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CONTENTS

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CANADA GEESE

Management and Hunting in Iowa

By James L. Hansen

James Hansen is the waterfowl research biologist for the Iowa Conservation Commission. He received his BS from the University of Minnesota and his MS from the University of Missouri. He has been with the commission since 1979.

With the coming of the shorter, cooler days of autumn, a strange stirring begins in two different creatures—Canada geese and Canada goose hunters. The stirring in Canada geese is part of the fall migration that will take them from the Arctic and marshes of northern Iowa to places southward. The stirrings in goose hunters involve a number of diverse activities. It may involve walking with an unusual posture, eyes cocked skyward, or rummaging through the garage to locate bags of decoys. The sight and sound of the first flock of Canada geese in the fall can be quite a thrill to people whether they hunt or not.

The Canada geese we see in Iowa are of several different subspecies which differ in size and origin. Many of the giant Canada geese, the big 10- to 14-pounders, nest right here in Iowa and winter primarily in Missouri. We also get giant Canadas in our state that have migrated from elsewhere, especially from Minnesota and Manitoba. Most of the medium-sized (six to nine pounds) Canada geese that pass through central Iowa nest along the western shores of Hudson Bay in Canada and winter primarily at Swan Lake National Wildlife Refuge in Missouri. This flock is known as the Eastern Prairie Population. A different population of Canadas of a similar size, the Mississippi Valley Population, nests near Hudson Bay and James Bay, migrates through Wisconsin and eastern Iowa to wintering areas in southern Illinois. A population of somewhat smaller Canadas, the Tall Grass Prairie Population, nest in the Arctic, north of the other populations and migrate through Iowa on the way to wintering areas in Oklahoma and Texas.

The relationship between these various nesting, migration and wintering areas has been discovered primarily by capturing and leg-banding geese and then finding out where the band recoveries come from. Iowa hunters have contributed to the unraveling of the mysteries of migration by reporting the leg-banded geese that they shoot. The reporting of banded geese and other birds is still as important as ever in managing populations, because the information is used in determining survival rates and changes in migration and mortality that may be caused by changes in management practices.

LOCAL GIANT CANADA GEESE

The Iowa Conservation Commission's management programs for Canada geese in the state includes managing for both migrating and nesting Canadas. Giant Canada geese originally nested in Iowa, but due to loss of habitat and unrestricted hunting, wild nesting Canadas no longer existed in the state by about 1907. The Iowa Conservation Commission began reestablishing giant Canada geese in 1964, when 16 adult pairs of pinioned geese were bought from private goose raisers in Minnesota and South Dakota. These geese were released at Ingham Lake in Emmett County in a large enclosure with artificial nesting structures and man-made islands for nesting. To increase the chances of success of the stocking, most young produced for a few years were pinioned or wing-clipped to increase the breeding flock, and an area of 120 square miles around Ingham Lake was closed to Canada goose hunting.

Using the same techniques as at Ingham, additional giant Canada goose flocks were started in the early 1970's in northern Iowa at Smith's

Ron Johnson

Slough near Ruthven, Kettleson's Hogsback near Spirit Lake and at Rice Lake near Lake Mills. Efforts were made from 1976 to 1981 to establish nesting giant Canada goose flocks in southern Iowa, at Rathbun Reservoir, Green Valley, Bays Branch, Lake Icaria and Red Rock Reservoir. The flock near Rathbun was substantially increased in 1980 and 1981 when interested citizens volunteered to transport nearly 2,000 surplus Canada geese from Toronto, Ontario, Canada.

The four giant Canada goose flocks in northern Iowa have all done very well. Nesting pairs have spread out from the nucleus flocks to wetlands as far as 50 miles away. The Canada goose refuges around each flock successfully reduced local hunting mortality to allow the flocks to grow. Recently some of the refuges were reduced in size to allow more harvest. In 1983 it is estimated that over 5,000 goslings were produced from these four flocks.

With the success of the North Iowa goose flocks, crop depredations have occurred in a few areas. This occurs from May to July, when adult geese bring their flightless goslings from a lake or marsh to "graze" on small soybean or corn plants on private land. Geese, unlike ducks, are browsing animals that need some short, succulent, green plants for food. Iowa Conservation Commission personnel try to provide sufficient green browse on public land adjacent to major goose rearing wetlands. Where there is little or no state land on which to plant browse crops, acquiring at least small areas, where willing sellers are found, is given a high priority. Other methods that have been used to reduce depredations are the use of exploders and the use of permanent or temporary fences to protect private land. Personal contact with the farmers is emphasized in all of the depredation control work. Efforts to deal with goose depredations have been quite successful. However, it is likely that giant Canada goose production in North Iowa will be limited by our ability to provide food for the geese without causing undue hardships on adjacent landowners.

The giant Canada goose projects in southern Iowa have not yet flourished to the same degree as the northern Iowa ones but some look very promising. At Bays Branch and Lake Icaria several broods are produced each year, and the flocks are beginning to grow and spread out to nearby areas. The Rathbun flock is beginning to do particularly well, with a few hundred young produced each year. A great deal of effort at Rathbun has gone into providing nesting structures on public land and on private farm ponds. The effort is paying off, as many pairs of geese now nest on ponds several miles from Rathbun Reservoir. Early summer depredations should not become much of a problem in this area. The public water areas have plenty of uplands associated with them and nearly all of the private ponds will have only one pair of geese nesting on them. To protect and increase the breeding stock of giant Canadas in the Rathbun area, all of the public land is closed to Canada goose hunting. While this provides plenty of water and a safe nesting area, geese flying out to favored

feeding areas may be quite vulnerable to hunting. A study has been started to find out more about the needs of Canada geese in the Rathbun area.

MIGRANT CANADA GEESE

For all Canada geese, but especially for the ones that migrate through Iowa from breeding grounds far to the north, we must remember that this is a resource that we share with other countries, other provinces and other states. Many people have an interest in how the various goose populations are doing. Representatives of interested agencies meet twice a year as the Mississippi Flyway Council Technical Section to review the population status, production outlook, current studies and to agree on recommendations to be made to administrators at the Flyway Council meetings. In the case of the Eastern Prairie Population of Canada geese, Iowa has participated in work on the breeding grounds near Hudson Bay each summer for the past 15 years. Work there has included banding, aerial surveys, ground surveys to estimate production, and studies of breeding biology of the geese. Information obtained is applied to management of the flock.

For the Canada geese that nest in northern Canada, the breeding grounds are not threatened with destruction at present. (Perhaps mineral exploration will some day change that.) Geese on their fall migration and wintering areas need some protection from overharvest. A goose also requires a square meal and a drink every day, obtained in peaceful surroundings. A Canada goose needs each day about a half pound of corn, or its equivalent in other foods.

Here in Iowa we try to provide for the needs of migrating Canada geese in a number of areas. All of the Canada goose refuges associated with giant Canada goose flocks provide food, water and protection for migrants as well. At both Rathbun and Red Rock some of the corn is left unharvested to provide food for geese and other wildlife, and wheat is planted for green browse. At Red Rock some 2,000 acres of subimpoundments, all of it a refuge, will provide excellent Canada goose habitat, especially in years when the water levels cooperate. Rathbun may be on the verge of becoming an important stopping place for migrating Canada geese, as fall peak populations have reached 8,000 to 10,000 in the last two years. We are attempting to learn more about which geese are stopping at Rathbun and whether the present refuge is adequate. One federal area, Louisa National Wildlife Refuge in southeastern Iowa, attracts fall peaks of 10,000 to 15,000 Canada geese.

Even if one provides food, water and sanctuary for geese, he may not attract many immediately. Canada geese are very tradition-bound. The young migrate with their parents, and the adults tend to use the same stopping and wintering areas each year. Therefore, a new area may not be used right away. In providing corn or other crops for migrating Canadas, the size and type of field can make a difference. Canada geese tend to avoid small, hilly fields bordered by trees, and prefer instead large, flat, open fields. They may feel more secure in a large field.

Canada geese and other waterfowl depend a great deal, during both fall and spring migration, on a supply of waste grain from private land. Iowa farmers have increased that supply as they have shifted away from fall moldboard plowing to minimum tillage or even no-till planting.

CANADA GOOSE HUNTING

The Canada goose is a "*big game*" species among waterfowl, whether pursued with eye, camera or gun. The thrill of an approaching flock of Canadas is one remembered for a long time.

There are several ways to hunt Canada geese. Perhaps the most rewarding, and what most hunters would consider the highest quality hunt, is by calling them into decoys over water or in a field. This method, when used in a field, takes a lot of time scouting and preparing a blind or pit. It also requires, on the part of the hunter, faith that a flock of geese will feed in the same field two days in a row! After locating geese feeding in a field, one then asks permission to hunt and prepares for the arrival of the geese the next day or that afternoon. Some hunters will dig pit blinds, while others have success just lying on their backs next to the decoys and covering up with cornstalks.

Hunting from a boat over "floater" decoys gives a hunter a better chance at migrating geese, rather than geese that have been around long enough to develop a feeding pattern. This type of hunting is especially enjoyable the first two weeks of the goose season because, with our present duck season dates, there are no duck hunters sharing the lake or marsh. In hunting migrating Canadas, one might think that a day with a north wind would be best, because it would be more conducive to migration. However, some hunters think they have better luck when the wind is from the south or west. There may be fewer geese migrating, but

Roger Sparks

those that are are more likely to get tired and look for a place to rest.

Some other methods of Canada goose hunting are, to me at least, a lower quality experience. Some people will watch geese flying out of a refuge, or even migrating geese, and then follow them with a vehicle until they land in a field. They then try to sneak close enough for a shot. It seems that this would disturb the geese more, would be very frustrating, and would also encourage people to violate trespass laws.

Another method of Canada goose hunting is to line up along a refuge line and shoot at the geese as they fly out. If the geese are flying high, this method is sure to lead to a number of crippled geese, some of which will not be retrieved. Where hunter numbers and spacing are not regulated, there often are arguments over downed birds. If, as has occurred elsewhere in the country, large numbers of geese become half-tame and fly out low, what happens? There is no suspense, no challenge. You are almost as sure of bringing home a goose as you would be visiting your local meat market, provided you can run faster than the guy in the next blind.

Some people may enjoy the race for a cripple or the fight over a hunting spot, but this is not the type of hunting a conservation agency should encourage. In Iowa we don't have the quantity of Canada goose hunting that some states do, but most of it, to me, is a high quality of hunting. In most places you can go out and "do your own thing," with plenty of room for geese to work your decoys as you try to call them in.

In recent years, according to the federal waterfowl harvest estimates, Iowa's retrieved Canada goose kill has been around 10,000 to 12,000. There is a good potential for that to increase over the next few years if Rathbun and Red Rock attract more migrants and as our giant Canada goose flocks continue to expand. As these things happen there will be more Canada geese for all Iowans to enjoy.

The outlook for Canada geese in Iowa in 1983 is mixed. Eastern Prairie Population Canadas had a disasterous nesting season due to snow cover persisting very late on their nesting grounds west of Hudson Bay. Under those conditions, the geese were unable to begin laying eggs when they should, and instead they began to use up the energy reserves they had stored. The net result was that very few geese nested. Gosling production will be only 10 percent or less of what it was in 1982. With few young geese in the fall migration, hunters may find that migrating Canada geese are more wary and not as vulnerable. Because of the poor production, some states will have more restrictive hunting regulations to help maintain the population. Iowa's kill of geese from this flock is so small that we will be permitted to have regulations similar to last year.

Now for the good news! Production from Iowa's giant Canada goose flocks has been good this year in spite of a cold, snowy period in April. Those hunting or goose watching near these goose refuges may find more birds in the area.

Ron Johnson

Far left, ***Two thousand surplus Canada geese from Toronto, Ontario, Canada arrive at Lake Rathbun in the summer of 1981.*** Left, ***Relationships between nesting, migration and wintering areas have been discovered through leg-banding Canadas.***

The Summer Season

By Tim Huisman

Tim Huisman is a ranger's aid for Big Creek State Park. This is his second summer season with the commission. During the remainder of the year he is a band instructor for grades 5 through 12 in Madrid. He earned his BA from Central College in Pella.

Although maintaining and administering a state park is a busy job the year around, the summer months have a special character all their own. While the other three seasons each entail their own particular duties and responsibilities, planning and preparing for the hot days of summer remain a constant part of the schedule. Winter and spring, especially, are times of building and repairing, until all is in order for the Summer Season.

The summer season at Big Creek State Park begins as soon as the weather allows the placement of boat docks and opening of restrooms and shelters. Once the fear of freezing has past, park personnel move to get water turned on, meters installed and all fittings reattached in the park's modern facilities. Docks are moved into place as soon as ice disappears. As Memorial Day approaches, beach and boat-rental concession areas are opened up and put in operating order, while last-minute checks are made on picnic areas, parking lots and boat ramps.

A real sign of summer is the arrival of the seasonal workers to the park. This year's crew is mostly returning workers, so few introductions are necessary when Ranger Rod Slings brings his staff together for their initial

Ron Johnson

summer meeting. At this session Slings shares with the entire staff his plans and goals for the park during the summer. Tom Shinn, head of maintenance, goes over equipment operation with the crew, with a stress on safety. The worker's responsibilities to be helpful and courteous to the public are reinforced in a talk by Slings, and a brush-up on basic water-rescue techniques is also presented. Together the crew maps its strategies for maintaining the park and providing adequate day-to-day staffing throughout the season.

On a typical Monday morning at Big Creek, workers assemble at the maintenance headquarters for distribution of duties. A review of weekend stress areas is discussed to acquaint the workers with spots in the park that may need immediate attention. Jobs are delegated off of a master work-list kept up-to-date by the ranger and his assistants. Priority items are listed, along with a variety of smaller but equally important jobs.

Because of the importance of avoiding costly down-time on the job, much attention is paid to preventive maintenance. Oil, water and fuel levels are checked on all vehicles before they are moved. Mower operators are expected to thoroughly grease their machines at all points before each usage. All the necessary tools for a particular job are loaded and organized on the trucks.

A daily activity log is filled out each day before lunch. This log is a continuing record of what work is being done and how much time is being spent accomplishing it. Before resuming work in the afternoon, workers check in with a ranger for a progress report and to receive additional instructions if needed. After a full afternoon's work the crew checks in again at the shop. The cleaning of vehicles and putting away of tools is treated with the same importance as preparing the equipment was in the morning. And before leaving, crew members again log their hours.

Throughout the summer it is the responsibility of the ranger to keep in close communication with the staff and, when necessary, to meet with them for group information and planning sessions. Besides being expected to work along with the others on daily maintenance projects, Ranger Slings and his two assistant rangers, Shellie Aneweer and Jim Humberg, are also charged with administrative duties such as regular reports, inventory control, budget, and public relations. In addition they are responsible for providing enforcement and security for the park, which can be a full-time job in itself and involves extra efforts on holidays or hot, busy weekends. All the while the park is expected to improve and grow under their supervision, with the development of new facilities and special projects.

A big part of the job, even for the seasonal worker, is dealing with the public. Workers are encouraged to "*know*" their park, so they can provide ready help and information in answering questions or advising park users where to go for various types of recreation on and around the lake. Of course providing clean and attractive areas for public use is important, and workers are always on the lookout for areas that need attention in maintenance or clean-up. Above all else, park workers encourage the use of their particular park. That, after all, is what the job is all about.

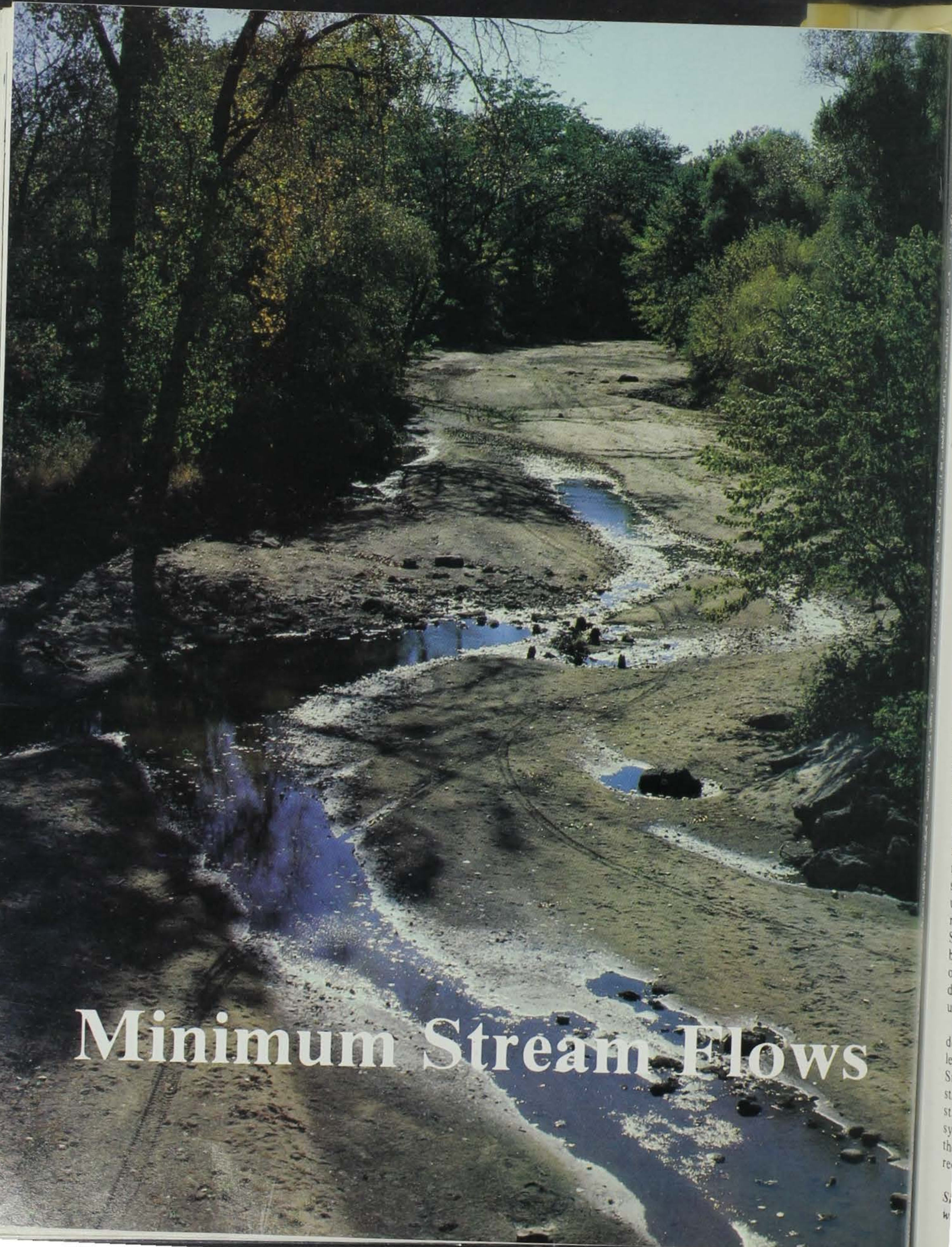
Although keeping existing areas clean and well maintained is the primary focus of summer work, many new projects go on as well. This year at Big Creek workers have put the finishing touches on a new boat ramp, opened up a dry-dock storage area and made major repairs on the west-side parking and boat launch facilities. The initiation of a park newsletter and a great deal of tree-planting have also been accomplished, and before the summer is over new lifeguard stands will be installed at the beach and a park visitor center opened up.

Summer at the park does have its frustrations and concerns. A good day can easily turn sour for the park worker who discovers a littered eyesore where a clean, attractive picnic area had been only the day before. Vandalism is also a frequent problem, and correcting the damage often robs valuable work time from park improvements and new projects. Of even greater concern is public safety. Park rules and conservation laws meant for the protection of the park user are often flaunted, sometimes with tragic results.

The end of summer comes all too soon for the park user and park worker alike. As August moves towards an end the focus on clean-up in the park intensifies. A last push puts picnic areas, boat ramps, restroom facilities, and beaches in order for the last "*big day*" of the summer — Labor Day. As various tools and equipment are used for the last time of the season they are stored away or marked for winter maintenance. With the passing of the Labor Day holiday comes the check-out of the summer workers, many leaving with promises to return next year. The rangers and other permanent staff are left behind to complete the winterization of the facilities. And to look ahead. That's important. For the planning has already begun — for the **next** Summer Season.

Ron Johnson

Far left, ***Summer sunset at Big Creek.*** Left, ***Summer crews such as this one at Big Creek, play a vital role in readying and maintaining state parks for visitors.***


Minimum Stream Flows

By Lannie Miller

Lannie Miller is a fisheries biologist located at Lake View. He has been with the commission since 1974 and received his BS in fisheries management from Kansas State University.

Iowa has always been a land of abundant water. Boardered on the west by the Missouri River and on the east by the Mississippi River, our state is indeed rich in aquatic resources. The interior of Iowa is interlaced with a network of many smaller rivers, streams and creeks, all of which add beauty, recreational opportunities and life-giving water to our state.

We must not be lulled into complacency, however, and believe that Iowa's water resource is a never ending one. Today, more than ever before, our water resources are being utilized by many different entities at an ever increasing rate. Towns and cities are using more water, while irrigation systems are springing up throughout many of our rural areas. Factories, industries and power plants have also greatly increased their water demands. Loss of habitat, diminished water quality and the alteration of aquatic biota have resulted. It is becoming ever more apparent that continued increased usage of this life-giving resource will negatively impact Iowa's fish, wildlife and recreactional base, both now and in the future.

In order to protect the organism inhabiting these streams, decisions must be made as to how much water is needed to sustain them. Minimum stream flow is a concept oftentimes used to describe the amount of water necessary to sustain aquatic life. Several methodologies have and are being developed for the determination of this rate. All methods require a determination of what the flow is under normal stream conditions.

In most cases, the easiest way to determine this is by using data collected by the United States Geological Survey at their gaging stations. These stations are distributed throughout the state on most of our major river systems. Information collected at these stations ranges from a continuous record of flows for the past fifty years to a record with only sporadic readouts. The Department of Water, Air and Waste Management (formerly the Iowa Department of Environmental Quality and Iowa Natural Resources Council) have assigned minimum flow rates to many streams in our state. These minimum flow rates are normally represented as a percentage of the average or mean annual daily flow.

Because methods for determining minimum flow rates are being continually refined and technically improved the Iowa Conservation Commission has been reviewing many of the flow regimes and discharge designations. It is our intention to provide a technically sound data base upon which management decisions may be formulated. These refined models are more responsive to the biological processes in the stream as well as the natural variation that occurs in a flowing water ecosystem.

In addition to the establishment of minimum flow criteria, studies are also being initiated to determine how these reduced flow rates affect the aquatic species that are present. As the amount of water is reduced, aquatic organisms go through several phases. At optimum water conditions, they go about their activities as nature intended, but as water levels drop, life becomes more difficult. Problems begin to occur with spawning habitat, water temperature, predator avoidance, water turbidity and the ability to secure food. Finally, water levels reach a point where the stream can no longer support aquatic life. This end point is not the same for all organisms and work must be done to decide how early and to what degree the most sensitive animals are affected.

Some of the most dramatic examples of these flow problems can be seen in the Pacific Northwest. To produce power at peak periods, varying amounts of water must be released through hydroelectric dams. This varying can result in periods of time when salmon redds (nests) downstream from the dam can be completely dewatered. Although studies have shown that the eggs in these redds can stand an amazing amount of water fluctuation, in many cases whole sections of streams can be made useless for salmon production.

A study has been undertaken on a section of the Missouri River in Montana to discover the species present and locate areas where essential life activities take place. As a result of this reasearch, young sauger were found to require quiet, side channel areas in their first summer of life. A decrease in flow could make these areas unavailable and force the fish into unsuitable areas of the river, seriously effecting their survival. Another species, the shovelnose sturgeon, was found to feed almost exclusively on aquatic insects in riffles. If the flow was decreased these riffles would be one of the first areas affected and if it was to survive, the sturgeon would be forced to find another area to feed.

Aquatic insects and other invertebrates that live on the stream bottom can also be effected by low water levels. Many aquatic insects live above and around the water as adults, but during their immature stages they require water. There can be a great number of species of insects in a small stream that lay eggs, hatch and emerge at different times. Although the eggs of these insects can often survive for a time in the dry stream bottom, after they have hatched they are extremely susceptible to drought. The length of time from hatching to emergence from the water is when the insect is most susceptible to low water. For this reason, low flows at a particular time can completely wipe out an entire segment of the aquatic insect community.

The majority of Iowa's streams are not regulated by dams or water retention structures. Flow regimes are determined, to a large extent at least, by the amount of precipitation. Once minimum flow rates are established for Iowa's streams, nonvital water uses could be curtailed during periods of low stream flows in order that the aquatic ecosystem may be protected against unnecessary damage.

The streams and rivers of Iowa belong to all of us equally and must be protected and enhanced for the good of all, both now and for the future. More data is needed concerning minimum stream flows and how they relate to the delicate balance of nature. Your support is needed to implement laws to further protect and enhance these precious aquatic resources.

Skunk River, north of Ames, in 1976. Iowa's streams and rivers show drastic water level fluctuations due to drought conditions.

IT'S SEED COLLECTION TIME

By Ruth Reitmeier

It's not just the squirrels who collect acorns and hickory nuts in the fall of the year. So does the Conservation Commission's nursery in Ames.

Did you know Iowa's Conservation Commission **has** a nursery — a nursery for growing trees and shrubs? It isn't like commercial nurseries that sell large, individual plants to beautify your yard. Instead, the State Forest Nursery sells small tree and shrub seedlings in large quantities to encourage forestry, wildlife habitat and erosion control plantings. This year the nursery sold over 3 million plants for such purposes.

All of the seedlings are grown at the nursery and nearly all of them are grown from seed. But where does the nursery get seed for plants like white pine, honeysuckle and black walnut? Commercial dealers supply seed for the evergreens and most of the shrubs the nursery sells. Seed for walnut, oak, hickory, ash and wild plum is purchased each fall from individual collectors throughout Iowa.

The nursery buys some seed from local collectors because oftentimes commercial dealers can't provide all the seed the nursery needs. And seed collected from trees in Iowa is better adapted for growing in Iowa.

The use of locally-bought seed began several years ago, with a few people bringing small amounts of walnut seed to the nursey in Ames. Today, the nursery buys as many as 10,000 bushels of walnuts each fall. It also buys many bushels of acorns, hickory nuts, ash seeds and plum fruits. And this seed comes from people all over the state who deliver it to one of several collection stations.

But why does the nursery need more seed now than it used to? More seed is needed because more people are planting for conservation purposes. Iowans are becoming increasingly concerned about the loss of their natural resources. And all this has meant more demand on the nursery for more seedlings.

To meet this demand, the nursery purchases as much seed each fall as it can find room to plant. In fact, this year's seed collection will be getting under way soon. Here are the prices (per bushel) that the nursery will pay for seed this fall:

Walnut	$ 1.60
Red Oak	$10.00
White Oak	$10.00
Bur Oak	$ 5.00
Wild Plum	$10.00
Shagbark Hickory (hulled)	$10.00
Shellbark Hickory (hulled)	$10.00
Green Ash	$15.00
White Ash (contact nursery before collecting)	$20.00

Perhaps you would like to try your hand at seed collecting. If so, you might want to get the whole family involved, since large amounts of seed (10 bushels or more) are the most helpful to the nursery. You should contact the nursery or one of the other stations before collecting to make sure seed is still being accepted.

As you might imagine, collecting seed can be fun. It offers a chance to enjoy the nice fall weather. It's also a good way to make some extra money. And it gives the satisfaction of helping the nursery provide seedlings for conservation plantings. And that's worth a lot — for **all** Iowans!

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If you are interested in ordering seedlings from the State Forest Nursery, the application form will appear in the November issue of the *Iowa Conservationist*. Orders are processed on a first come, first served basis and the seedlings are delivered the following spring.

Ruth Reitmeier has worked at the State Forest Nursery for five years.

Wayne Lonning

1983 SEED COLLECTION STATIONS

State Forest Nursery
2404 South Duff Avenue
Ames, Iowa 50010
515/294-4622

Yellow River State Forest
(near McGregor)
319/586-2254

Shimek State Forest
(near Farmington)
319/878-3811

Stephens State Forest
(near Chariton)
515/774-4918

Black Hawk County
Conservation Board
319/266-6813

Buchanan County
Conservation Board
319/636-2617

Clayton County
Conservation Board
319/245-1516

Muscatine County
Conservation Board
319/649-3379

O'Brien County
Conservation Board
712/448-2254

Sac County
Conservation Board
712/662-4530

Warren County
Conservation Board
515/961-6169

DUCKS UNLIMITED THANKS ICC AND SPORTSMEN

Al Weaver, Ducks Unlimited State Chairman (far left) ***and State Chairman Elect Pat Neuhaus*** (left), ***present a special framed and remarqued artist's proof of James Killen's "Hawkeye Mallards" to Commission Chairman John Field*** (right), ***and Director Larry Wilson*** (far right). ***Weaver said "The print represents a special thanks to the commission and the sportsmen of Iowa for their contribution to Ducks Unlimited and to waterfowl restoration in North America."***

In honor of major contributions to waterfowl habitat restoration, Iowa Ducks Unlimited recently donated a very special art print to the Iowa Conservation Commission. The framed and remarqued print, "Hawkeye Mallards," is number two of 40 artist's proofs by Iowa Ducks Unlimited Artist-of-the-Year James Killen.

Killen not only won this, the first Iowa Ducks Unlimited Artist-of-the-Year, he recently was named national Artist-of-the-Year by that organization. A long-time supporter of Ducks Unlimited, Killen has contributed many art prints to Ducks Unlimited over the years. Among many credits, the nationally known artist recently won the 1983 South Carolina Duck Stamp Competition and was named Minnesota Wildlife Artist-of-the-Year.

Ducks Unlimited initiated the print program to honor major contributors and to promote sponsor membership. The commission qualifies as a "major donor" by virtue of the state duck stamp program. Each year, about 25% of the revenue from the sale of the Iowa stamps is pumped into Ducks Unlimited projects in Canada, where much of North America's waterfowl resource originates.

The original James Killen painting of "Hawkeye Mallards" will be auctioned by Ducks Unlimited this December. For details contact state chairman Al Weaver [319] 365-8631.

SAFETY CLASS REQUIRED FOR YOUNG HUNTERS

Commission officials remind all persons born after January 1, 1967 that they will be required to have a certificate of completion of a hunter safety course to purchase an Iowa hunting license.

Minimum age for the course is 12 years old. The course covers hunter responsibility and ethics, history of firearms, safe gun handling, bow hunting and safety, survival and first aid, and game care and identification. For information on courses in your area, contact your local conservation officer or call the Iowa Conservation Commission at (515) 281-6824.

Before cutting down a dying tree on your property, think about this. There are over 80 species of birds that only nest in dead or dying trees, such as red-bellied woodpeckers, screech owls and chickadees. In return for supplying them a home, they'll eat many of those pesty insects around your neighborhood, including mosquitoes.

An acre of trees can remove 13 tons of dust and significant amounts of other potentially harmful gases every year from the surrounding environment.

Large birds may have as many as 25,000 feathers. Each feather contributes to the streamlining of its body and ***each****, from time to time, must be preened to be kept in good shape.*

GOVERNOR PROCLAIMS PRAIRIE HERITAGE WEEK

SEPT. 4—10

Governor Terry Branstad recently procliamed Sept. 4—10, 1983, as the first annual Prairie Heritage Week in Iowa.

The proclamation urged the state's resource managers, educational leaders and concerned individuals to develop programs aimed at increasing people's awareness of Iowa's prairie heritage and protecting these ecosystems.

As a part of Prairie Heritage Week, Rolling Thunder Prairie, a 122-acre tract in southern Warren County, was dedicated as a state preserve on Sept. 6.

Prior to settlement time, 85 percent of Iowa was covered by prairie. Today, less than 10,000 acres remain of the approximately 30 million acres which once existed. Three thousand of these remaining acres are protected by federal, state or county organizations. "Iowa's agriculture success is based directly on the rich topsoil these prairies created," says Dean Roosa, state ecologist. "Iowans need to be aware of the living museums they have in their prairie remnants. They provide not only beauty, but wildlife habitat, erosion control and invaluable natural classrooms."

The State Preserves Advisory Board decided in June to establish, with the governor's approval, a prairie week. According to Roosa, they hope to develop a number of special activities in conjunction with future Prairie Heritage Weeks.

The Iowa Conservation Commission, in cooperation with The Nature Conservancy, is inventorying key elements of Iowa's natural heritage. Persons knowing of rare plants, animals, special geological features or remnant tracts of native vegetation such as prairies are encouraged to contact the Iowa Conservation Commission Natural Areas Inventory, Wallace State Office Building, Des Moines, Iowa 50319. Persons interested in more information on prairies should contact the Iowa Conservation Commission (at the above address) or their local county conservation board.

Governor Terry Branstad recently proclaimed September 4—10, 1983 as Prairie Heritage Week. Present at the proclaimation's signing were (left to right) ***Doug Smalley, State Preserves Board member; Sylvan Runkel, Preserves Board advisor; LeRoy Pratt, Preserves Board member; Dorothy Baringer, Preserves Board chairperson; Dean Roosa, state ecologist; Larry Wilson, Iowa Conservation Commission director; Allen Farris, chief of fish and wildlife; and Bob Walker, County Conservation Board administrator.***

HUNTING AND FISHING DAY

September 24

Governor Terry Branstad recently signed a proclaimation designating September 24 as Iowa Hunting and Fishing Day.

This date also marks the 12th anniversary of National Hunting and Fishing Day. The theme of this year's NHF Day is "A Day for a Lifetime." It emphasizes that the memories gathered from hunting and fishing can be treasured for life and encourages sportsmen to share that excitement.

Over ten million people are expected to participate in NHF Day activities and more than 40 of the nation's leading conservation organizations will help sponsor such activities.

In the proclaimation for Iowa Hunting and Fishing Day, Governor Branstad urged all Iowans to dedicate themselves to the wise use and management of their natural resources so that future generations can enjoy the benefits of hunting and fishing. The proclaimation noted that hunters and fishermen have been instrumental in increasing public awareness of the importance of conseving Iowa's natural resources.

Each year sportsmen contribute some $500 million to conservation through licenses and equipment tax. Approximately one million hunters and fishermen have contributed six million dollars annually to the conservation of Iowa's fish and wildlife. These funds are used for land acquisition, scientific research and habitat management.

CATFISH, State Fish?

Visitors to the conservation commission's building at the 1983 Iowa State Fair feel the state fish of Iowa should be the channel catfish.

The question of the day at the conservation building on Saturday and Sunday, Aug. 13 and 14 was — "What's your choice for the state fish of Iowa?" Over 550 people responded to the question and results were as follows:

channel catfish	36%
largemouth bass	22%
bullhead	12%
carp	7%
crappie	6%
bluegill	6%
walleye	4%

remaining percentage — miscellaneous

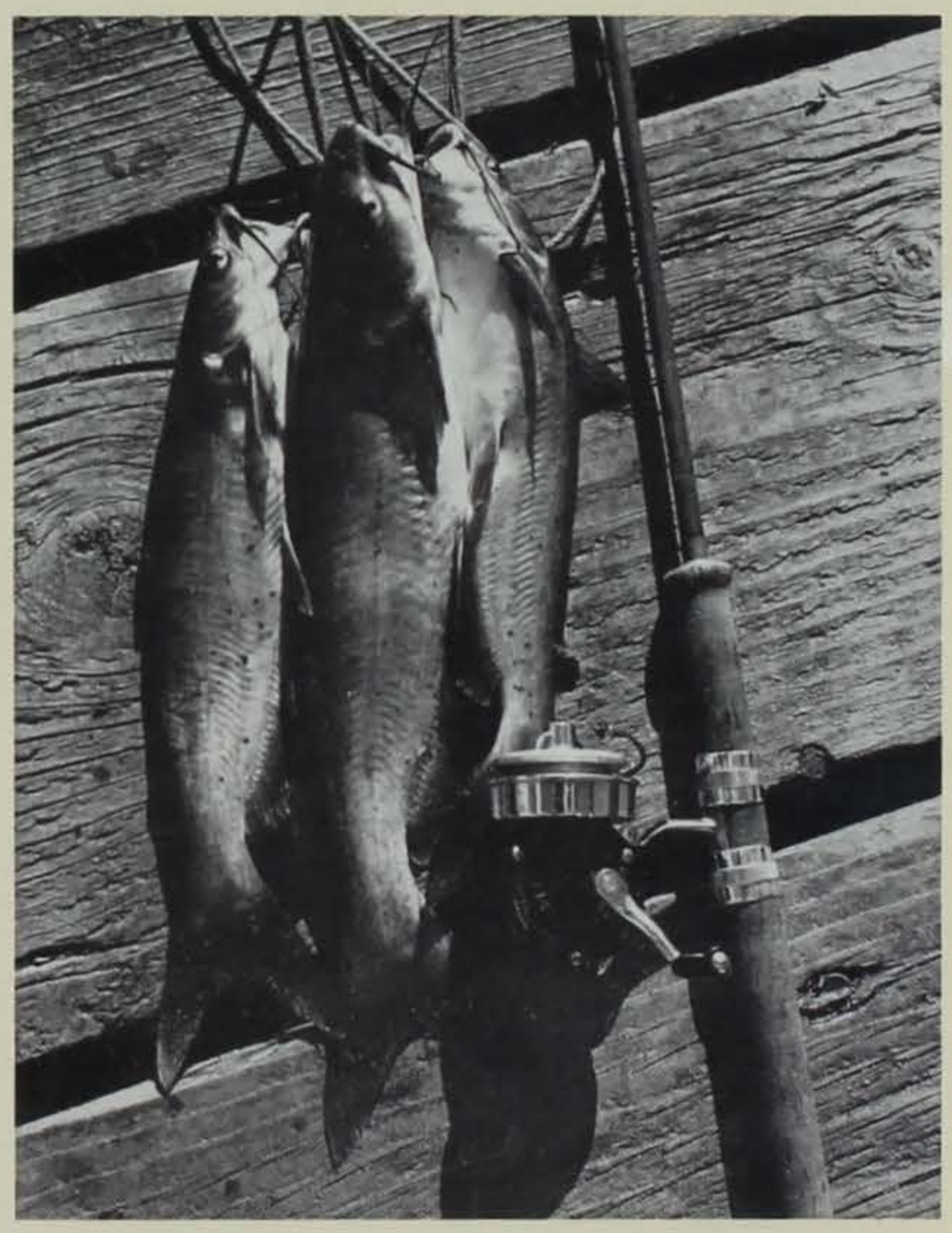
Although Iowa is not known for its shark population, they captured close to 4 percent of the vote.

Other questions posed during the fair required "yes" or "no" responses. Over 1700 people let the commission know how they felt on various topics.

Approximately 73 percent of those polled said they witnessed illegal hunting and fishing in the past year. In response to the question "Do you know how to get in touch with your local conservation officer?," 63 percent said yes. Nearly 80 percent thought a reward-for-information would reduce poaching.

A concern about the effects of farming on wildlife was reflected when 60 percent of those polled said modern farming hurts wildlife. About 97 percent felt farmers should get a tax break for leaving land for wildlife.

Iowa needs a required boating course according to 61 percent of those answering the question.



CLASSROOM CORNER

By Bob Rye

The first summer of OUTLOOK has been concluded with 320 Iowa teachers trained in the environmental enrichment education program. During the training sessions they planned how and where they will implement the program in their own school curriculum.

The teachers are from 77 counties and will be more than willing to discuss OUTLOOK with others in their counties. When discussing OUTLOOK, ask about the materials, field activities, credits and fun.

The 1984 summer schedule for OUTLOOK is set at the Conservation Education Center in Springbrook. Sessions will be filled as soon as the registration information is available. The dates of the sessions are: June 3-8, 1984, July 15-20, 1984, July 22-27, 1984 and July 29-August 3, 1984.

If you are interested in attending and wish to obtain the registration materials contact Duane Toomsen, Department of Public Instruction, Grimes State Office Building, Des Moines, Iowa 50319.

The funding of 1983 OUTLOOK sessions were handled by donations to the Iowa Natural Heritage Foundation or the staff at the Education Center.

In addition to the teacher activities of OUTLOOK, the center is continuing the successful teacher naturalist workshops. These workshops offer one graduate credit. This school year the workshops and topics will be: September 16-18 — Iowa Forests; November 4-6 — Rocks and Soils of Iowa; December 2-4 — Canines; Wolf-Fox-Coyote; February 3-5 —Endangered Species; March 2-4 — Amphibians and Reptiles of Iowa; April 6-8 — Bird Observations; and May 4-6 —Wildflowers in the Yard and Wild. Contact the Conservation Education Center at R.R. 1, Box 53, Guthrie Center, Iowa 50115 for more information and registration.

Also scheduled this fall is the Iowa Conservation Education Council Workshop. The workshop will be held October 7-9 at the education center; the themebeing "At Peace with Nature." All teachers, scout leaders, naturalists and interested individuals are welcome. Once again, one graduate credit is available to those attending.

For registration information contact Duane Toomsen, Department of Public Instruction, Grimes State Office Building, Des Moines, Iowa 50319.

DONATIONS

The commission would like to recognize and thank the following people for their recent donations:

Anderson School 3rd Grade Dubuque	$20.25 to parks
Van Horne Garden Club	$10 to Pleasant Creek for shrubs
Saunders Archery Co. Columbus, Neb.	Archery equipment for hunter safety classes valued at $80
Metform MacLean-Fogg Co. Savana, Ill.	300 plastic containers for wood duck houses
Epley Seed Corn Plant Shell Rock	148 bags of seed corn for spring planting
Stanford Warner Blakesburg Stanford Warner, Jr. Ankeny Tom Warner Drakesville Jerry Warner and David Woofter Ottumwa	$100 each for electrical service at Lake Wapello campgrounds
Albert M. Andreas Foundation Cedar Rapids	$250 worth of sand for Lake MacBride State Park
Fort Atkinson Foundation	2 replicas of Charleville muskets for Fort Atkinson museum valued at $600

1983 FORT ATKINSON RENDEZVOUS

SEPTEMBER 24-25

Demonstrations of frontier crafts, cooking, and lifestyles will again bring the partially-restored Fort Atkinson State Preserve back to life during the Seventh Annual Fort Atkinson Rendezvous, September 24-25. The event is sponsored by the Iowa Development and Conservation Commission, the Iowa Preserves Board and the community of Fort Atkinson.

Fort Atkinson, located 14 miles southwest of Decorah on Highway 24, has been the site of the rendezvous for the past five years, delighting thousands with its recreation of 1840's frontier life. Tomahawk throwing contests, black powder shooting demonstrations, cannon firing by an 1840 military unit, and demonstrations of period crafts such as rope making, candle making, and weaving are just some of the activities scheduled for this year's rendezvous.

The Fort Atkinson Rendezvous is a living Iowa history lesson and a lot of fun, too. Admission is free. For more information contact Doyle Adams, Iowa Conservation Commission, Wallace State Office Building, Des Moines, Iowa 50319; or call 515/281-5886.

THIRD ANNUAL MINES OF SPAIN AUTUMN SEMINAR

OCTOBER 14, 15, and 16, 1983

MINES OF SPAIN STATE CONSERVATION AREA DUBUQUE, IOWA

The Mines of Spain "Autumn Seminar" is a unique two and one-half day field school that offers a diverse program of cultural and natural resource studies taught by distinguished researchers, educators and historians. The setting for the seminar is the Paleozoic plateau landform region of northeastern Iowa; the focus is the Mines of Spain, an ecologically and culturally rich 1,260-acre reserve located along the bluffs of the Mississippi River south of Dubuque, Iowa. The Autumn Seminar is designed to provide a range of educational opportunities for persons interested in ecology and cultural history. Participants include conservationists, nature enthusiasts, historians, educators and students.

Autumn Seminar programs and options include: a core cultural and natural history program, an optional preseminar program, and an advanced study program.

The Mines of Spain Autumn Seminar is cosponsor-by the Iowa Conservation Commission and the State Preserves Advisory Board. Program registration cost is $20 per person. The Saturday evening banquet is $20 and the evening riverboat cruise is $2. For registration information contact:

Ken Smith
Conservation Recreation Planner
Wallace State Office Building
Des Moines, Iowa 50309
515-281-5815

SOME FISHY FACTS

What does it take to be an expert fisherman? Those who make the grade say you should know your tackle and lures, understand fish behavior and do a lot of fishing. Others, perhaps not quite as serious about fishing, say that all it takes to be an expert is to sound like one.

Either way you must know something about fish. Here are a few simple facts which you can use to either catch more fish, or to impress friends.

Do fish hear?

Yes, but not the same as most other creatures. Fish do not have external ears but they do detect sounds and vibrations in water by means of an internal air bladder which transmits sound to an ear chamber. Also, experiments have shown that some fish use their lateral lines to detect vibrations and transmit them to the ear chamber.

Do fish see underwater?

Definitely, although their vision is limited by the short distance light travels in water. Some fish, such as walleye see much better at night than during the day in bright sunlight.

Do fish shed their scales?

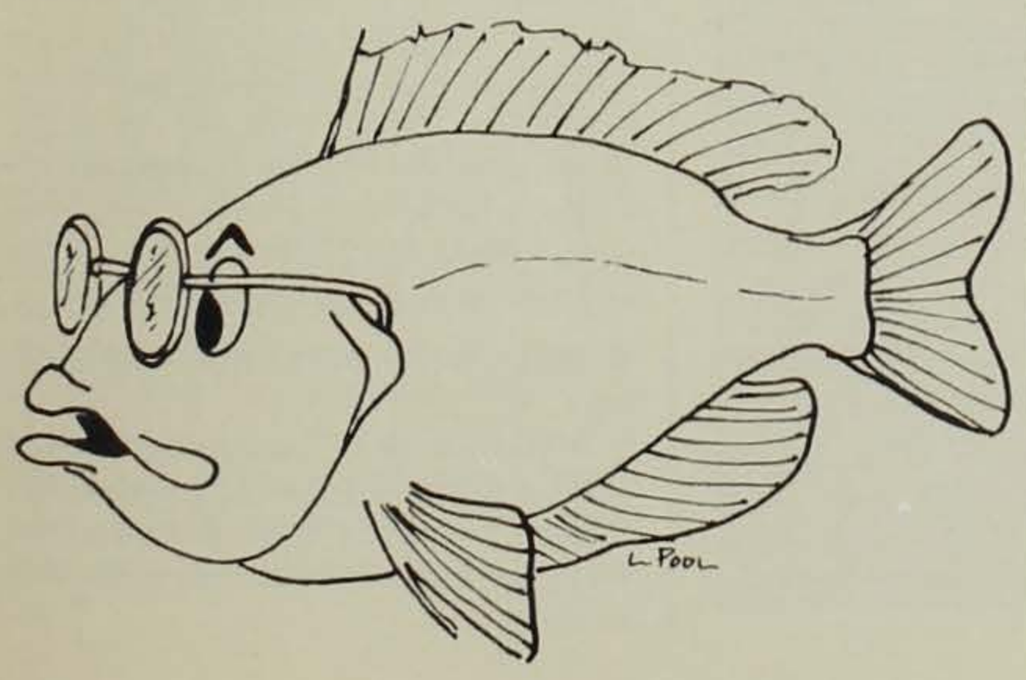
No, scales only grow bigger. Biologists use the scales to age fish. Rings appearing on a scale correspond to each year of a fish's life.

Do fish drink water?

Not freshwater fish. They take in water with their food and also when they force water through the gills to obtain oxygen. Most of this is probably expelled immediately. Saltwater fish do drink water, since the high concentration of salt in the water around them tends to cause a loss of natural body fluids. They pass off excess salt through special cells.

Do fish sleep?

Biologists say yes. Fish do not have eyelids and therefore don't close their eyes, but they do take time out to rest. Some lie on their sides, others rest against objects, and still others suspend themselves motionless for short periods of time.



BOOK REVIEWS

BASIC HUNTER'S GUIDE by the National Rifle Association of America.

300 pages. Illustrated with color art and drawings. Published by the National Rifle Association, 1600 Rhode Island Avenue, N.W., Washington, D.C. 20036; 1983. Price $10.95. Ten to 27 copies, $8.95. Box of 28 copies, $8.50 each.

This guide covers most everything about hunting. Beginning with a history of hunter education, the book proceeds through chapters covering hunting ethics, the role of the hunter in wildlife management, equipment, firearms, bowhunting, field techniques, survival, hypothermia, first aid, vision and physical fitness, and legal responsibilities.

THE BASIC HUNTER'S GUIDE is based on a publication of the Alberta Department of Energy and Natural Resources, Fish and Wildlife Division. NRA has taken the Alberta manual and expanded it to a 300-page, softbound book that covers hunting over the entire North American continent.

Clear, easy to follow illustrations and bold chapter headings stress this book's use as a beginner's manual. But its thoroughness in subject coverage is in extreme contrast to many similar manuals. For example, all species in the wildlife identification section are illustrated with color plates, and bold, easy-to-follow graphics accompany all explanations throughout the text.

This book will be useful particularly to the educator, since it proceeds in a step-by-step format through the basic aspects of hunting. Experienced hunters also will find the book useful for hunting in a new area, or brushing up on their marksmanship or game identification. Sections on sportsmanship and game management are useful for hunters of all ages and levels of achievement.

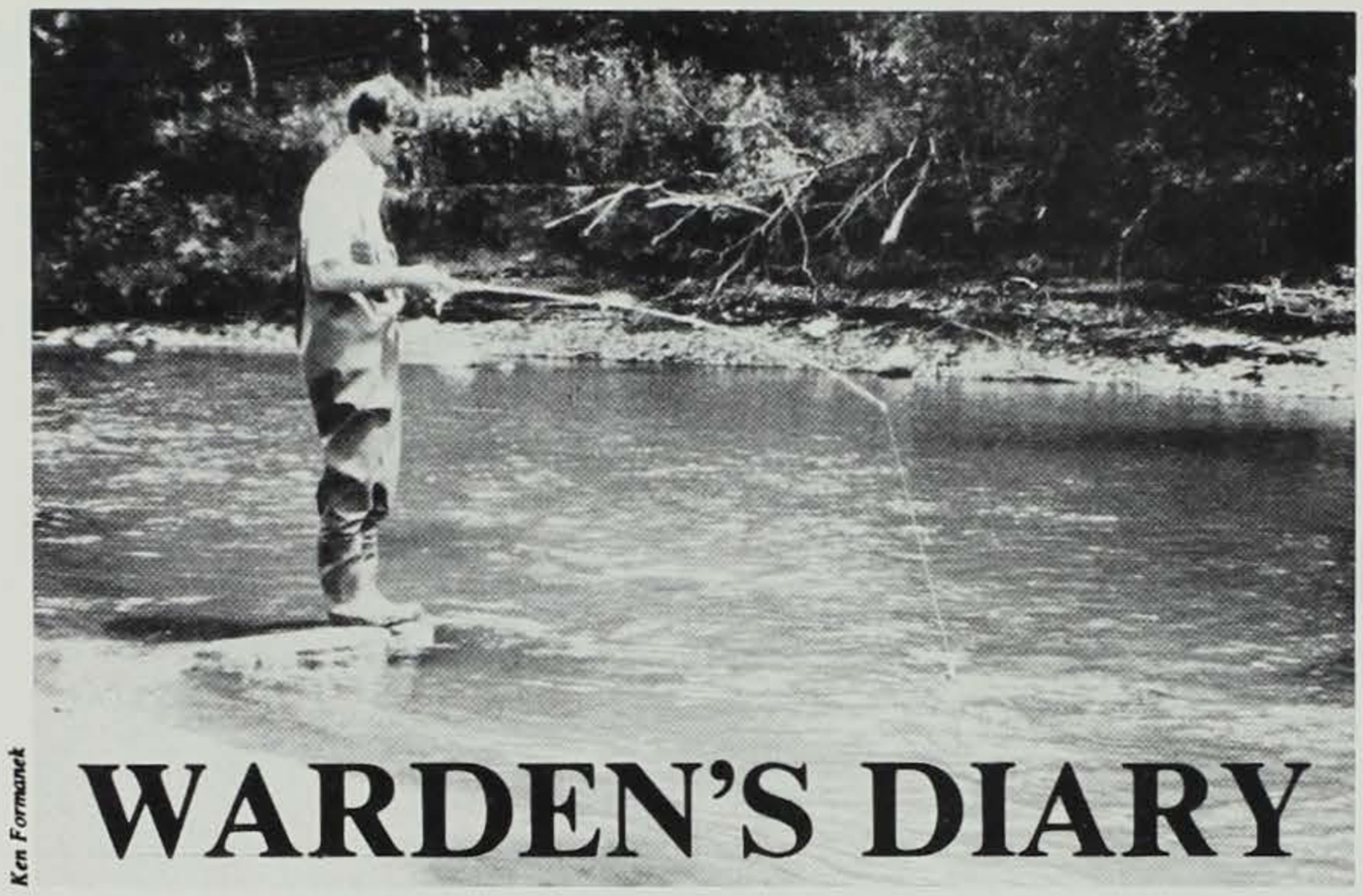
THE BASIC HUNTER'S GUIDE focuses on developing and sustaining a life-long interest in hunting. As hunters progress through various stages in their careers, they will find the guide useful for keeping interest alive and passing the sporting tradition along to younger people.

SOME FEET HAVE NOSES
by Anita Gustafson

This book does, indeed, discuss all types of feet from those of the bumblebee to those of the rhinoceros. It is designed for junior high school aged students both in vocabulary and level of understanding. While using scientific terms throughout, it maintains smooth readability.

SOME FEET HAVE NOSES approaches its subject without making it a reading assignment. Excellent drawings and photographs are inserted to dramatize the points being made. The unique functions of feet, their uses and advantages are explained.

This book and the author will be at the Conservation Education Center for the Fall Iowa Conservation Education Council Workshop on October 7-9, 1983.



Ken Formanek

WARDEN'S DIARY

By Jerry Hoilien

Summer is going full tilt now and the fishing is fine. The old man down by the river always said — "The only thing wrong with relaxin' on a shady stream bank is those darn fish keep pesterin' — swipin' worms or floppin' on the top — waken' a fella up and all!" Hard to please everyone isn't it?

I saw another brood of wild turkeys and a pair of fawns on the meadow the other morning. Young critters are getting big fast. Mother Nature has things worked out pretty well, hasn't she? The lush summer growth hides and protects the young of the year as well as nourishes them and prepares them all for the coming winter. And with spring, the cycle starts all over again. There is something very comforting in all of that.

I remember being a party to a dirty trick one summer. (I sort of enjoyed it.) My neighbor came over to the house one evening to buy his brother a fishing license, seems he was studying hard for the ministry in Milwaukee and was coming home for a few days of relaxation. Frank asked me to hold on to the license and bring it with me the next morning when I was checking licenses. He even suggested a remote place where I might find a couple of fishermen about 8 o'clock in the morning.

So, the next morning I "just happened" to be walking along a very deserted stretch of the Yellow River where Frank had claimed "Wardens NEVER go," and I came upon two men fishing. One looked up and saw me approaching, immediately reeled in his line, put his pole over his shoulder and casually walked towards his partner, all the time trying to watch the birds high in the trees overhead.

His partner kept right on casting and as I strolled up I greeted them with the usual "How's fishin'?" My neighbor acted very surprised and got out his license right away, while the other one continued to study the bird life overhead and started to whistle a nervous little tune. As I studied Frank's license, I started to read the other one in the palm of my hand — "Mr. Jones, I see you are from Milwaukee. Have you had any luck at all?"

There was a long silence and then came an understanding look on his face... I think I almost heard a preacher swear! How about that?!

Put any fish you catch on ice; don't let them loose color. When you get home try this:

Soak fish fillets in just enough buttermilk to cover. Place lemon slices on top to cut the "fishy" taste and refrigerate for a couple of hours. Heat 24 ounces of cooking oil in heavy 2½ quart saucepan. Drain milk off fish. Cut fillets in triangle shapes. Dredge in dry pancake mix. In another bowl, combine 2 cups of pancake mix and 2½ cups club soda (beer works here, too) to give the consistency of buttermilk. Dip the floured fillets in batter, allowing excess to drip off. Deep fry for 4 minutes on each side (time depends on thickness of fillets). Keep warm in 250° oven, without heaping, allow no "snitching" until all are fixed. (The "no snitching" doesn't apply to cooks however.)

How toTr

By Roger Sparks

A small, black, furry ball bounced toward my feet, attached its front end to my shoe lace and two over-sized brown eyes peered upward as if to say, "*take me.*" The decision-making process had ended.

Now that I owned not just any old huntin' dog, I thought to myself, but a purebred, papered and pedigreed Labrador retriever, training should involve nothing more than releasing her natural instincts. Knowing that most folks over-complicate simple problems, I bought a small paperback on dog training and skimmed several chapters.

With the aforementioned research behind me, I'll explain just how easy training a dog can be by relating my own experiences in correcting a few minor problems of my loveable Lab, Cassie.

Incessant Barking

This can be testy trouble, but for me, finding the cure was a simple matter. First, I must point out that Cassie is not your run-of-the-mill barker. No, for her, barking has become an art. She has far greater range and control of both howl and bark than any dog, including the beagles and hounds I have known. When I see her sitting there in the kennel, eyes all but closed in wonderful contentment, jaws moving in perfect rhythm, I realize there is no way I can punish her. After all, those hour-long sessions are merely her way of expressing herself. But I did buy a central air conditioning unit for my house. Now, with the windows closed and the blower on high speed, Cassie's barking is barely discernible over ringing telephones, police sirens and shouts of angry neighbors.

Whining While Ducks Are Approaching

Who can deny becoming excited when a flock of ducks or geese, wings cupped, swing low toward the decoys? Well, our canine counterparts become anxious, too.

to Train a Labrador Retriever

Cassie not only whines loudly when she spots ducks, but she also jumps up on the blind where the whines almost become feverish howls. This apparently seems unnatural to approaching waterfowl as none have ever come close enough to shoot while she's up there.

I have discovered only one way to control her natural enthusiasm. I coax her with a gentle bear hug to the floor of the blind where, with my hunting cap over her muzzle, her whines are adequately muffled. This, of course, eliminates my ability to shoot. But then, far more important to me are the intangible aspects of hunting: like the sounds of others shooting at ducks, the camaraderie (I've had six new hunting partners in just two seasons) and, of course, the ultimate satisfaction of truly fine dog work.

Failure To Retrieve

This more than any other problem tests the very steel of the hunter. I had always assumed retrievers were supposed to retrieve things, or they wouldn't have given them that name. This type of logic has no place in the world of dog training. At first, Cassie seemed to have a slight flaw in the retrieving category; then I began to realize that my own lack of patience was the real problem. For the first year or two, I simply expected far too much of my dog! For example, I actually dreamed of Cassie bounding out from my side to retrieve a downed pheasant. The cover of the dog training book featured a picture of a Lab doing just that. In practice, however, Cassie's boundless energy and genuine enthusiasm for hunting carry her far from my side, often in fact, beyond earshot of the muzzle blast. How could I expect her to retrieve a pheasant when she's a half-mile away chasing rabbits? Patience, I discovered, is the answer. Shooting at flushing birds **only** if the dog happens to be nearby takes patience and, like any other sport, lots of luck. I just know she'll retrieve a pheasant, and any year now, I'll prove it.

All that intensive training doesn't seem to affect a dog's eating habits. It hasn't curbed Cassie's appetite. In fact, her performance one day last November would surely qualify her as National Grand Champion — in the eating category.

Having positioned our boat on the end of the marsh exactly opposite where the ducks wanted to go, we decided to move. This required that both my latest hunting partner and I get out of our boat and drag it off the mud bar. Hidden from my view by the boat's blind, Cassie had one of those crazy, uncontrollable hunger attacks. In about a minute and a half, she consumed five pounds of sandwiches, a half-dozen *Snickers*, an entire case of *Twinkies* (wrappers and all) and a large tray of fresh, four-inch thick pecan rolls. When we climbed aboard, she was smiling. My partner wasn't.

Later that day, however, that magical moment of which duck hunters' dreams are made occurred as Cassie came of age. Having whined away several large flocks of mallards, a green-winged teal zipped into our spread, unnoticed by man or dog. Well, almost unnoticed. At the last second, my partner leaped up (he's learned to be quick while hunting with Cassie), and downed the bird cleanly. In a flash, my retriever was on the deck, and with quiet encouragement and a gentle shove, she hit the water. Instinct took over, but by patiently stepping on her toes, I persuaded her not to climb back into the boat.

Then, it happened. While swimming in small circles, she swung close to the duck lying stone-dead and belly-up, some 15 feet from the boat. With powerful spine-tingling strokes, she drove toward it while her shaking, blurry-eyed master whispered, "*Fetch 'em, girl, fetch 'em!*"

And fetch him she did! With the blood of countless generations of Labrador retrievers surging through her veins, she caught up to her quarry, firmly but gently grasped the dead duck's nearest toe and, stopping only twice to sniff water bugs, returned triumphantly to my waiting arms.

A few mintues later, I glanced at my partner who was still staring at the floor shaking his head, obviously overwhelmed with admiration. "*Just think*," I said with wavering voice, "*next season she'll do even better*!"

Artwork by Larry Pool

RUFFED GROUSE
On the Way Back?

By
Terry Little
Greg Hanson
Jeff Telleen

Artwork by James F. Landenberger

A century ago, forest lands all over Iowa were inhabited by a smallish, gray-brown bird called the ruffed grouse. Our wooded hill country resounded in the springtime with the muffled... *thump... thump... thump...* of male grouse at their drumming logs, attracting mates and warning away other males. Ruffed grouse were plentiful and were hunted year around for the delicate white meat which was a favored dish of early settlers. Their quick, darting flight among the dense shrubs and trees which are their preferred habitat, made it difficult to shoot grouse, but year-around subsistence hunting, combined with accelerated clearing of forest land for agriculture, eventually rendered much of their historic range in Iowa uninhabitable. Some restrictions were placed on hunting as early as 1856, and seasons were finally closed altogether in 1924. By this time, grouse had disappeared from all but the heavily forested northeast corner of the state and a few scattered sites along the major rivers in eastcentral Iowa.

For four decades ruffed grouse were virtually ignored in Iowa, and few residents of grouse range were even aware that they existed. Population research and surveys conducted by the Iowa Conservation Commission and Iowa State University led to institution of a limited hunting season in 1969. Two decades of monitoring breeding populations and 10 years of fall hunting seasons have shown that our remnant grouse populations are relatively stable and are unaffected by current controlled hunting seasons.

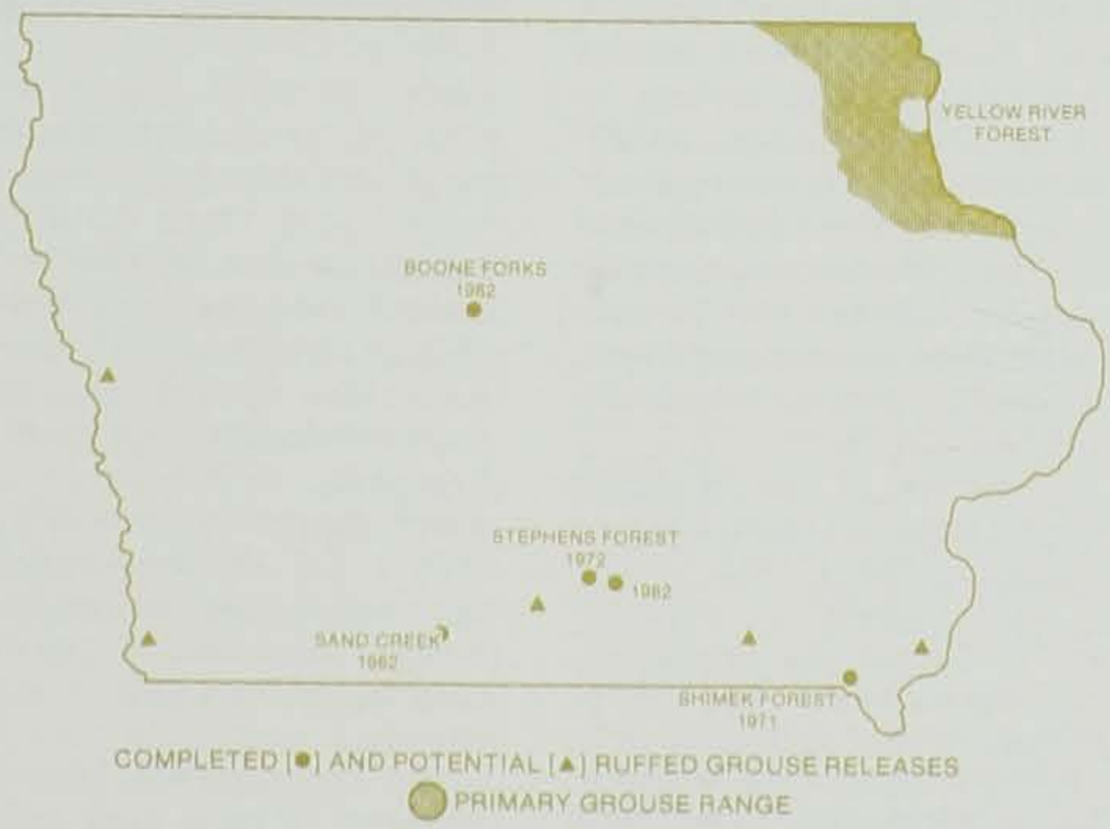
In the decades since ruffed grouse were eliminated from most of Iowa, several changes in land use have occurred which have affected the status of grouse habitat. Demands for agricultural land escalated a trend in forest clearing during the 1960's and 1970's, however, in some areas ruffed grouse habitat actually improved during this period. The commission purchased a considerable amount of forest land in the past 20 years though both the wildlife and forestry sections, which is now permanently protected from clearing and grazing. Management of these lands for wildlife has created some potential for ruffed grouse on many of our public hunting areas. In southern Iowa, pastures which are not closely grazed quickly begin reverting to brush and then early successional forests, which provide excellent grouse habitat. As a result, pockets of the dense, shrubby vegetation preferred by grouse are found scattered through portions of forested western, southern and central Iowa.

The commission's first serious effort at restoring ruffed grouse began with the transplanting of 43 grouse from Yellow River State Forest (Allamakee County) to Shimek State Forest (Lee County) in 1971, and 39 grouse to Stephens State Forest (Lucas County) in 1972. Grouse were trapped in "*lily-pad*," or walk-in traps in September and October when broods were intact or just breaking up. They were held in a storage room for 1-5 days until several birds were available for transportation to southeast Iowa where they were banded and released.

These first two releases produced contrasting results. Drumming logs of at least three males were found at Shimek Forest in the spring of 1972, and the numbers of drummers increased slowly until 15 were found in 1979. Drummers were found in virtually all suitable habitat over an area within 3.5 miles of the release site in 1979, and there have been unconfirmed sightings of grouse for several miles along the Des Moines River watershed above and below Shimek Forest. Grouse broods were seen occasionally in many areas of the forest, and several yearling males were trapped on drumming logs in 1978 and 1979, indicating that grouse were successfully reproducing at this site. Interestingly, one male from the original release was still using a drumming log in 1979, making him at least 8 years old, which exceeds the previous known record for this species.

Radio transmitters determine movement and survival of released grouse.

Ron Johnson



The immediate objective is to restore part of our native fauna to its natural habitat.

The Stephens Forest release in 1972 was not as successful. Less effort has been spent on following this release, but it is apparent a viable grouse population has not developed. No drumming activity or grouse observations have been confirmed by commission personnel, although "*probable*" sightings were made by sportsmen in the first years after the release. We are uncertain if the failure was due to unsuitable habitat, injuries to the released birds or just a quirk of fate, but we believe this was an unsuccessful release.

By 1980, spurred by the tremendous success of the commission's turkey restoration program and the limited success of the Shimek Forest release, biologists began thinking of expanding the grouse program to other forested parts of Iowa. The Upper Iowa Wildlife Management Unit moved 40 grouse to Big Mill Wildlife Area in Jackson County in 1980 and 1981, but the demands of turkey trapping to stock many identified release sites has limited the manpower available for grouse trapping.

Fortunately, biologists from the Iowa Conservation Commission and Michigan's Department of Natural Resources learned that they had a common interest in trading Michigan ruffed grouse for Iowa turkeys to benefit both states' forest wildlife programs. Based on Iowa's success with transplanting wild turkeys to mixed forest-farmland habitat, Michigan was interested in stocking the intensively farmed lower peninsula of their state. They wanted turkeys which had demonstrated the ability to survive in small blocks of scattered forest, and had plentiful ruffed grouse populations with which to trade.

An initial trade of 180 Michigan grouse for 65 Iowa turkeys was agreed on and implemented in 1982. Grouse broods were trapped in southern Michigan in August and September, flown via commercial airline to Des Moines and released at three sites — Boone Forks Wildlife Area in Hamilton County (55 grouse), 1,000 Acres Unit of Stephens State Forest in Monroe County (51 grouse) and Sand Creek Wildlife Area in Decatur and Ringgold Counties (34 grouse). At the first two sites, grouse were just banded and released, but at Sand Creek, 21 were fitted with miniature radio transmitters, which allowed us to follow their movements and determine survival.

Limited efforts were made to find drumming males at the first two releases in 1983 — at least two males were drumming at Boone Forks in 1983, one drummer and a possible nest were reported by the public at 1,000 Acres — but a good deal of surprising information about released grouse was collected from the radioed birds at the Sand Creek Area.

Ruffed grouse are fairly sedentary in established populations. Juveniles may move as much as 1-1.5 miles from their brood range during a "*fall shuffle*" as broods break up, but then they settle into a home range of a few hundred acres and do not leave it during the rest of their lifetime. Two of the Sand Creek grouse — a juvenile and an adult hen — were also relatively immobile and remained near the release site until radio contact was lost during the winter. All of the rest of the radioed grouse were extremely mobile; several covered more than 13 miles in the first two months following release, and they readily utilized nontraditional grouse habitats—standing corn fields and fence rows in open pastures—as travel corridors. Movement patterns of these mobile grouse actually fell into three distinguishable periods. In late September, they remained fairly stable near the release sites for up to three weeks post-release. They then underwent a period of dramatic dispersal for about a month beginning in mid-October, during which movements averaged about a mile a day. By mid-November, all surviving birds had settled into smaller home ranges and stayed there for months until they died or we lost radio contact.

We are uncertain what triggered dispersal or why such large movements were observed. These movements coincide approximately with the timing of brood break up and juvenile dispersal in established populations, but our radioed adults dispersed also. Perhaps some homing instinct triggered movements of adults, or habitat at the release site may have been marginal. The ending of dispersal seemed to coincide with crop harvesting, which removed most of the potential nonforested habitats as secure travel areas. Grouse trapped in isolated woody draws or woodlots by crop harvest tended to remain there until their death or we lost radio contact.

Survival of the released grouse paralleled the movement patterns. Only one bird died during the sedentary, pre-dispersal period, 5 of 16 carrying radios died during the short dispersal period and 3 of 6 died during the next 3½ months. Thus, daily mortality rates were 2½-3 times higher during dispersal than the other two periods. Grouse moving through unfamiliar habitats were apparently more vulnerable than during sedentary times. Leaf fall, which greatly reduced cover, and the major fall migration period for hawks, also occurred at this time, and may have been contributing factors to high dispersal mortality rates. We are uncertain whether or not the radio package these grouse carried may have influenced survival, but are encouraged by the fact that 3 of 12 radioed grouse survived, and just 3 of 10 nonradioed males could be found drumming which indicated similar survival for all grouse released.

Five drumming males were found at Sand Creek in April, and at least one was accompanied by a hen, so some possibility of nesting exists even though mortality rates of released grouse were high. Several years will have to pass before the fate of any of these releases is known. Experience gained from the first year will assist us in planning future releases at other sites as to numbers to be released, potential distances for dispersal and probable mortality rates.

The future of grouse restoration is

Ken Formanek

A number of sportsmen enjoy grouse hunting in Iowa's beautiful northeast corner. Between 1976-1982 hunters took an average of 15,552 ruffed grouse per year. Thousands of additional hours of outdoor recreation could be in store for Iowa sportsmen if grouse releases in southern Iowa are successful.

rather uncertain at this time. An additional 88 Michigan grouse are scheduled for release at the Whitebreast Unit of Stephens State Forest in Lucas County in 1983, and 25-30 will be radioed to see if they also undergo extensive movements and suffer high mortality rates. While there are no plans for other releases in the near future, at least five other potential release sites have been identified (Fox Hills Wildlife Management Area, Wapello Co.; Burlington Ordanance Plant, Des Moines Co.; Loess Hills Wildlife Management Area, Monona Co.; Eldon Wildlife Management Area, Davis Co.; Loess Hills, Fremont Co.) and should be stocked if the first few sites prove successful.

If Michigan grouse fail at these sites, grouse from northeast Iowa, which were successful at Shimek Forest, will be tried.

No plans to have hunting seasons on these areas have yet been discussed. The immediate objective is to restore part of our native fauna to its natural habitat in southern and central Iowa. Certainly no one thought turkey hunting was a possibility when the turkey restoration program was begun. However, the success of that program must provide a glimmer of hope for ruffed grouse as well. If huntable populations develop, the possiblility exists for thousands of additional hours of outdoor recreation for the Iowa sportsman.

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WILDFLOWER of the MONTH

PRAIRIE GRASSES

By Dean M. Roosa and Mary Jean Huston

People usually do not think of grasses as flowers. They are; in fact, grasses are members of the largest family of flowering plants—the Poaceae. There are over 5000 species of grasses in the world; 1400 of these are found in the U.S. Iowa has 200 species of native grasses.

Grasses are undoubtedly the most important group of plants to man. It is from this family that we take corn, wheat, oats, sorghum, rice, cane sugar and forage for livestock. In Iowa, our current lifestyle is possible due to the native prairies that once covered the state. These prairies, composed of grasses and forbs, helped create the rich topsoil that makes Iowa such an important agricultural state today. Let's celebrate our Iowa prairie heritage with a closer look at some native grasses.

Members of the grass family have one seed leaf, usually have long and narrow parallel-veined leaves, and have flowers made of a number of smaller parts called spikelets. Their root system, which helps secure the soil, is fibrous and extensive, reaching depths of six feet or more. All grasses are wind-pollinated, except for a few that are self-pollinating.

Indian Grass; *Sorghastrum nutans*

Indian grass is a handsome prairie species, coming into its glory in late summer through September. The panicle gets a gold and silver appearance from the yellow spikelets and the whitish hairs which fringe part of the flowers. Late in the summer the plant becomes a deep, rich orange-brown color. The stems are usually smooth; the plant grows to heights of six feet. It is found on moist and dry prairies throughout the state. Its Latin name *Sorghastrum* indicates its resemblance to plants in the genus Sorgum. Indian grass is an important component of our native prairie flora.

Needle Grass, Porcupine Grass; *Stipa spartea*

This grass is well-named. It is recognized as one of nature's amazing self-planters. When the seed falls from the plant, its pointed end secures a position in the prairie sod. As the humidity of the air changes, a long, twisted portion of the awn coils and uncoils until the seed has actually been screwed down into the soil. Backward-pointing hairs on the seed prevent the floret from being easily pulled out, whether it be from the soil or from your socks!

Needle grass is found throughout Iowa on sandy areas and prairie remnants. It blooms fairly early in the prairie season — June and July. It grows to about three feet in height, and is recognized by its erect or nodding panicle with whitish bracts.

Slough Grass, Cord Grass; *Spartina pectinata*

Slough grass is a coarse, tough plant that once dominated the wet portions of Iowa's tallgrass prairies. Today it is found on the remaining prairies and in other wet areas. Stout, erect stems grow from tough rhizomes to a height of six feet. The spikelets are crowded in two rows on the stem. Slough grass is easily recognized by its rough, saw-edged leaves.

Big Bluestem, Turkeyfoot; *Andropogon gerardi*

Growing to heights of six feet, it was probably big bluestem that spawned stories of riding through the prairie on horseback through grasses over one's head. Big bluestem is a characteristic plant of tallgrass prairies. It grows from short rhizomes in vigorous bunches, prefers dry soils, and has a deeply-penetrating root system. Like many of the native prairie grasses, it is a warm season grass, meaning growth begins late in the spring and continues through the summer.

The stems of the plant are bluish purple, especially near the nodes. This gives the plant the common name blue-joint. The flowers are crowded at the tip of erect stems. These often branch into three parts, resembling a turkeyfoot—yet another common name.

Big bluestem was once common throughout Iowa; it is now restricted to prairie remnants scattered around the state.

Reed Grass; *Phragmites australis*

This stout, leafy species is found growing in colonies in prairie potholes, along banks of streams and in wet roadside ditches. Its range is widespread in the U.S., but in Iowa it is most common in the north central prairie pothole region of the state. It commonly grows to a height of 10 feet, and can be recognized by its smooth stem and broad leaves. It seldom forms seeds, but spreads by vigorous rhizomes. The large seedheads, six to ten inches in length, have hairs on the branches—giving the seedhead a fuzzy, feathery appearance. It is also known from European fossil records, which makes it one of the few grasses known from past geological times.

Indian Grass

Needle Grass

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Slough Grass

Big Bluestem

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Reed Grass

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"HAWKEYE MALLARDS"

By James Killen

Iowa Ducks Unlimited

1983

Print-of-the-Year
and
Artist-of-the-Year

(see story on page 11)