oct.
Early dates: 15 Aug 1973 (Lamoni, IBL 43:106)
27 Aug 1968 (Davenport, PCP)
Late dates: 9 Oct 1975 (Davenport, PCP)
8 Oct 1967 (Davenport, PCP)
3 Oct 1982 (Ames, IBL 52:123)
COMMENT: This species is frequently observed in Sep, especially in E Iowa. Of 162 banded, only 71 were from spring (PCP).

Red-eyed Vireo, **Vireo olivaceus**

STATUS: Regular; abundant migrant and common summer resident. Class I-S N.
HABITAT: Deciduous forest and edge.
SPRING MIGRATION: Red-eyes usually arrive in early to mid-May, with a peak in late May. The peak number banded was 13 on 28 May 1967 (PCP).
Early dates: 25 Apr, year not given (location not given, Brown 1971)
29 Apr 1970 (Davenport, PCP)
SUMMER: From 0 to 12 per year were found on BBSs.
FALL MIGRATION: Most leave by mid-Sep, with stragglers lingering into Oct. The banding peak is late Aug, with 21 banded on 29 Aug 1977 and on 28 Aug 1978 (PCP); but larger numbers have been killed at the Alleman TV tower in Polk Co. in mid-Sep (478 on 12 Sep 1974, DM; 133 on 14 Sep 1982, IBL 52:123).
Late dates: 5 Nov 1972 (Des Moines, IBL 42:97)
4 Nov 1981 (Ames, IBL 51:121)
16 Oct 1982 (Lacey-Keosauqua S.P., IBL 52:123)
COMMENT: This species seems to be declining as a breeding bird in recent years. More are banded in fall (706 of 1,072, PCP) because the birds forage lower then. At the Alleman TV tower in Polk Co., Red-eyed Vireos constituted 20 percent of the birds killed in fall (Mosman 1975), suggesting that this species is either very common or especially susceptible to tower killing.

REFERENCE:
Mosman, D. 1975. Bird casualties at Alleman, Ia., TV tower. **Iowa Bird Life** 45:88-90.

New World Nine-primaried Oscines, Family Emberizidae

This large assemblage of about 700 North and South American species contains the warblers, tanagers, cardinals, grosbeaks, buntings, towhees, sparrows, longspurs, meadowlarks, blackbirds, and orioles, groups that formerly were divided into several different families. All have 9 primaries and complex syrinx muscles. They also show similarities in their egg-white proteins and thus have been combined into 1 large family. Several subfamilies of this family are found in Iowa.

Wood Warblers, Subfamily Parulinae

This large New World group contains over 100 species, of which 57 have been found in North America. Of the species reported from Iowa, 35 are regular, 1 is casual, 2 are accidental, 1 is hypothetical, and 2 are Class VI. Eleven of the species breed in Iowa regularly. Most warblers are arboreal, but several are terrestrial and walk rather than hop. The majority are insectivorous, and some occasionally eat fruits. They migrate at night and spend their days foraging for food.

Most warblers are found in forested and brushy areas. A few have very specialized habitat requirements that they hold to rigidly. In spring most species are quite vocal, a trait that helps in locating them. The fall migration is prolonged and quiet. Some have quite different fall plumages, making identification difficult, especially for Blackpoll, Bay-breasted, and Pine warblers. By fall, habitat that was bare, plowed ground in spring is vegetated cropland providing some feeding habitat. During migration, warblers are attracted by a water drip, sometimes coming close to a window to enjoy a brief bath. Warblers are more common in E Iowa because it has more wooded land.

As in the vireo accounts, the number banded by Petersen from 1960 to 1980 is included in the Comment section as an index of abundance. Almost all this banding was done at Pine Hill Cemetery, Davenport. There are few other quantitative records of warbler migration in Iowa.

Prairie Warbler, Lansing W.A., 19 Jun 1982, T. H. Kent.

Worm-eating Warbler,
Pine Hill Cemetery, 5 May 1973,
P. C. Petersen.

Prothonotary Warbler,
Johnson Co., 13 Jun 1957,
F. W. and T. H. Kent.

Blue-winged Warbler, **Vermivora pinus**

STATUS: Regular; uncommon migrant and summer resident in E Iowa. Class I-S N.
HABITAT: Woodland openings, brushy hillsides.
SPRING MIGRATION: Blue-wings arrive and peak in early May.
Early dates: 26 Apr 1964 (Iowa City, FWK)
27 Apr 1975 (Lamoni, IBL 45:59)
30 Apr 1975 (Davenport, PCP)
SUMMER: Blue-wings can be locally common in prime habitat. This species moves on after the vegetation develops into middle succession stages. A peak of 16 were recorded on 2 Jun 1978 at Yellow River F. (IBL 49:75). Only 2 BBS routes have reported this species, with 0 to 5 per year.
FALL MIGRATION: Peaks occur in late Aug to early Sep, and the species is gone by mid-Sep.
Late dates: 26 Sep 1981 (Big M., IBL 51:121)
18 Sep 1978 (Davenport, PCP)
16 Sep 1979 (Davenport, IBL 49:114)
16 Sep 1982 (Turkey Creek W.A., IBL 52:123)
COMMENT: Of 26 banded, 13 were from spring (PCP). Blue-winged and Golden-winged warblers regularly hybridize, producing recognizable forms call Brewster's and Lawrence's warblers. Both have been seen in Iowa, usually in spring. Recent records of Brewster's are 11 Sep 1982 at George Wyth S.P. (IBL 52:123), 19 May 1980 at Ledges S.P. (IBL 50:50), 20 Oct 1979 at Waterloo (IBL 49:114), spring 1979 at Marion (IBL 49:62), 30 Aug 1966 at Des Moines (Brown 1971), 20 May 1966 at Marble Rock (IBL 36:51), and 14 Sep 1965 at Burlington (Brown 1971). Recent records of Lawrence's are 13 May 1979 at Vinton (IBL 49:62), 2 May 1964 at Goldfield (IBL 34:48), and 2 May 1964 at Sigourney (IBL 34:48).

Golden-winged Warbler, **Vermivora chrysoptera**

STATUS: Regular; uncommon migrant, primarily in E Iowa. Class I-S N.
HABITAT: Deciduous forest, edge, and brushy areas.

SPRING MIGRATION: Most arrive in mid-May, remaining briefly. A peak of 11 were banded 14 May 1974 (PCP).
Early dates: 30 Apr 1981 (Waterloo, IBL 51:69)
1 May 1981 (Amana, IBL 51:69)
3 May 1941 (Central City, Brown 1971)
Late dates: 3 Jun 1979 (Lee Co., IBL 49:102)
26 May 1982 (Amana, IBL 52:60)
23 May 1982 (Ames, PWM)
SUMMER: Although old records suggest that this species bred in Iowa, there are no recent nesting records. Two nests were reported from Grundy Co. in 1898 (Anderson 1907). It is possible that this species has been replaced by Blue-winged Warbler, as has happened elsewhere in its range.
FALL MIGRATION: They reach Iowa by Aug, and most are gone by mid-Sep with no peaks reported.
Early dates: 29 Jul 1977 (Allamakee Co., IBL 47:103)
14 Aug 1977 (Waterloo, IBL 47:146)
19 Aug 1965 (Davenport, PCP)
Late dates: 27 Sep 1973 (Polk Co., DM)
24 Sep 1961 (Davenport, IBL 31:87)
21 Sep 1966 (Davenport, PCP)
21 Sep 1973 (Davenport, PCP)
21 Sep 1978 (Iowa City, IBL 48:140)
COMMENT: Of 82 banded, 46 were from spring (PCP).

Tennessee Warbler, **Vermivora peregrina**

STATUS: Regular; abundant migrant. Class I-S.
HABITAT: Wooded and brushy areas, usually high in trees in spring but often in croplands and weed patches in fall.
SPRING MIGRATION: Tennessees arrive in early May, peak in mid-May, and depart in late May. A peak of 200 were sighted in Muscatine, Scott, and Clinton counties on 14 May 1979 (PCP), and a peak of 63 were banded on 13 May 1976 (PCP).
Early dates: 21 Apr 1982 (Waterloo, IBL 52:60)
26 Apr 1954 (Iowa City, FWK)
27 Apr 1981 (Ames, IBL 51:69)
Late dates: 3 Jul 1981 (Decorah, IBL 51:102)
28 Jun 1980 (Sweet M., IBL 50:77)
16 Jun, year not given (Sioux City, Brown 1971)
FALL MIGRATION: They arrive in late Aug, peak in early to mid-Sep, and linger into mid-Oct. A peak of 31 were banded on 17 Sep 1955 (PCP).
Early dates: 9 Aug 1979 (St. Lucas, IBL 51:121)
9 Aug 1980 (Winneshiek Co., IBL 51:121)
9 Aug 1981 (Winneshiek Co., IBL 51:121)
Late dates: 23 Oct 1979 (Davenport, IBL 49:114)
23 Oct 1982 (Cass Co., IBL 52:123)
22 Oct 1979 (Iowa City, IBL 49:114)
22 Oct 1979 (Davenport, PCP)
COMMENT: This species is one of the most abundant of migrant warblers in Iowa. In mid-May the trees seem to be full of singing Tennessee Warblers for several days. Of 1,429 banded, 513 were from spring (PCP).

Orange-crowned Warbler, **Vermivora celata**

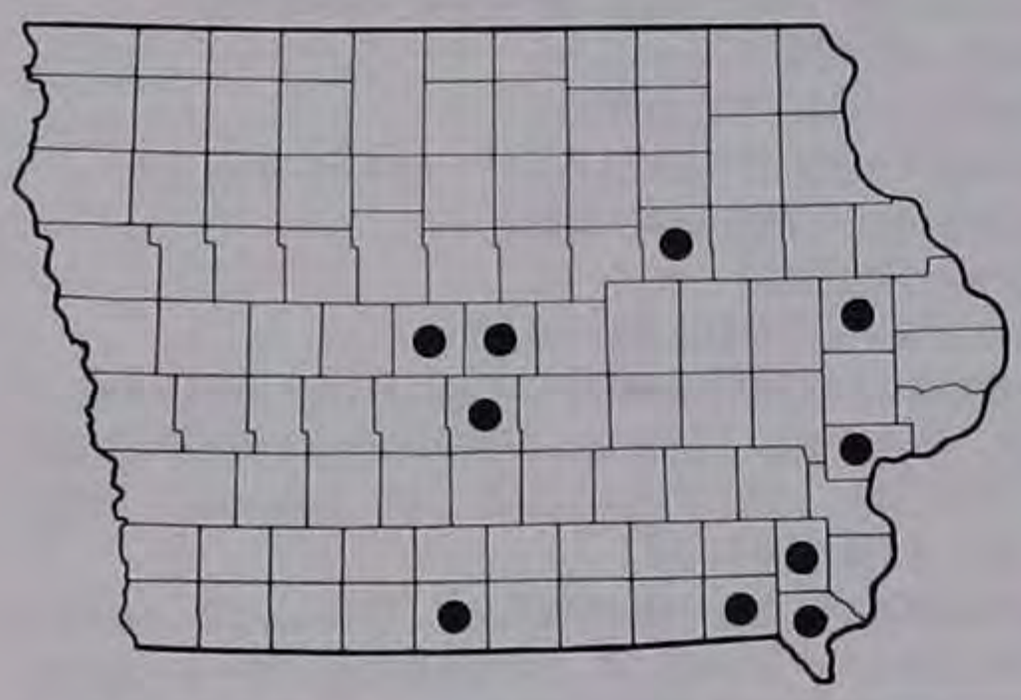
STATUS: Regular; common migrant. Class I-S.
HABITAT: Wooded and brushy areas, occasionally conifers; weed patches in fall.
SPRING MIGRATION: Most pass through in late Apr and early May. The peak occurs around 1 May; 12 were banded on 27 Apr 1975 (PCP).
Early dates: 15 Apr 1977 (Ames, JJD)
19 Apr 1981 (Ames, IBL 51:69)
20 Apr 1980 (Sioux City, IBL 33:40)
Late dates: 6 Jun 1929 (Des Moines, DuMont 1931)
30 May, year not given (Des Moines, Brown 1971)
19 May 1980 (Davenport, IBL 50:50)
FALL MIGRATION: They arrive in late Sep, peak in early to mid-Oct, and leave by 1 Nov. A peak of 10 were banded on 11 Oct 1979 (PCP).
Early dates: 1 Sep, year not given (Des Moines, Brown 1971)
8 Sep 1966 (Davenport, PCP)
13 Sep 1981 (Davenport, IBL 51:121)
Late dates: 29 Nov 1981 (Davenport, IBL 51:121)
23 Nov 1978 (Sioux Center, IBL 48:140)
2 Nov 1967 (Davenport, PCP)
2 Nov 1971 (Red Rock Res., IBL 41:112)
WINTER: The following Dec records probably represent lingering migrants: 25-31 Dec 1962 at Sidney (IBL 33:19), 27 Dec 1970 at Cedar Rapids (IBL 41:6), 21 Dec 1965 at Lowden (IBL 36:23), 15 Dec 1970 at Lamoni (IBL 41:29), and 12 Dec 1971 at Shenandoah (IBL 42:23).
COMMENT: Orange-crowns may be overlooked, as most pass through ahead of major spring warbler waves. The faint ventral streaking is a good field mark to distinguish Orange-crowned from Tennessee warblers. Of 513 banded, 113 were from spring (PCP).

Nashville Warbler, **Vermivora ruficapilla**

STATUS: Regular; abundant migrant. Class I-S.
HABITAT: Wooded and brushy areas; cropland and weed patches in fall.
SPRING MIGRATION: Nashvilles arrive in early May, peak in mid-May, and depart by late May. A peak of 18 were banded on 13 May 1976 (PCP).
Early dates: 13 Apr, year not given (Waterloo, Brown 1971)
25 Apr 1981 (Ames, IBL 51:69)
27 Apr 1976 (Ames, JJD)
Late dates: 5 Jun 1979 (Lee Co., IBL 49:84)
27 May 1968 (Davenport, PCP)
FALL MIGRATION: Arrival is in late Aug, with a peak in early to mid-Sep and departure by mid-Oct. A peak of 25 were banded on 19 Sep 1966 (PCP).
Early dates: 22 Jul 1979 (Volga River A., IBL 49:84)
11 Aug 1981 (St. Lucas, IBL 51:121)
15 Aug 1977 (Yellow River F., DK)
Late dates: 6 Nov 1977 (Coralville Res., IBL 47:146)
1 Nov 1964 (Davenport, PCP)
30 Oct 1976 (Davenport, IBL 46:115)
COMMENT: This has been the most common warbler banded in Iowa by Petersen with a total of 1,703 banded, 396 in spring.

Northern Parula, **Parula americana**

STATUS: Regular; uncommon migrant, rare summer resident south and east. Class I-S N?.
HABITAT: Swampy, bottomland forest; wooded areas in migration.
SPRING MIGRATION: Parulas are usually seen high in overstory. Migration occurs in early to mid-May.
Early dates: 9 Apr 1981 (Polk Co., **IBL** 51:69)
17 Apr 1982 (Ames, PWM)
18 Apr 1982 (Lacey-Keosauqua S.P., **IBL** 52:60)
SUMMER: Nest-building was observed at Lacey-Keosauqua S.P. on 29 May 1979, but no follow-up was obtained (Koenig 1979). Summer sightings are most common in SE Iowa but have extended as far as C Iowa (Map 6.108).



Map 6.108 Northern Parula summer records by county, 1960-1982.

FALL MIGRATION: Migrants are present from mid-Aug through late Sep. A peak of 3 were banded on 12 Sep 1973 (PCP).
Late dates: 16 Oct 1982 (Hickory Hill P., **IBL** 52:123)
10 Oct 1982 (Ames, **IBL** 52:123)
4 Oct 1963 (Marble Rock, PK)
COMMENT: Of 39 banded, only 2 were from spring (PCP). The southern area of nesting for Northern Parula reaches up to SE Iowa; then there is a wide gap in its range to the northern arm in N Minnesota and N Wisconsin (Peterson 1980). Lacey-Keosauqua S.P. is a typical summer location for this species.
REFERENCE:
Koenig, D. 1979. Probable nesting of the Northern Parula Warbler in Iowa. **Iowa Bird Life** 49:116-117.

Yellow Warbler, **Dendroica petechia**

STATUS: Regular; common migrant and summer resident. Class I-S N.
HABITAT: Willow thickets near marshes and streams, brushy areas.
SPRING MIGRATION: Arrival is in early May with peak in mid-May. Seven were banded on 17 May 1969 at L. Okoboji (PCP).
Early dates: 24 Apr 1957 (Iowa City, FWK)
24 Apr 1982 (Riverton A., IBL 52:60)
26 Apr 1964 (Iowa City, FWK)
SUMMER: Yellow Warblers are common in ideal habitat such as NW Iowa, NE

Iowa along the Mississippi R., and SW Iowa in the Missouri R. bottoms. Along a 2.5-mile portion of Bloody Run P. in Allamakee Co., 21 were found in the summer of 1976 and 42 in 1977 (IBL 47:103); n of Marquette 49 were seen on 21 Jun 1981 (IBL 51:102). The literature includes 2 nesting studies conducted in Iowa (Bigglestone 1913; Schrantz 1943). Nesting starts in late May or early Jun. Cowbirds commonly parasitize their nests (Schrantz 1943). From 4 to 19 per year were found on Iowa BBSs.

FALL MIGRATION: Peaks occur in late Aug, and most are gone by late Sep.

Late dates: 5 Oct 1967 (Davenport, PCP)
2 Oct 1973 (Polk Co., DM)
2 Oct 1982 (Lacey-Keosauqua S.P., IBL 52:123)

COMMENT: Although this species is on the Blue List, data are insufficient to judge whether it has decreased in Iowa. It is still common in ideal habitat, and BBSs in Iowa inadequately sample its breeding habitat. Of 68 banded, 47 were from spring (PCP).

REFERENCES:

Bigglestone, H. C. 1913. A study of the nesting behavior of the Yellow Warbler (**Dendroica aestiva aestiva**). **Wilson Bull.** 25:50-67.

Schrantz, F. G. 1943. Nest life of the Eastern Yellow Warbler. **Auk** 60:367-387.

Chestnut-sided Warbler, **Dendroica pensylvanica**

STATUS: Regular; common migrant, rare nester. Class I-S N.
HABITAT: Deciduous forest and edge.
SPRING MIGRATION: They arrive in early May, peak in mid-May, and leave by late May. A peak of 18 were banded on 14 May 1975 (PCP).

Early dates: 2 May 1964 (Iowa City, FWK)
3 May 1970 (Iowa City, FWK)
4 May 1965 (Davenport, PCP)

SUMMER: An adult feeding young was observed on 6 Jul 1978 at Volga River A. (Schaufenbuel 1979). Breeding was also said to have occurred at the Macbride Field Campus the same summer (IBL 48:100). Other summer records in recent years are from Pikes Peak S.P., Sweet M., Lee Co., and Camp Arrowhead in Wapello Co.
FALL MIGRATION: Migrants arrive in mid-Aug, peak in early Sep, and leave by late Sep. A peak of 14 were banded on 30 Aug 1975 (PCP).

Early dates: 11 Aug 1977 (St. Lucas, IBL 47:147)
12 Aug 1981 (Davenport, IBL 51:121)
13 Aug 1977 (Davenport, IBL 47:147)
13 Aug 1976 (Yellow River F., DK)

Late dates: 4 Oct 1973 (Davenport, IBL 43:106)
3 Oct 1978 (Davenport, PCP).
3 Oct 1982 (Des Moines, IBL 52:124)
3 Oct 1982 (Lacey-Keosauqua S.P., IBL 52:124)

COMMENT: Of 674 banded, 198 were from spring (PCP). The breeding range of this species just touches NE Iowa (Peterson 1980).

Magnolia Warbler, **Dendroica magnolia**

STATUS: Regular; common migrant. Class I-S.
HABITAT: Deciduous woodland, usually at low to mid-heights.

SPRING MIGRATION: Magnolias arrive in early May, peak in mid- to late May, and depart abruptly. A peak of 41 were banded on 19 May 1974 (PCP).
Early dates: 18 Apr 1982 (Lacey-Keosauqua S.P., IBL 52:60)
29 Apr 1957 (Des Moines, Brown 1971; JCK)
2 May 1964 (Iowa City, FWK)
Late dates: 22 Jun 1976 (Davenport, PCP)
6 Jun 1972 (Davenport, PCP)
2 Jun 1967 (Davenport, PCP)
FALL MIGRATION: Magnolias arrive in late Aug, peak from late Aug to mid-Sep, and are gone by very early Oct. Banding peaks were 14 on 10 Sep 1968 and 13 on 27 Aug 1967 and 20 Sep 1974 (PCP).
Early dates: 13 Aug 1976 (Yellow River F., DK)
14 Aug 1982 (Johnson Co., IBL 52:123)
15 Aug 1977 (Yellow River F., DK)
Late dates: 26 Nov 1954 (Clinton, IBL 25:16)
2 Nov 1974 (Lamoni, IBL 44:103)
2 Nov 1974 (Davenport, IBL 44:103)
COMMENT: Of 1,247 banded, 468 were from spring (PCP).

Cape May Warbler, **Dendroica tigrina**

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Prefers conifers but also found in deciduous trees.
SPRING MIGRATION: Cape Mays are usually found in mid-May, with a peak of 8 at Sweet M. on 13 May 1981 (IBL 51:69).
Early dates: 1 May 1964 (Castalia, Winneshiek Co., DK)
3 May 1969 (Iowa City, FWK)
6 May 1979 (Wildcat Den S.P., THK)
Late dates: 23 May 1976 (Coralville Res., MCN)
22 May 1967 (Davenport, PCP)
FALL MIGRATION: Cape Mays usually are seen from late Aug into Oct.
Early dates: 11 Aug 1977 (Cardinal M., IBL 47:147)
29 Aug 1967 (Davenport, PCP)
29 Aug 1971 (Davenport, PCP)
Late dates: 17 Nov 1964 (Shenandoah, DeLong 1965)
23 Oct 1968 (Davenport, IBL 38:126)
COMMENT: There was a strong flight in mid-Sep 1966, with 5 banded on 16 Sep, 4 on 17 Sep, and 4 on 24 Sep at Davenport (PCP). Of 34 banded, only 5 were in spring (PCP).
REFERENCE:
DeLong, Mrs. W. C. 1965. The elusive warblers. **Iowa Bird Life** 35:29-30.

Black-throated Blue Warbler, **Dendroica caerulescens**

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Deciduous woodland.
SPRING MIGRATION: Black-throated Blues are usually found in mid-May.
Early dates: 6 May 1978 (Louisa Co., IBL 48:75)
9 May, year not given (location not given, Brown 1971)
Late dates: 19 May 1980 (Davenport, PCP)
18 May 1980 (Wildcat Den S.P., IBL 50:50)
18 May 1980 (St. Lucas, IBL 50:50)

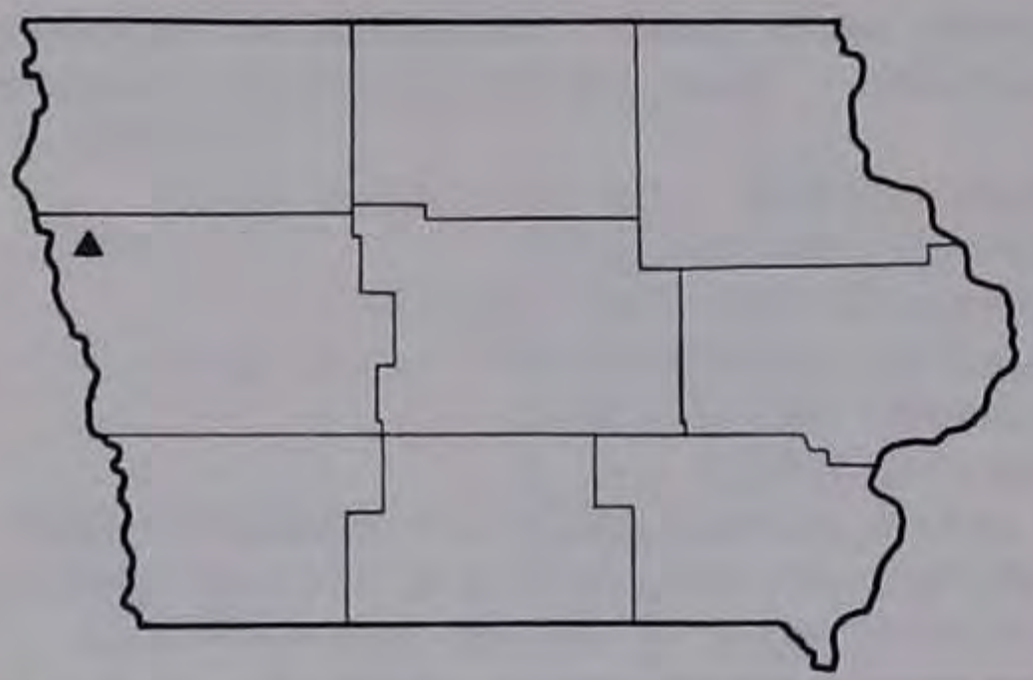
FALL MIGRATION: Migration occurs from early Sep through Oct. A peak of 3 were banded on 6 Sep 1976 (PCP). Observations are much more frequent in fall than in spring.
Early dates: 30 Aug 1975 (Davenport, PCP)
31 Aug 1982 (Davenport, IBL 52:124)
1 Sep 1959 (Des Moines, Brown 1971; JCK)
Late dates: 20 Nov 1943 (Clayton Co., Allert 1944)
3 Nov 1962 (Marble Rock, IBL 33:19)
25 Oct 1975 (Davenport, PCP)
COMMENT: Of 40 banded, all but 1 were in fall (PCP). Black-throated Blues seem to forage lower in fall than in spring and are present longer in fall. Although previously listed as Class I-P (Kent et al. 1982), 2 specimens were obtained from a tower kill at Alleman, Polk Co., on 14 Sep 1982 (JJD).
REFERENCE:
Allert, O. P. 1944. The Black-throated Blue Warbler as a delayed migrant. Iowa Bird Life 14:12.

Yellow-rumped Warbler, **Dendroica coronata**

STATUS: Regular; abundant migrant, rare winter. Class I-S.
HABITAT: Wooded and brushy areas, conifers in late fall.
SPRING MIGRATION: They arrive in mid-Apr and leave by mid-May. A peak of 38 were banded on 28 Apr 1977 (PCP). A high observational count of 150 occurred on 14 May 1979 in Muscatine, Scott, and Clinton counties (PCP).
Early dates: 25 Mar 1979 (Iowa City, THK)
29 Mar 1966 (Iowa City, FWK)
31 Mar 1982 (Des Moines, IBL 52:60)
Late dates: 17 Jun 1978 (Mills Co., IBL 48:100)
8 Jun, year not given (Des Moines, Brown 1971)
2 Jun 1966 (Union Sl. N.W.R., IBL 36:83)
FALL MIGRATION: Migration occurs from late Sep to early Nov. Some are found until 1 Jan. A peak of 19 were banded on 12 Oct 1966 (PCP).
Early dates: 20 Aug 1968 (Ogden, Brown 1971)
14 Sep 1959 (Davenport, PCP)
Late dates: 1 Jan 1971 (Sabula, IBL 42:7, 23)
30 Dec 1972 (Sabula, IBL 43:4-5)
30 Dec 1978 (Decorah, IBL 49:13)
WINTER: There are 10 December records since 1971. In addition to late Dec and early Jan records, 1 was seen on a CBC and again on 7 Feb 1954 at Cedar Rapids (Brown 1971). Another was found on 22 Feb 1982 at Des Moines (IBL 52:28). Early winter birds are sometimes attracted to poison ivy berries. The distinctive call note helps locate this abundant species. Of 1,050 banded, only 230 were from spring (PCP). There is 1 old sight record of the Audubon's race on 30 Apr 1934 in Winneshiek Co. (DuMont 1944) and a recent one on 27 Oct 1981 at Iowa City (IBL 51:121).

Black-throated Gray Warbler, **Dendroica nigrescens**

STATUS: Accidental. Class III.
RECORD: There is a sight record of this western species from Sioux City on 19 May 1961 (Youngworth 1961) (Map 109).



Map 6.109 Black-throated Gray Warbler record.

COMMENT: This species breeds from S British Columbia, Idaho, and Wyoming south to Baja California and New Mexico, and east to C Colorado. It winters from S California and S Arizona to Guatemala, rarely to C and S Texas, and casually to S Louisiana and S Florida. The preferred habitat is arid scrub and pinyon-juniper woodland. On the plains east of the Rocky Mountains it is a rare migrant from W North Dakota to N Texas. It is a frequent vagrant to the east, recorded from Alberta and Nova Scotia south to Iowa and New Jersey and along the Atlantic Coast to North Carolina. In Iowa and surrounding states, most records are from Aug to Nov and Apr to May, corresponding to the normal migration periods. In the eastern states it has also been recorded in Dec to Mar.

REFERENCE:

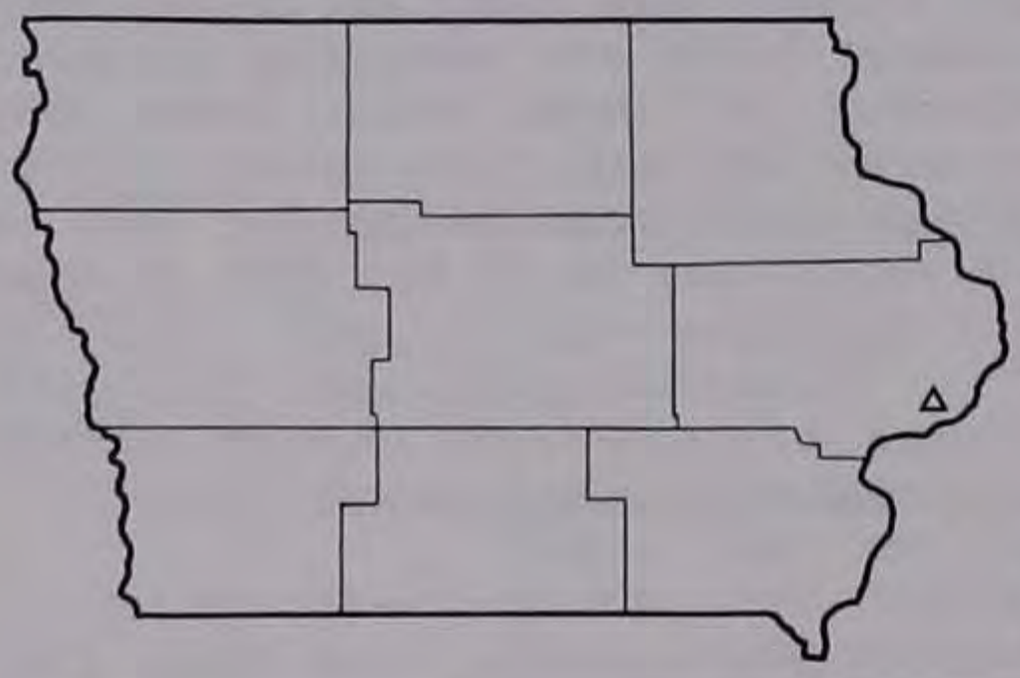
Youngworth, W. 1961. Black-throated Gray Warbler at Sioux City. **Iowa Bird Life** 31:69.

Townsend's Warbler, **Dendroica townsendi**

STATUS: Accidental. Class III.

RECORD: There is a sight record of this western species from Davenport on 7 May 1950 (Feeney 1950) (Map 110).

COMMENT: Townsend's Warbler breeds in coniferous forest from S Alaska and the Yukon south to Washington, Oregon, Idaho, and Wyoming. It



Map 6.110 Townsend's Warbler record.

winters from Nicaragua north to C California and casually to Washington, SE Arizona, and W and SE Texas. East of the Rocky Mountains it is a regular migrant in Colorado in May and Aug-Sep (more common in fall) and a rare migrant in W Oklahoma, Kansas, and Nebraska. As a vagrant, it has been found from Alberta and Saskatchewan south to Iowa and east to the Atlantic Coast (North Carolina to Nova Scotia). The Canadian prairie records are from Jul to Sep, including 1 breeding record from Saskatchewan (**Am. Birds** 33:873). The eastern records are about two-thirds spring (late Apr to mid-May) and one-third fall/winter (Oct to Feb, with several overwintering at feeders). Records from the central states (Iowa, Illinois, Minnesota) are from spring. The pattern suggests eastward drift in fall migration, but the source of the spring birds is less clear (returning vagrants or eastward-drifting northbound migrants).

REFERENCE:

Feeney, T. J. 1950. Townsend's Warbler at Davenport. **Iowa Bird Life** 20:61.

Black-throated Green Warbler, **Dendroica virens**

STATUS: Regular; common migrant. Class I-S.

HABITAT: Deciduous and coniferous forest and edge.

SPRING MIGRATION: They arrive in early May, peak in mid-May, and leave by late May.

Early dates: 6 Apr, year not given (Waterloo, Brown 1971)
22 Apr 1981 (Ames, IBL 51:69)
29 Apr 1975 (Davenport, PCP)

Late dates: 31 May, year not given (Des Moines, Brown 1971)
28 May 1968 (Davenport, PCP)

FALL MIGRATION: Migrants arrive in late Aug, peak in mid-Sep, and leave by early Oct. Six were banded on 10 Sep 1967 (PCP).

Early dates: 13 Aug 1976 (Pikes Peak S.P., DK)
17 Aug 1977 (Yellow River F., DK)
2 Aug 1977 (Yellow River F., DK)

Late dates: 10 Nov 1975 (Iowa City, IBL 46:24)
6 Nov 1967 (Des Moines, Brown 1971)
28 Oct 1981 (Ames, IBL 51:121)

COMMENT: Of 134 banded, 30 were from spring (PCP). According to banding data, the fall migration interval is longer than for most warblers.

Blackburnian Warbler, **Dendroica fusca**

STATUS: Regular; uncommon migrant. Class I-S.

HABITAT: Deciduous forest and edge; usually forages high in spring, low in fall.

SPRING MIGRATION: Blackburnians arrive in early to mid-May and leave by late May. A peak of 4 were banded on 13 May 1976 (PCP).

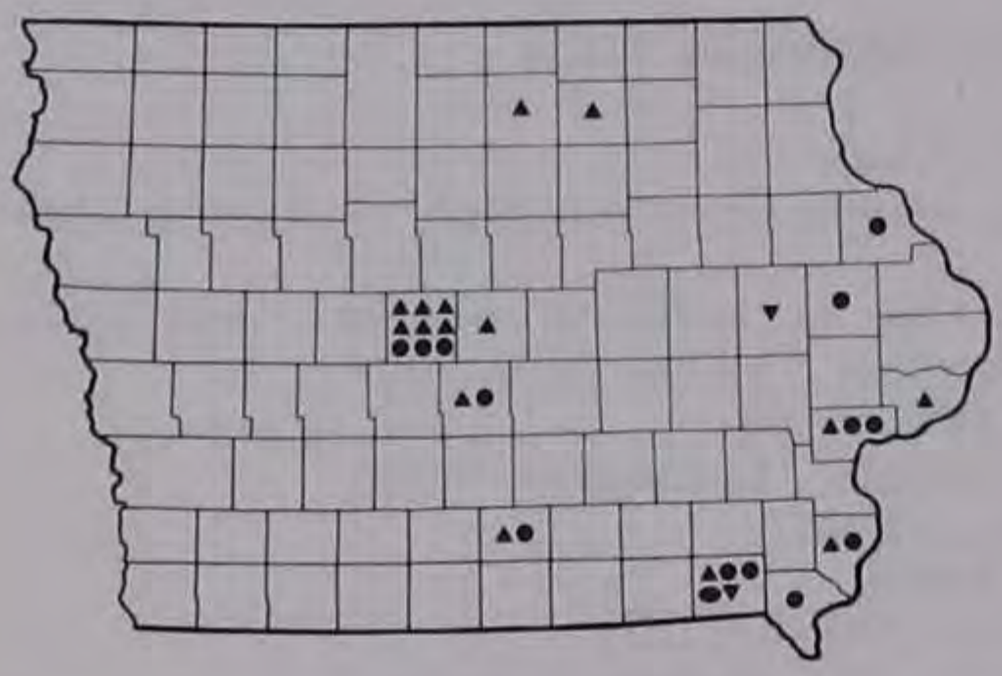
Early dates: 29 Apr 1981 (Ames, IBL 51:69)
30 Apr 1944 (Cedar Rapids, Serbousek 1959)
5 May 1965 (Iowa City, FWK)

Late dates: 11 Jun 1978 (Ames, PWM)
5 Jun 1977 (St. Lucas, IBL 47:103)
3 Jun 1979 (Shimek F., IBL 49:84)

FALL MIGRATION: They return in mid-Aug, peak in late Aug, and leave by late Sep. A peak of 6 were banded 23 Aug 1977 (PCP).
Early dates: 12 Aug 1978 (Yellow River F., IBL 48:140)
15 Aug 1976 (Marquette, DK)
15 Aug 1977 (Yellow River F., DK)
Late dates: 16 Nov 1974 (Des Moines, IBL 44:103)
17 Oct 1981 (Keosauqua, IBL 51:121)
10 Oct 1981 (Dickinson Co., IBL 51:121)
10 Oct 1982 (Lizard L., IBL 52:124)
COMMENT: Of 74 banded, 20 were from spring (PCP).

Yellow-throated Warbler, **Dendroica dominica**

STATUS: Regular; rare migrant and summer resident. Class I-P N.
HABITAT: Sycamore trees in river and creek bottoms. Prefers treetops.
SPRING MIGRATION: This species may arrive as early as mid-Apr, but most sightings have been in May.
Early dates: 11 Apr 1981 (Keosauqua, IBL 51:69)
14 Apr 1982 (Ledges S.P., IBL 52:61)
18 Apr 1982 (Lacey-Keosauqua S.P., IBL 52:61)
SUMMER: The only nest that has been found was at Lacey-Keosauqua S.P. on 6 Jun 1981 (Koenig 1981). Territorial males have been found at Ledges S.P., Lacey-Keosauqua S.P., n of Keosauqua, n of Burlington, Wildcat Den S.P., and White Pine Hollow.
FALL MIGRATION: Since the range of this species does not extend north of Iowa, it is not surprising that there are only 6 fall records.
Late dates: 4 Nov 1981 (Cedar Rapids, IBL 51:121)
11 Sep 1982 (Seymour, IBL 52:124)
29 Aug 1926 (Des Moines, DuMont 1933)
COMMENT: Except for about a dozen records up to 1931 (DuMont 1933) and another from Cedar Rapids on 16 May 1935 (Serbousek 1936), there were no substantiated records until 1 was found on 17 Jun 1969 at Ledges S.P. (Brooke 1969). Sightings have been recorded every year since then except for 1973, 1974, and 1975. The distribution of records appears to follow the Des Moines and Mississippi rivers (Map 6.111). The most consistent location in the past few years has been along the Des Moines R. in Van Buren Co. A specimen taken at Keokuk on 4 May 1888 (Anderson 1907) was formerly at Coe College but cannot be located (DuMont 1933). A stunned bird was photographed at Seymour on 11 Sep 1982 (C. Scott, on file with the Records Committee).



Map 6.111 Yellow-throated Warbler records by county and year, 1960-1982.

REFERENCES:

Brooke, M. 1969. Yellow-throated Warbler in Ledges State Park. **Iowa Bird Life** 39:64.
Koenig, D. 1981. A Yellow-throated Warbler nest in Iowa. **Iowa Bird Life** 51:104-105.
Serbousek, L. 1936. Spring birds in eastern Iowa. **Iowa Bird Life** 6:42.

Pine Warbler, **Dendroica pinus**

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Prefers conifers but may be found in deciduous trees, especially in fall.
SPRING MIGRATION: Most arrive in late Apr, peak in early May, and depart by mid-May.
Early dates: 17 Apr 1948 (Wheatland, Brown 1971)
25 Apr 1967 (Waterloo, **IBL** 37:52)
27 Apr 1982 (Linn Co., **IBL** 52:61)
Late dates: 20 May 1945 (Sioux City, Youngworth 1963)
19 May 1951 (Davenport, PCP)
FALL MIGRATION: They return in late Aug, peak in mid-Sep, and depart by late Sep.
Early dates: 27 Aug 1963 (Davenport, PCP)
27 Aug 1976 (Iowa City, **IBL** 46:84)
Late dates: 6 Oct, year not given (Decorah, Brown 1971)
4 Oct 1981 (Cone M., **IBL** 51:121)
1 Oct 1973 (Polk Co., DM)
COMMENT: Only 9 have been banded, 1 of them in spring (PCP). In limited banding in conifers, Pine Warblers have been netted at peak migration times (PCP). Although previously listed as casual (Kent et al. 1982), records have recently been located for 9 of 10 years, 1973-1982.
REFERENCE:

Youngworth, W. 1963. The Pine Warbler as a migrant in the Sioux City area. **Iowa Bird Life** 33:84-85.

[Kirtland's Warbler, **Dendroica kirtlandii**]

STATUS: Class VI.
RECORD: There is an old report (no date given) of a partially decomposed bird from Linn Co. that was dubiously identified (Anderson 1907).
COMMENT: This localized resident of NC Michigan has been reported in recent years from Chicago on 10 May 1979 and 26 Sep 1978 (**Am. Birds** 33:778), from Green Bay, Wis., in 1967 (**Audubon Field Notes** 21:512), and from Black River Falls, Wis., 10 Jun to 18 Jul 1978 (**Am. Birds** 32:1165).

Prairie Warbler, **Dendroica discolor**

STATUS: Casual; migrant, primarily spring. Class I-P N?.
HABITAT: Open upland areas with saplings.
SPRING MIGRATION: The early and late dates for the 11 spring reports are as follows:
Early dates: 23 Apr 1960 (George Wyth S.P., Hays 1960)

26 Apr 1954 (Grundy Co., King 1954)
1 May 1927 (Polk Co., DuMont 1933)
Late dates: 28 May 1915 (Polk Co., DuMont 1933)
28 May 1978 (Wildcat Den S.P., IBL 48:75)
21 May 1977 (Macbride Field Campus, IBL 47:61)

SUMMER: Currier in 1935 wrote that he had found a nest and collected eggs in Lee Co. on 5 Jun 1886 (DuMont 1935b). The Records Committee considered this evidence of nesting only probable because of the long reporting interval and the secondhand nature of the evidence. Other summer reports are from Allamakee Co. in Jun 1962 at Yellow River F. (Koenig 1979), on 19 Jun 1982 at Lansing W.A. (IBL 52:93), and 1 Jul 1978 at Yellow River F. (TS).

FALL MIGRATION: There are 3 Sep reports: 29-30 Sep 1922, West Liberty, Muscatine Co. (DuMont 1933), 13 Sep 1930, Polk Co. (DuMont 1933), 5 Sep 1977, Rathbun Res. (IBL 47:147).

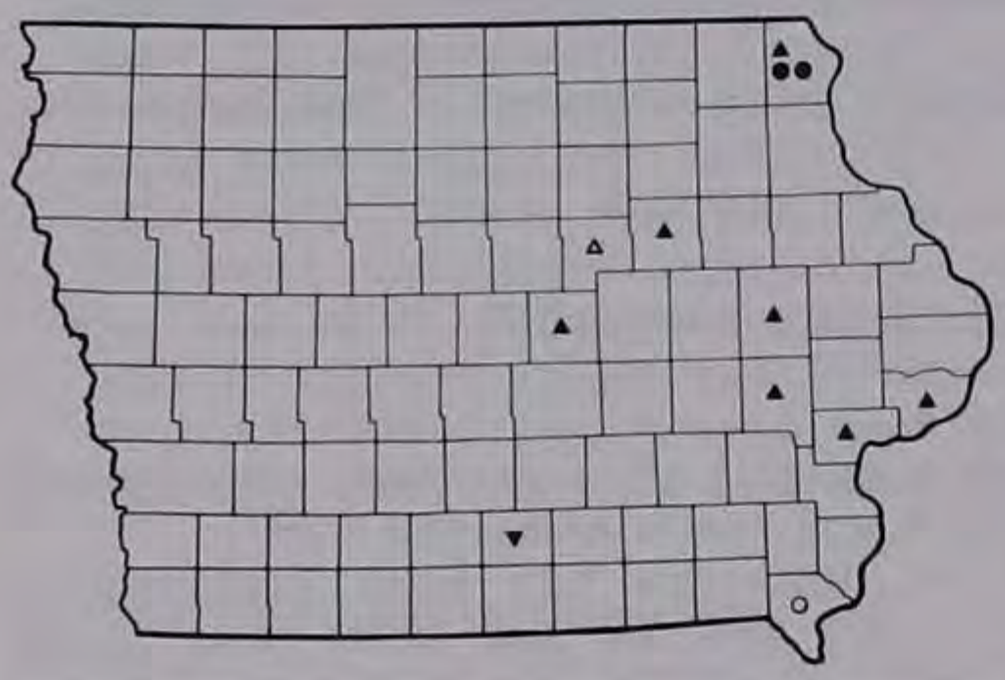
COMMENT: Of 21 reports, only 4 have been accepted by the Records Committee:

21 May 1977, Macbride Field Campus (IBL 47:61)
5 Sep 1977, Rathbun Res. (IBL 47:147)
20 May 1981, Marshall Co. (IBL 51:69)
23 May to 19 Jun 1982, Lansing W.A., photographed and recorded (IBL 52:61, 93)

In addition, 7 records were judged Class IV (Map 6.112). The normal range of this southeastern species extends north to Chicago, St. Louis, and Kansas City (Peterson 1980). Males are likely to sing loudly and continuously from small trees and bushes.

REFERENCES:

Hays, R. 1960. Bird notes from Waterloo. **Iowa Bird Life** 30:68.
King, Mrs. J. R. 1954. Bird notes from central Iowa. **Iowa Bird Life** 24:59.



Map 6.112 Prairie Warbler records.

Palm Warbler, **Dendroica palmarum**

STATUS: Regular; common migrant. Class I-S.
HABITAT: Woodland edge, brushy areas, weed patches, and cultivated areas.
SPRING MIGRATION: Palms arrive in late Apr, peak in early May, and depart in mid-May. A peak of 20 were banded on 3 May 1975 (PCP).
Early dates: 19 Apr 1981 (Ames, IBL 51:69)
21 Apr 1979 (Hendrickson M., JHZ)

24 Apr 1982 (Lizard L., IBL 52:61)
Late dates: 29 May 1968 (Davenport, PCP)
22 May 1967 (Davenport, PCP)

FALL MIGRATION: Most return in mid-Sep, peak in early Oct, and depart by mid-Oct. A peak of 4 were banded on 3 Oct 1977 (PCP).
Early dates: 8 Sep 1975 (Davenport, PCP)
9 Sep 1976 (Davenport, PCP)
14 Sep 1977 (Davenport, PCP)
Late dates: 17 Nov 1974 (Waterloo, IBL 45:22)
14 Oct 1974 (Davenport, PCP)
13 Oct 1978 (Davenport, PCP)

COMMENT: Of 238 banded, 194 were from spring (PCP). Palm Warbler is one of the early spring warbler migrants. It is also late in fall but less noticed than in spring.

Bay-breasted Warbler, **Dendroica castanea**

STATUS: Regular; common migrant. Class I-S.
HABITAT: Deciduous forest and edge; forages in treetops in spring, lower in fall.
SPRING MIGRATION: Most arrive in mid-May and leave in late May. A peak of 9 were banded on 23 May 1967 (PCP).
Early dates: 18 Apr 1982 (Lacey-Keosauqua S.P., IBL 52:61)
3 May, year not given (Des Moines, Brown 1971)
6 May 1981 (Ames, IBL 51:69)
Late dates: 29 May 1968 (Davenport, PCP)
27 May 1977 (Davenport, PCP)

FALL MIGRATION: They arrive in late Aug, peak in mid-Sep, and leave by mid-Oct. A peak of 9 were banded 16 Sep 1966 and 9 Sep 1976 (PCP).
Early dates: 17 Aug 1963 (Castalia, Brown 1971)
17 Aug 1981 (Keosauqua, IBL 51:121)
17 Aug 1982 (Lacey-Keosauqua S.P., IBL 52:124)
Late dates: 30 Oct 1976 (Davenport, IBL 46:115)
20 Oct 1963 (Hamburg, Brown 1971)
20 Oct 1979 (Coralville Res., IBL 49:114)

COMMENT: Of 397 banded, 35 were from spring (PCP). This large percentage in fall is probably due to low foraging at this season.

Blackpoll Warbler, **Dendroica striata**

STATUS: Regular; common migrant. Class I-S.
HABITAT: Deciduous and coniferous forest and edge; forages in treetops both spring and fall.
SPRING MIGRATION: Blackpolls arrive in early May, peak in mid- to late May, and depart abruptly. A peak of 25 were observed on 14 May 1979 in Muscatine, Scott, and Clinton counties (PCP). A banding peak of 11 occurred on 11 May 1977 (PCP).
Early dates: 28 Apr 1951 (Davenport, PCP)
30 Apr 1981 (Ames, IBL 51:69)
1 May 1979 (Ames, JJD)
Late dates: 9 Jun 1967 (Burlington, IBL 37:66)
7 Jun 1982 (Plymouth Co., IBL 52:93)
31 May 1968 (Davenport, PCP)

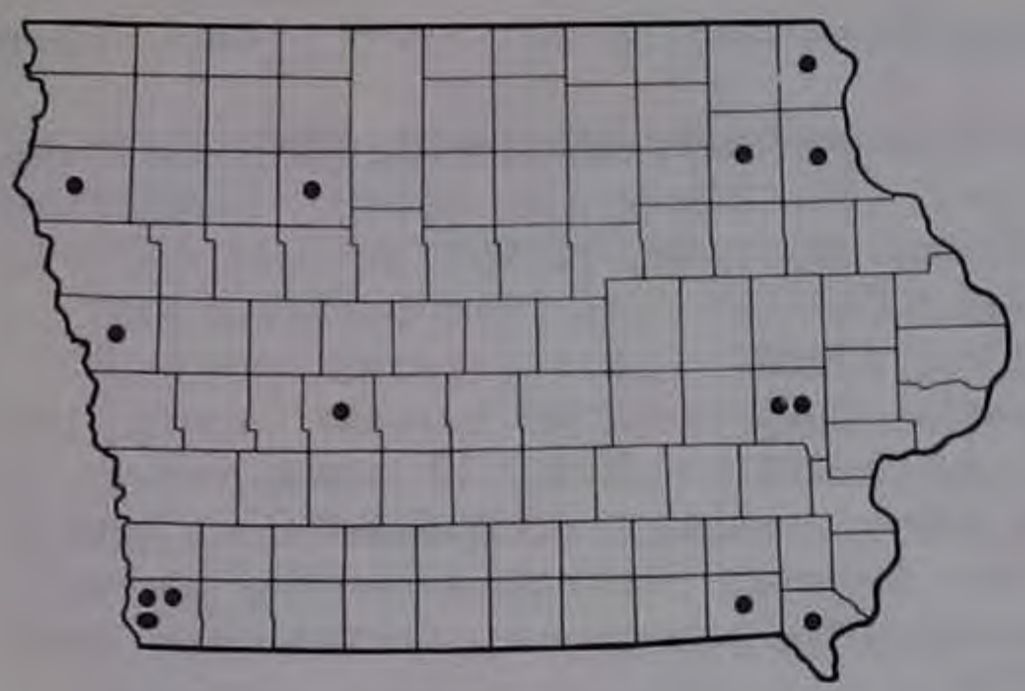
FALL MIGRATION: Migrants return in late Aug, peak in mid-Sep, and depart by late Sep.
Early dates: 19 Aug, year not given (Des Moines, Brown 1971)
27 Aug 1967 (Davenport, PCP)
29 Aug 1979 (Davenport, PCP)
Late dates: 12 Oct 1981 (Davenport, IBL 51:121)
5 Oct 1967 (Davenport, PCP)
5 Oct 1977 (Davenport, PCP)
COMMENT: Blackpolls are difficult to distinguish from Bay-breasted in fall. White undertail coverts, the lack of buffy wash on sides, and light legs are useful field marks. Of 162 banded, 136 were from spring (PCP).

Cerulean Warbler, **Dendroica cerulea**

STATUS: Regular; uncommon migrant and local resident in S and E Iowa. Class I-S N.
HABITAT: Deciduous forest, especially stream and river bottoms.
SPRING MIGRATION: Ceruleans arrive in mid-May, with some in early May.
Early dates: 27 Apr 1981 (Amana Woods, IBL 51:69)
29 Apr 1981 (Ames, IBL 51:69)
2 May 1964 (Castalia, DK)
2 May 1980 (Amana Woods, IBL 50:50)
2 May 1982 (Lacey-Keosauqua S.P., IBL 52:60)
SUMMER: This species can be found in appropriate habitat in small numbers, for example, 12 in Allamakee Co. in 1976 (IBL 46:84), 10 in Lee Co. on 9 Jun 1979 (Petersen 1979b), and 5 at Ledges S.P. in 1969 (Faaborg 1969). At least a few nest in Iowa. A nest with young was found in Yellow River F. on 16 Jun 1975 (Koenig 1976).
FALL MIGRATION: Most depart in Aug, but late lingerers have been recorded.
Late dates: 3 Oct 1964 (Ames, IBL 34:100)
1 Oct 1974 (Des Moines, WHB)
24 Sep 1967 (Jasper Co., IBL 37:100)
COMMENT: Only 3 have been banded in Iowa by any banders and none by Petersen. This obviously reflects the selective habitat and treetop location of this species.
REFERENCE:
Faaborg, J. 1969. Notes on the summer birds of Boone County. Iowa Bird Life 39:45.

Black-and-white Warbler, **Mniotilta varia**

STATUS: Regular; common migrant, rare nester. Class I-S N.
HABITAT: Woodlands, mature urban plantings.
SPRING MIGRATION: Black-and-white Warblers arrive in early May and reach peak numbers by mid-May. A peak of 13 were banded on 14 May 1974 (PCP).
Early dates: 31 Mar 1979 (Cedar Rapids, IBL 49:61-62)
5 Apr 1981 (Sunken Grove, IBL 51:69)
15 Apr 1964 (location not given, IBL 34:48)
SUMMER: Several observations have been made of singing males in Jun and Jul in widely scattered areas of the state (Map 6.113). In Jun 1968, an adult was feeding young at Waubonsie S.P. (Silcock 1977).



Map 6.113 Black-and-white Warbler summer records by county, 1960-1982.

FALL MIGRATION: Most move out of Iowa in late Aug and early Sep. A peak of 10 were banded on 2 Sep 1968 (PCP), and 54 were observed at Rush L., Palo Alto Co., on 29 Aug 1981 (IBL 51:121).

Late dates: 30 Oct 1982 (Lacey-Keosauqua S.P., IBL 52:123)
22 Oct 1979 (Davenport, PCP)
18 Oct 1964 (Jefferson, Brown 1971)

COMMENT: Black-and-white Warblers typically creep along trunks and branches much like nuthatches or creepers. Of 745 banded, 261 were from spring (PCP).

American Redstart, **Setophaga ruticilla**

STATUS: Regular; common migrant and locally common summer resident. Class I-S N.

HABITAT: Bottomland forest and edge, brushy areas in fall.

SPRING MIGRATION: Redstarts arrive in early May and peak in mid- to late May. A banding peak of 20 occurred on 14 May 1974 (PCP), and an observational peak of 50 were found on 14 May 1979 in Muscatine, Scott, and Clinton counties (PCP).

Early dates: 27 Apr 1954 (Davenport, PCP)
30 Apr 1951 (Iowa City, Brown 1971)
1 May 1954 (Iowa City, FWK)

SUMMER: The most consistent breeding localities are in E Iowa, with spotty occurrence in C and SW Iowa. On 21 Jun 1981, 41 were found near Marquette (IBL 51:102). From 0 to 13 have been reported yearly on BBSs.

FALL MIGRATION: Migrants peak from late Aug to mid-Sep and leave by early Oct. The peak noted by banding was 22 on 29 Aug 1978 (PCP).

Late dates: 23 Oct 1979 (Davenport, IBL 49:114)
16 Oct 1982 (Lacey-Keosauqua S.P., IBL 52:124)
14 Oct 1974 (Davenport, IBL 44:103)

COMMENT: Of 1,072 banded, 419 were from spring (PCP).

Prothonotary Warbler, **Protonotaria citrea**

STATUS: Regular; uncommon summer resident in E and S Iowa. Class I-S N.

HABITAT: Flooded bottomland and sloughs along large rivers; very rare out of habitat.
SPRING MIGRATION: Prothonotaries arrive in early May and peak by mid-May.
Early dates: 26 Apr 1982 (Otter Creek M., IBL 52:60)
2 May 1959 (Davenport, PCP)
2 May 1959 (Louisa Co., FWK)
SUMMER: This species breeds regularly in available habitat along the Mississippi R. and its tributaries. At Rathbun Res. 17 were found in Jul 1977 (IBL 47:102), and 33 were near Lansing, Allamakee Co., on 21 Jun 1978 (IBL 49:75). There are also summer records from the western edge of the state (IBL 52:93). A nest with young was found near Iowa City in early Jun (Kent and Vane 1958).
FALL MIGRATION: Prothonotaries are seldom found after the cessation of singing, but there are a few Aug records.
Late dates: 31 Aug 1963 (Davenport, PCP)
14 Aug 1954 (Davenport, PCP)
COMMENT: Only 2 have been banded, including the latest date for the state (PCP).
REFERENCE:
Kent, F. W., and R. F. Vane. 1958. Notes on the Pronthonotary Warbler in Johnson County. **Iowa Bird Life** 28:50-53.

Worm-eating Warbler, **Helmitheros vermivorus**

STATUS: Regular; rare spring migrant and summer resident in E and S Iowa. Class I-P N.
HABITAT: Steep, wooded hillsides and ravines.
SPRING MIGRATION: Spring birds are found from late Apr through May.
Early dates: 23 Apr 1976 (Davenport, PCP)
25 Apr 1966 (Hamburg, IBL 36:51)
26 Apr 1979 (Davenport, IBL 49:62)
SUMMER: At least 15 were found in Lee and Van Buren counties in late May and early Jun 1979; most were territorial (Petersen 1979b). They have also been seen recently in Jun at Waubonsie S.P., Lacey-Keosauqua S.P., Wildcat Den S.P., Amana Woods, and White Pine Hollow. No nest has been found recently, but Anderson (1907) cited several pre-1900 nest records. The only fall records are 10 Sep 1925 and 13 Sep 1930, both at Des Moines (DuMont 1931). Otherwise, the latest record is 21 Jun 1981 at Amana Woods (IBL 51:102).
COMMENT: Worm-eating Warblers have been reported much more frequently from 1976 to 1982 than previously, probably because observers have learned where to listen for this secretive deep woods species, so it is likely to be much more common than the records indicate. SE Iowa falls within its breeding range (Peterson 1980).

[Swainson's Warbler, **Limnothlypis swansonii**]

STATUS: Class VI.
RECORD: Grant (1963) indicates 1 record, and Brown (1971) indicates that supporting information is "Davenport, 1 May (F. P.)."
COMMENT: This species is rare in cane swamps in S Illinois; there have been 1 or 2 records in C Illinois (Bohlen 1978) and SE Nebraska (Johnsgard 1980).

Ovenbird, **Seiurus aurocapillus**

STATUS: Regular; common migrant, uncommon nester. Class I-S N.
HABITAT: Deciduous woodland, large tracts required for breeding.
SPRING MIGRATION: Most arrive in early May, with a peak in mid-May. The banding peak was 36 on 18 May 1974 (PCP).
Early dates: 14 Apr 1975 (Des Moines, IBL 45:59)
16 Apr, year not given (Des Moines, Brown 1971)
21 Apr 1973 (Iowa City, FWK)
SUMMER: From 0 to 3 were recorded per year on BBSs, all from 4 routes in SE and C Iowa.
FALL MIGRATION: Ovenbirds peak in mid-Sep and depart in early Oct. A banding peak of 14 occurred on 9 Sep 1976 (PCP).
Late dates: 28 Dec 1957 (Dubuque, IBL 28:18)
4 Nov, year not given (Sioux City, Brown 1971)
COMMENT: Of 1,500 banded, 484 were from spring (PCP). There is little information on the breeding distribution of this species in Iowa. It is known to require large tracts of timber (Robbins 1979) and should be a bellwether of habitat destruction.
REFERENCE:
Robbins, C. S. 1979. Effects of forest fragmentation on bird populations. In **Management of North Central and Northeastern Forests for Nongame Birds**. U.S. For. Serv. Gen. Tech. Rep. NC-51, pp. 198-212.

Northern Waterthrush, **Seiurus noveboracensis**

STATUS: Regular; common migrant. Class I-S.
HABITAT: Deciduous forest and edge, brushy areas, usually near water.
SPRING MIGRATION: They arrive in late Apr, peak in early May, and leave by late May. A peak of 20 were banded 4 May 1965 (PCP).
Early dates: 6 Apr 1963 (Goldfield, IBL 33:40)
19 Apr 1980 (Ames, IBL 50:50-51)
23 Apr 1964 (Davenport, PCP)
23 Apr 1965 (Davenport, PCP)
Late dates: 1 Jun 1967 (Davenport, PCP)
1 Jun 1968 (Davenport, PCP)
29 May 1965 (Davenport, PCP)
FALL MIGRATION: Northern Waterthrushes arrive in mid-Aug, peak in late Aug to early Sep, and leave by late Sep. A peak of 8 were banded on 30 Aug 1967 (PCP).
Early dates: 6 Aug 1976 (Yellow River F., DK)
6 Aug 1977 (Cone M., IBL 47:147)
11 Aug 1980 (Little Clear L., IBL 51:29)
11 Aug 1981 (Little Clear L., IBL 51:121)
Late dates: 21 Nov 1969 (Ames, IBL 40:19)
18 Nov 1962 (West Union, IBL 33:19)
19 Oct 1969 (Davenport, PCP)
COMMENT: Early Apr waterthrushes are much more likely to be Louisianas than Northerns. Sight identifications of these similar appearing species are subject to error. Of 873 banded, 618 were from spring (PCP).

Louisiana Waterthrush, **Seiurus motacilla**

STATUS: Regular; rare and local summer resident, S and E Iowa. Class I-S N.
HABITAT: Deep woods along steep, eroded streambanks.
SPRING MIGRATION: Louisianas may arrive by mid-Apr, with no distinguishable peak.
Early dates: 2 Apr 1982 (Ledges S.P., IBL 52:61)
4 Apr 1981 (Ames, IBL 51:69)
13 Apr, year not given (location not given, Brown 1971)
SUMMER: In the summer of 1979, 19 were found at various E Iowa locations by 1 observer (IBL 49:84). Recent summer records are mostly from E Iowa.
FALL MIGRATION: Few are found in fall, as most depart by early Sep.
Late dates: 9 Sep 1958 (Davenport, PCP)
2 Sep 1968 (Davenport, PCP)
COMMENT: Of 10 banded, 7 were from spring (PCP). Louisiana Waterthrush is most easily located by song in suitable deep woods streambeds. Typical locations where birds have been regularly found include White Pine Hollow, Wildcat Den S.P., Palisades-Kepler S.P., Amana Woods, and Ledges S.P. Many more probably remain undiscovered.

Kentucky Warbler, **Oporornis formosus**

STATUS: Regular; uncommon migrant and summer resident. Class I-S N.
HABITAT: Large tracts of moist, deciduous forest, especially with thickets.
SPRING MIGRATION: Kentuckys arrive in early to mid-May, with no distinguishable peak.
Early dates: 28 Apr 1977 (Lamoni, IBL 47:62)
3 May 1977 (Davenport, PCP)
3 May 1969 (Iowa City, FWK)
3 May 1980 (Wildcat Den S.P., THK)
SUMMER: They can be found in suitable habitat and are locally regular in large areas of prime habitat. Although less common than Ovenbird, whose habitat it shares, the Kentucky Warbler can be found regularly in large wooded tracts, especially in S and E Iowa. A nest with newly hatched young was found in Allamakee Co. on 13 Jun 1975 (Koenig 1976).
FALL MIGRATION: Most are gone by early Sep.
Late dates: 23 Sep 1971 (Lamoni, IBL 41:112)
15 Sep 1971 (Des Moines, IBL 41:112)
COMMENT: Of 16 banded, all were from spring (PCP). This loud-voiced bird of the deep woods moves less frequently than other warblers and may be difficult to locate even when singing continuously.

Connecticut Warbler, **Oporornis agilis**

STATUS: Regular; rare migrant. Class I-S.
HABITAT: Forest, thickets, brush piles, and weed patches.
SPRING MIGRATION: Connecticuts arrive in mid-May and leave in late May. Peaks of 2 were banded on 26 May 1968, 20 May 1974, and 23 May 1976 (PCP).

Early dates: 27 Apr 1957 (Des Moines, Brown 1971)
7 May 1979 (Ames, IBL 49:62)
11 May 1978 (Ames, IBL 48:76)
Late dates: 6 Jun 1982 (Amana Woods, IBL 52:93)
3 Jun, year not given (location not given, Brown 1971)
1 Jun 1971 (Davenport, PCP)

FALL MIGRATION: They return in late Aug and depart by late Sep. A peak banding of 2 occurred on 29 Aug 1976 (PCP).
Early dates: 20 Aug 1973 (Des Moines, IBL 43:106)
23 Aug 1976 (Davenport, PCP)
Late dates: 8 Oct 1970 (Cedar Rapids, IBL 41:27)
5 Oct, year not given (Des Moines, Brown 1971)
2 Oct 1976 (Iowa City, IBL 46:115)
2 Oct 1982 (Lacey-Keosauqua S.P., IBL 52:124)

COMMENT: The Connecticut Warbler is such a late spring migrant and lone forager that it is easily overlooked. It is most often found by song, and it may be difficult to get a view of the bird. Of 49 banded, 36 were from spring (PCP).

Mourning Warbler, **Oporornis philadelphia**

STATUS: Regular; uncommon migrant. Class I-S.
HABITAT: Forest, thickets, brush piles, and weed patches.
SPRING MIGRATION: Mournings arrive in mid-May and peak and leave in late May. Peaks of 4 were banded 23 May 1965 and 22 May 1973 (PCP).
Early dates: 6 May 1956 (Amana, Serbousek 1959)
9 May 1979 (Ames, JJD)
9 May 1968 (Iowa City, FWK)
9 May 1982 (Amana, IBL 52:61)
Late dates: 19 Jun 1979 (White Pine Hollow, IBL 49:84)
17 Jun, year not given (location not given, Brown 1971)
9 Jun 1979 (Shimek F., IBL 49:84)

FALL MIGRATION: They arrive in late Aug, peak in late Aug to early Sep, and leave in late Sep. Peaks of 3 were banded on 5 dates from 19 Aug to 9 Sep (PCP).
Early dates: 14 Aug 1968 (Davenport, PCP)
15 Aug 1976 (Marquette, DK)
19 Aug 1966 (Davenport, PCP)
Late dates: 4 Oct 1980 (Des Moines, IBL 51:29)
2 Oct 1973 (Polk Co., DM)
1 Oct 1965 (Davenport, PCP)

COMMENT: Like the Connecticut, Mourning Warblers are late migrants in spring and are easily overlooked. Of 240 banded, 150 were from spring (PCP).

[MacGillivray's Warbler, **Oporornis tolmiei**]

STATUS: Hypothetical. Class IV.
RECORDS: A bird seen at Sioux City on 16 May 1966 had white spots above and below the eye and the breast dappled with very black "crape" markings (Youngworth 1966). Other reports without supporting detail are from 1874 (presumably in Winnebago Co., Krider 1879) and in 1978 (location not given, IBL 49:46).
COMMENT: Distinguishing this species from Mourning Warbler is difficult

because some Mourning Warblers exhibit characteristics of MacGillivray's Warbler and the 2 forms are known to hybridize. For a record to be entirely convincing, a bird should be caught or collected and the wing and tail carefully measured. Tail measurements must be taken in a standard manner (Lanyon and Bull 1967), and detailed photographs should be taken to show the plumage characteristics.

REFERENCES:

Lanyon, W. E., and J. Bull. 1967. Identification of Connecticut, Mourning, and MacGillivray's warblers. **Bird-Banding** 38:187-194.

Youngworth, W. 1966. MacGillivray's Warbler at Sioux City. **Iowa Bird Life** 36:54-55.

Common Yellowthroat, **Geothlypis trichas**

STATUS: Regular; abundant migrant and summer resident. Class I-S N.

HABITAT: Moist areas of low cover, marsh edge, willow thickets, and brushy meadows.

SPRING MIGRATION: Most arrive in early May, with a peak in mid-May. A banding peak of 25 occurred on 20 May 1974 (PCP).

Early dates: 21 Apr 1976 (Davenport, PCP)
23 Apr 1973 (Davenport, PCP)
24 Apr 1967 (Iowa City, FWK)

SUMMER: It is the most abundant nesting warbler in Iowa and is widely distributed throughout the state. Numbers on BBSs have varied from 349 in 1967 to 854 in 1979. Shaver (1918) made a detailed study of 1 nest.

FALL MIGRATION: Peaks occur from early to mid-Sep, and most have left by early Oct. A banding peak of 9 occurred on 9 Sep 1973 (PCP).

Late dates: 3 Nov 1971 (Shenandoah, **IBL** 41:112)
14 Oct 1970 (Davenport, PCP)
10 Oct 1982 (George Wyth S.P., **IBL** 52:124)

COMMENT: Of 1,055 banded, 778 were from spring (PCP). Yellowthroats are very easily netted, as they stay low.

REFERENCE:

Shaver, N. E. 1918. A nest study of the Maryland Yellow-throat. **Univ. Iowa Stud. Nat. Hist.** 8(2):1-12.

Hooded Warbler, **Wilsonia citrina**

STATUS: Regular; rare migrant and summer resident in E and S Iowa. Class I-S N.

HABITAT: Forested bottomland and hillsides.

SPRING MIGRATION: They arrive in late Apr and may be seen throughout May.

Early dates: 23 Apr 1975 (Davenport, **IBL** 45:59)
26 Apr 1981 (Ames, **IBL** 51:70)
27 Apr 1973 (Waterloo, NO)

SUMMER: There are several recent summer records: 2 Jul 1971 at Ledges S.P. (**IBL** 41:90), 6-7 Jul 1976 at Yellow River F. (**IBL** 46:85), into Jul 1977 at Marquette (**IBL** 47:103), 1 Jun 1979 at Shimek F. (**IBL** 49:84), 7 Jul 1979 at Volga River A. (**IBL** 49:84), 16 Jul 1980 at Pilot Knob S.P. (Schaufenbuel 1981), and up to 4 Jul 1982 at Amana Woods (**IBL** 52:93). The latter record included at least 3 territorial males and a female (Bendorf 1982). The only nesting record is from Lee Co. on 24 Jun

1894, when 2 nests with eggs were found by Currier (DuMont 1935b, 1936).
FALL MIGRATION: There are 2 fall dates: 26 Sep 1975 at Davenport (PCP) and 7 Aug 1976 at Effigy Mounds (IBL 46:85).
COMMENT: DuMont (1933) considered this species to be a formerly rare summer resident in S Iowa. Peterson (1980) shows the breeding range extending into SE Iowa. In recent years the number of reports of this species have been increasing with 3 records from 1950 to 1967, 12 from 1968 to 1974, and 27 from 1975 to 1981. At Davenport, none were banded from 1960 to 1973, but 9 were netted from 1974 to 1980. Records are most commonly from SE Iowa but have also been from NE Iowa and SW Iowa (Diggs and Diggs 1982). Recently, nesting has been documented as far north as Wisconsin (Brittingham and Temple 1980).

REFERENCES:

Bendorf, C. 1982. Summer records of Hooded Warbler. **Iowa Bird Life** 52:115-117.
Brittingham, M. C., and S. A. Temple. 1980. Hooded Warblers nesting in the Baraboo Hills, Sauk County, Wisconsin. **Passenger Pigeon** 42:128-130.
Diggs, H., and F. Diggs. 1982. A special bird banding. **Iowa Bird Life** 52:96.
DuMont, P. A. 1936. Old nesting records of rare birds in Iowa. **Oologist** 53:8-10.
Schaufenbuel, J. 1981. 1980 breeding marsh-bird survey. **Iowa Bird Life** 51:111-114.

Wilson's Warbler, **Wilsonia pusilla**

STATUS: Regular; common migrant. Class I-S.
HABITAT: Deciduous forest edge, brushy areas, and weed patches.
SPRING MIGRATION: They arrive in early May, peak in late May, and leave abruptly. A banding peak of 6 occurred on 19 May 1968 (PCP).
Early dates: 29 Apr 1977 (Ames, JJD)
2 May 1959 (Iowa City, FWK)
3 May 1981 (Ames, IBL 51:70)
Late dates: 1 Jun 1971 (Davenport, PCP)
30 May 1977 (Yellow River F., DK)
29 May 1967 (Davenport, PCP)
29 May 1968 (Davenport, PCP)
FALL MIGRATION: Migrants arrive in late Aug, peak in early Sep, and leave by early Oct. A banding peak of 5 occurred on 10 Sep 1971 (PCP).
Early dates: 8 Aug 1981 (Waterloo, IBL 51:121)
8 Aug 1977 (Iowa City, IBL 47:147)
15 Aug 1977 (Yellow River F., DK)
Late dates: 25 Nov 1962 (West Union, IBL 33:19)
2 Nov 1980 (Coralville Res., IBL 51:29)
18 Oct 1966 (Davenport, PCP)
COMMENT: Of 442 banded, 201 were from spring (PCP).

Canada Warbler, **Wilsonia canadensis**

STATUS: Regular; uncommon migrant. Class I-S.
HABITAT: Deciduous forest and edge; in fall, brushy areas and weed patches.

SPRING MIGRATION: Most Canadas arrive in mid-May and leave in late May. A banding peak of 7 occurred on 21 May 1963 (PCP).
Early dates: 3 May 1958 (Des Moines, Brown 1971)
4 May 1977 (Ames, JJD)
10 May 1956 (Davenport, PCP)
10 May 1976 (Davenport, PCP)
Late dates: 21 Jun 1980 (Waubonsie S.P., IBL 50:77)
8 Jun 1982 (Plymouth Co., IBL 52:93)
5 Jun 1979 (Bellevue S.P., IBL 49:84)
SUMMER: The finding of 1-3 each year at White Pine Hollow on 19-20 Jun 1979, 1981, and 1982 (IBL 49:84, 51:102, 52:93) suggests the possibility of nesting even though the breeding range of this species is far from Iowa.
FALL MIGRATION: They arrive in mid-Aug, peak in late Aug to early Sep, and depart by late Sep. A banding peak of 13 occurred on 29 Aug 1975 (PCP).
Early dates: 4 Aug 1977 (Davenport, IBL 47:146)
9 Aug 1980 (Winneshiek Co., IBL 51:29)
12 Aug 1981 (Davenport, IBL 51:122)
Late dates: 6 Oct 1962 (Des Moines, Brown 1971)
3 Oct 1979 (Davenport, IBL 49:114)
30 Sep 1967 (Iowa City, FWK)
COMMENT: Of 422 banded, 120 were from spring (PCP).

Yellow-breasted Chat, **Icteria virens**

STATUS: Regular; rare migrant and local summer resident. Class I-S N.
HABITAT: Brushy, upland areas and overgrown pastures.
SPRING MIGRATION: Chats arrive in early to mid-May with no apparent peaks.
Early dates: 3 May 1981 (Iowa City, IBL 51:70)
8 May 1970 (Iowa City, FWK)
8 May 1971 (Des Moines, IBL 41:90)
SUMMER: They occur locally in all parts of the state in suitable habitat. One observer found 18 in E Iowa in the summer of 1979, including 6 along 7.5 miles of the Des Moines R. in Lee Co. on 2 Jun (IBL 49:84). There are sightings for 5 of 13 years on BBSs with a maximum of 2 birds on any route. A nest found in Jul near Des Moines was described by Peasley and Peasley (1957).
FALL MIGRATION: There is no distinguishable peak, and all are gone by late Sep.
Late dates: 28 Sep 1958 (Sabula, PCP)
28 Sep 1964 (Davenport, PCP)
WINTER: One attempted to overwinter at a Davenport feeder until it was taken indoors on 16 Jan 1972 (Petersen 1972). Based on its scaly legs, it appeared to be an old bird.
COMMENT: Of 21 banded, 19 were from spring (PCP). SE Iowa is the most reliable place to locate this species.
REFERENCES:
Peasley, H. R., and Mrs. H. R. Peasley. 1957. Nesting record of Yellow-breasted Chat in Polk County. **Iowa Bird Life** 27:3-5.
Petersen, P. C. 1972. Wintering Yellow-breasted Chat at Davenport. **Iowa Bird Life** 42:26.

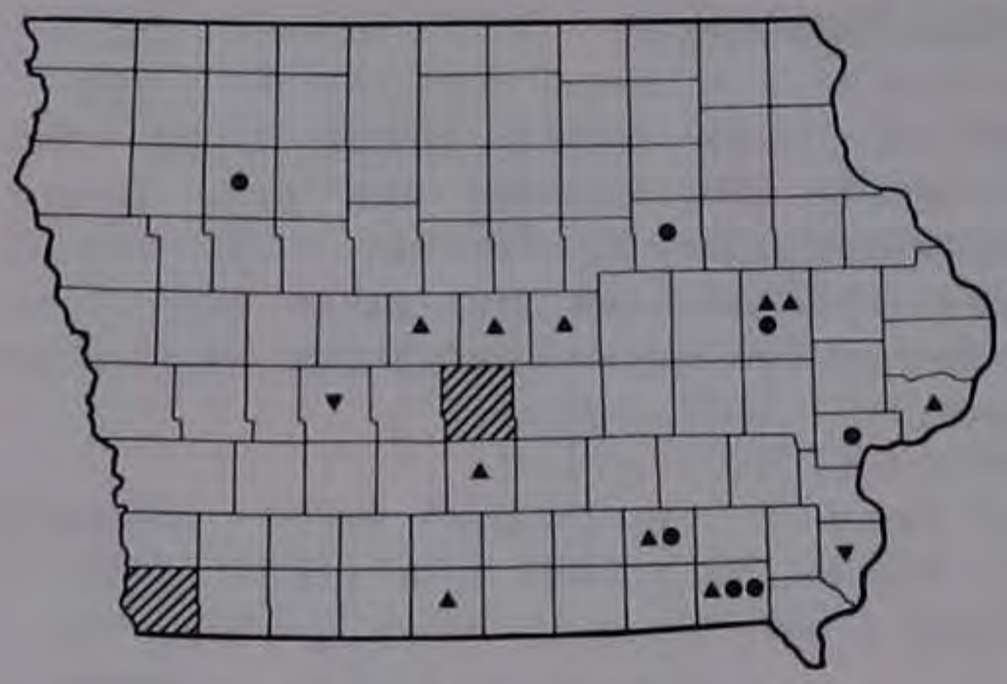
Tanagers, Subfamily Thraupinae

The tanagers are a large group of New World birds. Of the approximately 235 species, most are found in the tropics and only 5 are found in North America, including 1 introduced to Florida. Of the 3 species reported in Iowa, 2 are regular and nest in the state and 1 is accidental. Male tanagers are usually brightly colored and are found in wooded or brushy areas.

Scarlet Tanager,
A. B. Thiermann.

Summer Tanager, **Piranga rubra**

STATUS: Regular; uncommon migrant and summer resident in S Iowa, especially the southwest corner of the state (Map 6.114). Class I-S N.
HABITAT: Woodlands.
SPRING MIGRATION: Few data are available, but Summer Tanagers generally arrive in early or mid-May.
Early dates: 20 Apr 1899 (Burlington, DuMont 1933)
27 Apr 1942 (Waubonsie S.P., Jones 1942)
29 Apr 1974 (St. Lucas, JPS)
SUMMER: Lange (1961) summarizes some early nesting records along with information on a nest found near Muscatine. In recent years the most reliable place to locate Summer Tanagers in Iowa has been Waubonsie S.P.
FALL MIGRATION: Most generally leave Iowa in Aug or Sep, but few data are available.
Late dates: 8 Oct 1966 (location not given, IBL 36:105)
7 Oct 1982 (Davenport, IBL 52:124)
22 Sep 1973 (Burlington, IBL 43:70)



Map 6.114 Summer Tanager records, 1960-1982. The shaded counties have more than 10 records.

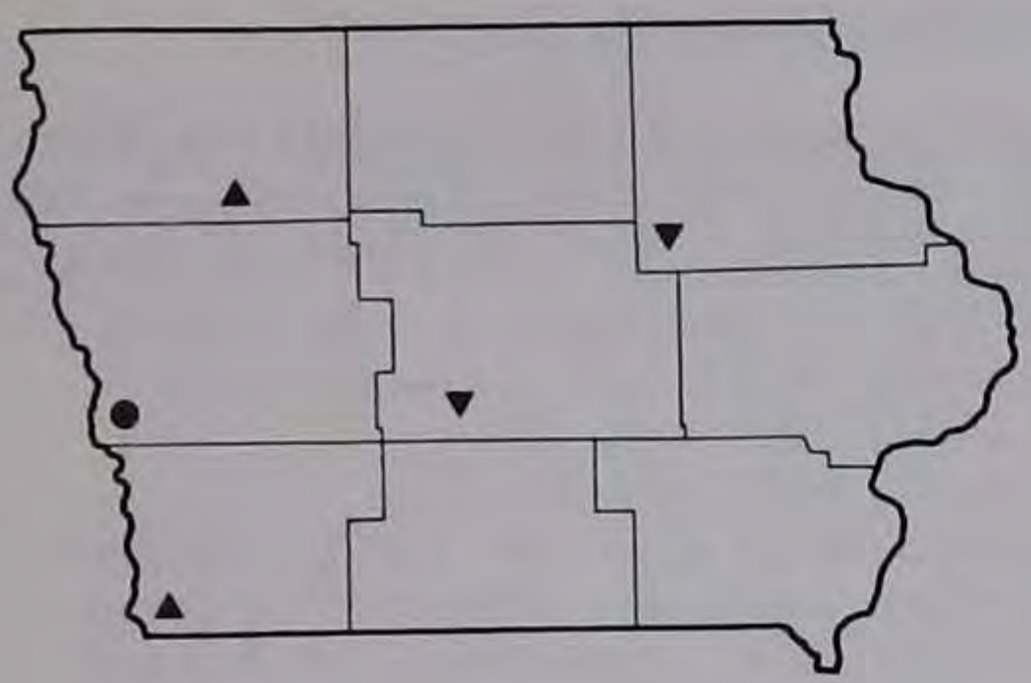
REFERENCES:
Jones, M. L. 1942. Bird observations at Waubonsie. **Iowa Bird Life** 12:39-40.
Lange, J. W. 1961. The Summer Tanager. **Iowa Bird Life** 31: 50-53.

Scarlet Tanager, **Piranga olivacea**

STATUS: Regular; uncommon migrant and summer resident. Class I-S N.
HABITAT: Woodlands.
SPRING MIGRATION: Most migrants are seen in early and mid-May.
Early dates: 22 Apr 1970 (Davenport, IBL 40:50)
28 Apr 1977 (Davenport, IBL 47:62)
1 May 1952 (Cedar Rapids, Serbousek 1959)
SUMMER: Small numbers of Scarlet Tanagers nest in woodlands throughout Iowa. They are most common in E and NE Iowa, but few data are available.
FALL MIGRATION: Most migrants are seen from late Aug to Sep.
Late dates: 28 Oct 1979 (Ames, IBL 49:114)
22 Oct 1979 (Davenport, IBL 49:114)
9 Oct 1982 (Lacey-Keosauqua S.P., IBL 52:124)

Western Tanager, **Piranga ludoviciana**

STATUS: Accidental. Class III.
RECORDS: There are 5 acceptable sight records of single birds, 3 from spring and 2 from fall (Map 6.115).
8 May 1969, Storm L., Buena Vista Co. (Crocker 1969)
22 Jun 1969, De Soto N.W.R., Harrison Co. (Bramel 1969)
4 Nov 1971, Des Moines (Brown 1971)
26 Apr 1980, Forney L., Fremont Co. (Myers 1980)
18 Oct 1981, Waterloo (IBL 51:122; Kent 1982)
This species was also listed by Say at Engineer Cantonment n of Omaha in 1819-1820 (James 1823).
COMMENT: This species breeds from S Alaska and C Saskatchewan south to Baja California and W Texas and east to C Colorado and, locally, to the Black Hills and NW Nebraska. It winters from Baja California south to Costa Rica and casually north to S California, SE Arizona, and SE



Map 6.115 Western Tanager records.

Texas. It is a common transient on the plains east of the Rocky Mountains in May to early Jun, Aug to Oct, and rarely in late fall/winter. It is regular to W South Dakota, W Nebraska, E Colorado, W Oklahoma, NE New Mexico, and W Texas but rare farther east. It is a very frequent eastward vagrant, being recorded in every month of the year and in nearly every state east of its normal range. In the East and Southeast most records are from early winter into spring (Dec-May) suggesting that these birds are displaced fall migrants. In the upper Midwest (Minnesota, Wisconsin, Michigan, Iowa, Illinois, and Indiana) nearly all records are between Apr and Aug, with over half in May, suggesting that these birds are displaced spring migrants. There is a nesting record for Jefferson Co., Wis., in May 1877 (Kumlien and Hollister 1951). Observers should keep in mind that immature male Scarlet Tanagers sometimes have wing bars but lack the contrasting 3-zoned effect of back, head, and rump of the Western Tanager. Scarlet and Western tanagers have hybridized, and such a bird was collected in Minnesota on 17 Aug 1950 (Green and Janssen 1975).

REFERENCES:

Bramel, G. C. 1969. Another Iowa Western Tanager. **Iowa Bird Life** 39:64-65.

Brown, W. H. 1971. Western Tanager in Des Moines. **Iowa Bird Life** 41:113.

Crocker, Mrs. E. G. 1969. Iowa's first Western Tanager. **Iowa Bird Life** 39:44.

Myers, B. 1980. Western Tanager in southwest Iowa. **Iowa Bird Life** 50:53.

Cardinals, Grosbeaks, and Buntings, Subfamily Cardinalinae

This New World group has about 40 species, 13 of which have been reported in North America. Of the 8 species reported from Iowa, 5 are regular, 2 are accidental, and 1 is hypothetical. Most of these birds are seed eaters and have a heavy, conical bill.

Rose-breasted Grosbeak, Iowa City, 15 May 1967, F. W. Kent.

Northern Cardinal, **Cardinalis cardinalis**

STATUS: Regular; abundant permanent resident. Class I-S N.
HABITAT: Wooded edge, hedgerows, urban areas.
SUMMER: Cardinals begin nesting in late Apr and often produce several broods. Nests with young have been found as late as 19 Sep 1979 at Iowa City (IBL 49:114) and 18 Sep 1964 in Fremont Co. (IBL 34:101). Cardinals are most abundant in the southern and eastern thirds of the state. The average number per BBS route is 8, but numbers are often twice as high in southern areas and less than 1 per route in some northwest areas.
WINTER: The winter distribution of cardinals based on CBCs is similar to the breeding distribution, with an average of 3 per party hour and a range from twice the average in some southern and eastern areas to less than 1 on some northwest counts. On 10 CBCs at Union Sl. N.W.R. in Kossuth Co., only 1 cardinal was recorded.
COMMENT: From 1960 to 1980 the distribution of cardinals shows no evidence of change. However, cardinals were once less common in Iowa. The northward movement into NC Iowa in the early 1900s was described by Brown (1920). The breeding habits of cardinals were studied in Scott Co. from 1943 to 1947 (Hodges 1949).
REFERENCES:

Brown, H. C. 1920. The cardinal in north-central Iowa. **Wilson Bull.** 32:123-132.
Hodges, J. 1949. A study of the cardinal in Iowa. **Proc. Iowa Acad. Sci.** 56:347-361.

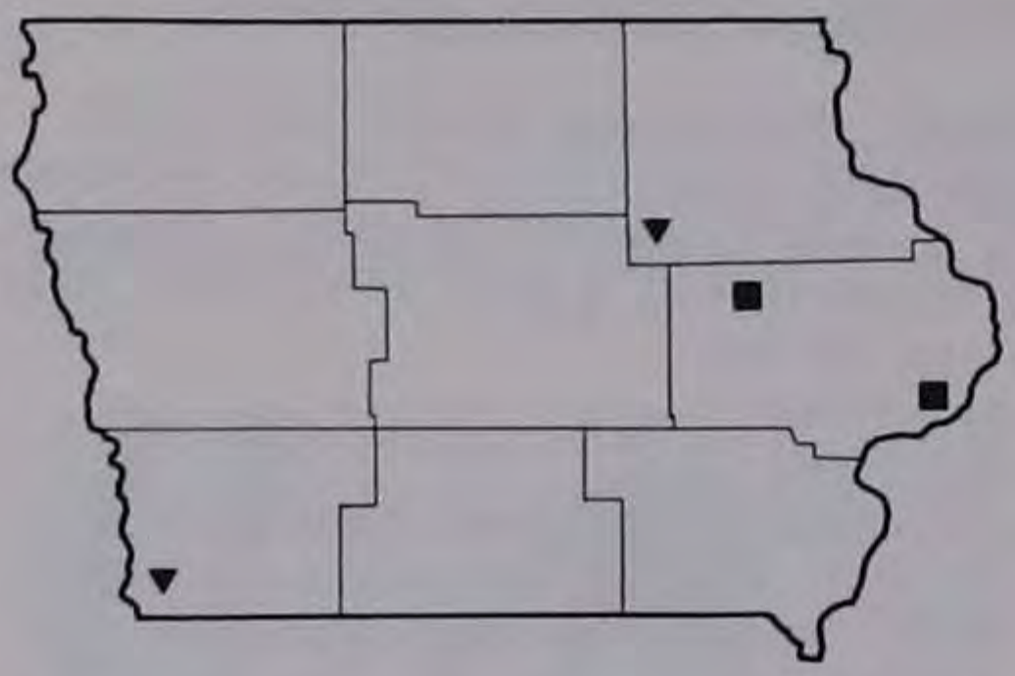
Rose-breasted Grosbeak, **Pheucticus ludovicianus**

STATUS: Regular; common summer resident. Class I-S N.
HABITAT: Wooded areas and edge, urban and rural.
SPRING MIGRATION: Grosbeaks usually arrive suddenly in large numbers in early May. Occasionally a few are found in late Apr.
Early dates: 7 Apr 1973 (Carlisle, IBL 43:48)
24 Apr 1967 (Iowa City, FWK)
25 Apr 1954 (Iowa City, FWK)
SUMMER: BBSs average 2.5 grosbeaks per route, but numbers vary greatly, probably because routes do not evenly sample the wooded habitat of grosbeaks. Gabrielson (1915) made a careful study of the feeding behavior at 1 nest.
FALL MIGRATION: Grosbeaks usually leave by late Sep. More data on departure dates are needed.
Late dates: 19 Oct 1963 (Lamoni, DeLong 1964)
12 Oct 1977 (Davenport, PCP)
10 Oct 1982 (Lacey-Keosauqua S.P., IBL 52:124)
WINTER: There are 5 winter records: 2 to 22 Jan 1962 at Bettendorf (IBL 32:19), Jan 1965 at Davenport (IBL 35:26), 7 Dec 1972 to 2 Jan 1973 at Des Moines (Peasley and Peasley 1973), late Dec 1972 at Cedar Rapids (IBL 43:26), and 26 Dec 1975 at Wheatland (IBL 46:14).
REFERENCES:

DeLong, Mrs. W. C. 1964. Our ovenbird woods. **Iowa Bird Life** 34:70-71.
Gabrielson, I. N. 1915. Field observations on the Rose-breasted Grosbeak. **Wilson Bull.** 27:357-368.
Peasley, H., and H. Peasley. 1973. A wintering Rose-breasted Grosbeak at Des Moines. **Iowa Bird Life** 43:31.

Black-headed Grosbeak, **Pheucticus melanocephalus**

STATUS: Accidental. Class I-P.
RECORDS: There are 4 fall/winter records (Map 6.116). Two were photographed.
30 Oct 1968, Manti Woods, Fremont Co., Class III (DeLong 1969)
20 Sep 1970, Waterloo, Class IV (Hays 1970)
1-11 Dec 1978, Cedar Rapids, Class I-P (Millikin 1979)
13-14 Dec 1981, Le Claire, Scott Co., Class I-P (Kent 1982)
In addition, several birds reported in 1982 likely were hybrid females (IBL 52:61, 94, 124; Peterjohn 1983).
COMMENT: The Black-headed Grosbeak is found from S British Columbia and Saskatchewan south through Baja California and W Texas into Mexico. It breeds east to W North Dakota, C South Dakota, EC Nebraska, W Kansas, and W Texas. It nests at low middle elevations in riparian woodland, deciduous forest, and in orchards, parks, and wooded suburbs. In migration, it is found somewhat farther east to C North Dakota, E South Dakota, W Oklahoma, C Texas, and casually to E Texas, Louisiana, and rarely Florida. It is a regular vagrant to S Canada and the E United States, most commonly along the Atlantic Coast where it is seen annually in heavily birded states such as New York and Massachusetts. Most eastern records are from Sep to Apr, with birds often overwintering at feeders. There are a few Jul-Aug records. In the Midwest the records, though fewer, follow the same pattern, except in Minnesota where there are 4 summer records, including 1 of a male



Map 6.116 Black-headed Grosbeak records.

feeding a juvenile (Green and Janssen 1975). Observers should be aware that this species hybridizes with the Rose-breasted Grosbeak in E South Dakota, E Nebraska, and W Kansas, so that many birds from those regions will be intermediate between the 2 parental species in appearance (West 1962; Anderson and Daugherty 1974). Peterjohn (1983) outlined the field identification of females.

REFERENCES:

Anderson, B. W., and R. J. Daugherty. 1974. Characteristics and reproductive biology of grosbeaks **(Pheucticus)** in the hybrid zone in South Dakota. **Wilson Bull.** 86:1-11.

DeLong, Mrs. W. C. 1969. The Black-headed Grosbeak in western Iowa. **Iowa Bird Life** 39:43.

Hays, R. 1970. Black-headed Grosbeak at Waterloo. **Iowa Bird Life** 40:74.

Millikin, S. 1979. Black-headed Grosbeak at Cedar Rapids. **Iowa Bird Life** 49:64-65.

Peterjohn, B. 1983. Identification of female grosbeaks. **Iowa Bird Life** 53:22-23.

West, D. A. 1962. Hybridization in grosbeaks **(Pheucticus)** of the Great Plains. **Auk** 79:399-424.

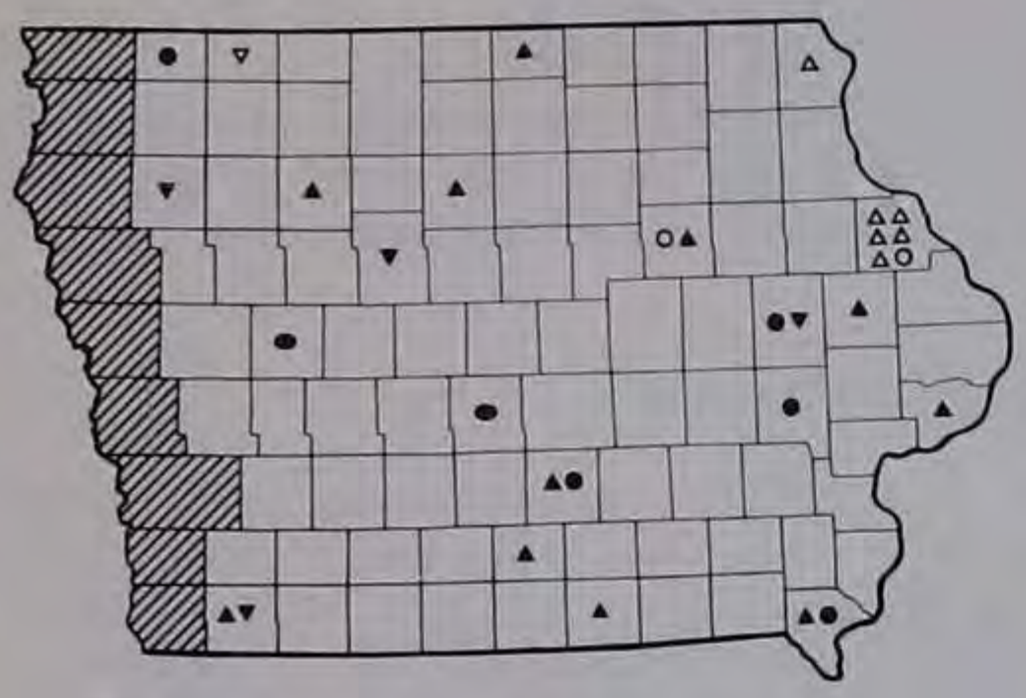
Blue Grosbeak, **Guiraca caerulea**

STATUS: Regular; common western edge of state, rare elsewhere. Class I-S N.

HABITAT: Prefers open country with scattered small trees and bushes.

SUMMER: The Blue Grosbeak arrives late, about the middle of May. It is easily found in the open farmland of the Missouri R. floodplain and north into Plymouth and Sioux counties. Apparently it is more common than it used to be (Youngworth 1934, 1954, 1955). Grant (1955) reviewed the early records. There are scattered records from other areas of Iowa (Map 6.117), but there are no known regular nesting areas east of the Missouri and Big Sioux river valleys. However, there is a nest card from Coon Rapids, Carroll Co., for 1977 (JJD). The fragmentary late summer data suggest that Blue Grosbeaks leave by late Sep.

Early dates: 23 Apr 1975 (Davenport, IBL 45:59)
8 May 1974 (Shenandoah, IBL 44:45)



Map 6.117 Blue Grosbeak range and extralimital records.

8 May 1982 (NE Mills Co., IBL 52:61)
Late dates: 8 Oct 1975 (Cedar Rapids, IBL 46:24)
4 Oct 1965 (Fort Dodge, IBL 36:21)
20 Sep 1969 (Page Co., IBL 39:83)

COMMENT: More extensive survey data are needed to better define the nesting areas and abundance of this species. A specimen was collected on 23 Jun 1934 (Youngworth 1934), but it is not known whether the specimen still exists. A recent specimen was obtained from a road kill in Mills Co. on 3 Jul 1980 (BLW). The nesting birds in W Iowa probably are of the western subspecies, **G. c. interfusa**, while stragglers in E Iowa (Map 6.117) may be of the eastern subspecies, **G. c. caerulea.**

REFERENCES:

Grant, M. L. 1955. The Blue Grosbeak in Iowa. **Iowa Bird Life** 25:4-5.

Youngworth, W. 1934. The Western Blue Grosbeak in Iowa. **Wilson Bull.** 46:257.

Youngworth, W. 1954. The Blue Grosbeak in western Iowa. **Iowa Bird Life** 24:58-59.

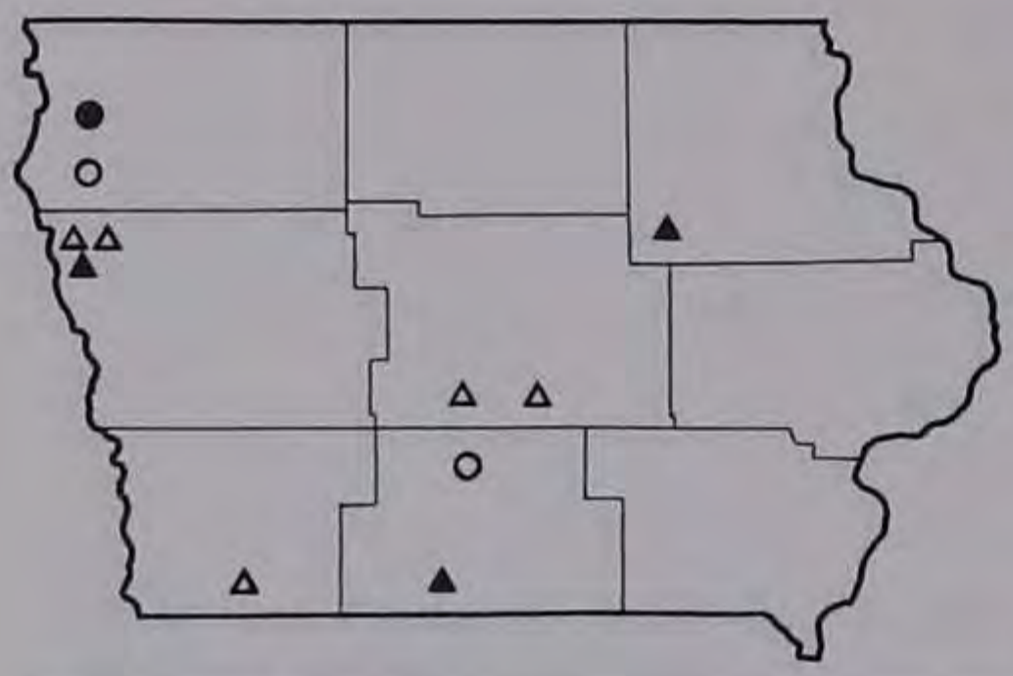
Youngworth, W. 1955. Further notes on the Blue Grosbeak in western Iowa. **Iowa Bird Life** 25:62.

Lazuli Bunting, **Passerina amoena**

STATUS: Accidental. Class II.

RECORDS: There are 11 reports, 5 of which have been judged Class III by the Records Committee. All reports are of single birds except for a pair at Shenandoah on 15 May 1959. A male in Plymouth Co. on 18 Jun 1958 was a hybrid Lazuli x Indigo Bunting observed in company with a female Indigo Bunting. The female was carrying nest material (Youngworth 1959). Eight records are for May, 2 for June, and 1 for July. Six records are for W Iowa and the rest from scattered locations (Map 6.118). There are no specimens or photographs.

20 May 1929, Woodbury Co., Class III (Youngworth 1929)
25 and 27 Jul 1935, Warren Co. (Peasley 1936)
third week of May 1940, Polk Co. (Brown 1971)
13 May 1949, Jasper Co., Class III (Moore 1949)
14 May 1958, Woodbury Co., Class III (Youngworth 1959)
18 Jun 1958, Plymouth Co., Class III (Youngworth 1959)



Map 6.118 Lazuli Bunting records.

15 May 1959, Page Co., Class III (Bordner 1959)
29 May 1964, Decatur Co. (IBL 34:66)
24 May 1973, Woodbury Co. (IBL 43:76)
14 Jun 1975, Sioux Co. (IBL 45:95)
14 May 1978, Black Hawk Co. (IBL 48:76)

COMMENT: The zone of hybridization of this species with Indigo Bunting is in the western parts of Kansas, Nebraska, and South Dakota. The number of Minnesota records is similar to those in Iowa, with 4 being hybrids (Green and Janssen 1975). Eastward vagrancy is distinctly rare with this species; but it has been recorded in Illinois (2), Wisconsin (3), and less than 10 times east of Illinois (Maine to Florida). There are a few sightings from Oct; most are from Jan to Jun, with some apparently wintering (Jan-Apr) and others overmigrants (Apr-Jun)

REFERENCES:

Bordner, Mrs. R. I. 1959. Bird records at Shenandoah. **Iowa Bird Life** 29:102.

Moore, J. P. 1949. Lazuli Bunting at Newton. **Iowa Bird Life** 19:73.

Peasley, Mrs. H. R. 1936. The Lazuli Bunting in Warren County. **Iowa Bird Life** 6:11.

Youngworth, W. 1929. The Lazuli Bunting in Iowa. **Wilson Bull.** 41:190.

Youngworth, W. G. 1959. The Lazuli Bunting along the western border of Iowa: A summary. **Iowa Bird Life** 29:3-5.

Indigo Bunting, **Passerina cyanea**

STATUS: Regular; abundant summer resident. Class I-S N.

HABITAT: Wooded edge.

SUMMER: The first arrivals are in early May, and by mid-May Indigo Buntings are abundant throughout the state. By late summer they become silent, so their departure is much less obvious than their arrival. Indigo Buntings average 4.9 birds per BBS route, with individual routes ranging from 1 to 14. The variation is ascribed to the variable amount of wooded habitat on the routes. Populations are unchanged from 1967 to 1979.

Early dates: 27 Apr 1981 (Ames, JCR)
28 Apr 1979 (Iowa City, THK)
2 May 1964 (Iowa City, FWK)
2 May 1981 (Coralville Res, JJD; THK)

Late dates: 23 Oct 1971 (Davenport, IBL 41:112)

22 Oct 1979 (Davenport, PCP)
19 Oct 1979 (Davenport, PCP)

COMMENT: There are no winter records for Indigo Bunting. This species usually does not form large flocks in Iowa, but on 18 Oct 1975 a flock of 100 was reported from Newton (IBL 46:24).

[Painted Bunting, **Passerina ciris**]

STATUS: Hypothetical. Class IV.
RECORD: One was reported from Fort Defiance S.P., Emmet Co., on 30 May 1956 (Jones 1956). Although this record seems highly probable, there is no supporting description to substantiate it.
COMMENT: The normal range of this species is the SC United States, extending north to SE Kansas and SW and SC Missouri. There are records from N Missouri, so the species should be expected to occur in Iowa occasionally. The Painted Bunting is a regular vagrant to the NE United States, appearing most commonly in spring (Apr-May) but also in fall (Aug-Sep) and winter (Dec-Feb). Midwest records are much less frequent, with 5 or fewer from Nebraska, Minnesota, Illinois (hypothetical), and Michigan, and all except 1 in spring.
REFERENCE:
Jones, M. L. 1956. Storm-driven birds at Fort Defiance State Park. **Iowa Bird Life** 26:69-70.

Dickcissel, **Spiza americana**

STATUS: Regular; abundant summer resident. Class I-S N.
HABITAT: Open country; grassy fields and border.
SUMMER: The Dickcissel is one of the most abundant birds in Iowa, averaging 62 birds per BBS route in the years 1967 to 1978. However, numbers are steadily and dramatically declining (Fig. 6.1). Dickcissels arrive with bright colors and full song in early May but become quiescent and drab by late summer. Therefore, arrival dates are much better substantiated than departure dates. Most probably leave in September.

Early dates: 10 Apr 1968 (Waterloo, IBL 38:60)
27 Apr 1951 (Iowa City, FWK)
28 Apr 1968 (Iowa City, FWK)

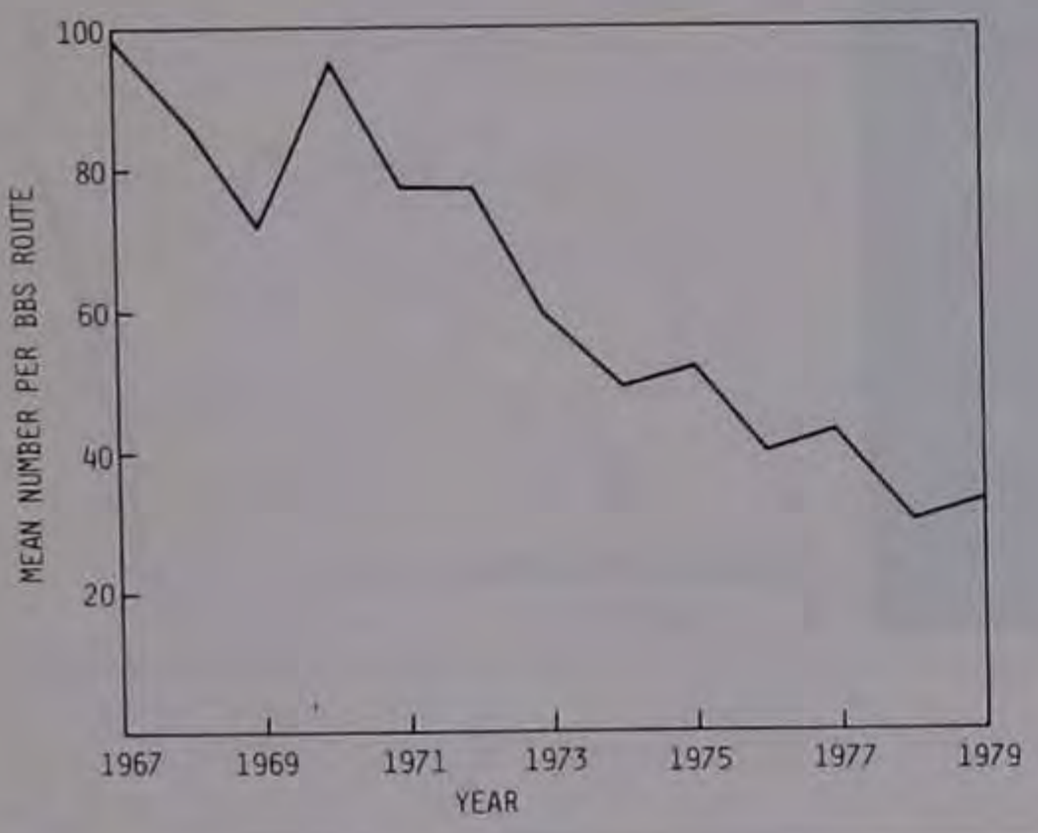


Fig. 6.1 Mean number of Dickcissels per BBS, 1967-1979.

Late dates: 2 Nov 1978 (Harrison Co., IBL 49:114)
18 Oct 1982 (Mills Co., IBL 52:125)
14 Oct 1980 (Mills Co., BLW)

WINTER: One was at a feeder in Cedar Rapids on 15 Dec 1979 (IBL 50:10, 14). A few Dickcissels are found at feeders in winter on the East Coast of the United States, but most winter in South America.

COMMENT: Although the 70 percent decline in Dickcissels from 1967 to 1979 appears to correlate with the increased acreage of corn and beans (with fewer fields in pasture, hay, and oats and with less edge), the decline is probably not due to altered farming practices. Fretwell (1977) hypothesizes that altered winter habitat in Venezuela favors the diet of the larger males, resulting in lower survival of females on the wintering grounds. An excess of males over females has been observed at many localities, and this may affect breeding success. Cowbird parasitism and predators also account for many nesting failures. On the other hand, the decrease in meadowlarks, species found in the same habitat as Dickcissels, cannot be explained by alteration of wintering habitat. Dickcissels appear to be an ideal species to monitor by BBSs as their habitat occupies the majority of the state and territorial males perch on wires and sing continuously. However, such surveys do not evaluate the number of females. According to Fretwell, there are about 2 males to every female even though Dickcissels are polygynous.

REFERENCE:

Fretwell, S. 1977. Is the Dickcissel a threatened species? **Am. Birds** 31:923-932.

Towhees, Sparrows, and Longspurs, Subfamily Emberizinae

This group contains about 270 species, with 50 reported from North America. Of the 30 species reported from Iowa, 21 are regular, 2 are casual, 4 are accidental, 2 are Class V, and 1 is Class VI. These birds include some of the most familiar of Iowa birds. Most Iowa species are small, largely brown, and have a conical-shaped bill for seed eating.

Fox Sparrow,
C. Kurtz.

Harris Sparrow, Johnson Co., Oct 1962, F. W. Kent.

Henslow's Sparrow, Hayden Prairie, 6 Jun 1981, T. H. Kent.

Green-tailed Towhee, **Pipilo chlorurus**

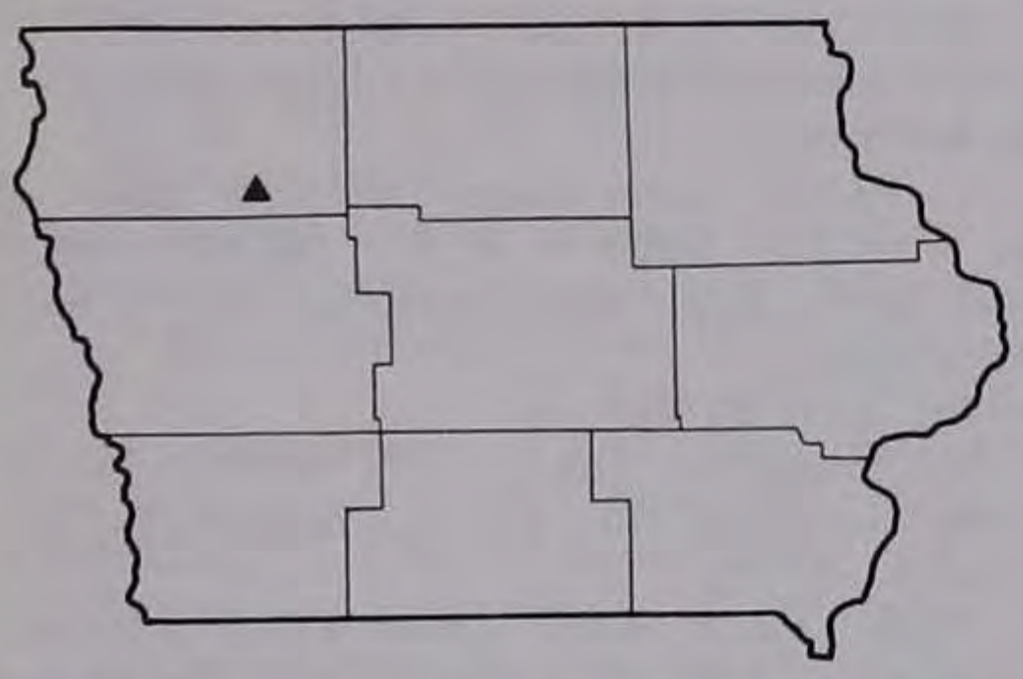
STATUS: Accidental. Class III.

RECORD: There is 1 sight record (Class III) from Storm Lake, Buena Vista Co., for 5 May 1975 (Crocker 1975) (Map 6.119).

COMMENT: This species occupies brushy habitat of the SW United States, migrating northward into the mountains for nesting. There are about 2 vagrants reported per year from South Dakota to Louisiana and from Nova Scotia to Alabama with the greatest number from the NE United States. One to 6 have been reported from the states adjacent to Iowa. Reports extend from Oct to Jun, with a peak in Dec-Feb. Many of the birds have wintered at feeders.

REFERENCE:

Crocker, V. R. 1975. Green-tailed Towhee at Storm Lake. **Iowa Bird Life** 45:61.



Map 6.119 Green-tailed Towhee record.

Rufous-sided Towhee, **Pipilo erythrophthalmus**

STATUS: Regular; common summer resident, rare winter. Class I-S N.
HABITAT: Wooded edge and loose shrubby rural areas; more often urban in winter.
SUMMER: Towhees arrive in early to mid-Apr and leave in Oct. Early and late dates cannot be defined because of overlap with wintering birds. Towhees have been encountered on only half the BBS routes and average only 0.5 birds per route. This finding correlates with the patchy distribution of habitat for this species. It is usually found in the overgrown edge of deep woods and is uncommon in urban areas. After the breeding season the birds are hard to find, probably because they become quiet after nesting.
WINTER: Winter birds are usually singles, but up to 3 or 4 have been reported from 1 locality. Most of the winter birds, but not all, are of the western or spotted race, **P. e. arcticus**. Towhees have been found on CBCs every year since 1966. They are usually seen at several localities, with a maximum of 8 in 1978.
COMMENT: The subspecies of towhees seen from Oct to Apr should be identified. This information may be helpful in defining migration dates for winter and summer populations. Elucidation of the breeding distribution of this species will require special surveys of appropriate habitat.

[Bachman's Sparrow, **Aimophila aestivalis**]

STATUS: Class VI.
RECORD: The only record is based on a set of eggs taken from a ground nest e of Des Moines on 2 Jun 1884 (Keyes and Williams 1889). On the basis of examining the eggs, J. A. Allen, an authority from Boston, thought the identification highly probable. He considered Indigo Bunting improbable because of the position of the nest. In retrospect, it seems more likely that the identification of the eggs was in error.
COMMENT: There are a few records of this southern species north to Kansas, C Illinois, Michigan, Ontario, and New York, with most in Apr-May.

American Tree Sparrow, **Spizella arborea**

STATUS: Regular; abundant migrant and winter resident. Class I-S.
HABITAT: Weedy fields, edge, and grasslands.
WINTER: CBCs usually total 10,000 to 15,000 per year, with a peak of 2,250 recorded on 22 Dec 1982 on the De Soto N.W.R. count. Most migrants arrive in very late Oct and early Nov and leave by Apr, with occasional late Apr and early May stragglers.
Early dates: 14 Sep 1975 (Cherokee, IBL 45:80)
14 Sep, year not given (location not given, Brown 1971)
Late dates: 5 May, year not given (location not given, Brown 1971)
3 May 1953 (McCausland, PCP)
COMMENT: American Tree Sparrows often flock with Dark-eyed Juncos. Flock size is down a bit in recent years. Two American Tree Sparrows banded at Davenport by Petersen were recaptured 3 years later at the same location, but they were not taken in the intervening years. Data on early and late dates are sparse. Early and late birds should be

carefully documented, as the dates occur at a time when the similar appearing Chipping Sparrow is more likely.

Chipping Sparrow, **Spizella passerina**

STATUS: Regular; common migrant and summer resident. Class I-S N.
HABITAT: Open, grassy woodland, ornamental shrubs and conifers in urban parks, and residential areas.
SPRING MIGRATION: Most arrive in early to mid-Apr.
Early dates: mid-Mar 1973 (Marble Rock, IBL 43:48)
6 Apr 1981 (Ames, JJD)
9 Apr 1959 (Davenport, PCP)
SUMMER: From 11 to 104 have been found per year on BBSs with no detectable yearly or geographic variation.
FALL MIGRATION: Most depart by late Oct, with stragglers seen until late Dec.
Late dates: 29 Dec 1968 (Cedar Rapids, IBL 39:7)
26 Dec 1960 (Davenport, IBL 31:8)
21 Dec 1975 (Davenport, IBL 46:9)
21 Dec 1980 (Davenport, IBL 51:11)
WINTER: Chipping Sparrows have been reported several times on CBCs, as noted in the late dates above, but there are no Jan or Feb records.
COMMENT: Chipping Sparrows seem most attracted to farmyards, city parks, and grassy residential areas. Early and late dates should be carefully documented, as the dates occur at a time when the similar appearing American Tree Sparrow is more likely.

Clay-colored Sparrow, **Spizella pallida**

STATUS: Regular; uncommon migrant. Class I-S N.
HABITAT: Grassy second-growth areas, often along streamsides.
SPRING MIGRATION: Most pass through the state in early to mid-May.
Early dates: 8 Apr 1944 (Cedar Rapids, Serbousek 1959)
24 Apr 1930 (Sioux City, Youngworth 1933)
Late dates: 19 May 1957 (Estherville, IBL 27:48)
18 May 1969 (L. Okoboji, IBL 39:32)
15 May 1960 (Waterloo, IBL 30:46)
SUMMER: The only recent summer records are from late Jul 1974 at Cardinal M. (IBL 44:75) and singing birds at Volga River A. on 11 and 26 Jul 1981 (IBL 51:103). They bred in NW Iowa early in the century (DuMont 1933).
FALL MIGRATION: There is a long migration period, from mid-Sep through late Oct, with no apparent peaks.
Early dates: 6 Sep 1961 (Davenport, IBL 31:88)
12 Sep 1967 (Ames, JRF)
Late dates: 3 Dec 1968 (Ottumwa, IBL 39:20)
13 Nov 1961 (Sioux City, Youngworth 1962)
COMMENT: Fall Clay-colored Sparrows are very similar to immature Chipping Sparrows. The brown rump of the Clay-colored Sparrow differentiates it from the gray-rumped Chipping Sparrow.
REFERENCE:
Youngworth, W. 1962. A late Clay-colored Sparrow. **Iowa Bird Life** 32:22.

Field Sparrow, Spizella pusilla

STATUS: Regular; common migrant and summer resident, rare winter. Class I-S N.
HABITAT: Weedy, brushy pastures, fallow areas, and woodland edge.
SPRING MIGRATION: Most arrive in early to mid-Apr.
Early dates: 3 Mar 1955 (Des Moines, Brown 1971)
8 Mar 1970 (Waterloo, IBL 40:50)
SUMMER: From 48 to 153 were recorded per year on BBSs and were spread evenly throughout the state. Nesting starts in early May and continues until late Jul, with birds commonly renesting (Crooks and Hendrickson 1953). Cowbirds commonly parasitize their nests.
FALL MIGRATION: Most leave by early Oct. Stragglers remain into winter.
WINTER: Field Sparrows have been seen on CBCs every year since 1955 with a high of 10 birds on 6 counts in 1979. Most reports are from S Iowa. Two later dates are 30 Jan 1955 at Webster City (IBL 25:42) and 12 Feb 1980 at Yellow River F. (IBL 50:28).
COMMENT: This species should be searched for in flocks of Dark-eyed Juncos and American Tree Sparrows in winter. It is probably quite regular in SE Iowa. However, winter sightings should be substantiated by noting field marks.
REFERENCE:
Crooks, M. P., and G. O. Hendrickson. 1953. Field Sparrow life history in central Iowa. Iowa Bird Life 23:10-13.

Vesper Sparrow, Pooecetes gramineus

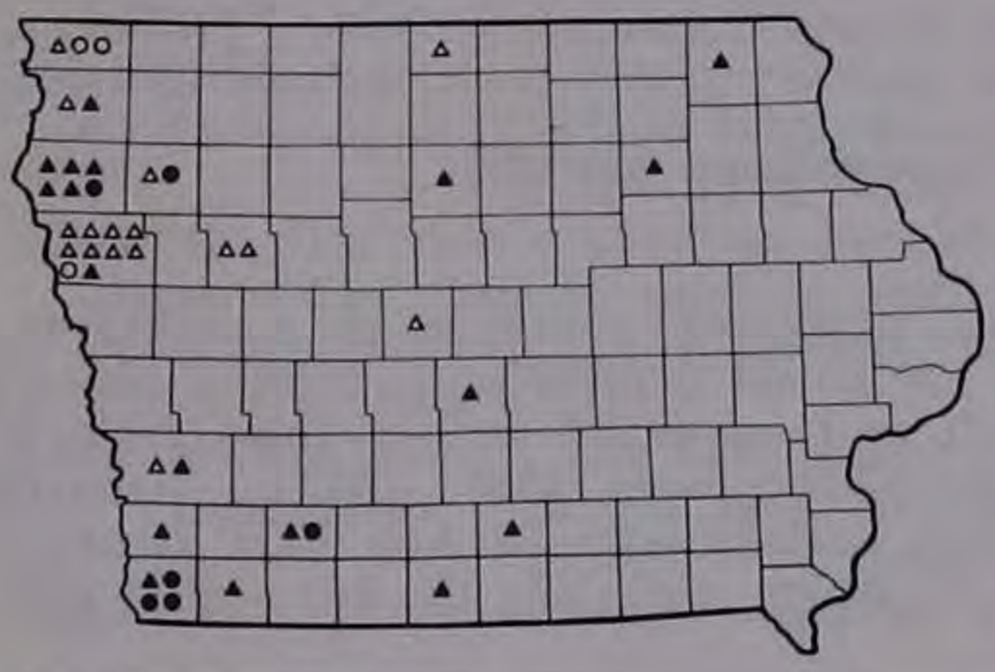
STATUS: Regular; common migrant and summer resident, rare winter. Class I-S N.
HABITAT: Grasslands, cultivated areas, and brushy and weedy areas.
SPRING MIGRATION: Most migrants arrive by mid-Apr. A peak of 75 occurred on 9 Apr 1982 in Johnson and Louisa counties. (IBL 52:62).
Early dates: 10 Mar 1966 (Iowa City, FWK)
28 Mar 1963 (Iowa City, FWK)
SUMMER: Vespers have been found on 32 of 34 BBS routes, with an average of 13.5 birds per route. Nesting occurs from May through Jul. Predation and agricultural operations were the main causes of nesting failure along fencerows between corn and soybean fields in C Iowa (Rodenhouse 1981).
FALL MIGRATION: Most are gone by mid-Oct.
Late dates: 7 Nov 1964 (Ames, IBL 35:27)
1 Nov 1971 (Davenport, PCP)
30 Oct 1982 (Doolittle Prairie, JPS)
WINTER: Vespers have been found on CBCs for 13 of 23 years from 1960 to 1982. Midwinter records include 7 Jan 1982 in NE Mills Co. (IBL 52:29), 22 Jan 1967 at Jefferson (IBL 37:22), and 14 Feb 1981 at Cedar Falls (IBL 51:34).
COMMENT: Vesper Sparrows nest extensively on fields planted for row crops, where their nests are often destroyed by agricultural operations. A shift to minimum tillage practices may benefit this species. Winter sparrow flocks should be checked over for possible Vespers, especially in SE Iowa, but winter identification should be documented.
REFERENCE:
Rodenhouse, N. L. 1981. Breeding Ecology of Vesper Sparrow in Corn and Soybean Fields. Master's thesis, Iowa State University, 66 p.

Lark Sparrow, **Chondestes grammacus**

STATUS: Regular; locally common migrant and summer resident. Class I-S N.
HABITAT: Sandy grasslands, field edges, and brushy areas.
SPRING MIGRATION: Most arrive in early May.
Early dates: 14 Apr 1956 (Amana, Serbousek 1959)
21 Apr 1982 (Cherokee Co., IBL 52:62)
24 Apr 1954 (NW Scott Co., PCP)
SUMMER: This species is very localized, but is common in prime habitat such as Big Sand Mound Pr., Louisa Co., along the Des Moines R. in Lee Co., and the loess hills of SW Iowa. Lark Sparrows were found on only 14 of 34 BBS routes from 1967 to 1980 with a maximum of 4 on 1 route. Nesting has been recorded from early May to late Jul.
FALL MIGRATION: Most depart by mid- to late Sep.
Late date: 22 Nov 1953 (Clinton, PCP)
WINTER: The only winter record was a bird closely observed at a Davenport feeder through 5 Feb 1977 (IBL 47:21).
COMMENT: Extensive sandy areas should be checked for Lark Sparrows. Their distribution is very spotty throughout the state. They are more common in W Iowa.

Lark Bunting, **Calamospiza melanocorys**

STATUS: Casual; spring and summer in W Iowa. Class I-P.
HABITAT: Open, dry, grassy areas.
RECORDS: Three-fourths of the records are from mid-May to early Jun. All the records except 2 are for the western half of the state, and two-thirds are from NW Iowa (Map 6.120). There are 15 records from 1875 to 1928, 2 from 1942, 20 from 1958 to 1972, and 1 each from 1975, 1980, 1981, and 1982. About 12 pairs were in Plymouth Co. in 1970, and they were thought to be nesting (Bryant 1971).
Early dates: 28 Mar 1970 (Adams Co., Bleise 1970)
15 Apr 1965 (Lucas Co., IBL 35:52)
4 May 1982 (Fremont Co., IBL 52:62)
Late dates: 29 Jul 1980 (Fremont Co., IBL 50:78)
1 Jul 1894 (Woodbury Co., Stephens 1942)
1 Jul 1970 (Plymouth Co., Bryant 1971)
COMMENT: The range of the Lark Bunting extends into E South Dakota and Nebraska, so it is surprising how rarely it is seen in Iowa. The early records are almost all from NW Iowa, where this species may have



Map 6.120 Lark Bunting records.

once nested regularly. Lark Buntings practically disappeared from Iowa between 1928 and 1958, even though a NW Iowa observer was looking for them (Youngworth 1958). The records since 1960 are much more scattered. The lack of data from the mid- and late 1970s occurred despite increased field reporting from all areas of the state. Recently a photograph was obtained from Bremer Co. (Francis Moore, on file with Records Committee).

REFERENCES:

Bleise, J. C. W. 1970. Lark Bunting observations. **Iowa Bird Life** 40:52-53.

Bryant, E. 1971. Lark Buntings in Plymouth County, Iowa. **Iowa Bird Life** 41:55.

Stephens, T. C. 1942. Another record of the Lark Bunting in Woodbury County. **Iowa Bird Life** 12:30.

Youngworth, W. 1958. The Lark Bunting in northwest Iowa. **Iowa Bird Life** 28:44.

Savannah Sparrow, **Passerculus sandwichensis**

STATUS: Regular; common migrant, uncommon summer resident, rare in winter. Class I-S N.

HABITAT: Grassland, preferring short grass areas; sometimes in cultivated areas and marsh edges.

SPRING MIGRATION: They usually arrive in early Apr.

Early dates: 18 Mar 1979 (Cone M., THK)
27 Mar 1955 (Davenport, PCP)
27 Mar 1962 (Hamburg, IBL 32:44)

SUMMER: Most summer observations are from N and C Iowa. Savannahs have been found on 20 of 34 BBS routes, with a maximum of 61 on 1 route in 1 year and an average of 3.1 on routes reporting the species.

FALL MIGRATION: Most depart in late Sep to early Oct.

Late dates: 11 Nov 1979 (Lock and Dam 9, IBL 49:115)
3 Nov 1979 (Coralville Res., THK)
30 Oct 1982 (Doolittle Prairie, IBL 52:125)

WINTER: Savannahs have been recorded on CBCs in 11 of 23 years from 1960 to 1982. Several were seen on 22 Jan 1977 at Malvern. (IBL 47:21).

COMMENT: Savannahs are usually seen along fences bordering county roads, but walking short grassy areas would likely produce more records. They sing into Jul, providing the best means of locating them during the breeding season. They are probably a common breeder over the northern three-fourths of Iowa, but existing BBS data are equivocal. BBS data on some routes are likely low because not all observers are attuned to the song of this species.

[Baird's Sparrow, **Ammodramus bairdii**]

STATUS: Class V.

RECORDS: There are no records with sufficient evidence to evaluate the occurrence of this species in Iowa. A noted ornithologist shot a Baird's Sparrow at Grinnell on 25 Apr 1885 and reported seeing them from 24 Mar to 20 Apr and from 4 to 15 Oct 1886 (Jones 1886, 1887). Records from Polk Co. were from 29 Apr 1925 and 23 and 29 Apr 1927 (DuMont 1931). Recent reports are from Plymouth Co. on 15 Sep 1963 (IBL

33:90; Brown 1971), Woodbury Co. in the fall of 1964 (IBL 34:101), and Floyd Co. on 16 May 1978 (IBL 48:76). Other references to this species without citing records were by Allen (1870), from Pottawattamie Co. (Anderson 1907), and from the Sioux City region (DuMont 1933).

COMMENT: This Great Plains species has a peak migration in Nebraska from late Apr to early May and from late Sep to early Oct. It is casual in summer in WC Minnesota (Clay Co.), but has not been found recently as a transient (Green and Janssen 1975). Three Missouri records are 7 May 1959 n of Kansas City (**Audubon Field Notes** 13:376), 9 Sep 1976 at Maryville (collected, **Am. Birds** 31:186), and 24 Apr 1977 n of St. Louis (**Am. Birds** 31:1009). This species is listed as hypothetical for Illinois (Bohlen 1978) and Wisconsin (Gromme 1963). There is a Wisconsin record for 25 May 1980 (**Am. Birds** 34:780).

REFERENCES:

Jones, L. 1886. Baird's Sparrow in Iowa. **Ornithologist and Oologist** 11:117.

Jones, L. 1887. Baird's Sparrow in fall. **Ornithologist and Oologist** 12:106.

Grasshopper Sparrow, **Ammodramus savannarum**

STATUS: Regular; common migrant and summer resident. Class I-S N.
HABITAT: Grasslands, borders, and alfalfa fields.
SPRING MIGRATION: Most arrive in early May.
Early dates: 10 Apr 1981 (Hamburg, IBL 51:70)
11 Apr 1964 (Goldfield, IBL 34:49)
19 Apr 1981 (Hendrickson M., IBL 51:70)

SUMMER: Grasshoppers have been found on all 34 BBS routes, with a maximum of 73 seen on 1 survey. The overall average per route is 10.5, with a low yearly average of 7.8 and a high of 12.7. This reflects a fairly constant breeding population.

FALL MIGRATION: Most leave in late Sep and early Oct. They are hard to locate after early Aug, when they cease singing.
Late dates: 5 Nov 1980 (Willow Sl., IBL 51:29)
29 Oct 1977 (Iowa City, IBL 47:147)
26 Oct 1961 (Davenport, IBL 31:88)

COMMENT: Grasshoppers are easy to locate by voice. This species will probably remain common as long as alfalfa is grown widely.

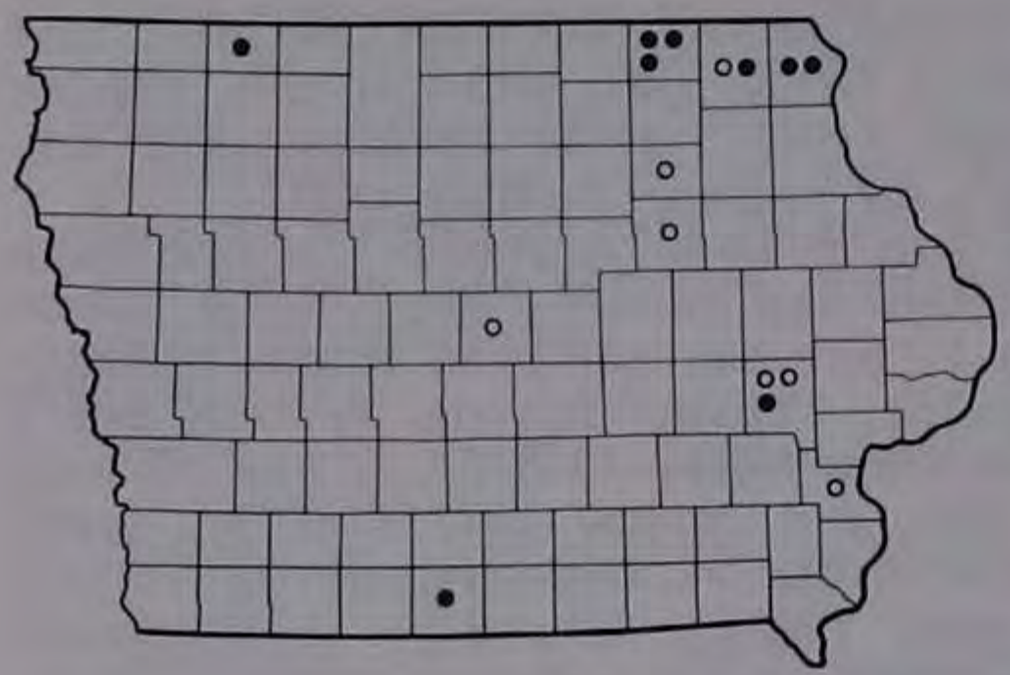
Henslow's Sparrow, **Ammodramus henslowii**

STATUS: Regular; rare migrant and summer resident. Class I-S.
HABITAT: Tall grasslands, prairie remnants, and weedy areas.
SPRING MIGRATION: Most records are for late Apr and early May.
Early dates: 29 Mar 1963 (Brenton's Sl., IBL 33:41)
3 Apr 1979 (Volga River A., IBL 49:63)

SUMMER: Henslow's Sparrow probably breeds regularly at Hayden Prairie, Howard Co., but no nest or small young have been located (Ennis 1959). It is occasionally found during the summer at other locations throughout the state (Map 6.121).

FALL MIGRATION: The few records are for mid- to late Oct.
Late dates: 29 Oct 1966 (Davenport, IBL 36:105)
24 Oct 1974 (Davenport, IBL 44:103)

COMMENT: This species requires a specialized habitat, typified by tall-



Map 6.121 Henslow's Sparrow summer records.

grass prairie. This habitat does not occur in large tracts but is present in a few prairie preserves. No definitive description of nesting exists; however, nesting birds were purportedly banded in Decatur Co. in 1972 (IBL 42:71). The call is distinctive and is usually the best means of locating this species. Although Henslow's Sparrow was probably more common before the prairies were plowed, it was already uncommon by 1900 and early reports are spotty. Allen (1868) noted it was less common than the Grasshopper Sparrow in W Iowa, and Trippe (1873) said it was common in S Iowa.

REFERENCE:

Ennis, J. H. 1959. Some notes on Hayden Prairie, with special reference to Henslow's Sparrow. **Iowa Bird Life** 29:82-85.

Le Conte's Sparrow, **Ammodramus leconteii**

STATUS: Regular; uncommon migrant. Class I-S.

HABITAT: Tall grassland and marsh edge in spring; tall, moist grassy and weedy areas in fall.

SPRING MIGRATION: Le Conte's Sparrows are present from early Apr through mid-May. A peak of 15 were observed at Sweet M. in mid-Apr 1981 (IBL 51:70).

Early dates: 19 Mar 1977 (Cone M., IBL 47:62)
29 Mar 1975 (Hendrickson M., IBL 45:59)
31 Mar 1964 (Oskaloosa, IBL 34:49)

Late dates: 15 May 1980 (Hendrickson M., IBL 50:51)
15 May 1980 (Willow Sl., IBL 50:51)
15 May 1981 (Coralville Res., IBL 51:70)

FALL MIGRATION: Most are seen from late Sep through mid-Oct. In late Sep and early Oct of 1976, 100 were present at Coralville Res. (IBL 46:116).

Early dates: 5 Sep 1970 (Waterloo, IBL 40:74)
14 Sep 1974 (Iowa City, IBL 44:75)
14 Sep 1975 (Cherokee, IBL 45:80)

Late dates: 15 Nov 1970 (Shenandoah, IBL 41:28)
12 Nov 1976 (Davenport, IBL 46:116)
7 Nov 1976 (Iowa City, IBL 46:116)
7 Nov 1982 (Doolittle Prairie, IBL 52:125)

WINTER: The only winter records are 13 Dec 1952 (Brown 1971), 20 Dec

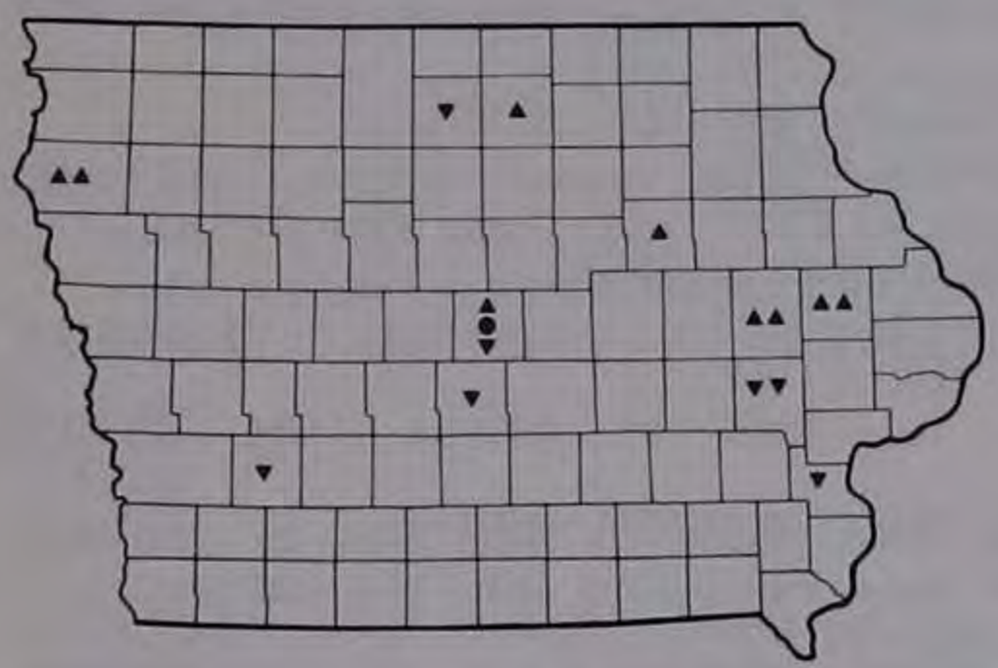
1954 at Webster City (IBL 25:11), and 26 Dec 1969 at Jefferson (IBL 40:12).

COMMENT: This species is probably commoner than observations indicate. Careful checking of the ideal habitat usually produces the species, especially in fall and occasionally in fairly large numbers. The bird is most easily seen by being patient and letting it come out of cover.

Sharp-tailed Sparrow, **Ammodramus caudacutus**

STATUS: Casual; migrant. Class I-S.
HABITAT: Marsh or wet, tall grassy areas.
SPRING MIGRATION: Migration occurs primarily in May, especially mid- to late May.
Early dates: 24 Apr 1976 (Palo M., IBL 46:58)
26 Apr 1952 (Swan L., Johnson Co., Serbousek 1959)
2 May 1963 (Waterloo, IBL 33:41)
Late dates: 4 Jun 1964 (Ames, IBL 34:67)
29 May 1963 (Akron, IBL 33:41)
27 May 1904 (Coralville, Anderson 1907)
27 May 1929 (Polk Co., DuMont 1931)
FALL MIGRATION: Most observations are from mid-Sep to mid-Oct.
Early dates: 30 Aug 1931 (Polk Co., DuMont 1932)
13 Sep 1971 (East Twin L., IBL 41:112)
19 Sep 1973 (Polk Co., DM)
Late dates: 25 Oct 1972 (Hendrickson M., Crawford 1975)
18 Oct 1931 (Polk Co., DuMont 1931)
16 Oct 1950 (Cedar Co., FWK)

COMMENT: The 17 records from 1960 to 1982 (Map 6.122) undoubtedly underrepresent this species in Iowa. It is overlooked if one does not spend time carefully checking marshes at the right time of year. The song does not carry well, so the observer must look hard to find this elusive bird. This species is probably regular and should be searched for during its peak migration periods, mid- to late May and early Oct. It should occur across the entire state.



Map 6.122 Sharp-tailed Sparrow records, 1960-1982.

Fox Sparrow, **Passerella iliaca**

STATUS: Regular; common migrant, rare winter resident in S Iowa. Class I-S.

HABITAT: Brushy areas, weed patches, and woodland edge.
SPRING MIGRATION: Migrants begin to arrive in mid-Mar, peak in late Mar through mid-Apr, and leave by late Apr.
Late dates: 25 Apr 1979 (Davenport, PCP)
23 Apr, year not given (Des Moines, Brown 1971)
FALL MIGRATION: They begin to arrive in late Sep, peak in mid- to late Oct, and most are gone by mid-Nov.
Early dates: 21 Sep 1974 (Davenport, PCP)
22 Sep 1975 (Davenport, PCP)
WINTER: Fox Sparrows have been found on CBCs from 1960 to 1982 except for 1972, but they are usually reported for only a few SE Iowa locations. On 24 Dec 1981, 8 were found at Davenport (IBL 52:29) and 1 was at Ames on 7 Feb 1982 (IBL 52:29).
COMMENT: This early spring and late fall migrant seldom overwinters.

Song Sparrow, **Melospiza melodia**

STATUS: Regular; common permanent resident. Class I-S N.
HABITAT: Grassy and brushy areas, streambeds.
SPRING MIGRATION: Most migrants pass through in late Mar and early Apr.
SUMMER: Song Sparrows have been found on all BBS routes (but not each year on each route), with totals varying from 151 to 845 per year.
FALL MIGRATION: Migrants are present primarily in Oct and early Nov.
WINTER: They were recorded on CBCs yearly, usually at almost every location, with 300 to 500 observed per year. The CBC peak for a single count was 171 on 26 Dec 1960 at Davenport (IBL 31:7).
COMMENT: One Song Sparrow banded in Iowa by Petersen was recaptured over 1 year later in Ohio.

Lincoln's Sparrow, **Melospiza lincolnii**

STATUS: Regular; common migrant, rare in winter. Class I-S.
HABITAT: Thickets, woodland edge, and weedy and brushy areas.
SPRING MIGRATION: Migrants arrive in mid-Apr, peak in early to mid-May, and depart by 1 Jun.
Early dates: 7 Mar 1954 (Iowa City, Brown 1971; FWK)
20 Apr 1977 (Davenport, PCP)
20 Apr 1979 (Davenport, PCP)
Late dates: 2 Jun 1966 (Davenport, Brown 1971)
30 May 1976 (Davenport, PCP)
27 May 1982 (Ames, IBL 52:62)
SUMMER: One singing male on 8 Jul 1978 at Amana (IBL 48:100) constitutes the only record.
FALL MIGRATION: Lincolns arrive in Sep, peak in late Sep to mid-Oct, and most depart by early Nov, with some remaining into the winter.
Early dates: 4 Sep 1975 (Davenport, PCP)
7 Sep 1977 (Davenport, PCP)
Late dates: 24 Feb 1981 (Mills Co., IBL 51:34)
13 Feb 1955 (Webster City, IBL 25:42)
30 Jan 1955 (Webster City, IBL 25:42)
WINTER: Lincoln's Sparrows have recently been seen in 8 of 23 years on CBCs, usually at only 1 or 2 locations per year and mostly in S Iowa.
COMMENT: More winter records can be expected, but such records should be carefully documented.

Swamp Sparrow, Melospiza georgiana

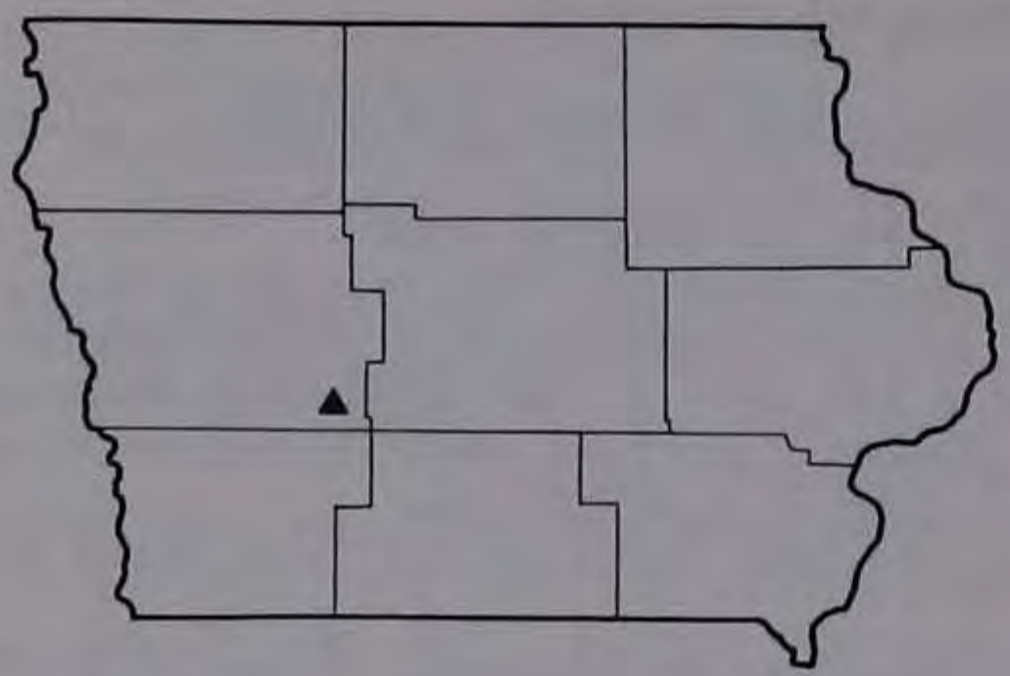
STATUS: Regular; common migrant, uncommon summer and winter. Class I-S N.
HABITAT: Marsh, tall grassland, and weedy or brushy areas.
SPRING MIGRATION: Migrants pass through from late Mar into early May.
SUMMER: Although this is a common summer resident in suitable habitat, especially in NW and NC Iowa, there are only a few acceptable nesting records for Iowa (Johnson 1982). Swamp Sparrows were found on 6 of 34 BBS routes, with a maximum of 5 seen in a single year.
FALL MIGRATION: Migrants return in late Sep, peak in Oct, and leave by mid-Nov.
WINTER: They occur regularly in marshy areas in SE Iowa. From 25 to 40 are usually seen on CBCs. They have been seen yearly on CBCs since 1953.
COMMENT: Careful searching should produce Swamp Sparrows in prime habitat during the winter. Special surveys are needed to determine summer distribution and numbers.
REFERENCE:
Johnson, R. R. 1982. Swamp Sparrow nesting in Iowa. **Iowa Bird Life** 52:128.

White-throated Sparrow, Zonotrichia albicollis

STATUS: Regular; abundant migrant, rare in winter. Class I-S.
HABITAT: Woodland, edge, brushy areas, and brush piles.
SPRING MIGRATION: The first migrants arrive in late Mar, with a peak in late Apr to early May, and some remain to late May. A banding peak was 38 on 28 Apr 1977 (PCP).
Late dates: 9 Jun 1979 (Lee Co., IBL 49:103)
4 June, year not given (Des Moines, Brown 1971)
3 Jun 1966 (Davenport, PCP)
3 Jun 1979 (Lee Co., IBL 49:103)
FALL MIGRATION: Some arrive in early Sep, with a peak in late Sep through Oct. A fall banding peak of 29 occurred on 9 Oct 1974 (PCP).
Early dates: 5 Sep 1977 (Davenport, PCP)
6 Sep 1953 (Davenport, PCP)
10 Sep 1977 (Iowa City, IBL 47:147)
WINTER: White-throats have been seen on CBCs every year since 1951, with 50-100 per year. The species has overwintered in 1 Davenport yard annually since 1976 (PCP).
COMMENT: Hundreds can be seen and heard during peaks of migration.

Golden-crowned Sparrow, Zonotrichia atricapilla

STATUS: Accidental. Class III.
RECORDS: There is a sight record from Jamaica, Guthrie Co., on 3-7 May 1977 (Burns 1977) (Map 6.123). Two old reports from Winnebago Co., one in Sep 1872 (Krider 1879) and the other undated, are likely in error (Anderson 1907).
COMMENT: This West Coast species is a rare vagrant eastward, with zero to 3 (average of 1) recorded per year from Saskatchewan, Colorado, and Texas east to Nova Scotia, New Jersey, and Alabama. Midwest records are from Nebraska (4), Illinois (2), Wisconsin (1), and Michigan (1).



Map 6.123 Golden-crowned Sparrow record.

Reports have been from Aug to May, with peaks from Oct-Nov and Apr-May, but some winter.

REFERENCE:

Burns, G. 1977. Golden-crowned Sparrow (first Iowa sighting). **Iowa Bird Life** 47:63.

White-crowned Sparrow, **Zonotrichia leucophrys**

STATUS: Regular; uncommon migrant, rare in winter. Class I-S.

HABITAT: Thickets, woodland, edge, vine tangles, hedgerows, and brushy areas.

SPRING MIGRATION: Most of the migration occurs between late Apr and mid-May.

Late dates: 28 May 1976 (Davenport, PCP)
24 May 1968 (Marble Rock, IBL 38:60)

FALL MIGRATION: Most move through from late Sep through early Nov.

Early dates: 12 Sep 1967 (Ames, JRF)
23 Sep 1966 (Davenport, PCP)

WINTER: White-crowns have been seen every year on CBCs since 1955, with 50-100 per year recently.

COMMENT: Wintering White-crowned and White-throated sparrows can often be found in SE Iowa by searching sheltered, weedy areas.

Harris' Sparrow, **Zonotrichia querula**

STATUS: Regular; common migrant and winter resident west, uncommon migrant and rare winter resident east. Class I-S.

HABITAT: Thickets, woodland edge, vine tangles, hedgerows, and brush piles.

SPRING MIGRATION: Most leave Iowa by mid-May.

Late dates: 26 May, year not given (Sioux City, Brown 1971)
18 May 1969 (L. Okoboji, IBL 39:32)

SUMMER: The only record is for 9-15 Jun 1977 at Trumbull L., Clay Co. (IBL 47:104).

FALL MIGRATION: Most arrive in early Oct.

Early dates: 17 Sep 1967 (Ames, JRF)
21 Sep 1961 (Sioux City, WGY)

23 Sep, year not given (Des Moines, Brown 1971)
WINTER: In recent years from 300 to 600 have been seen on Iowa CBCs, chiefly in the west.
COMMENT: Harris' Sparrows are seen in much larger numbers in fall than in spring. In E Iowa, Harris' Sparrows are frequently found in the company of White-crowned Sparrows.

Dark-eyed Junco, **Junco hyemalis**

STATUS: Regular; abundant migrant and winter resident. Class I-S.
HABITAT: Widespread, frequenting woodland, edge, fields, hedgerows, roadsides, residental areas, and conifers.
WINTER: From 10,000 to 15,000 juncos are recorded per year on CBCs. A peak of 3,180 was seen on a Muscatine count in 1963. A few have arrived by late Sep, and numbers have arrived by early Oct. Most depart by mid- to late Apr, with stragglers into late May.
Early dates: 11 Sep 1976 (Decorah, DK)
20 Sep 1960 (Sioux City, Brown 1971)
22 Sep 1963 (Davenport, PCP)
22 Sep 1966 (Davenport, PCP)
22 Sep 1972 (Davenport, PCP)
Late dates: 7 Jun 1980 (Cherokee, IBL 50:78)
25 May 1974 (Lock and Dam 9, DK)
22 May 1970 (Davenport, PCP)
COMMENT: Prior to 1973 the Oregon Junco was recognized as a species, but now it is considered a subspecies of the Dark-eyed Junco. Intergrades and apparent full Oregon Juncos were reported in Iowa each winter. Juncos are one of the most typical and abundant of winter birds. They prefer to feed on the ground beneath feeders.

[McCown's Longspur, **Calcarius mccownii**]

STATUS: Class V.
RECORDS: A flock of 20 were noted at Grinnell, Poweshiek Co., 3-8 Mar 1887 (Jones 1892), but no description is provided. The only other reference to this species is as a common migrant in Pottawattamie Co. (Anderson 1907).
COMMENT: This uncommon species is found on the W Great Plains, with little evidence of vagrancy. There are 2 recent Missouri records, on 16 Mar 1975 at Maryville (**Am. Birds** 29:699) and 11-16 Jan 1969 at St. Louis (**Am. Birds** 33:287); 1 from Michigan on 27-29 May 1981 (**Am. Birds** 35:827); and 1 from Massachusetts on 9 Jan to 3 Feb 1977 (**Am. Birds** 31:309).
REFERENCE:
Jones, L. 1892. Report of the committee on migration and distribution. **Wilson Quarterly** 4:28.

Lapland Longspur, **Calcarius lapponicus**

STATUS: Regular; uncommon to common migrant and winter resident. Class I-S.
HABITAT: Short grassland, roadsides, open fields, and stubble.
FALL MIGRATION: Most arrive in late Oct or early Nov. A peak of 600

were seen on 2 Nov 1963 at Davenport (IBL 33:90).
Early dates: 30 Sep 1967 (Greene Co., IBL 37:100)
2 Oct 1977 (Iowa City, IBL 47:147)
3 Oct 1982 (Doolittle Prairie, IBL 52:125)

WINTER: Winter numbers fluctuate widely. Longspurs have been seen on CBCs every year since 1953, but numbers vary greatly. Over 1,000 were seen on the De Soto N.W.R. count on 22 Dec 1977 (IBL 48:37).

SPRING MIGRATION: Numbers move through from late Feb into early Apr. A peak of 2,500 was seen on 1 day near Jefferson during the first week of Apr 1965 (IBL 35:52).
Late dates: 12 May 1965 (Akron, IBL 35:52)
28 Apr 1965 (Lamoni, IBL 35:52)
25 Apr 1982 (Story Co., IBL 52:62)

COMMENT: Lapland Longspurs are much easier to find when heavy snow cover forces them to roads. Careful checking of more grassland habitat would reveal data on their distribution pattern in Iowa. Massive numbers were killed in snowstorms in NW Iowa in Mar 1904 (Roberts 1907) and Jan 1938 (Stephens 1939).

REFERENCES:

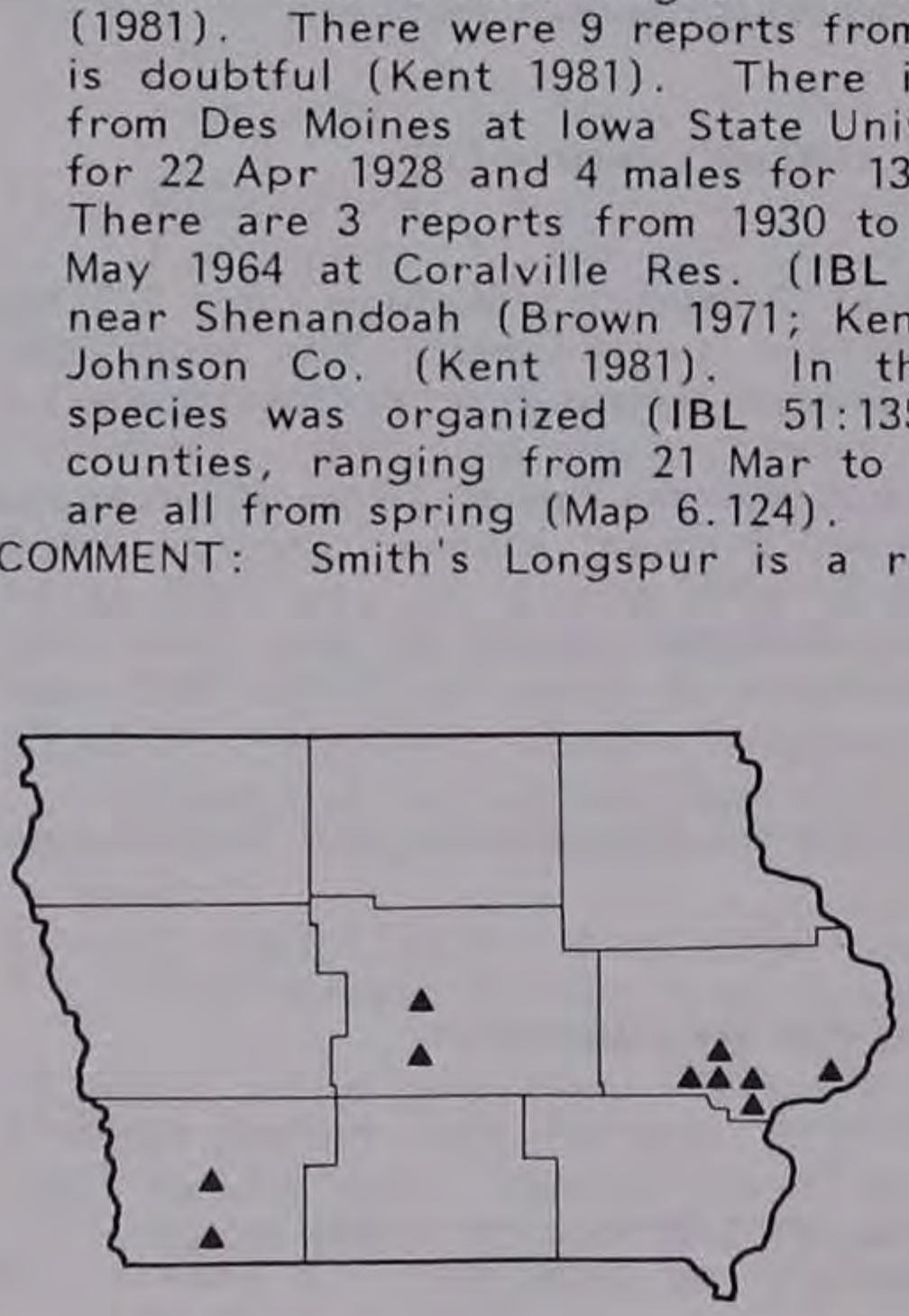
Roberts, T. S. 1907. A Lapland Longspur tragedy. **Auk** 24:369-377.
Stephens, T. C. 1939. The 1938 longspur tragedy in northwest Iowa. **Proc. Iowa Acad. Sci.** 46:383-395.

Smith's Longspur, **Calcarius pictus**

STATUS: Accidental. Class I-S.

RECORDS: The reports prior to 1900 that suggest that this species was a common but erratic migrant through Iowa are summarized by Kent (1981). There were 9 reports from 1900 to 1930, but at least 1 of these is doubtful (Kent 1981). There is a female specimen for 18 Apr 1885 from Des Moines at Iowa State University and a female or immature male for 22 Apr 1928 and 4 males for 13 Apr 1929 from Amana at Coe College. There are 3 reports from 1930 to 1981: a female or winter male on 3 May 1964 at Coralville Res. (IBL 34:49; Kent 1981); 6 on 6 Apr 1968 near Shenandoah (Brown 1971; Kent 1981); and 100 on 11 Apr 1981 in N Johnson Co. (Kent 1981). In the spring of 1982 a search for this species was organized (IBL 51:135) that produced 9 sightings from 6 counties, ranging from 21 Mar to 18 Apr (IBL 52:63). Recent records are all from spring (Map 6.124).

COMMENT: Smith's Longspur is a rare species that breeds in the arctic



Map 6.124 Smith's Longspur records, 1960-1982.

from Hudson Bay to Alaska and winters in the SC United States. Although Iowa lies north of, and perhaps formerly in, the wintering area for Smith's Longspur, this species has not been found regularly in Iowa in recent years. However, the 1982 sightings suggest that it is an overlooked regular species. The lack of sightings may, in part, be due to the rarity of the species and the fact that it travels in flocks and is not evenly distributed. In addition, the species prefers grassy fields, where it is not likely to be encountered by birdwatchers. Based on records from surrounding states, the migration intervals should be early to mid-Apr and Oct-Nov. Spring flocks may contain breeding plumage males, which are easy to identify. Females and winter plumage birds are more difficult to separate from other longspurs.

REFERENCE:
Kent, T. H. 1981. Smith's Longspur in Iowa. **Iowa Bird Life** 51:53-55.

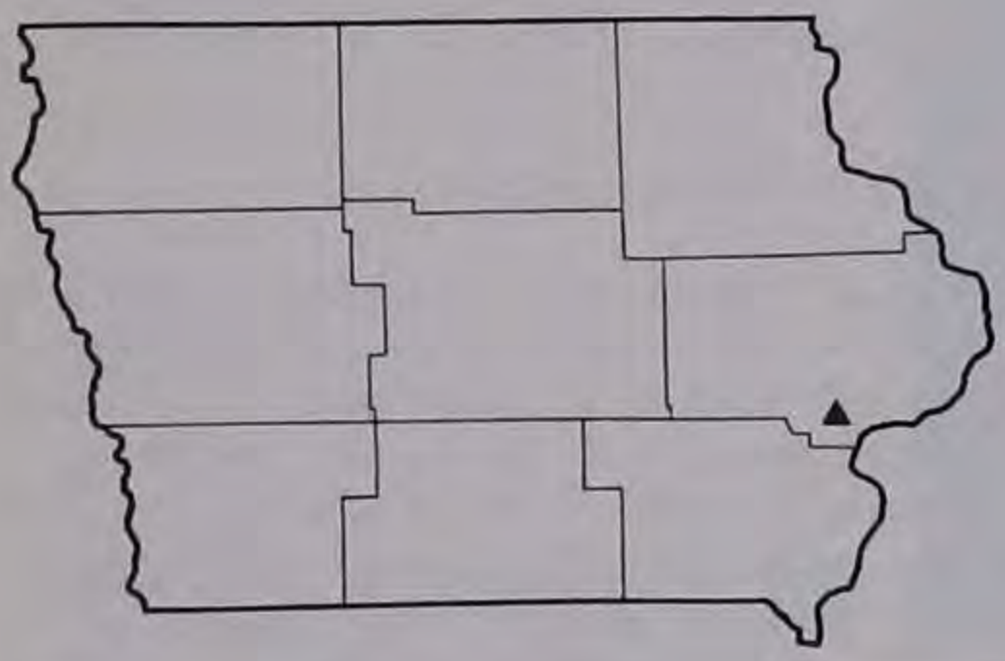
Chestnut-collared Longspur, **Calcarius ornatus**

STATUS: Accidental. Class III.

RECORDS: The only acceptable record is of a male in breeding plumage in NW Muscatine Co. on 4 Apr 1982 (IBL 52:63) (Map 6.125). There are also 2 reports that merit probable status. A flock of several hundred in full plumage and song were at Grinnell, Poweshiek Co., for several weeks in the spring of 1887 (Jones 1892). A specimen in the Miles Collection taken at Charles City, Floyd Co., no date given, was identified by Bailey (Fenton 1923-1924). Other specific sightings were in Jefferson Co. in 1896 (Anderson 1907), 1 shot in Winnebago Co. in 1903 (Anderson 1907), 2 in Sac Co. in the fall of 1912 (Spurrell 1919), a large flock in Emmet Co. in the winter of 1932-1933 (DuMont 1933), and 11 at Keosauqua on 23 Dec 1939 (IBL 10:9). Other indefinite references to this species are from Howard, Linn, Pottawattamie, and Van Buren counties. (Anderson 1907).

COMMENT: It appears likely that Chestnut-collared Longspur, and perhaps McCown's Longspur, occurred sporadically in Iowa until the early 1900s. Chestnut-collared Longspur is predominantly a bird of the W Great Plains but still occurs in NW Minnesota. There are a few recent records for Illinois, Missouri, Wisconsin, Michigan, Ontario, and the East Coast from Florida to Newfoundland. Careful search of Lapland Longspur flocks might yield more Iowa records.

REFERENCE:
Jones, L. 1892. Report of the committee on migration and distribution. **Wilson Quarterly** 4:28.



Map 6.125 Chestnut-collared Longspur record.

Snow Bunting, Plectrophenax nivalis

STATUS: Regular; uncommon to common migrant and winter resident. Class I-S.
HABITAT: Short grasslands, open fields, shoreland, and roads.
FALL MIGRATION: Snow Buntings arrive in late Oct and Nov into Dec.
Early dates: 20 Oct 1962 (Des Moines, IBL 32:85)
27 Oct 1980 (Story Co., KDW)
29 Oct 1982 (Saylorville Res., IBL 52:125)
WINTER: They have been recorded on CBCs yearly since 1959 except for 1962 and 1971, but in greatly varying numbers. In 1978 almost 900 were seen on CBCs.
SPRING MIGRATION: Most move through in Feb and Mar.
Late dates: 9 Apr 1982 (Howard Co., IBL 52:63)
5 Apr 1975 (Des Moines, IBL 45:59)
21 Mar 1964 (Jefferson, IBL 34:49)
COMMENT: Snow Buntings are easier to find when heavy snow cover forces them to roads.

Meadowlarks, Blackbirds, and Orioles, Subfamily Icterinae

The blackbird and oriole group consists of about 90 species confined to the New World. Of 23 species reported from North America, 12 have been reported in Iowa. Eleven of these are regular in the state and the other is Class V. They include several of the most abundant species in the state (Red-winged Blackbird, Common Grackle, both meadowlarks, and Brown-headed Cowbird) and are one of the most conspicuous components of Iowa's avifauna. Icterids inhabit various habitats (farmland, cities, marshes, grasslands), where they feed on insects, seeds, and grains. As a group they are quite adaptable; several species probably have increased in numbers with the settlement of Iowa. Brewer's Blackbirds nest in S Minnesota and might nest in Iowa in the near future. Also, the Great-tailed Grackle has expanded its nesting range to Nebraska in recent years so it might soon nest in Iowa. Dams, power plants, and other human activities have affected the number of blackbirds wintering in Iowa. Since a nuclear power plant was opened in Illinois near Davenport in 1975, much larger numbers of several species have wintered in that area.

Eastern Meadowlark, Iowa City, 24 Apr 1981, T. H. Kent.

Yellow-headed Blackbird,
C. Kurtz.

Bobolink, **Dolichonyx oryzivorus**

STATUS: Regular; common migrant and summer resident. Class I-S N.
HABITAT: Grasslands, prairies, and hayfields.
SPRING MIGRATION: Bobolinks generally arrive in early May.
Early dates: 26 Apr 1969 (Iowa City, FWK)
28 Apr 1962 (Davenport, IBL 32:43)
3 May 1981 (Webster City, IBL 51:70)
SUMMER: Bobolinks nest throughout Iowa wherever suitable habitat is found.
FALL MIGRAION: Most Bobolinks leave Iowa in Jul or Aug, with few remaining into Sept.
Late dates: 25 Nov 1975 (Zearing, Dinsmore 1976)
15 Oct 1954 (Sioux City, Brown 1971)
10 Oct, year not given (Sac Co., Spurrell 1919)
COMMENT: An average of 10.3 Bobolinks was seen per BBS route from 1967 to 1980. Numbers declined quite drastically over that period, probably a reflection of changes in farming practices, particularly the decline of hayfields.
REFERENCE:
Dinsmore, J. J. 1976. Late Bobolink record. **Iowa Bird Life** 46:86.

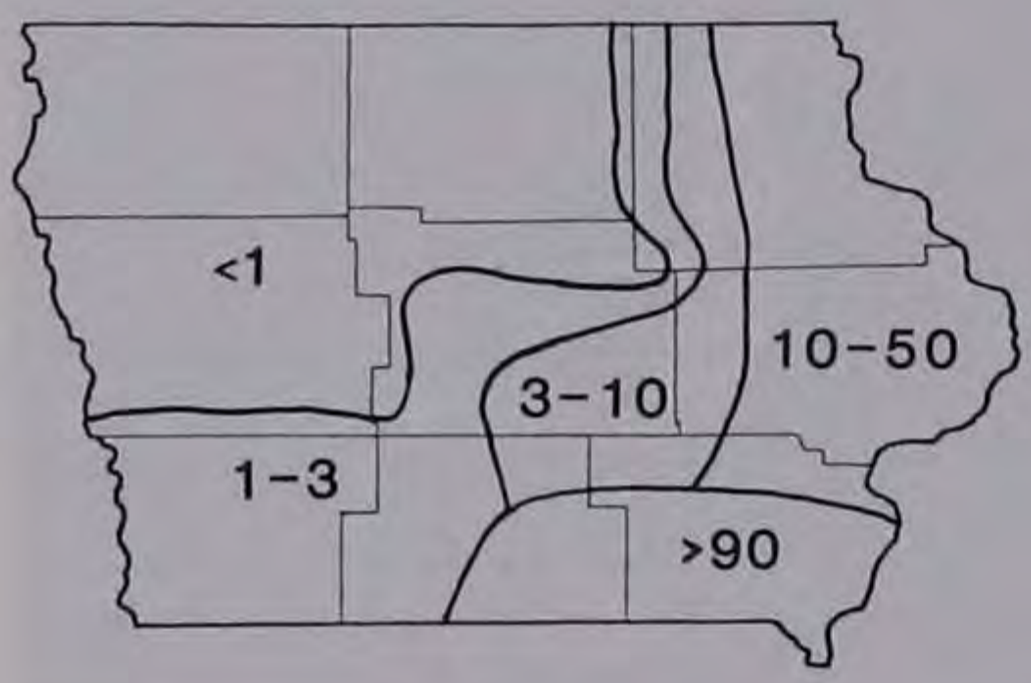
Red-winged Blackbird, **Agelaius phoeniceus**

STATUS: Regular; abundant migrant and summer resident, uncommon in winter. Class I-S N.
HABITAT: Marshes, shrubby fields; in migration and winter, thick groves of trees, feedlots, and pastures.
SPRING MIGRATION: Most typically arrive as soon as the snow melts, generally in early to mid-Mar, with a peak by late Mar. Some migration continues through Apr or May (e.g., a flock of female red-wings in Mills Co. on 14 May 1981, THK). Males tend to migrate before females.

SUMMER: Red-wings are an abundant nesting species throughout Iowa, especially in marshes, where they tend to nest in shallower areas than yellow-heads (Weller and Spatcher 1965; Krapu 1978). Nesting typically begins in early May and continues through mid-Jul. By early Jul some birds are flocking.
FALL MIGRATION: Large flocks are apparent by late Sep. These birds may remain in Iowa well into Nov, with some roosts numbering in the tens of thousands or more. Most leave the state by early or mid-Nov.
WINTER: Red-wings are reported yearly on CBCs from throughout Iowa, with the largest numbers reported from S Iowa and along the Mississippi R. Many of these birds overwinter.
COMMENT: Red-wings are probably the second most abundant bird in Iowa after the House Sparrow. From 1967 through 1980, an average of 172 were seen per BBS route. Their ability to utilize a wide variety of habitats and their use of grainfields for foraging have both contributed to their high numbers. DuMont (1933) reported 3 subspecies from Iowa, 2 of which (**Agelaius phoeniceus phoeniceus** and **A. p. arctolegus**) breed in the state and a third (**A. p. fortis**) occurs as a migrant.
REFERENCE:
Krapu, G. L. 1978. Productivity of Red-winged Blackbirds in prairie pothole habitat. **Iowa Bird Life** 48:24-30.

Eastern Meadowlark, **Sturnella magna**

STATUS: Regular; common migrant and summer resident, winter status uncertain. Class I-S N.
HABITAT: Grasslands and pastures, generally in lower and moister areas than Western Meadowlarks.
SPRING MIGRATION: Migrants generally arrive as soon as the snow melts, usually in early or mid-Mar, with a peak in late Mar.
SUMMER: Eastern Meadowlarks are common nesters in E and S Iowa. Small numbers are found over much of the rest of the state. Few are found in the northwest quarter of Iowa (Map 6.126).
FALL MIGRATION: Virtually no data are available.
WINTER: Although Eastern Meadowlarks are reported yearly on CBCs from numerous locales in Iowa, the field identification of any meadowlark in winter is difficult. There are no winter specimens of this species. The winter status of Eastern Meadowlark needs further study.
COMMENT: According to BBSs, the only places in Iowa where Eastern



Map 6.126 Summer distribution of Eastern Meadowlark expressed as a percentage of all meadowlarks reported on BBSs.

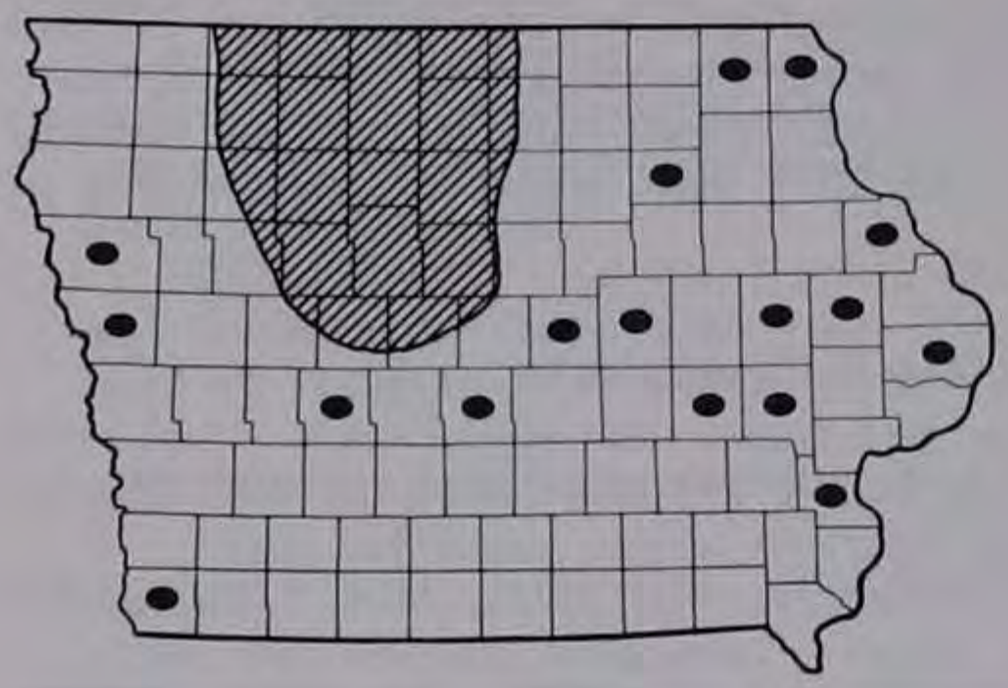
Meadowlarks outnumber Western Meadowlarks are in the southern 2 rows of counties and in an area extending north to Iowa Co. (Map 6.126). Some of the highest populations are in SE Iowa. BBSs show a steady decline in numbers of this species, from 20.1 per route in 1968 to 8.6 in 1980.

Western Meadowlark, **Sturnella neglecta**

STATUS: Regular; abundant migrant and summer resident, uncommon in winter. Class I-S N.
HABITAT: Grasslands and pastures, generally in higher and drier areas than the Eastern Meadowlark.
SPRING MIGRATION: Migrants usually arrive as soon as snow melts, generally in early or mid-Mar, with a peak in late Mar.
SUMMER: Western Meadowlarks are an abundant nesting species over much of Iowa. The only areas where they are rare are parts of SE Iowa (Map 6.126).
FALL MIGRATION: Virtually no information is available.
WINTER: Like the Eastern Meadowlark, Western Meadowlarks are reported yearly on CBCs from all parts of Iowa, but their identification is difficult in winter. Because Western Meadowlarks are more abundant than Eastern Meadowlarks and because most of the nesting meadowlarks n of Iowa are Westerns, this species would be expected to winter more often in Iowa than Eastern Meadowlark.
COMMENT: According to BBSs, Western Meadowlarks outnumber Eastern Meadowlarks over virtually all the northern two-thirds of Iowa and they rank as the third most numerous bird in Iowa after the House Sparrow and Red-winged Blackbird. However, BBSs show a drastic decline, from 95.3 per route in 1967 to 40.6 in 1980.

Yellow-headed Blackbird, **Xanthocephalus xanthocephalus**

STATUS: Regular; common migrant and summer resident, accidental in winter; most common in western half of state. Class I-S N.
HABITAT: Marshes; croplands in migration.
SPRING MIGRATION: Migrants generally arrive in mid- or late Apr.
Early dates: 12 Apr 1975 (Ankeny, IBL 45:59)
13 Apr 1980 (near Ledges S.P., JCR)
15 Apr 1981 (Anderson L., JJD)
SUMMER: Yellow-heads are locally abundant nesters in marshes, especially in an area extending south from Spirit L. and Worth Co. to Greene and Story counties, the area of the Wisconsin glaciation and historically part of the prairie pothole region (Weller 1969). A few colonies are located on oxbow lakes along the Missouri R. and at isolated marshes elsewhere in Iowa (Map 6.127). Yellow-heads tend to use deeper, more permanent wetlands and deeper areas of those wetlands than do red-wings (Weller and Spatcher 1965).
FALL MIGRATION: Few data are available, but most apparently leave Iowa in Sep.
Late dates: 11 Nov 1978 (Trumbull L., IBL 48:140)
27 Oct 1979 (Rush L., Palo Alto Co., IBL 49:114)
19 Oct, year not given (Sioux City, Brown 1971)
WINTER: From 1960 to 1982, yellow-heads have been reported on CBCs at 6 locales, all in C or W Iowa. Some of these probably overwinter.



Map 6.127 Yellow-headed Blackbird nesting range (Weller 1969) and other nesting records by county, 1960-1982.

Other recent winter reports include 3 at a feeder in Davenport on 23 Dec 1973 (IBL 44:21), 1 at a feeder in Council Bluffs on 26 Feb 1978 (IBL 48:70), 1 at Waterloo on 14 Feb 1981 (IBL 51:33), and 1 at a feeder in Ottumwa on 3 Jan 1982 (IBL 52:28).

COMMENT: Because of its specialized habitat requirements, the yellow-head is seldom reported on BBSs in Iowa, and the few reports do not reflect its abundance in suitable habitat, where it is one of the most abundant and conspicuous bird species.

REFERENCE:

Weller, M. W. 1969. Distribution of the Yellow-headed Blackbird in Iowa. **Iowa Bird Life** 39:3-5.

Rusty Blackbird, **Euphagus carolinus**

STATUS: Regular; common migrant, uncommon in winter. Class I-S.

HABITAT: Marshes and wooded wetlands.

SPRING MIGRATION: Most generally arrive in mid- or late Mar and are gone by early Apr.

Late dates: 9 May 1953 (Sabula, PCP)
14 Apr 1968 (Davenport, PCP)
14 Apr 1979 (Amana, THK)

FALL MIGRATION: Most migrants pass through Iowa in late Oct and early Nov, with some lingering on into Dec.

Early dates: 24 Aug 1958 (Muskrat Sl. PCP)
16 Oct 1964 (Goose L., Greene Co., IBL 34:100)
22 Oct 1964 (Des Moines, IBL 34:100)

WINTER: From 1960 to 1982, Rusty Blackbirds were seen yearly on CBCs throughout Iowa. At least some of these wintered in Iowa, such as flocks in Mills Co. and at Coralville Res. in 1980-1981 (IBL 51:33), 5 at Harpers Ferry 5 Feb 1978 (IBL 48:50), and 1 at Sioux Center 27 Jan 1978 (IBL 48:50).

Brewer's Blackbird, **Euphagus cyanocephalus**

STATUS: Regular; rare migrant and in winter. Class I-S.

HABITAT: Fields and feedlots.

SPRING MIGRATION: Most probably arrive in late Mar and are gone by mid-Apr.

Late dates: 10 May 1981 (Sweet M., IBL 51:70)
2 May 1966 (Ogden, IBL 36:51)
28 Apr 1910 (Sac Co., Spurrell 1919)

SUMMER: Other than several unsubstantiated records on BBSs from 1967 to 1980, there are no summer records of this species in Iowa.

FALL MIGRATION: Most are found from Oct to mid-Nov.
Early dates: early Sep 1971 (Hamburg, IBL 41:112)
13 Sep 1975 (Coralville, IBL 46:24)
30 Sep 1971 (Pleasantville, IBL 41:112)

WINTER: Brewer's Blackbirds have been reported on CBCs 17 of 23 years from 1960 to 1982 on counts scattered throughout Iowa. Relatively few CBCs are conducted in W Iowa, but this species has been reported there more often than in E Iowa. At least some of these winter, such as those reported at Akron in 1964-1965 (IBL 35:26), at Hamburg on 19 Jan 1969 (IBL 39:20), and at Jamaica 14 Feb 1977 (IBL 47:21).

COMMENT: This species is probably more common in Iowa than the relatively few reports would suggest. It can be missed when it mixes with other large flocks of blackbirds. However, Brewer's Blackbirds are found in pastures with cows, an unlikely habitat for the similar Rusty Blackbird. The gradual increase in reports in Iowa in recent years probably reflects both the better identification skills of Iowa birders and the gradual eastern extension of the nesting range of this species through the Great Lakes region from Minnesota into Ontario in this century (Stepney and Power 1973). The species nests in S Minnesota (Green and Janssen 1975) and might nest in N Iowa in the near future.

REFERENCE:

Stepney, P. H. R., and D. M. Power. 1973. Analysis of the eastward breeding expansion of Brewer's Blackbird plus general aspects of avian expansions. **Wilson Bull.** 85:453-464.

[Great-tailed Grackle, **Quiscalus mexicanus**]

STATUS: Class V.

RECORD: There is a secondhand report of a bird seen and heard at Wheatland, Clinton Co., on 18 Oct 1961 that was similar to Boat-tailed Grackles seen by the observer in New Orleans (Brown 1961). It is more likely that this bird might have been a Great-tailed Grackle, a species not recognized at that time. There are no details on which to evaluate the record.

COMMENT: This species has been spreading northward from the south and might be expected to reach Iowa soon. It first appeared in Missouri in 1976 (**Am. Birds** 30:850) and in Nebraska in 1977 (**Am. Birds** 31:1019) and has nested in NW Missouri (**Am. Birds** 33:778, 34:784) and in E and SC Nebraska (Faanes and Norling 1981). There are also a winter record from NW Missouri (**Am. Birds** 34:279) and an Oct 1974 record from WC Illinois (Bohlen 1978). Eye color, head shape, and tail length are useful field marks to distinguish Great-tailed and Boat-tailed grackles (Pruitt 1975).

REFERENCES:

Brown, W. 1961. A sight record of the Boat-tailed Grackle. **Iowa Bird Life** 31:88.

Faanes, C. A., and W. Norling. 1981. Nesting of the Great-tailed Grackle in Nebraska. **Am. Birds** 35:148-149.

Pruitt, J. 1975. The return of the Great-tailed Grackle. **Am. Birds** 29:985-992.

Common Grackle, **Quiscalus quiscula**

STATUS: Regular; abundant migrant and summer resident, uncommon in winter. Class I-S N.
HABITAT: Cities and towns, pastures, fields, and marshes; nests in hedgerows and thick groves of trees, especially conifers.
SPRING MIGRATION: Migrants typically arrive as soon as the snow melts, generally in early to mid-Mar, with a peak in late Mar.
SUMMER: Grackles are an abundant nester in Iowa, especially in thick groves of conifers and thick hedgerows. Nesting starts in late Apr and peaks in early May, with some late nests extending into Jul.
FALL MIGRATION: Flocks are evident by late summer. Large numbers roost and flock by Sep, and most leave Iowa by early or mid-Nov.
WINTER: Grackles are reported yearly on CBCs from throughout Iowa. The largest numbers generally are reported from S Iowa and from near the Mississippi R. Many of these birds overwinter.
COMMENT: Grackles are one of the most abundant birds in Iowa and do well near humans. From 1967 to 1980, they were reported on all BBSs run in Iowa, with an average of 54 per route. This was the sixth most common bird seen on BBSs in Iowa. There has been a slight decline in numbers since 1967.

Brown-headed Cowbird, **Molothrus ater**

STATUS: Regular; abundant migrant and summer resident, uncommon in winter. Class I-S N.
HABITAT: Pasture, fields, and farmsteads; often associates with domestic livestock.
SPRING MIGRATION: Migrants generally arrive as soon as the snow melts, usually in mid-Mar, with a peak in late Mar or early Apr.
SUMMER: Few data are available. An average of 21.6 cowbirds was reported per BBS from 1967 to 1980, making them one of the more abundant summering birds in Iowa. They are abundant throughout Iowa and undoubtedly parasitize a wide variety of other birds. By late summer, flocks of cowbirds are common.
FALL MIGRATION: Cowbirds commonly flock and roost with other blackbirds during the fall. Such flocks are evident in Sep and Oct, with most birds leaving Iowa in mid- or late Oct.
WINTER: Cowbirds have been reported yearly on CBCs since 1960. They have been reported from throughout the state but most commonly in S Iowa and along the Mississippi R., where they flock and roost with other blackbirds. Many of these undoubtedly winter, such as 35 in Iowa City on 11 Jan 1978 (IBL 48:50) and 1 at Rush L., Palo Alto Co., on 23 Feb 1980 (IBL 50:28).
COMMENT: The subspecies **Molothrus ater ater** is found over much of the state, while a western subspecies, **M. a. artemisiae**, has also been found in Iowa (DuMont 1933).

Orchard Oriole, **Icterus spurius**

STATUS: Regular; uncommon migrant and summer resident over most of Iowa, common in SW Iowa. Class I-S N.
HABITAT: Isolated groves of trees, fence lines, and orchards.
SPRING MIGRATION: Most apparently arrive in early or mid-May.

Early dates: 24 Apr 1976 (Forney L., IBL 46:58)
28 Apr 1981 (Montpelier, IBL 51:70)
3 May 1967 (Davenport, PCP)

SUMMER: There are numerous nesting and summer records of Orchard Orioles from scattered parts of Iowa in recent years. The species does not seem to be common anywhere except in SW Iowa. Relatively few have been reported on BBSs.

FALL MIGRATION: Most apparently leave in Jul or Aug, but little information is available.

Late dates: 9 Sep 1976 (Iowa City, IBL 46:115)
6 Sep 1976 (Rathbun Res., WMH)
29 Aug 1962 (Sioux City, IBL 32:85)
29 Aug 1981 (Mills Co., IBL 51:122)

COMMENT: DuMont (1933) noted that this species apparently had declined in numbers since about 1900, and to date there is no indication that its numbers have increased in recent years.

Northern Oriole, **Icterus galbula**

STATUS: Regular; common migrant and summer resident, rare in winter. Class I-S N.

HABITAT: Cities, towns, farmsteads, woodlots, and wooded areas along rivers and streams.

SPRING MIGRATION: Most orioles arrive in late Apr or early May, with a peak in mid-May.

Early dates: 24 Apr 1957 (Iowa City, FWK)
24 Apr 1981 (Ames, IBL 51:70)
26 Apr 1964 (Iowa City, FWK)

SUMMER: Northern Orioles are a common nesting species throughout Iowa. An average of 4 per route was reported on BBSs from 1967 to 1980. Maples and elms were the preferred nesting tree in SE Iowa (Gilmore and Jaques 1921; Jaques 1928).

FALL MIGRATION: Most orioles depart in mid-Aug to early Sep.

Late dates: 27 Sep 1953 (Davenport, PCP)
18 Sep 1978 (Davenport, PCP)
13 Sep 1962 (Sioux City, IBL 32:85)

WINTER: Several have been reported at feeding stations in recent winters: 2 at Shenandoah on 10 Dec 1961 (IBL 32:19), 1 at Lamoni on 29 Dec 1969 (IBL 40:20), 1 in Ames in late Dec 1974 (**Am. Birds** 29:438), 1 at Nora Springs in winter 1979-1980 (IBL 50:27), 1 at Fairport on 14 Jan 1981 (IBL 51:33), and 1 at Pleasant Valley on 24 Dec 1981 to at least 4 Jan 1982 (IBL 52:28; PCP). One at Cedar Falls on 20 Dec 1981 (IBL 52:28) was the western "Bullock's" subspecies.

REFERENCES:

Gilmore, K., and H. E. Jaques. 1921. A Baltimore Oriole census. **Proc. Iowa Acad. Sci.** 28:131-134.

Jaques, H. E. 1928. A recount of the Baltimore Orioles nesting in Mount Pleasant, Iowa. **Proc. Iowa Acad. Sci.** 35:305-306.

Finches, Family Fringillidae

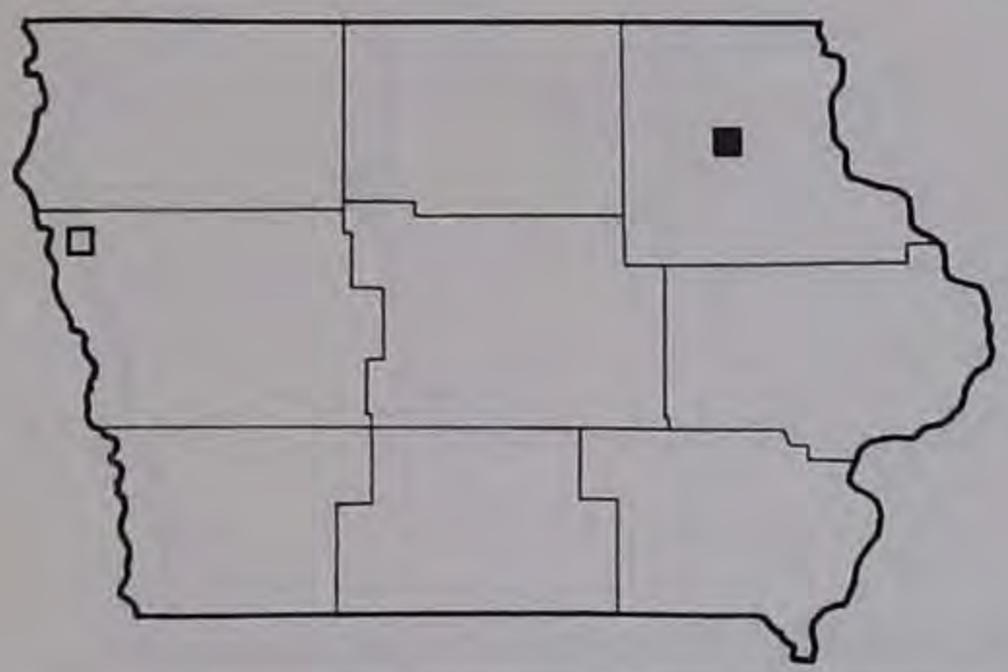
This family contains about 145 species, 20 of which have been reported in North America and another 20+ that are native to the Hawaiian Islands. Of the 11 Iowa species, 7 are regular, 1 is casual, and 3 are accidental. The fringillids, found in both the New and Old World, generally have short, conical, seed-eating bills. Because of similarities in their egg-white proteins, the Hawaiian Honeycreepers, a group with a wide variety of bill shapes, are also placed in this family.

White-winged Crossbill, Iowa City, F. W. Kent.

Hoary Redpoll, Marion, 11 Feb 1978, P. C. Petersen.

Rosy Finch, **Leucosticte arctoa**

STATUS: Accidental. Class I-P.
RECORDS: The first of 2 Iowa records (Map 6.128) occurred in Sioux City, where 1 was caught in Feb 1883 and kept through the summer (Talbot 1883). The description leaves little doubt as to its identity. The second bird frequented a feeder in Oelwein from 25 Dec 1977 to 19 Mar 1978 and was photographed (Wilkinson 1978).
COMMENT: This species breeds from the Aleutians, N Alaska, and W



Map 6.128 Rosy Finch records.

Alberta south in mountains to C California, E Oregon, and NW Montana. It winters from S Alaska and SW Manitoba south to C California, Nevada, Utah, and Colorado. It is a sporadic winter visitor to the Black Hills from late Oct to late May, where it is occasionally abundant, and more rarely to W Nebraska from Oct to Mar. Winter habitat includes open plains, mountain parks, and weedy fields. It is a rare winter vagrant eastward to E South Dakota (3), E Nebraska (3), Minnesota (8), Wisconsin (1), Ontario, and Iowa. Further east, it apparently has occurred only in Maine. Many of the eastward vagrants remained at 1 location, often a feeder, for an extended period.

REFERENCES:

Talbot, D. H. 1883. The Gray-crowned Finch in confinement. **Bull. Nuttall Orn. Club** 8:240-242.

Wilkinson, R. 1978. "Rosy, the Finch" creates stir in birdwatching. **Iowa Bird Life** 48:79-80.

Pine Grosbeak, **Pinicola enucleator**

STATUS: Casual; winter visitant. Class I-S.

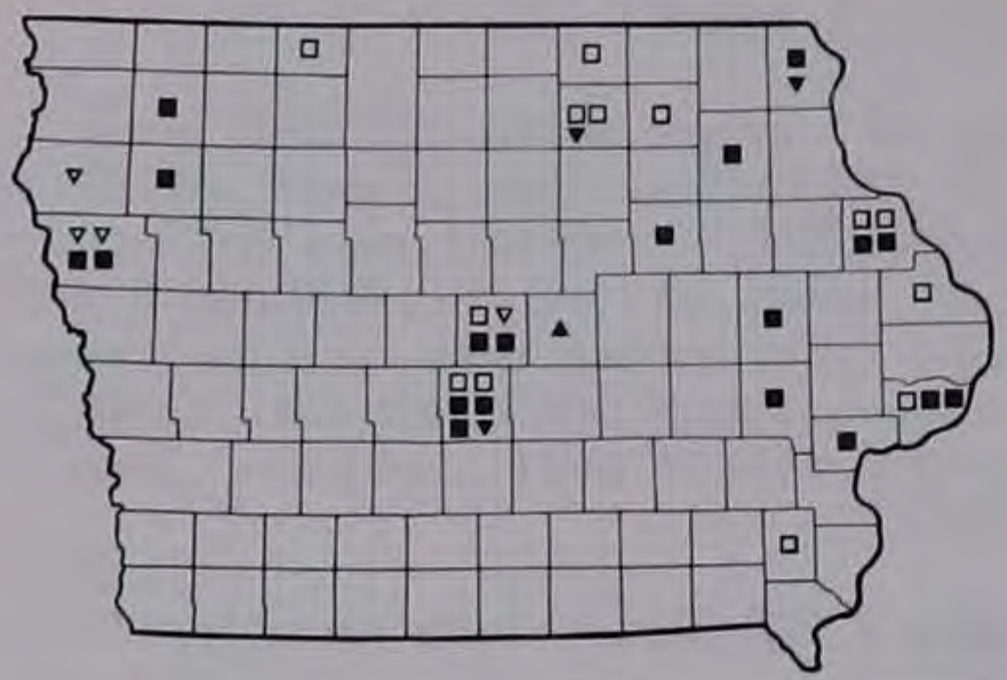
HABITAT: Usually found in conifers, occasionally at feeders.

WINTER: The majority of records for this sporadic northern visitor are of 1 or 2 birds, but flocks of up to 20 birds may also be seen. Most records are from the northern two-thirds of the state (Map 6.129), but this may relate to favorable habitat and presence of observers in the larger cities. There are a number of records from the late 1800s and early 1900s, but between 1920 and 1950 there were only 5 records. Pine Grosbeaks have been seen in half the winters since 1950. The winter of 1977-1978 brought the largest invasion on record, with approximately as many birds seen then as in all the others combined.

Early dates: 24 Oct 1922 (Sioux City, Spiker 1926)
30 Oct 1938 (Ames, Hendrickson 1938)
2 Nov 1924 (Plymouth Co., Stephens 1925)

Late dates: 8 Mar 1981 (State Center, **IBL** 51:70)
28 Feb 1981 (Ames, **IBL** 51:33)
15 Feb 1953 (Des Moines, Brown 1953)

COMMENT: Pine Grosbeaks leave much earlier than other winter finches. There is a specimen from Des Moines at the State Historical Museum dated 31 Jan 1973 (submitted by Mrs. R. Bush).



Map 6.129 Pine Grosbeak records.

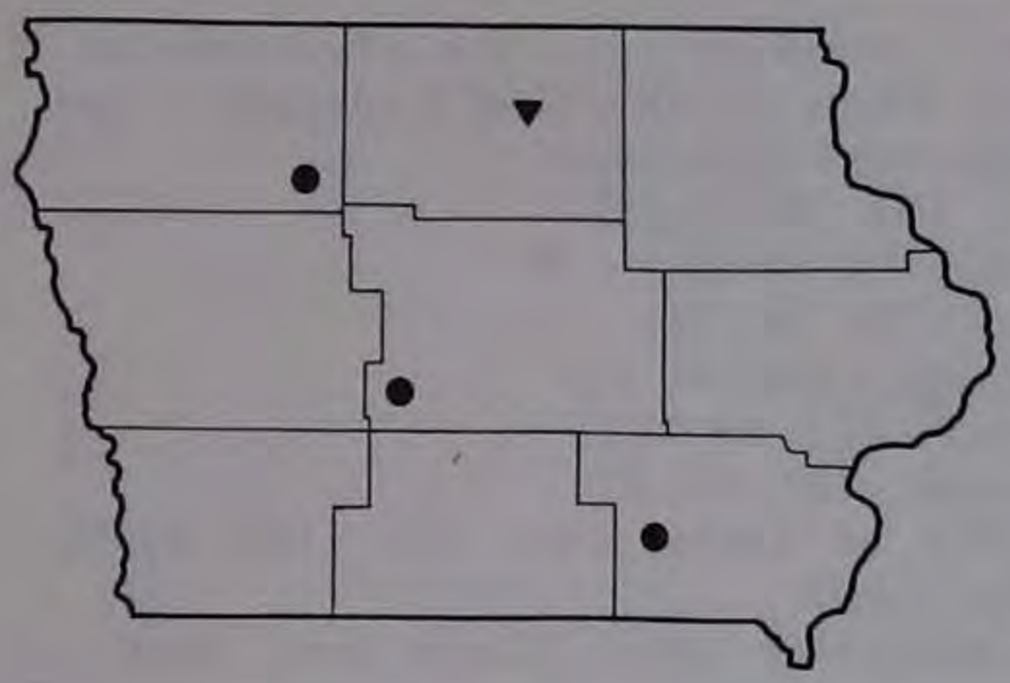
REFERENCES:
Brown, W. H. 1953. Bird notes and records, late fall and winter of 1952-53. **Iowa Bird Life** 23:20.
Hendrickson, G. O. 1938. Canadian Pine Grosbeak at Ames. **Iowa Bird Life** 8:52.
Stephens, T. C. 1925. The Pine Grosbeak at Sioux City, Iowa. **Wilson Bull.** 37:41.

Purple Finch, **Carpodacus purpureus**

STATUS: Regular; common migrant, uncommon winter resident. Class I-S.
HABITAT: Open wooded areas and feeders.
FALL MIGRATION: Early arrivals may appear in Sep, but the main migration occurs in Oct.
Early dates: 29 Aug 1976 (Davenport, IBL 46:115)
29 Aug 1978 (Ely, IBL 48:140)
1 Sep 1978 (Davenport, PCP)
WINTER: Based on CBCs, numbers vary from year to year with waves in the years 1968 and 1969 and again in 1976, 1977, and 1978. They are frequently found at feeders in the winter.
SPRING MIGRATION: Purple Finches are not uncommon in late Apr and early May. They are often seen feeding on buds high in trees at the time the warblers are arriving.
Late dates: 17 May 1966 (Davenport, PCP)
15 May 1966 (Burlington, IBL 36:51)
15 May 1978 (NE Iowa, IBL 48:76)
SUMMER: A nest was said to have been found in Henry Co. on 2 Jun 1892 (Anderson 1907).
COMMENT: There are no summer records except for the reported nesting, which cannot be substantiated.

House Finch, **Carpodacus mexicanus**

STATUS: Accidental. Class I-P.
RECORDS: In Jun-Jul 1982, male House Finches visited feeders in Pocahontas, Perry, and Ottumwa, and in Sep a female appeared in Mason City (Map 6.130). The latter 3 were photographed (IBL 52:94, 125).



Map 6.130 House Finch records.

COMMENT: House Finches were released in the East in the 1940s and have increased in numbers and spread rapidly since 1953. The first birds reached Illinois in 1971, Ohio and Wisconsin in 1972, Michigan in 1976, Missouri in 1978, and Minnesota in 1980. Birds in the West have also moved east, with recent records in North Dakota, E South Dakota, and E Kansas. The normal range reaches to W Nebraska. In contrast to the Iowa records, most of the vagrant records in other states have been in fall, winter, and spring. If the current trend continues, this species will become regular in Iowa.

Red Crossbill, **Loxia curvirostra**

STATUS: Regular; cyclic winter visitant. Class I-S N?.
HABITAT: Conifers.
WINTER: Red Crossbills may be found in small flocks anytime from Aug to May. They tend to be erratic and unpredictable. In some years there are small invasions, and in others they are absent from the state. Usually a few are seen. On CBCs, Red Crossbills are 10 times as common as White-winged Crossbills.

Early dates: 2 Aug 1972 (Jesup, IBL 42:71)
10 Aug 1966 (Marble Rock, IBL 36:105)
16 Aug 1972 (Lamoni, IBL 42:71)

Late dates: 7 Jun 1970 (Ames, IBL 40:74)
31 May 1981 (Waterloo, IBL 51:70)
21 May 1974 (Des Moines, IBL 44:45)

SUMMER: The only summer record is the Jun record listed above. However, a pair was noted building a nest in Des Moines on 22-25 Apr 1982, but the nest apparently was destroyed (IBL 52:62).
COMMENT: This species is usually present in small numbers in most winters, but small invasions occur periodically. Red Crossbills have nested in every month in Colorado and have nested in states s of Iowa.

White-winged Crossbill, **Loxia leucoptera**

STATUS: Regular; cyclic winter visitor. Class I-S.
HABITAT: Conifers, especially hemlocks.
WINTER: On CBCs this species is only one-tenth as common as the Red

Crossbill and is seen in fewer years. However, for the whole winter it is seen in about the same number of years as the Red Crossbill. Nov, Dec, and Feb are the months with the most sightings.

Early dates: late Aug 1969 (Ames, IBL 39:82-83)
26 Oct 1965 (Waterloo, IBL 36:21)
28 Oct 1980 (Waterloo, IBL 51:29)

Late dates: 21 May 1974 (Des Moines, IBL 44:45)
4 May 1974 (Davenport, IBL 44:45)
28 Apr 1981 (Davenport, IBL 51:70)

SUMMER: One found dead on 24 Jul 1979 at Anita, Cass Co. (IBL 49:85), was examined at Iowa State University (JJD).

COMMENT: This species is usually present in small flocks and does not exhibit massive invasions.

Common Redpoll, **Carduelis flammea**

STATUS: Regular; rare to common winter visitant. Class I-S.

HABITAT: Open weedy areas; less attracted to feeders than other winter finches.

WINTER: This species is the most cyclic of the winter finches. Based on CBC data, there were massive invasions in 1965 and 1968 and somewhat smaller ones in 1975 and 1977. Between invasion years few, or sometimes none, are seen.

Early dates: 15 Oct 1981 (Rush L., Palo Alto Co., IBL 51:122)
23 Oct 1965 (Waterloo, IBL 36:21)
25 Oct 1968 (Davenport, IBL 38:126)

Late dates: 1 May 1978 (Cherokee, IBL 48:76)
8 Apr 1982 (Davenport, IBL 52:62)
3 Apr 1964 (Waterloo, IBL 34:49)

COMMENT: The largest numbers reported were 400-500 on 7 Feb 1974 at Central City (IBL 44:21) and 400 on 14 Jan 1969 at Lamoni (IBL 39:41). Redpolls are most likely to be seen from late Nov to early Mar.

Hoary Redpoll, **Carduelis hornemanni**

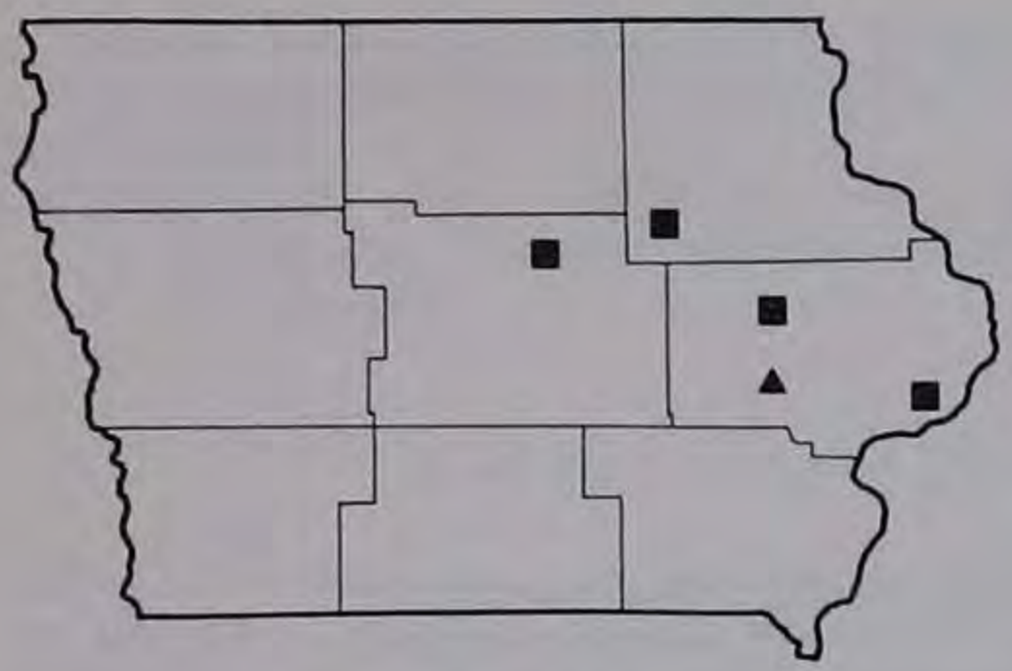
STATUS: Accidental. Class I-P.

RECORDS: Records that have been accepted by the Records Committee as Class III or better (Map 6.131) are as follows:

22 Jan to 15 Feb 1978, Marion, Class I-P (IBL 48:51; Halmi 1978; Petersen 1978)
12 Feb 1978, Davenport, Class III (IBL 48:51)
10 Mar 1978, Coralville Res., Class III (IBL 48:76)
27 and 29 Dec 1980 and 2 Jan 1981, Waterloo, Class II (IBL 51:3-4, 10; 52:41)
23 and 30 Jan 1982, Pine L., Hardin Co., Class II (IBL 52:28)
2 Mar 1982, Laurens, Pocahontas Co., Class I-P (IBL 52:61)

There are other possibly correct reports of this difficult-to-identify species from 1978 (Halmi 1978; IBL 48:51) and from 1982 (IBL 52:28). Three specimens at the Putnam Museum are probably those collected in Iowa City in Jan 1896, 1 of which was tentatively identified as a Hoary Redpoll (Morrissey 1944). These specimens were examined by the Records Committee on 5 Sep 1981, were found to be heavily streaked on the rump, and were identified as Common Redpolls.

COMMENT: This species occurs regularly in N Minnesota with Common



Map 6.131 Hoary Redpoll records.

Redpolls, so it is not surprising that it might come further south in invasion years. The 1978 and 1982 Iowa sightings occurred during invasion years. The differences between the 2 species are subtle, so identification of single birds outside their normal range is extremely difficult. Features to look for are a white unstreaked rump; overall lighter coloration than Common Redpoll, with "frosty" feather edging; less streaking on the back and breast; and a shorter conical bill, which is as thick at the base as it is long, forming an equilateral triangle.

REFERENCES:

Halmi, N. S. 1978. Hoary Redpoll (**Carduelis hornemanni**) in Iowa. **Iowa Bird Life** 48:53-54.

Morrissey, T. J. 1944. Holboell's Redpoll in Iowa. **Iowa Bird Life** 14:74.

Petersen, P. C. 1978. Editor's note. **Iowa Bird Life** 48:54.

Pine Siskin, **Carduelis pinus**

STATUS: Regular; uncommon to common winter visitant, occasionally nesting. Class I-S N.

HABITAT: Conifers, open wooded areas, feeders.

WINTER: Based on CBC data, Pine Siskins are cyclical, with peaks occurring every 2 to 4 years. In intervening years they are uncommon to rare. They are usually less abundant than Purple Finches in winter. They are most frequently encountered in large urban areas. Siskins usually arrive in Oct or Nov, and some linger into May.

Early dates: 22 Sep 1973 (Waterloo, IBL 43:106)
23 Sep 1965 (Marble Rock, IBL 35:90)
23 Sep 1967 (Guthrie Co., IBL 38:19)

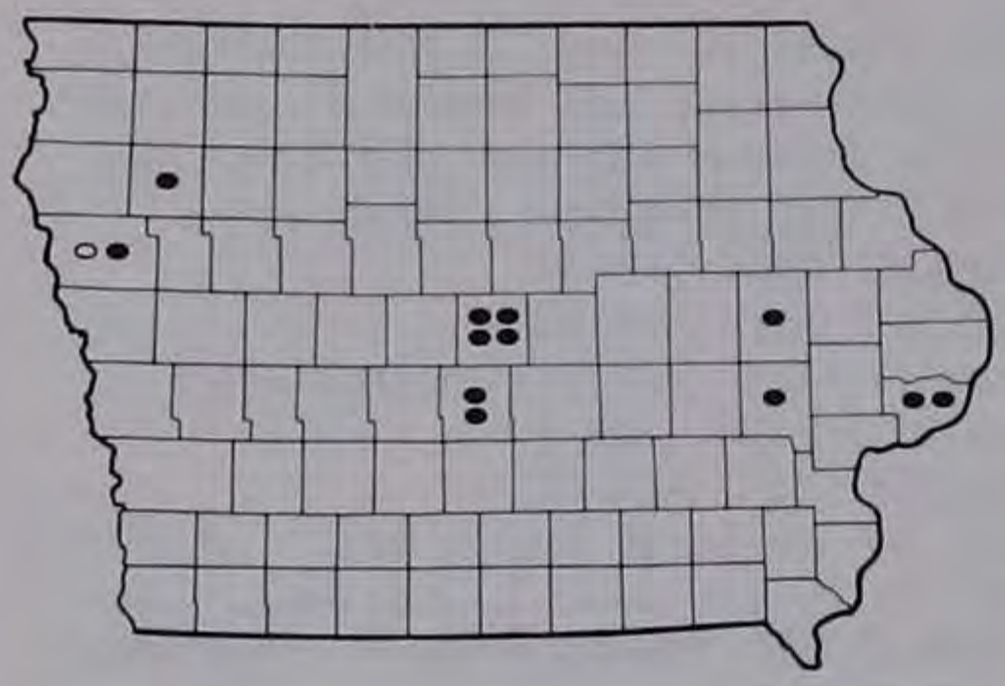
Late dates: 9 Jul 1978 (Des Moines, IBL 48:100)
5 Jul 1976 (Iowa City, IBL 46:85)
30 Jun 1976 (Cherokee, IBL 46:85)

SUMMER: In peak years, nesting sometimes occurs. Late dates may represent nesting birds. None have been observed from 9 Jul to 22 Sep. Nesting records (Map 6.132) include the following:

13 Apr to 5 May 1914, Sioux City, nest with 3 eggs, 1 fledged (Hayward and Stephens 1914)

5 May 1973, Des Moines, carrying nesting material (IBL 43:48, 76)

17 to 29 Jun 1973, Sioux City, young seen (IBL 43:76)



Map 6.132 Pine Siskin nesting records.

10 to 30 Jun 1976, Cherokee, 2 adults and 3 immatures (IBL 46:85)
8 Apr 1978, Des Moines, adult sitting on nest (Brooke 1978)
spring 1978, Ames, one young left nest (IBL 48:76; JJD)
spring 1978, Cedar Rapids, Iowa City, North Liberty, no details given (IBL 48:100)
Apr 1979, Ames, started to nest but failed (IBL 49:63)
14 Jun 1979, Iowa City, nest with fledglings (IBL 49:85)
early May 1981, Ames, fledgling noted (IBL 51:70)
27 Apr 1982, Davenport, nest with 3 eggs, preyed upon (IBL 52:62)
4 May 1982, Ames, nest with 2 siskin and 3 cowbird eggs, empty on 8 May (IBL 52:62; JJD)
23 Jun 1982, Davenport, fledging date (IBL 52:94)

COMMENT: Increased winter bird feeding has attracted Pine Siskins and made them more familiar to city dwellers.

REFERENCES:

Brooke, M. 1978. Pine Siskin nest in Des Moines. **Iowa Bird Life** 48:102.

Hayward, W. J., and T. C. Stephens. 1914. The Pine Siskin breeding in Iowa. **Wilson Bull.** 26:140-146.

American Goldfinch, **Carduelis tristis**

STATUS: Regular; common permanent resident. Class I-S N.

HABITAT: Open areas and edge, feeders.

SUMMER: Goldfinches are late nesters. Egg laying usually begins in Jul with a peak in mid-Aug (Lynch 1970). The latest dates for nesting are 29 Sep 1981, with young ready to fledge, in Marshall Co. (IBL 51:122); 29 Sep 1982, with young ready to fledge, in O'Brien Co. (IBL 52:125); and 28 Sep 1969 in Johnson Co. (Lynch 1970). Goldfinches are evenly distributed across the state and average 12 per BBS.

WINTER: On CBCs, goldfinches average 2 per party hour and are evenly distributed across the state. Numbers have remained relatively constant from year to year, especially from 1970 to 1979.

COMMENT: It is not known whether goldfinches migrate to any significant extent in Iowa. They are usually present in small flocks. However, on 6 May 1970, 2,000 were reported from Sioux City (IBL 40:50). Goldfinches are most noticeable in the spring when they are singing

loudly and frequenting the tops of the trees with the warblers. The American Goldfinch is the State Bird of Iowa.

REFERENCE:

Lynch, C. B. 1970. The reproductive strategy of the American Goldfinch, **Spinus tristis tristis**, in Iowa. **Proc. Iowa Acad. Sci.** 77:164-168.

Evening Grosbeak, **Coccothraustes vespertinus**

STATUS: Regular; uncommon to rare winter visitant. Class I-S.
HABITAT: Wooded areas, especially urban areas at feeders.
WINTER: Evening Grosbeaks may arrive as early as Sep and leave as late as May, but most are seen from Nov to Mar. Numbers vary greatly from year to year, with no clearcut pattern. From 1960 to 1982 numbers on CBCs varied from zero (5 years) to 231.

Early dates: 25 Aug 1947 (Clarksville, Ulrich 1948)
8 Sep 1961 (Goldfield, IBL 31:88)
18 Sep 1972 (Dewitt, IBL 42:71)

Late dates: 14 May 1976 (Ottumwa, IBL 46:58)
14 May 1976 (Coon Rapids, IBL 46:58)
9 May 1981 (Centerville, WMH)

COMMENT: Cyclic peaks of Evening Grosbeaks do not correlate well with those of other winter finches. When present, this species may move around or they may frequent feeders with abundant supplies of sunflower seeds for a prolonged period.

REFERENCE:

Ulrich, Mrs. V. 1948. Crossbills and Evening Grosbeaks at Clarksville. **Iowa Bird Life** 18:17.

Weaver Finches, Family Passeridae

This family contains about 35 species, which are native to Europe, Asia, and Africa. Two species have been introduced into North America; the House Sparrow is widely distributed and is regular in Iowa, while the Eurasian Tree Sparrow is found mainly near St. Louis, although 1 was seen on a CBC recently just across the Mississippi R. from Davenport (IBL 51:3) so they might soon be reported in Iowa. The 2 species found in North America generally are found near humans or domestic animals. They build a bulky woven nest and usually eat seeds.

House Sparrow, **Passer domesticus**

STATUS: Regular; abundant permanent resident. Class I-S N.
HABITAT: Cities and towns, farmsteads, generally found close to human habitation.
SUMMER: House Sparrows are an abundant nesting species throughout Iowa, but few data are available. According to BBSs, they are the most abundant bird in Iowa, with an average of 180 recorded per route. Their numbers have increased slightly on BBSs in recent years.
WINTER: In most years House Sparrows are the most abundant songbird reported on CBCs in Iowa; as many as 47,000 are recorded in 1 year.
COMMENT: House Sparrows reached Iowa by about 1869 and spread

rapidly. By 1886 they were found over much of E and S Iowa (Barrows 1889), and by 1900 they were found throughout the state.

REFERENCE:

Barrows, W.B. 1889. The English Sparrow (Passer domesticus) in North America. USDA Bull. no. 1., 405 p.

Appendixes

Appendix A

Iowa List: Regular, Casual, Accidental, Extirpated, and Extinct (362 species)

REGULAR SPECIES (276)

Common Loon
Pied-billed Grebe
Horned Grebe
Eared Grebe
Western Grebe
American White Pelican
Double-crested Cormorant
American Bittern
Least Bittern
Great Blue Heron
Great Egret
Little Blue Heron
Cattle Egret
Green-backed Heron
Black-crowned Night-Heron
Yellow-crowned Night-Heron
Tundra Swan
Mute Swan
Greater White-fronted Goose
Snow Goose
Ross' Goose
Canada Goose
Wood Duck
Green-winged Teal
American Black Duck
Mallard
Northern Pintail
Blue-winged Teal
Cinnamon Teal
Northern Shoveler
Gadwall
American Wigeon
Canvasback
Redhead
Ring-necked Duck
Greater Scaup
Lesser Scaup
Oldsquaw
White-winged Scoter
Common Goldeneye
Bufflehead
Hooded Merganser
Common Merganser
Red-breasted Merganser
Ruddy Duck
Turkey Vulture
Osprey
Bald Eagle
Northern Harrier
Sharp-shinned Hawk
Cooper's Hawk
Northern Goshawk
Red-shouldered Hawk
Broad-winged Hawk
Swainson's Hawk
Red-tailed Hawk
Rough-legged Hawk
Golden Eagle
American Kestrel
Merlin
Peregrine Falcon
Gray Partridge
Ring-necked Pheasant
Ruffed Grouse
Wild Turkey
Northern Bobwhite
Virginia Rail
Sora
Common Moorhen
American Coot
Sandhill Crane
Black-bellied Plover
Lesser Golden-Plover
Semipalmated Plover
Piping Plover
Killdeer
American Avocet
Greater Yellowlegs

Lesser Yellowlegs
Solitary Sandpiper
Willet
Spotted Sandpiper
Upland Sandpiper
Hudsonian Godwit
Marbled Godwit
Ruddy Turnstone
Sanderling
Semipalmated Sandpiper
Western Sandpiper
Least Sandpiper
White-rumped Sandpiper
Baird's Sandpiper
Pectoral Sandpiper
Dunlin
Stilt Sandpiper
Short-billed Dowitcher
Long-billed Dowitcher
Common Snipe
American Woodcock
Wilson's Phalarope
Red-necked Phalarope
Franklin's Gull
Bonaparte's Gull
Ring-billed Gull
Herring Gull
Glaucous Gull
Caspian Tern
Common Tern
Forster's Tern
Least Tern
Black Tern
Rock Dove
Mourning Dove
Black-billed Cuckoo
Yellow-billed Cuckoo
Common Barn-Owl
Eastern Screech-Owl
Great Horned Owl
Snowy Owl
Barred Owl
Long-eared Owl
Short-eared Owl
Northern Saw-whet Owl
Common Nighthawk
Chuck-will's-widow
Whip-poor-will
Chimney Swift
Ruby-throated Hummingbird
Belted Kingfisher
Red-headed Woodpecker
Red-bellied Woodpecker
Yellow-bellied Sapsucker
Downy Woodpecker
Hairy Woodpecker
Northern Flicker
Pileated Woodpecker
Olive-sided Flycatcher
Eastern Wood-Pewee
Yellow-bellied Flycatcher
Acadian Flycatcher
Alder Flycatcher
Willow Flycatcher
Least Flycatcher
Eastern Phoebe
Say's Phoebe
Great Crested Flycatcher
Western Kingbird
Eastern Kingbird
Horned Lark
Purple Martin
Tree Swallow
Northern Rough-winged Swallow
Bank Swallow
Cliff Swallow
Barn Swallow
Blue Jay
American Crow
Black-capped Chickadee
Tufted Titmouse
Red-breasted Nuthatch
White-breasted Nuthatch
Brown Creeper
Carolina Wren
House Wren
Winter Wren
Sedge Wren
Marsh Wren
Golden-crowned Kinglet
Ruby-crowned Kinglet
Blue-gray Gnatcatcher
Eastern Bluebird
Townsend's Solitaire
Veery
Gray-cheeked Thrush
Swainson's Thrush
Hermit Thrush
Wood Thrush
American Robin
Varied Thrush
Gray Catbird
Northern Mockingbird
Brown Thrasher
Water Pipit
Cedar Waxwing
Northern Shrike
Loggerhead Shrike
European Starling
White-eyed Vireo
Bell's Vireo
Solitary Vireo

Yellow-throated Vireo
Warbling Vireo
Philadelphia Vireo
Red-eyed Vireo
Blue-winged Warbler
Golden-winged Warbler
Tennessee Warbler
Orange-crowned Warbler
Nashville Warbler
Northern Parula
Yellow Warbler
Chestnut-sided Warbler
Magnolia Warbler
Cape May Warbler
Black-throated Blue Warbler
Yellow-rumped Warbler
Black-throated Green Warbler
Blackburnian Warbler
Yellow-throated Warbler
Pine Warbler
Palm Warbler
Bay-breasted Warbler
Blackpoll Warbler
Cerulean Warbler
Black-and-white Warbler
American Redstart
Prothonotary Warbler
Worm-eating Warbler
Ovenbird
Northern Waterthrush
Louisiana Waterthrush
Kentucky Warbler
Connecticut Warbler
Mourning Warbler
Common Yellowthroat
Hooded Warbler
Wilson's Warbler
Canada Warbler
Yellow-breasted Chat
Summer Tanager
Scarlet Tanager
Northern Cardinal
Rose-breasted Grosbeak
Blue Grosbeak
Indigo Bunting
Dickcissel
Rufous-sided Towhee
American Tree Sparrow
Chipping Sparrow
Clay-colored Sparrow
Field Sparrow
Vesper Sparrow
Lark Sparrow
Savannah Sparrow
Grasshopper Sparrow
Henslow's Sparrow
Le Conte's Sparrow
Fox Sparrow
Song Sparrow
Lincoln's Sparrow
Swamp Sparrow
White-throated Sparrow
White-crowned Sparrow
Harris' Sparrow
Dark-eyed Junco
Lapland Longspur
Snow Bunting
Bobolink
Red-winged Blackbird
Eastern Meadowlark
Western Meadowlark
Yellow-headed Blackbird
Rusty Blackbird
Brewer's Blackbird
Common Grackle
Brown-headed Cowbird
Orchard Oriole
Northern Oriole
Purple Finch
Red Crossbill
White-winged Crossbill
Common Redpoll
Pine Siskin
American Goldfinch
Evening Grosbeak
House Sparrow

CASUAL SPECIES (16)

Red-necked Grebe
Snowy Egret
(Ibis species)
Surf Scoter
Ferruginous Hawk
Prairie Falcon
Yellow Rail
King Rail
Buff-breasted Sandpiper
Burrowing Owl
Scissor-tailed Flycatcher
Bewick's Wren
Bohemian Waxwing
Prairie Warbler
Lark Bunting
Sharp-tailed Sparrow
Pine Grosbeak

ACCIDENTAL SPECIES (62)

Red-throated Loon
Arctic Loon
Brown Pelican
Anhinga
White-faced Ibis
Roseate Spoonbill
Wood Stork
Brant
Eurasian Wigeon
Common Eider
King Eider
Harlequin Duck
Black Scoter
Black Vulture
Greater Prairie-Chicken
Black Rail
Purple Gallinule
Whooping Crane
Mountain Plover
Whimbrel
Red Knot
Sharp-tailed Sandpiper
Ruff
Parasitic Jaeger
Long-tailed Jaeger
Laughing Gull
Mew Gull
Great Black-backed Gull
Black-legged Kittiwake
Sabine's Gull
Thick-billed Murre
Ani species
Northern Hawk-Owl
Great Gray Owl
Lewis' Woodpecker
Three-toed Woodpecker
Black-backed Woodpecker
Western Wood-Pewee
Gray Jay
Pinyon Jay
Clark's Nutcracker
Black-billed Magpie
Common Raven
Boreal Chickadee
Pygmy Nuthatch
Rock Wren
Mountain Bluebird
Sage Thrasher
Curve-billed Thrasher
Sprague's Pipit
Black-throated Gray Warbler
Townsend's Warbler
Western Tanager
Black-headed Grosbeak
Lazuli Bunting
Green-tailed Towhee
Golden-crowned Sparrow
Smith's Longspur
Chestnut-collared Longspur
Rosy Finch
House Finch
Hoary Redpoll

EXTIRPATED SPECIES (6)

Trumpeter Swan
American Swallow-tailed Kite
Mississippi Kite
Sharp-tailed Grouse
Eskimo Curlew
Long-billed Curlew

EXTINCT SPECIES (2)

Passenger Pigeon
Carolina Parakeet

Appendix B

Species Not Substantiated by Existing Specimen, by Class

CLASS I-P SPECIES (34)

Brown Pelican
Little Blue Heron
White-faced Ibis
Roseate Spoonbill
Mute Swan
Cinnamon Teal
Whimbrel
Mew Gull
Glaucous Gull
Great Black-backed Gull
Black-legged Kittiwake
Least Tern
Northern Hawk-Owl
Great Gray Owl
Chuck-will's-widow
Say's Phoebe
Scissor-tailed Flycatcher
Gray Jay
Boreal Chickadee
Pygmy Nuthatch
Bewick's Wren
Mountain Bluebird
Townsend's Solitaire
Varied Thrush
Curve-billed Thrasher
White-eyed Vireo
Yellow-throated Warbler
Prairie Warbler
Worm-eating Warbler
Black-headed Grosbeak
Lark Bunting
Rosy Finch
House Finch
Hoary Redpoll

CLASS I-R SPECIES (1)

Alder Flycatcher

CLASS II SPECIES (3)

Black Rail
Western Tanager
Lazuli Bunting

CLASS III SPECIES (25)

Red-throated Loon
Anhinga
Wood Stork
Common Eider
Harlequin Duck
Mississippi Kite
Mountain Plover
Sharp-tailed Sandpiper
Laughing Gull
Thick-billed Murre
Carolina Parakeet
Ani species
Lewis' Woodpecker
Three-toed Woodpecker
Black-backed Woodpecker
Western Wood-Pewee
Pinyon Jay
Rock Wren
Sage Thrasher
Sprague's Pipit
Black-throated Gray Warbler
Townsend's Warbler
Green-tailed Towhee
Golden-crowned Sparrow
Chestnut-collared Longspur

CLASS IV (HYPOTHETICAL) SPECIES (12)

Magnificent Frigatebird
Glossy Ibis
Black-bellied Whistling-Duck
Gyrfalcon
Purple Sandpiper
Red Phalarope
Iceland Gull
Ivory Gull
Carolina Chickadee
American Dipper
MacGillivray's Warbler
Painted Bunting

CLASS V SPECIES (7)

Fulvous Whistling-Duck
Harris' Hawk
Black-necked Stilt
Common Poorwill
Great-tailed Grackle
Baird's Sparrow
McCown's Longspur

CLASS VI SPECIES (19)

Emperor Goose
Barrow's Goldeneye
Masked Duck
Gray Hawk
Chukar
Scaled Quail
Thayer's Gull
Gull-billed Tern
Band-tailed Pigeon
Ringed Turtle-Dove
Common Ground-Dove
Monk Parakeet
Greater Roadrunner
Boreal Owl
Brown-headed Nuthatch
Western Bluebird
Kirtland's Warbler
Swainson's Warbler
Bachman's Sparrow

Appendix C

Year of First Record for Species

Following are species listed by the year of the first definite sighting in Iowa. Most of the species listed by Keyes and Williams (1889), which constitute most of the regular species, are not listed. Keyes and Williams listed a few species based on secondhand information. Of these, Western Bluebird and Bachman's Sparrow are not currently accepted and Carolina Parakeet, Western Kingbird, and Rock Wren are accepted but not on the basis of the citations by Keyes and Williams. Species listed by Keyes and Williams that were regular then but not now are Trumpeter Swan, American Swallow-tailed Kite, Greater Prairie-Chicken, Sharp-tailed Grouse, Whooping Crane, Long-billed Curlew, and Passenger Pigeon. All other species on the Keyes and Williams list are now regular except for Snowy Egret, Yellow Rail, Bohemian Waxwing, Smith's Longspur, and Pine Grosbeak.

References are to an account of the first definite record. Citations preceded by an asterisk can be found in the species accounts in Chapter 6; the others are in the References. References to **Iowa Bird Life** are in the Field Reports.

1819-20	Long-billed Dowitcher (James 1823)
	Black-billed Magpie (James 1823)
1843	Yellow-crowned Night-Heron (Audubon and Coues 1897)
	Carolina Parakeet (Audubon and Coues 1897)
	Lark Bunting (Audubon and Coues 1897)
1864	Brewer's Blackbird (DuMont 1933)
1868	Peregrine Falcon (Anderson 1907)
1869	House Sparrow (*Barrows 1889)
1873	Red-throated Loon (DuMont 1935b)
1874	Eskimo Curlew (DuMont 1933)
1883	Rosy Finch (*Talbot 1883)
1884	Hudsonian Godwit (Anderson 1907)
	Buff-breasted Sandpiper (Anderson 1907)
	Kentucky Warbler (Anderson 1907)
1886	Carolina Wren (DuMont 1933)
1887	Mississippi Kite (DuMont 1933)
1888	Least Tern (Anderson 1907)
	Yellow-throated Warbler (Anderson 1907)
1889	Black Rail (Nutting 1893)
	Caspian Tern (Anderson 1907)
1890	White-winged Scoter (Nutting 1895)
	Burrowing Owl (Anderson 1907)
1891	Baird's Sandpiper (Nutting 1893)
	Sabine's Gull (*Bartsch 1899)
1892	Oldsquaw (Nutting 1895)
	Prairie Falcon (Anderson 1907)
	Ruddy Turnstone (*Bartsch 1898)
	Pine Warbler (Nutting 1893)
1893	Surf Scoter (Anderson 1907)
	Semipalmated Plover (Anderson 1907)
	Piping Plover (DuMont 1933)
	Short-billed Dowitcher (DuMont 1933)
	Common Tern (Nutting 1893)
	Bewick's Wren (Nutting 1895)

1894	Cinnamon Teal (Anderson 1907)
	King Eider (*Praeger 1895)
	Red-necked Phalarope (Anderson 1907)
	Clark's Nutcracker (Nutting 1895)
	Sharp-tailed Sparrow (Anderson 1907)
1895	Arctic Loon (Nutting 1895)
	Whimbrel (Anderson 1907)
	Western Sandpiper (Anderson 1907)
	Western Kingbird (Anderson 1907)
1896	Parasitic Jaeger (Anderson 1907)
	Thick-billed Murre (*Brown 1897)
1897	Connecticut Warbler (Anderson 1907)
1900	Brown Pelican (*Henning 1905)
	Ring-necked Pheasant (Farris et al. 1977)
1901	Common Eider (*DuMont 1934)
	Ferruginous Hawk (Bailey 1918)
1902	American Avocet (Anderson 1907)
	Bonaparte's Gull (Anderson 1907)
1905	Gray Partridge (DuMont 1933)
1907	Long-tailed Jaeger (*Anderson 1908)
1910	Rock Wren (*Bennett 1925)
1913	Dunlin (Gabrielson 1918)
1915	Purple Gallinule (DuMont 1931)
1922	European Starling (DuMont 1933)
1923	Blue Grosbeak (DuMont 1933)
1926	Red-necked Grebe (Pierce 1930)
	Western Grebe (DuMont 1933)
1929	Lewis' Woodpecker (*Bailey 1929; *Youngworth 1929)
	Lazuli Bunting (*Youngworth 1929)
1931	Black-legged Kittiwake (*DuMont 1933)
1932	Harlequin Duck (*DuMont 1934)
1933	Eurasian Wigeon (*DuMont 1935)
	Black Vulture (*Dill 1933)
	Chuck-will's-widow (*DuMont 1935)
1934	Red Knot (Bennett 1938b)
1940	Ruff (*Dill 1940)
1941	Glaucous Gull (*Stiles 1941)
1945	Ross' Goose (Brown 1971)
1946	Scissor-tailed Flycatcher (*Brown 1946)
1950	Townsend's Warbler (*Feeney 1950)
1952	Black Scoter (*Morrissey 1954)
	Common Raven (*Sieh 1957)
1953	Anhinga (*Collins 1953)
1954	Townsend's Solitaire (Brown 1971)
1958	Sprague's Pipit (*Brown 1958)
1960	Roseate Spoonbill (*Burgess 1960)
	Say's Phoebe (*Bryant and Youngworth 1962)
1961	Cattle Egret (*Weller 1961)
	Black-throated Gray Warbler (*Youngworth 1961)
1964	Mountain Plover (*Petersen 1964)
	Sage Thrasher (Brown 1971)
	Varied Thrush (IBL 35:26)
1966	Ani species (*Vane 1981)
1968	Black-headed Grosbeak (*DeLong 1969)
1969	Western Tanager (*Crocker 1969)
1972	Pinyon Jay (*Zollars 1973)

1974 Mute Swan (IBL 44:20)
Sharp-tailed Sandpiper (*Halmi 1974)
Great Gray Owl (*Berg 1974)
Alder Flycatcher (Petersen, note to Records Committee)
1975 Three-toed Woodpecker (*Fredericksen 1976)
Mountain Bluebird (*Dowell 1975)
Green-tailed Towhee (*Crocker 1975)
1976 Gray Jay (*Koenig 1977)
Boreal Chickadee (*Brown 1976)
1977 White-faced Ibis (*Ryan 1977)
Laughing Gull (*Halmi 1977)
Pygmy Nuthatch (*Brooke 1977)
Prairie Warbler (IBL 47:61)
Golden-crowned Sparrow (*Burns 1977)
1978 Great Black-backed Gull (IBL 49:56)
Black-backed Woodpecker (IBL 49:26, 56)
Hoary Redpoll (*Halmi 1978)
1979 Western Wood-Pewee (*Schaufenbuel 1979)
1980 Curve-billed Thrasher (*Newlon 1981)
Brant (*Dinsmore et al. 1981)
1981 Northern Hawk-Owl (*Myers 1982)
1982 Mew Gull (*Kent 1983)
Chestnut-collared Longspur (IBL 52:63)
House Finch (IBL 52:94)

Appendix D

Persons Whose Unpublished Records Are Cited in Text

JLA	Jerry L. Abma
EB	Edwin Broley
EJB	Eldon J. Bryant
LAB	Lynn A. Braband
TB	Tanya Bray
WHB	Woodward H. Brown
JCC	Jack C. Coffey
JJD	James J. Dinsmore
SD	Steve Duecker
JRF	John R. Faaborg
DLG	David L. Graham
MSG	Marlyn S. Glasson
RRG	Ronnie R. George
DCH	Douglas C. Harr
NH	Neil Heiser
RMH	Russell M. Hays
WMH	William M. Heusinkveld
DK	Darwin Koenig
FWK	Frederick W. Kent
JCK	Joseph C. Kennedy
PK	Pearl Knoop
THK	Thomas H. Kent
DM	Darwin Mosman
PWM	Paul W. Martsching
MCN	Michael C. Newlon
BRO	Bill R. Ohde
NO	Nick Osness
PCP	Peter C. Petersen
DMR	Dean M. Roosa
JCR	John C. Robinson
JS	Jon Stravers
JPS	Joseph P. Schaufenbuel
LAS	Larry A. Stone
RS	Robert Sheets
TS	Tom Stone, Jr.
DV	Daniel Varland
BLW	Barbara L. Wilson
KDW	Kenneth D. Wiggers
WGY	William G. Youngworth
JHZ	J. Hank Zalatel

Gazetteer

This gazetteer lists all of the counties in Iowa, all cities over 10,000 population, major rivers, and all locations cited in the text. For each citation, the region of the state is given as defined by Map 3.1, using the following abbreviations: C for central, EC for east central, NC for north central, NE for northeast, NW for northwest, SC for south central, SE for southeast, SW for southwest, and WC for west central.

Information given for counties includes the region, the county seat and any other major cities, any major river(s), and the locations cited. Information given for cities includes the region, county, and any major river(s). Information given for rivers includes (from mouth to source) regions, counties, and major cities that the river passes through. Information given for locations cited in the text includes the region, county, approximate miles from the nearest town, nature of property, and number of acres. The nature of the property is designated by one or more of the following: Fed. (federal), S.P. (state park), S.Pr. (state preserve), S.F. (state forest), P.H.A. (public hunting area of Iowa Conservation Commission), Co. (county owned), City (city owned), or Private. A few locations that are not cited in the text are included because they are synonyms or part of another location. See the List of Abbreviations at the front of the book for definitions of other abbreviations.

Much of the information in this gazetteer comes from the most recent editions of the following pamphlets published by the Iowa Conservation Commission: "Iowa Public Hunting Areas" (8 pages; covers state-managed hunting areas designated P.H.A.s), "Iowa's State Parks, Forests and Recreation Areas" (large foldout; covers state parks, preserves, and forests), "Directory of State Preserves" (94 pages; gives descriptive detail and location on map), and "County Conservation Area Directory 1981-82" (30 pages; complete list of all county-managed areas by county). An excellent road map, the "Iowa Official State Transportation Map," was used for locations of counties, cities/towns, and rivers. The regions of the state correspond to the districts used by the Iowa Department of Agriculture and the state climatologist.

Adair Co., SW, Greenfield, Mormon Trail P.
Adams Co., SW, Corning.
Allamakee Co., NE, Waukon, Mississippi R., Upper Iowa R., Effigy Mounds, Lansing W.A., Lock and Dam 9, Yellow River F.
Amana L., EC, Iowa Co., 1 w of Amana, Private, 175 a.
Amana Woods (Dutch Lake Woods), EC, Iowa Co., 1 ne of Homestead, Private, 1,100 a.
Ames, C, Story Co., Skunk R.
Anderson L. (formerly Goose L.), C, Hamilton Co., 1 ne of Jewell, Private, 135 a.
Ankeny, C, Polk Co.
Appanoose Co., SC, Centerville, Chariton R., Rathbun Res., Rathbun W.A., Stephens F.
Audubon Co., WC, Audubon, Nishnabotna R.
Barringer Sl., NW, Clay Co., 2 w and 1 n of Ruthven, P.H.A., 1,071 a.

Bays Branch, WC, Guthrie Co., 2 e and 2 n of Panora, P.H.A., 797 a.
Beeds L., NC, Franklin Co., 3 nw of Hampton, S.P., 319 a.
Bellevue S.P., EC, Jackson Co., 2 s of Bellevue, S.P., 547 a.
Benton Co., EC, Vinton, Cedar R.
Bettendorf, EC, Scott Co., Mississippi R.
Big Creek S.P., C, Polk Co., 1 n of Polk City, S.P./P.H.A., 3,100 a.
Big M., NC, Butler Co., 5 n of Parkersburg, P.H.A., 2,813 a.
Big Sand Mound Preserve, SE, Louisa/Muscatine counties, 5 s of Muscatine, Private, 500 a.
Big Sioux R., WC-NW, Woodbury/Plymouth/Sioux/Lyon counties, Sioux City.
Big Wall L., NC, Wright Co., 7 se of Clarion, P.H.A., 978 a.
Black Hawk Co., NE, Waterloo, Cedar Falls, Cedar R., George Wyth S.P.
Black Hawk L., WC, Sac Co., e of Lake View, S.P./P.H.A., 1,228 a.
Bloody Run P., NE, Clayton Co., e of Marquette, Co., 135 a.
Blue L./Lewis and Clark S.P., WC, Monona Co., 2 w of Onawa, S.P./P.H.A., 647 a.
Boone, C, Boone Co.
Boone Co., C, Boone, Des Moines R., Ledges S.P., Saylorville W.A.
Boyer R., SW-WC, Pottawattamie/Harrison/Crawford/Sac counties.
Bremer Co., NE, Waverly, Cedar R., Wapsipinicon R., Sweet M.
Brenton's Sl., C, Polk Co., 2 n of Grimes, Private.
Brown's L., WC, Woodbury Co., 2 w of Salix, P.H.A., 1,100 a.
Browns Sl. (at Rathbun Res.), SC, Lucas Co., 4 s and 3 e of Russell, P.H.A., 153 a.
Brush Creek Canyon, NE, Fayette Co., 2 n of Arlington, S.Pr., 217 a.
Buchanan Co., NE, Independence, Maquoketa R., Wapsipinicon R.
Buena Vista Co., NW, Storm Lake, Raccoon R., Little Sioux R., Pickeral L., Storm L.
Burlington, SE, Des Moines Co., Mississippi R.
Butler Co., NC, Allison, Big M., Heery Woods.
Calhoun Co., WC, Rockwell City, Raccoon R., North and South Twin Lakes.
Camp Arrowhead, SE, Wapello Co., 7 se of Ottumwa, Private.
Camp Dodge, C, Polk Co., 1 n of Johnston, military camp.
Cardinal M., NE, Winneshiek Co., 2 se of Cresco, P.H.A., 862 a.
Carroll Co., WC, Carroll, Raccoon R.
Carter L., WC, Pottawattamie Co., 2 n and 1 w of Council Bluffs, City, 315 a.
Cass Co., SW, Atlantic, East Nishnabotna R., Lake Anita.
Cedar Co., EC, Tipton, Cedar R.
Cedar Falls, NE, Black Hawk Co., Cedar R.
Cedar L., EC, Linn Co., Cedar Rapids.
Cedar R., SW-EC-NE-NC, Louisa/Muscatine/Cedar/Johnson/Linn/Benton/Black Hawk/Bremer/Floyd/Mitchell/Worth counties, Cedar Rapids, Waterloo, Cedar Falls.
Cedar Rapids, EC, Linn Co., Cedar R., Cedar L.
Cerro Gordo Co., NC, Mason City, Clear L., McIntosh Woods, Ventura M., Zirbel Sl.
Chariton R., SC, Appanoose/Lucas counties.
Cheever L., NW, Emmet Co., 2 s and 2 w of Estherville, S.Pr./P.H.A., 423 a.
Cherokee Co., NW, Cherokee, Little Sioux R.
Chickasaw Co., NE, New Hampton, Wapsipinicon R.
Clarke Co., SC, Osceola.
Clay Co., NW, Spencer, Little Sioux R., Barringer Sl., Dan Green Sl., Dewey's Pasture, Elk L., Mud L., Trumble L., Wanata S.P.

Clayton Co., NE, Elkader, Mississippi R., Turkey R., Bloody Run P., Lock and Dam 10, Pikes Peak S.P.
Clear L., NC, Cerro Gordo Co., w of Clear Lake, S.P./P.H.A., 3,643 a. Adjacent areas: McIntosh Woods, Ventura M.
Clinton, EC, Clinton Co., Mississippi R.
Clinton Co., EC, Clinton, Mississippi R., Wapsipinicon R., Goose L., Lock and Dam 13.
Colyn A. (at Rathbun Res.), SC, Lucas Co., 5 s of Russell, P.H.A., 770 a.
Cone M., SE, Louisa Co., 2 w of Conesville, P.H.A./Private, 701+ a.
Cooper M., C, Story Co., 3 ne of Ames, Co., 10 a.
Coralville Res., EC, Johnson Co., 5 n of Iowa City, Fed./P.H.A., 34,677 a. Includes Hawkeye W.A., Macbride Field Campus.
Council Bluffs, SW, Pottawattamie Co., Missouri R.
Crawford Co., WC, Denison, Boyer R.
Credit I., EC, Scott Co., Davenport, City, 420 a.
Crystal L., NC, Hancock Co., n of Crystal Lake, P.H.A., 283 a.
Dallas Co., C, Adel, Des Moines R., Raccoon R., Saylorville W.A.
Dan Green Sl., NW, Clay Co., 5 e of Langdon, P.H.A., 285 a.
Davenport, EC, Scott Co., Mississippi R., Credit I., Lock and Dam 15, Nahant M., Pine Hill Cemetery.
Davis Co., SE, Bloomfield.
Decatur Bend, WC, Monona Co., 5 w of Onawa, P.H.A., 906 a.
Decatur Co., SC, Leon, Nine Eagles S.P.
Delaware Co., NE, Manchester, Maquoketa R.
Des Moines, C, Polk Co., Des Moines R., Raccoon R.
Des Moines Co., SE, Burlington, Mississippi R., Skunk R., Lock and Dam 18.
Des Moines R., SE-SC-C-NC-NW, Lee/Van Buren/Wapello/Mahaska/Marion/Warren/Polk/Dallas/Boone/Webster/Humboldt/Palo Alto/Emmet counties, Keokuk, Ottumwa, Des Moines, Fort Dodge.
De Soto N.W.R., WC, Harrison Co. and Nebraska, 5 w of Missouri Valley, Fed., 7,800 a. (3,500 in Iowa).
Dewey's Pasture, NW, Clay/Palo Alto counties, 1 w and 4 n of Ruthven, P.H.A., 443 a.
Diamond L., C, Poweshiek Co., 1 nw of Montezuma, Co., 269 a.
Dickinson Co., NW, Spirit Lake, Little Sioux R., Grovers L., Hottes L., Jemmerson Sl., Silver L., Spirit L., Swan L., West Okoboji.
Doolittle Prairie, C, Story Co., 3 s of Story City, Co., 55 a.
Dubuque, NE, Dubuque Co., Mississippi R.
Dubuque Co., NE, Dubuque, Mississippi R., Lock and Dam 11, White Pine Hollow.
Dunbar Sl., WC, Greene Co., 5 s and 3 w of Scranton, P.H.A., 507 a.
Dutch Lake Woods (see Amana Woods).
Eagle L., NC, Hancock Co., 3 ne of Britt, P.H.A., 919 a.
Eagle L., NW, Emmet Co., 2 w of Huntington, P.H.A., 277 a.
Easter L., C, Polk Co., 1 se of Des Moines, 172 a.
East Twin L., NC, Hancock Co., 3 e of Kanawha, P.H.A., 493 a.
Echo Valley S.P., NE, Fayette Co., 3 se of West Union, S.P., 101 a.
Effigy Mounds National Monument, NE, Allamakee Co., 3 n of Marquette, Fed., 1,200 a.
Elk Creek M., NC, Worth Co., 3 n of Joice, P.H.A., 2,000 a.
Elk L., NW, Clay Co., 2 w and 3 s of Ruthven, P.H.A., 306 a.
Elm L., NC, Wright Co., 3 ne of Clarion, P.H.A., 466 a.
Emmet Co., NW, Estherville, Des Moines R., Cheever L., Eagle L., Fort Defiance S.P., High L., Ingham L., West Swan L.

Engineer Cantonment, SW, across from Pottawattamie Co., 10 n and 5 w of Council Bluffs, ancient site.
Fairview A., NW, Sioux Co., 2 n and 8 w of Rock Rapids, Co., 31 a.
Fayette Co., NE, West Union, Maquoketa R., Turkey R., Brush Creek Canyon, Echo Valley S.P., Volga River A.
Fisher's L., C., Polk Co., 2 n of Des Moines.
Floyd Co., NC, Charles City, Cedar R.
Floyd R., WC-NW, Woodbury/Plymouth/Sioux/O'Brien counties, Sioux City.
Folsom W.A., SW, Mills Co., 4 nw of Glenwood, P.H.A., 100 a.
Forney L., SW, Fremont Co., 2 nw of Thurman, P.H.A., 1,071 a.
Fort Defiance S.P., NW, Emmet Co., 1 w of Estherville, S.P., 181 a.
Fort Dodge, NC, Webster Co., Des Moines R.
Fort Madison, SE, Lee Co., Mississippi R.
Franklin Co., NC, Hampton, Iowa R., Beeds L.
Fremont Co., SW, Sidney, Missouri R., Nishnabotna R., Forney L., Manti Memorial P., Riverton A., Waubonsie S.P.
George Wyth S.P., NE, Black Hawk Co., Cedar Falls, S.P., 454 a.
Gitchie-Manitou S.Pr., NW, Lyon Co., 9 nw of Larchwood, S.Pr., 91 a.
Goose L., C, Hamilton Co. (see Anderson L.)
Goose L., EC, Clinton Co., 1 w of Goose Lake, P.H.A., 893 a.
Goose L., WC, Greene Co., 5 n and 1 w of Jefferson, P.H.A., 456 a.
Green Bay, SE, Lee Co., 4 s of Wever, P.H.A., 171 a.
Green I., EC, Jackson Co., 6 n of Sabula, P.H.A., 3,294 a.
Greene Co., WC, Jefferson, Raccoon R., Dunbar Sl., Goose L.
Grovers L., NW, Dickinson Co. and Minnesota, 2 w and 5 n of Spirit Lake.
Grundy Co., C, Grundy Center.
Guthrie Co., WC, Guthrie Center, Bays Branch, Springbrook S.P.
Hamilton Co., C, Webster City, Skunk R., Anderson L., Little Wall L.
Hancock Co., NC, Garner, Iowa R., Crystal L., Eagle L., East and West Twin Lakes.
Hardin Co., C, Eldora, Iowa R., Pine L.
Harrison Co., WC, Logan, Boyer R., Little Sioux R., Missouri R., De Soto N.W.R.
Hawkeye W.A. (at Coralville Res.), EC, Johnson Co., 2 w and 2 n of North Liberty, P.H.A., 13,078 a.
Hayden Prairie, NE, Howard Co., 3 sw of Chester, S.Pr/P.H.A., 240 a.
Heery Woods S.P., NC, Butler Co., s of Clarksville, Co., 380 a.
Hendrickson M., C, Story Co., 3 w of Rhodes, P.H.A., 601 a.
Henry Co., SE, Mount Pleasant, Skunk R.
Hickory Hill P., EC, Johnson Co., NE Iowa City, City, 137 a.
High L., NW, Emmet Co., 5 e of Wallingford, P.H.A., 683 a.
Hottes L., NW, Dickinson Co., 3 n of Spirit Lake, P.H.A., 378 a.
Howard Co., NE, Cresco, Turkey R., Upper Iowa R., Wapsipinicon R., Hayden Prairie, Lylah's Sl.
Humboldt Co., NC, Dakota City, Des Moines R.
Ida Co., WC, Ida Grove.
Ingham L., NW, Emmet Co., 5 e of Wallingford, P.H.A., 1,002 a.
Iowa City, EC, Johnson Co., Iowa R., Hickory Hill P.
Iowa Co., EC, Marengo, Iowa R., Amana L., Amana Woods.
Iowa R., SE-EC-C-NC, Louisa/Johnson/Iowa/Tama/Marshall/Hardin/Franklin/Wright/Hancock counties, Iowa City, Marshalltown.
IPL (Iowa Power and Light) Settling Ponds, SW, Pottawattamie Co., 7 s of Council Bluffs, Private.
Jackson Co., EC, Maquoketa, Maquoketa R., Mississippi R., Bellevue S.P., Green I., Lock and Dam 12.
Jasper Co., C, Newton, Skunk R., Rock Creek S.P.

Jefferson Co., SE, Fairfield, Skunk R..
Jester P. (at Saylorville Res.), C, Polk Co., 3 nw of Polk City, Co., 898 a.
Jemmerson Sl., NW, Dickinson Co., 2 w of Spirit Lake, P.H.A., 343 a.
Johnson Co., EC, Iowa City, Cedar R., Iowa R., Coralville Res., Hawkeye W.A., Hickory Hill P., L. Macbride, Macbride Field Campus, Swan L.
Jones Co., EC, Anamosa, Maquoketa R., Wapsipincon R., Muskrat Sl.
Keokuk, SE, Lee Co., Des Moines R., Mississippi R., Lock and Dam 19.
Keokuk Co., SE, Sigourney, Skunk R.
Keokuk Pool (Pool 19), SE, Lee Co., Keokuk to Fort Madison, Fed.
Kossuth Co., NC, Algona, Union Sl. N.W.R.
Lacey-Keosauqua S.P., SE, Van Buren Co., s of Keosauqua, S.P., 1,498 a.
Lake Ahquabi, SC, Warren Co., 6 sw of Indianola, S.P., 775 a.
Lake Anita, SW, Cass Co., 1 s of Anita, S.P., 942 a.
Lake Cornelia P., NC, Wright Co., 4 n and 3 e of Clarion, Co., 96 a.
Lake Keomah, SC, Mahaska Co., 5 e of Oskaloosa, S.P., 373 a.
Lake Macbride, EC, Johnson Co., 4 w of Solon, S.P., 1,073 a.
Lake Manawa, WC, Pottawattamie Co., 1 s of Council Bluffs, S.P./P.H.A., 1,529 a.
Lake Okoboji (see West Okoboji)
Lake Odessa, SE, Louisa, 5 e of Wapello, P.H.A., 4,100 a.
Lansing W.A., NE, Allamakee Co., 3 n of Lansing, P.H.A., 895 a.
Ledges S.P., C, Boone Co., 6 s of Boone, S.P., 859 a.
Lee Co., SE, Fort Madison, Keokuk, Des Moines R., Mississippi R., Skunk R., Green Bay, Keokuk Pool, Lock and Dam 19, Shimek F.
Lewis and Clark S.P. (see also Blue L.), WC, Monona Co., 2 w of Onawa, S.P., 286 a.
Linn Co., EC, Cedar Rapids, Marion, Cedar R., Wapsipinicon R., Cedar L., Palisades-Kepler S.P., Palo M.
Little Clear L., NW, Pocahontas Co., 10 w of Pocahontas, P.H.A., 187 a.
Little Sioux R., WC-NW, Harrison/Monona/Woodbury/Cherokee/Buena Vista/Clay/Dickinson counties, Spencer.
Little Wall L., C., Hamilton Co., 2 s of Jewell, P.H.A., 273 a.
Lizard L., NW, Pocahontas Co., 2 w and 4 s of Gilmore City, P.H.A., 348 a.
Lock and Dam 9, NE, Allamakee Co., 3 n of Harpers Ferry, Fed.
Lock and Dam 10, NE, Clayton Co., Guttenberg, Fed.
Lock and Dam 11, NE, Dubuque Co., Dubuque, Fed.
Lock and Dam 12, EC, Jackson Co., Bellevue, Fed.
Lock and Dam 13, EC, Clinton Co., 1 n of Clinton, Fed.
Lock and Dam 14, EC, Scott Co., 5 e and 2 n of Bettendorf, Fed.
Lock and Dam 15, EC, Scott Co., Davenport, Fed.
Lock and Dam 16, EC, Muscatine Co., Muscatine, Fed.
Lock and Dam 17, SE, Louisa Co., 6 e of Wapello, Fed.
Lock and Dam 18, SE, Des Moines Co., 5 n and 4 e of Burlington, Fed.
Lock and Dam 19, SE, Lee Co., Keokuk, Fed.
Lost Island L., NW, Palo Alto Co., 1 w and 3 n of Ruthven, P.H.A., 1,260 a.
Louisa Co., SE, Wapello, Cedar R., Iowa R., Mississippi R., Big Sand Mound Preserve, Cone M., L. Odessa, Lock and Dam 17, Mark Twain N.W.R.
Lucas Co., SC, Chariton, Chariton R., Browns Sl., Colyn A., Rathbun W.A., Rathbun Res., Stephens F.
Lylah's Sl., NE, Howard Co., 3 nw of Elma, Co., 155 a.
Lyon Co., NW, Rock Rapids, Big Sioux R., Rock R., Gitchie-Manitou S.Pr.

Macbride Field Campus, EC, Johnson Co., 3 ne of North Liberty, University, 620 a.
Madison Co., SC, Winterset.
Mahaska Co., SE, Oskaloosa, Des Moines R., Skunk R., Quercus Wilderness A.
Manti Memorial P., SW, Fremont Co., 4 sw of Shenandoah, Co., 12 a.
Maquoketa R., EC-NE, Jackson/Jones/Delaware/Buchanan/Fayette counties.
Marion, EC, Linn Co.
Marion Co., SC, Knoxville, Des Moines R., Skunk R., Red Rock Res., Red Rock W.A.
Mark Twain N.W.R., SE, Louisa Co., 5 e and 2 n of Wapello, Fed., 10,376 a.
Marshall Co., C, Marshalltown, Iowa R.
Marshalltown, C, Marshall Co., Iowa R.
Mason City, NC, Cerro Gordo Co.
McCray's Sl. (Tomahawk M.), WC, Sac Co., 4 n of Lake View, P.H.A., 40 a.
McFarland P., C, Story Co., 2 e and 5 n of Ames, Co., 188 a.
McIntosh Woods, NC, Cerro Gordo Co., 1 e of Ventura, S.P./P.H.A., 219 a.
Mill Creek S.P., NW, O'Brien Co., e of Paullina, Co., 124 a.
Mills Co., SW, Glenwood, Missouri R., Nishnabotna R., Folsom W.A., Willow Sl.
Mississippi R., SE-EC-NE, Lee/Des Moines/Louisa/Muscatine/Scott/Clinton/Jackson/Dubuque/Clayton/Allamakee counties, Keokuk, Fort Madison, Burlington, Muscatine, Davenport, Bettendorf, Clinton, Dubuque.
Missouri R., SW-WC, Fremont/Mills/Pottawattamie/Harrison/Monona/Woodbury counties, Council Bluffs, Sioux City.
Mitchell Co., NC, Osage, Cedar R., Wapsipinicon R.
Monona Co., WC, Onawa, Little Sioux R., Missouri R., Blue L., Decatur Bend, Lewis and Clark S.P.
Monroe Co., SC, Albia, Rathbun W.A., Stephens F.
Montgomery Co., SW, Red Oak, Nishnabotna R.
Mormon Trail P., SW, Adair Co., 1 se of Brigewater, Co., 170 a.
Mud L., NW, Clay Co., 1 w and 4 n of Ruthven, Private.
Muscatine, EC, Muscatine Co., Mississippi R.
Muscatine Co., EC, Muscatine, Cedar R., Mississippi R., Big Sand Mound Preserve, Lock and Dam 16, Weise Sl., Wildcat Den S.P.
Muskrat Sl., EC, Jones Co., 3 w of Olin, P.H.A., 366 a.
Nahant M., EC, Scott Co., SW Davenport, Private.
Newton, C, Jasper Co.
Nine Eagles S.P., SC, Decatur Co., 6 se of Davis City, S.P., 1,119 a.
Nishnabotna R. (East and West), SW-WC, Fremont/Mills/Page/Montgomery/Potawattamie/Cass/Shelby/Audubon counties.
North Twin L., WC, Calhoun Co., 5 n of Rockwell City, P.H.A., 574 a.
O'Brien Co., NW, Primghar, Floyd R., Mill Creek S.P.
Osceola Co., NW, Sibley, Rush L.
Oskaloosa, SE, Mahaska Co.
Ottumwa, SE, Wapello Co., Des Moines R.
Otter Creek M., C, Tama Co., 1 nw of Chelsea, P.H.A., 3,285 a.
Page Co., SW, Clarinda, Nishnabotna R.
Palisades-Kepler S.P., EC, Linn Co., 4 w of Mt. Vernon, S.P., 603 a.
Palo Alto Co., NW, Emmetsburg, Des Moines R., Dewey's Pasture, Lost Island L., Rush L., Virgin L.
Palo M., EC, Linn Co., 1 n of Palo, Co., 144 a.
Pickeral L., NW, Buena Vista Co., 3 n of Marathon, P.H.A., 176 a.

Pikes Peak S.P., NE, Clayton Co., 3 se of McGregor, S.P., 970 a.
Pilot Knob S.P., NC, Winnebago Co., 4 e of Forest City, S.P., 700 a.
Pine Hill Cemetery, EC, Scott Co., N Davenport, Private.
Pine L., C, Hardin Co., 1 ne of Eldora, S.P., 572 a.
Plymouth Co., NW, LeMars, Big Sioux R., Floyd R.
Pocahontas Co., NW, Pocahontas, Little Clear L., Lizard L., Sunken Grove.
Polk Co., C, Des Moines, Ankeny, Urbandale, West Des Moines, Des Moines R., Raccoon R., Skunk R., Big Creek S.P., Brenton's Sl., Camp Dodge, Easter L., Fisher's L., Jester P., Red Rock W.A., Runnells Game A., Saylorville Res., Saylorville W.A.
Pool 19 (see Keokuk Pool)
Pottawattamie Co., SW, Council Bluffs, Boyer R., Missouri R., Nishnabotna R., Carter L., IPL Settling Ponds, L. Manawa, Wilson Island.
Potter's Sl. (see Swan L., Dickinson Co.)
Poweshiek Co., C, Montezuma, Diamond L.
Prairie Rose S.P., WC, Shelby Co., 6 e and 3 s of Harlan, S.P., 66 a.
Princeton A., EC, Scott Co., 1 n of Princeton, P.H.A., 1,178 a.
Quercus Wilderness A., SC, Mahaska Co., 3 nw of Eddyville, Co., 78 a.
Raccoon R., C-WC-NW, Polk/Dallas/Greene/Carroll/Calhoun/Sac/Buena Vista counties, Des Moines.
Rathbun Res., SC, Appanoose Co., 7 n of Centerville, Fed./P.H.A. Includes Browns Sl., Colyn A., Honey Creek S.P., Rathbun W.A.
Rathbun W.A. (at Rathbun Res.), SC, Appanoose/Lucas/Monroe/Wayne counties, P.H.A., 13,720 a.
Red Rock Res., SC, Marion Co., 6 e and 3 n of Knoxville, Fed./P.H.A. Includes Red Rock W.A., Runnells Game A.
Red Rock W.A. (at Red Rock Res.), SC, Marion/Polk/Warren counties, P.H.A., 25,542 a.
Rice L., NC, Winnebago/Worth counties, 2 se of Lake Mills, S.P./P.H.A., 1,831 a.
Ringgold Co., SC, Mount Ayr.
Riverton A., SW, Fremont Co., 1 n of Riverton, P.H.A., 2,493 a.
Rock Creek S.P. (at Rock Creek L.), C, Jasper Co., 6 ne of Kellogg, S.P., 1,262 a.
Rock R., NW, Sioux/Lyon counties.
Runnells Game A. (part of Red Rock W.A.), C, Warren/Polk counties, 2 s of Runnells.
Rush L., NW, Osceola Co., 2 e and 1 n of Ocheyedan, P.H.A., 336 a.
Rush L., NW, Palo Alto Co., 6 n of Laurens, P.H.A., 522 a.
Sac Co., WC, Sac City, Boyer R., Raccoon R., Black Hawk L., McCray's Sl.
Saylorville Res., C, Polk Co., 6 n and 4 w of Des Moines, Fed./P.H.A. Includes Jester P., Saylorville W.A.
Saylorville W.A. (at Saylorville Res.), C, Boone/Dallas/Polk counties, P.H.A., 10,909 a.
Scott Co., EC, Davenport, Bettendorf, Mississippi R., Wapsipinicon R., Credit I., Locks and Dams 14 and 15, Nahant M., Pine Hill Cemetery, Princeton A.
Shelby Co., WC, Harlan, Nishnabotna R.
Shimek F., SE, Lee/Van Buren counties, near Farmington and Keosauqua, S.F./P.H.A., 7,940 a. (5 units, 4 in Lee Co.).
Silver L., NW, Dickinson Co., s of Lake Park, P.H.A., 1,141 a.
Sioux City, WC, Woodbury Co., Big Sioux R., Floyd R., Missouri R., Stone P.
Sioux Co., NW, Orange City, Floyd R., Rock R., Big Sioux R., Fairview A.

Skunk R., SE-C, Lee/Des Moines/Henry/Jefferson/Washington/Keokuk/Mahaska/Marion/Jasper/Polk/Story/Hamilton counties, Ames.
Skunk River Green Belt, C, Story Co., n of Ames to Story City, Co., 426 a.
Soper's Mill (part of Skunk River Green Belt), C, Story Co., 2 e of Gilbert, Co.
South Twin L., WC, Calhoun Co., 4 n of Rockwell City, P.H.A., 600 a.
Spencer, NW, Clay Co., Little Sioux R.
Spirit L., NW, Dickinson Co., n of Orleans, P.H.A., 5,684 a.
Springbrook S.P., WC, Guthrie Co., 8 ne of Guthrie Center, S.P., 794 a.
Stephens F., SC, Lucas Co. (also Appanoose/Clark/Monroe counties), several units, S.F./P.H.A., 8466 a.
Stone P., WC, Woodbury Co., NW Sioux City, S.P., 1,069 a.
Storm L., NW, Buena Vista Co., s of Storm Lake, P.H.A., 3,367 a.
Story Co., C, Nevada, Ames, Skunk R., Cooper M., Doolittle Pr., Hendrickson M., Skunk River Green Belt, Soper's Mill.
Sunken Grove, NW, Pocahontas Co., 2 n and 2 w of Fonda, P.H.A., 371 a.
Swan L. (see also West Swan L.), EC, Johnson Co., 5 w and 2 n of North Liberty, P.H.A., 44 a.
Swan L. (Potter's Sl.), NW, Dickinson Co., 2 n of Superior, P.H.A., 380 a.
Sweet M., NE, Bremer Co., 1 e of Tripoli, P.H.A., 1,925 a.
Tama Co., C., Toledo, Iowa R., Otter Creek M., Union Grove S.P.
Taylor Co., SW, Bedford.
Trumbull L., NW, Clay Co., 1 w and 5 n of Ruthven, P.H.A., 1,224 a.
Turkey Creek A., SW, Cass Co., 2 ne of Lewis, Co., 57 a.
Turkey R., NE, Clayton/Fayette/Winneshiek/Howard counties.
Twin L. (see east and west, Calhoun Co.; north and south, Hancock Co.)
Union Co., SC, Creston.
Union Grove S.P., C, Tama Co., 4 sw of Gladbrook, S.P., 282 a.
Union Sl. N.W.R., NC, Kossuth Co., 6 w of Titonka, Fed., 2,077 a.
Upper Iowa R., NE, Allamakee/Winneshiek/Howard counties.
Upper Mississippi N.W.R., NE-EC, Pools above Lock and Dams 9-14, Fed., 50,791 a. (30,315 in Iowa).
Urbandale, C, Polk Co.
Van Buren Co., SE, Keosauqua, Des Moines R., Lacey-Keosauqua S.P., Shimek F.
Ventura M., NC, Cerro Gordo Co., sw of Ventura, P.H.A., 751 a.
Virgin L., NW, Palo Alto Co., 2 s of Ruthven, P.H.A., 225 a.
Volga River A., NE, Fayette Co., 5 ne of Fayette, S.P./P.H.A., 5,459 a.
Wanata S.P., NW, Clay Co., s of Petersen, S.P., 160 a.
Wapello Co., SE, Ottumwa, Des Moines R., Camp Arrowhead.
Wapsipinicon R., EC-NE, Scott/Clinton/Jones/Linn/Buchanan/Black Hawk/Bremer/Chickasaw/Howard/Mitchell counties.
Warren Co., SC, Indianola, Des Moines R., L. Ahquabi, Red Rock W.A., Runnells Game A.
Washington Co., SE, Washington, Skunk R.
Waterloo, NE, Black Hawk Co., Cedar R.
Waubonsie S.P., SW, Fremont Co., 7 sw of Sidney, S.P., 1,209 a.
Wayne Co., SC, Corydon, Rathbun W.A.
Webster Co., C, Fort Dodge, Des Moines R.
Weise Sl., EC, Muscatine Co., 2 e of Atalissa, P.H.A., 1,707 a.
West Des Moines, C, Polk Co.
West Okoboji, NW, Dickinson Co., w of Arnolds Park, P.H.A., 3,949 a.
West Swan L., NW, Emmet Co., 2 s and 1 e of Gruver, P.H.A., 1,195 a.
West Twin L., NC, Hancock Co., 2 w of Kanawha, 109 a.

White Pine Hollow, NE, Dubuque Co., 2 nw of Luxemburg, S.Pr./P.H.A., 712 a.
Wildcat Den S.P., EC, Muscatine Co., 3 e of Fairport, S.P., 321 a.
Willow Sl., SW, Mills Co., 3 s of Henderson, P.H.A., 599 a.
Wilson Island, SW, Pottawattamie Co., 5 w of Loveland, S.P./P.H.A., 525 a.
Winnebago Co., NC, Forest City, Pilot Knob S.P., Rice L.
Winneshiek Co., NE, Decorah, Turkey R., Upper Iowa R., Cardinal M.
Woodbury Co., WC, Sioux City, Big Sioux R., Floyd R., Little Sioux R., Missouri R., Brown's L., Stone P.
Worth Co., NC, Northwood, Cedar R., Elk Creek M., Rice L.
Wright Co., NC, Clarion, Iowa R., Big Wall L., Elm L.
Yellow River F., NE, Allamakee Co., 3 se of Waterville, S.F./P.H.A., 6,629 a. (7 units).
Zirbel Sl., NC, Cerro Gordo Co., 5 s and 2 e of Clear Lake, Co., 330 a.

References

Allen, J. A. 1868. Notes on birds observed in western Iowa in the months July, August, and September. **Mem. Boston Soc. Nat. Hist.** 1:488-502.

------. 1870. Catalogue of the birds of Iowa. In **Report on the Geological Survey of the State of Iowa**, vol. 2, ed. C. A. White. Des Moines: Mills and Co., pp. 419-427.

American Ornithologists' Union. 1982. Thirty-fourth supplement to the American Ornithologists' Union check-list of North American Birds. **Auk** 99(3)[Suppl.]:1-16CC.

Anderson, R. M. 1897. An Annotated List of the Birds of Winnebago and Hancock Counties, Iowa. Forest City: Published by author, 19 p.

------. 1907. The birds of Iowa. **Proc. Davenport Acad. Sci.** 11:125-417.

Anonymous. 1881. **History of Fremont County, Iowa.** Des Moines: Iowa Historical Company, pp. 339-354.

------. 1883. **History of Johnson County, Iowa.** Iowa City, pp. 562-568.

------. 1936. Local bird clubs in Iowa. **Iowa Bird Life** 6:36-39.

------. 1946a. Local bird clubs in Iowa. **Iowa Bird Life** 16:58-59.

------. 1946b. Recent bird books. **Iowa Bird Life** 16:59-60.

------. 1947. Local bird clubs in Iowa. **Iowa Bird Life** 17:74-77.

------. 1971. Announcing--the Blue List: An "early warning system" for birds. **Am. Birds** 25:948-949.

------. 1979. Endangered and threatened wildlife. **Federal Register** 44(12), 17 Jan 1979.

Audubon, M. R., and E. Coues. 1897. **Audubon and His Journals.** New York: Charles Scribner's Sons, vol. 1, pp. 476-487; vol. 2, pp. 170-172.

Bailey, B. H. 1906. **200 Wild Birds of Iowa.** Cedar Rapids: Audubon Nature Publications, 93 p.

------. 1910. **Two Hundred Wild Birds of Iowa.** Cedar Rapids: The Superior Press, 80 p.

------. 1918. **The Raptorial Birds of Iowa.** Des Moines: Iowa Geological Survey (bull. no. 6), 238 p.

Balch, L. 1978. Shrike identification. **Illinois Audubon Bull.** 183:25-27.

Banks, R. C., M. H. Clench, and J. C. Barlow. 1973. Bird collections in the United States and Canada. **Auk** 90:136-170.

Barger, N. R., R. H. Lound, and S. D. Robbins. 1975. Wisconsin Birds. Wisconsin Society for Ornithology, 32 p.

Bartsch, P. 1897. Summer birds of the Oneota Valley (June, July 1895). **Iowa Orn.** 3:51-61.

------. 1899. The Literature of Iowa Birds, 3 vols. Master's thesis, University of Iowa.

Bennett, L. J. 1934. Notes on nesting waterfowl and other marsh nesting birds in northwest Iowa. **Oologist** 51:101-104.

------. 1935. The 1934 spring migration of shore birds through Clay and Palo Alto Counties, Iowa. **Iowa State Coll. J. Sci.** 9:609-616.

------. 1938a. **The Blue-winged Teal: Its Ecology and Management.** Ames, Iowa: Collegiate Press, 144 p.

------. 1938b. The 1934 migration of some birds through Clay and Palo Alto Counties, Iowa. **Iowa Bird Life** 8:2-6.

Bennett, W. W. 1931. Birds of Sioux City Iowa. Sioux City, Iowa: Sioux City Bird Club. 18 p.

Black, G. 1974. Shorebirds at Red Rock Reservoir--1973. **Iowa Bird Life** 44:25-26.

------. 1979. **Birds of Iowa.** Iowa Chapter of the Nature Conservancy, 80 p.

Bohlen, H. D. 1978. **An Annotated Check-list of the Birds of Illinois.** Springfield, Ill.: Illinois State Museum, 156 p.

Brown, W. H. 1953. Polk County Check-list of Observations of Members of the Des Moines Audubon Society. 18 p.

------. 1957. Twenty years of Christmas Bird Censuses in Iowa--Analysis and criticism. **Iowa Bird Life** 27:85-91.

------. 1959. Polk County Check-list of Observations of Members of the Des Moines Audubon Society. Des Moines, Iowa: Des Moines Audubon Society, 40 p.

------. 1971. An annotated list of the birds of Iowa. **Iowa State J. Sci.** 45:387-469.

------. 1973a. Shorebirds at Des Moines. **Iowa Bird Life** 43:77.

------. 1973b. Winter population trends in Marsh, Cooper's and Sharp-shinned hawks. **Am. Birds** 27:6-7.

------. 1975. Population changes in the Tufted Titmouse and Black-capped Chickadee. **Iowa Bird Life** 45:97.

Brown, W. H., N. S. Halmi, and R. F. Vane. 1977. I.O.U. checklist of Iowa birds. **Iowa Bird Life** 47:31-40.

Bull, J. 1974. **Birds of New York State.** Garden City, N.Y.: Doubleday, 655 p.

Burns, F. L. 1915. A bibliography of scarce or out of print North American amateur and trade periodicals devoted more or less to ornithology. **Oologist** 32[Suppl.]:1-32.

Cole, J. L. 1920. Story County Iowa birds. **Oologist** 37:11-13.

Cooke, W. W. 1888. **Report on Bird Migration in the Mississippi Valley in the Years 1884 and 1885.** Washington, D.C.: U.S.D.A., Division of Economic Ornithology (bull. no. 2), 313 p.

Cooper, T. C. 1982. **Iowa's Natural Heritage.** Des Moines: Iowa Natural Heritage Foundation and the Iowa Academy of Science, 341 p.

Crane, J. L., and G. W. Olcott. 1933. **Report on the Iowa Twenty-five Year Conservation Plan.** Des Moines: Wallace Homestead Co., 176 p.

Crawford, R. D. 1975. A four-year summary of unusual Iowa bird records. **Iowa Bird Life** 45:90-91.

Crone, J. V. 1890. Summer residents of Buena Vista County, Iowa. **Oologist** 7:45-47.

Dinsmore, J. J. 1981. Iowa's avifauna: Changes in the past and prospects for the future. **Proc. Iowa Acad. Sci.** 88:28-37.

DuMont, P. A. 1931. Birds of Polk County Iowa. Des Moines: Des Moines Audubon Society, 72 p.

------. 1932. Notes from central Iowa. **Wilson Bull.** 44:170-177.

------. 1933. **A Revised List of the Birds of Iowa.** Iowa City: University of Iowa Studies in Natural History, vol. 15, no. 5, 171 p.

------. 1934. The breeding birds of Iowa. **Oologist** 51:50-66.

------. 1935a. The role of the accidental or straggling species of birds in Iowa. **Iowa Bird Life** 5:8-9.

------. 1935b. Additional Iowa species of birds substantiated by specimens. **Wilson Bull.** 47:205-208.

------. 1935c. Additional breeding birds in Iowa. **Oologist** 52:83-84.

------. 1944. A review of ornithology in Iowa. **Iowa Bird Life** 14:64-68.

Easterla, D. A., and R. A. Anderson. 1979. Checklist of Missouri Birds. Audubon Society of Missouri, 2 p.

Ennis, J. H., T. J. Feeney, T. Morrissey, J. W. Musgrove, W. Youngworth, and W. H. Brown. 1954. Iowa distributional check-list. **Iowa Bird Life** 24:73-79.

Fagan, L. P. 1909. The summer resident birds of Polk County Iowa--a guide to local study. **Proc. Iowa Acad. Sci.** 16:197-215.

Farris, A. E., E. D. Klonglan, and R. C. Nomsen. 1977. **The Ring-necked Pheasant in Iowa.** Des Moines: Iowa Conservation Commission, 147 p.

Fawks, E., and P. Petersen. 1961. A Field List of Birds of the Tri-city Region. Davenport, Iowa: Tri-city Bird Club, 40 p.

Fenton, C. L. 1916. Preliminary list of the birds of Floyd County, Iowa. **Wilson Bull.** 28:130-138.

------. 1923-1924. The birds of Floyd County, Iowa. **Am. Midl. Nat.** 8:189-208, 230-256; 9:63-69.

Gabrielson, I. N. 1914. Breeding birds of Clay County, Iowa. **Wilson Bull.** 26:69-81.

------. 1917a. A list of birds observed in Clay and O'Brien Counties, Iowa. **Proc. Iowa Acad. Sci.** 24:259-272.

------. 1917b. A criticism of two recent lists of Iowa birds. **Wilson Bull.** 29:97-100.

------. 1918. A list of the birds found in Marshall County, Iowa. **Proc. Iowa Acad. Sci.** 25:123-153.

------. 1919. The birds of Marshall County, Iowa, II. **Proc. Iowa Acad. Sci.** 16:47-75.

Glover, F. A. 1948. The 1947 fall migration of aquatic birds through central Iowa. **Iowa Bird Life** 18:43-47.

------. 1951. Spring waterfowl migration through Clay and Palo Alto Counties, Iowa. **Iowa State Coll. J. Sci.** 25:483-492.

Grant, M. L. 1963. A checklist of Iowa birds, coded with status symbols. **Iowa Bird Life** 33:50-62.

Green, J. C., and R. B. Janssen. 1975. **Minnesota Birds: Where, When and How Many.** Minneapolis: University of Minnesota Press, 217 p.

Griscom, L., and D. E. Snyder. 1955. **The Birds of Massachusetts: An Annotated and Revised Check List.** Salem, Mass.: Peabody Museum, 295 p.

Gromme, W. J. 1963. **Birds of Wisconsin.** Madison: University of Wisconsin Press, 219 p.

Halmi, N. S. 1976. Shorebirds in Iowa City area, 1973-75. **Iowa Bird Life** 46:26.

------. 1977. Early arrival of peeps in eastern Iowa. **Iowa Bird Life** 47:65-66.

Hendrickson, G. O. 1944. The Allert collection passes to Iowa State College. **Iowa Bird Life** 14:68-69.

Henning, C. F. 1900. Notes on the birds of Boone County, Iowa. **Western Ornithologist** 5:15-19, 36-39, 54-57.

Hodges, J. 1959. Birds of Scott County, Iowa: 1900-1925. **Iowa Bird Life** 29:33-36.

James, E. 1823. **Account of an Expedition from Pittsburgh to the Rocky Mountains Performed in the Years 1919, 1920.** London: Longman, Hurst, Rees, Orme and Brown, pp. 261-270.

Johnsgard, P. A. 1980. A Revised List of the Birds of Nebraska and Adjacent Plains States. Lincoln: Nebraska Ornithologists' Union, occas. pap. no. 6, 114+ p.

Johnston, R. F. 1964. The breeding birds of Kansas. **University of Kansas Publications, Museum of Natural History** 12:575-655.

------. 1965. **A Directory to the Birds of Kansas.** Lawrence: Museum of Natural History, University of Kansas, 67 p.

Jones, L. 1889. A list of birds found in eastern Jasper and western Poweshiek Counties, Iowa. **Curlew** 1:50-53, 57-60.

Keith, G. S., et al. 1982. A.B.A. Checklist: Birds of Continental United States and Canada, 2d ed. Austin, Tex.: American Birding Association, 90 p.

Keller, C. E., S. A. Keller, and T. C. Keller. 1979. **Indiana Birds and Their Haunts.** Bloomington: Indiana University Press, 214 p.

Kelsey, C. 1891. Birds of Poweshiek County, Iowa. **Ornithologist and Oologist** 16:131-134.

Kent, F. W., and T. H. Kent. 1975. Birding in Eastern Iowa. Iowa City: Published by the authors, 150 p.

Kent, T. H. 1981. Reporting observations of birds seen in Iowa. **Iowa Bird Life** 51:88-98.

------. 1982. Report of the I.O.U. Records Committee. **Iowa Bird Life** 52:39-43.

Kent, T. H., J. J. Dinsmore, D. Koenig, M. C. Newlon, P. C. Petersen, W. R. Silcock, and J. P. Schaufenbuel. 1982. Official checklist of Iowa birds: 1982 edition. **Iowa Bird Life** 52:67-76.

Keyes, C. R., and H. S. Williams. 1889. Preliminary annotated catalogue of the birds of Iowa. **Proc. Davenport Acad. Nat. Sci.** 5:113-161.

Koenig, D. 1975a. Winter hawk population trends in Iowa--Part I. **Iowa Bird Life** 45:42-48.

------. 1975b. Winter hawk population trends in Iowa--Part II. **Iowa Bird Life** 45:67-78.

------. 1976. Some unusual nest discoveries. **Iowa Bird Life** 46:19-20.

------. 1977. Winter population trends of woodpeckers in Iowa. **Iowa Bird Life** 47:75-92.

------. 1979. Annotated list of Allamakee County foray birds. **Iowa Bird Life** 49:71-77.

Krider, J. 1879. **Forty Years Notes of a Field Ornithologist.** Philadelphia, Pa.: J. H. Weston Press, 84 p.

Kumlien, L., and N. Hollister. 1951. **The Birds of Wisconsin**, rev. ed. (A. W. Shorger, ed.). Madison: Wisconsin Society of Ornithology, 122 p.

Laffoon, J. 1941. Late fall and winter bird reports, 1938-1941, in Sioux City area. **Proc. Iowa Acad. Sci.** 48:425-436.

Lange, D. 1906. **How to Know the Wild Birds of Iowa and Nebraska.** Minneapolis, Minn.: North-Western School Supply Co., 68 p.

Legg, R., and P. Frye. 1981. Effect of effort and environmental variables on Christmas Bird Count outcomes in Iowa. **Iowa Bird Life** 51:43-49.

Low, J. B. 1939. A comparison of spring migration of shore birds through Clay and Palo Alto Counties, Iowa. **Iowa State Coll. J. Sci.** 13:187-200.

------. 1941. Spring flight of diving ducks through northwestern Iowa. **Condor** 43:142-151.

Lowery, G. H., Jr. 1974. **Louisiana Birds**, 3d rev. ed. Baton Rouge: Louisiana State University Press.

Morrissey, T. J. 1967-1968. Notes of birds in the Davenport area. **Iowa Bird Life** 37:75-97, 38:27-46.

------. 1968a. Notes of birds in the Davenport area. **Iowa Bird Life** 38:67-85.

------. 1968b. Notes of birds in the Davenport area. **Iowa Bird Life** 38:107-118.

Musgrove, J. 1949. Check list of Iowa Birds. **Iowa Conserv.**, April 1949.

------. 1952. Check list of Iowa birds. **Iowa Conserv.** [Suppl.], May 1952.

Musgrove, J. W., and M. R. Musgrove. 1977. **Waterfowl in Iowa**, 5th ed.

Des Moines: State Conservation Commission, 130 p.
Nauman, E. D. 1926. An Iowa bird census. **Wilson Bull.** 38:83-91.
Newhouse, D. 1982. Iowa's Nest Record Card Program. Des Moines: Iowa Conservation Commission, 18 p.
Nutting, C. C. 1893. Report of the Committee on State Fauna. **Proc. Iowa Acad. Sci.** 1(3):39-42.
------. 1895. Report of the Committee on State Fauna. **Proc. Iowa Acad. Sci.** 2(3):43-51.
Osborn, H. 1892. A Partial Catalogue of the Animals of Iowa Represented in the Department of Zoology and Entomology, Iowa Agricultural College. Ames, Iowa: Published by the Authority of the Board of Trustees, pp. 6-9.
Parker, H. W. 1871. Iowa birds. **Am. Naturalist** 5:168-170.
Paulson, M. C. 1922. List of breeding birds of Story County, Iowa. **Oologist** 34:20.
Pellett, F. C. 1913. Birds that nest at Tamakoche. **Bird-Lore** 15:305-307.
Petersen, P. C. 1979a. **Birding Areas of Iowa.** Iowa Ornithologists' Union, 152 p.
------. 1979b. Birds seen on the Lee County foray. **Iowa Bird Life** 49:99-107.
Petersen, P. C., and E. Fawks. 1977. A Field List of Birds of the Quad-city Region. Davenport, Iowa: Quad-city Audubon Society, 27 p.
Petersen, W. J. 1971a. Birds along the Missouri. **Palimpsest** 52:550-570.
------. 1971b. Barging down from Fort Union. **Palimpsest** 52:571-583.
Peterson, D. 1967. Summer shorebird migration at Union Slough National Wildlife Refuge. **Iowa Bird Life** 37:23.
Peterson, R. T. 1980. **A Field Guide to the Birds.** Boston: Houghton Mifflin, 384 p.
Pierce, F. J. 1921. Buchanan County Iowa birds. **Oologist** 38:4-7.
------. 1930. Birds of Buchanan County, Iowa. **Wilson Bull.** 42:253-285.
------. 1933a. County lists of Iowa birds. **Iowa Bird Life** 3:7-10.
------. 1933b. The early Iowa bird magazines. **Iowa Bird Life** 3:48-51.
------. 1936. Bird notes in the mimeographed letters of the Iowa Ornithologists' Union. **Iowa Bird Life** 6:48-53.
Praeger, W. E. 1925. Birds of the Des Moines Rapids. **Auk** 42:565-577.
Prior, J. C. 1976. **A Regional Guide to Iowa Landforms.** Iowa Geological Survey Education Series 3, 72 p.
Provost, M. W. 1946. Spring waterfowl migration in the Ruthven area of Iowa: Comparative data for 1934, 1938, and 1942. **Iowa Bird Life** 16:42-46.
------. 1947. Nesting of birds in the marshes of northwest Iowa. **Am. Midl. Nat.** 38:485-503.
Rapp, W. F., J. L. C. Rapp, H. E. Baumgarten, and R. A. Moser. 1971. Revised Check-list of Nebraska Birds. Crete, Nebr.: Nebraska Ornithologists' Union, occas. pap. no. 5, 35 p.
Rickert, J. E. 1978. **A Guide to North American Bird Clubs.** Elizabethtown, Ky.: Avian Publications.
Robbins, C., and W. Van Velzen. 1969. **The Breeding Bird Survey 1967 and 1968.** Washington, D.C.: Bureau of Sports Fisheries and Wildlife Special Scientific Report--Wildlife no. 124, 107 p.
Robbins, C. S., et al. 1975. A.B.A. Checklist: Birds of Continental United States and Canada. Austin, Tex.: American Birding Association, 64 p.
Robbins, C. S., B. Bruun, and H. S. Zim. 1966. **Guide to Field Identification Birds of North America.** New York: Golden Press, 340 p.
Roosa, D. M. 1977a. Endangered Iowa Birds. Des Moines, Iowa: Special Report of the Preserves Board no. 4, 25 p.

------. 1977b. The first Iowa foray. **Iowa Bird Life** 47:119-123.
------. 1978. Winter Raptor Survey. Des Moines, Iowa: State Preserves Board, 28 p.
Roosa, D. M., and P. Bartelt. 1977. Winter Raptor Survey--1977. Des Moines, Iowa: State Preserves Board, 23 p.
Roosa, D. M., P. Bartelt, and D. Koenig. 1979. Winter Raptor Survey--1979. Des Moines, Iowa: State Preserves Board, 27 p.
Rosene, W. M. 1932. A bit of history. **Iowa Bird Life** 2:3-5.
Ross, W. G. 1938. **Bird Notes from the Journal of a Nature Lover.** W. B. Conkey Co., 169 p.
Ryan, D. 1972. A guide to North American waterfowl escapes. **Birding** 4:159-160.
Savage, D. L. 1897. A complete and annotated list of Iowa birds. **Iowa Orn.** 3:25-28.
Schaufenbuel, J. 1979. Recent breeding records of uncommon or rare birds of Iowa. **Iowa Bird Life** 49:104-107.
------. 1981. Breeding marsh bird survey. **Iowa Bird Life** 51:111-114.
Schlicht, D. 1973. Historical notes on the birds of Black Hawk County, Iowa. **Iowa Bird Life** 43:87-96.
Schrimper, G. D. 1982. A brief history of the University of Iowa Museum of Natural History and its ornithological collections. **Iowa Bird Life** 52:103-111.
Scott, T. G., and C. A. Sooter. 1937. Migration of shore birds at Goose Lake, Hamilton County, Iowa, during the fall of 1936. **Iowa State Coll. J. Sci.** 11:247-252.
Serbousek, L. 1959. Bird records of the Cedar Rapids Bird Club. **Iowa Bird Life** 29:63-69.
Sherman, A. R. 1952. **Birds of an Iowa Dooryard.** Boston: Christopher Publishing House, 270 p.
Shoemaker, F. H. 1896a. A Partial List of the Birds of Franklin County, Iowa. Published by the author.
------. 1896b. Seabirds that visit Iowa. **Iowa Orn.** 2:31-34.
Silcock, W. R. 1977. Annotated list of foray birds. **Iowa Bird Life** 47:123-132.
Spawn, G. B. 1935. The 1934 fall migration of shorebirds through Clay and Palo Alto Counties, Iowa. **Iowa State Coll. J. Sci.** 9:617-624.
Spiker, C. J. 1924. Birds of Wapello County, Iowa. **Proc. Iowa Acad. Sci.** 31:419-426.
------. 1926. Winter bird records 1922 to 1926 in northwestern Iowa. **Proc. Iowa Acad. Sci.** 33:307-313.
Spurrell, J. A. 1917. Annotated list of the water birds, game birds and birds of prey of Sac County, Iowa. **Wilson Bull.** 29:141-160.
------. 1919. An annotated list of the land birds of Sac County, Iowa. **Wilson Bull.** 31:117-126.
------. 1921. An annotated list of the land birds of Sac County, Iowa. **Wilson Bull.** 33:123-132.
Stephens, T. C. 1917. Bird records during the past winter, 1916-1917, in northwestern Iowa. **Proc. Iowa Acad. Sci.** 24:245-258.
------. 1918. Bird records of the past winter, 1917-1918, in the upper Missouri valley. **Proc. Iowa Acad. Sci.** 25:71-83.
------. 1920. Bird records of the past two winters, 1918-1920, in the upper Missouri valley. **Proc. Iowa Acad. Sci.** 27:395-407.
------. 1930. Bird records of the winters 1920-1922 in the upper Missouri valley. **Proc. Iowa Acad. Sci.** 37:357-366.
------. 1957. An Annotated Bibliography of Iowa Ornithology. Crete, Nebr.: Nebraska Ornithologists' Union, occas. pap. no. 4, 114 p.

Sutton, G. M. 1967. **Oklahoma Birds.** Norman: University of Oklahoma Press, 674 p.

Tate, J., and D. J. Tate. 1982. The Blue List for 1982. **Am. Birds** 36:126-135.

Teer, J. G. 1952. The 1950 fall migration of waterfowl through the Forney area, Fremont County, Iowa. **Iowa Bird Life** 22:34-37.

Thompson, D. 1973. Feeding ecology of diving ducks on Keokuk Pool, Mississippi River. **J. Wildl. Manage.** 37:367-381.

Thompson, D. H., and M. C. Landin. 1978. **An Aerial Survey of Waterbird Colonies along the Upper Mississippi River and Their Relationship to Dredged Material Deposits.** Vicksburg, Miss.: U.S. Waterways Experimental Station, tech. rep. D-78-13, 67 p.

Thornburg, D. D. 1973. Diving duck movement on Keokuk Pool, Mississippi River. **J. Wildl. Manage.** 37:382-389.

Thwaites, R. G. 1905. **Early Western Travels, 1748-1846,** vol. 14. **Part I of James's Account of S. H. Long's Expedition, 1819-1820.** Cleveland, Ohio: Arthur H. Clark Co., pp. 252-255.

------. 1906a. **Early Western Travels, 1748-1846,** vol. 22. **Part I of Maximillian Prince of Weid's Travels in the Interior of North America, 1832-1834.** Cleveland, Ohio: Arthur H. Clark Co., pp. 260-281.

------. 1906b. **Early Western Travels, 1748-1846,** vol. 24. **Part III of Maximillian Prince of Weid's Travels in the Interior of North America.** Cleveland, Ohio: Arthur H. Clark Co., pp. 104-109.

Tinker, A. D. 1914. Notes on the ornithology of Clay and Palo Alto Counties, Iowa. **Auk** 31:70-81.

Totemeier, J. 1972. Weather patterns and warbler movements. **Iowa Bird Life** 42:20-22.

Trippe, T. M. 1873. Notes on the birds of southern Iowa. **Proc. Boston Soc. Nat. Hist.** 15:229-242.

Van Tyne, J., and A. J. Berger. 1976. **Fundamentals of Ornithology,** 2d ed. New York: John Wiley and Sons, 808 p.

Weller, M. W. 1961. Cattle Egret and other uncommon Iowa water birds. **Iowa Bird Life** 31:44-45.

------. 1962. Recommendations for collecting data on nesting birds. **Iowa Bird Life** 32:2-6.

Weller, M. W., and C. S. Spatcher. 1965. Role of habitat in the distribution and abundance of marsh birds. Iowa Agric. and Home Econ. Stn. Spec. Rep no. 43, 31 p.

Whitney, N. R., Jr., B. E. Harrell, B. K. Harris, N. Holden, J. W. Johnson, B. J. Rose, and P. F. Springer. 1978. **The Birds of South Dakota.** Vermillion: South Dakota Ornithologists' Union/W. H. Over Museum, 311 p.

Wilds, S. D. 1972. Waterfowl harvest on Keokuk Pool, Mississippi River, 1969 and 1970. **Proc. Iowa Acad. Sci.** 79:79-84.

Wilson, B. H. 1906. The birds of Scott County, Iowa. **Wilson Bull.** 18:1-11.

Youngworth, W. 1931. Late fall and winter bird records, 1926 to 1930, in the upper Missouri valley. **Proc. Iowa Acad. Sci.** 38:277-285.

------. 1932. Fall migration dates from Sioux City, Iowa. **Iowa Bird Life** 2:52.

------. 1933. Spring migration dates from Sioux City, Iowa. **Iowa Bird Life** 3:38-39.

------. 1952a. Additional fall migration dates for the Sioux City region. **Iowa Bird Life** 22:9-10.

------. 1952b. Spring migration dates from the Sioux City region. **Iowa Bird Life** 22:40-41.

Zimmerman, D. 1955. Notes on field identification and comparative behavior of shrikes in winter. **Wilson Bull.** 67:200-208.

Zimmerman, D. A., and J. Van Tyne. 1959. A Distributional Check-list of the Birds of Michigan. Ann Arbor: University of Michigan, occas. pap. Museum of Zoology no. 608, 63 p.

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IOWA BIRDS

IOWA BIRDS reviews, consolidates, and updates all previous information on occurrence and distribution of every known species of bird in Iowa. It summarizes abundance and occurrence patterns of the past, offers tips on species identification, and provides other valuable data to supplement illustrated field guides currently available. It features an easy-to-read text, abundant maps, extensive references to other literature, and appendixes of additional facts.

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Introductory chapters of Iowa Birds cover the state list, terminology used, geology and birding areas, history of Iowa ornithology, and rare and endangered species. All birding areas mentioned are conveniently listed in the gazetteer at the back of the book, and the references are extensive.

The illustrations and identification tips in Iowa Birds will supplement the standard identification handbook for bird enthusiasts already familiar with bird recognition.

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