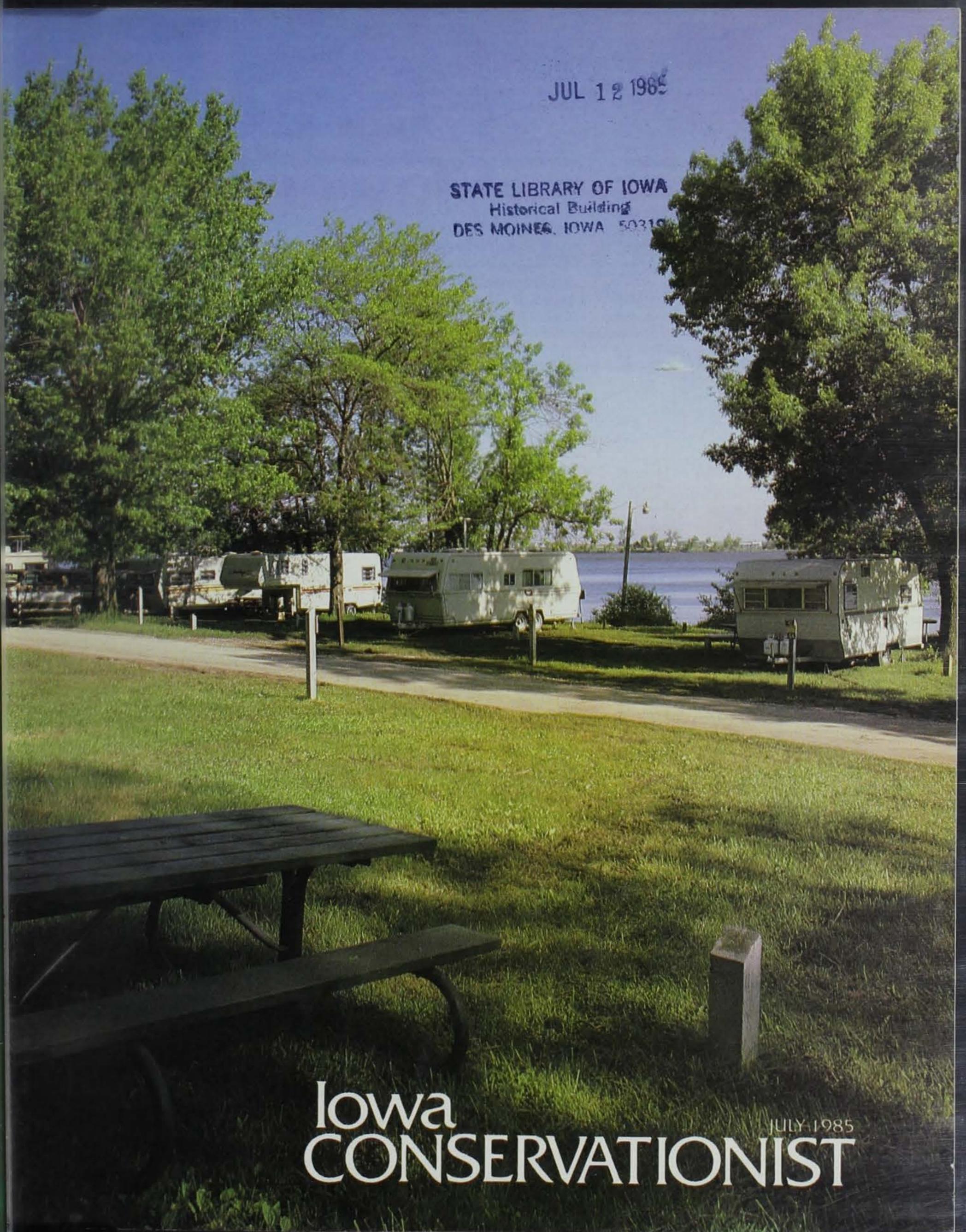


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COVER: The month of July is the peak of camping at Iowa's state parks. Photo by Ron Johnson.

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A Taste of the Slower Pace

By Jim Mayer

Jim Mayer is the outdoor editor and assistant state editor for the Cedar Rapids Gazette.

I vacationed in Minnesota, Kentucky and Tennessee last summer, but the most relaxing trip was to Pinicon Ridge County Park near Central City.

The setting wasn't the key. It could just as well have been Heery Woods Park at Clarksville, Rock Creek near Kellogg, Bellevue State Park on the Mississippi, or one of scores of other state or county parks in Iowa.

The difference was the contrasts in the moods of the trips. On the vacations to other states there were long rides, planned stops and the usual amount of rush and flurry to see this and do that. Some of the days were long and crammed with driving, doing and seeing. In Minnesota and Tennessee, I stayed in resorts and state parks, but because I was there with a mission — catch walleyes or see the hills — the pace was faster. There was always so much to do in so little time.

Late in August, wife Marge and I hooked up our well-aged travel trailer and spent three days at Pinicon Ridge.



Jerry Leonard

The drive is less than 30 minutes from our home, so there was little need to hurry. It rained lightly most of the first day so it was a good time to lounge under the trailer's awning and watch the Wapsipinicon River and the rest of the world go by.

The mood was set.

Later, in the rain, and in the sunshine, we canoed the river, fished, enjoyed a campfire, grilled some beef, hiked around the park, saw nature, talked to our neighbors and discovered that our internal clocks slowed to the mood.

We saw mink, deer, ground squirrels, more birds than we could count and a wide variety of humans in and out of the water.

We had no schedule, no alarm clock, no long miles to travel. When we were hungry we ate, when we were dry, we found something to drink and when the flies bit, we swatted them.

Otherwise, life slid along in the slow lane. There's still time this summer for you to taste this same pace.

Pinicon Ridge sets a relaxing mood. There's lots to do and see, of course, but it will be there tomorrow, so why try to see it all the first day?

Friday evening, in the quiet coolness after an afternoon of rain, I fished a rocky shoreline of the Wapsipinicon from the canoe, casting toward shore, around deadfalls, trying to interest a smallmouth bass. I didn't work very hard at it, and the bass didn't either. Ditto for catfish, crappies and even carp. But that way I didn't have to clean any fish. I knew we had hamburger in the cooler; fresh fish didn't have to headline the menu.

A half-grown mink worked the shoreline in front of me. Even when my spinner plunked in the water hardly more than a paddle length away, he wasn't startled. He explored every crack in the rocks, every undercut bank, every hole under every root.

Sunday morning, fishing the same area, I saw the mink again, and watched its travels for several hundred yards. It seemed unconcerned with the steady parade of canoers, tubers, rafters and motorboats coming down the Wapsi.

Later, on the Flying Squirrel Trail — an up-and-down 2½-mile hike over and around a bluff on the northeast corner of the park — I saw a deer, heard what probably were several others and shared the trail with a pie-plate-size turtle.

The trail swings around and through 80 acres on the east side of the county gravel road, across from the Flying Squirrel Campgrounds. It is one of four trails in the park and leads to a grand view of the river from the top of a bluff. The view approaches some of Tennessee's.

The trail followed a mowed path that was well-maintained and smooth, winding through timber and past apple and plum trees — the apples were ripe and wormy, the plums were turning color and not wormy.

Once up on the crest of the hill, the trail leads around a highland meadow, then follows a fence row to the pack-in campgrounds.

As I passed a stand of corn in an adjoining field, a whitetail deer ran out onto the trail and bounded away. I could hear others running through the standing corn. I stood, watched and waited, but all was quiet. The watcher was probably being watched.

Down a hill and back up two others, I came to a stand of mixed pines, planted a decade or two ago, straight and tall. The air was cool and dark under the heavy canopy. There was no undergrowth, only a bed of soft pine needles.

Later, the trail passed a pasture where enough crows for two football teams were working up a storm. Smaller birds sang for me and told the forest of my presence.

A turtle ambled across the trail at right angles to my path. It snuggled itself into its shell, hiding until I left.

These were my only companions on the trail; there were no other hikers and there were no campers at the pack-in campground. Just the sights and sounds of the woods.

Around another bend or two the trail traces the rim of an abandoned quarry and beyond I could see the Wapsi, several hundred feet below, crowding a large, lazy S path through the trees. A canoe slid through the water on the upper curve, a motorboat cut a wake below it.

Down the hill, around a few bends, back to the road I hiked. I had been gone less than two hours, but it felt like a week.

Back on the dusty road, a car passed between me and the noise from a busy campground. Other campers were packing up. Some families were pulling out, heading to the city, back into the real world.

Or is it only the artificial world?



Ken Formanek



By Bob Mullen

The Essence of

As a youngster, I was befriended by a retired gentleman who had spent his life enjoying the outdoors. He gave me some advice that didn't seem to have much significance then but as the years have passed, I find they were truly words of wisdom for us all. The message was that if we never learn anything else in this life, we need to learn that time is one of your most precious possessions.

In our youth it seemed like time was a commodity which was unlimited. Some days seemed like they would never pass. As children, many of us spent time just lying on our backs in the lush grass on a warm summer day letting the wind blow across our faces and looking up into the sky, seeing animals and faces in the clouds. If we would try it now, it would seem hard to see those things in the clouds. The clouds aren't different than when we looked at them in our childhood, but we now have so many things on our minds, we can't put them aside and enjoy the moment at hand.

Some day we will realize that time is running out. We're going to listen to dogs barking or look at the hills and wonder why the trees look differently than they ever looked before. And then we'll realize that we didn't begin to see all there is to see in life, even though it was right in front of our eyes every day. Then we'll question why we spent so much time in front of the television, or were in such a hurry that we couldn't see the delicate beauty.

Yes, one day we may look back on life and visualize just how that favorite fishing or hunting spot looked. Perhaps we'll visualize how the trees looked against the sky — how that one big tree up on the hill stood way above all the others. We won't be able to remember just exactly what tree it was, because we never took the time to walk over and see it among the others. It was easier not to go out of our way.

What difference does it make which tree stuck up above all the others, or why

the trees seem to look different now? What difference does it make how we spend our time?

There is a difference, and it's an important difference. Before us all is one of the greatest things in life — the great outdoors and all that's in it. Out there are some of the great moments that a person remembers; for example, that big tom turkey that would not come within gun range. I may not have shot him, but I remember him strutting and the early morning sun reflecting off his majestic feathers. You may remember the big fish you almost landed before it threw the hook, or having watched a delicate hummingbird darting from flower to flower looking for nectar. These are things that count for those of us who enjoy the outdoors.

As I grow older, I look around and find the words that elderly gentleman shared with me in my youth are right. Life is so full that a person must appreciate every minute of it. It doesn't matter

of Time

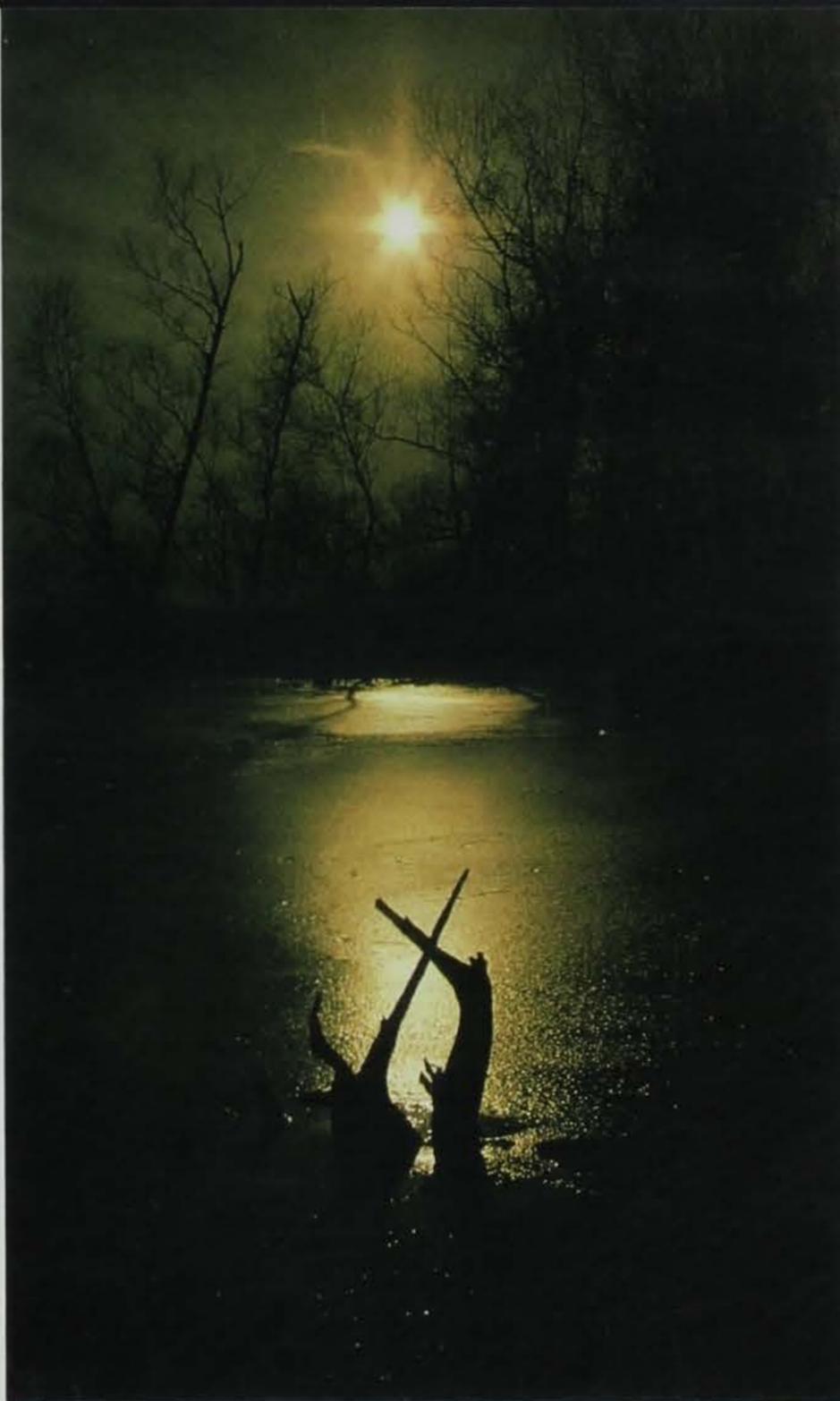
Bob Mullen

why my fishing partner caught more fish than I did, or whether I spent hours in a duck blind and never fired a shot. There is always something worthwhile in the outcome, some new bit of knowledge to be accumulated and shared with someone else, or some memory etched forever in my mind.

As the years go by, we must pull aside the curtain of adult responsibility and look back on the years with a sense of intimacy — with the knowledge that we've utilized our time in the great outdoors to the fullest. It is one of God's gifts to mankind.

Bob Mullen has been with the commission since January 1971, and is a graduate of Northwest Missouri State University with a B.S. degree in agronomy and horticulture.

Bob Mullen

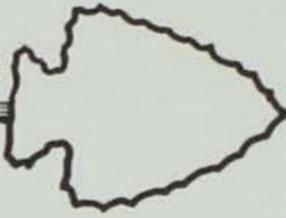


Bob Mullen



County Conservation Board Feature

Hamilton County



By Brian Holt and Larry Haren

Why should sportsmen be concerned about conservation tillage? How do farming practices and soil erosion affect fish and wildlife populations in our State? How can we have better fishing and more wildlife?

Members of the Hamilton County Conservation Board asked these questions of themselves up to 1980 and then embarked on the promotion of a concept that was quite different from what county conservation boards normally are involved with at the local level. Here is what the Board noticed:

SPORTSMEN AND CONSERVATION TILLAGE



1. Decreased numbers of pheasants, rabbits, quail and song birds throughout the county.
2. More row crop acres under cultivation than ever before.
3. Fall plowing left a "black desert" with no cover on the land to serve as shelter or food source for the wildlife.
4. Excessive soil and water erosion silted in drainage ways, filled in deep holes in natural streams and silted in the very few remaining acres of wetlands. This caused problems for fish spawning and rearing.
5. No cover on the crop lands caused snow to drift full the remaining winter habitat, forcing wildlife out to die during blizzard conditions.

The Board understood from these observations the way to create the greatest change from these conditions and to improve fish and wildlife populations in our county was to change the way farm land was being tilled. The only way to accomplish this task was to introduce a different method of farming to farmers — the people who control the vast majority of land acres in the county.

Now this task was major because long standing tradition and personal attitudes towards tillage practices were well entrenched in the minds of farmers and landowners. It was also known that to

create a change in attitude and tradition, farmers would have to be involved or know someone who was involved that was his neighbor. The test must also affect the farmer economically, increasing profits at the years end. With our light and sandy to heavy and wet soils and our flat to rolling terrain, we also knew the tillage system would have to be versatile. If all this could be accomplished, we would be successful and the fish and wildlife would be benefactors in the long run.

The Conservation Board presented this idea to the Hamilton Soil Conservation District Commissioners and the Board of Supervisors and proposed a minimum tillage pilot program to test ridge till farming practices against "conventional" farming practices in cooperation with farmers throughout the county. The idea was funded, the interagency administrative arrangements were made and numerous interested farmers surfaced.

Fourteen farmers were selected to conduct 10- to 20-acre demonstration plots of ridge tillage and comparing the results with 10 to 20 acres adjacent to it farmed "conventionally."

What is ridge tillage?

During the second cultivation of corn or soybeans, farmers use a special cultivator to build up soil 8 to 10 inches high around the base of the corn or soybean plant. Following harvest, no tillage is

performed in the fall of the year. This leaves all stock residue undisturbed until the following spring.

The next spring the farmer uses a modified planter equipped with either a sweep or two small discs that shave off the upper two inches of the ridge. At the same time the planter plants the seed, it incorporates a band of herbicide to control weeds in the row. Then during early and mid summer, the field is cultivated twice with the second cultivation ridging the soil once again.

This ridge-till practice eliminates the need for several other pieces of equipment normally purchased and used by farmers in more conventional tillage. These are moldboard plows, chisel plows, big discs, disc-chisels, field cultivators, rotary hoes, drags and big tractors.

How did we conduct the demonstration program in our county?

One individual was hired with the program funds to coordinate all aspects of farmers' involvement, equipment preparation and use, and gathering of factual data. This coordinator moved the equipment from test plot to test plot and aided farm cooperators with setting the equipment and learning how it operates. Each farmer had a chance to learn first-hand how the ridge-tillage system works on a functional part of their farms over a three-year period. *Continued on page 8*



Ken Formanek



Ron Andrews

On ridge-till fields, crop stalks and ridges hold snow, rather than allowing it to drift full the heavy cover areas of ditches and windbreaks. Around fall-plowed fields, pheasants are forced out to die. Opposite page: Building an 8' to 10' ridge is the foundation for next year's crop.

Data was collected on crop emergence, weed control, fuel and labor per acre, tillage trips on both ridge and conventional plots, and crop yield information. This was all tabulated and is shown in the adjoining tables.

This factual data was assembled in a slide program and promoted to service clubs, agricultural education classes, and special workshops or field demonstration days. A narrative report giving more detailed information concerning the minimum tillage program was prepared and made available to interested farmers.

What did this test do for the farmer?

The farmer realized several important gains:

1. Considerably less capital investment in machinery.
2. Longer life to smaller-size tractors.
3. The same chemical rates and nearly the same chemical costs as under conventional farming.
4. Excellent seed bed conditions and crop emergence, producing equivalent and, many times, increased crop yields.
5. Better moisture retention for the crop with increased percolation and less soil compaction.
6. Less time spent in the field.
7. *Greater profits!*

How will sportsmen benefit from widespread use of this farming technique?

1. Bigger numbers of wildlife breeding populations surviving winter storms.
2. Nice fields of crop stalks to hunt in during the fall rather than plowed ground.
3. Longer life expectancies of big lakes and reservoirs such as Saylorville and Red Rock.
4. Less flooding because water doesn't run off the land as fast but percolates into the soil.
5. Reduced agricultural chemical, fertilizer, and other non-point source pollution because chemicals do not wash with the soil.
6. Better fishing conditions from cleaner water to more and bigger fish.

Was the minimum tillage pilot program successful?

You can bet on it; but it takes time to change attitudes and traditional ways of farming.

The momentum of farmers changing to a ridge-till system has doubled each year in Hamilton county from acres farmed by ridging the previous year. As the depressed farm economy tightens, each farm operator will have to look at reducing cost to maintain a profit, and thus stay in farming. This system will do it.

And just look who and what will benefit from it: farmers, soil, fish, wildlife and sportsmen.

For more information contact the Hamilton County Conservation Board, RR 1, Briggs Woods Park, Webster City, Iowa 50595.

YIELDS 1982-1984

	Ridge-till	Conventional
Corn	121.07	124.71
Soybeans	42.87	42.87

VARIABLE PRODUCTION COSTS 1982-1984

	Corn	
	Ridge	Conventional
Fertilizer	\$45.17	
Chemicals	22.98	22.49
Tillage	21.74	31.10
Nutrient Loss (soil erosion)	2.50	7.42
TOTAL	\$90.31	\$101.26

	Soybeans	
	Ridge	Conventional
Fertilizer	—	—
Chemicals	\$20.35	\$14.71
Tillage	25.07	38.44
Nutrient Loss (soil erosion)	2.50	7.42
TOTAL	\$47.92	\$60.57

Many local people attend a tour of the demonstration plots.



Hamilton County SCS

Brian Holt is the executive director of Hamilton County Conservation Board. He has a B. S. degree in resource management for outdoor recreation from Iowa State. He has been with Hamilton County since 1973.

Larry Haren, minimum tillage program coordinator, has been employed with the Hamilton County Conservation Board since 1982. He has an associate in applied science degree from the University Technical College.



State Park Mascot "Unmasked"

Don't be alarmed if you spot a six-foot raccoon roaming Iowa's state parks in the near future. It's only "Ric Rac Raccoon," the new mascot for Iowa's more than 100 Iowa Conservation Commission state parks and recreation areas.

Ric Rac is the creation of Brian Johansen, a 5th grade student at Whittier School in Sioux City. Johansen had the winning entry in a poster contest which included designs from more than 1,300 4-6 grade students from across the state.

The contest — sponsored by the ICC, Adventure Lands of America, Jerry Gazaway and Associates, Miracle Equipment Company and Chase Concessions — required entrants to design a poster which featured a mascot drawing, name, and some type of activity in a state park. Johansen's poster depicts Ric Rac peeking from around a tree and has the slogan "Ric Rac says: Be Curious and Courteous."

Winners of the contest were chosen by ICC staff

members. The second-place entry was submitted by Deanne Keller of Parkside Elementary in Oelwein. Honorable mention awards went to Chad Trierweiler of St. Rose of Lima School in Denison and CeCelia Haynes of Walnut Community Schools in Walnut.

The grand prize — one night's free lodging and one day free family admission to Adventure Land Park in Des Moines — was donated by J.G. Glassnapp, general manager of Adventure Lands of America. The second prize — a \$100 savings bond — was donated by Jerry Gazaway and Associates of Marshalltown and Miracle Equipment Company. The two honorable mention prizes — two \$75 bonds — were provided by Rick Chase of Chase Concessions.

The mascot costume was donated by the Des Moines office of the Equitable Life Assurance Society of the United States, and The Theatrical Shop in West Des Moines donated their labor in making the costume.



Brian De Vore

BIRD ATLAS BEING PREPARED

More than 200 Iowans are searching forests, pastures and marshes throughout the state for nesting birds as part of the new Breeding Bird Atlas sponsored by the Iowa Conservation Commission's Nongame Program and the Iowa Ornithologists' Union. The purpose of the atlas is to systematically record the breeding ranges of Iowa's feathered friends.

Previous surveys reflected more where the avid birders lived, than where the birds nested. To correct this fault, the Breeding Bird Atlas has sampling units in each county of the state in a checkerboard fashion. Each unit is a three-

mile square that volunteers search for nesting birds. After five years, each of the nearly 1,000 sampling units will have been surveyed at least once to provide information on how far throughout the state the different bird species nest and what types of areas they use. This will help biologists determine the status and breeding range of Iowa's birds and learn which habitats are critical to each species' survival.

For information on how to participate, Nongame Biologist Doug Reeves can be reached at the Boone Wildlife Research Station, 515/432-2823.

OBEY SPEED AND DISTANCE RULES

Iowa Conservation Commission waters officials urge boaters to obey the state's speed and distance rules while boating in waters under the jurisdiction of the commission. Sonny Satre, recreational safety coordinator for the commission, says there have been a number of recent violations of these rules and citations have been given to the offenders.

To avoid an unnecessary fine, abide by the following speed and distance regulations:

1. Don't exceed 5 mph within 100 feet of any craft going 5 mph or less.
2. Keep a distance of 50 feet when both boats are exceeding 5 mph.
3. Don't exceed 10 mph unless vision is unobstructed for at least 200 feet ahead.
4. On federal impoundments don't exceed 10 mph in restricted speed zones which are at least 50 feet from shore. If the zone is greater than 50 feet the zone will be marked with buoys.
5. On inland lakes other than federal impoundments, don't exceed 10 mph within 300 feet of shore (except in specially zoned areas).



LEGISLATIVE REVIEW

By Brian DeVore

Despite a sagging state economy and an uncertain political climate, conservation fared well in the recently adjourned legislative session, according to Bob Fagerland, Deputy Director of the Iowa Conservation Commission.

Fagerland, who does extensive lobbying for the ICC in the Iowa House of Representatives as well as the Senate, says many of the Commission's priorities were addressed by lawmakers this year and the future looks bright for other conservation issues in the spring, 1986, session. He says he was especially happy to see the progress the legislature made on conservation related measures considering the amount of political jockeying going on in preparation for next year's general election.

"That's often a situation where not a whole lot gets accomplished," he adds.

One of the first priorities the ICC had for this session was an idea that has been kicked around the Iowa statehouse for many years — a park user fee. Backers of such a program were finally successful this year and the fees — \$2 for one day and \$10 for an entire season at Iowa's state parks — will go into effect January 1, 1986. The rest of the conservation related measures passed by the legislature this session went into effect July 1 of this year.

Although the final version of the park user fee measure was not in the exact form the ICC was hoping for, Fagerland says it will provide much needed funds for the upkeep of the state's parks and will provide an opportunity for those who utilize the facilities the most to help foot the bill.

It is estimated the fee will raise between \$700,000 and

\$800,000 per year but Fagerland says those funds will have to be distributed among approximately 70 state parks.

As a result, "you're not going to see any great shining city on the hill" in the form of vast park improvements, he says.

One other conservation priority that was passed into law this year was a measure that provides incentive for landowners to fence in their woodland tracts to exclude tree-damaging livestock. Under the measure, landowners can put up the fence on a cost-sharing basis with the state Soil Conservation Department.

Fagerland says this is an important program to have because "the greatest destroyer of forestlands is livestock running free."

It is difficult to encourage landowners to protect stands of timber without some sort of economic incentive since many times trees do not turn over a profit in the form of lumber sales for 20 to 25 years, according to Fagerland.

A change in the law that will affect Iowa hunters is the extension of the number of hunter safety education hours (from 8 to 10) required for certification. Fagerland says the reason the ICC supports such a change is because the U.S. Fish & Wildlife Service is striving for a uniform course length for hunter safety certification throughout the country.

"We did want to put our program on the same level as everyone else's," he says.

Some groups like the eight-hour course because it allows them to finish the training in one day. However, Fagerland says the attention span of the younger students is short and more than one session is needed to properly teach the course in many cases. In addition, although the mechanics

of hunter safety are important, "equally important is the hunter ethics part of it," Fagerland says. To include this, a larger amount of teaching time is needed and students need to be given a greater opportunity to actually use firearms in the field, he says.

One other hunter related change in the law this year regards youngsters under 12 years of age and deer and turkey licenses. Previously, the law stated that no one under 12 years old could purchase a license without completing a hunter safety education program. However, the minimum age for the hunter safety course is 12; thus those youths under that age could not purchase deer and turkey licenses although they were eligible to hunt other game if they were accompanied by a licensed adult.

Now the law has been changed so anyone under 16 years of age can purchase a deer or turkey license if they hunt with a licensed adult.

In addition, people purchasing hunting licenses will no longer be required to display their hunter safety certificates if they can produce their license from the previous year.

The legislature also made some slight changes in the new fur harvester license to accommodate houndsmen participating in off-season dog events. The license, which is required of anyone harvesting furbearers with traps or firearms, had caused problems when houndsmen participating in treeing contests where animals were not harvested realized they fell under jurisdiction of the law. Under the change, houndsmen will now be exempt if they are participating in an ICC-approved event.

Under another change in Iowa's laws, boat owners will no longer be required to produce a certificate of origin (a

document showing where the boat was manufactured) when recording their craft with the county. Fagerland says many boat owners were running into difficulties trying to register boats that had been manufactured in states or countries not requiring certificates of origin. Now, only a bill of sale will be required to record boats with the county.

A change in the law which, according to Fagerland, "got a lot of laughs in the legislature" was one relating to the use of gizzard shad as live bait for fishing. In some areas, the gizzard shad has become a pest species rivaling the carp. As a result, anglers will no longer be allowed to use them as live bait on lakes, but will be able to use them dead on rivers and lakes. Gizzard shad can also be taken for bait now.

Fagerland says one unexpected plus for conservation was the passage of the state lottery bill. If the lottery raises more than \$30 million in one year, \$2.5 million of that will go for "recreation in Iowa" with large portions going toward such things as preservation of fragile areas and protection of timbered lands.

Just as it is important to make sure legislation beneficial for conservation passed, it is equally important to work for the defeat of "bad" legislation, Fagerland says.

Examples of what many conservation groups considered negative legislation that was defeated this session were such things as a bill allowing rifles to be used for deer hunting, a measure allowing five to six deer to be taken by a landowner and a requirement that canoeists get permission from the landowners before floating down a stream or river on private land.

Although it was considered a good session for conservation in general, there were some disappointments in the

certain legislation was not considered by lawmakers, Fagerland says. For example, the ICC was unsuccessful in getting "implied consent" to apply to boats and snowmobiles. Implied consent refers to a law requiring a person operating a vehicle to submit to a sobriety test if it is requested by a law enforcement officer. Currently, the law only applies to automobiles.

"There's a lot of feeling that being a little drunk operating a boat is not as serious as operating an automobile while intoxicated," Fagerland says.

Although the implied consent measure did not make it out of committee this session, he says it is hopeful it will stay alive and be considered next year.

One other disappointment for ICC officials is the more than \$400,000 cut the agency will receive in next year's budget as a result of legislative action. Stan Kuhn, ICC Chief of Administration, says this cut will mostly affect the state parks and forest areas.

This reduction in funding is "going to cut our ability to maintain our state park and forest facilities," he says. Alternative funding from such sources as park user fees, the lottery, and other legislative appropriations will help make up the difference, but there will still be problems maintaining facilities at their current levels, Kuhn says.

Fagerland says despite a few disappointments with the actions of the legislature, the general attitude of some lawmakers toward conservation is good. For example, Speaker of the House Don Avenson is a strong supporter of conservation related measures, he says.

As a result, the ICC lobbyist says he is optimistic conservation will be treated well in the 1986 session when such

issues as trapping regulations, exotic pet ordinances, and implied consent will be brought before lawmakers.

Although there is no "hard opposition" to conservation legislation in the statehouse, there is not that much active support, because most lawmakers are interested in other issues or subjects, according to Fagerland.

"It's kind of like punching a pillow — nothing solid to grab onto" when trying to round up support for a certain conservation measure, he adds.

However, lawmakers are fair and open-minded and will listen to common sense when faced with a natural resources issue and there are strong supporters of conservation on capitol hill in the form of lobbyists and representatives from various groups, Fagerland says.

Although the ICC and organizations like the Sierra Club and the Audubon Society may not always see eye-to-eye on some subjects, there are certain issues brought up in the legislature that these various groups feel the same way about.

"If we find something that's mutually beneficial, we work together," Fagerland says. "The conservation interests do have some power. Over the years we've gained more respect."

Although the various conservation groups lobbying on capitol hill have some influence on legislators, people from the grassroots level can also have an impact, he says. Many times, constituents will influence lawmakers more than professional lobbyists, according to Fagerland. As a result, conservation related legislation can be influenced on both the group and individual level.

"You can turn legislation around out there but it takes a concerted effort."

Iowa Waterfowl To Get Extra \$87,000

Waterfowl restoration projects in Iowa are \$87,000 richer due to a new direction of Ducks Unlimited, Inc., the private fund-raising group which until now has spent nearly all of its funds on Canadian nesting grounds.

Richard Bishop, wildlife superintendent for the State Conservation Commission, said the commission has signed an agreement with DU's new organization called MARSH, or the Matching Aid to Restore States' Habitat. He said the commission will put up about \$30,000 to match the MARSH allotment.

"The MARSH program will give us 7.5 percent of DU money raised in Iowa annual-

ly from now on," said Bishop. "We will match that on a one-to-three basis with the state duck stamp funds."

Bishop said that the commission is working on a project to spend the money on which might make Iowa the first state to have a MARSH project underway. He declined to name the area until land negotiations have been completed.

With more than 100 chapters in Iowa, DU raises more than \$1 million around the state, mostly from dinners with raffles and auctions. Bishop said Iowa is one of the nation's leading DU contributors on a per capita basis.

PARK USER FEE BEGINS NEXT YEAR

The state park user fee recently signed into law by Governor Branstad will not go into effect until Jan. 1, 1986.

Iowa Conservation Commission parks officials say they have received a number of questions about the need to purchase a permit. Officials note that the permits will not be required until Jan. 1.

LIVE BAIT LAW CHANGE

A change has been made in the law relating to the use and taking of live bait on Iowa's lakes. Live gizzard shad will no longer be allowed on any lake in Iowa. However, gizzard shad may now be taken as bait. "Minnows" — defined as chubs, shiners, suckers, dace, stonerollers, mud-minnows, redhorse, blunt-nose and fat-head minnows — may still be taken and used as live bait. Green sunfish and orange-spotted sunfish may also be taken and used as live bait.

BOATING ACCIDENT REPORTS REQUIRED BY LAW

If you are involved in a boating accident involving personal injury, death or property damage more than \$100, you are required to obtain and complete a boating accident report.

According to Iowa Conservation Commission boating officials, the accident report must be filed within 48 hours with the ICC if the accident results in a loss of life or disappearance. An accident report must also be filed within five days if the accident results in injury requiring medical attention, property damage in excess of \$100, loss of consciousness or disability in excess of 24 hours. These reports remain confidential.

Copies of the accident report form can be obtained from conservation officers, county sheriffs' departments, or by contacting the ICC, Wallace Building, Des Moines, Iowa 50319.

Avoid Using Methanol Additives In Marine Fuel

According to a United States Coast Guard Boating Safety Circular, certain types of alcohol additives in gasoline pose a serious safety problem.

Boaters should especially avoid methanol blends (wood alcohol). Methanol causes deterioration of fuel hoses, corrodes metal parts causing engine failure and allows fuel to accumulate in the bilges increasing the risk of fire.

Bridgford Sweeps Stamp Contests Again

An unprecedented event has occurred in the Iowa Conservation Commission's annual waterfowl, habitat and trout stamp contest. For the second time in three years, one man — Paul Bridgford of Urbandale — is the winning designer of all three stamps.

Bridgford topped a field of 51 contestants in the waterfowl stamp competition with a painting of a pair of blue-winged teal winging over cattails. Bridgford's design of a

group of turkeys emerging from the woods beat out 34 other designs in the habitat stamp category, while a painting of a brook trout completed his sweep of the contest.

Bridgford's first sweep came in 1982 with paintings of wigeon, gray partridges and a brown trout that appeared on 1983 stamps. He has won various categories of the stamp contest in the past but that was the first time any artist had taken all three categories the same year.

The waterfowl design will be used on more than 40,000 1986 duck stamps which will be sold for \$5 each. Revenue generated by the sale of the stamps is used for acquisition, development, restoration, and maintenance of wetlands in Iowa.

The turkey design will appear on more than 300,000 1986 habitat stamps that will be sold for \$3 each. This money is used for wildlife habitat development within the state.

The trout design will be used on approximately 50,000 1986 trout stamps. These \$8 stamps are the main support behind Iowa's trout program.

There was a total of 107 entrants in this year's stamp contest and other winners were:

Waterfowl — 2. Richard Masters of Iowa City. 3. John A. Heidersbach of Cedar Falls. 4. Bethany A. Caskey of Albia. 5. Brian Wignall of West Des Moines.

Habitat — 2. Kenneth Wind of Laurens. 3. Tom Walker of Council Bluffs. 4. A.M. Shogren of Blainstown. 5. Jan Spree of Parkersburg.

Trout — 2. Val Patrilla of Vinton. 3. David M. Cahill of Cedar Rapids. 4. Ted McElhinery of Le Claire. 5. Edward King of Cedar Rapids.

WATER RECREATIONISTS URGED TO USE MORE CAUTION

The Iowa Conservation Commission urges Iowans to use good judgment when engaging in various water recreational activities.

Simple rules to follow are:

1. When near water all children and nonswimmers should wear a personal flotation device. Parents should closely watch their children.
2. If wading in a stream or river, wade upstream — the force of the current can help waders back to their feet if they fall or step in a hole. It is also wise to wear a personal flotation device while wading.
3. Everyone in a boat should wear a personal flotation device — especially small children and nonswimmers.
4. Avoid alcoholic beverages. A high percentage of all drownings are alcohol related.
5. Boaters on rivers and streams should be aware of the locations of low head dams and should be on a constant lookout for other obstacles such as floating debris, snags, submerged logs and boulders and fast flowing riffles. More than 50 percent of all drownings and boating accidents in Iowa occur on rivers and streams.
6. Holding on to a capsized boat can save a life since the boat will not sink.
7. Standing in a boat is always dangerous. Also, weight should be evenly distributed in a boat.
8. The buddy system should be used while boating or swimming. Quick action from a companion could save a life.
9. Caution should be used when fishing on river banks as they can be slippery and treacherous.
10. Whether boating or swimming, it is wise to rest periodically. Extreme summer heat can accelerate fatigue thereby raising the potential for an accident.
11. Swimming across open bodies of water should never be attempted. Even good swimmers can overestimate their ability.
12. Boaters and other water recreationists should check weather forecasts for possible storms and strong winds.

Conservation L



Dr. Marvin Dalchow

From Boy Scouts to the interested in national natural resource issues, people know Dr. Marvin A. Dalchow as a true conservationist.

Born in Lyons, Iowa January 10, 1911, he attended the University of Iowa dental school from 1929-1936 and graduated as a practicing orthodontist. He and his wife Viola, moved to Maquoketa in 1936 and set up his dental practice.

Dr. Dalchow immediately became active in the local Maquoketa Valley Izaak Walton League and Boy Scout troop.

In 1941, his conservation interests were temporarily halted as he was called to serve in World War II.

After returning to active practice in the late '40s, involvement in scouting with him the prestigious silver Beaver award presented by the National Boy Scout Council in 1948.

While "Doc" led local scouts through many exciting adventures, he also became leader in the Maquoketa Valley Izaak Walton League. A member, he contributed greatly to the local chapter activities and was elected president in 1953 and again in 1980. He became state president in 1963 and served until 1974 when he became national director. He led the national organization for six years.

Leaders

Dr. Dalchow was appointed to the Jackson county Conservation Board in 1957 and worked diligently on local projects until his retirement from the board in 1982. His participation led to the purchase of a 120-acre wildlife production area — one of eastern Iowa's finest. He served as chairman of the board from 1958 to 1962. He was elected president of the Iowa Association of County Conservation Boards in 1961.

As if this were not enough, "Doc" was recognized for his effectiveness in conservation and was appointed to the Iowa Natural Resources Council for a 6 year term. He was especially concerned over the problem of stream straightening in Iowa, and found himself on the stream-straightening review committee for 5 years. During this time, he helped protect many major streams.

Dr. Dalchow established a 35-mile cross-country backpack trail along the South Fork of the Maquoketa River. Today, this trail extends from Monticello Iowa to the south shores of Lakehurst Reservoir near Maquoketa. Other conservation accomplishments include helping plant hundreds of thousands of trees and shrubs with many conservation groups in Eastern Iowa, and serving as an instructor with the Maquoketa Valley Rifle and Revolver Club for 12 years. He was senior division president of the club for 1 year and a director for the club for 12 years.

Dr. Dalchow's enthusiasm for natural resource protection led him onto many battlefields. His dedication resulted in the completion of many successful projects. It can easily be said that because of his encouragement, many young men and women have learned to appreciate Iowa's natural resources.



WARDEN'S DIARY

By Jerry Hoilein

DIRTY TRICKS

Talk about your dirty tricks (yes, I've pulled one or two through the years), well, this one was back quite a few years, but I remember it like it was yesterday.

I had been assigned that afternoon to work the "Skunk Wagon" at Lacy-Keosauqua. That was our pet name for the department's Semi-trailer which was built for live animal and fish displays and traveled around the state. I was waiting for another officer to stop at my house when Bill Aspelmeier called. Bill, a good friend, was the unit game manager at Wapello at the time. Seems he had some information and material for me and since he had to be in Burlington that morning, asked if I could meet him there. Ten o'clock would work for both of us.

I no more than craddled the phone and it rang again. "How do I get a permit to keep a baby skunk?" I explained the law to him about not being able to take pets from the wild and he decided to turn it over to me. (Good thinking on his part since he was already in unlawful possession.) He gave me his address and said it would be in the back yard in a cage, if I could stop over.

My neighboring officer arrived and over coffee I told him I had a couple of odd jobs to do on the way out. Arriving at the address, we walked around the back and sure enough, a baby skunk in a cage by the back door. He wasn't very big, but they don't have to be to have scent. We were trying to figure out how to move the little fella into a small cardboard box without getting him excited, when a little girl came out the backdoor inquiring what we were doing with "her baby." I had just gone through a hair-graying experience with another youngster over the picking up of a young protected species, but that's another story. We dutifully explained that her daddy had called and we were going to take it to the Conservation Exhibit Truck so that it could be with another baby skunk. She remembered seeing it at school once and said, "you want it in that box?" Before I could answer, she scooped it up in her arms, petted it to the back, and saying good-bye, popped it in

the box. Keep in mind, even the little ones have their built in protection. A striped pussy cat with a fluid drive, I always say.

Two thankful wardens headed for Burlington. Bill was waiting there with his trunk open. He gave me some signs and the information I wanted and I remembered Bill hated skunks. "Say, Bill, that's a game car and we've got some game here to turn over to you," I said, handing him the box. He no more got his hands on it and he could hear something inside. "Darn you, Holien, a rattlesnake!" and he gingerly placed it back in my car. I retrieved it and handed it back.

"No, Bill, I wouldn't give you a buzz-tail in a cardboard box, it's game!" About now the little skunk stuck his head out between the folds on the top. "A SKUNK!!" Bill exploded, throwing it back and turning the air blue. He slammed his trunk and took off across the street on foot. We got back in our car and started up the highway. "You're going the wrong way," my partner ventured. "No, I'm not," as I pulled up to a local grocery store, "I'll be right back."

I carefully poured our baby into a new box and put it in the trunk. Folding the old box just right so it gaped open just a bit, I returned to Bill's car. He had a trusting habit of not locking it. I placed the empty box on the front seat, putting a couple of hairs on the opening, and we left for Keosauqua.

They tell me Bill looked for three hours, trying to find that "game" in his game car. Then repeated it again going home when he passed where a road-killed skunk left its scent.

Needless to say, Bill doesn't leave his car unlocked anymore. But then neither do I—especially if Bill Aspelmeier is anywhere in the county.





The Forest Resource Center

Do-It-Yourself Forest Management

By George Wilkes

The picturesque bluffs and valleys of northeastern Iowa, western Wisconsin and southeastern Minnesota harbor a richness of ecology found in few other areas. Varied landscape and soil types encourage the patchwork environment of hardwood forest and cropland that is home to a great diversity of plant and animal communities.

The Forest Resource Center is a private, non-profit organization located on 900 acres of rolling state forest land just to the north of Lanesboro, Minnesota. Its objective is to provide a demonstrational program to increase the awareness, knowledge and skills needed for successful care and management of the hardwood forest resource.

The Forest Resource Center (FRC) is designed to be an information center where anybody can come to learn about forest management, and actually see the results of a wide range of management practices within a small area. The FRC is making knowledge of forest management available to the public through educational classes, a network of demonstration areas, and a full-time, resident forester/naturalist.

Recent classes include wildlife habitat management, fuelwood management, wild edibles of the forest, growing the shiitake forest mushroom, black walnut management, and general multiple-use woodland management.

The area to be directly influenced by the center includes the forested lands of central Minnesota, southeastern Minnesota, western Wisconsin, and northeastern Iowa. Because 85 percent of the woodlands in this area of impact are privately owned, the FRC's effort to improve overall forest management centers around educating local woodlot owners.

Other groups that can benefit from the center's programs are sportsmen, environmental researchers, foresters, teachers, students of all ages, government officials, and the public in general.

Two other educational programs offered by the FRC are "Project Wild" and a 4H agent workshop. Both of these are courses for educators that will improve their abilities to teach children about conservation, ecology, plants and animals.

Naturalists also find something of value at the FRC: an excellent hiking and wildlife appreciation area. A great vari-

ety of habitats resulting from the many demonstration areas should make the land around the FRC an exceptional place to see and learn about nature.

Work on many of the demonstration sites at the FRC was started last summer and a few are still in the planning stages. When they are all in place, the demonstrations will be linked by a network of trails, and will illustrate a broad range of forest management techniques such as clear-cutting, deadening, prescribed burning, planting and thinning.

Steep hillsides, agricultural clearing, and grazing are major contributors to the erosion problem in the region. Protecting highly erodible areas with trees and other vegetation is a key soil and water conservation tool.

Besides promoting management for high value timber, the FRC is investigating ways to make lower grade trees more usable. For example, when a clear-cut is made to regenerate new oak growth, many of the trees taken out are "undesirable" species, or are too small and crooked for timber production. The FRC's efforts to increase the market value of low grade trees includes programs on more efficient fuelwood usage; using the small logs to grow commercially saleable shiitake forest mushrooms; and plans for a new computerized lumber processing facility that could obtain higher quality boards from the small, malformed logs.

Just being introduced is a way to make low grade, small diameter logs more



valuable by "planting" them with mushroom spores. The shiitake (she-tock-key) forest mushroom is currently the major edible mushroom in Asia, and represents a billion dollar business in Japan. Growing these mushrooms on small diameter logs could produce \$350-\$400 per cord of wood that would otherwise be worth only a fraction of that. The mushrooms, which taste similar to our native morel mushroom, fruit in the spring and fall at the FRC's shiitake demonstration area.

Fuelwood has become another valuable forest product, both as a private source of energy and as a cash crop. The FRC's program to educate people about fuelwood management includes a one day course, a fuelwood demonstration area, and a new wood-burning home heating unit called a "downdraft gasifier." The unit has an estimated combustion efficiency of over 80 percent, and has cut the FRC's fuel consumption by 75 percent.

More courses and programs are being held this winter and some of the demonstration areas are taking shape. In another couple of years with the completion and maturation of the demonstration sites, and the development of better roads, trails, and a classroom facility, the FRC should become an exceptional learning and recreational center.

For more information about the FRC write the Forest Resource Center, Route 2, Box 156 A Lanesboro, MN 55949, or call 507/467-2437.



Patchwork timber (above left) is typical of region.

Game harvest (top right) is enhanced by proper forest management.

Seeing is believing. Center forester leads field trip for regions landowners.

George Wilkes graduated from Carlton College in Northfield, Minnesota, in 1983. He holds a B.S. degree in biology.

By Dean M. Roosa **Nature Tale for Kids**

Blue Jays go by the scientific name *Cyanocitta cristata*, "cyano" meaning blue and "cristata" meaning crested. This noisy, obvious member of Iowa's avifauna is present around most homes, in all cities, and its voice, with its many variations, is familiar to everyone. Most spend the spring, summer, and fall here, and migrate south for the winter; however, a few stay on through the winter. They nest in woodlands and noisily defend their territory. It is in a wooded grove in Keg Valley where our story begins.

Keg Valley is a place where not many people venture — except for a few weeks in the autumn when hunters are afield. The remainder of the year the valley is a bramble-choked, sandy thicket — just right for rabbits, skunks, foxes, and blue jays. A long-forgotten spruce tree swayed lazily in the wind, gently rocking a nest, four greenish-gray blotched eggs, and a mother blue jay. She napped fitfully, remaining alert to the slightest noise, while her mate patrolled the perimeter of their large territory. Seemingly, all was well in the central Iowa valley on a pleasant early June day.

Unknown to the blue jay family, the old farmer from the valley's edge could observe the incubating parent from a certain spot atop the nearby hill. He often came and sat on a grassy knoll to

peer into binoculars at the adult blue jays and marvelled at their patience — sitting like a rock hour after hour, day upon day for 15 to 17 days. He marvelled, too, at the bird's ability to construct a nest in just the right location on their first attempt. It was the excited calls of the jays that brought the gentle old man to the knoll to peer down the valley at the jays. What he saw filled him with consternation — a large black snake was climbing toward the nest, being dive-bombed by the adults. The old farmer pondered — should he interfere or should he let nature take its course? His decision came in a flash and he ran toward the nest in the spruce. He grabbed the snake and carried it a long way up the valley, but not before the clutch of eggs were reduced to two. The excited jays eventually settled back into incubating and peace returned once again to Keg Valley.

The next excitement, although not nearly so dramatic, came a week later when two naked, helpless youngsters struggled from the shells. Now the old farmer marvelled at the care and gentleness the adults showed in feeding the new jays.

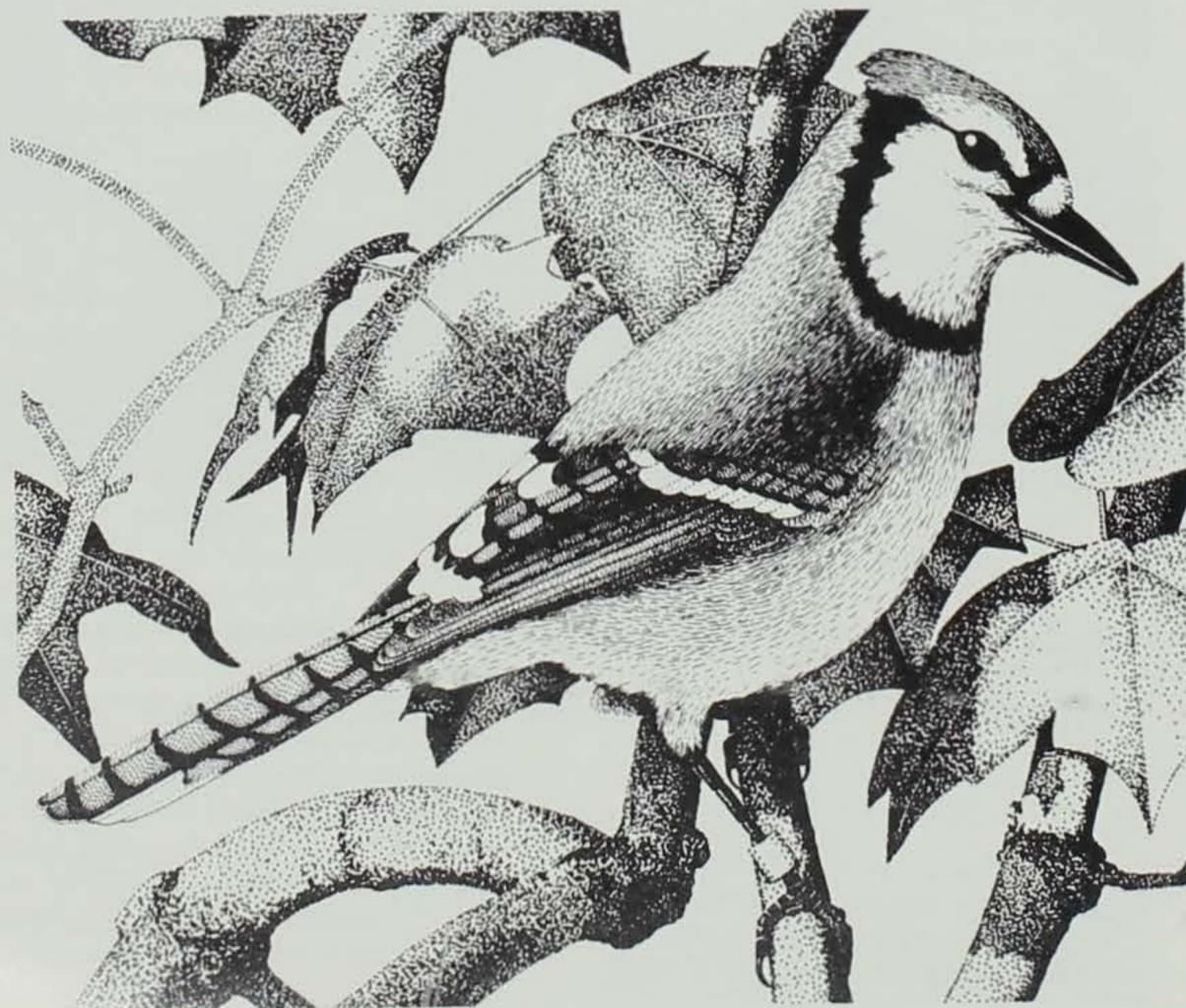
The two young, under the constant care and love of their parents, grew fast and two weeks later were seen sitting on the nest edge, then in nearby branches,

then flying around Keg Valley. One left for Sleepy Hollow where a variety of food items were available. The other, we'll call him Cris, liked Keg Valley and decided this forevermore would be home. Cris was now on his own and soon learned an easy source of food was the old farmer's yard. Cris would sneak in and fly away with some of the food meant for the cat. The old farmer shook his fist at Cris, but it must be noted that he put out more food than the cat could eat. Cris became an attraction in Keg Valley and the old farmer delighted in pointing out the many calls Cris knew.

Life was so good that Cris didn't migrate, but stayed in Keg Valley and the small farm all winter. He became a tyrant around the bird feeder, chasing all the smaller birds away. One day Cris was behaving particularly badly, chasing juncos and finches away, when a sharp-shinned hawk nearly ended Cris's career. The hawk grabbed the young jay with both feet and started to fly away, but a great struggle allowed Cris to escape. He became much more wary and peace returned to the feeder.

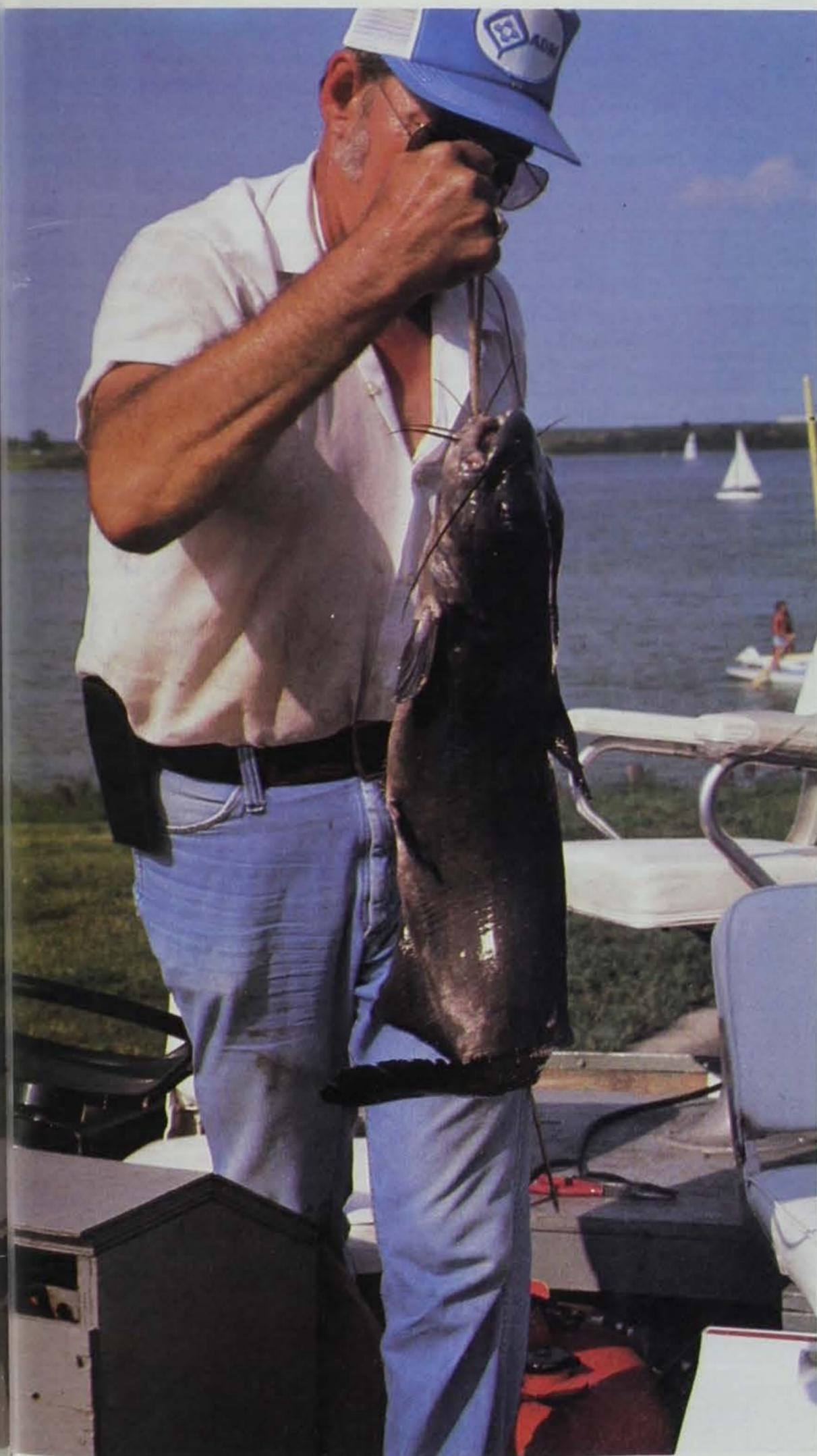
Blue jays have nearly as many detractors as defenders — they are basically a beneficial bird but do rob other bird's nests of eggs and young. Cris was no exception and on occasion came close to an unfortunate end by the old farmer's neighbors who saw only Cris's bad side. The old man would patiently explain how this was the way nature had been working in a fine balance for eons.

Cris lived a varied life — one day he flew into a window with a loud 'thump' and lay unconscious on the ground. He recovered to later fly into a researcher's net and was fitted with an aluminum, numbered leg band. He joined many others of this species to fly south to Arkansas one winter, leaving Keg Valley and the old farmer to wonder if he had met his demise. The following spring many blue jays were in Keg Valley, but the old farmer knew Cris was not among them. All summer the small, poor Keg Valley farm was devoid of a resident jay and finally the farmer sadly accepted the fact Cris, who wanted to live forevermore in Keg Valley, was forevermore gone. Then on May 20th of this year as he was sitting at his kitchen table, drinking coffee and drawing on his ancient pipe, the old farmer noticed a movement in the spruce by his window. A blue jay! A banded blue jay! Cris! Cris was back, nesting in the safest place in the universe — a spruce on the edge of his beloved Keg Valley, on a small sandy farm in central Iowa.



LAKE FISHING FOR CHANNEL CATS

By Don Kline



Ron Johnson

Channel catfishing seems to get more popular each year. Last year it became a competitive activity, with the advent of two Catfish Tournaments in southeastern Iowa. Of course, many of us know that channel catfishing has always been popular in Iowa, because of our excellent river fishing. An increased emphasis on lake stocking during the 1970's followed the construction of Rathbun Hatchery. The new hatchery brought together fruitful efforts of past research into catfish production techniques to provide a reliable supply of high quality fish. These catfish are then stocked in public lakes throughout Iowa.

Channel catfish grew very well in Iowa's lakes, so now, in the 1980's we can expect a range of good-sized fish, from one pounders to over the present state record of 30 pounds, 4 ounces. Anglers are just starting to decipher the secret to catfishing in lakes, and will find the code involves an appreciation of how catfish react to lake environments. Understanding catfish food habits is an important first step.

Channel catfish are omnivores, meaning they feed on both plant and animal material. They are erroneously described as scavengers, and are actually sophisticated in their feeding habits. They have a very acute sense of smell associated with discriminating tastes. Channel catfish have evolved an advanced olfactory system, which utilizes sensing organs, scattered over their body, allowing them to sense even minute chemical levels.

River catfish anglers have utilized prepared baits containing cheese, blood, fish oils, and other scents, which drift with the current, thus attracting catfish from downstream locations. Lake anglers can also use these baits, but must depend on dispersion, instead of current, to spread the scent. The advantage, for lake anglers, is the scent will be carried in all directions. However, it will take more time to reach fish at some distance, which means patience is a virtue. Prepared baits are especially effective, during late spring and summer, when high water temperatures melt the bait.

Proliferation of prepared catfish baits, within the last five years, has muddied the water, so to speak. In the past, anglers might have found one or two

prepared catfish baits at sporting goods centers, or had to make their own. Now, we can choose from more than a dozen prepared baits, in a variety of formulations. The original moist, dough type was formed into soft, pear-shaped balls around a treble hook. Then came sour dough types, needing special plastic worms or sponges to hold the bait as it melts away. A gelatin encased bait, which oozes out after hooking, is the newest type. These baits have attracted quite a following, and are now prominently displayed at tackle stores.

Larger channel catfish have a habit of picking up their food and carrying it away before stopping and swallowing. Therefore, it is important to give them a chance to move off with bait, hook, and line. Many experienced anglers leave slack line and set their reel on free wheel, so catfish will feel a minimum of resistance. It is a good idea to use only enough weight to sink the bait, many times the hook will do just fine. When the line stops its time to get a good hold on the rod and set the hook.

Channel catfish anglers should keep an eye peeled for natural baits, and take advantage of them when they are available. Crayfish, frogs, salamanders, worms, grasshoppers, crickets, minnows, chubs, and shad are all used by catfish anglers. Fished alive or freshly dead, each of these baits has its season, because channel catfish change their diet to take advantage of an ever-changing supply of natural food items. It is always

a good idea to check stomach contents of fish you catch, and ask other successful anglers.

Spring anglers should find small shad or cut bait (strips of fish flesh) very effective, because small fish will be among the first food catfish will find when the ice goes out. Worms will also be a good food as soon as you can get them, spring rains wash many worms into creeks and channel catfish move from the lake into these inlet streams to fill up on worms. Switch back to dead shad, cut bait, or worms at any time of the year when other baits slow down.

Crayfish, frogs, salamanders and leeches will be available in good supply beginning in June and continuing through September. Fish these food items near shore in two feet or less of water where they are naturally found. Leopard frogs are especially good in August and September. Frogs should be hooked in one leg or through the lips, with the barb up. Hook crayfish, salamander, and leeches through the tail to ensure natural movement. If the bait is not working, try crushing it to release body fluids into the water.

Large minnows and chubs will be effective from mid-summer through fall, fished freshly dead. Grasshoppers and crickets hooked through the length of the tail and out the top of the back can really perk up catfishing during the summer doldrums.

No discussion of channel catfishing would be complete without mention of

chicken liver. No one knows why it has to be chicken, and not beef or pork, liver, but apparently catfish know. Therefore, no catfish angler would be without it. Chicken liver is a delicate bait, and needs special attention to keep it on the hook. A treble hook works well if the liver is allowed to set up (left in the sun for 1/2 hour) or is slipped into a cheesecloth bag. Liver bought in stores is soft and is difficult to keep on the hook, so if you can get some fresh chicken liver, by all means, lay in a supply. A liver hook has just appeared on the market, which incorporates a safety pin device to increase its holding ability. Frozen chicken liver can be stored and brought out to set fire to catfish, who have lost interest in other baits.

Channel catfishing in lakes can be as exasperating, fulfilling, demanding, rewarding, frustrating, satisfying, humiliating, and competitive as any other angling. Who knows, with the introduction of spray and dip scents, the time of artificial baits and lures for channel catfish may be just around the next creek bend. Make sure you have your license and may your reel bend often!

Don Kline is a fisheries management biologist in southeast Iowa. He received a B.S. degree from Iowa State University and has worked for the commission since 1967.



Don Kline

Lake catfishing calls for sturdy tackle and a number of baits, including those commercially prepared.



Don Kline

Branding — An Improvement in Catfish Stock

By Alan Moore

Pond spawning of channel catfish has been performed by hatcheries for more than 30 years. The process begins with placement of mature adult fish in ponds in late May. The hatchery manager hopes the fish will pair off and spawn in the 10 gallon cream cans he has placed in shallow water near the pond edge. Experience has proven this system works, but it can be inefficient and the hatchery manager has little control over the outcome. Disadvantages of this method include a drawn out spawning season because fish spawn only when they are ready. Also, fighting male fish can hinder spawning, and intruding fish can disrupt spawning or destroy eggs.

Intensive raceway spawning of channel catfish was initiated in 1977 at Rathbun Hatchery. This method differs from pond spawning in that spawning takes place inside a pen in a concrete tank in the hatchery building. Adult fish with the best spawning characteristics are hand selected, females are injected with a hormone, paired with a male of comparable size, and placed in the raceway pen. Cream cans are placed in each pen and checked every Monday, Wednesday and Friday for eggs. If the pair fail to spawn within one week, the pair is removed and replaced with a new pair of fish. This allows the pairing of specially selected individuals and close control of the spawning time because hormones are used. It also provides protection of the spawning pair from intruding fish and the ability to replace spawned out fish or non-spawning fish with a new pair. This system is an improvement over pond spawning, but experience in recent years indicated only about 50% of the channel catfish broodstock spawn in a given year. To learn more about the spawning behavior of channel catfish, a study was initiated in 1982. Factors to be studied included percent spawning success of individual fish, percent hatch of eggs spawned by individuals, and the spawning sequence and growth of adult channel catfish at Rathbun Hatchery. Since approximately 550 adult catfish are maintained for spawning purposes at Rathbun, a numbered method of identifying each fish was a must. The best branding method and the one selected was the use of silver nitrate impregnated sticks. These sticks, used by veterinarians to disinfect animal wounds, produce

a chemical burn when pressed against the moist skin of catfish. One or two sticks are used per digit and the sticks are retraced over the numbers until the number has an engraved appearance in the skin. There are no adverse effects and upon healing, the brand is easily read for several years.

Now, when a catfish is brought into the hatchery for spawning, the fish is weighed and records are kept listing the sex of the fish, identifying number, spawning partner, whether or not the fish spawned, and how well the eggs hatched. A computer file has been developed and at the end of each spawning season, all data is entered and sorted to give spawning trends.

Three years of data on individual catfish have revealed some interesting results. It has been found only 20 percent of the adult fish have spawned all three years, 30 percent have spawned two of three years and nearly 40 percent have never spawned.

Fish 6.5 pounds in size produce the best spawns and larger fish are poor spawners and should be discarded. Spawns that weigh 1.3 pounds to 1.9 pounds give the best hatch. Finally, if a

female catfish begins adult life spawning eggs that have a high percent hatch she will continue giving fertile eggs 70 percent of the time. On the other hand, if a female catfish begins adult life spawning eggs with a poor percent hatch, she will continue in this manner 80 percent of the time.

Three more years of branding and study will be completed before final answers to all our broodstock questions are obtained. However, several more findings in addition to those mentioned previously are being closely studied and different ways of managing the adult channel catfish are presently being added to Rathbun's production plans.

So if you visit Rathbun someday and see catfish with numbers on their sides or personnel branding fish, think nothing of it. It is our way of trying to improve fish hatchery production and fishing for Iowans.

Alan Moore is a fisheries research biologist located at the Rathbun hatchery. He holds a B.S. degree from Iowa State University and has been with the commission since 1975.



Alan Moore

Branding of catfish is actually improving hatchery production.



The Unsung *By Doug Reeves*
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Of the birds that nest in Iowa, the common nighthawk is one of the least understood. Living mostly in cities and towns, yet seldom causing a problem, nighthawks are a mystery to most people. Actually, the more one learns about these birds, the more fascinating they become.

Nighthawks are crepuscular, which means they are most active during morning and evening. Sometimes this trait has caused them to be confused with bats, which are active at the same time. Not really a hawk at all, the nighthawk has neither the sharp talons nor the thick, hooked beak that is so characteristic of true hawks. In fact, nighthawks are more closely related to chimney swifts and hummingbirds than they are to hawks. In the past, that last syllable "hawk" has caused these birds to be persecuted. Alfred Gross, writing in 1940, reviewed an article that appeared in the Portland Press (Maine) in which the reporter described the destruction of two eggs in a nighthawk's nest, "and farmers may rest assured that the breed of distasteful birds who pilage their chicken yards is two the less." How unfortunate! Here is a bird that weighs less than three ounces (about the size of a red-headed woodpecker) and has absolutely no means of capturing a chicken, yet its nest was destroyed simply because the word "hawk" appeared at the end of its name. Thankfully such mistakes are no longer made. Farmers, as well as the rest of us, should be glad to have nighthawks around because they are insectivorous — eating flies, beetles, and other winged insects that they capture with their oversized mouths during flight.

During the courtship period nighthawks can be detected without even seeing them. As part of the courtship flight the male dives toward the ground, then suddenly pulls up. The vibrations caused by wind rushing through the feathers of the wing creates a sound which is hard to describe but can be called "zoom" lasting about a second. Their vocal repertoire is somewhat limited. The most frequently heard vocalization is a kind of "peent" which somewhat resembles the "peent" of the woodcock.

Nighthawks are mottled gray-brown in color, blending very nicely with their

surroundings when they are setting on graveled rooftops during the day. They look very much like whip-poor-wills which are close relatives. In flight, nighthawks show distinct white patches on the wings. They are about the size of a kestrel (sparrow hawk) but have a somewhat unusual flight, including a few quick flaps of the wings followed by a short pause. Once you learn this pattern, it is hard to mistake the nighthawk for another bird.

The nighthawk nest is no elaborate affair. Most generally the bird simply lays two eggs on a flat, gravelled rooftop in town. In Iowa the eggs are laid during June. Incubation takes about 20 days and the young begin making lengthy flights in another 25 days.

Last summer I received a large number of calls about young nighthawks that had fluttered down from their rooftop homes onto a street or sidewalk. There appeared to be two periods, about ten days apart, when the calls came in. A little further study indicated that the two periods were the hottest days of the summer. My guess is that the rooftops simply became too hot for the young birds, and they fluttered to the ground hoping to find cooler conditions. A report written by Dr. Milton Weller (formerly of Iowa State University) tells of a nighthawk that was able to shade her eggs and keep them at a temperature of 115 degrees Fahrenheit although roof temperature was 142 degrees. It seems incredible that these birds are able to withstand such temperatures. Those rooftops get *hot* on midsummer afternoons. Apparently the birds are able to maintain their body temperature on such occasions by panting — the huge, gaping mouth is a great place for heat loss to occur.

Another reason that nighthawks were reported to us relates to roofing and carpentry activities. On several occasions we received reports from roofing crews that were repairing or replacing gravel roofs. One such instance was at the main post office in Des Moines. The gravel roof was being replaced with a new fabric roof and a young nighthawk fluttered down into a mail cart to escape the activity. Fortunately there was another finished roof right next door, so we were able to put the young bird back up where the adults could find it and care for it. In fact, there was an adult

bird on the roof when we took the young one up. In most cases that is the best thing to do with displaced young. However, there should be a shaded spot somewhere for the birds to get away from extreme heat. As with most young wild birds and animals it is far better to put the young back in the area where they were found and let the adults care for them as opposed to trying to rear them yourself.

Another interesting thing about nighthawks is they are urban birds. Yet, in contrast to some other species, (most notably house sparrows and starlings) nighthawks are almost never a problem. Because they do not build elaborate nests, they do not create messy conditions. Neither are they noisy to the point of disturbing anyone. In fact, they are one of the most unobtrusive birds living in our area.

Nighthawks do not live in Iowa all year. They winter in South America and return to Iowa in May. Groups of 20 or more are often seen in late summer, just prior to the fall migration. By the first of October most of them are gone, not to be seen again until the following spring.

So you see, nighthawks are fascinating birds that almost anyone can observe. We cannot easily feed, build nest boxes for, or otherwise help them by normal means. Praise for them seems to have lagged, but they certainly deserve our admiration as a desirable and beneficial nongame bird.

Doug Reeves is the nongame wildlife biologist located at Boone. He holds a B.S. degree from Michigan State University. He joined the commission in 1984.



Hot Summer



Peter Sparks

In Iowa, fishing slows down when the weather begins to get good and hot. Actually, the fish don't quit, the people do.

All fish species feed during June, July and August. Catching them may simply require using different techniques, working new locations, or limiting angling time to the hospitable coolness of morning and evening. In some cases, summer fishing is best. It normally takes a hot, dry spell for larger rivers to come down, following spring rains. Many Iowa lakes also require settled weather to clear. Clear water is important to gamefish that must rely primarily on sight to find food. So, lakes and streams that were muddy in April and May, could hold hungry fish, eager to cooperate once the water clears. Here, then, are some thoughts on catching those favorite fish during the so-called "dog days" of summer.

CHANNEL CATFISH

Channel cats, of course, do not rely on sight to find food and can be taken from turbid water. However, the lower water levels and warm air of summer send these fish into the deepest shaded holes around snags and cut banks of streams. When the rivers are said to be "in shape" for fishing, it really just means that catfish are concentrated and easier to find.

Wading is a great hot-weather method for taking catfish from all but the largest streams. Old sneakers, jeans and a T-shirt, when wet, provide comfortable, natural air conditioning, even on the hottest day of the year. A straw hat band provides a dry place for the fishing license, and a floating bait box attached to the stringer carries tackle and bait. Permission of the landowner is required, of course, on private property.

SMALLMOUTH BASS

Stream fishing for smallmouth bass really doesn't begin until summer. The best time to pursue these great gamefish is from July on, when streams are low and clear and most rods and reels are gathering dust. Bronzebacks prefer

Fishing

By Roger Sparks

rocks, and the bigger the rocks the better. Deep, boulder-strewn holes below rocky riffles will be full of them. Wading and canoeing are the best methods of reaching the seldom-fished spots. Most of the streams in north-central and northeastern Iowa have good numbers of smallmouths. However, stream bass grow slowly and fishing pressure takes its toll on larger fish. A 12-inch minimum-length limit applies on all interior streams, but a total catch-and-release policy can be self-imposed to benefit both bass and anglers.

LARGEMOUTH BASS

The poor cousin of the smallmouth, the largemouth bass, can also be caught in hot weather. Summer bass may come out of deep water in the mornings and evenings, but they won't be far from it. They will lurk in deep snags like man-made fish shelters, around stumps, or on riprap or rocky points. Weed lines near creek-channel drop-offs are favorite cruising lanes and are accessible to wading anglers; otherwise boats are needed. Largemouth bass are the major predator in most lakes and ponds, so catch-and-release fishing is important in maintaining a balanced fishing. Many lakes have length limits to help protect these popular fish.

TROUT

Many of the spring-fed streams in northeast Iowa remain cold enough to support trout during hot weather. Stocking continues well into the fall. Fishing can be particularly challenging during summer since the streams are low and extremely clear. Water cress reaches full growth in the summer, giving trout an abundance of hiding spots. Still, the streams hold a large number of fish from weekly stockings and fishing pressure is somewhat lighter than during spring.

WALLEYES

The Mississippi River offers excellent walleye and sauger fishing. Summer anglers concentrate on wing dams, once the water comes down far enough to

expose the presence of those massive fish attractors. Reservoirs, particularly Rathbun, yield walleyes to boat anglers in July and August, when the water recedes to normal levels. Large fish seem to prefer water 10 to 15 feet deep, around points, and take trolled, deep-diving lures.

MUSKIES

Muskellunge usually go on a rampage for a few days during August. Fishing for muskies during that month may seem like a long shot, but it's still the best chance for a true trophy. Spirit Lake, West Okoboji and Clear Lake are becoming premier musky waters. The tiger musky (hybrid northern pike/musky) has been stocked in many lakes around the state, providing a trophy opportunity for summer fishermen.

PANFISH

Crappies spawn in May and congregate around shorelines, where anxious anglers often line up elbow-to-elbow. But not all crappies are caught in May. In

fact, large crappies and bluegills can be caught throughout the summer from a boat. Drifting with a moderate breeze across open expanses of lakes and bays can fill a cooler with these tasty panfish. The fish are usually suspended some 10 to 12 feet down and readily take tiny leadheads. Most man-made lakes in Iowa provide fair to good fishing for crappies and bluegills during hot weather periods.

Yellow perch are panfish that also offer good summer fishing. They are less predictable than bluegills and crappies, but occasionally provide fast action at sundown on the natural lakes.

The point of all this is that there is no need to stow the tackle when the sun gets high. Hot-weather fishing can be mixed with swimming or wading to keep the body temperature at a comfortable level. It's also a good idea to use suntan lotion on exposed skin, dark glasses and a straw hat. And a jug of ice water is always welcome back at the car.



Panfish can be caught throughout the summer from boats.



Wildflower of the Month

LEADPLANT (*Amorpha canescens*)

By Dean M. Roosa

Leadplant (*Amorpha canescens*) is a shrubby perennial and a fairly common member of the tallgrass prairie flora throughout Iowa. Found on dry or sandy soils, it often occurs in dense colonies which have a whitish appearance (a lead color) hence its common name. Its latin name means generally "without shape," referring to the flower with only one petal, and "gray hairy," referring to the color of the plant due to the whitish hairs.

Tiny purple flowers occur as a spike along the upper several inches of the stems and each has conspicuous protruding yellow stamens.

Native Americans used dried leaves for smoking and for tea. Some species have been used as dyes, and as a treatment for rheumatism and neuralgia.

This legume occurs on most Iowa prairies; perhaps this is the year you should make its acquaintance.

Ken Formanek