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Iowa CONSERVATIONIST



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Iowa CONSERVATIONIST

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Cross-country skiing at Yellow River
State Forest, Allamakee County
Photo by Ron Johnson

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From the Director's Desk

Looking Back —

By Larry Wilson
Director

Today's cliché of where does the time go when you're having fun applies to my past year as director of the Iowa Conservation Commission. It has been challenging, exciting, stimulating, frustrating at times, overwhelming on occasions, but always rewarding.

About one month before I moved from Utah to Iowa, I was visiting with a friend about changes in our careers. He was moving to Salt Lake City, I to Iowa. His wife, rather sympathetically, commented she would rather go to Salt Lake City. Another wag exclaimed to me he could stand on a tuna fish can in Des Moines and view the entire state from such a lofty perch. But I set them straight, expounding on the rich beauty of Iowa's hills, fields, waters, and woodlands, comparable to any scenic wonderland in America. The lack of rugged, massive mountain ranges is more than made up for by the lushness of our countryside. The open space and vastness of the west is replaced by great expanses of farmland with sporadic refuges of wildlands and woodlands for people and wildlife.

I have found strong support throughout Iowa, not only for me as the new director, but for the mission of the Conservation Commission. Constructive criticism has been offered and received, but so have acts and words of kindness and encouragement. Most Iowans understand the need for conservation and management of the land, water and wildlife, but are frustrated at times by conflicts that exist with other uses of these resources.

It is necessary for all of us to pause

occasionally and reflect on the accomplishments of our goals. Looking at the past year, several changes have occurred in our agency. Our communications with the public have improved by an organizational change which more clearly defines and assigns this responsibility. Placement of key people in important positions has improved the performance of our public relations efforts. The Conservation Commission provides many services to the public, as well as recreational opportunities, and these should be made known to Iowans. Increased understanding of the Commission through the media is important and will be a continuing goal of the agency. More participation by our field people with local interest groups has been requested. Highlighting positive actions and programs of the Commission has been stressed. We have many successful programs in the agency, and we should look at those with pride. Good communication and public relations is very important in all of our employee's work and association with the public. Positive action and attitude is highly encouraged.

An important administrative change which occurred in July of this year, put all law enforcement officers into one unit of the Fish and Wildlife Division. At full strength, 81 officers will now be in the field, enforcing all of Iowa's hunting, fishing, and water safety regulations. This action puts those officers in the field performing a broader range of duties.

Additionally, all campground and recreation areas are now placed entirely within the Parks Section. Several of these

And Ahead

Larry Wilson has served as director of the Iowa Conservation Commission since January 1981.



areas were managed by other sections, but are now administered by park personnel. While budget reductions have caused some maintenance problems in our parks, these areas will be more regularly cared for, and where necessary, staffed by park employees. Other areas, primarily dedicated to fish and wildlife, remain under the Fish and Wildlife Division, and forests under the Forestry Section.

It is one of my goals to more clearly define the purpose of the various sections within the Commission. In those instances where I felt improvement could be made by reassigning facilities, personnel, and responsibility into more logical units of the Commission, such changes were made. The objective is to make the agency more effective and efficient, placing duty and responsibility with the proper authority.

In years ahead, the demands on Iowa's natural resources will increase. Use of parks and recreation areas will grow, as will the number of outdoor users. And, no longer can we only consider the hunter, trapper, fisherman, and camper. Joining those groups is an ever-increasing number of nonconsumptive users, such as the bird watcher, photographer, botanist, hiker, and those with just a desire to communicate with nature. All of these are legitimate uses of the outdoors, and must be considered in our planning.

The Conservation Commission has begun the identification of what future needs are and will be for the outdoor enthusiast. In a state where less than 1%

of the total land area is publicly owned, it is critical that the outdoor resource be put to the best possible use. We cannot establish a habit of managing park lands, forests, and wildlife on a year-to-year basis. Determining the needs for the future is an important task for our agency.

To achieve some of the long-range goals, there is action to be considered now. For example, the Commission is strongly supporting legislation this year, including bills on the Nongame Tax Checkoff, Hunter Safety, Catfish, and Recreational Boating. These four bills are top priority to the Commission and fit into our agency objectives. The Nongame Tax Checkoff for example, would provide funds on a voluntary basis from the taxpayer to provide studies, management, and development of habitats for nongame wildlife. Urban wildlife habitat can be developed which will add hours of pleasure to city dwellers by attracting birds and small mammals to their backyards. The Hunter Safety Bill is an effort to provide safety and ethics training to young hunters. Individual ethics, respect for others, and property as well as safe gun handling would be taught. The Catfish Bill applies only to the Missouri and Mississippi rivers and would restrict harvest of the small fish, thereby allowing more catfish to spawn and build their population. Long-term harvest data from the Mississippi River documents a gradual decrease in annual harvest of this important fishing resource. The Boating Bill would add immeasurably to boating safety throughout the state.

Development of better public relations skills for all of us will be a priority item in the year ahead. Such efforts need to be made occasionally. Our endeavors at times in the Commission can be very frustrating, and at times thankless; but nevertheless, our position requires we act in a positive, professional manner. We will improve our public relations training with our employees to make their work with the public more comfortable and effective.

Donations of woodlands, prairies, and wildlands of all sorts have been made to the Conservation Commission in the past. We are developing a program to work harder in encouraging Iowans to consider donations, either to the State Conservation Commission, State Preserves Board, County Conservation Boards or to private foundations as a way to preserve unique or wild Iowa lands for the future. Such contributions are a fitting memorial to those who possessed deep interest in and love for the land.

Wildlife and other natural resource features have a permanent place in our culture. We will develop programs to enhance the aesthetic and recreational value of fish, wildlife and wildlands, and seek ways to ensure the wise use of these native resources. Public understanding of these programs will be sought in the coming months. No major conservation management program can succeed without the public behind it. The goals of this agency need the support of all Iowans who appreciate, use, and enjoy the outdoors.



WETLAND

By Lonnie L. Williamson
Wildlife Management Institute

Artwork By
Patrick Costello,
Maquoketa, Iowa

PROGRAMS IN TROUBLE

The nation's wetland protection effort is in serious trouble, according to the Wildlife Management Institute. Unless some significant changes in laws, policies and attitudes are made, there is no future for a large portion of wildlife that depend on wetlands. Many of the waterfowl, shorebirds, songbirds and other animals enjoyed by millions of people will disappear.

The federal government has been acquiring migratory bird habitat for nearly 80 years, beginning with a 1903 executive order that established the Pelican Island National Wildlife Refuge in Florida. Federal wetland protection became especially relevant in 1916 when the U.S. Government assumed management responsibility from the states for migratory birds under a treaty with Great Britain.

Federal wetland protection has become politically unpopular in recent years. It remains, however, a valuable alternative for preserving a part of the wetlands so vital to many kinds of wildlife.

Consider the fact that half of the prairie potholes (the nation's most productive waterfowl nesting sites) in the northcentral states had been drained by 1950. Of the pothole acreage existing in 1964, 10 percent was drained in North Dakota by 1974. During that same 10-year period, four percent was drained in South Dakota and 24 percent in Minnesota. Those rates probably persist.

In the Mississippi Delta, a key wintering area for waterfowl and other migratory birds, losses of bottomland hardwoods are occurring at tremendously high rates. Of the original 24 million acres, 48 percent remained in 1950 and only 31 percent by 1969. Today, those habitats are being lost at the alarming rate of 200,000 acres annually. Within the decade, all but about 2.4 million acres (unsuitable for agriculture) are expected

to disappear.

Wetland acquisition began on a regular basis following enactment of the Duck Stamp Act in 1934. It was targeted in 1958 when Congress amended the Act to authorize the U.S. Fish and Wildlife Service (FWS) to acquire small wetlands for waterfowl production. Little was accomplished with that authorization, however, until Congress approved the Accelerated Wetlands Program in 1961. That legislation made available a \$105 million interest-free loan to be used over a seven-year period to acquire small wetlands. Monies appropriated from the loan have been added to the duck stamp receipts and deposited in the Migratory Bird Conservation Fund which is the kitty from which FWS draws funds for wetland acquisition.

The loan program has been extended twice. The 1976 extension, which expires in 1983, authorized an additional \$95 million, bringing the loan up to \$200 million. When that authorization expires, the loan must be repaid by transferring three-fourths of the annual duck stamp receipts to the general treasury.

To retain a modicum of migratory bird production, FWS has established a goal of acquiring a total of 3.8 million acres of small wetlands by 1986. About 2 million acres have been acquired thus far.

Acquisition is not the only tool used to protect wetlands. In 1970, Congress passed the Water Bank Act. That statute authorized the U.S. Department of Agriculture (USDA) to pay landowners not to drain important wetlands. The annual payments are made under 10-year contracts. The original authorization of \$10 million per year was increased to \$30 million in 1980.

Another important program designed to protect wetlands is the so-called "404" Permit Program administered by the U. S. Army Corps of Engineers in consultation with the Environmental Protection

Agency (EPA). That effort, under the Clean Water Act, requires developers to get a Corps permit before dredging or filling wetland areas. EPA has veto power over the permits.

But FWS wetland acquisition, the Water Bank and the 404 Permit Program have been ambushed. The most striking attack on FWS wetland acquisition occurred in North Dakota in 1977. That state's governor, in an attempt to force federal support for an unpopular irrigation project, refused to approve fee purchases of wetlands and placed unacceptable restrictions on easement purchases. That action later became academic when the state legislature passed a law with further restrictions. Finally, in 1981 the state enacted a statute forbidding any federal land acquisition in the state. FWS was forced to shut down its acquisition program. The program remains grounded even though a U.S. District Court and a U.S. Appeals Court have ruled that the state's antiwetland laws are unconstitutional.

Similar state and county government opposition to wetland acquisition by the federal government is abundant in South Dakota, Nebraska, Oklahoma, Texas and probably other states. This is the case even though individual landowners continue to offer to sell their interest in wetlands. There are many more wetland easements available to buy than the FWS can afford.

One source of the growing opposition to wetland acquisition is the failure of the Administration and Congress to provide adequate "in lieu" of taxes payments to the counties in which acquired wetlands are located. In 1979, for example, South Dakota counties received only 76 percent of the in-lieu payments they should have under federal law. Because of the leaner 1982 budget, the counties will receive less than 25 percent of their in-lieu payments next year. South

“As for the 404 Permit Program, legislation appears regularly that would cripple that effort and open the door to a rash of unregulated dredge and fill operations in wetlands.”

Dakota's governor has asked FWS to stop purchasing wetlands until there is assurance of full in-lieu payments. That request was granted.

A distant bell seems to be tolling for FWS' small wetland program. On top of the other problems, Congress apparently will authorize only \$1.2 million of the accelerated loan funds next year to bolster the duck stamp receipts which will be about \$16 million. Furthermore, if the loan is not extended again or forgiven by 1983, 75 percent of the annual duck stamp income will be used to reimburse the treasury until the loan is repaid. That would leave only about \$4 million annually to go toward the purchase of the remaining 1.8 million acres of wetlands needed to reach the FWS goal. Under those circumstances, the Rocky Mountains would be worn flat before the goal was attained.

The Water Bank Program in USDA is in worse straits than the FWS wetland protection effort. The Administration and Congress are not recommending any money for Water Bank payments in 1982. And there is little hope for funding in the foreseeable future. Also, the Administration reportedly is trying to figure a way to skirt the law and renege on making annual payments due the landowners already under contract. That means that the money appropriated in past years to be paid out during the 10-year length of contracts signed in those years would be redirected to other purposes.

As for the 404 Permit Program, legislation appears regularly that would cripple that effort and open the door to a rash of unregulated dredge and fill operations in wetlands. The sponsors of that legislation want to eliminate the EPA's oversight responsibility for the program and redefine wetlands in a way that would allow many important wildlife areas to be destroyed.

For wildlife that depend on wetlands, the needs are clear. The FWS accelerated wetland program should be funded. It should be extended beyond 1983 or the indebtedness incurred should be forgiven so that all of the duck stamp money can go for acquisition instead of 75 percent being used to repay the loan. The price of the duck stamp should be increased also to generate more acquisition funds. And the opposition to acquisition among states and counties should be subdued by vigorous pursuit of court decisions, by legislation if necessary and by providing full payment of in-lieu taxes.

The Water Bank Program should be funded to the limit and USDA should

support the effort rather than trying to kill it. The Water Bank is no more or less a subsidy than numerous other agricultural programs, but it accomplishes a national purpose as well as an individual purpose.

The 404 Permit Program should remain intact. It should be supported and administered judiciously throughout the Corps. Many Corps offices handle the program professionally and effectively. Others do a poor job.

There is strong competition for the use of areas that now are wetlands. Wildlife has no say in the fracas. People who enjoy wildlife must labor in its stead.

What Wetland Program Cutbacks Mean to Iowans

Iowans would be seriously affected by the curtailment of federal wetland programs. The fact that much of the wetland habitat in Iowa as well as the entire continent has been lost emphasizes the tremendous need for protecting what remains.

The 404 permit procedure has saved countless acres of wetlands along Iowa streams including the Mississippi and Missouri Rivers. If developers are allowed to dredge and fill these riparian sloughs and backwaters, much of the state's remaining wetland habitat will be gone forever.

Iowa has just begun to receive direct benefits from the U.S. Fish and Wildlife Service Accelerated Wetlands Program. Under this program even some of the relatively small waterfowl production areas

still existing in northern Iowa qualified for federal funding. With the abolishment of the interest free loan, that program would be essentially dead and Iowa projects initially approved by the FWS for purchase would not be funded.

While not available to Iowa landowners the U.S. Department of Agriculture Water Bank Program is directly important to waterfowl enthusiasts. Many water oriented birds migrating through this state depend on important wetlands in Wisconsin, Minnesota, and the Dakotas. The elimination of payment to landowners will no doubt result in the draining of key production areas in these states. Add to that the loss of winter habitat protection and the prospects for preserving wetland resources important to Iowans look dim.



Photo by Tony Pitzen

MORE THAN MEETS THE EYE

By Larry Davis,
Information Specialist

It has been said that *"the roots of the present lie deep in the past, but the past is not dead to the person who would understand how the present came to be what it is"*. It's a rather complex statement, but with just a few moments of analysis, it becomes evident how well the words define our natural heritage and its importance to us. It is this importance that prompts the efforts of the Iowa Conservation Commission in its development of a statewide interpretive program...a program to help us better observe our natural outdoor environment and learn more from what we see.

Prior to World War II, many state parks had full-time naturalists and there was considerable activity taking place in developing interpretive programs. These naturalists were provided under a federal program, however, and with our nation's involvement in the Japanese and European conflicts, much of the federal program was curtailed. Since that time, except for

efforts made through the Commission's Conservation Education Center near Guthrie Center, and those of individuals at scattered county and state parks, there has not been a truly statewide interpretive program, even though the need has been fully recognized. To date, the state's efforts have been spotty and uncoordinated, although there are quite a few interpretive programs being carried out through a number of county conservation boards. Outstanding examples of formal interpretive facilities are at Cedar Rapids' Indian Creek Nature Center, a private facility, and the E. B. Lyons Preserve at Dubuque. Two current examples of Iowa Conservation Commission interpretive special events are the Fort Atkinson Rendezvous, an annual event which began in 1977, and the Forest Craft Festival held for the first time in 1981 at Lacey-Keosauqua State Park. The Rendezvous gains in popularity every year, and more and more people are becoming aware of the historical significance of this



Photo by Dale Brumm

state preserve in southwest Winneshiek County. At the Forest Craft Festival, which has been planned as an annual event, the public is becoming better aware of Iowa's timber and forest wildlife resource, how it is managed, and how wood products are processed.

The Commission's Parks Section is implementing and enhancing specific program efforts at a number of state parks and recreation areas. According to Jim Scheffler, Associate Superintendent of Parks, this is the first phase of an expanded sectional program that will be implemented despite current significant budget and staffing cutbacks. Considerable progress has been made, and hopefully much more will be done in the future.

Why is an interpretive program so important, and what is it expected to accomplish? The goal of the interpretive program, Scheffler points out, is to make park visitors more aware of the natural and historical features in Iowa parks. But in addition to making the public aware of what can be found in these park areas, and fostering a greater appreciation and understanding of what they see, Scheffler hopes that an interpretive program will encourage visitors to treat park areas with respect and help them understand park regulations. In this way, the program benefits both the public and the Commission's management of park areas.

There are many facets to an interpretive program and they are as varied as the character of the area with which they are concerned. Some rangers are developing trails; others are developing or showing on-site slide or movie presentations. The objective, of course, is to present information in an interesting and meaningful way that will help the visitor better understand the natural features of the area, and relate them to past history and the people and life of earlier times.

How is the program going? Much has been accomplished around the state and a number of projects are in progress. In the Clear Lake-Mason City area, a self-guided trail was completed in 1980 at McIntosh Woods State Park, and a trail for the handicapped awaits funding. At Stone Park, Sioux City, the

development of a self-guided interpretive trail, with an informative brochure, has been completed. Work has also been completed on self-guided trails at Walnut Woods State Park, Des Moines, as well as Lake Ahquabi near Indianola, and Waubonsie State Park in Fremont County.

At Lake Macbride State Park near Iowa City, a trail and an informative brochure are nearing completion, as is the trail at Bob White State Park in Wayne County. A physical fitness trail, being developed in cooperation with the YWCA, and a self-guided trail for Lake Keomah State Park near Oskaloosa, are both nearing completion.

An on-site program based upon history and archaeology of the area is in progress at Viking Lake State Park in Montgomery County. Progress is also being made at Ledges State Park, where refurbishing of a self-guided trail in the Lost Lake area is underway. Trail development is also underway at Palisades-Kepler State Park, near Cedar Rapids, and at George Wyth State Park near Waterloo.

The park ranger is conducting an on-site program at unique Maquoketa Caves State Park in Jackson County, and there is hope that more can be done in the future, depending on the implementation of a recent master plan. Such work would include the conversion of the old ranger residence to a visitor-interpretation center. Restoration of the C.C.C. amphitheater of bygone days at Pilot Knob State Park is nearing completion, to be used as an interpretive facility. Plans are complete for a major interpretive center at Ledges State Park near Boone. Construction and staffing of the facility will depend upon legislative funding.

Public response to program efforts thus far has been excellent, particularly at Lake Macbride and Black Hawk State Parks, where attendance has been very good at the campground movies. Rangers also report good levels of usage at several of the recently-completed interpretive trails. There are also outdoor theaters at Lake Manawa and Wilson Island, but a shortage of help has curtailed their use temporarily.



Photo by Jim Scheffler

An example of how visitors can learn from these interpretive programs is found in the self-guided interpretive trail at Waubonsie State Park. There, a stroll along Sunset Ridge Trail offers an opportunity to escape the hectic pace of today's concrete and plastic world and retreat into the picturesque splendor of western Iowa's unique loess hills. Numbered stations along the marked mile-long trail provide information concerning points of interest.

At the first stop on the trail, the hiker learns that the Eastern Hophornbeam is an "ironwood" tree usually found growing on dry slopes, and that although it has little commercial value, the wood is very hard and makes excellent firewood. At succeeding stops along the way, much can be learned about other wood and plant species of the area. Many species of wildlife and birds can be observed, and near the end of the trail, the visitor learns that a cottonwood tree once struck by lightning has quickly responded by isolating and surrounding the damaged portion of the trunk with a ridge of healthy wood tissue. The trail ends with an explanation of how the loess hills, a truly unique landform, were developed as the Pleistocene glaciers melted about 14,000 to 16,000 years ago, and that only in China does a similar landscape exist. Memorable, indeed, is the last station of the trail with its scenic overlook of Nebraska, Missouri, Kansas, and of course, Iowa.

"We're making the park visitor more aware of the natural and historical features in our parks," Jim Scheffler concludes, "from types of trees, to soil types, to the effects of man on the environment." He notes that a 1981 survey of states showed that the great majority of them have full-time and seasonal staffs who are involved in interpretive efforts. Scheffler hopes that Iowa, too, will be able to secure at some future time a full-time and seasonal staff, so that our statewide program can really get off the ground. In the meantime, the Commission will continue to expand as far as staff and budget constraints will allow, and welcomes the public's use and support.

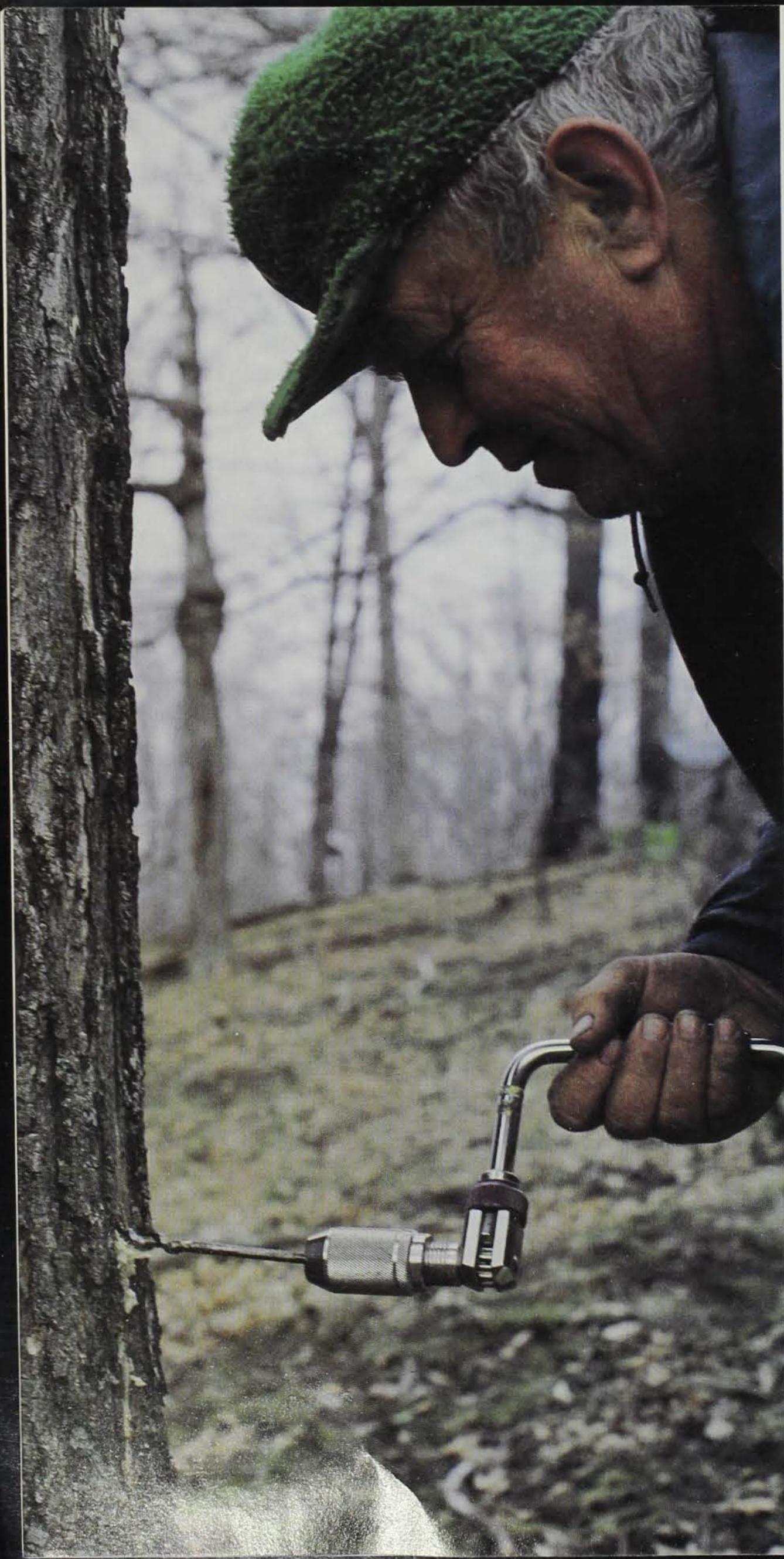
Efforts so far, while only the beginning of a planned Commission statewide interpretive program, clearly indicate the vast amount of knowledge Iowans can gain about our natural heritage. It's the kind of knowledge that proves that "the roots of the present lie deep in the past".

With the development of a statewide interpretive program, park visitors will be learning more from what they see, because, indeed, in our natural outdoor environment, there is "more than meets the eye".

Larry Davis is an information specialist in the Information and Education Section. He works with various audio-visual projects for the Commission. He has been employed with the Commission since 1973.

WINTER RECREATION IN IOWA PARKS AND FORESTS

AREA	COUNTY LOCATION								
		DESIGNATED SNOWMOBILE ROUTE	ICE SKATING	FISHING	SLED COASTING	ICE-BOATING	CAMPING	HUNTING	CROSS-COUNTRY SKIING
State Parks									
Backbone	Delaware	•	•	•	•	•	•	•	•
Badger Creek	Madison			•	•	•	•	•	•
Beeds Lake	Franklin	•	•	•	•	•	•	•	•
Bellevue	Jackson	•	•	•	•	•	•	•	•
Big Creek	Polk	•	•	•	•	•	•	•	•
Black Hawk Lake	Sac	•	•	•	•	•	•	•	•
Bob White	Wayne	•	•	•	•	•	•	•	•
Brushy Creek	Webster	•				•	•	•	•
Clear Lake	Cerro Gordo		•	•			•	•	
Dolliver Memorial	Webster	•		•	•			•	•
Echo Valley	Fayette								•
Elk Rock (Red Rock Reservoir)	Marion	•	•	•	•	•	•	•	•
Ft. Defiance	Emmet	•				•		•	•
Geode	Henry	•	•	•	•	•	•	•	•
George Wyth Memorial	Black Hawk	•	•	•			•	•	•
Green Valley	Union	•	•	•			•	•	•
Gull Point	Dickinson	•	•	•	•	•	•	•	
Honey Creek (Rathbun Resv.)	Appanoose	•	•	•	•	•	•	•	•
Lacey-Keosauqua	Van Buren	•	•	•	•		•	•	•
Lake Ahquabi	Warren	•	•	•	•	•	•	•	•
Lake Anita	Cass	•	•	•	•	•	•	•	•
Lake Darling	Washington	•	•	•	•	•	•	•	•
Lake Keomah	Mahaska	•	•	•	•	•	•	•	•
Lake Macbride	Johnson	•	•	•	•	•	•	•	•
Lake Manawa	Pottawattamie	•	•	•			•	•	
Lake of Three Fires	Taylor	•	•	•	•	•	•	•	•
Lake Wapello	Davis	•	•	•	•	•	•	•	•
Ledges	Boone	•				•		•	•
Lewis & Clark	Monona	•	•	•			•	•	
Maquoketa Caves	Jackson	•				•		•	
McIntosh Woods	Cerro Gordo	•	•	•			•	•	•
Nine Eagles	Decatur	•	•	•	•	•	•	•	•
Palisades-Kepler	Linn	•				•		•	•
Pammel	Madison	•				•		•	•
Pikes Peak	Clayton	•				•		•	•
Pilot Knob	Hancock	•	•			•		•	•
Pine Lake	Hardin	•	•	•	•	•	•	•	•
Pleasant Creek	Linn-Benton	•	•	•	•	•	•	•	•
Prairie Rose	Shelby	•	•	•	•	•	•	•	•
Red Haw Lake	Lucas	•	•	•	•	•	•	•	•
Rock Creek	Jasper	•	•	•	•	•	•	•	•
Springbrook	Guthrie	•	•	•	•	•	•	•	•
Stone	Woodbury	•				•		•	•
Union Grove	Tama	•	•	•	•	•	•	•	•
Viking Lake	Montgomery	•	•	•	•	•	•	•	•
Volga River	Fayette	•	•	•	•	•	•	•	•
Walnut Woods	Polk	•				•		•	
Wapsipinicon	Jones	•				•		•	•
Waubonsie	Fremont	•				•		•	•
Wildcat Den	Muscatine	•				•		•	•
Wilson Island	Pottawattamie	•						•	•
Forests									
Shimek	Lee-Van Buren	•	•	•	•			•	•
Stephens	Lucas-Mon.-Davis-Appan.	•	•	•	•			•	•
Yellow River	Allamakee	•				•		•	•



Pure Syrup SUGAR

The dairy farmer knows his most productive cow, perhaps calling her by name. One dairy farmer, Erwin Ruff, also knows his maple trees. He knows that his better producing, large crowned trees can yield forty gallons of sap each spring. Boiled down, this translates to one finished gallon of pure maple syrup, currently selling for twenty dollars. Over a fifty-year tapping life, an annual return of twenty dollars makes one good sugar maple tree more valuable than many of the walnut trees growing on Erwin's sixty-acre timber near McGregor in northeast Iowa.

Sap collection in Iowa begins in late February or early March. Ideal conditions exist when nighttime temperatures drop below freezing and daytime temperatures are mild. These conditions cause maximum sap flow from the roots. Prior to this time, though, Erwin has selected the trees to be tapped. His maple stand, or sugar bush operation as it is called, would be a thin stand of trees by intensive forestry standards. Only the most productive trees have been maintained. Competing oak and hickory have been removed, perhaps to fuel the fires that will boil the sap.

The Ruff sugar bush operation is a family affair. It began in the early 1960's when the family collected maple sap in three-pound coffee cans. Erwin now uses a few aluminum buckets, but he prefers to use five-gallon plastic pails fed by plastic tubing leading from spouts, or "spiles", into the pail. Erwin and his wife, Eileen, with the help of the entire family, monitor 250 taps in one hundred trees. These will normally produce 4,000 gallons of sap, yielding one hundred gallons of finished syrup (a 40:1 ratio). Their operation utilizes an efficient, commercial evaporator made of English tin. With its enclosed fire chamber and steam vents, this evaporator will consume only one cord of firewood in an entire sugaring season.

Photos by Bob Hibbs

from Iowa Maples

BUSH SEASON

By Bob Hibbs & Jerry Kemperman, District Foresters

The American Indian also knew of the sweet maple sap, but unlike the Ruffs, did not have the fortune of using modern equipment. Most likely, the Indians merely slashed through the bark to collect sap. Or perhaps they used crude stone drills to tap the trees. Hollow stems of sumac could have served as spiles as they did for pioneers, with the sap boiled down over open fires.

The same basic procedure can be followed by woodland owners today, providing labor, enjoyment, and perhaps some small monetary reward. To collect sap in the early spring, select sugar or black maple trees ten inches in diameter and larger. (Silver maple or boxelder, also

a maple species, can be tapped, though flavor might not be top quality.) Bore seven-sixteenth inch tap holes three inches deep, between two and five feet off the ground. Use one tap for ten- to fifteen-inch trees, two taps for sixteen- to twenty-inch trees, three for trees twenty-two to twenty-six inches, and not more than four taps in larger trees. Do not tap within six inches of last year's tap holes. Insert a spile and attach your collection bucket. The bucket should be covered to reduce contamination from rain, dirt, and insects. Use a clean wool or orlon cloth to filter the sap prior to boiling. Sap collection should end when tree buds begin to swell, causing syrup with a

"buddy" flavor. Sap should be boiled immediately after collection, or it should be stored cold to avoid microbial contamination. All equipment should be kept clean and sanitary throughout the entire process. One part of household bleach mixed with nine parts water can be used to sterilize equipment.

Boiling can be accomplished in a single kettle, multiple kettles (to maintain continuous production), a sorghum evaporator pan, or a commercial evaporator. Begin the boiling with two to three inches of sap in the kettle. Continue adding sap as water boils off. Maintain at least one inch of sap in the kettle at all times to avoid scorching

Photos by Bob Hibbs



Collection buckets should be covered to prevent contamination from rain, dirt, and insects. Below: The finished product, ready for sale.



your syrup. The syrup gets thicker and the boiling point rises as water evaporates from the sap. Standard density syrup results at a boiling point seven degrees Fahrenheit above the boiling point of water. Maple candies are made by boiling the sap to higher temperatures. Sap boiled twenty-two to forty degrees above the water boiling point will yield a thin, glassy, taffy-like candy when poured on ice or snow. Maple cream is made by boiling the sap twenty-two to twenty-four degrees above the water boiling point, then cooling it to fifty degrees Fahrenheit, and then blending it with a wooden spoon or low speed mixer. The boiling point for water should be checked daily, as climatic conditions can cause important differences. A candy thermometer is adequate for checking the boiling point and monitoring sap temperatures. Because of the excessive volumes of steam produced, boiling should not be attempted in the home! One exception is the finishing pan. After boiling the sap to five degrees above the water boiling point, the syrup can be poured into a finishing pan and finished on an indoor range.

A final filtering of the boiled syrup will remove "sugar sand". Sugar sand consists mostly of calcium and magnesium

from the tree's sap. The syrup should be packaged hot — between 180 and 200 degrees Fahrenheit.

The woodland owner truly interested in maple syrup production might want to obtain Ag Handbook #134, Maple Syrup Producer's Manual, U.S. Government Printing Office, Washington, D.C. 20402, (\$2.50). Reynolds Sugar Bush of Aniwa, Wisconsin, 54408, is one supplier of maple syrup equipment. A syrup producer interested in selling his product should review State Department of Agriculture regulations pertaining to food products.

Like Erwin Ruff in northeast Iowa, any woodland owner with a few hard maple trees can collect and process his own syrup. The drilling, of course, will reduce the tree's sawlog quality, but it should not kill the tree. Tap holes cease bleeding on their own, and will heal completely in two growing seasons. From his twenty years in the sugar bush business, Erwin cannot recall one of his maple trees having died. And the family operation has produced a togetherness and an appreciation for nature that city living cannot match. As Erwin noted, "Eileen and me build bluebird houses while the sap's boilin'." What better way to enjoy an early spring day!

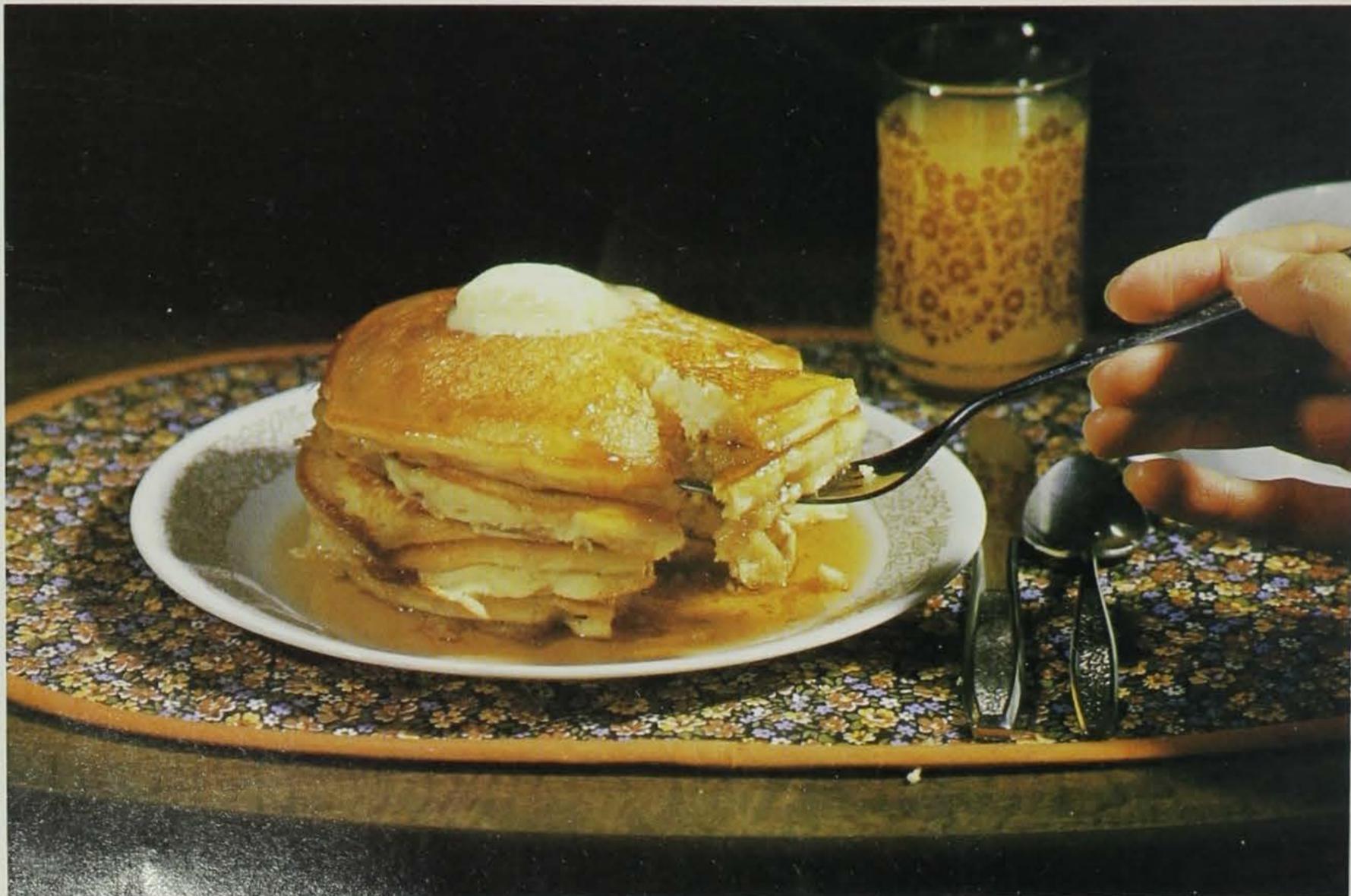
Bob Hibbs has been employed as a district forester for the Commission since 1970. Currently he is the district forester for a nine-county area with his headquarters located in Marshalltown.

Jerry Kemperman is the district forester for a four-county area in northeast Iowa with his headquarters at Elkader. He has been with the Commission since 1977.



Wood is the most popular fuel, although bottled gas or fuel oil is occasionally used.

Photo by Ken Formanek



Saturday morning finally arrives. This is the day you promised to take the family out to the state park for some fishing and a picnic. Having finally packed everything into the old wagon, you drive out to the park and enter the gate down by the lake. You spot the "Fishing Center" sign and pull into the parking lot, slip your computer card-fishing license into the fishing center data machine and it speaks back to you.

"Thank you for coming to Swede's Point State Park. We hope you enjoy your visit and have good luck fishing."

"Yesterday anglers were catching good numbers of crappies in the brush off the north point. Several nice bass were taken with spinners in the weeds on the south end and catfishing was fair to good on cheese bait along the dam."

"Today's limits are 3 largemouth bass, 75 bluegill, 35 crappie, and 10 channel catfish."

"Please remember that there is a 14-inch length limit on bass in this lake, and if you catch any catfish with tags on them, please leave the tags in the box here as you leave."

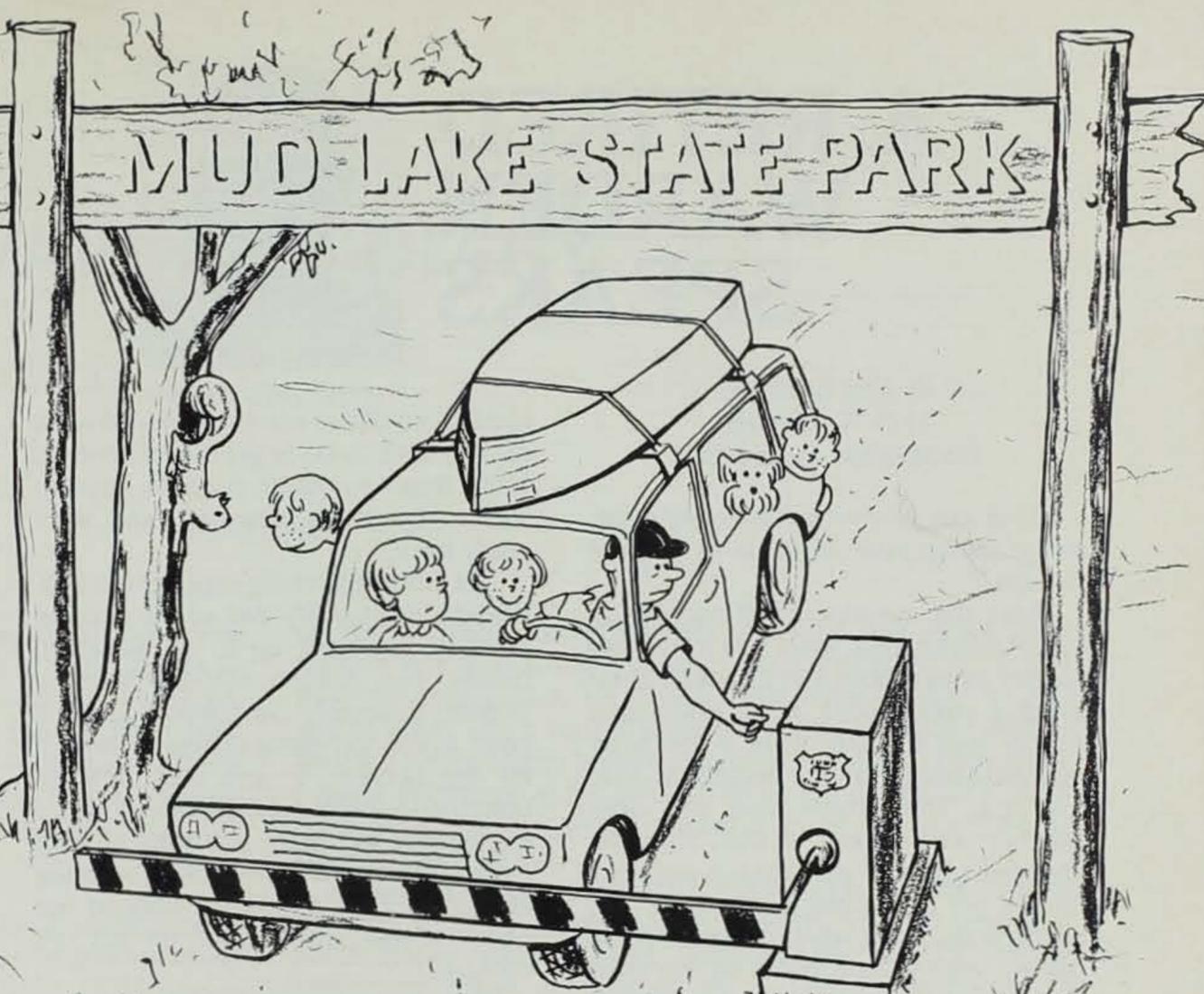
"Thank you and have a good day fishing."

Does this sound a little far-fetched? Perhaps for now it is, but let's examine the possibilities.

In this age of computer technology it seems only logical that sooner or later computers will have a great influence on fishing. They are already involved indirectly with fishing since much fisheries data collected by biologists are analyzed with the aid of computers.

However, the analytical use of computers only partially exploits their full potential. Consider for a moment the practical applications possible.

Someday there could be a computer terminal/information center at the main entrance of each lake in the state. Any fisherman who requests information such as limits, hotspots, or any special regulations would first have to insert their combination fishing license/magnetized computer activator card into the terminal. This network of terminals would be connected to a central programming center by phone lines. All general information which applies to all lakes and all fishermen would be programmed from this center.



FISHING IN THE COMPUTER AGE

by Dale Anderson

FISHERIES RESEARCH TECHNICIAN

In addition, specific information about individual lakes would be relayed to that lake's terminal. This would allow biologists to custom tailor the harvest of a particular lake to allow for maximum harvest possible without harming the resource. As an example, if a lake had a large population of crappies, the limit could be set at say 100 per day or even no limit on numbers taken in that lake. Another lake nearby may have only a few more crappies than are necessary to sustain the population so the limit could be set at 3 or 4 per day.

Although it might sound like many restrictions are being placed on the fisherman, he will also reap many benefits from this system. The computer terminal could be set up so that the local park officer or fisheries biologist could program information concerning location of fish attractors, fishing hotspots, locally productive methods of catching fish and past catch information. This would all

help fishermen in locating and catching available fish in the lake.

A system like this could allow the angler to assist biologists by providing catch data at the end of a fishing trip. The terminal could provide a method of feedback where the angler could first insert the magnetized combination computer activator card/fishing license, then enter any catch data which the biologist requests of them. This would also allow fishermen to report any tagged or otherwise marked fish.

As an added benefit, the computer terminal might provide the sportsman with a direct line to law enforcement officials so that fish and game violations could be reported.

As you can easily see, the coming of the computer age could very possibly affect the world of fishing — providing the best possible fishing for the sportsman as well as the most complete and up-to-date information for biologists.

A RETIRED WARDEN SPEAKS



By Rex Emerson
1115 N. 4th Ave.
Washington, Iowa 52353

"What was your most frightening experience during your 26 years as a game warden?"

That's the question most people ask since I retired. Well, there was the armed jewelry store robber that I tracked down along a stream bank while assisting a county sheriff. There were a few hairy moments before the guy decided to drop his gun. Then there was the deer poacher who jacked a shell into the chamber of his 12 ga. shotgun and said, "You're not taking me, or my deer." He changed his mind when he realized the officers were a little faster on the draw than he was. One night we had a search warrant for illegal furs. Two officers knocked at the violator's back door. He came slipping out the front door with a loaded shotgun. Fortunately, we had two officers at that door also. They disarmed the individual quickly, but not too gently.

I have had illegal fishermen swing boat oars and log chains. Some have grabbed axes, hatchets, machetes and hunting knives for the purpose of changing my physical appearance.

Those are just a few things that happened over the years. Officers wear sidearms so they will get old enough to retire. The officer doesn't have time to go back to the car to get a weapon.

Actually, none of the above was the most frightening. Oh, sure, there were some mighty ticklish moments on those cases. But, most people who, on the spur of the moment want to do great bodily

harm to an officer can be reasoned with. All you have to do is get their attention. Many times we knew it could develop into a dangerous situation, and were ready for it.

The most frightening experiences happened almost every day of the hunting seasons. You walk up to an untrained hunter and ask to see his hunting license. Invariably his loaded gun will point at you sometime during his search for the license. To see one of these untrained hunters get over a fence with a loaded gun will make you want to dive under your car. While checking a young hunter's license one day, I noticed the hammer was pulled back on his old shotgun.

When this was called to his attention, he said, "Oh sure. I always hunt with the hammer back. Then I'm ready when a pheasant flies up."

A weed touching the trigger would have caused the old scatter-gun to go off. If he had dropped it, who knows which direction it might shoot.

One day during the deer season I ran across a wild-eyed man out in the woods. He had an extra long magazine on his shotgun. It would hold seven shells. That was all very legal for hunting deer, but I asked why he needed so many shells in an automatic shotgun.

He said, "I need that many. I get excited when I see a deer, and I'll run off three before I can get the gun to my shoulder."

When asked if he had had any luck today, he said, "No, but I got a good sound shot. I thought I heard something

in the brush so I emptied my gun in that direction, but there was nothin' there!"

Now that is frightening! One of those untrained hunters is more apt to kill the officer than the old hard nose violators. Sure, it would be an accident, but you would be just as dead. Someone saying, "I'm sorry," wouldn't help much.

We need a mandatory hunter safety program that would require everyone under a certain age (maybe 16) who goes hunting to attend a hunter safety class before acquiring his or her first hunting license. That wouldn't make every young hunter 100% safety conscious, but it would help. The older hunters need this training also, but sheer numbers would make that almost impossible, and it's harder to teach an old dog new tricks.

There will be a mandatory hunter safety bill presented to the legislature again this next session. The last time a mandatory hunter safety bill was presented, one legislator argued that "Eight or ten hours of classroom hunter safety would not make sharpshooters out of anyone. In fact, they wouldn't be able to hit the broad side of a barn!"

That's all right! We are trying to teach them not to be shooting at the barn. Safety with weapons in the home and in the field is what this program is all about.

Every gun accident gives the anti-hunters and people who are "anti-gun" another foot in the door. They have one foot in the door now. Don't let them get the other foot in too.

Let's make hunting a safer sport by contacting our legislators and asking them to vote for a mandatory hunter safety law for Iowa.

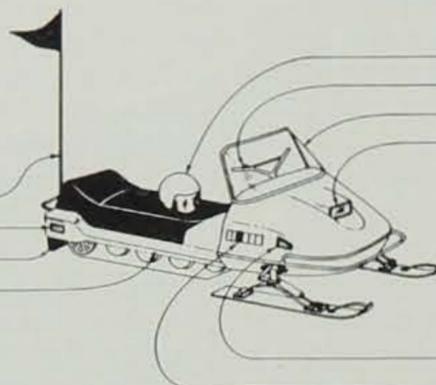
Rex Emerson retired as a district law enforcement supervisor in June 1981. He served the Commission for over 25 years and was well known to Conservationist readers for the "Wardens Diary," column he authored.

HOW'S YOUR SNOWMOBILE SENSE?

Circle the correct answer and test your snowmobile sense.

M = REQUIRED BY IOWA LAW
R = EQUIPMENT - RECOMMENDED ONLY

1. M R OWNERS MANUAL
2. M R EXTRA SPARK PLUGS
3. M R BRAKES
4. M R MUFFLER
5. M R FIRST AID KIT
6. M R 60" SAFETY FLAG
7. M R (RED) REFLECTOR
8. M R SNOW FLAP
9. M R RUNNING BOARD



- HELMET M R 10.
- EMERGENCY STOP SWITCH M R 11.
- WINDSHIELD M R 12.
- HEADLIGHT & TAILLIGHT M R 13.
- REFLECTOR (YELLOW) M R 14.
- REGISTRATION M R 15.

16. IDENTIFY THE MISSING ITEM
(NOT LISTED ABOVE)

WARDEN'S DIARY

By Jerry Hoilien
Conservation Officer

Ice Fishing

Ol' Man Winter has frozen up the Mississippi backwaters now, but that doesn't stop the fishing. As a matter of fact, it seems to improve for a lot of folks. Panfish by the thousands — crappie, bluegill, and perch — are taken through the ice each year. There's something social about ice fishing — getting out there on a bright clear day, boring holes in the ice, setting up your gear with tiny bobbers and miniature jigs baited with "mousies" or wax worms, and then visiting with your neighbor until the bobber disappears.

Two rigs are legal in Iowa, and you must be in attendance at all times. Don't be like the fella who told me he was watching his buddy's poles while his friend went to town. Problem was his "friend" never did come back. Had to issue him a citation when he couldn't even remember his "friend's" name. Funny how a few people try to stretch the rules.

I was going to tell the story about the drunk who told his wife he was going ice fishing, and sure enough came home with several pounds of ice — but I won't!

I was assigned to one of our northern areas one winter. We had a lot of complaints from some law-abiding fishermen about an individual who was always using too many tip-ups. The local officer asked me to work one of the heavier fishing areas. Upon arriving I was amazed at the hundreds of fish shacks and people out there. I wasn't supposed to check any licenses, just observe. My associate equipped me with a couple of ice poles, an auger, strainer, some bait, and a couple of five-gallon buckets. I wandered out into the middle of the crowd and began fishing and observing. It was a tough job trying to keep track of who was fishing with what gear; a lot different than summer anglers who are in a boat and don't wander all around.

It wasn't too long before I noticed one man making several trips from the car he had driven out onto the ice. He would walk

out 50 to 75 yards, set up a couple of tip-ups, then strike out in another direction to do the same thing. Pretty soon, he had them all around him. He drilled three holes by his car and settled down with a couple more poles. As I wandered over to his car, I noticed him checking his distant gear with binoculars, make a 360° sweep of the area. "Keep an eye peeled for a green car or a short stocky guy all dressed in green — that will be the warden," he told me.

I showed him my identification, much to his surprise, and we gathered up his equipment for a trip into town to meet that short stocky warden. Later, walking back to pick up my equipment, I was approached by a smiling elderly woman whom I'd been fishing beside earlier. "Are you a warden? Good, I'm glad you got that game hog. He's always been out here with too many poles!" Then with a twinkle in her eye, she asked me if I had a fishing license. When I reached for my billfold, she laughed and said she was only kidding. I insisted she take a look. "This is the only time I've ever gotten a chance to show mine in all these years! How about that!"

I got a letter from that ol' man down by the river, Rex Emerson, the other day. He said fishing was so good he and Marge couldn't eat them all so he tried pickling them. That gave him a new job to do — watching fish pickle!

Here's a great recipe I got from Vivian Huffman of Rossville years ago:

Fillet fish and cut into chunks. Soak in refrigerator for six days with a solution of 1 quart vinegar and ½ cup salt. Drain after six days. In a crock or other container layer fish alternating with layers of onions until all fish is used. Cover with a cold solution of 1 quart vinegar, 1 quart White Port Wine, ¼ cup sugar, and 1 Tablespoon Allspice. Stand guard by the refrigerator for one week before serving....

ANSWERS TO SNOWMOBILE QUIZ

1. Owner's manual — Recommended only.
2. Extra spark plugs — Recommended only.
3. Brakes — Required by law. Pressure slows down the snowmobile; braking distances will vary according to snow conditions and speed.
4. Muffler — Required on all snowmobiles.
5. First Aid Kit — Recommended only. A good question to ask, "Can I get back safely with the equipment I'm taking?" Remember always — be prepared for an emergency.
6. Safety flag — Required by law on any public road or street. It must be sixty-inches above ground and fluorescent orange in color.
7. Reflector — Recommended only, for easy visibility at night.
8. Snow flaps — Recommended only. Prevents stones, ice, and other objects from shooting back at other machines that are behind.
9. Running Board — Recommended only. A footrest will support and protect the feet.
10. Helmet — Recommended only. However, for your protection it is essential.
11. Emergency stopswitch (killswitch or shut-off switch) — Recommended only. Allows for easy shut-off of engine in an emergency.
12. Windshield — Recommended only. Helps protect face and eyes from wind, snow, and debris.
13. Headlight and taillight — Required by law. Must be on from sunset to sunrise.
14. Reflector — Recommended only.
15. Registration — Required by Iowa law. Biennial registration runs from January 1, through December 31, of odd-number years. Registration fee is \$12, plus a writing fee.
16. The missing item — A snowmobile safety certificate. It is a required item for persons born after July 1, 1965 before operating on public land or ice.



1982 Nongame Support Certificate Now Available

Here's your opportunity to help Iowa's living resources. Numbered collectors prints of the 1982 nongame support certificates are now available for \$5. The print features a colorful male bluebird photographed by Carl Kurtz of St. Anthony.

All the proceeds from the sale of these certificates will be used solely to support the Commission's nongame wildlife programs. Copies of this year's certificate can be obtained by sending \$5 to the *Iowa Conservation Commission, Nongame Support Certificate, Wallace State Office Building, Des Moines, Iowa 50319.*