Iowa CONSERVATIONIST

olume 24 March, 1965 Number 3

BIRDING IS FUN

Max Schnepf

"Bird watching" brings to many people's minds a picture of be-ectacled elderly gentlemen with walking canes and frivolous women essed in course tweeds and leather walking shoes scurrying about e city park, monoculars in hand, spying on the array of bird life tting among the greenery. No picture is more ill-conceived!

Bird watching, more properly called birding, is a serious hobby to ree million American naturalists and scientists. To these participants, rding is a source of scientific information, such as sight records, popu-tions, distribution and migration patterns.

Each year the Department of the Interior's Fish and Wildlife Service licits the cooperation of birders in estimating waterfowl populations. nder the direction of the National Audubon Society, local birding ubs and natural history clubs throughout the United States make an nual bird census known as the Christmas census because it is made ring the holiday season; the results, compiled by the Society, com-ise the best record of bird numbers and distribution in this country.

Less Serious Participants

In addition to the serious participants are millions of weekend birders ho enjoy the activity as a form of outdoor recreation. To these people, rding places avian life in a new dimension. They become aware of e abundant and varied forms of bird life—approximately 750 species shore birds, waterfowl, song birds and birds of prey exist on the orth American continent. These amateur birders view bird life in the ntext of nature rather than as feathered nuisances that eat straw-rries out of gardens or decorate statues in the parks.

Although birding can be a year 'round hobby, the most interesting d colorful time to go is spring. Stimulated by mild weather and the nger periods of daylight, thousands of birds in breeding plumage stinctively fly north to their summer residence. (A list accompanying is article indicates the average spring arrival date in Central Iowa r a number of bird species.)

The competitive spirit of this hobby results in contests to see who can serve the rarest, earliest arriving or most species. On May Day each ar, birding clubs across the land vie with each other in an attempt identify the most species within a 24-hour period.

Birding Equipment

The well-outfitted birder carries a pair of field glasses or binoculars, field guide for identification, notebook or checklist, pen or pencil and ears clothing to correspond with the season.

The choice of field glasses depends on individual preferences concern-g magnification and field of view. The versatile 7 x 35 binocular is ost popular because of its light weight. A 20X spotting scope with ipod is almost essential for long distance observation of hawks or terfowl.

Several excellent field guides are available, including Roger Tory terson's *Field Guide to the Birds* and the *Audubon Bird Guide*. For e real enthusiast, a record album of bird songs keyed to Peterson's ld guide can also be purchased.

Identifying Birds

Identifying birds presents a challenge, especially to the beginning der. The ideal way to learn identification techniques and specific d species is to accompany an expert. Since this is frequently im-ssible, there are a few tips every beginner should know.

Birding should be done in small groups—never more than 10 indi-iduals. Move slowly and quietly. Scour the trees for movements. You ay even want to sit in one spot for several minutes. Talk only when cessary, and keep it to a whisper.

When an unknown species is spotted, work into a position that allows clear view of the bird. Keep the sun at your back if at all possible. **Once in position, make these general observations!**

(Continued on page 24)

Jim Sherman Photo.
White-Breasted Nuthatch, a permanent resident in Iowa.

Iowa Conservationist

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CIRCULATION THIS ISSUE.....52,000

COMMISSION MINUTES

February 2 and 3, 1965

FISH AND GAME

Approval was given to the 1965 Fishing Season Regulations.

Approval was given to exercise seven options for approximately 300 acres of Badger Lake in Monona County at an average cost of $150 per acre.

Approval was given for a land exchange at Hendrickson Marsh in Story County involving 38 acres in ownership of Mr. Long, in trade for land having the same appraisal value.

A report was given concerning planning for part of the Kiowa Marsh in Sac County and further negotiations with the County Board of Supervisors and County Conservation Board were ordered.

Approval was given to permit an easement for levee purposes to Iowa River-Flint Creek Levee District No. 16 in Des Moines County with a provision that easements for crossing must be obtained for continuous access.

The Flint Access Area in Polk County was established as a Wildlife Refuge and abandoned as a shooting range.

Chairman Sherry Fisher received a report from Dr. Carlander of Iowa State University regarding efforts to obtain the establishment of a Cooperative Fisheries Unit in Iowa. This Unit would carry an annual budget of $40,000 and would be established at Iowa State University. The Director was ordered to prepare a resolution to be sent Congressmen and the U. S. Fish and Wildlife Service urging acceptance of the State of Iowa for a Cooperative Fisheries Unit.

The Commission met with a delegation to discuss underwater rough-fish spearing by scuba divers in Iowa and went on record as approving of a proposed bill which would allow this activity, under Commission regulations.

Approval was given to a motion that Iowa participate in the proposed special experimental teal season next fall.

The Commission requested that the Attorney General proceed with a suit to recover trout loss damages at Big Springs.

LANDS AND WATERS

Approval was given to a motion to hold a meeting with interested groups at the site of a proposed sewage treatment plant in the town of Sabula.

The Commission met with a delegation from Carroll County to discuss various ways and means of financing the expansion of Swan Lake Park which is now under the management of the Carroll County Conservation Board.

A bid of $3,854.52 was accepted for fuel for the Stom Lake Dredge from the Callison Oil Sales.

A discussion was held concerning three applications for the Backbone Park Concession, and the contract was awarded to Dale Nodurft for 3 years.

Mr. George Weaver of the Engineering Section reviewed the principal large lake sites studied to date.

A discussion was held concerning the possible purchase of land at Casino Bay on Storm Lake; and Dr. Kinney, Commissioner, was asked to contact the landowners involved and determine the lowest price on this property.

A discussion was held by the Commission and Staff on the management of the Eagle Lake water level.

Boat registration procedures were reviewed.

Approval was given to a request that a complete file of all data involved in the Missouri land transactions and studies be established in the Commission Office in Des Moines.

COUNTY CONSERVATION ACTIVITIES

Calhoun County received approval for acquisition of 5½ acres of land at a total cost of $1,000 for the purpose of developing a fishing access to Big Cedar Creek and the development of a small picnic area to be called Kelly Access.

Crawford County received approval to acquire 21 acres of land under a sponsoring agreement with the Iowa State Highway Commission for the purpose of establishing a highway safety rest area adjacent to new U. S. Highway 30 west of Denison.

Howard County received approval for the acquisition of 27 acres of land at a total cost of $1,500 for an addition to Vernon Spring Park Area.

Linn County received approval for the acquisition of 33⅓ acres of land adjacent to the Cedar River as a gift from the Iowa Electric Light and Power Company for development as an outdoor classroom for the teaching of natural sciences and as a fishing access to the Cedar River.

Story County received approval for the acquisition of one acre of land by a sponsoring agreement with the Iowa State Highway Commission located one mile north of the town of Ames adjacent to U. S. Highway 69 to be used as a highway safety rest area.

Story County received approval for the acquisition of 2½ acres of land by a sponsoring agreement with the Iowa State Highway Commission located on the newly constructed Highway 30 approximately 3½ miles east of the town of Nevada to be used as a highway safety rest area.

Delaware County received approval for a development plan for the Burton Wildlife Area consisting of one acre of land adjacent to Highway 38.

Delaware County received approval for development of the M & O Wildlife Areas consisting of 6½ acres of land.

Story County received approval for a development plan for the Highway 69 Safety Rest Area and for the Highway 30 Safety Rest Area.

The County Conservation Director, H. W. Freed, reported on the negotiations concerning the Iowa Public Service Company riverdams and landholdings in Humboldt County.

The Commission approved the acquisition of the mill race in Humboldt to use in connection with the fish hatchery there.

GENERAL

Approval was given for travel to North American Wildlife Conference at Washington, D. C.; the Waterfowl Banding Program in Canada; the U. S. Forest Fire Control Meeting at Milwaukee, Wisconsin; Participation in sports shows at Chicago, Milwaukee, Minneapolis, and Omaha; a Blanket Travel Authorization for Engineering Section Personnel to the Corps of Engineers Office in Omaha, Nebraska City, Rock Island and Savannah.

Approval was given for the renewal of annual blanket travel three district foresters one county into adjoining states to transact business.

The renewal of annual blanket travel by the area forester Yellow River Forest to Prairie du Chien in Wisconsin; Blanket Travel for Land Acquisition Personnel to travel one county in adjoining states.

The Commission discussed the DeSoto Bend National Wildlife Program and asked the Director to obtain further information on the subject.

Dr. Marshall McKusick, State Archeologist, appeared before the Commission and discussed some of the new archeological findings in Iowa.

Snakes can swallow their victim whole since the upper and lower jaw can "unhook" to encompass large objects.

* * *

The flea can lift 140 times its own weight. If a man could do this, he would be capable of lifting a ten-ton truck.

* * *

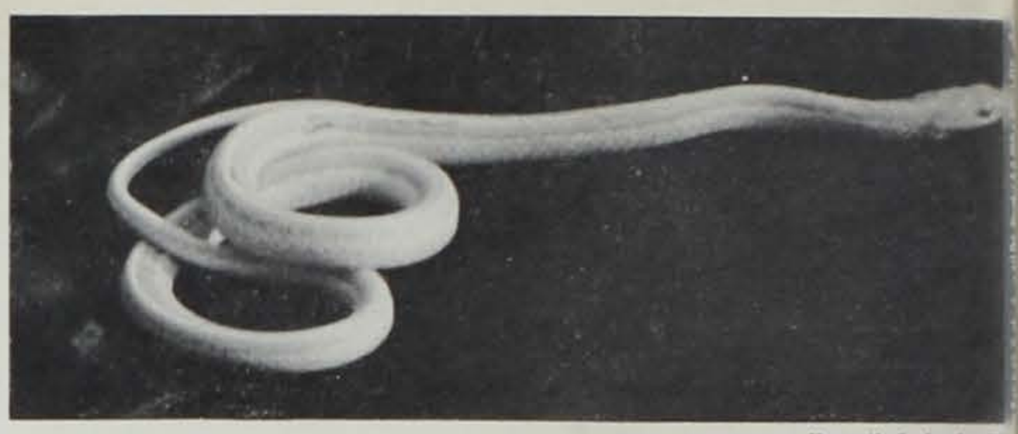
The bluegill gets its name from a small blue tab that extends backward from the gill cover.

* * *

Turtles have no teeth, but their jawbones are often very sharp and their jaw muscles extremely powerful.

* * *

The skunk uses his potent scent sparingly. He produces it at the rate of only about one-third liquid ounce per week.



Kenneth Carlander Ph

GHOST SNAKE

Dr. Kenneth D. Carlander

Iowa Cooperative Fisheries Research Unit
Iowa State University

Raymond Hylland of Leland, Iowa, may have thought his eyes were deceiving him last September when he saw a ghost-like snake. Fortunately, it was only 21 inches long and he was able to catch it. It was all white except for a faint pinkish stripe down each side and faint pink blotches on the side. The eyes were bright pink.

Mr. Hylland turned the snake over to Wilfrid Macheak, Conservation Officer, who sent it to State Conservation Commission Biologist Tom Moen. Tom sent it on to Iowa State University where it was put in the permanent museum collections after it died from injuries suffered while it tried to escape from a cage.

The snake was identified as an albino common garter snake (perhaps the red-sided subspecies). Albino snakes have been reported before but are very rare.

G" PRACTICES IMPROVE IOWA'S HERITAGE

Jack Higgins

Future hunting and fishing prospects have never looked brighter in wa than at this time. The credit for this improved outlook goes to rmers and landowners who have set up cooperative conservation eas with the aid of the Agriculture Stabilization and Conservation rvice, and State Conservation Commission. Their activities cover ree basic wildlife habitats and are known as the "G" practices.

G-1

The G-1 program seeks to establish vegetative cover which will pro- de wildlife with both food and habitat. It is the broadest of the three ograms, as it may be set up on any, or all, parts of a farm.

One portion allows the establishment of shrubs as field and travel ne borders. A second section allows the planting of shrubs around isting groves and windbreaks. The purpose here is to encourage e development of ground cover for birds and animals in sections of e state that have little, if any, natural shrub growth in fields. The ird section encourages the use of odd areas for plantings that are itable for wildlife, but not agriculture.

Odd area plantings must contain at least one-fourth acres of ground, d may be located on any portion of the farm. The pattern of plant- g will vary according to location and layout of the area. In general, ch plots consist of a central area planted to either conifers, or an ea on which the major portion is planted to permanent vegetative ver. Where conifers are used, the odd area planting consists of at ast 50 conifers and 50 shrubs.

G-2

The program for the development or restoration of shallow water eas is designated as the G-2 practice. This program encourages the velopment of marsh and feeding areas that are attractive to water- wl. Such an area has to be at least one acre in size to qualify for velopment aid.

A marsh may be established by plugging a drainage channel to return marsh conditions an area previously drained for agricultural use. this condition can't be met, consideration is given to the construc- n of either a dike or dam system, or even the excavation of earth a point below the water table. In the event that an excavation is eded, the winter water table has to be no more than two feet below ound level.

Waterfowl feeding areas are developed on flat, dry land, as they ve to be tilled and seeded annually and then be flooded for a portion the year. Flooding may be accomplished by pumping from an adja- nt water supply, or by gravity from a near by impoundment.

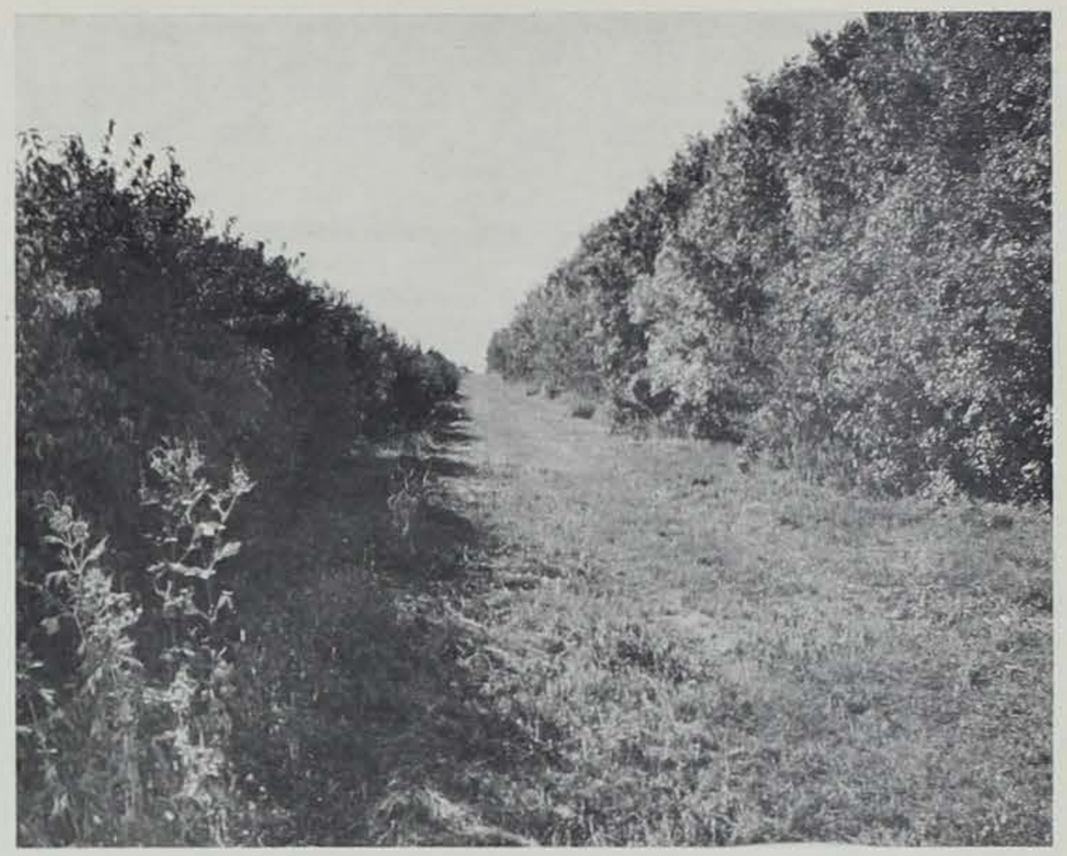
G-3

The final "G" practice deals with the construction of ponds or dams create wildlife habitat for both animals and fish. The G-3 program meant to aid in the development of permanent water structures on rmland. No federal cost-sharing is permitted if the primary use lls for the impoundment to be used for irrigation, or the commercial oduction of fish.

Basically, G-3 ponds must provide a minimum of eight feet of water at least 20 percent of the total surface area of the pond at all nes. The watershed may be as small as three acres, but can be

George Tovey Photo.

l area plantings under the G-1 program aid small game populations by providing winter and nesting cover.



Special wildlife plantings for field and travel lane borders can be purchased from the State Nursery.

no larger than 15 acres. The pond itself has to have at least one-half surface acres of water.

Financing

Under both the G-2 and G-3 practices, the federal cost-sharing agreement extends to 60 percent of the total costs involved. In the case of pond construction, the average cost to landowners in south central Iowa has been about $400 per one-half acre of surface water acquired. The G-1 program contains optional practices. Therefore, the cost-share agreements may vary. The percentage payments may range from a low of 50 percent for seeding an area, to a high of 80 percent of the cost of shrubs and trees.

"G" Practice Benefits

The idea behind all the "G" practices is that they foster the conservation of soil and water—two assets vital to the continuance of our society. The fact that they benefit the continuance of many forms of wildlife further enhances their value to both the farmer and the sportsman.

Per mile, shrub rows will generally produce 15,000 additional beneficial insects, 20 more insect eating birds, and 20 desirable small animals. At the same time there is a drastic reduction in the number of pests that plague crops. There will be 39,000 fewer destructive insects and 63 less harmful animals. Anyway you look at it, this is a real economic gain.

The hunter, on the other hand, discovers a more vigorous and numerous game population than had previously been supported by the land. Truly, these programs do much to improve the outlook of our Iowa heritage.

NATIONAL WILDLIFE WEEK

March 14-20

Control of water pollution is America's most pressing conservation problem. It has been estimated that, by 1980, this nation will need to re-use existing water supplies at least six times in order to meet domestic, industrial and agricultural needs.

Although many areas of our country are blessed with adequate water supplies at this time, we may face an acute water shortage unless steps are taken immediately to halt water pollution. By cleaning up streams, rivers, lakes and reservoirs, water can be used many times to supply human needs; but already, some parts of the country face economic disaster because of dirty water.

Every citizen can help "FIGHT DIRTY WATER" and keep America's supply of water clean and usable. Support efforts on the local, state and national level to control water pollution.

"FIGHT DIRTY WATER"

SPRING'S SPECTACULAR GOOSE I HT

The clamor of thousands of blue and snow geese herald the arrival of spring as waves of these migrating birds move north each spring along the broad alluvial flood plain o
March. Throughout the blustery month the magnificent flight shuttles north in the shadow of western Iowa's loess hills—Hamburg, Percival, Thurman, Pacific Junction, Missouri
ralists, such as Audubon; and until recent years, went unnoticed except by a few people living on

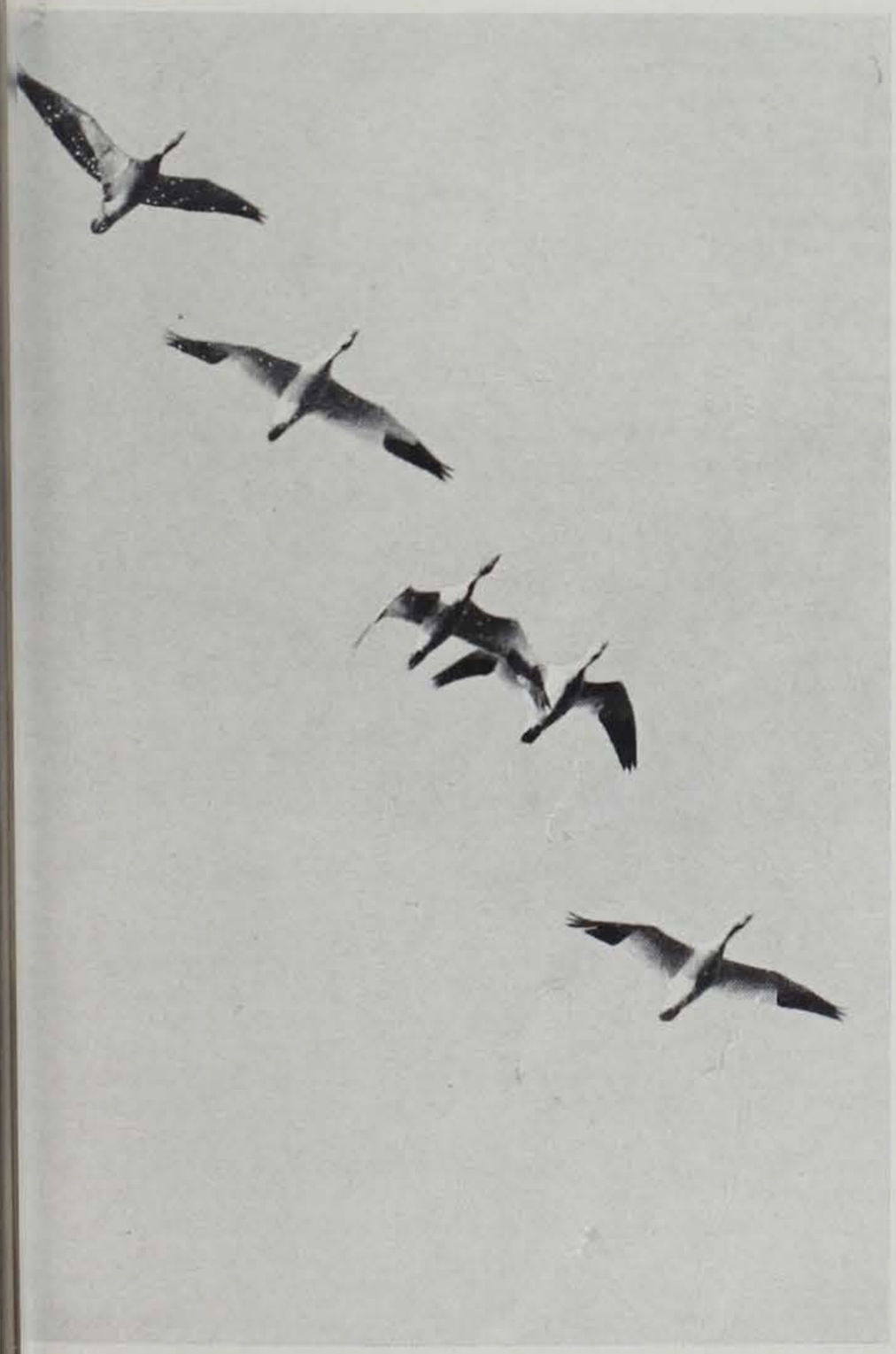
Almost simultaneously, the blues and snows break formation; swinging and sideslipping, they descend to the ground to feed or rest. The constant milling attracts new flock
The geese become so thick in some instances that it looks like there isn't room for another one to land. Suddenly they swarm into the air, frightened by the blundering approa
of a photographer. With wings thundering and voices squawking, they circle a few times, and once more land to feed or rest.

Early morning and late afternoon is feeding time for the geese. In turn, the flocks move from their resting areas on lakes and sloughs to nearby fields. The long lines an
broken V's settle into the wet gumbo soil where they glean what remains of last fall's harvest. The flocks hop from field to field until, gullets full, they return to the resting are

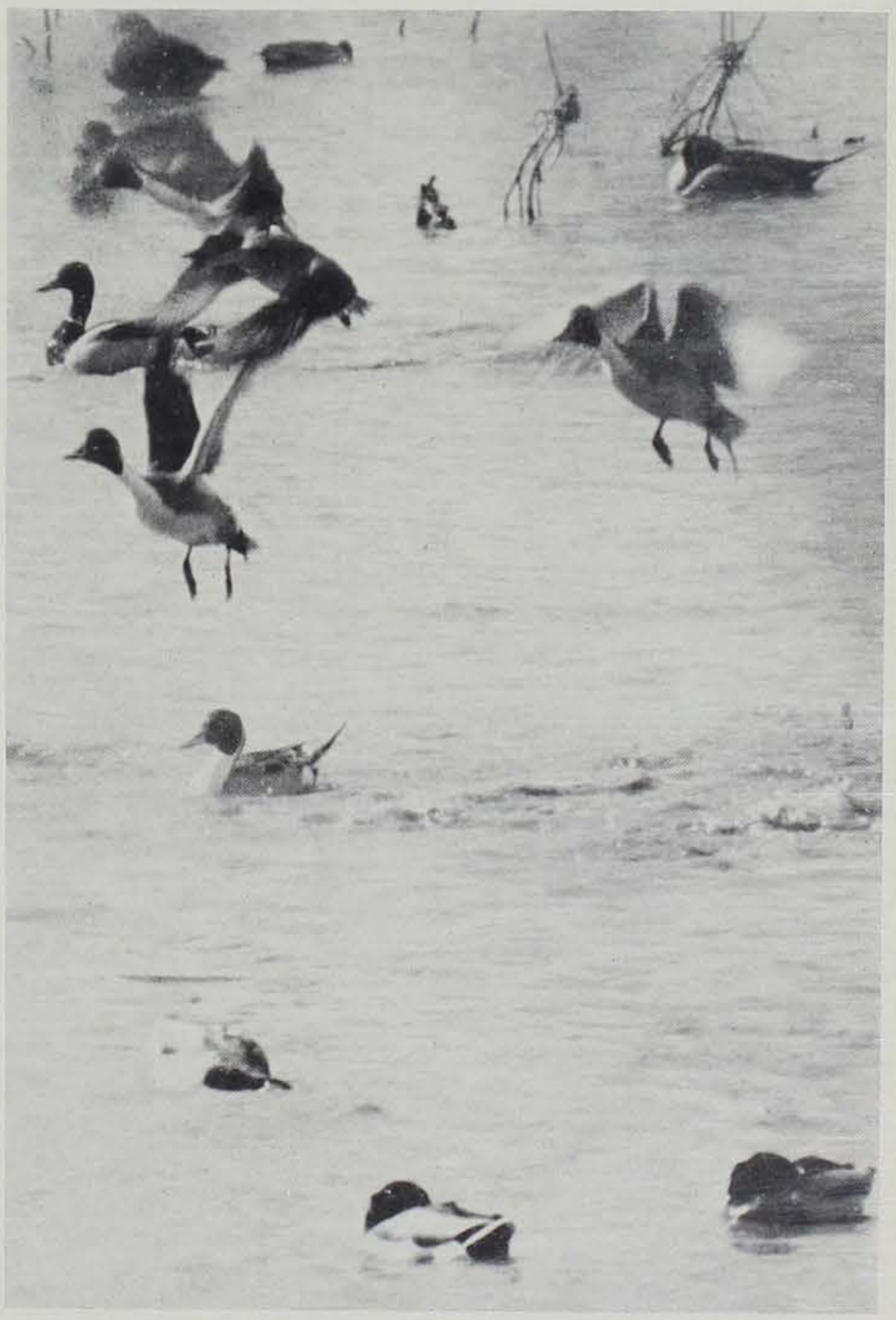
HT

Photo Feature by Jack Kirstein

. The first blues and snows begin arriving in Iowa during the last week in February or first week in March; the peak migration usually occurs between the 10th and 25th of ux City—following the retreating snow line on the 2,600-mile journey to the Baffin Island breeding grounds. The spectacle was never mentioned in the writings of early natu- plain. Now, scores of people from all over the midwest line the highways to view the awesome sight.



: blue and snow goose migration on the central flyway is leisurely, depending upon weather conditions. A late winter storm may send the birds scurrying back into souri, or unusually mild weather may magnetically draw them northward. Once y leave Iowa, the blues and snows, accompanied by lesser numbers of Canadas and te-fronts, migrate through Minnesota, South Dakota and North Dakota, into the adian prairie provinces, to James Bay and eventually into their arctic nesting grounds.



Other waterfowl, such as these mallard and pintail ducks, enhance the spring spectacle. Teal, baldpates, mergansers and redheads, dart in and out among the flocks of geese. To see all the birds in their spring plumages, to see and hear their mating flights and calls and to thrill to the sheer magnitude of the migratory flights is a never-to-be-forgotten experience. Further information regarding the spring flights can be obtained from the State Conservation Commission, East 7th and Court, Des Moines, Iowa 50308.

SKUNKS AND THE RABIES PROBLEM

Paul D. Kline
Game Biologist

People think they have problems with flu, measles, chicken pox, and the like. What many of us don't realize is that all wild animals also host a repertoire of diseases. Some are of no more consequence than our common cold. Others are of vital importance to individual animals or populations. Very few wildlife diseases are transferable to human or domestic livestock.

Recently, rabies has become significant in Iowa wildlife, principally among striped skunks. Other animals, such as foxes and raccoons, occasionally have rabies but not as often as skunks. Rabies would not be a problem if these animals kept the disease to themselves, but they don't. They infect livestock and pose a mild threat to campers, picnickers and other outdoorsmen. Much of Iowa's annual livestock loss due to rabies can be traced to skunks; and even though there are no recent Iowa records of rabies in humans, the threat exists. It should be pointed out that not all skunks are rabid. As a matter of fact, most of them are not.

The disease, frequently called "hydrophobia" or "mad dog disease," is one that can infect any warm-blooded animal. It is caused by a filterable virus which attacks nerve tissue and eventually the brain of the infected animal. Since the virus usually occurs in the saliva of the rabid animal, the disease is usually transmitted from one animal to another by biting. One of the common symptoms of rabies is the irresistible urge to roam and bite.

High Skunk Population

At first glance it might seem simple to reduce the threat of rabies in Iowa by eliminating skunks. Certain facts complicate this solution, however. Skunk population surveys made in Iowa revealed an average of approximately three striped skunks per square mile. Therefore, Iowa's striped skunk population could be near 165,000 individuals. Any artificial population control would first need to remove the annual production or equivalent.

An Illinois study revealed the age ratio of skunks to be 2.3 juveniles per adult. In other words, more than two-thirds of the population represents annual production. Using these figures as a base, any sort of statewide control would need to remove 100,000 striped skunks **annually** before any resemblance of control would be achieved. Currently, less than 2,000 striped skunks are harvested each year by Iowa trappers.

If expert trappers were hired to achieve this degree of control, it would take at least 50 full time trappers and a capital outlay of $500,000 annually. And there would be no guarantee that rabies would be reduced!

One might say, "Let's put a bounty on skunks." The failure of any bounty system should be obvious to Iowans. There has been a bounty on foxes for years. In recent years more than $100,000 per annum has been spent for fox bounties, with the result that these animals are at least as numerous now as they were more than 20 years ago when the statewide bounty went into effect. A bounty on skunks would undoubtedly yield similar results.

Poisons Dangerous

Skunk control by use of poisons has been suggested. Using poisons, however, would be dangerous. Iowa has an average population of 50 humans per square mile. With this human population and the vast number of dogs, cats, livestock and other wildlife, accidents would surely follow the use of poisons no matter how well they were administered. Poisons are non-selective. They destroy whatever partakes of them.

Skunks Are Valuable

To this point we have condemned skunks. The truth is we should be cautious before we evaluate skunks merely on the basis of their role as rabies carriers.

One positive value of skunks relates to their food habits. Both species, striped and spotted, feed heavily on insects in summer and fall. Most of these insects are generally considered harmful species. Grasshoppers, crickets, cutworms and white grubs are commonly eaten. During winter and spring, mice and rats are important in the diet. According to an Iowa State University Extension Service report, rats eat or destroy at least 100 pounds of food per rat per year in Iowa. This food has a minimum value of $2.00. Rats do considerable other damage also; but considering the food loss, the estimated 200,000 skunks (striped and spotted) perform a service worth $400,000 per year in rat control alone. This is based on the assumption that each skunk kills only one rat per year—many kill more.

Skunks probably kill and eat more mice than rats. It is difficult to say exactly how many mice the average skunk will eat during one year. If they eat 50 mice and we compare weights of mice and rats, we can say that the value of skunks for mouse control in Iowa is at least $2,500,000 per annum. This is based on the assumption that it takes eight mice to equal the damage done by one rat. Hence, for rodent control alone we can place a minimum value of $2,900,000 per year on skunks. We must keep this in mind before we condemn all skunks.

Rabies a Local Problem

Rabies appears as a local problem. Local "hot spots" spring up here and there, some of them in the same locality year after year. Any control of rabies in skunks must be on a local basis, preferably by farmers or livestockmen who are faced with a rabies problem. It appears the only practical means for control is by use of steel traps.

The State Conservation Commission will help farmers and landowners set up a rabies control program. Conservation Officers and Game Managers will on request demonstrate the use of steel traps and skunk trapping techniques.

In areas of locally severe rabies outbreaks, individual landowners should band together to trap skunks in an effort to reduce the threat. Skunk denning sites near farm buildings, such as hay piles, openings under buildings or tra piles, should be eliminated. Rat mouse infestations attract skun and should be eliminated. Skun are nocturnal animals. In t event that an individual of eith species is seen wandering abo during daylight hours, it should destroyed as a suspect rabies ca rier. Whenever humans or liv stock have been exposed to rabi a medical doctor or veterinari should be consulted immediately

Rabies is one of many proble we must face as wildlife manage farmers, sportsmen and lovers the outdoors. It may be with a long time. Until research fin a solution or way to mitigate t threat, we will have to adjust this problem.

TEACHERS CAMP APPLICATIONS DUE

Jack Higgins

The Iowa Teachers' Conservation Camp will soon be opening for its 16th annual session at Springbrook State Park. A number of openings still exist, but time for making application is quickly drawing to a close. Interested individuals should make application in the near future.

The Conservation Camp program gives Iowa teachers and college students who have a sophomore or better standing, an opportunity to live, work and play in a state park while earning up to six college credits in natural science. The major fields of study include forest resources, ecology, fish and wildlife management, rocks and minerals, soil and land management, as well as water conservation.

The subject matter is taught in two courses presented during three sessions. Session dates are June 6 to June 26, June 27 to July 17, and July 18 to August 7. Students may sign up for either one or two of the sessions. Since the first session is repeated during the last three week period, students may work out various combinations of time that they want to devote summer study.

During any one course stude will travel about 1,000 miles to and learn at first hand about various conservation practices ing used in Iowa. A bus supp transportation to and from various sites.

A single three week course co an undergraduate $115.50; gra ate students pay $118.50. This covers tuition, room and boa Scholarships are available in m counties. The amount may va as the scholarship is depend upon the resources of the orga zation that agrees to sponsor it

To be eligible for a scholarsh the student must first be accep for participation in the progra Admission is granted by the St College of Iowa, Iowa Falls. Cr it for the course also comes fr SCI.

The Iowa Teachers Conser tion Camp is the oldest school its kind in the United States. is held annually at the Gr Camp in Springbrook State Pa Guthrie County. Through the ye it has established a reputation t extends beyond Iowa. Teach from all over the nation have tended various sessions. First c

(Continued on page 24)

"There's an eager beaver to see you, sir."

THE MILKWEED

From the time their first green oots appear in spring until their ad brown stalks stand above e snow in winter, the milkweeds ve a variety of uses and features interest. The common name re- rs to the milky juice that oozes m stems and leaves when they e cut or broken. Because the ots of milkweeds were used as ugs, their scientific name, *clepias,* was taken from that of Greek god of medicine.

Jim Sherman Photo.

he Common Milkweed so often in fields, waste places, and g roadsides is the largest and t familiar of the dozen or more ls found in the Chicago region. large oval leaves are arranged airs on the tall stout stem so if one pair points east and t, the pair above and the pair w point north and south. Like r milkweeds it is a perennial oducing both from seeds and shallow roots that live over winter.

ne "milk" is not the sap of the t but a special secretion. Ex- iely bitter, it serves as a pro- on against most nibbling and ing animals. On the contrary, weed leaves are the only food ne caterpillar of our monarch erfly. Also, this milk quickly any wound on the plant be- e it contains latex and, as it , becomes very sticky and ic, turning into a kind of e rubber. See how a drop of milk makes your thumb and rs cling together. Like rub- cement, it cannot be washed vith soap and water. During d War II when imports of nat- rubber from the rubber tree cut off, the milkweed was d as a possible substitute.

spring, the tender shoots can oiled and eaten like asparagus. In autumn, the roots are still collected and marketed in small amounts for the drugs they contain Formerly, these were common remedies for lung trouble and rheumatism. The Indians made twine from the coarse strong fibers in the bark of the stalk. The dead stalks with their picturesque empty pods are favorites for making winter bouquets and art objects.

The common milkweed bears clusters of dull purple flowers with a heavy cloying odor which, though unpleasant to us, is unusually attractive to bees and butterflies. Each flower of the cluster has an elaborate trap to catch the legs of these insects and remove any pollen they may carry. Sometimes the insect cannot escape and pays with its life for the nectar it came to drink. Indians produced sugar by shaking the honeydew from its blooms in early morning and drying it.

Each cluster of blossoms is followed by one or two large warty pods with a seam along one side which pops open when the pod becomes ripe and dry. Inside is a closely packed roll of several hundred flat brown seeds arranged like scales on a fish, each with a folded parachute of fine silky fibers. Gradually, these parachutes open and the seeds are carried away on the fall winds. During the war, hundreds of tons of milkweed pods were gathered by school children and the silky fluff processed as a substitute for kapok, used to pad life jackets and flying suits.

The Butterfly Weed or Pleurisy Root with its glowing orange flowers is the most beautiful of the milkweeds. Unlike other milkweeds, it lacks the milky juice. The Indians used its roots for medicine and cooked the green pods with their buffalo meat much as we use green peppers. The Swamp Milkweed bears masses of brilliant red or rose-purple flowers which are followed by pencil-slender pods. The dainty Whorled Milkweed has tiny greenish white flowers and very slender leaves. Mixed with hay crops it can be poisonous to livestock.—*From the Cook County, Illinois, Nature Bulletin.*

IOWA'S 1965 FISHING SEASONS AND LIMITS

March 1, 1965 to February 28, 1966

INLAND WATERS OF THE STATE					BOUNDARY WATERS
Kind of Fish:	Open Season	Daily Catch Limit	Possession Limit	Minimum Length or Weight	Mississippi River, Big Sioux River, Missouri River and Inland Waters of Lee County
Carp, Buffalo, Quillback, Gar, Dogfish, Gizzard Shad, Sheepshead, Sucker, Redhorse, Chub, Sunfish, Bluegill, Crappie, Silver Bass, Bullhead, Rock Bass, Yellow Bass, Warmouth, Minnows and Sand Sturgeon	Continuous	None	None	None	Same as inland waters.
Rock Sturgeon	Closed				Closed.
Paddlefish	Continuous	2	4	5 lb.	Same as inland waters except no catch or possession limit on Mississippi River.
Perch	Continuous	15	30	None	Same as inland waters except no catch or possession limit.
Trout	Continuous	6	12	None	Same as inland waters.
Catfish	Continuous	8	16	None	Continuous open season, no catch or possession limit.
Largemouth Bass	Continuous	5	10	None	Largemouth and Smallmouth Black Bass. Continuous open season. Aggregate daily catch limit 10; aggregate possession limit 20.
Smallmouth Bass	May 29-Feb. 15	5	10	None	
Walleye and Sauger	May 8-Feb. 15*	Combined Walleye & Sauger 5	Combined Walleye & Sauger 10	None	Continuous open season. Aggregate daily catch limit 10; aggregate possession limit 20.
Northern Pike (Pickerel)	May 8-Feb. 15*	3	6	None	Continuous open season. Daily catch limit 5; possession limit 10.
Muskellunge	Closed				Closed.
Frogs (except Bullfrogs)	Continuous	4 doz.	8 doz.	None	Same as inland waters.
Bullfrogs (Rana Catesbeiana)	Continuous	1 doz.	1 doz.	None	Same as inland waters.

Where waters are located within the confines of state, county, city parks, or State Fish and Game Management Areas, fishing will be permitted only when such areas are open to the public.

*In all streams; Missouri and Mississippi River oxbow lakes and artificial lakes a continuous open season for Walleye, Sauger and Northern Pike (Pickerel) shall apply.

EXCEPTIONS: On all state-owned natural lakes, all angling through ice is prohibited between the hours of 8:00 P.M. and 6:00 A.M.

In Little Spirit Lake, Dickinson County; Iowa and Tuttle (Okamanpedan) Lakes, Emmet County; Burt (Swag) Lake, Kossuth County; and Iowa Lake, Osceola County, the following exceptions apply: **WALLEYE,** daily catch limit 6, possession limit 6; **NORTHERN PIKE,** daily catch limit 3, possession limit 3; **SUNFISH,** daily catch limit 15, possession limit 30; **CATFISH,** daily catch limit 16, possession limit 16. Open seasons on above fish, May 8 to February 15. **SMALLMOUTH AND LARGEMOUTH BLACK BASS,** daily catch limit 5, possession limit 5. Open seasons, May 29 to November 30. The possession limit shall not exceed thirty (30) fish of all kinds in the aggregate except that the aggregate possession limit shall not apply to fish named on which there is no daily catch limit.

BIRDING IS FUN—

(Continued from page 17)

1. Estimate the size of the bird. Compare it to a common bird you are familiar with—a sparrow, robin, crow, etc.
2. Is the bird chunky or slender?
3. What is the length and shape of the bird's tail and bill?
4. How long are the bird's legs?
5. Does the bird have a crested head?

Observe the bird's behavior!

1. Does the bird walk, hop, swim or wade?
2. Is the bird feeding on the ground, in low shrubbery, high in a tree or on the fly?
3. Does the bird move up or down the tree trunk as it feeds?
4. Does the bird fly in a straight line or in an undulating motion?
5. Do the bird's wings beat quickly or slowly?

Now look for the identifying color characteristics!

1. Is the bird's breast plain, spotted or striped?
2. Does the bird have an eye line?
3. Does the bird have an eye ring?
4. Does the bird have wing bars?
5. Does the bird have any other pronounced color patches or characteristics?

Once you have made these observations and recorded them in your mind or on paper, leaf through your field guide and attempt to make an identification. Soon you will learn to associate different characteristics with certain families and species of birds. The identification process will become more automatic, and you will be able to extend your concentration and observations to include bird songs, location of nests, a more precise study of behavior and making a rare find.

IOWA BIRD MIGRATION CALENDAR

Calendar Prepared by ROBERT B. MOORMAN,
Extension Wildlife Conservationist, Iowa State University.

Name of Species	Avg. Date of Arrival	Avg. Date of Departure
Gadwall	March 15	November 4
American Pintail	March 5	November 16
Green-Winged Teal	March 12	November 8
Blue-Winged Teal	March 18	November 4
Wood Duck	March 20	October 26
Redhead	March 18	October 25
Canvas-Back	March 18	November 3
Lesser Scaup Duck	March 9	November 21
Buffle-Head	March 25	November 6
Ruddy Duck	April 5	October 28
American Merganser	March 20	November 12
Turkey Vulture	April 1	October 18
Eastern Red-Tailed Hawk	March 12	November 16
Red-Shouldered Hawk	March 14	October 16
Broadwinged Hawk	March 24	October 28
Swainson's Hawk	April 14	September 25
Rough-Legged Hawk	(from north) October 16	March 25
Marsh Hawk	March 1	November 14
Eastern Sparrow Hawk	March 14	October 12
King Rail	April 17	September 25
Virginia Rail	April 24	October 15
American Coot	March 25	November 20
Killdeer	March 10	November 4
American Woodcock	April 9	October 28
Wilson's Snipe	March 25	November 25
Upland Plover	April 16	August 31
Eastern Solitary Sandpiper	April 23	October 10
Greater Yellowlegs	April 10	September 25
Herring Gull	April 4	November 12
Bonaparte's Gull	May 1	October 4
Common Tern	April 28	September 20
Mourning Dove	March 24	October 25
Yellow-Billed Cuckoo	May 16	September 25
Black-Billed Cuckoo	May 12	September 22
Barn Owl	Partially migratory	
Eastern Screech Owl	Permanent resident	
Great Horned Owl	Permanent resident	
Northern Barred Owl	Permanent resident	
Long-Eared Owl	Partially migratory	
Short-Eared Owl	Permanent resident	
Eastern Whip-poor-will	April 26	September 18
Eastern Nighthawk	May 3	September 25
Chimney Swift	April 18	September 16
Ruby-Throated Hummingbird	May 7	October 1
Eastern Belted Kingfisher	March 27	November 18
Northern Flicker	March 20	October 22
Red-Bellied Woodpecker	Permanent resident	
Red-Headed Woodpecker	May 1	November 20
Yellow-Bellied Sapsucker	April 3	October 15
Eastern Hairy Woodpecker	Permanent resident	
Northern Downy Woodpecker	Permanent resident	
Arkansas Kingbird	May 8	September 8
Northern Crested Flycatcher	May 8	September 15
Eastern Phoebe	March 18	October 14
Eastern Wood Pewee	May 7	October 1
Prairie Horned Lark	Partially migratory	
Tree Swallow	April 5	October 1
Bank Swallow	April 20	September 21
Rough-Winged Swallow	April 19	September 4
Barn Swallow	April 20	September 24
Cliff Swallow	April 24	September 18
Purple Martin	April 8	September 3
Northern Blue Jay	Permanent resident	
Black-Capped Chickadee	Permanent resident	
Tufted Titmouse	Permanent resident	
White-Breasted Nuthatch	Permanent resident	
Brown Creeper	Permanent resident	
Western House Wren	April 26	October 5
Eastern Winter Wren	(often winter resident) April 4	September 30
Short-Billed Marsh Wren	May 6	September 25
Catbird	May 1	October 3

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TEACHERS CAMP—

(Continued from page 22)

sideration is always given to Iowa teachers, however.

Co-sponsors for the camp since it was first organized have been the State Conservation Commission, State College of Iowa, and the Department of Public Instruction.

Further information may be obtained by writing to the Public Relations Section, State Conservation Commission. Applications should be directed to Mr. Ber Clausen, Director ITCC, State College of Iowa, Cedar Falls.

The white Bishareen cam is the most valuable of the tribe ing very fast and capable of running a horse. They make cellent mounts.

The bottle-nosed dolphin or poise can outswim most fish can remain submerged no lo than three minutes.

Name of Species	Avg. Date of Arrival	Avg. Date of Dep
Brown Thrasher	April 16	Octol
Eastern Robin	March 8	Novem
Wood Thrush	May 3	Septem
Eastern Hermit Thrush	April 10	Octol
Olive-Backed Thrush	May 10	Septem
Eastern Bluebird	March 8	Octol
Blue-Gray Gnatcatcher	April 15	Septem
Golden-Crowned Kinglet	April 2	Octol
Ruby-Crowned Kinglet	April 10	Octol
Cedar Waxwing	March 7	Octol
Migrant Shrike	March 28	Octol
Red-Eyed Vireo	May 6	Septem
Black and White Warbler	April 27	Septem
Tennessee Warbler	May 10	Septem
Nashville Warbler	May 6	Octol
Eastern Yellow Warbler	May 3	Septem
Magnolia Warbler	May 12	Septem
Myrtle Warbler	April 20	Septem
Ovenbird	May 5	Septem
Grinnell's Water Thrush	May 7	Septem
Louisiana Water Thrush	April 23	Septem
Northern Yellow-Throat	May 7	Septem
American Redstart	May 8	Septem
Bobolink	May 1	Octol
Eastern Meadowlark	March 10	Octol
Western Meadowlark	March 12	Octol
Yellow-Headed Blackbird	April 14	Octol
Red-Wing Blackbird	March 12	Novem
Orchard Oriole	May 10	Augu
Baltimore Oriole	May 1	Septem
Rusty Blackbird	March 21	Octol
Bronzed Grackle	March 14	Novem
Eastern Cowbird	April 10	Augu
Scarlet Tanager	May 8	Septem
Eastern Cardinal	Permanent resident	
Rose-Breasted Grosbeak	May 1	Septem
Indigo Bunting	May 6	Septem
Dickcissel	May 16	Septem
Eastern Purple Finch	March 24	Octol
Pine Grosbeak	November 2	Mar
Common Redpoll	October 22	Ap
Northern Pine Siskin	April 24	Octol
Eastern Goldfinch	Permanent resident	
Red Crossbill	Irregular winter visitant	
White-Winged Crossbill	Irregular winter visitant	
Red-Eyed Towhee	April 14	Octol
Grasshopper Sparrow	April 28	Septem
Eastern Vesper Sparrow	April 2	Octol
Eastern Lark Sparrow	April 21	Ju
Slate-Colored Junco	Winter visitant	
Tree Sparrow	October 24	Mar
Eastern Chipping Sparrow	April 1	Octol
Clay-Colored Sparrow	April 18	Octob
Field Sparrow	April 11	Octob
Harris' Sparrow	May 9	Octob
White-Crowned Sparrow	May 6	Octob
White-Throated Sparrow	April 26	Septemb
Eastern Fox Sparrow	April 6	Octob
Song Sparrow	March 20	Novemb
Lapland Longspur	October 23	Mar
Eastern Snow Bunting	November 6	Mar