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A photograph of a forest in autumn. The trees have yellow and orange leaves. In the background, a house with a dark roof is visible through the trees. The ground is covered in fallen leaves.

Iowa  
**CONSERVATIONIST**

October 1987

Department of Natural Resources





Iowa  
**CONSERVATIONIST**  
DEPARTMENT OF NATURAL RESOURCES

VOLUME 46 NO. 10

OCTOBER 1987

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*Iowa CONSERVATIONIST (USPS 268-780), is published monthly by the Iowa Department of Natural Resources, Wallace State Office Building, Des Moines, Iowa 50319-0034. Second class postage paid in Des Moines, Iowa, and additional mailing offices. Subscription rates: \$6 for one year or \$12 for three years. Include mailing label for renewals and address changes. POSTMASTER: Send changes to the Iowa CONSERVATIONIST, Department of Natural Resources, Wallace State Office Building, Des Moines, Iowa 50319-0034.*

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Ron Johnson





1987-1997

# A DECADE TO REMEMBER

By Terry Little

**P**ART OF THE AMERICAN HUNTING TRADITION, SOME WOULD SAY A major part, is the recollection of hunts and years past. Successful hunts and the glory of autumn days afield are recalled fondly, each growing in proportion to the number of retellings. In Iowa, most of these nostalgic reminiscences center on the heyday of pheasant hunting — we remember large parties of hunters walking and posting corn fields, or kicking tight-sitting roosters out of cattails, or tracking birds in fresh snow to their eventual hiding place. They include descriptions of hordes of pheasants billowing out of cover and rapid-fire shooting by excited shotgunners. Our scrapbooks are adorned with pictures of long lines of gaudy roosters laid out to admire. Of course there were slow days, lots of them, but highly successful hunts were not uncommon at a time when ringnecks were plentiful over most of northern Iowa.

Intensification of farming practices over the last 20 years, coupled with severe winters and cold, rainy springs in the early 1980's, reduced our pheasant harvests to less than a million roosters each of the last two years, about half of what they used to be. Though Iowa still ranks at or near the top of the list of pheasant hunting states, pheasant hunting has become more of a small-party sport. A couple of hunters and a pointing dog or two searching heavy cover somewhere in the south half of Iowa is a more typical scene these days. Pheasant hunting remains good, but its character has changed.

As the 1987 hunting season approaches, the Iowa hunter has every reason to believe that the outlook for the ring-necked pheasant —

indeed for all of our upland game birds — has finally taken a turn for the better. The twin nemeses of the bird hunter, habitat loss and untimely severe weather, have lately been unable to work their destructive ways. The recent poor farm economy slowed the rate of habitat loss, and new federal farm programs designed to shore up stressed farmers and reduce soil erosion have restored more potential upland bird habitat than any other agricultural or wildlife program of the past 30 years. Nearly 1.5 million acres of eroding farm land have been converted to grasslands in the past two years as part of the 10-year Conservation Reserve Program (CRP), and more acres are yet to be enrolled. The new nesting cover provided by CRP acres will provide a boost to pheasants, quail, partridge, wild turkey, rabbits and a host of ground-nesting songbirds. The same acres will provide good brood rearing and roosting habitat and a place for hunters to search for birds in the fall. CRP contracts last for 10 years, so if disturbance of these acres is kept to a minimum during the nesting season, the Iowa hunter should be starting a new decade of improved bird hunting.

Weather, the other threat to upland wildlife, has been especially generous as we start this promising new decade. The past extremely mild winter allowed carry-over of excellent numbers of all game birds in good breeding condition. An early, mild spring continued into a hot and mostly dry summer. Hens faced few threats to nests or broods and conditions were set for a banner production year. Some areas that experienced heavy thunderstorms and flooding in late May and June may have fewer birds this year, but



they are not widespread and are confined mostly to the southwest quarter of the state. A better year could not be designed to provide a much-needed boost for wildlife and for the morale of hunters.

Will pheasant hunters really get to relive their dreams of flourishing pheasant numbers? Perhaps not, for certain realities cannot be ignored. Much of northern Iowa, our traditional pheasant range, is flat farmland that does not qualify for CRP or is too productive to idle. The majority of the good nesting cover will go into west-central, east-central and southern Iowa, areas that retained reasonable pheasant numbers even in recent years. Substantial increases in northern Iowa bird numbers — doubling, tripling or even more — could occur and still not bring back the “good old days.” Compared to recent years, however, substantial improvements should be obvious and very welcome.

Hunters need to recognize that most CRP lands will not develop into prime nesting cover for another year or two, so the biggest benefits are still down the road. Most CRP acres also will not provide adequate winter cover during severe winters. DNR cost-share programs to provide winter cover and food, and the efforts of groups like Pheasants Forever, will help, but winter losses will be unavoidable in some years. Hunters will still be at the mercy of Mother Nature but with a greatly improved nesting habitat base on which to more quickly build a recovery. The extent to which upland bird numbers improve will depend on the number of acres ultimately enrolled in the CRP and combinations of winter and spring weather that affect production of young birds.

Whatever the eventual outcome, the decade ahead holds more promise for the bird hunter than any in the recent past. As the following status reports on prospects for the 1987 hunting seasons indicate, we may be at the start of a decade to remember.

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*Pheasants have increased almost 40% statewide. Quail numbers may be the best seen in the last decade. If weather conditions hold out, prospects will be good for small game hunting throughout the state.*

## STATUS OF WILDLIFE - 1987

Wildlife surveys conducted annually by DNR personnel form the basis for determining the status of hunted wildlife. Seasons, bag limits and other regulations are developed after examining long-term trends in populations and habitats. Generally, wildlife fared well during the past year and hunters will find increased numbers of just about all species. Small game populations continued a recovery begun in 1985, big game populations are at historic high levels, waterfowl held their own after a few declining years and furbearers continue to be plentiful. Forecasts for most hunting seasons are very positive.

### Small Game

Pheasant numbers continued a remarkable comeback from the low numbers found in 1985. The numbers of pheasants seen on roadside counts in August increased 38 percent statewide, with the biggest gains observed in the northern half of the state (see map). Pheasant numbers were already high in southern Iowa however, and that region will continue to provide excellent hunting. Some of the best counts came from portions of northeast and northwest

Iowa, however, so good pheasant hunting should be available over a larger part of the state than has been the case for several years.

The recovery of quail and partridge populations is even more incredible. Gray partridge have continued to spread into nearly every county from their traditional range in northwest Iowa. Counts were very high as far south as Interstate 80, with sightings of partridge deep into southern Iowa. Abundant partridge numbers should provide a bonus to pheasant hunters early in the bird season and excellent, but challenging, gunning in January. Quail numbers increased most impressively of all, reaching all-time high levels on roadside counts throughout southern Iowa. Quail and partridge hunting should be the best seen in the last decade.

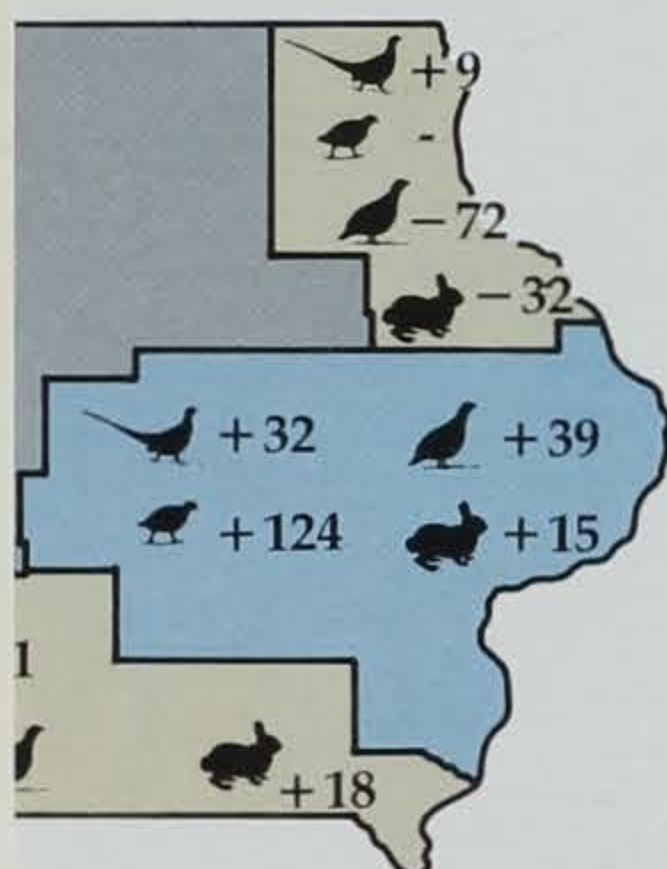
Populations of other small game are improving or are already abundant. Rabbits and squirrels, once the staple of the Iowa hunter, have fallen from their position of major quarry for Iowa hunters, but neither rabbits nor squirrel numbers have declined as rapidly as their decline in popularity among hunters. Why are they not as popular as they once were? Perhaps the reasons are that hunters rely less on wild game for food, or



Ron Johnson



## 1986 Roadside Counts\*



le  
 +62 Partridge  
 +15 Cottontail Rabbit

### Big Game

It would be hard to blame the Iowa hunter for becoming euphoric about the next decade or so when expectations for improved upland bird hunting are combined with the fact that numbers of deer and wild turkey are at all-time high levels right now. New record harvests and success rates have been recorded by deer and turkey hunters each of the last several years, and the end is not immediately in sight.

Major liberalizations were made in deer hunting regulations this year to attempt to control the growth of an expanding deer herd. Deer seasons were lengthened and any-sex quotas were nearly doubled to attempt to increase the harvest of does. All landowners, bow hunters, muzzleloaders and nearly three of four shotgun hunters will receive any-sex licenses this year.

Fall turkey license quotas were increased and the season lengthened to take advantage of burgeoning turkey populations. Exceptional turkey catches the past three years also assure that good numbers of gobblers will be carried into coming spring seasons, and the stage is set for excellent spring hunting the next two or three years as well. Iowa's deer and turkey hunters already experience some of the finest hunting in the United States, and that should continue during the next few years.

crash in grouse numbers, and it should continue to improve after the excellent weather that occurred during the nesting season this year.



Roger Hill



Hunters can expect waterfowl hunting conditions to be about the same as last year. However, better days are on the horizon with the signing of the North American Waterfowl Management Plan.



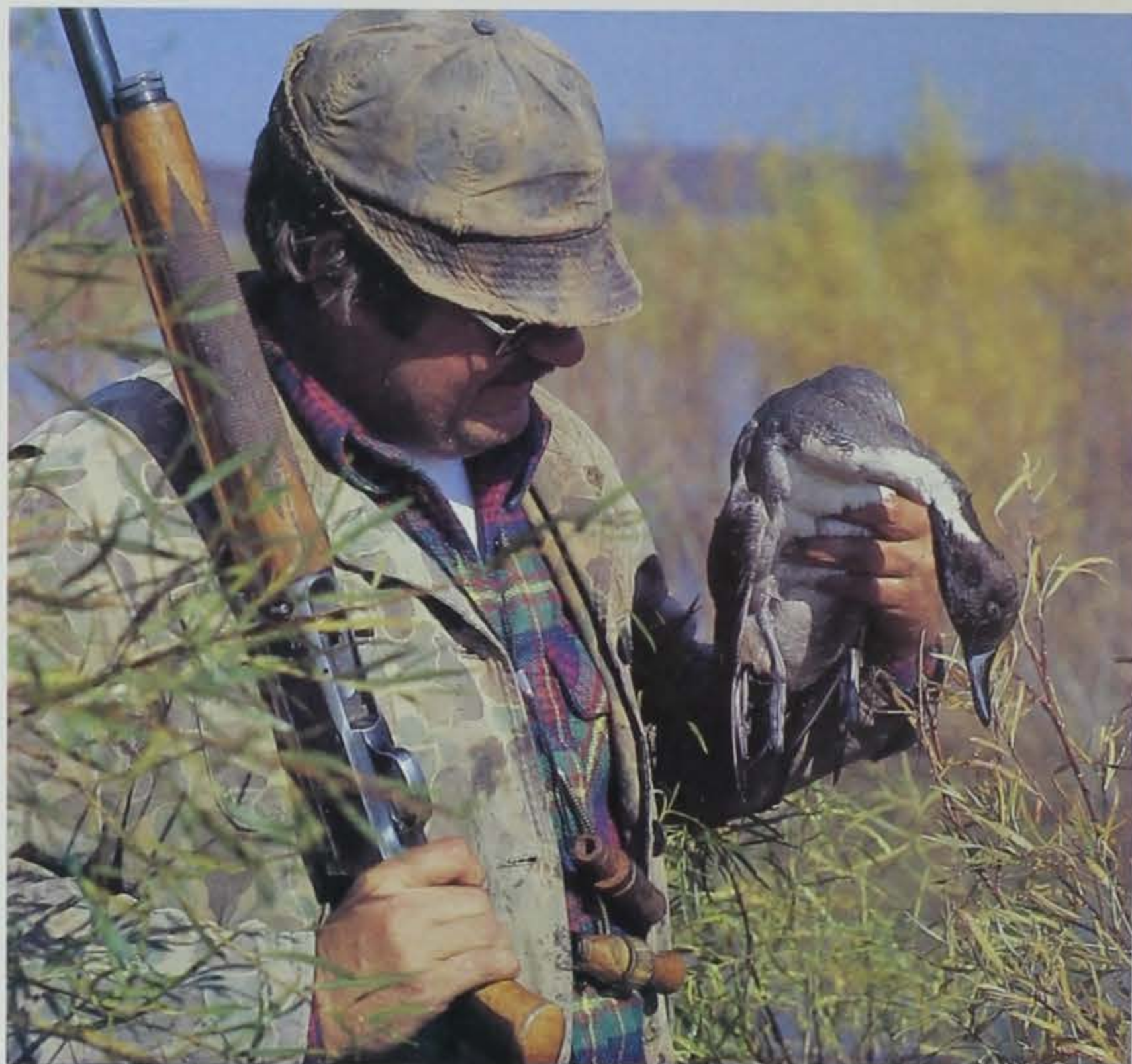
Ken Formanick

## Waterfowl

Just as every rose has its thorns, the outlook for the waterfowler dims an otherwise bright picture. Droughts that dried up most of the breeding marshes in the northern U.S. and southern Canada in the 1980's extended, and in some areas intensified, in 1987, particularly in areas that supply many of the ducks that migrate through Iowa. Parts of southern Manitoba and Saskatchewan experienced the same dry winter that benefited Iowa's wildlife, but the lack of snowpack provided little runoff to replenish thirsty marshes. Even in areas that had adequate moisture this year, nesting vegetation has not had time to develop around wetlands that were plowed in past dry summers.

Although duck hunting regulations have been restricted the past two years to return more breeding ducks to the breeding grounds, these ducks have not had an adequate habitat base on which to achieve their reproductive potential. As a result, a duck flight much like last fall's is predicted, but with a relatively low percentage of unwary young birds to respond to hunters' decoys and duck calls. Restrictive regulations will remain in effect until populations improve.

On the bright side, lower populations of popular species like mallards and pintails have prompted a resurgence in concern for wetlands and



resulted in signing the North American Waterfowl Plan, a joint venture between federal Canadian and U.S. agencies to protect and restore increasing amounts of waterfowl habitat (see "A Strategy for Cooperation" in the August 1987 *Iowa CONSERVATIONIST* for details). Positive gains in duck numbers as a result of this program are several years off, however.

Goose populations are much better off than ducks, but little change is expected from last year's flight. Late snow cover in the sub-Arctic breeding grounds delayed nesting and kept production at or slightly below average, so a fall flight about like last year's is expected for most populations of snow and Canada geese. The exception is the Eastern Prairie Population of Canada geese that winters in Missouri and nests on the west side of Hudson Bay. Breeding populations are below target levels and mild restrictions on hunting regulations have failed to cause a response in their numbers. As a result, Manitoba, Minnesota, Iowa and Missouri — areas that share in the harvest of this resource — have all accepted goose

hunting restrictions to protect this flock for a few years. Canada goose seasons in Iowa have been shortened to 45 days, ending in mid-November instead of early December. This will still allow hunters plenty of time to take locally-produced Giant Canada geese, which have increased rapidly in the past decade, before most EPP geese appear.

Fortunately for the Iowa waterfowler, hunting success here often depends more on habitat and water conditions on our marshes and reservoirs than on the number of birds flying south. If adequate food and water are present when birds arrive, they often stay for prolonged rest stops and are available to hunters for an extended period. If habitat conditions are poor, or if major storm fronts to our north move large numbers of birds over extensive areas at the same time, overflights can occur and hunting can be poor. At this writing, late summer storms have replenished marshes and reservoirs that were dry in the spring, but more rain will be needed to assure that conditions are right throughout the fall.





Roger Hill

## 1986 GAME HARVEST AND 1987 POPULATION STATUS

	Harvest (1000's)		Population Change:	
	1981-85 avg.	1986	1981-85 avg.	1986
<b>UPLAND GAME</b>				
Ring-necked Pheasant	983.4	855.9	+ 49%	+ 38%
Bobwhite Quail	345.7	339.0	+172%	+108%
Gray Partridge	61.6	60.6	+192%	+ 62%
Cottontail Rabbit	751.4	478.7	+ 72%	+ 15%
<b>WATERFOWL</b>				
Ducks				
Mallard	113.7	90.6		+ 6%
Wood Duck	48.0	47.1		
Blue-winged Teal	52.9	27.1		
Other Ducks	79.8	55.4		
All Ducks	294.4	220.2	No Change	
Geese				
Canada	11.1	17.5		
Snow/Whitefront	12.1	14.9		
All Geese	23.2	32.4	No Change	
<b>FOREST WILDLIFE</b>				
White-tailed Deer				
Gun	29.4	52.8	Not Available	
Bow	5.1	9.9	Until January	
All Deer	34.5	62.7		
Wild Turkey				
Fall	1.0	1.9	+8-9%	+5-10%
Spring	2.0	3.9		
Ruffed Grouse	11.4	12.7	No Survey	
Squirrels	681.4	506.8	No Survey	
<b>FURBEARERS</b>				
Raccoon	282.8	599.7		+ 8%
Fox	24.1	52.1	No Survey	
Coyote	8.8	46.0	No Survey	
Muskrat	408.4	722.2	No Survey	
Mink	23.5	54.8	No Survey	
Beaver	10.3	44.4	No Survey	

### Furbearers

Populations of furbearers remain healthy in a period of moderate trapping and hunting pressure. Few surveys are available to document trends in furbearer numbers, but results of trapping and hunting seasons indicate they are fairly stable. Muskrat numbers fluctuate with water and vegetation conditions on marshes and streams. Most public marshes currently have moderate vegetation, so rat populations are below peak numbers, but trapping pressure will have little impact on overall muskrat numbers. Beaver remain abundant and are a pest species that clog field drains and creeks, flood croplands and destroy valuable trees. Low pelt prices for beaver keep trapping interest low.

Raccoon, fox, coyote and other terrestrial furbearers thrive in spite of the heavier than usual trapping pressure they sustained during the past mild season. These predators will benefit from CRP also. More grasslands mean increasing populations of rodents and small mammals and more food for predators. Denning sites that have been tilled recently will become available as rolling lands are seeded down. Red fox, which have been depressed in recent years, should rebound strongly.

Increased furbearer populations mean increased trapping and hunting opportunity, but not necessarily more animals harvested. Harvest pressure is dictated mostly by pelt prices, not by the abundance of furbearers, so trends in the fashion industry will dictate whether or not furharvesters benefit much from the expected increase in wildlife populations. Research studies conducted by the DNR have consistently shown that even in years of intense trapping and hunting pressure, removing animals only serves to increase production by the remainder and keep populations vigorous and healthy.

For the 1987 season dates see page 14.

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*Terry Little is the wildlife research supervisor for the department. He holds a Ph.D. from the University of Minnesota and has been in wildlife research since 1975.*

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# The Hows and Whys of Waterfowl Regulations

By Jim Hansen

**W**HENEVER IOWA WATERFOWL HUNTERS FACE shorter seasons or reduced bag limits, a conversation similar to the following probably takes place around the state. A hunter looks at the announcement of the waterfowl regulations in the morning paper and says to his partner, "Well, they did it to us again." Just who are *they*, and how and why are *they* making decisions on waterfowl seasons? I think most Iowa waterfowlers have at least a general idea of how and why seasons are set, but they may not know the steps involved or what factors are considered.

The season-setting process is much different for waterfowl than it is for pheasants and quail. Since ducks, geese and coots are migratory, primary responsibility for their management rests with the federal government. Each state can select its season dates, but it must do so within the federal framework, which stipulates the season length and bag limits.

Within the United States, protection is provided by the Migratory Bird Treaty Act of 1918. This act makes it unlawful to hunt, kill, sell, purchase or possess any migratory birds except by regulations adopted by the Secretary of the Interior. Within the U.S. Department of the Interior, the Fish and Wildlife Service (FWS) is the agency responsible for providing population data for establishing regulations and also for enforcing those regulations.

Many different agencies participate each year in collecting data that is used in the regulation process. Participants include people from the FWS, Canadian Wildlife Service, several states and provinces and private organizations. Some of the surveys



Ken Formanek

done each year are wetland counts, breeding population surveys and brood surveys. A key survey for ducks is the breeding population survey initiated in early May and ending in mid-June each year. Its purpose is to determine the species and number of potential breeding ducks in the principal nesting areas of North America. Thousands of miles of transects are surveyed from low-flying airplanes. Some survey transects are censused from both the air and ground to determine "visibility rates" which are then used as correction factors. Duck brood surveys in July on some of the same transects are used to determine how good the production was. Aerial counts of ponds in May and July provide an index of how good the water conditions are

for duck nesting and brood rearing. Results of these surveys are combined to arrive at a fall flight index for total ducks (10 species) and for mallards. The Waterfowl Status Report and Fall Flight Forecast are released on July 25 each year.

Population and production estimates for geese are obtained much differently, primarily because most geese nest in far northern areas. For one flock of Canada geese, the Eastern Prairie Population, Iowa and several other agencies cooperate to do surveys of the breeding grounds on the west side of Hudson Bay. For most other Canada goose populations, plus snow geese and white-fronted geese, there are no regular breeding ground surveys. However, there are some indications of how





Ron Johnson

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*The season-setting process is much different for waterfowl than it is for pheasants and quail. Since ducks, geese and coots are migratory, primary responsibility for their management rests with the federal government. Each state can select its season dates, but it must do so within the federal framework.*

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good production will be from weather and snow cover information from local observers, weather stations or satellite imagery. An early snow-melt usually means good production, while a late snow-melt (after June 15) means poor production.

Even though the federal government is ultimately responsible for waterfowl hunting regulations, the states get involved in the process through the flyway councils. The Mississippi Flyway Council technical section is made up of biologists from 14 states and three Canadian provinces. It meets twice a year to review and discuss issues related to waterfowl habitat, populations, regulations and research. Committees within the technical section deal more in depth with particular species and issues. Actions or recommendations by the technical section then go to the Mississippi Flyway Council which is made up of administrators from the same states and provinces. The Flyway Council's recommendations are then passed on to the FWS.

If a state were to request a change in regulations on canvasbacks for example, that request would need to be approved by the technical section's diving duck committee, the full technical section, and the Flyway Council before it goes to the FWS. If the proposed change affects other flyways, as it well might, the state would probably also seek the endorsement of another flyway council. So, there are a number of possible "roadblocks" before a proposed change even gets to the FWS. On occasion a state has worked directly with the FWS when they felt they were being treated unfairly within the Flyway Council, but that is not the usual way of doing business.

The FWS receives recommendations from four different flyway councils and must try to treat all of them fairly, even though regulation recommendations might be very different. In early August each year, soon after the summer flyway council meetings, the FWS announces tentative waterfowl hunting regulations, including season length and bag limits. There is then a period of a few days during which the FWS will receive comments from public and private agencies and individuals. These comments will be considered and then by mid-August the FWS will announce the final federal regulations approved by the Secretary of the Interior.

After these federal frameworks are announced, Iowa and the other states complete the process by selecting season dates. Actually the waterfowl regulations process starts much earlier in Iowa, and it allows ample

opportunity for the public to offer comments. In January tentative waterfowl regulations are proposed, reviewed by wildlife biologists, supervisors and administrators, and taken to the Natural Resource Commission for approval. The Commission then either accepts or changes the recommendations and approves what is called a "Notice of Intended Action". After the "notice" is published, public meetings are held around the state specifically to receive comments on the proposed regulations. The public can also write to the DNR at any time to offer suggestions on regulations. After comments have been considered, final regulations are developed and taken to the Commission for final action. Early seasons, such as a September duck season, are usually set by the Commission in June, while the later seasons are set in late August or early September.



Kent Formanek



**F**OR ANY NEW AND DIFFERENT WATERFOWL SEASON that is considered experimental, an additional set of procedures is followed. In the eight years I have been in Iowa we have had three experimental seasons; the September duck season, zoning for duck hunting, and a southwest Iowa goose zone. For each experiment the DNR director has had to sign a "Memorandum of Understanding" with the FWS, stipulating specific dates and boundaries, what evaluation will be done, who will do the evaluation and when reports are due. Evaluations normally run at least three years.

With that information on *how* seasons are established, let's look at *why* they are set the way they are in Iowa. Because bag limits and other regulations are largely set by the FWS, we will talk mainly about Iowa's season dates. In setting waterfowl regulations we try to provide the greatest amount of recreation and harvest consistent with maintaining waterfowl populations at desired levels. The experimental seasons mentioned above were instituted in hopes of providing more recreation for Iowa hunters. We, of course, have to work with other states, provinces and countries because we share the same resource.

In selecting duck season dates in Iowa we have tried to give hunters an opportunity to shoot early-migrating ducks such as blue-winged teal and wood ducks and also to get in on the major mallard migration period from late October through mid-November. Certainly major mallard flights arrive later than that in some years on some areas, but that isn't the case for most of the state. It wasn't too difficult to pick satisfactory duck season dates when we were permitted to have 50-day seasons, but in 1985, because of record low breeding populations of mallards and total ducks, the federal framework was cut to 40 days. We knew this would make some hunters unhappy because something had to be cut. Since we had already sought and received authorization two years earlier to zone the state, we were still able to run the duck season through Thanksgiving weekend in the south zone.

In making decisions on season

dates we consider when the ducks are being killed, as indicated by the federal harvest data for each day. This data shows that even the weekdays of the September season are important hunting days, with kills usually ranging from 8,000 to 14,000 ducks per weekday, as compared to a few hundred per day late in the season. Data also indicates that there is a high duck kill, including mallards, in October. For these reasons, most of the cut has been made from the end of the season. We hear from hunters who want much later seasons, and as much as I enjoy those late days myself, there just aren't very many hunters out or ducks killed then, and a cold front or heavy snow can end the hunting in a hurry.

Some hunters have asked why we can't have a longer duck season and larger bag limits like some of the southern states. They have the wrong idea, because the federal framework is the same for all Mississippi Flyway states in both season length and bag limit. Some states south of Iowa do get nine extra days in September to shoot teal only. Iowa is not offered that option because we are considered a production state. Central Flyway states, such as Nebraska, have often been allowed a longer season than Iowa because of the lower harvest rates and fewer hunters in that flyway.

In setting Canada goose seasons in Iowa we work closely with other states and provinces. Geese can easily be over harvested, so close attention is paid to kills and population levels. There is some concern at present for the status of the Eastern Prairie Population of Canada geese, because the flock has for several years been below the objective level called for in the management plan developed by the Flyway Council. Iowa's contribution to the harvest of this flock is relatively minor now, but it is showing some signs of increasing. In a cooperative effort by several states and provinces to build this flock there are some restrictions in Iowa's Canada goose season this fall.

In my work with the Mississippi Flyway Council there is one thing in particular that has struck me that we tend to take for granted. This is one area where representatives from states and provinces and two federal governments can sit down and discuss the welfare and management of an international resource of mutual concern without bureaucratic red tape getting in the way.

For the 1987 waterfowl season dates see page 14.

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*Jim Hansen is a waterfowl research biologist located at Clear Lake. He holds an M.A. degree in zoology. Hansen has been with the department since 1979.*

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Rory Johnson



# Old-Fashioned Ingenuity

## Drying Corn With Wood

By Abby Feely

Since the energy price shocks of the 1970's and early 1980's, more Iowa farmers are looking for, and finding, alternative sources of fuel that are available on the farm to help satisfy their energy needs. Richard Humphrey, who farms 1,200 acres of corn and soybeans near Gilman, successfully burns wood instead of propane to dry his corn.

Humphrey purchased a Stormor biomass furnace in 1979 for \$6,000. He received a \$1,000 discount off the list price for installing the unit himself. "I bought it during the energy crisis," Humphrey explained. "LP gas had been as high as 75¢ per gallon, and I figured by now it would be up around a dollar. This summer LP was 50¢, but the burner has still paid for itself, saving me 60 percent on the cost of LP gas."

The unit is used to dry shelled corn, drying approximately 30,000 bushels a year in 1,500-bushel batches. The corn is harvested at about 28 percent moisture content and dried to 14 percent off the cob.

His heat-exchanger unit was designed to accept round bales of corn stalks and bean stubble. Humphrey tried burning 6-foot by 6-foot hay bales and found only one bale could be loaded in the unit at a time. It would burn for a few hours, leaving behind a "big ball of black soot." Humphrey said not much heat was generated from the bales. However, he had planned from the start on burning wood and has found the unit performs satisfactorily when loaded with logs up to four feet in diameter and six feet in length.

Humphrey had experimented with 2 x 4 and 1 x 6 wood studs he salvaged from a house, but found when he loaded the unit to capacity that the tinder-like wood burned too rapidly, overheating the unit and creating a build-up of pressure that burst open one of the unit's two 5-foot by 10-foot doors. Humphrey can still use the dry dimension lumber if he fills the firebox with "two or three front-end loaders' worth" of the wood;

however, it is necessary to restoke the furnace every two to three hours. The logs, in contrast, will burn 7 to 10 hours, depending on their size and moisture content.

Humphrey said he burned wood in the unit two years in a row before he had to remove the ash that had accumulated at the bottom. A cement base surrounds the unit but the firechamber floor is filled with crushed lime. Ashes are scooped up on his front-end loader or shoveled out by hand. "I've had no problems at all with creosote or slag buildup," Humphrey added. He said some rust from the steel combustion chamber does flake off but that the firebox has not yet required relining.

Once the unit is loaded, Humphrey douses the wood with diesel fuel and ignites it with a match. The backup LP burner is placed on automatic mode and kicks in until the wood brings the combustion air in the firebox up to the required temperature. After that, the LP burner may cycle in for 15 seconds to four minutes as needed throughout the drying cycle to assure an even temperature is maintained. "The flame is blue, just like with the LP," Humphrey observed.

The burner is used in conjunction with an overhead bin. Wet grain from the fields is fed into the top of the bin where a cone-shaped receptacle receives it. Drying air, warmed to 130 to 140 degrees is blown in underneath the corn. After the air has been circulated through the grain by a 10 horsepower fan, a crank lever is used to drop the grain to the bottom of the bin, and another load of wet grain is discharged at the top. Capillary tubes inserted into the grain sense when it reaches 92 degrees, at which time the biomass furnace fans shut down. The dried corn is then augered into a storage bin.

Humphrey said he is quite happy with the furnace system. "I can fill the burner once with logs and combine in the fields all day. There are very few moving parts." He said

because he dries his grain harvested at 28 percent, there's less field loss. "It takes two months to dry all our grain, so really we can't wait for it to be drier or the snow would be flying before we were through combining."

*Reprinted from Combustion of Crop Residues for Energy, Great Lakes Biomass Energy Program, January 1987.*

*This article also appeared in the DNR's Iowa Energy Bulletin. The Bulletin is published bi-monthly and is free of charge. To receive the Iowa Energy Bulletin, write the Iowa DNR, Wallace State Office Building, Des Moines, Iowa, 50319-0034, c/o Wendy Zohrer.*

*Last year, Richard Humphrey dried 30,000 bushels of corn with wood in the biomass furnace he purchased in 1979.*





# Conservation Update

## STARTING OUT RIGHT

No little leaguer has to face a Nolan Ryan fastball when he's just learning to bat but, all too often, the young hunter who's just learning to shoot is thrown into the "major leagues" before he's had a chance to learn the fundamentals. For instance, it's more than a little discouraging for any aspiring wingshooter, especially a young one, to miss target after target at the middle stations in skeet or find himself trying to shoot a round of trap with a shotgun he can barely lift, let alone aim.

The point, of course, is to start the young hunter out right and, we hope, these tips will help:

## GUN SAFETY

Experienced hunters are well aware of the importance of teaching the basics of firearms and hunter safety to those who are just starting out. However, several safety points are worth repeating since they don't always get the emphasis they should.

First, as important as it is to know how to properly handle your gun, it is equally important for every novice hunter to be thoroughly familiar with the gun itself. How does the action work? What's the right way to load and unload the gun? And, what about the safety? Where is it and how does it work? No one who handles a gun should be unfamiliar with the answers to questions such as these.

## SAFE HABITS

Second, it is important that young hunters have

the chance to actually practice safe gun handling skills before the season starts. If you're a duck hunter, for example, you can realistically simulate a blind with a few bales of hay and can set up a portable trap to throw "duck" targets. It is a great way to practice and to impress on a young hunter safety concepts such as zones of fire and the precautions necessary when handling a shotgun in the close proximity of others.

## LEARNING TO SHOOT

Beyond developing basic wingshooting skills, practice should help build confidence in a young shooter. Portable traps are ideal in this regard. The spring can be loosened to throw a softer target and target angle and elevation can be easily controlled. If you're at a skeet field, start off with the easier stations, such as one and seven. And there's nothing that says you have to shoot trap from the 16-yard line. If you're teaching someone who's just starting off, get them shooting from right behind the trap house.

Whatever type of practice you arrange, be sure to keep it simple and fun. There's nothing like breaking that first clay target to hook a youngster on shooting.

— National Shooting Sports Foundation

**REMINDER** — All persons born after Jan. 1, 1967, are required to have a certificate of completion of a hunter safety course to purchase an Iowa hunting license.

## START WINTER BIRD FEEDING IN THE FALL

Officials of the Department of Natural Resources say the best time to start a winter bird feeding program is during October or early November.

"This will enable birds to include the feeder in their regular feeding circuit. Starting feeders in December or January is much harder because the birds have already selected their primary feeding sites," says Laura Spess Jackson, urban biologist for the DNR.

Feeders should be placed near shrubs, trees or other structures that can be used as perching sites while the birds wait to feed. Officials also recommend placing the feeders in sunny areas that are protected from the wind.

Further information on winter bird feeding is available in the Fall 1987 Nongame Newsletter. To receive a copy, call or write the Department of Natural Resources.

## AUTUMN COLOR REPORT

People interested in the fall foliage color change this autumn may call (515)233-4110 for a weekly progress report from the Iowa Department of Natural Resources' forest nursery in Ames.

The recorded information will change each Monday and will run through mid-October. The weekly message will describe fall color throughout the state, which tree species are most colorful and when the peak of color will likely occur in different areas of the state.



## EARLY BIRD CATCHES A WORM ... AND MORE

Chuck Humeston, conservation officer, was called to Five Island Lake north of Emmetsburg and found this bird hanging from a tree by a strand of monofilament fishing line. The tree was located next to a popular crappie fishing spot. Apparently, a fisherman had caught his line in a tree during a cast and had broken the line off leaving the hook and bait, possible a worm, hanging from a limb.

Apparently, the bird saw dinner hanging from the tree and grabbed it, only to find its beak caught on the fish hook. Humeston found the bird still alive flapping its wings trying to free itself. Since it was hanging from a dead limb, he threw a rope over the limb breaking it from the tree. Upon hitting the ground, the bird shook loose of the hook and flew away.

Anglers — watch where you discard old fishing line and tackle!



# Donations

Parker Brothers Games Beverly, Massachusetts	Assorted games valued at \$679 for state park week contests at McIntosh Woods State Park	Houghton State Bank Red Oak	\$100 for Lake Fest '87 at Viking Lake State Park
Central Iowa Bass Anglers, Des Moines; Heritage Cablevision, Des Moines; Auto Body Supply Co., Des Moines; K&L Tournament Committee, Des Moines; Pella Super Value, Pella	\$505 for "Ric-Rac" state park mascot costume at Big Creek State Park	Red Lion Red Oak	\$75 for Lake Fest '87 at Viking Lake State Park
AID Association for Lutherans Indianola	8 grills valued at \$479 for Lake Ahquabi State Park	Three Crowns Cafe Stanton	\$60 for Lake Fest '87 at Viking Lake State Park
Hy-Wee Food Store Boone	160 candy bars valued at \$52 for state park special event at Ledges State Park	Randy's Body Shop Red Oak	\$50 for Lake Fest '87 at Viking Lake State Park
Fareway Food Store, Inc. Boone	Soft drinks and ice valued at \$52 for state park special event at Ledges State Park	City of Red Oak	\$500 for Lake Fest '87 at Viking Lake State Park
Seventh grade class Spencer Middle School Spencer	\$50 for nongame program	Burning Dairy Farm Red Oak	\$50 for Lake Fest '87 at Viking Lake State Park
K-Mart Oskaloosa	12-gauge Bioto shotgun valued at \$129 for hunter safety education program	The Insurance Center Red Oak	\$50 for Lake Fest '87 at Viking Lake State Park
Safari Club International	\$500 for Springbrook Education Center	Viking Lake Concession Stanton	\$210 for Lake Fest '87 at Viking Lake State Park
Herschell Linderwell Dundee	Use of trailer valued at \$90 for Backbone State Park	Douglas and Lomason Red Oak	\$250 for Lake Fest '87 at Viking Lake State Park
Anonymous	Use of air compressor valued at \$65 at Viking Lake State Park	State Farm Insurance Red Oak	\$80 for Lake Fest '87 at Viking Lake State Park
Anonymous	Road rock valued at \$259 at Viking Lake State Park	Dave Riley Essex	Square dance calling valued at \$80 for Lake Fest '87 at Viking Lake State Park
Harold Pruin Lawton	14' Indian teepee for interpretive program at Waubesaie State Park	Pat Mintle Glenwood	Square dance calling valued at \$80 for Lake Fest '87 at Viking Lake State Park
Farmers and Merchants State Bank Winterset	\$150 for state park photo contest at Pammel State Park	Lowell Schaaf Elliott	Square dance calling valued at \$80 for Lake Fest '87 at Viking Lake State Park
Union State Bank Winterset	\$50 for state park photo contest at Pammel State Park	Bob Stolz Council Bluffs	Square dance calling valued at \$80 for Lake Fest '87 at Viking Lake State Park
United Federal Savings Bank Winterset	\$50 for state park photo contest at Pammel State Park	Dean McCreedy Omaha, Nebraska	Square dance calling valued at \$80 for Lake Fest '87 at Viking Lake State Park
Harley Fischer Winterset	Use of corn planter and volunteer labor valued at \$50 for wildlife management at Pammel State Park	Darwin Rossander Stanton	Photographic services valued at \$150 for Lake Fest '87 at Viking Lake State Park
Edgewood Community Club Edgewood	Volunteer labor and equipment valued at \$200 for facility maintenance and renovation at Backbone State Park	Mr. and Mrs. Donald Jacobs Red Oak	Aerial photographic services valued at \$200 for Lake Fest '87 at Viking Lake State Park
Stanton Chamber of Commerce Stanton	\$225 for Lake Fest '87 at Viking Lake State Park	Nick's Farm Equipment Red Oak	Tractor use for hayrack rides valued at \$250 for Lake Fest '87 at Viking Lake State Park
Parker Hannifin Company Red Oak	\$75 for Lake Fest '87 at Viking Lake State Park	Case-III West Des Moines	Tractor use for hayrack rides valued at \$250 for Lake Fest '87 at Viking Lake State Park
Montgomery County Bank Red Oak	\$150 for Lake Fest '87 at Viking Lake State Park	Larry Watson Stanton	Use of hayracks valued at \$120 for Lake Fest '87 at Viking Lake State Park
City of Stanton	\$250 for Lake Fest '87 at Viking Lake State Park	Dennis Quist Stanton	Use of hayrack valued at \$60 for Lake Fest '87 at Viking Lake State Park
Wstrom Oil Company Stanton	\$60 for Lake Fest '87 at Viking Lake State Park	St. Joseph Hospital Omaha, Nebraska	Lifelight helicopter demonstration valued at \$482 for Lake Fest '87 at Viking Lake State Park
Oakview Construction Company Red Oak	\$100 for Lake Fest '87 at Viking Lake State Park	Baha'i Faith Ames	Volunteer labor valued at \$184
Red Oak Chrysler Red Oak	\$150 for Lake Fest '87 at Viking Lake State Park	Mark Peterson Stanton	Volunteer labor valued at \$134
Red Oak Express Red Oak	\$250 for Lake Fest '87 at Viking Lake State Park	Claude Peterson Stanton	Volunteer labor valued at \$84
Stanton Care Center Stanton	\$60 for Lake Fest '87 at Viking Lake State Park	White City FFA Chapter Stanton	Volunteer labor valued at \$320
		Marvin Carlson Stanton	Volunteer labor valued at \$84
		Dennis Usher Stanton	Volunteer labor for Lake Fest '87 at Viking Lake State Park valued at \$1,740
		Kenneth Athy Stanton	Volunteer labor for Lake Fest '87 at Viking Lake State Park valued at \$1,340
		Duane DeKay Villisca	Volunteer labor for Lake Fest '87 at Viking Lake State Park valued at \$1,370

# Classroom Corner

By Robert P. Rye

Animals' homes are used for shelter, raising young or capturing food. As we observe Iowa's habitat, we can tell what animals live there by the homes we find. It is important to observe animal homes, as well as the animals themselves, to be able to fully appreciate nature and all natural resources.

Try matching the following animals with their homes to tell how well you have observed Iowa's habitat.

- |                      |                  |
|----------------------|------------------|
| A. Bald-faced hornet | F. Mourning dove |
| B. Robin             | G. Muskrat       |
| C. Beaver            | H. Bullhead      |
| D. Spider            | I. Caddis flies  |
| E. Woodchuck         | J. Oriole        |

1. What animal weaves an elaborate, hanging, sack-like nest?
2. What animal interrupts a stream with gnawed-off trees to form a pond and lodge?
3. What animal builds an oval, covered nest that can accommodate over 10,000 in the colony?
4. What animal builds a loose nest of a few sticks on which it balances two white eggs?
5. What animal digs a hillside den that acts as a lookout, nursery and winter quarters?
6. What animal builds cases of sand or plant debris cemented together by silk?
7. What animal constructs a shallow water home - a domed structure with rooms for living and storage?
8. What animal, using its beak to carry in clay, makes a sturdy bowl for a nest?
9. What animal cleans a space on the pond's floor for his mate's eggs, and after fertilizing them guards the nest and protects the fry?
10. What animal spins a silk nest and also uses this silk for a safety line, egg sacs and snares?



Answers:

1. J; 2. C; 3. A; 4. F; 5. E;  
6. I; 7. G; 8. B; 9. H; 10. D.



## IOWA HUNTERS KILLED MORE DUCKS AND GEESE IN 1986

The U.S. Fish and Wildlife Service (USFWS) recently released preliminary duck and goose harvest estimates for each state for the 1986 hunting season.

The harvest estimates for Iowa indicated that the duck kill increased from 200,000 in 1985 to 220,000 in 1986. This is still somewhat below the recent average, but it does show some improvement from the poor 1985 season. The mallard kill in Iowa increased from 62,000 in 1985 to 91,000 in 1986. In total duck harvest in 1986, Iowa ranked seventh among the 14 Mississippi Flyway states.

Hunting for geese was even more productive, especially Canada geese. Iowa's snow goose harvest estimate was 12,000 in 1986, compared to 8,500 the previous year. The 1986 Canada goose kill in Iowa was estimated to be 17,500, a substantial increase over the 10,400 in 1985. The Canada goose kill of 17,500 was the highest ever recorded for Iowa since the estimates were started in 1962. The previous high was 15,500 in 1969. The increased harvest in 1986 can probably be attributed to a number of factors, including increasing numbers of Iowa-reared Giant Canada geese, increasing interest in Canada goose hunting and a couple of significant migrations occurring on weekends, when more hunters were out.

The USFWS harvest es-

timates have been derived through the cooperation of randomly-selected hunters who send in a duck wing or a goose tail from each bird they bag and another group of hunters who answer a questionnaire. Other information provided with the harvest estimates included duck stamp sales and seasonal bags. The number of federal duck stamps sold in Iowa increased slightly, from 33,304 to 33,827. The average number of ducks killed per adult hunter for the entire season in Iowa was 6.50, which was equal to the average for the Mississippi Flyway.

Duck populations have been lower than normal the past five years because of prolonged drought on the breeding grounds in the prairie pothole region of the northern U.S. and Canada. Bag limits and season length were shortened by the U.S. Fish and Wildlife Service in 1986 to protect adequate breeding stock. The prairies remained dry this year but slightly improved from last year.

DNR officials remind waterfowl hunters of the change in the boundary dividing the north and south zones of the state. The state will be divided by a line beginning on the Nebraska-Iowa border at State Highway 175, south-east to State Highway 37, east to U.S. Highway 59, south to Interstate 80 and along Interstate 80 east to the Iowa-Illinois border.

## 1987 IOWA HUNTING & TRAPPING SEASONS

### HUNTING AND TRAPPING SEASONS FOR FURBEARERS

The furbearer seasons all open at 8:00 a.m. on the opening date except the late beaver season which opens at 12:00 noon. There are no daily bag or possession limits.

SPECIES	OPENING DATE	CLOSING DATE	AREA OPEN
Mink, Muskrat, Raccoon, Badger, Opossum, Striped Skunk, and Fox (Red and Gray)	Nov. 7	Jan. 24, 1988	Statewide
*Beaver *Except for the federal Upper Mississippi River Wildlife and Fish Refuge. In this area, the open season will be from 12:00 noon December 12, 1987-February 29, 1988	Nov. 7	April 10, 1988	Statewide
Groundhog	June 15	Oct. 31	Statewide
Coyote (Hunting)	Continuous Open Season		Statewide
Coyote (Trapping)	Nov. 7	Jan. 24, 1988	Statewide
Otter, Weasel, Spotted Skunk and Bobcat	Continuous Closed Season		Statewide

### HUNTING SEASONS AND LIMITS

Game	Season	Shooting Hours	Daily Bag Limit	Possession Limit
Cock Pheasant	Oct. 31-Jan. 3	8:00 a.m. to 4:30 p.m.	3	12
Quail	Oct. 31-Jan. 31		8	16
Gray Partridge	Oct. 31-Jan. 31		8	16
*Ruffed Grouse	Oct. 10-Jan. 31		3	6
*Rails (Sora & Virginia)	Sept. 5-Nov. 13	Sunrise to Sunset	15	25
Snipe (Wilson's-Jack)	Sept. 5-Dec. 20		8	16
Woodcock	Sept. 19-Nov. 22		5	10
Cottontail Rabbit	Sept. 5-Feb. 29		10	20
Jackrabbit	Oct. 31-Dec. 13		3	6
Squirrel (fox and gray)	Sept. 5-Jan. 31		6	12
Pigeons	Oct. 1-March 31		UNRESTRICTED	
Crows	Oct. 15-Feb. 15		UNRESTRICTED	
*Turkey (gun)	Oct. 12-Nov. 8	1/2 hr. before sunrise to sunset	ONE TURKEY PER LICENSE	
*Turkey (bow)	Oct. 1-Dec. 4 and Dec. 21-Jan. 10		ONE TURKEY PER LICENSE	
Deer (bow)	Oct. 1-Dec. 4 and Dec. 21-Jan. 10	1/2 hr. before sunrise to sunset	ONE DEER PER LICENSE	
Deer (muzzleloader)	Oct. 10-Oct. 18 or Dec. 21-Jan. 10		ONE DEER PER LICENSE	
*Deer (gun)	Dec. 5-Dec. 9 or Dec. 12-Dec. 20	Sunrise to Sunset	ONE DEER PER LICENSE	

\*Check Regulations for Open Areas

### WATERFOWL HUNTING SEASON AND LIMITS

Game	Season	Area	Shooting Hours	Daily Bag Limit	Possession Limit
Ducks	Sept. 19-23	N. Zone	1/2 hr. before sunrise to sunset	15	30
Early Season	Sept. 19-21	S. Zone			
Ducks	Oct. 17-Nov. 20	N. Zone			
Late Season	Oct. 24-Nov. 29	S. Zone			
Goose	Same as Ducks				
Geese (Snow and White-Fronted)	Oct. 3-Dec. 11	Check Regulations			†See below
	Oct. 17-Dec. 25	SW Goose Zone			
Geese (Canada)	Oct. 3-Nov. 16	Check Regulations			
	Oct. 17-Nov. 30	SW Goose Zone			

### DUCK POINT SYSTEM

Canvasback	Closed Statewide
Black Duck and Hen Mallard	100 Points
Wood Duck, Redhead & Hooded Merganser	70 Points
Blue-Winged Teal, Green-Winged Teal, Cinnamon Teal, Shoveler, Scaup, Gadwall, Wigeon & Mergansers (Except Hooded)	20 Points
Drake Mallard, Ring-Necked, Pintail & All Others	35 Points

Ducks: The daily bag limit will be attained when the last duck taken added to the point values of the other birds bagged reaches or exceeds 100 points. The possession limit is the maximum number of species and sex which could legally have been taken in two days.

†Geese: Daily bag limit is five (5) including no more than two (2) Canada and two (2) White-Fronted. Possession limit is ten (10) including no more than four (4) Canada and four (4) White-Fronted.

NOTE: Check regulations for areas closed to waterfowl hunting. Steel shot is required statewide for waterfowl hunting.



# WARDEN'S DIARY

By Jerry Hoilien

**J**UST GOT NOTIFICATION FROM THE DES MOINES OFFICE THAT roadside hunting may be considered trespassing on some roads in Iowa.

That reminds me of a couple of fellas I met one day a few years ago.

It was a beautiful Sunday during the pheasant season in western Iowa. The pickup had a topper on it and was driving slow down a gravel road. The license plate told me it was a Missourian, as I came up behind. I could see the face in the large rear-view mirror was watching me as I turned on the red light. His rider wasn't making any fast moves as I walked up to the door. The driver set his cup of hot coffee on the dash and reached for his billfold.

"Mornin' warden," the driver said "We've got our licenses, two nice pheasants, and if you'd like, I'll open the back so you can check our guns."

The nice greeting and the cooperative attitude made me feel good. Lots of times, it is a completely different story — shells flying all over the front, a frantic effort to zip up the gun cases, and an argumentive attitude to start with.

"Would you like a cup of coffee? Bet you started out awfully early. We're in no hurry. If you've got a minute, we'd like to talk with you."

They went on to tell me what a great time they were having in Iowa. They were both in their 70's and weren't able to walk very far so they drove around, enjoying the nice weather and the country, and would occasionally see a rooster in the ditch. They described how, when seeing a rooster, one of them would get out, get his gun from the back, load it while the other drove on past the bird and then they'd both walk towards the bird. Only one would shoot, so to be safe.

"We've got to tell you about the nice fella we met yesterday. We must

have driven past his place cause he drove by us in his pickup and then stopped ahead, down the road.

When we got to him, he asked if we were looking for pheasants. We told him we were, and he suggested we hunt down by his creek. Told us we could hunt that whole mile. We thanked him very much, but we didn't want to tell him that neither one of us could walk that far. It's sort of embarrassing, don't you know? He was sure a nice fella. Would it be legal if we gave him one of our pheasants, when we leave?"

I assured him it would be O.K. and thought how great it is when nice people can come together. I hear and see too much of the other kind!

I ran across them again later and gave them an extra copy of the *IOWA CONSERVATIONIST* I happened to have. They appreciated it and said they'd like to subscribe. They asked if we were going to change our road hunting laws. At the time I told them I hoped not, there had been some attempt, but so far only some minor changes.

As they left, one grinned and said, "I don't know why anyone would be so fussy about 'road-hunting' — those roads aren't any good to eat anyhow!"

Things have changed somewhat since I talked to them a few years ago. Hunters may not have it quite as easy now. Currently it is the Attorney General's opinion that it is the hunter's or trapper's responsibility to find out if the road ditches they intend to use are fee title or easement roads. And if they are easement roads, they should seek the permission of the owner.

The friends I mentioned sent me a Christmas card a while back, said they enjoy the "Warden's Diary." I sure hope the new roadside ruling won't keep them from coming back to Iowa. Visitors like them are always welcome.





Egret – a marsh visitor.



DNR Photo



Louise Wislamburn

# STORY OF A DITCH

By Tom Neal

Aerial photo of Iowa lakebed.



Tom Neal

Tom Neal has been a wildlife biologist for the department since 1972. He holds an M.S. degree in wildlife biology from Iowa State.

THIS STORY STARTS A LONG TIME AGO. NORTHWESTERN IOWA WAS DOTTED WITH THOUSANDS of untold marshes, lakes and potholes. In the language of some, northwestern Iowa was "poorly drained."

The area had only recently been completely settled, and it was eagerly being converted to farmland. Private drainage efforts were not always sufficient to accomplish all that was desired, so drainage districts were formed. These were basically groups of landowners who shared the cost of large-scale drainage projects.

The drainage ditch in this story was dug about 1915 in order to provide drainage for a number of farmers. It happened that the lowest and most logical place for the ditch to go was through the middle of a state-owned lake. This minor inconvenience did not deter the diggers. The lake was quickly and permanently drained, and the ditch was completed. In fact, the lake was a benefit to the diggers because the state became a "beneficiary" of the drainage and was forced to pay a part of this and any future costs of the ditch. Convoluted reasoning is the rule rather than the exception in drainage districts. In this case, it was ruled that the state would have to pay more than other landowners, because state land was originally wetter and thus would "benefit" more from drainage. Of course it was wetter, it was a lake!

The ditch did its job admirably, and little or no additional digging was necessary for 70 years. After many years of neglect, however, the ditch banks had grown up with trees. The ditch was frequently plugged by beaver dams, and it was badly silted in. A state-owned marsh at the lower end of the ditch was also filling in with silt at an alarming rate.

A few landowners felt that their drainage would be improved if the ditch was completely cleaned out. Drainage laws are such that no majority is needed to initiate





action on a ditch. County supervisors, as trustees of the drainage district, believed that the law required them to provide drainage. As required by law, an estimate of the costs of cleaning the ditch was obtained and a public hearing was held.

Both the general public and the affected landowners were overwhelmingly opposed to the project, and said so at the public meeting. Their opposition was based on high costs, questionable benefits and environmental damage.

Nevertheless, the project was approved, a contract was let and the digging began. In order to save money, the ditch banks were made extremely steep and were not seeded. Huge spoil piles were left on the banks. In a wide area on both sides of the ditch, all trees were cut and the stumps dug out. The trees which had been growing on state and private land for 70 years were sold by the contractor, who simply pocketed the money. A complaint was filed, and the supervisors decided this was all perfectly legal.

A county road bridge over the ditch was mysteriously replaced with a new one, apparently to accommodate the new ditch. It was not officially "part of the project," so the drainage district did not have to pay for it. Taxpayers did pay for it, even though it benefited only drainage interests.

What is the upshot of all this? As far as "benefits," a few people will be able to raise a few more bushels of corn. A few more bushels will be contributed to the huge surpluses we already have.

**WHAT WILL IT COST? FOR STARTERS, THE STATE WILL BE ASSESSED ABOUT \$25,000 FOR THE "benefits" they supposedly receive. These "benefits" consist of not only paying to have a public lake drained, but paying again every time the ditch needs to be maintained!**

This will be paid by state taxpayers. County taxpayers will pay for the new bridge. Drainage district members will pay huge assessments for the "benefits" they receive. They will be forced to pay whether they like it or not, even if they don't really benefit from the digging.

Much more important, however, is the cost in natural resources to the people of Iowa. A huge swatch of prime wildlife habitat has been eliminated. The songbirds, rabbits, pheasants, muskrats, ducks, mink, beaver, minnows, frogs and a host of other animals that lived there are gone. Much of this destruction took place on a public wildlife area, which has been designated and managed to provide a home for wildlife. The supervisors quickly agreed to pay for damage they did to fences and other man-made structures, but they refused to believe that the wildlife they destroyed had any value.

Just as important is what this means to the marsh located downstream. Even before the clean-out, the ditch had added an estimated 40 acre-feet of silt to the marsh. That is enough to cover 40 acres one foot deep. Put another way, 65,000 cubic yards of silt has been dumped in the marsh. The cost of removing this much silt would be astronomical, even if a place could be found to put it.

The siltation rate will be greatly increased from now on. With the steep, unprotected ditch banks (some 20 feet high), erosion along the ditch is now more severe than it has been during the past 70 years. Not all of the silt stops in the marsh. For as long as I can remember, the water running into this marsh would be laden with mud, but the water running out was always crystal clear. The marsh has provided us free water treatment, trapping silt as well as other pollutants. This is not true anymore. The overloaded marsh can no longer hold all the silt that is pouring in and much of it continues on downstream. As it moves downstream, silt covers fish spawning areas, kills aquatic life and causes still more ditches to be "renovated." Along with the silt comes a vast array of poisonous agricultural chemicals. Is it any wonder that this witches' brew of silt and chemicals will no longer support aquatic life?

**P**ERHAPS WE CAN LEARN SOMETHING FROM THIS NIGHTMARISH DESTRUCTION OF OUR environment.

Perhaps we will gradually learn that drainage is not automatically good. That so-called "wasteland" is not wasteland at all, but in fact produces a precious complement of plants and animals and contributes to our well-being in many ways.

Perhaps we will learn that the drainage laws of 1900 do not necessarily serve the public interest in the 1980s.

Perhaps we will learn that passing our silt and water on to someone else only compounds the problem. Most importantly, perhaps we will eventually realize that greed alone is not sufficient reason to destroy Iowa's natural environment.

Aldo Leopold said it best forty years ago: "We must cease being intimidated by the argument that a right action is impossible because it does not yield maximum profits, or that a wrong action is to be condoned because it pays."

It is just as true today as it was in 1947.



# POSTED!

## HUNTING BY PERMISSION ONLY

By Rick Samples



Ron Johnson

**Y**OU ARE OUT FOR A MORNING OF HUNTING IN THE beautiful Iowa countryside on a crisp November day. Everything is ready - the dog, the gun and especially you. You have been eagerly anticipating this day for months. As you drive along, your hunting partner spots an ideal spot with plenty of cover, some standing corn left for wildlife and a small pond nearby - a great place for pheasants! Now all you need to do is get permission to hunt. Quickly, you go to the nearest farmstead to ask, but find that the occupant just rents the house and doesn't know who owns the parcel you want to hunt. He suggests you go to the next house down the road to ask. You jump in your truck and beat it to the next place, but no one is home so you decide to wait, figuring they will be back shortly. Before you know it an

hour of prime hunting time has passed and all you've gotten is frustrated. Sound familiar?

From the landowner's perspective, consider this scenario. Over the years you have spent many enjoyable hours fishing and hunting and still do when you have time. You always had a concern for wildlife, and letting that waterway grow to provide cover and leaving a couple of rows of corn standing was just your quiet way of giving something back. In the past you did not mind people hunting on your property as long as they asked permission and left the area the way they found it. But since you started farming your father's farm in the next township, you have had nothing but trouble. Every time you go by there during hunting season you have to chase trespassers out and fix the fence. Frustrated, you decide to post

"NO HUNTING" signs and contact the state conservation officer about this persistent problem.

Unfortunately, both of these situations are all too common in Iowa. However, a partial solution may be just around the corner with a fresh approach that depends on the input and cooperation of various groups including landowners, hunters, county conservation boards and the Iowa Department of Natural Resources. This project is called the "HUNTING BY PERMISSION ONLY" sign program and will be entering its second hunting season this fall.

The concept of the program came from discussions of county conservation personnel from southeast Iowa. It was felt that action needed to be taken to improve landowner/hunter/conservation agency relations and the idea of distributing signs to landowners that provided information hunters could use to ask permission was suggested. The southeast county conservation board district adopted the idea and approached the DNR with a plan in which the state would pay for the signs, while county conservation boards would administer the project locally. The DNR agreed to support such an effort on a limited experimental basis for the 1986-87 hunting season with the possibility of expanding the program in the future if it was found to be effective.

Mahaska, Des Moines and Lee County Conservation Boards volunteered to serve as test counties for the experimental first year. Each county was allotted 100 weather-proof signs which simply read:

HUNTING BY  
PERMISSION  
ONLY  
TEL. #

Due to the number of absentee landowners in rural Iowa it was felt that providing the telephone number of the landowner would be the most effective means by which the two parties (landowner and hunter) could get together.

In October 1986, each of the three test counties sent out input surveys to landowners and hunters in their respective counties. By sending out surveys prior to distributing the signs



the counties were able to gain some valuable insight from both groups regarding their experiences with trespassing, hunting access and other related items. Among the hunter surveys some important trends were identified. First, an overwhelming 93 percent of those hunters responding to the survey indicated they preferred to hunt on private property rather than public property siting safety, harvestable game numbers and less competition with other hunters as prime reasons. Another notable point from the hunter surveys was that 42 percent of those responding indicated some degree of difficulty in obtaining permission to hunt on private land. The landowner survey showed that liability and having to deal with rude and careless hunters were the two most common reasons why landowners were less willing to allow access to their land.

In addition to this information, the surveys were used to identify landowners wishing to act as voluntary participants in the test project by posting their property with the signs and agreeing to report the pros and cons of the program at the end of the hunting season. In all, signs were distributed to 73 landowners in the three counties — 20 in Mahaska, 29 in Des Moines and 24 in Lee County. It was the responsibility of the participants to put the signs up. Posting the signs did not automatically open the land to hunting, nor did it mean that a government agency had taken control of the land posted. It was the right of the landowner to monitor his property and to grant or deny access as he always had done.

Once the hunting season was over, the participating landowners and randomly-selected hunters were re-surveyed to get their impressions of the pilot program. Local results were tabulated and forwarded to the DNR along with recommendations. The DNR compiled a summary report of the local data and used that information to evaluate the effort. Among landowner participants it was found that 70 percent rated the program as successful and indicated that it should be continued and expanded. Another 26 percent responded that the program had been moderately successful and should be expanded with modifications. Only 4 percent of

the participating landowners deemed the attempt unsuccessful. As for incidents of trespass, 3 percent of the landowners reported that trespassing on their property had increased with the posting of the signs, 45 percent reported a decrease in the number of trespasses, and 52 percent said the rate of trespass remained about the same as previous years.

So what is next? The Iowa Department of Natural Resources, with the help of the county conservation board system, will expand the program this fall to include Mahaska, Des Moines, Lee, Jefferson, Marion, Wapello, Wayne, Lucas, Cherokee, Clay, Lyon, Monona, Plymouth, Sac, Sioux and Woodbury Counties. It is the goal of this project to implement the program statewide by 1990.

Obviously, posting of these signs alone will not completely eliminate trespass problems in our state. Public awareness through education efforts and continued enforcement of existing trespass laws are necessary as well. Yet, this is an attempt to meet this problem head-on in a positive, cost-effective manner. It offers three specific advantages:

- 1) Participating landowners do so on a voluntary basis.
- 2) Participating landowners still control their land and who uses it.
- 3) Conscientious hunters have information readily available that can be used to ask permission for access to private property thus saving time and reducing the likelihood of misinformation.

To be fully successful an undertaking of this type needs the cooperation of conservation agencies, landowners and hunters.

If you have comments or questions regarding the program, please contact Steve Dermand, Iowa Department of Natural Resources, Wallace Building, Des Moines, Iowa 50319-0034. Let's all work together to make Iowa's hunting seasons an enjoyable, safe and productive time for everyone.

*Rick Samples is the director of the Mahaska County Conservation Board.*

# CALENDAR

## October 1987

Oct. 5	Winter Birdfeeding 7:00 p.m.	Palo Alto County Iowa Lake Community College Emmetsburg (712) 837-4866
Oct. 8	House Concert Jim Kennedy 7:00 p.m.	Clinton County Eagle Point Nature Center Clinton (319) 847-7202
Oct. 9-11	Eden Valley Rendezvous and Music Festival	Clinton County Eden Valley Refuge Clinton (319) 847-7202
Oct. 10	Indians of Iowa 2:00 p.m.	Mahaska County Russell Wildlife Nature Center (515) 673-9327
Oct. 10	Fall Bicycle Ride Cinder Path Trail	Clarke County (515) 342-3960
Oct. 10	Full Moon Walk 7:30 p.m.	Plymouth County Hillview Park (712) 947-4270
Oct. 10	Trapper's Clinic	Jackson County Spruce Creek Park Bellevue (319) 652-3783
Oct. 10	Hike Though Fallow Marsh	Palo Alto County (712) 837-4866
Oct. 10-11	Forest Crafts Festival	Lacey-Keosauqua State Park Van Buren County (319) 293-3502
Oct. 11	Canoe Float	Jackson County Maquoketa River (319) 652-3783
Oct. 11	Seed Harvest 2:00 p.m.	Story County Doolittle Prairie Story City (515) 232-2516
Oct. 15	Evening Color Hike 6:00 p.m.	Polk County Yellow Banks Park (515) 999-2557
Oct. 16-18	Camp EWALU Fall Workshop	Buchanan County (319) 636-2617
Oct. 17	Prairie Walk 10:00 a.m.	Plymouth County Five Ridge Prairie Preserve (712) 947-4270
Oct. 17	Trapper Safety	Mahaska County Russell Wildlife Nature Center (515) 673-9327
Oct. 18	Woodland Nature Hike 1:30 p.m.	Carroll County (712) 792-4614
Oct. 20	Orionid Meteor Watch 5:00 a.m.	Carroll County Swan Lake State Park (712) 792-4614
Oct. 23	Halloween Hike 7:00 p.m.	Clinton County Eden Valley Refuge (319) 847-7202
Oct. 24	Weather Folklore 2:00 p.m.	Mahaska County Russell Wildlife Nature Center (515) 673-9327
Oct. 24	Halloween Hike	Hamilton County Briggs Woods Park (515) 832-1994
Oct. 24	Halloween Hike	Wright County Lake Comelia Park Claron (515) 532-3185
Oct. 25-26	Halloween Hike 7:00 p.m.	Palo Alto County Lost Island-Hudson Park (712) 837-4866
Oct. 29	House Concert Dalia Goldstein 7:00 p.m.	Clinton County Eagle Point Nature Center (319) 847-7202
Oct. 31	Cemetery Hike 2:00 p.m.	Mahaska County Russell Wildlife Nature Center (515) 673-9327

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# Sheep Shed Hunt

By Bill Aspelmeier

**I**T WAS A LATE OCTOBER AFTERNOON. I HAD PULLED the pickup off on the shoulder of the road and was watching large numbers of mallards, along with numerous other puddle ducks, dive into the refuge. My thoughts were centered on the wish that ducks would respond to my decoys as well as they do to live waterfowl.

I was brought back to reality by a low flying aircraft buzzing over the pickup. As I looked up, the pilot waved and indicated that he was going to land in a nearby hayfield. I wheeled the pickup around and headed for the driveway leading to the field. Frankie, my airplane-driv-

ing friend, was just stepping out of the cab as I pulled up in the truck. He stepped toward me, shook my hand and asked, "How's duck hunting been?" I explained that the past few days had been slow, very little movement of waterfowl, and the ducks that were here wouldn't decoy.

"Let's go get some coffee. I've got some good news for you," he said.

On the way to the house he explained that he had just been flying up the Chariton River Valley and about three miles southeast was a small bayou loaded with ducks. It was apparent to Frankie that this place had not been hunted and would be a pushover for some good duck hunting. It was too close to sundown to go after them that day, so he gave me directions on how to find the place, downed the rest of his coffee and said he wanted to get home before dark. On the way back to the hayfield we talked about his coming back later in the week and hunting the bayou.

That night I decided I would locate the bayou tomorrow and talk to the landowner about permission to hunt there later on. I would then wait a couple of days and if Frankie didn't show, I would hunt it alone. I went to bed that night wondering how this place had been overlooked by hunters, but I did remember that Frank said it was located well away from any roads or farmsteads.

It seemed as though I had been in bed a short time when I was awakened by an intermittent pounding on the door and ringing of the bell. Pulling on my pants, I looked at the alarm clock. It was 4:15 a.m. Barefooted, I stumbled down the hall wondering who needed help. The road was dry, so nobody should be stuck. Well, I would find out soon enough. I flipped on the porch light and saw my hunting companions Bruce and Ray. They were dressed in hunting clothes. Each was also wearing an apologetic grin.

I invited them in and they asked if I would like to go with them to hunt the bayou, that they didn't know where it was located and that I did. The secret of the duck-filled bayou had obviously been too good to keep. Frankie told Ray and Ray told Bruce. I liked their idea, but I hadn't attempted to find and talk to the landowner and had only a vague idea about the location of the bayou. I also had not had any breakfast. They assured me that there was plenty of time and that they hadn't eaten either. With that, I dressed, grabbed my hunting gear and we headed to town for breakfast.

After a big breakfast we picked up sack lunches and took off in the general direction of where I thought the bayou would be. When we got close, I pointed to a farm driveway and told Ray to park the car. We could see a farmer standing in the doorway of a dimly lit barn, waiting for a half dozen Holsteins to be driven through a gate by a boy and a non-descript dog.

I recognized the farmer and explained the situation to him. He said he had such a bayou on his place, but had not been to that part of the farm for several weeks and did not know if ducks were using it. The farmer was not a hunter himself and said that we were welcome to hunt there. He said that he had a few head of stock cows in the pasture around the bayou, but there would likely be no conflict between us and his stock.

The sun was just visible over the eastern horizon as we took off on foot for the bayou. Along with our guns, shells and lunches, we were carrying two gunny sacks full of decoys. As we got close we could see small bunches of ducks sailing into a place



not visible because of the ridge between us and the river bottom. We carefully approached the ridge and looked over the edge, exposing only the tops of our heads.

I was not quite ready for what I saw. That bayou was about the size of a football field and was solid ducks from end to end. We dropped back out of sight and immediately got into an argument about what course of action to take. It appeared that we had two choices — sneak and shoot, or spook them off and shoot them as they returned. Bruce settled the question by announcing he was going to walk down to the bayou, spook the birds, conceal himself in some sort of blind and hope that his ammunition held out.

As we walked over the ridge, the whole pond exploded — mallards, blue-wings, green-wings, pintails, shovellers and wood ducks. We stood on the bank looking at the pond when Ray said, "Bruce, your idea was great, but where are we going to hide?"

Ray's question was valid. The pasture was over-grazed right down to the waterline. There was no vegetation over an inch high, except for a small clump of scrubby box elder at the north end, with a six-foot browse line; not one thing to build a blind with. Besides the box elders, the only

other thing extending above the ground line was a small, wooden, unpainted shed on the southeast side, about 15 feet from the bank. The low side of the shed faced the bayou and had about a three-foot by three-foot opening. The back side had a door on rusty hinges. Ray allowed that the shed would make a perfect blind. The door had not been opened for some time. After kicking away about three inches of dirt from in front of the door, we opened it and walked in. The shed had not been used recently, but it was obvious by looking at the dirt floor that the last occupants had been sheep. By pressing our faces close to the siding boards and looking through the cracks, we could get a pretty good view of the pond.

It would be perfect. The plan was set. When ducks had settled on the pond within range, a signal would be given. Ray and Bruce would exit the shed by crawling through the low opening at the front, while I would go out the door in back, run around the shed and do my shooting.

After putting out the decoys we took up our vigil in the shed. We didn't have long to wait. The birds started to return in twos, threes and small bunches. Within ten minutes approximately 25 ducks were resting on the pond, ten in good range.

Ray, peeking through a knothole, gave the signal and we made our move. As I went through the back

door and started around the shed I could hear the wing beats as the ducks spooked. I stood beside the shed waiting for the volley from Bruce and Ray. I was going to shoot at any stragglers or birds swinging around the end. But I heard nothing except the alarmed ducks and some of the derndest cussing imaginable. I momentarily forgot the ducks and looked around the front corner to see what had happened. Ray and Bruce were halfway through the opening, side by side and stuck fast. There they were pushing and shoving, their wheels spinning, like two pigs trying to go through the same hole in the fence. They were in no position to shoot. I was too amused to shoot. And the ducks escaped without a shot fired.

Bruce and Ray freed themselves and we immediately changed our plan of attack — if we got another chance. Ray would crawl out the front, Bruce would exit through the rear door and I would follow either Ray or Bruce, wherever I thought my chances were best.

Well, we had more chances...many of them. By early afternoon we had our limit. And along with our limit, we had a great time — lots of fun and one of the most memorable duck hunts any of us would ever have.

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*Bill Aspelmeier is a wildlife biologist. He has been with the department since 1950.*

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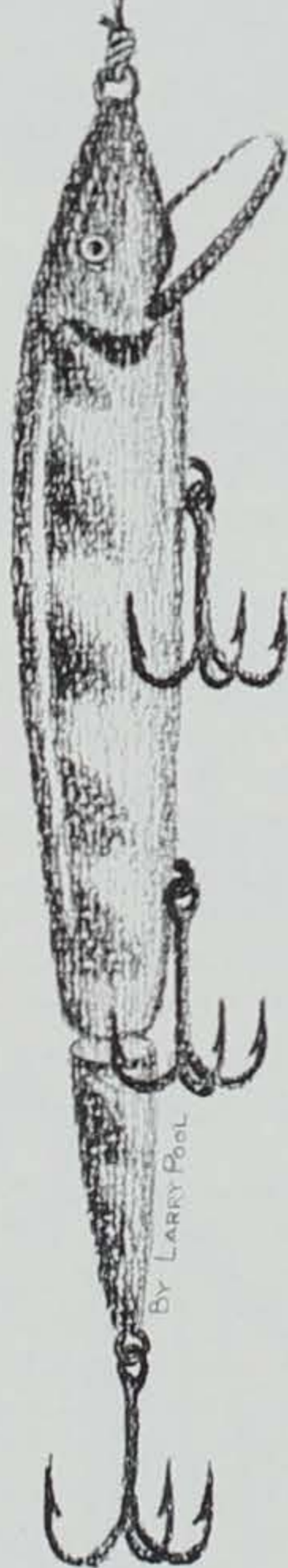




# Hook, Line and Sinker

## *They Do More Than Catch Fish*

By Martin Konrad



**E**ACH TIME ANGLERS PURCHASE FISHING ITEMS, THEY are investing in sportfishing. This was made possible in 1950 when Congress passed the Dingell-Johnson Act (D-J) which authorized a federal excise tax on fishing rods, reels, artificial lures, baits and flies. Money accrued from these tackle items could only be spent by state fish and wildlife agencies for the purpose of providing anglers with more and better sportfishing opportunities.

In the early 1980's money apportioned to Iowa from this tax averaged \$500,000. This money was spent for the maintenance of public fishing areas, fisheries research, trout stream acquisition and lake winter aeration. But since its passage, the Act has become obsolete because it did not make provisions to tax new tackle developed since 1950 such as monofilament line, fish finders and electric trolling motors. Also, imported tackle did not have an import duty. And the tax on marine fuel, which anglers were paying, was not being allocated for their benefits.

Recognizing that these inequities existed, a push was made in the early 1980's by private industries and organizations and by state and federal agencies to amend the D-J Act.

Need for amendment resulted from the tremendous increase in angling demand nationwide and state agencies' inability to keep pace with the demand. During a six-year period in Iowa alone activity increased 24 percent to nearly 13 million angling days annually. This increase put greater pressures on the Iowa fish and wildlife division's budget to maintain and improve existing fishing areas, to create new

fishing lakes, incorporate fisheries management techniques that create and maintain quality fishing and improve hatchery facilities to efficiently culture fish needed for stocking purposes.

**M**AJOR EFFORTS FROM THE FEDERAL LEVEL TO AMEND the D-J Act came from Senator Wallop (Wyoming) and Representative Breaux (Louisiana). In 1984, after several years of intense lobbying, Congress passed legislation to amend the D-J Act. In a nutshell, this new legislation known as Wallop-Breaux, extended the excise tax to fishing equipment not previously taxed, initiated import duties on pleasure craft and fishing equipment and made it possible to receive a percentage of the revenues accrued from the sale of motorboat fuels. To the State of Iowa this meant a jump from the \$500,000 previously received annually to more than \$2 million for federal fiscal year 1987. This magnum increase will become very instrumental in creating angling opportunities to meet the growing demands of Iowa anglers.

To meet anglers' demand, the Iowa Department of Natural Resources' personnel have been actively planning projects. The most aggressive and exciting is the acquisition of four sites to construct and develop public fishing lakes. These sites are located in Fremont, Dubuque, Plymouth and Scott Counties and were chosen because they are near highly populated areas that lack a quality fishing lake. Each site was carefully selected according to physical land characteristics important in making excellent fishing lakes.



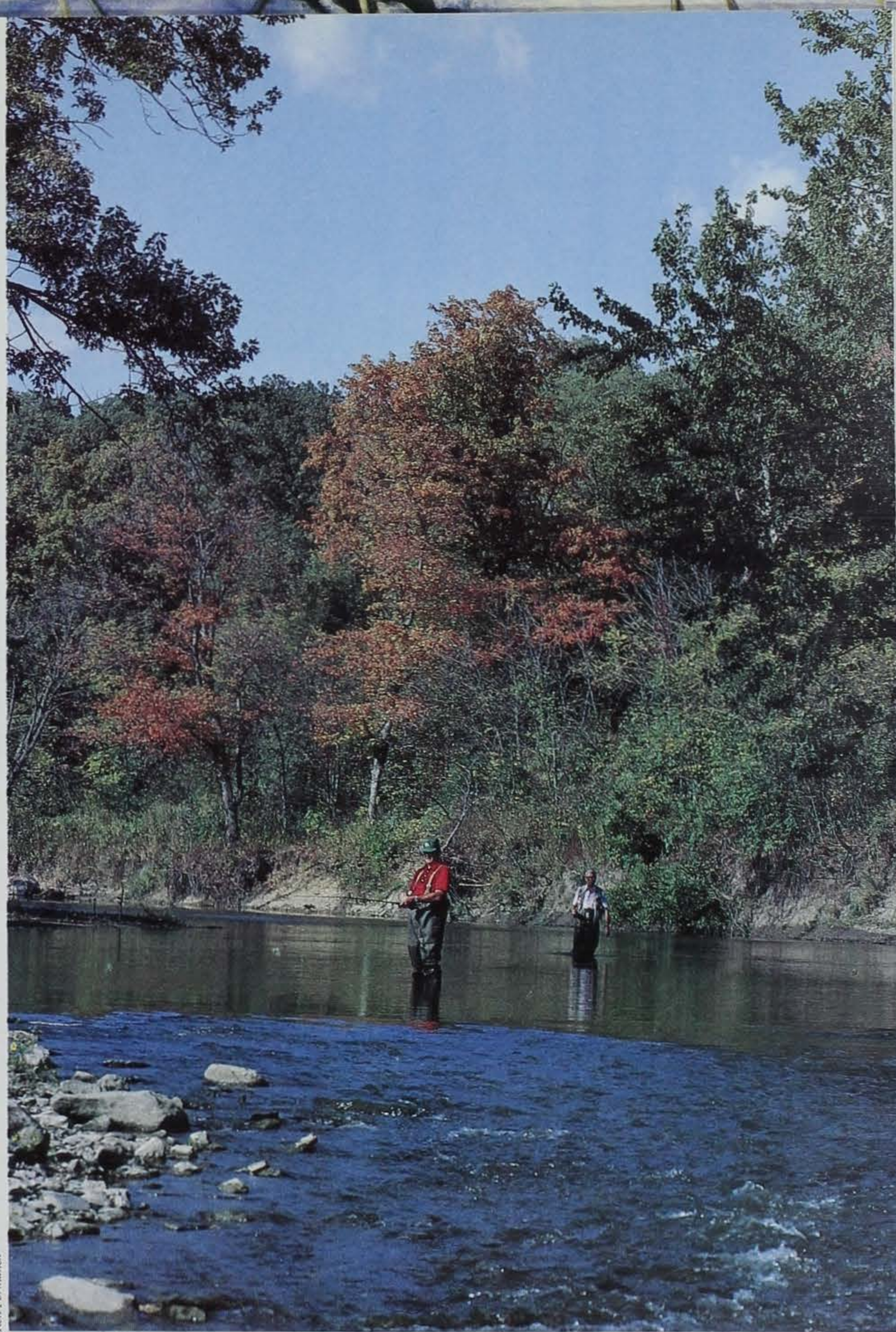
Feasibility studies have been conducted and three of the proposed sites have basins that will hold water and have soils suitable for dam construction. The Scott County site has recently been selected and is currently undergoing a feasibility study. Although this is an aggressive project, land acquisition is a slow process and angler benefits will not be readily realized in the near future.

The construction of fish cleaning facilities, fishing jetties and piers are other projects where anglers will visibly see their dollars at work.

**T**O IMPROVE SHORELINE ANGLING, THE IOWA DNR plans to construct 193 fishing jetties or piers on 66 public lakes. These structures can be expected to improve fishing by increasing shoreline length and allowing anglers access to deep water during months when fish seek deep water. Jetties and piers will be located in easy-to-reach areas for physically-impaired people and nearly 25 percent will be designed to benefit people confined to wheelchairs. Thus far, jetties have been built on Green Valley Lake, Morman Trail and Lake Cornelia. This year and next, piers or jetties will be built on Lake Icaria, Spirit Lake, Big Creek and Crystal Lake.

Presently, anglers who wish to field dress their catch are limited to boat docks and picnicking areas. These areas commonly become unsightly with an obnoxious odor. To rid this problem and provide convenience to anglers, the DNR plans to build fish cleaning facilities. Each facility will be sheltered and designed with electricity, running water, a disposal system and platform for easy cleaning. An information center will accompany each facility to benefit anglers and boaters. The first facilities will be constructed at Lake Macbride, Spirit Lake and Big Creek Lake.

To meet the growing demands of trout anglers, the DNR has plans to renovate the Decorah Trout Hatchery. Modern hatchery technology will be used to enhance water quality by increasing dissolved oxygen concentrations, lowering nitrogen saturation levels and decreasing sediment load-



Ken Formanek

ing. The raceways and rearing pond systems will be completely reconstructed plus a combination trout food storage, workshop and equipment storage facility will be constructed to improve operation efficiency.

Other projects planned for the future are construction of fishing rifles in streams, silt retention dikes and fish barriers on lakes, water qual-

ity improvement at Rathbun Fish Hatchery and the construction and development of Beaver Lake in Dallas County.

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*Martin Konrad is a fisheries specialist located in Des Moines. He holds a B.S. degree in fisheries and wildlife biology from Iowa State University. He has been with the department since 1977.*

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Ron Johnson

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# How To Catch A Feeding Fish

By Don Kline

**A**SCHOOL OF FISH IS FEEDING AND YOU'RE THERE. IT JUST doesn't get any better than that! The feeding instinct in fish is a basic concept which every angler needs to understand and meld into their subconscious. This knowledge can certainly improve angling success.

Trout anglers have been developing and using this method for many years, at least as far back as Izaak Walton! They call it "matching the hatch." Anglers look to see which particular insect is emerging from the stream each day, then tie on a "fly" which closely resembles the real thing. Of course, feeding trout eagerly await new food and when they recognize a familiar morsel, their instincts take over. And wow! You have a fish on.

But you might ask, what is so complicated about this feeding thing anyway? It is just the old predator-prey relationship in practice, isn't it? The larger fish eat the smaller ones and so forth down the food chain. If it were only that straightforward, angling would be a sure thing and catching fish would lose its alluring charm. The search, discovery and use of newfound information is as much a part of angling as your rod and reel. Here is some basic information to build on.

Bluegill are caught and enjoyed by thousands of anglers each year, but how can knowledge of their feeding habits help us catch more of them? We know that their mouths are small; it would be difficult to stick the tip of your little finger into their mouth. Therefore, the size of their mouths restricts them to relatively small food items. In a lake or pond, bluegills depend on macroscopic zooplankton (the size of a pin head), insect larvae (one half inch), immature insects (up to one inch) and worms (up to two inches). To really get the feel for how a bluegill feeds, imagine a school of



Don Kline

bluegill feeding at the edge of a weed bed. Some are selecting insects as they work their way among the plant stalks. Some are feasting on tiny organisms, as the zooplankton rise from the bottom on their evening journey to the surface. Some are tipped up on their noses waiting intently for a worm to venture out of its burrow. Although they are near-sighted and restricted to a few feet of clear vision, their eyes are constantly alert for any movement. Of course, muddy water makes their search for food a real dilemma and they will find your bait only by chance. Bluegill tackle includes a very small hook and a tiny piece of bait hooked below a bobber the size of a dime. No sinker is needed. Fish in shallow water near weeds, stumps or fallen trees.

Crappie, known as "Paper Mouth" because of the thin membranes which surrounds their surprisingly large mouth, have become one of the most sought-after fish in Iowa. The popularity of this delicious panfish continues to grow each spring as they make their annual spawning migration into the shallow water of many Iowa lakes. Later in the year you find them among submerged timber or offshore suspended above deep points, where their unique silver and black-flecked coloring provides ideal camouflage. Schools of crappies roam the lake hoping to surprise a school of smaller bait fish and rush in for a meal. Anglers have

taken note of the crappies' addiction to minnows and use live and/or artificial baits which imitate the real thing. The familiar "crappie minnow," one to two inches in length, has become a standard at bait shops, and the brightly colored leadhead jig assortments rival even the largemouth bass plug displays.

Largemouth bass, a close relative of both the bluegill and crappie, possess one of the biggest mouths in the fish family. "Bucket Mouth" is another name which aptly describes their food-gathering potential! These fish seem to enjoy their reputation for lure mauling and tackle busting, because a fast searing strike is one of their favorite tactics. Of course, these moves get them into a lot of trouble when there are some crafty anglers around. Many bass lures imitate a lone bait fish, and if you can present it to a bass in a way that makes it appear injured and struggling, you'll have the makings of a tournament-grade bass angler.

Bass will also hunt along the outline of weedbeds and other structures, ever alert for the presence of suitable food (crayfish, smaller fish, worms, snakes, frogs, etc.), then stealthily approach the unsuspecting prey and literally inhale them by sucking water in through their large mouth and out through their gills. The prey ends up in the stomach and the bass continues its unassuming search. It takes a real touch to determine when a bass has sucked up your bait, but once the touch is mastered, you're in for some exciting action.

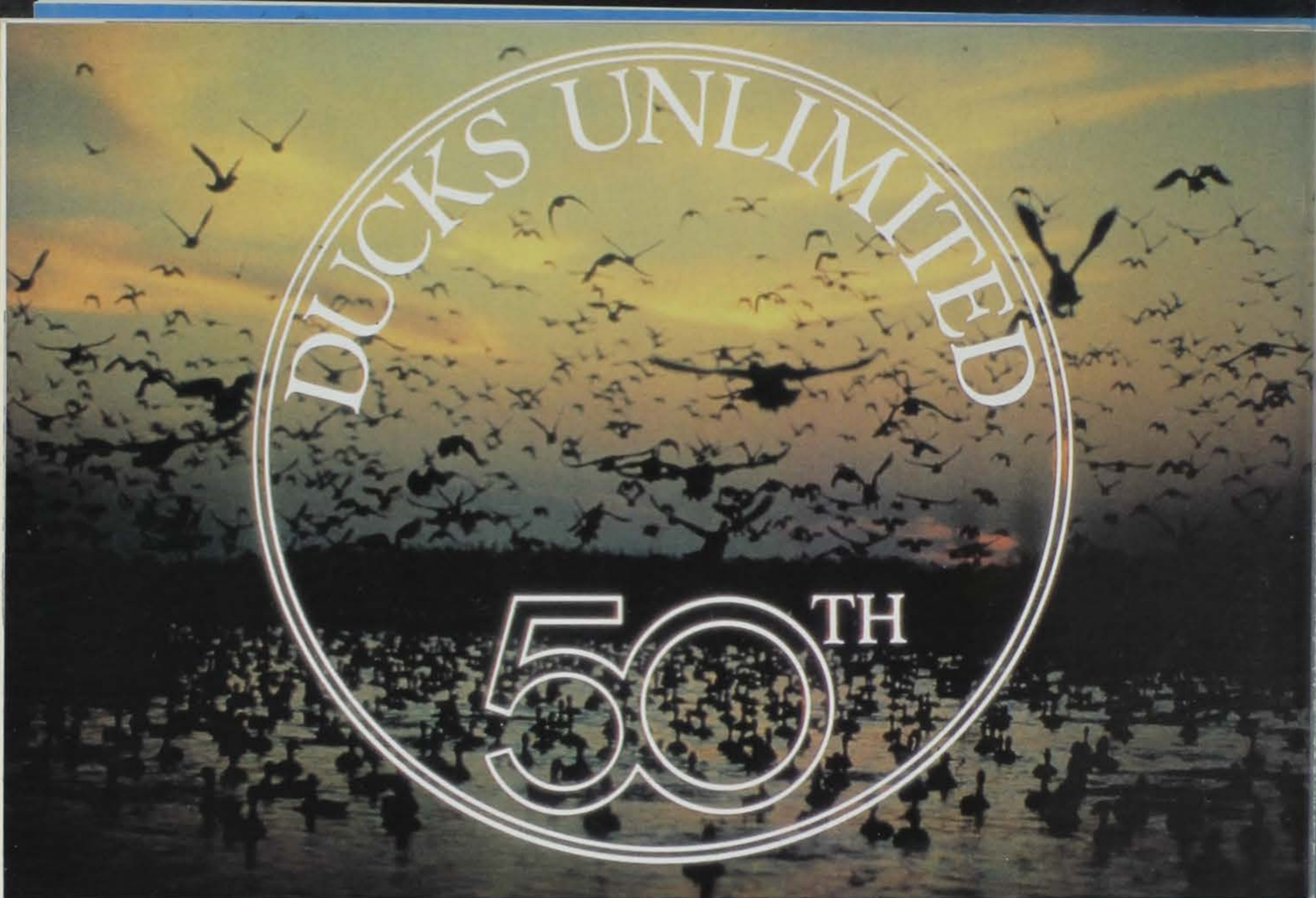
Becoming familiar with how, when and where fish feed will pay big dividends to your angling success.

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*Don Kline is a fisheries biologist. He has a B.S. degree in fisheries and wildlife biology from Iowa State University and has been with the department since 1967.*

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By Lowell Washburn

**S**INCE ITS MEAGER BEGINNINGS DURING THE DARK days of the 1930's, Ducks Unlimited (DU) has not only withstood the test of time but has emerged as the world's most powerful conservation organization.

Being somewhat of a chronic nostalgia buff, I have often regretted missing what are commonly referred to as the "Good Old Days."

There is one exception, however, and the decade of the 1930's is certainly one period of time that I'm glad not to have gotten mixed up with. Most of us weren't around then, but the history books and old timers alike give the '30's universally bad reviews.

Following the catastrophic crash of Wall Street, the nation had plunged into the deepest economic depression in history. Overall, hard times were further intensified by a relentless period of drought that set the stage for the now famous Dust Bowl

era. Cropland turned to wasteland. And as the awesome devastation of the "Dirty '30's" spread, desperate families gathered their meager possessions and fled in search of a better tomorrow.

But for much of America's wildlife treasure, it appeared as if there might be no tomorrow. The prolonged drought had been particularly brutal to migratory waterfowl, and authorities of the day predicted that, at least for some species, extinction was eminent. Federal government, understandably preoccupied with preserving the Union, gave little thought to preserving ducks and geese. Continental waterfowl populations soon reached an all-time low. With no relief in sight, their numbers continued to plummet.

Necessity is credited with being the mother of invention, and it was during this darkest hour that a small but profoundly dedicated group of hunters set out to save what was left of the waterfowl resource. When

Ducks Unlimited was incorporated in 1937, its founders made no bones over what they perceived as their single purpose — "to raise funds for developing, preserving, restoring and maintaining waterfowl habitat on the North American continent."

Initial surveys had revealed that a full 70 percent of America's ducks and geese originated north of U.S. borders, and so it was determined that that was where the habitat work should occur. The odds against success were overwhelming. But in spite of the tremendously negative economic climate, 6,270 fledgling supporters raised a total of \$90,000 during 1938. With its first accomplishment squarely under its belt, DU marched forward and never looked back.

Today, DU has generated more than \$337 million for wetland conservation. As the organization celebrates its 50th anniversary, it can indeed take pride in a remarkable string of achievements. Not only has DU

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withstood the test of time, but has emerged as the world's most powerful private conservation organization — a corporate giant whose common ground unites volunteers from the Canadian parklands to the steaming rain forests of Honduras. Current membership stands at 600,000 in the U.S. alone, and DU now operates under a budget that exceeds \$1 million per week.

Much of this success may be accredited to the fact that DU has never wavered from its singleness-of-purpose philosophy. Its motto could well read, "Habitat is our only business." To date, DU has completed over 3,000 wetland projects that encompass some four million acres of habitat, mostly in Canada. Ducks Unlimited de Mexico has protected over 400,000 acres of south-of-the-border wintering habitat which may hold up to 40 million ducks and geese during peak periods. Volunteers have also installed a total of 5,650 nesting boxes for wild muscovy and black-bellied whistling tree ducks around Yucatan and Honduras.

In 1984, DU began to divert a portion of its funding base into habitat projects within the U.S. Appropriately called the MARSH (Matching Aid to Restore State Habitat) pro-

gram, this agreement calls for 7.5 percent of DU's grass roots monies to be returned to the state where it was generated. These dollars are then cost-shared on a three-to-one basis with state conservation agencies such as the DNR. DU MARSH raises around \$85,000 annually in Iowa which, with the cost share, provides about \$100,000 per year for habitat work here at home. Iowa's first MARSH project, the 142-acre DU Marsh located near Ruthven in Clay County, was dedicated in October 1985.

The largest percentage of Ducks Unlimited's income is derived through special events. The most familiar of these is the DU banquet where participants actively compete for the purchase of raffle items, gold-inlaid commemorative shotguns, carvings, paintings and other wildlife art objects.

Although successful fund raising is certainly a critical component of the DU story, making those bucks work for the ducks is what administration calls the "corporate bottom line." And a good share of what makes the machinery work so well can be summed up in a single word — efficiency. According to independent audits, nearly 83 percent of each dollar raised by Ducks Unlimited is

applied directly to habitat projects.

In Iowa, there are currently around 24,000 active DU members representing 128 chapters, 16 of which are women's chapters. Iowa ranks seventh in the nation for total contributions. During 1986, there were 165 events held in the state, generating a total of \$1,231,000. Over 3,000 of Iowa's young people are enrolled in the DU Greenwing program which educates future waterfowl enthusiasts on the importance of wetland conservation. Around 30 Greenwing field days are held in the state each year.

Ducks Unlimited recorded its first million dollar year in 1966. During 1986, it generated a record smashing \$59 million. For 1987, DU has a targeted goal of \$66.7 million, and as the fall banquet season commences, the organization is on track to achieving that sum.

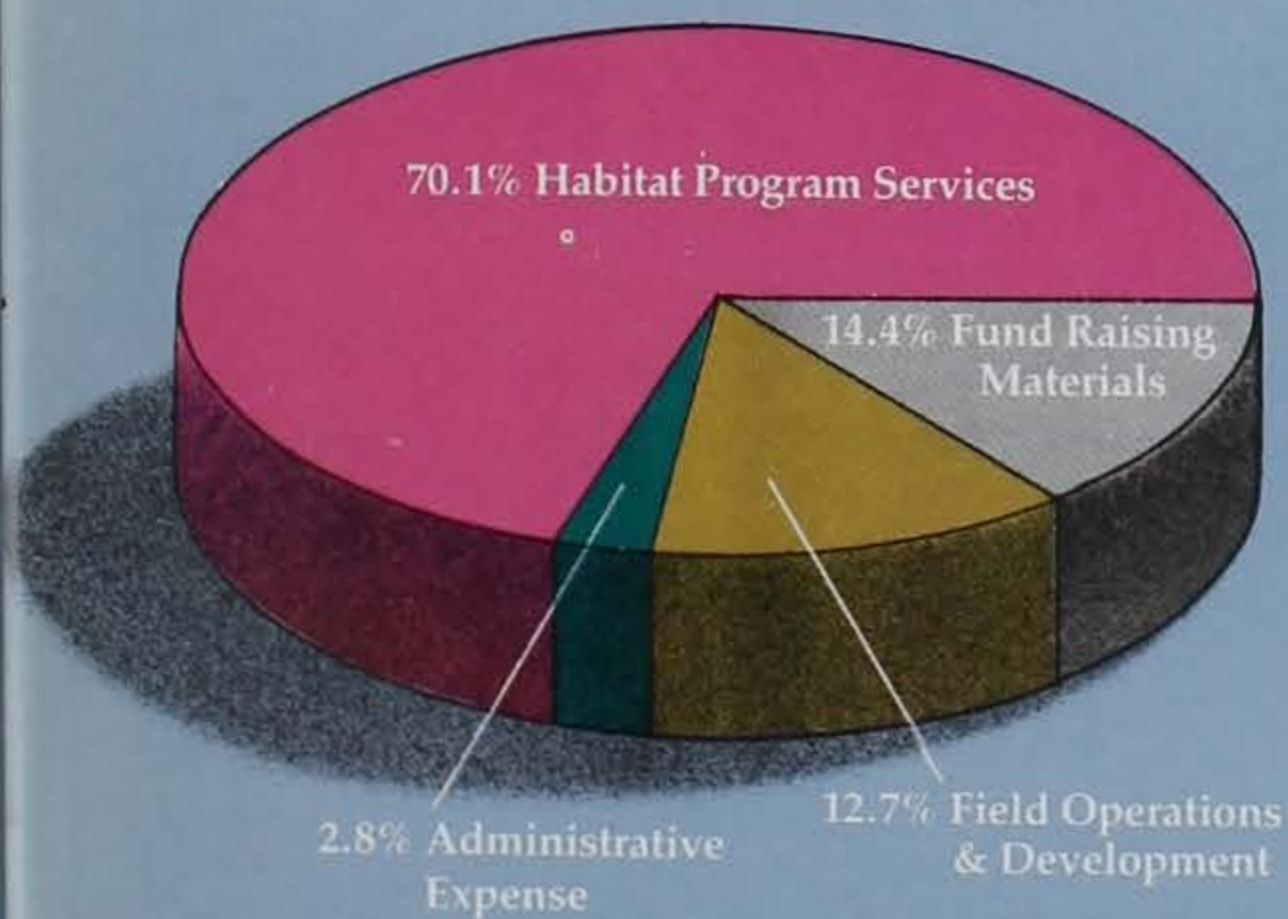
We at the *Iowa CONSERVATIONIST* join the rest of the Iowa Department of Natural Resources in saluting Ducks Unlimited for a job well done. May DU's next 50 years be as productive as its first.

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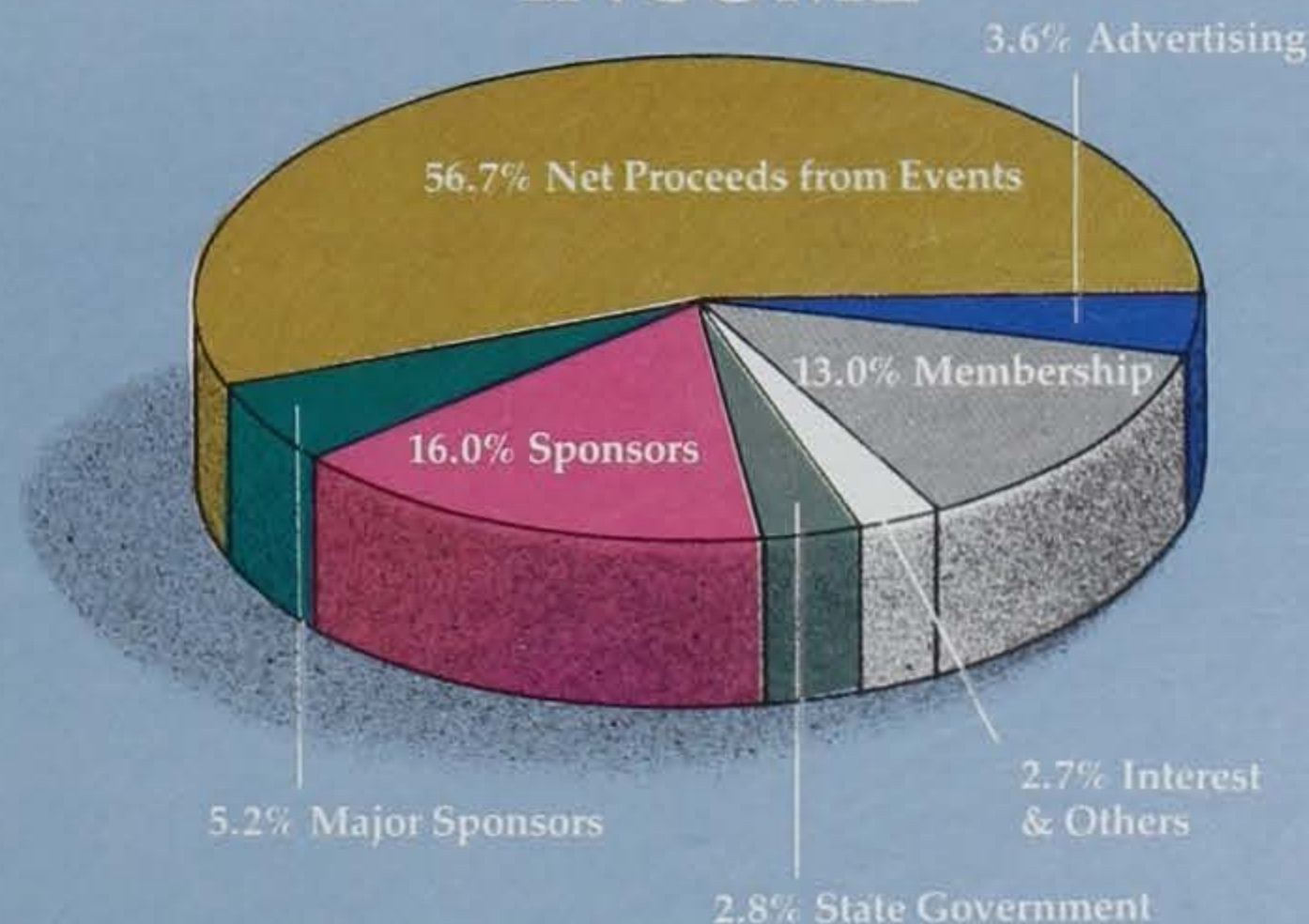
*Lowell Washburn is an information specialist located at Clear Lake. He has been with the department since 1984.*

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## WHERE YOUR DU DOLLAR GOES



## SOURCES OF DU INCOME







## A Holiday of Gifts

To make your holiday shopping easier this year, the Iowa Department of Natural Resources is offering the above items for wildlife and outdoor enthusiasts. To order, fill out the attached order form blank, enclose appropriate remittance and mail to:

**Iowa Department of Natural Resources  
Wallace State Office Building  
Des Moines, IA 50319-0034**

Order early. Some quantities are limited. Additional order forms may be requested from the above address.

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# A Holiday of Gifts

	Quantity	Cost
1. <b>OVERLOOKED BACKYARD BIRDS</b> — Make tax deductible donation of \$5 or more to the Chickadee Checkoff to be used to support nongame wildlife.	_____	_____
2. <b>1987 Nongame Support Certificate</b> — River otter; image 5 3/4" x 7 1/4", 5,000 limited edition numbered; available until March 31, 1988; \$5.	_____	_____
3. <b>1988 Iowa CONSERVATIONIST Calendar</b> — (1987 shown) 12-month, full-color photos of Iowa's native wildlife and colorful outdoors; \$2.	_____	_____
4. <b>Iowa Fish and Fishing</b> — 1987 edition; James Mayhew, Editor; 323 pages; color plates by Maynard Reece; hard bound; \$15.	_____	_____
5. <b>The Ring-necked Pheasant In Iowa</b> — Allen L. Farris, editor; 147 pages; color photos; hard bound; \$5.	_____	_____
6. <b>Waterfowl In Iowa</b> — Jack W. Musgrove, editor; 130 pages; color plates by Maynard Reece; hard bound; \$3.	_____	_____
7. <b>Iowa CONSERVATIONIST</b> — 12 issues per year; one-year subscription, \$6; three-year subscription, \$12 (include address(es) of subscription recipient(s) on separate sheet).	_____	_____
8. <b>1988 State Park User Annual Permit</b> (1987 shown) — \$5.50.	_____	_____
9. <b>1987 Stamps</b> (shown)		
Waterfowl (Duck) Stamp — \$5	_____	_____
Habitat Stamp — \$3	_____	_____
Trout Stamp — \$8	_____	_____
Complete Set — \$16	_____	_____
(also available at county recorders and sports shops)		
<b>1988 Stamps</b>		
Waterfowl (Duck) Stamp — \$5	_____	_____
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Trout Stamp — \$8	_____	_____
Complete Set — \$16	_____	_____
(also available at county recorders and sports shops)		
10. <b>1987 Licenses</b>		
Resident Hunting — \$8.50	_____	_____
Resident Fishing — \$8.50	_____	_____
Resident Combination — \$15.50	_____	_____
Resident Fur Harvester under 16 — \$2.50	_____	_____
Resident Fur Harvester 16 and older — \$15.50	_____	_____
(Due to personal information required, please buy licenses from local county recorders or sports shops. If you check here, we'll send you a special envelope to use in giving a license. _____)		
<b>Suggested Packages:</b>		
<b>The Complete Hunter</b> — Receive item numbers 3, 5, 6, 7 (one year) and 9 (1988 Waterfowl and Habitat Stamps) — \$24	_____	_____
<b>The Complete Angler</b> — Receive item numbers 3, 4, 7 (one year), 8 and 9 (1988 Trout Stamp) — \$36.50	_____	_____
<b>The Outdoor Enthusiast</b> — Receive item numbers 1, 2, 3, 7 (one year) and 8 — \$23.50	_____	_____
<b>Total Cost</b>	=====	=====

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EXAMPLE OF ST. PETERS SANDSTONE.

The colored sands are a source of material for an art form known as sand painting. Local artists pack the

Ken Formanek

## Item

By Jim Farnsworth

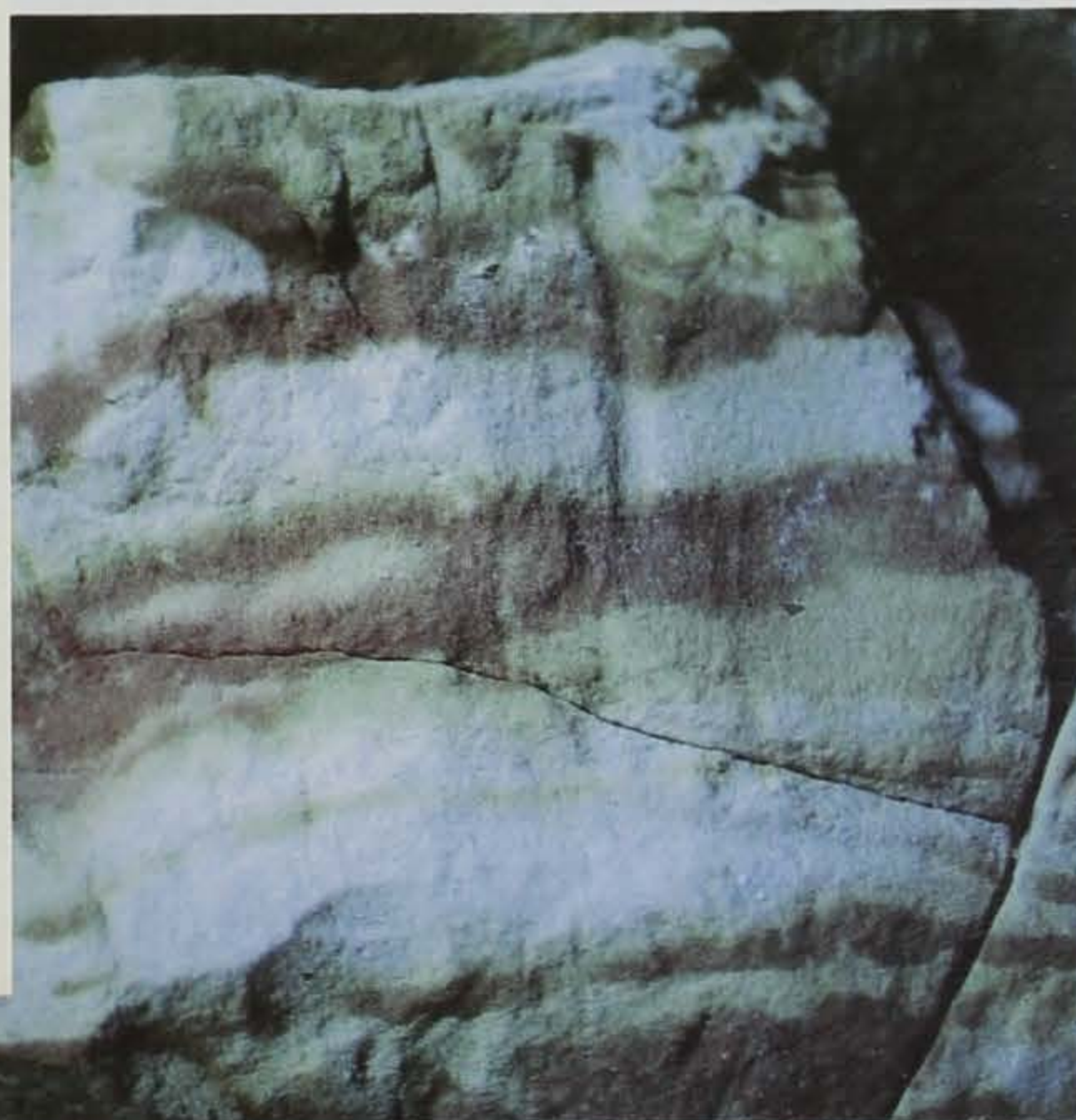
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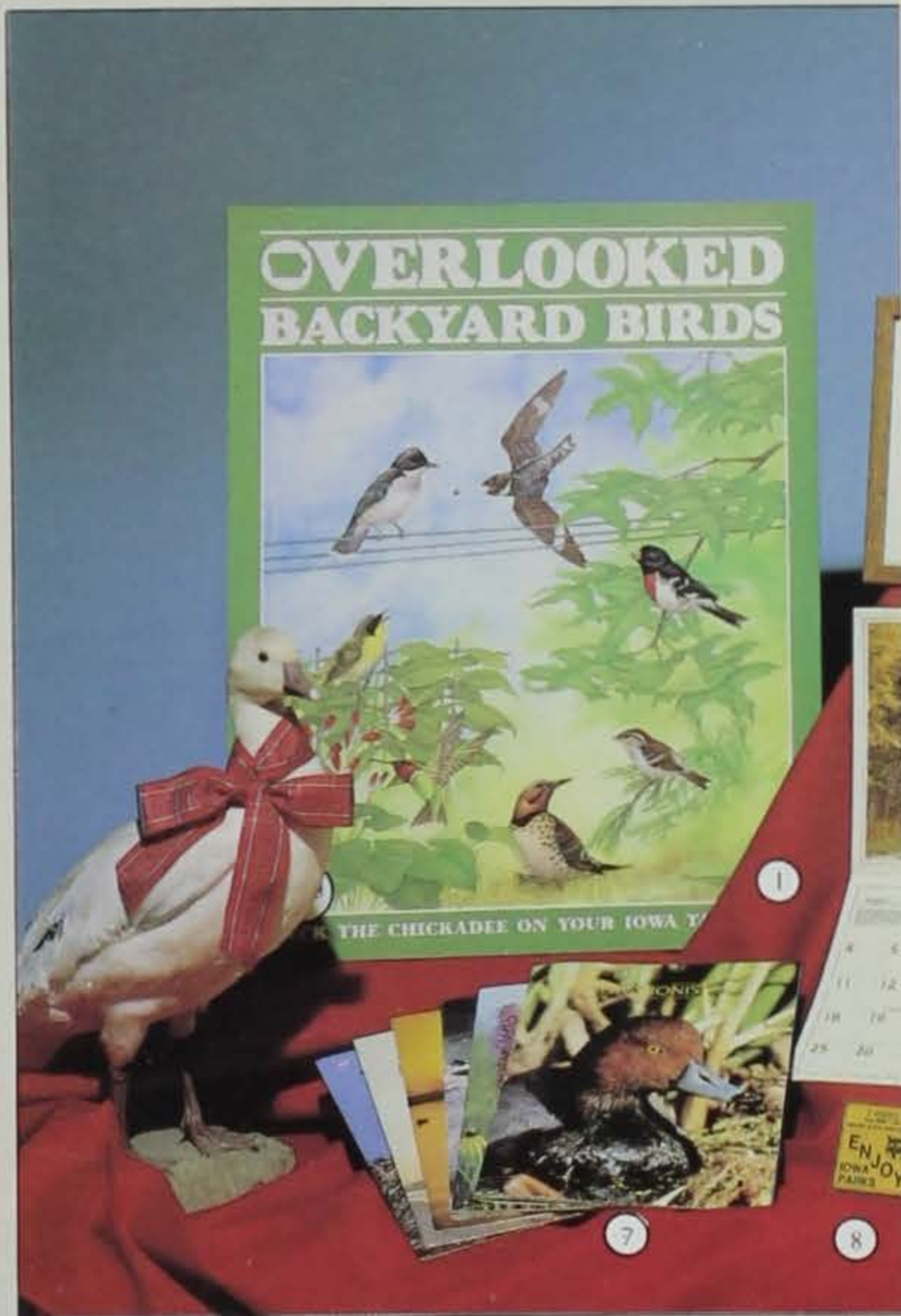
limestone beds. Some of the beds are eroded away but the more resistant beds form the overhang of the 10-foot waterfall.

Another geologic feature of the area is the fractured limestone or Karst topography. The cracks or fractures in the limestone bedrock give rise to water infiltration. The water, charged with tannic acids from decaying vegetation, dissolves the calcium carbonate that makes up limestone. Over time, the cracks enlarge to form caverns. In places, portions of the cave ceiling may collapse creating sinkholes on the surface. Sinkholes provide a drainage basin for excess water but in doing so, they allow access to groundwater sources and provide a direct route for surface contaminants such as pesticides and fertilizers which can pollute drinking water and require new deeper wells to provide safe water.

Colorful sandstone found in Pikes Peak State Park and the







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# PIKES PEAK

## *An Iowa Gem*

By Jim Farnsworth

### GEOLOGY

Pikes Peak State Park, "the Peak" as the locals call it, encompasses 960 acres of steep hills and valleys in northeast Iowa, along the Mississippi River bluffs just south of McGregor.

Pikes Peak lies in northeast Iowa's Paleozoic Plateau, a region which escaped the more recent glaciations which flattened and molded much of the state. The term "Paleozoic Plateau" is derived from the Paleozoic rock which influences the landscape. The bedrock has been lifted, tilted in a northeast/southwest direction, and exposed to weathering longer than in any other part of the state. Although the plateau was not directly contacted by the Pleistocene glaciers, it nevertheless was greatly influenced by their existence. That great influence manifested itself in the form of the Mississippi River. Carrying huge loads of melt water, sand, gravel and silt, the great river scoured out a valley that, at times was as much as 150 feet lower than its present 485 feet below the main overlook at the Peak.

Northeast Iowa is a geologist's dream. Nowhere else in the state can the succession of geologic events leading to the present be more easily viewed than along the valleys, bluffs and road cuts of northeast Iowa. Pikes Peak is an area particularly rich with the rock exposures. The oldest rock unit exposed in the park is the Jordan sandstone, over 500 million years old. The most famous is the St. Peter sandstone. The St. Peter sandstone is a richly colored formation with variations of red, orange and purple sands coarsing through a mostly buff-colored matrix. Many people make the hike down the steep and narrow trail of the park just to see the colors of Sand Cave — a good example of St. Peter's sandstone.

The colored sands are a source of material for an art form known as sand painting. Local artists pack the

sand into glass containers and using the different colors 'paint' pictures of a variety of subjects on the inner sides of the container. The detail obtained in these creations is hard to imagine. Examples of this art can be seen in McGregor at the historical museum. Collecting sand is not permitted in the park.

On the way to Sand Cave visitors pass underneath Bridal Veil Falls, a feature that also owes its existence to the area's geology. As the water courses down the little valley towards Sand Cave and the Mississippi, it encounters a variety of substrates. Some erode more easily than others. The rock units of the Decorah formation present a substrate that is relatively impermeable to ground water percolation, giving rise to seeps along the trail. Below the Decorah formation is the Platteville formation which consists of irregular

limestone beds. Some of the beds are eroded away but the more resistant beds form the overhang of the 10-foot waterfall.

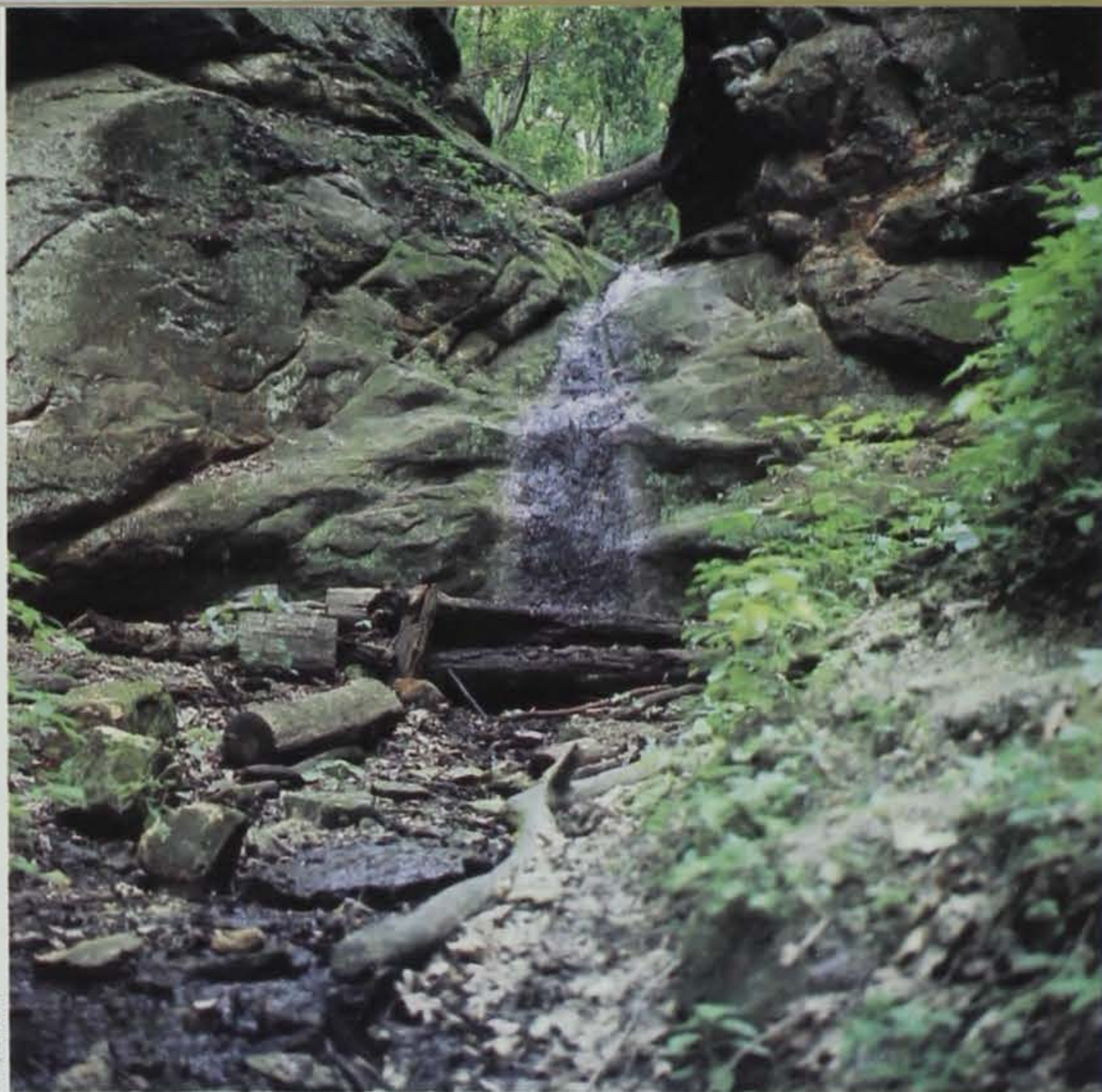
Another geologic feature of the area is the fractured limestone or Karst topography. The cracks or fractures in the limestone bedrock give rise to water infiltration. The water, charged with tannic acids from decaying vegetation, dissolves the calcium carbonate that makes up limestone. Over time, the cracks enlarge to form caverns. In places, portions of the cave ceiling may collapse creating sinkholes on the surface. Sinkholes provide a drainage basin for excess water but in doing so, they allow access to groundwater sources and provide a direct route for surface contaminants such as pesticides and fertilizers which can pollute drinking water and require new deeper wells to provide safe water.

*An example of the colorful sandstone found in Pikes Peak State Park and the surrounding area.*



Ken Formanek





Jerry Leonard

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*Pikes Peak offers a rich historical background, a spectacular view of the Mississippi River valley and beautiful geological features, along with upgraded state park facilities.*

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## HISTORY

Pikes Peak is rich in the history of mankind as well as geologic history. Native Americans long inhabited the land. Members of the Woodland Culture (900-1200 A.D.) constructed mounds of earth for ceremonial purposes to show their appreciation for the lands' abundance. Some of these mounds are simple conical mounds while others are in the shape of birds, bears or other creatures. These are called effigy mounds. The mounds at the park are, for the most part, accessible only on the foot trails winding through the park's hills and valleys. However, several conical mounds and a bear effigy are located in the picnic area. For a better understanding of the mounds and their importance, one should visit Effigy Mounds National monument just seven miles north of the Peak on Iowa Highway 76.

The first Europeans known to view the park area were Marquette and Joliet. Canoeing down the Wisconsin River, they came to its confluence with the Mississippi just below Pikes Peak on a June day in 1673. Early explorers, trappers settlers and Native Americans used the river as a

"highway" of transportation and commerce.

In 1806, Zebulon Pike, looking for sites for military posts, chose the Peak because it offered a commanding view of the valley. But the logistical problems of getting men and supplies up the bluff caused the military post, Fort Crawford, to ultimately be situated in Prairie du Chien, Wisconsin.

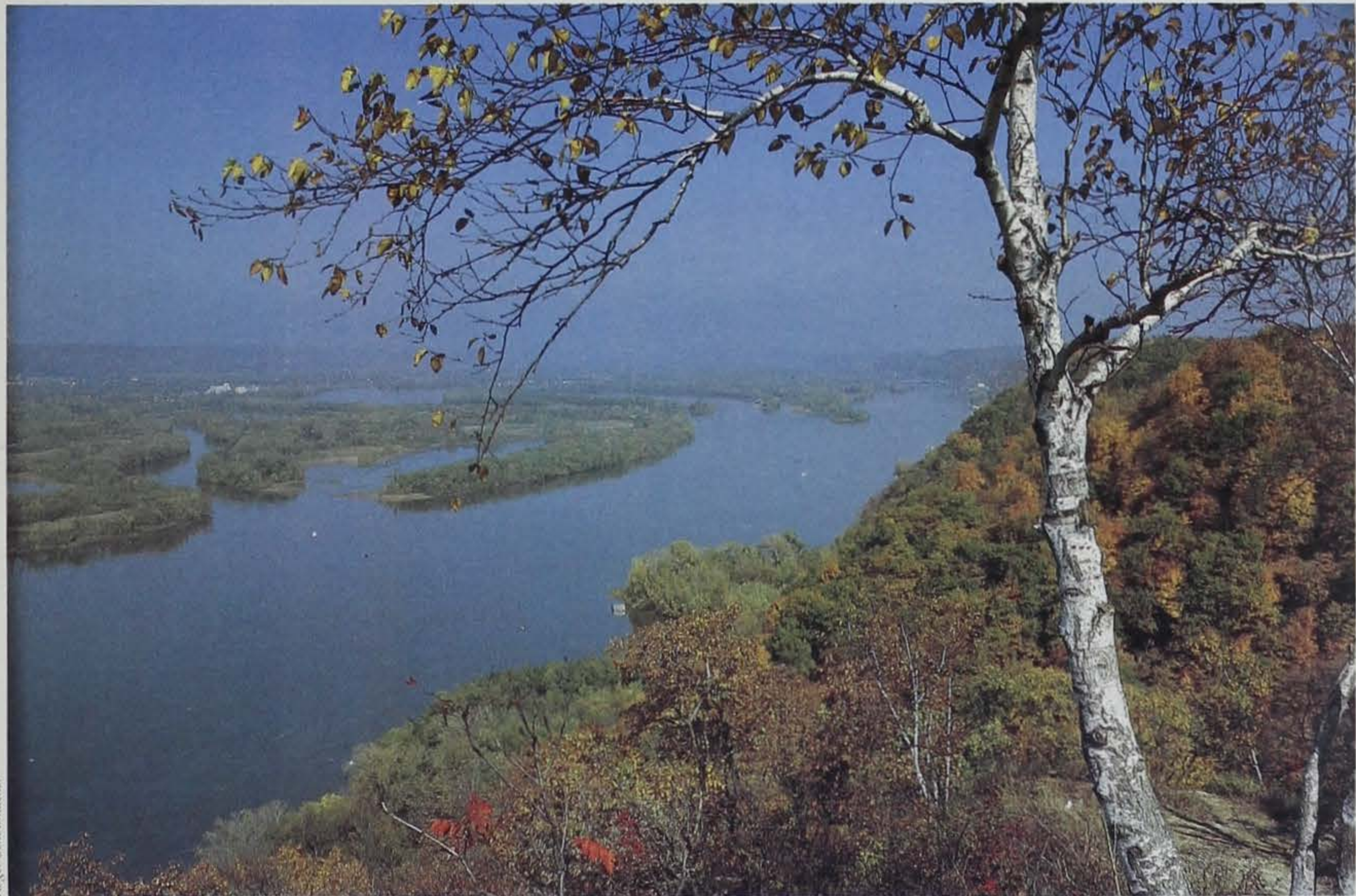
In 1837, Alexander McGregor purchased a portion of the Giard Tract from the heirs of Basil Giard who held an original land grant from Spain. McGregor established a ferry from Prairie du Chien to the west bank of the Mississippi. The ferry flourished as well as "McGregor's Landing." It was a natural avenue up the narrow coulee to the ever-expanding western frontier. McGregor's Landing soon became McGregor, one of the busiest towns west of Chicago. As the west expanded, so did McGregor. Sawmills, grain terminals, wagon makers, hotels, rail yards, river ports, ice companies and firewood operations for the trains and river boats all appeared. All this was crammed into the two narrow coulees of McGregor and North McGregor, now Marquette.

Through all the expansion, small portions of the area were saved from development. They were reserved for picnic and hiking grounds. In 1928, the Munns, descendants of Alexander McGregor, gave Point Ann and Pikes Peak, the hiking and picnic areas, along with other holdings around McGregor, to the federal government. They were to be used for parks and no fees were to be charged to enter them. In 1935, the federal government gave these lands



Jerry Leonard





Roger Schumacher

to the State of Iowa and they were incorporated into Iowa's fledgling state park system.

Development of the parks took place under the Civilian Conservation Corps. The shelter and restroom at Pikes Peak were completed in 1937, along with a trail system at Pikes Peak and Point Ann.

In the mid-sixties land was purchased to connect the two parcels of land, Point Ann lying northern most on the south edge of McGregor and Pikes Peak about a mile further down stream. Foot trails were constructed along the contour to connect the two areas.

For several years major development at Pikes Peak came to a standstill only to regain momentum in the recent years. In 1985 the parking lot and the sidewalk system were remodeled and the camp area roads were resurfaced. Scheduled in 1988 and funded by lottery monies are plans for a new shower and restroom for the camp area and a new modern restroom at the picnic area. Also scheduled are a continuation of the

sidewalk system, two overlook structures and the badly needed reconstruction of the Sand Cave/Pictured Rocks trail system.

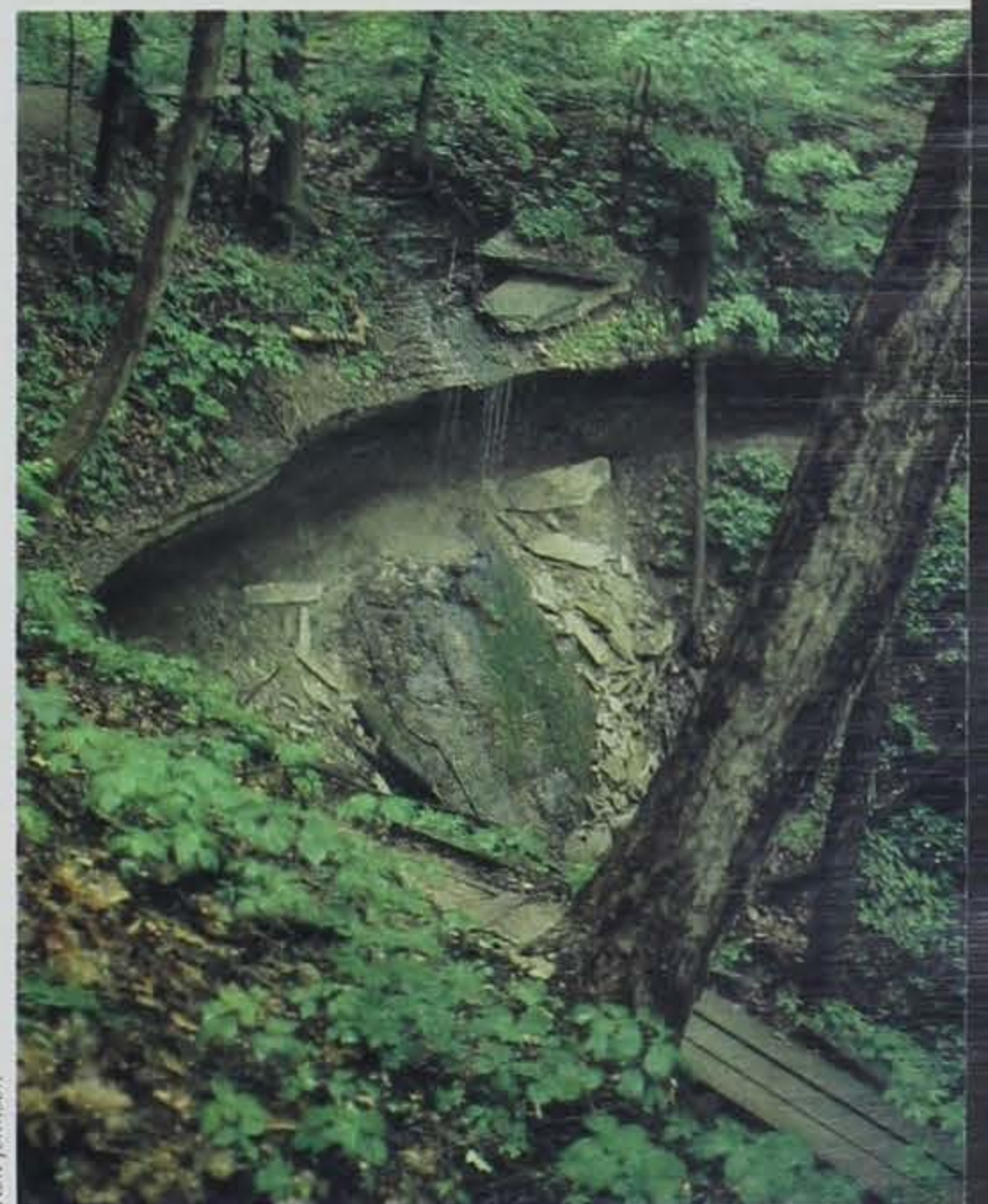
Currently, Pikes Peak offers a rich historical background, a spectacular view of the Mississippi River valley, scenic picnicking, a campground with a shower and restroom, an enclosed shelter with fireplace and a park store offering snacks and souvenirs. Because of the stipulations attached to the original acquisition of the park lands, Pikes Peak visitors are not required to have a state park user permit.

Reading about Pikes Peak is one thing, but experiencing the area is another. You've got to stand on the bluff at Pikes Peak and look down on the Father of Waters to get the full impact of the Iowa gem.

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*Jim Farnsworth is the park ranger at Pikes Peak State Park. He holds a B.S. degree in fisheries and wildlife biology from Iowa State University and has been with the department since 1972.*

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Ron Johnson

*Pikes Peak visitors walking the Sand Cave Trail pass underneath Bridal Veil Falls, a feature that owes itself to the area's geology.*



