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Iowa CONSERVATIONIST

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Front Cover: American Wigeon by Paul Bridgford.

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GRAND SLAM FOR PAUL BRIDGFORD

By Roger Sparks

Paul Bridgford levels his sights pretty high. Having won the Iowa waterfowl stamp and trout stamp contests in previous competitions, the Altoona artist decided last year to shoot for a sweep of all three, duck, trout and habitat contests...in the same year.

Considering the calibre of competition, it seemed to Bridgford's friends that he may as well try to reproduce the *Mona Lisa* on the head of a pin. But last summer, when the paint had dried and the judges had reached a decision, Bridgford had walked away with top honors for all three 1983 designs.

His painting of three wigeon in flight won top honors out of a field of 37 entries in the 1983 state migratory waterfowl competition. Bridgford's brown trout took top honors out of a field of 18 in the trout contest. His excellent painting of three gray partridge (see story on gray partridge elsewhere in this issue) won in a field of 31 entries and will appear on the 1983 wildlife habitat stamp.

In 1980, Bridgford won the waterfowl and trout stamp designs. This year's sweep was, of course, the only year when one artist won all three contests.

The waterfowl painting design will be used on more than 100,000 duck stamps. Revenues collected from the \$5 stamps are used for various waterfowl conservation programs such as land acquisition, development, restoration, maintenance, and preservation of wetlands.

The trout painting will be used on about 50,000 1983 Iowa trout stamps. Iowa's trout program is primarily supported by revenue from the sale of these \$5 stamps which are required for all licensed trout fishermen.

The gray partridge painting will appear on over 450,000 habitat stamps. The revenue from these \$3 stamps will be used for wildlife habitat development within the state.

Prints of each design will be sold by the artist. A percentage of the revenue from the sale of those prints will also go to the Conservation Commission's fish and wildlife programs.

Bridgford has recently taken aim again. He now wants to win the federal migratory waterfowl stamp design contest. A few years ago he finished in a tie for seventh in that highly coveted, lucrative affair. That contest attracts the finest wildlife artists in the business. Still, Paul Bridgford's friends and followers have learned not to bet against him.



1983 Iowa Waterfowl Stamp Design



1983 Iowa Trout Stamp Design



Ron Johnson

A WINTRY TOUR OF VOLGA

by Sonny Satre and Jerry Reisinger

Snowmobiling through the Volga River State Recreation Area in Fayette county can be a quality experience, as I discovered on a visit last winter. Located four miles north of Fayette in Fayette County, the 5,432-acre area provides one of the longest systems of marked trails existing on public land in Iowa. Some 20 miles of excellent trails extend through an area of beautiful winter landscapes and offer visitors the opportunity to see limestone bluffs, dense timber, prairie wildlife, and other facets of our natural environment. Several of us met at the area last January for a long, leisurely-paced ride.

Before starting the trip, we noted that park personnel had groomed the trail. A groomer is a large machine which smooths the trail for better riding conditions and is well worth the \$40,000 or more of the cost-shared snowmobile

registration funds needed to purchase it.

We began our tour along the Frog Hollow Trail (see map). After just a short distance, we stopped to observe a red-tailed hawk (1) perched on a lofty branch of a red oak tree. About a quarter of a mile further, someone pointed out a bee hive tree (2). The honey bees, of course, were dormant on this cold day with the temperature reading 12°F and a northwest wind at 5-10 mph. But come spring, the bees will again be busy making that natural sweet offering I love on my cornbread and toast.

Another half mile from the bee tree, we decide to stop for a spectacular distant view of the 135-acre Frog Hollow Lake (3). Down the trail, we came upon a prairie adjacent to the trail (4). We identified the tops of Indiangrass, big and little bluestem, switchgrass, and other varieties not completely buried by

the deep, heavy snow. We took time to imagine an Iowa that was once a vast prairie like this.

We turned onto the Lake View Trail, which afforded us a much closer view of the lake (5). After a short run and crossing an arched bridge, we stopped to observe an old unused silo, a remnant of a farm site that existed there long before the State purchased the land. We discussed its potential usefulness as an observation tower overlooking the lake (6).

We soon found ourselves on the Lima Trail, where we immediately encountered sheer limestone bluffs on our left. This is among the most scenic snowmobile routes in the state with magnificent bluffs rising 20 feet alongside the trail. Rounding a corner, we came upon a recently constructed bridge over a small clear stream. As we had already

covered almost 10 miles, we decided to stop for a short break, take some pictures, and enjoy the quiet, beautiful valley. We could see tracks where several deer, squirrels, and a raccoon had come to the stream for a drink (7).

The recreation area has a wide diversity of habitat on it and a few minutes brought us to a small cornfield where we decided to stop and check its popularity with the local wildlife (8). The food plot had served its intended purpose. Although the snow was deep, deer and birds, including wild turkeys, had eaten almost the entire 10 acres of the corn.

We proceeded down the Lima Trail. Before covering two miles, we passed through a white pine plantation (9) of some 15 acres of 10 to 20-foot trees. Although these had been planted, white pine is one of only a few native conifers found in Iowa. Further down the trail, a natural spring bubbled through a drinking pipe, offering trail users the opportunity for a cold drink of spring water. Volga River park personnel placed the pipe into the spring for public use and so they too could drink while doing trail maintenance work the year-round (10). After a refreshing pause, we were on our way again.

While at the spring, we decided to take a route leading south a couple of miles to the picturesque Volga River. We observed the pretty stream from the old overhead iron bridge (11). The Volga is a popular canoeing stream, and

is known for its good smallmouth bass fishing. From there, we proceeded toward the ranger station on the Albany and Ridge Trails. We arrived at our destination in about three hours, just as the sun was beginning to set.

We agreed it had been a fun way to spend an afternoon. We didn't cover all the trails in our 18-mile trip and we plan to visit the area again. We were careful to operate our machines on the trails designated by snowmobile signs so as not to harm any part of the outdoors we enjoyed that day. It had been a safe and relaxing trip, with enough excitement to prove again that snowmobiling truly is a great winter activity.

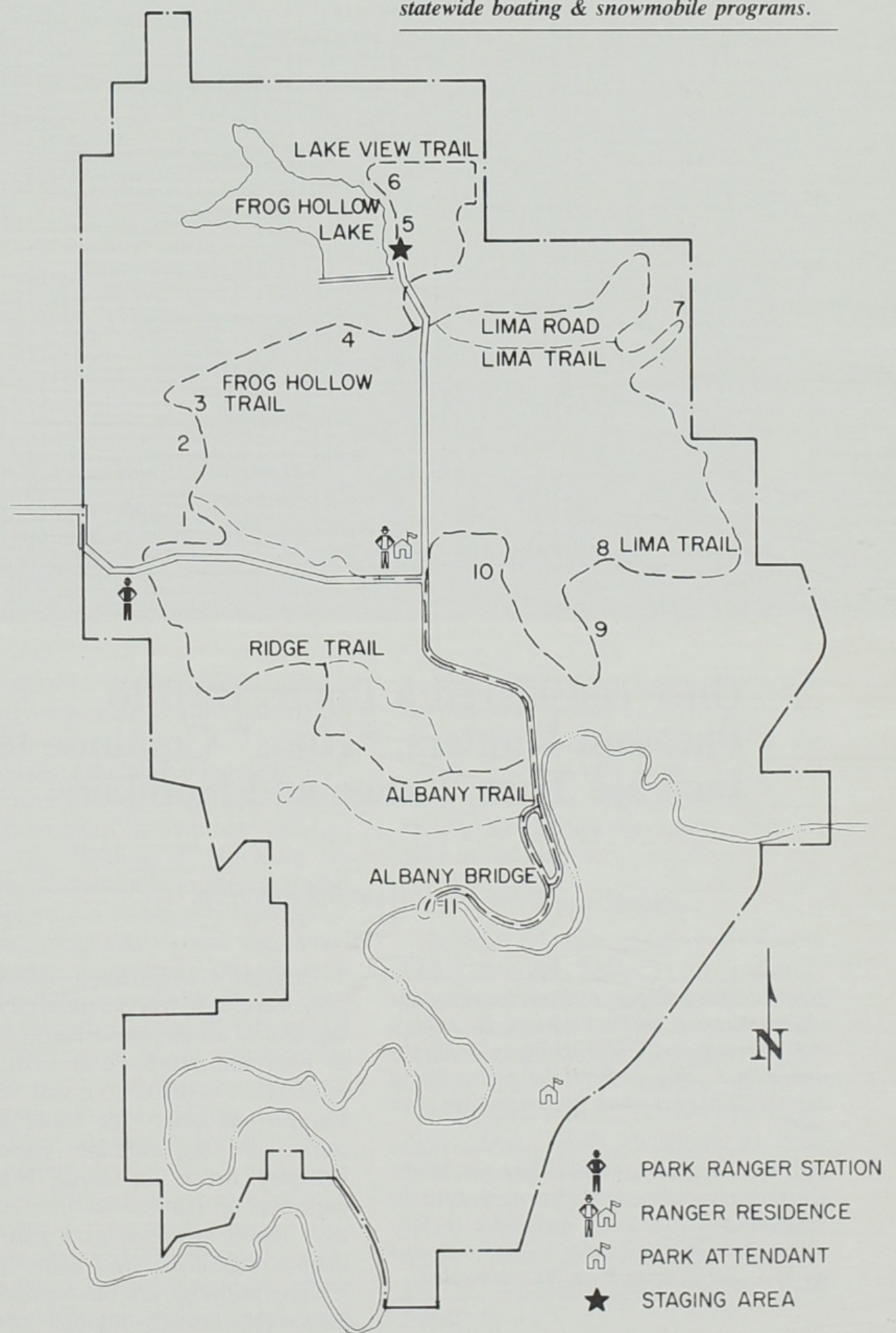
Snowmobilers are encouraged to contact the park ranger at (319) 425-4161 for snow and ice conditions and stop at the ranger station for free trail guides. There is room for the loading and unloading of snowmobiles and snowmobilers are asked to use the lake parking area as their staging area.

Jerry Reisinger is the park ranger for Volga River State Park. He has been with the commission since 1972. During this time he has also served as park ranger at Fort Defiance State Park and Lake Manawa State Park.

Sonny Satre has been employed with the commission since 1963. He has served as managing editor of the Iowa Conservationist and is presently safety coordinator for the statewide boating & snowmobile programs.



Ron Johnson



1983 Habitat Stamp Design by
Paul Bridgford

GRAY PARTRIDGE

**Once considered a Bonus Bird to
Pheasant Hunters, "Huns" Continue to
Increase Their Range and Numbers.**

by Jim Wooley and Bill Rybarczyk

Jim Wooley is a wildlife biologist located at the wildlife research unit in Chariton. He holds a B.S. degree from Central Michigan University and a M.S. degree from the University of Maine. He has been with the commission since 1977.

Bill Rybaiczek is a wildlife biologist at the Chariton research unit. He has worked for the commission for 5 years and holds a B.S. degree from the University of Wisconsin and an M.S. degree from Iowa State University.

Originally a Eurasian species, the gray partridge was successfully introduced into north-central North America in 1908 and into Iowa in 1910. While this species is native to a vast region of Europe and Asia, the birds used in initial stocking attempts came from Hungary hence the name Hungarian partridge or Hun came into common use. Today, however, gray partridge is the scientifically correct name.

Gray partridge are most numerous in intensively-farmed regions of north-



central and northwestern Iowa. However, gray partridge are currently increasing in numbers and expanding their range. Recent reports indicate this species has been observed in two-thirds of Iowa's 99 counties.

Identification:

Gray partridge are very wary, compact, heavily-featured, seed-eating, quail-like gamebirds. Their bodies are generally gray-brown in color with russet barring on the flanks and cinnamon markings on the face and head. Russet tail feathers provide an excellent field mark for birds observed in flight. Sexes are very similar in appearance. To a trained field observer, the cinnamon-colored facial markings on adult males are more pronounced than those on females. In the past, many sportsmen have mistakenly identified the large horse-shoe-shaped, chestnut-colored patch on



the lower breast as an exclusively male characteristic in gray partridge. While this patch is most common on males, it is often found on females and is occasionally absent on males. Neither sex has spurs on the legs.

Adult gray partridge are intermediate in size between bobwhite quail and ring-necked pheasants. They weigh slightly less than a pound and are approximately 10-11 inches in length.

Reproduction:

Gray partridge select mates and establish weak pair bonds while still in their winter coveys. Timing of pair formation is related to weather and snow conditions. As soon as thawing exposes large areas of bare ground, pairs begin to segregate themselves from other covey members during daylight hours but reform into a covey at night, or during severe weather. There

is considerable shifting of partners at this time of year until firm pair bonds are established.

Mated pairs establish a breeding territory which the male advertises to other partridge with his "rusty hinge" call and defends by fighting if necessary. In Iowa, nests are usually located in undisturbed bluegrass or smooth brome grass cover near road ditches and abandoned farmsteads. Nests are occasionally located in alfalfa hayfields or oats. The nest consists of a scrape in the ground lined with grass or leaves. While some nests are initiated as early as mid-April, most nesting in Iowa begins about the 20th of May. The female lays from 10 to 20 olive green eggs over a 2 to 3 week period carefully covering the eggs with nest material after each egg is laid. Once the clutch is complete, the eggs are incubated by the female for about 24 days while the male stands guard

nearby. Within a few hours after hatching, the chicks are able to leave the nest. Both parents help care for the young. These family groups along with other adults that were unsuccessful in raising young form the coveys observed later in the year.

Food Habits:

Insects and other invertebrates supply badly-needed protein for rapidly-growing chicks. Weed seeds, waste grain, and green leafy material become important in the diet of older birds. During the summer months, partridge broods often feed in the cover provided by soybean fields switching to corn fields in early fall. In winter, partridge will scratch and burrow under snow in search of waste grain and green vegetation. Some studies indicate partridge eat much more green matter than pheasants.

GRAY PARTRIDGE

Limiting Factors:

As with pheasants, lack of suitable undisturbed nesting cover is thought to be an important limiting factor for gray partridge. Mowing and burning of road ditches during the nesting season and removal of old farmsteads and fence-rows greatly reduces the amount of available nesting cover in some parts of Iowa.

Unlike pheasants, lack of winter cover does not seem to be a serious limiting factor for gray partridge. Even during bitter cold weather partridge can be observed feeding in open, wind-swept soybean fields or fall-plowed cornfields apparently oblivious to the lack of cover. Rugged winter weather conditions in the northern regions of its native Eurasia seem to have better prepared the gray partridge for winter survival when compared with the ring-necked pheasant which is native to the milder regions of central Asia.

Deep crusted snow during some winters can prevent partridge from finding enough food. Under these conditions, partridge may adapt by feeding around corn cribs or feed lots.

A number of researchers have reported that partridge numbers tend to increase whenever pheasant numbers decline indicating some sort of interspecific competition. However, as pheasant habitat conditions decline, partridge may simply be better adapted to surviving in the remaining short, thin cover. Recent Iowa studies indicate another mechanism may be involved. Wild ring-necked pheasants often carry low-grade, chronic infections of black-head disease. Pheasants are not generally harmed by this disease, but partridge chicks are extremely susceptible to the disease during their first few weeks of life. While it has not proven in the wild, large pheasant populations may provide a reservoir of infection which is not overcome by partridge until pheasant numbers decline.

Broods raised along heavily-traveled roads can suffer substantial roadkill losses. Hawks and owls take some

partridge during the winter and skunks and other mammals catch nesting hens and destroy nests, but predation as a whole does not appear to be too serious for partridge in Iowa. Hunting mortality is usually very low due to the wary nature of the birds.

Management Needs:

Gray partridge seem to be able to survive and even increase in numbers in intensively-farmed regions unsuitable for other upland gamebirds. However, delay of roadside mowing until after the nesting season, and protection of other idle grassland areas is very important for successful partridge reproduction.

Previous stocking efforts by Iowa Conservation Commission personnel are probably responsible for some of the partridge range expansion reported in south-central and southwestern counties. Introduction of gray partridge into southeastern Iowa is currently underway.

Additional research is needed to further evaluate limiting factors among partridge populations.

Hunting:

Ever since the invention of firearms, gray partridge have been an important gamebird in Europe. Beaters were often used to drive the birds toward shooters stationed at the ends of fields. It is interesting to note that during the 1700's, Germany had a "cocks only" season on partridge. As the birds flushed towards them, the shooters selected only those birds with the dark horseshoe mark on the lower breast. Since the horseshoe mark is not a reliable method of determining sex, the German hunters were obviously killing some hens, but this "cocks only" hunting system was used for many years.

From the beginning of the first partridge hunting season in Iowa in 1953 until the mid-1960's, gray partridge were usually thought of as a "bonus bird" for pheasant hunters. However, as pheasant populations declined in northern Iowa and partridge populations increased, some hunters began to take

partridge hunting more seriously. Prior to snowfall, partridge can be hunted in picked cornfields or open grassy areas in much the same manner you would hunt pheasants. As mentioned earlier, gray partridge are wary and will usually flush as a covey squawking their warning calls while the hunter is still 30 to 40 yards away. If the hunter is a good shot and is armed with a 12-gauge, full choke shotgun he may be able to bag one or more birds before they get out of range. Partridge are not difficult to knock down; hitting them is the problem. After flying for several hundred yards, the covey will usually alight as a group on open ground. If the birds are followed up, the covey will probably flush just before the hunter gets in range. If this tactic fails to discourage the hunter, the birds may eventually set down as singles in a grassy area or hayfield. Singles seem to hold much better than the covey, and may provide some excellent close-range shooting.

When there is snow on the ground, partridge are easier to locate but often more difficult to approach. Under these conditions, some hunters may have found they can get closer to these wary birds if they are wearing white coveralls.

Bird dogs are not essential for partridge hunting, and a wide ranging dog would probably flush the birds far beyond gun range, but well-disciplined, close-working dogs might be a real asset in partridge hunting.

Once the bird is bagged, it is important to care for the meat properly. The hunter should either remove the internal organs or dress the bird immediately after the hunt. An overloaded hunting coat or stuffy car trunk is not recommended for cooling meat. Partridge meat is much darker than that of pheasants, but almost any pheasant or chicken recipe would work on partridge.

Iowa's annual gray partridge harvest has risen from about 12,000 birds during the mid-1960's to well over 50,000 in recent years. Some years, the partridge harvest has even exceeded 100,000 birds.

CONSERVATION UPDATE



Governor Ray Thanks Land Givers

In a recent ceremony in Governor Ray's office, he extended his personal appreciation, and that of the Conservation Commission, to individuals who have made some exceptional gifts for the future of conservation. From the left, Tubaugh Bros., Inc., Richard, Russell, and Ray (Roy not shown) provided a bargain sale of land on 535 acres in Appanoose County adjacent to Stephens State Forest, for a savings of about \$60,000 off the appraised value of the tract. Mrs. William Burk of near Wever, representing her husband who was too ill to attend, accepted the Governor's thanks for an outright donation of 56 acres valued at about \$26,000. The Tubaugh and Burk properties will be public wildlife areas. Next to the Governor, Mr. and Mrs. Joseph Strasser of Des Moines provided an outright gift to the Commission, via the Iowa Natural Heritage Foundation, of 40 acres in the northeast part of Des Moines and called Strasser Woods. That area has been designated a state nature preserve, and is valued at \$138,000. Strasser Woods was publicly dedicated Nov. 30.

Editors Note:

William Burk, at the time this magazine went to press, was transferred from a hospital in Burlington to North Carolina, undergoing treatment for a major illness. Before he left Iowa, he said, "I want people to hear about how I gave some of my land for wildlife conservation, so they can look into the benefits available to them and to the future of our natural resources."

Estate Heirs Can Help Conservation

A new state law is being used for the first time, resulting in a strip of private shoreline at Black Hawk Lake being turned over to the Iowa Conservation Commission for public appreciation and use.

The law, passed in the 1981 legislative session, allows heirs of an estate to pay their state inheritance taxes by giving the state land in lieu of money. The estate of John J. Christian, left to Dorothy Drilling of Lake

View, represents the first use of this new law. The Christian land measures 70 feet long by about 6 feet wide.

More information may be obtained from your tax advisor or the State Department of Revenue.

TIME TO REGISTER SNOWMOBILES

Now is a good time to renew snowmobile registrations as all current registrations expire December 31.

Beginning in January, registrations will be valid for two years; January 1, 1983-December 31, 1984. All snowmobiles can be registered with the county recorder in the county in which the owner resides. There is a registration fee of \$12 plus a writing fee of \$1.

Any unregistered snowmobile can also be registered for the remainder of the current year and the subsequent two years. The fee is \$15 plus a writing fee of \$1.

The Commission also noted that copies of the state's snowmobile regulations are available at county recorder offices and from conservation officers throughout the state or by writing to the Iowa Conservation Commission, Wallace State Office Building, Des Moines, Iowa 50319.

Tea Service Donated

The Conservation Commission recently accepted a donation of an historic tea service for the Plum Grove State Park facility.

The tea service was brought to Plum Grove, home of Robert Lucas, first Territorial Governor of Iowa, by Mrs. Betty Numerof of Edison, New Jersey, and Mrs. Lucille Kapitan, of Griffith, Indiana. According to Mrs. Numerof's family history, the service was presented by Mrs. Lucas to her grandmother in the late 19th Century.

The service is silver plate on copper and of the ornate "repousse" pattern, raised floral design, and its appraised value is \$800.



ENVIRONMENTAL ENRICHMENT PROJECT

by Lisa Bartusek

Over 400 groups statewide are working this fall to solve environmental problems facing Iowa. They're learning first hand about soil erosion, energy conservation and other issues, and will then attempt to come up with workable solutions to the problems, and put their solutions into practice.

These "environmental interest groups" are Iowa students in grades K-12 whose teachers have volunteered to field test environmental education materials developed through the Department of Public Instruction and several other state agencies.

These materials encourage the development of an ethical concern for the environment and are designed to make the students feel they are an integral part of their surroundings and natural heritage. But perhaps most important, these materials can help children learn how to solve environmental problems in later life.

"The activities are designed to focus on environmental problems and specific situations in Iowa," says Dave McCalley, program development director, and professor at the University of Northern Iowa. The activities deal with topics like air, water, human habitat and environmental heritage. Each activity is targeted for one or more of the program themes — aesthetics, energy flow, interdependency, life style, stewardship and cultural evolution.

Some activities are simple awareness tasks, like letting elementary-age youth collect soil samples and make soil "paint" to help them differ-

entiate the colors and textures of soils found in Iowa.

Most activities, however, are designed to go beyond environmental awareness; they use a learning cycle that provides for awareness, understanding, valuing and decision-making, McCalley says.

"The activities use a developmental learning approach which focuses on the children and their ability to understand," he says. The project is aimed at four age groups, grades K-2, 3-5, 6-8, and 9-12.

"Each activity is a complete learning cycle. The first step is a hands-on exploration phase, which should lead the kids to finding the problem on their own," McCalley says.

The next step is the invention phase of the activity, where the students determine a way to solve the problem. The application phase lets the children apply their solutions to an immediate concern that can be found in the classroom, their home, or the school.

The activities were designed as supplemental or enrichment materials that will fit in easily with existing curriculums. Most activities require very little material beyond that regularly available in the classroom, and require little or no formal environmental background on the part of the teacher.

Field testing will provide the designers of the program with information about any problems in the activities, and suggestions for improvement. McCalley estimates that each activity will be actively tested by four or five teachers, and

many other educators will evaluate activities on the basis of reading them.

Some of the materials will be tested in Australia. A representative from New South Wales, Australia, contacted the developers when he read about the project in a Department of Public Instruction (DPI) newsletter.

"Since Australia has a strong agricultural character like Iowa, it will be interesting to see how materials designed just for Iowa will work in another setting," McCalley says. Three Australian states will test the materials.

Preliminary research for the project was conducted by Nancy Geske, UNI graduate assistant, and supported by the Iowa Natural Heritage Foundation.

Twenty-two writers, editors and program directors developed the materials — over 175 different activities — during a six-week period last summer. Duane Toomsen, DPI environmental education consultant, directed the project.

Several agencies cooperated in the development of the project. Funding was provided by the DPI and the Iowa Natural Heritage Foundation. State agencies representing conservation, environmental quality, soil conservation, agriculture, energy policy, geology, natural resources, development, arts, transportation, and others provided input and background for the activities.

After a final edit this winter, the materials should be ready for distribution in the summer of 1983. Eight one-week in-service workshops are being planned to be held at the Conservation Commission's Springbrook Conservation Education Center to distribute the materials, and help teachers fit them in with existing curriculums.

Eagle Survey Date Set

Target dates for the annual Midwinter Bald Eagle Survey are January 7 or 8, 1983.

The survey is a project of the Raptor Information Center in the National Wildlife Federation. In order to avoid duplication of counts, efforts are made to conduct all counts simultaneously, in as many areas as possible across the state. Counts reported between January 2 and 16 may be used if they do not duplicate target date counts.

Last winter 246 adult bald eagles and 82 immature birds were counted in Iowa. Of those, 130 (102 adults and 28 immatures) were seen inland from the major boundary rivers. Jackson and Lee counties reported the most birds followed by Clinton and Fremont counties. Des Moines, Dubuque and Harrison counties also had good numbers of eagles.

Counts are conducted by the Iowa Conservation Commission, Fish & Wildlife Service and Corps of Engineers personnel, assisted by concerned citizens and environmental groups.

Nongame Biologist Dave Newhouse is the Regional Coordinator for Iowa. People who wish to participate in the survey should contact their local conservation officer or wildlife biologist to coordinate counts. For report forms, contact Dave Newhouse at the Wildlife Research Station, R.R. #1 Boone 50036.



Hunter Safety for Southeast Asians

Hunter Safety, Ethics Taught to Refugees

There has been considerable interest in the new mandatory hunter safety course from throughout Iowa, including a good number of our newest residents from Southeast Asia. Iowa Conservation Commission personnel with the assistance of a Southeast Asian interpreter recently certified, as volunteer instructors, 15 Laotian, Cambodian, and Vietnamese from Grinnell, Storm Lake, Fairfield, Davenport, and Des Moines. These new instructors with the assistance of Commission personnel will teach refugee youngsters the importance of hunter responsibility and ethics, safe gun handling, Iowa hunting laws, bow hunting and safety, survival and first aid, history of firearms, and game care and identification.

The mandatory hunter safety course will be required for all persons born after January 1, 1967, in order to purchase a hunting license. This new law becomes effective July 1, 1983. The minimum age for taking the course is 12. Volunteer instructors certified by State Conservation officers will teach the required eight-hour course.

Persons interested in becoming volunteer instructors should contact their local State Conservation officer. Those unsure of how to get in touch with an officer may contact the county sheriff or write to the Iowa Conservation Commission, Wallace State Office Building, Des Moines, Iowa 50319, telephone number (515) 281-6824. Anyone interested in taking a hunter safety class should contact the local conservation officer.

State Ecologist Honored

Iowa Conservation Commission employee, Dean Roosa is Iowa's state ecologist. Recently he received the honorary degree of doctor of science from Grinnell College at their spring commencement exercises. Roosa also received the Distin-



guished Service Award from the Iowa Academy of Science at their annual meeting this spring.

An acknowledged leader in conservation activities, Roosa is one of the founders of the Iowa Natural History Association. He initiated Iowa's endangered species research program and has been instrumental in acquiring cultural, historic, archeological and biological areas for the State Preserves Board. Roosa has been a principle participant in the development of television productions on wildlife preservation and conservation of natural resources. He is among the state's leading authorities on endangered species and prairie preservation in Iowa.

Hunter Numbers/License Receipts Highest Ever:

The number of licensed sport hunters in the U.S. set a new record in 1981, according to the Wildlife Management Institute. The receipts from license sales to sportsmen also were the highest in history.

In 1981, 16,638,584 sport hunters paid \$242,366,371 for licenses and permits. Compared to 1980, that is 381,510 more hunters and 20.2 million more dollars.

Fishing appears to be maintaining its popularity also. There were 29,277,241 licensed anglers in 1981. They paid \$212,944,873 for those licenses. Both of those tallies are record figures too.

Hunting and fishing license receipts are collected by state fish and wildlife agencies and are the major source of funding for fish and wildlife management activities at the state level.

Aside from the 1981 license fees, hunters paid \$120,887,999 that year in manufacturers' excise taxes on sporting arms, ammunition and archery equipment which also go to state wildlife

agencies for wildlife conservation. Fishermen paid \$31,943,626 in similar taxes that fund state fisheries programs.

Other sportsman contributions to wildlife conservation in 1981 include the Duck Stamp sales receipts. Those funds are used by the U.S. Fish and Wildlife Service to acquire additions to the National Wildlife Refuge System. Last year sportsmen paid \$13,465,702 for federal Duck Stamps which are required for those more than 16 years old who hunt waterfowl.

Through 1981, sportsmen have paid more than \$3.3 billion for state hunting licenses. They have contributed \$1.2 billion in manufacturers' excise taxes on sporting arms, ammunition and archery equipment. They also have provided more than \$226 million in Duck Stamp receipts.

Over the years, anglers have paid more than \$3 billion in license fees and \$393 million in excise taxes on fishing equipment.



Shooting Sports...Pro and Con

Dear Aunt Martha:

I hear through the grapevine that the school here in town is thinking of starting a gun club for students [or something to that effect]. I want to go on record as saying that I am very strongly against this. I think that guns are a terrible thing and I will not allow one in my house under any circumstances. The thought of having gun practice in a place of learning makes me shudder. What is this country coming to?

I have seen statistics saying that there are more gun murders in the United States per person than in nearly any other civilized country. I realize that these are primarily handguns, but as far as I'm concerned, the fewer guns the better. I don't think guns should be promoted for recreation or any other purpose. Especially not at a school!

[Name withheld by request]

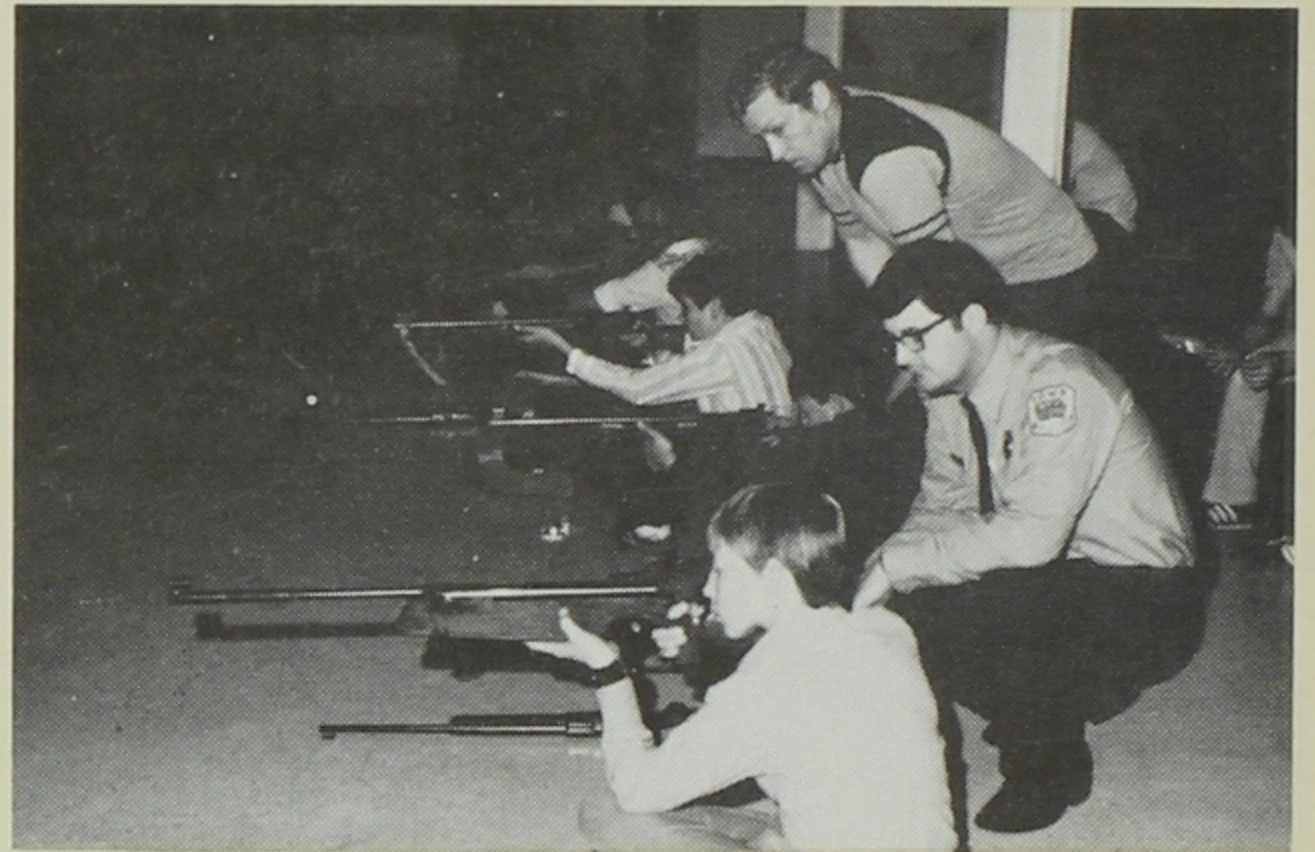
Aunt Martha Says: I haven't really heard anything about a gun organization at the high school. I would also have to admit up front that I, too, am against guns but I would also have to admit that I am prejudiced against them because my husband was involved in a very serious hunting accident some years ago (maybe this is a good enough reason to be against them!). However, I also realize that target shooting is a legitimate sport enjoyed by thousands of very responsible people and under the right conditions is certainly no more dangerous than football. Still, the idea of a school sponsored gun club rubs me the wrong way. Are there any gun enthusiasts out there who could enlighten me? Write to me in care of the MARION COUNTY NEWS and I'd be glad to share your opinions.

The following letter is in response to the column entitled Ask Aunt Martha which appeared in the Marion County News Sept. 30, 1982.

Dear Aunt Martha:

I would like to thank you for your professional objectivity concerning the attempt to establish a shooting sports program in the Pleasantville School System. I have no desire to change your personal opinion about guns. You and the person who wish to remain anonymous have every right to your personal views regarding guns. However, I would like to mention a number of points that should be considered before a final decision on a Youth Shooting Sports Program is announced.

School systems throughout the country presently provide young people opportunities to participate in sports such as football, wrestling, baseball, basketball, and track. All of the extracurricular activities involve relatively large expenditures for playing fields, lights, P.A. systems, equipment, coaching, medical supplies and staff, etc. A significant number of participating young athletes will suffer various injuries during their relatively short athletic careers. Some of these injuries will be severe enough to require corrective surgery. Most of the participating students will engage in such pursuits only through their formal educational years. They then give up the activities because of age, physical condition, injury, or lack of opportunity to play. In some cases, only the very best are provided the opportunity to compete with any degree of regularity and for years girls were not allowed to participate. That is being corrected today, but at the expense of segregating



sexes, requiring more coaching hours, more equipment, and other support services. Yet most people are quick to support these programs. This is not intended to be a criticism of contact sports. If they didn't provide a number of positive opportunities for youths they wouldn't remain such an important element in the education system. However, even a casual observer can see certain risks and drawbacks to such programs. Such concerns, while they do exist, are placed in proper perspective so that such programs can continue to be implemented. This type of approach should be used in evaluating shooting sports as well.

I would like to see the education system devote more time to instruct the young people in the pursuit of sports that they will be interested in and capable of pursuing later on in life. Such things as golf, bowling, pocket billiards, archery, and shooting sports. Activities they will be able to enjoy throughout their adult lives including their retirement years. Sports that do not extract such a severe physical toll from participating competitors. Past records indicate that shooting sports have a much superior health and safety record than any of the contact sports mentioned.

I think instead of criticizing the local club the community should be applauding the local men and women who are interested enough to donate their time and expertise to train and supervise the Pleasantville youth interested in shooting competitively. Postal matches would be utilized thus no expensive busing or travel would be necessary.

Shooting sports provide opportunities for girls and boys to compete with and against one another on a completely equal basis. Shooting sports can provide young people, who are physically unable or are just uninterested in contact sports, to earn a school letter and exhibit an ability to perform and excel that might otherwise go completely unnoticed. Since the long-term costs of such a program are so low and the longterm benefits so great, I feel it would be a travesty for the community to deny its local youth and its adults this opportunity to share the rich rewards connected with this type of program.

Sincerely,

RICK MCGEOUGH
A MEMBER OF
PLEASANTVILLE RIFLE
AND PISTOL CLUB

Conservation Officers Top Shots



Conservation officers shooting team left to right, back row, Steve Pierce, Dick Johnson and Lon Lindenberg. Front row, left to right, Dan LeClair, Mike Ashby and Rick McGeough. Al Roemig not pictured.

He had never fired a handgun before he started working for the Conservation Commission. The first time he shot at a target with a revolver was when he had to qualify for the department. He soon realized the sidearm was a necessary tool of his new job, and that some day he may have to rely upon it. The recruit began to practice. Today, ten years later, Rick McGeough of Indianola is the Commission's Law Enforcement Superintendent and a member on one of the best shooting teams in the midwest — the Commission's conservation officers.

This year, McGeough, along with Mike Ashby of Clear Lake, Dick Johnson of Missouri Valley, and Steve Pierce of Waterloo, placed second in the state. McGeough, Ashby, Pierce, along with Al Roemig of Osage, and Lon Lindenberg of Des Moines, earned fourth place honors at the Bisil Irwin Memorial Tournament.

The individual officers are also good marksmen. Nationally, Pierce and Lindenberg placed in the master, or second division. McGeough ranked in the expert, third division. Just a month before that, McGeough placed in the master class, the top ranking at the state shoot. The rest of the first team followed in the distinguished expert group. McGeough was the high scorer on the team at the state and Bisil Irwin shoots. Pierce took first place honors in the state shotgun competition, and Ashby was high team member in the nationals.

The most prestigious competition for the officers is the Bisil Irwin Memorial Shoot held in August. This tournament is just for game wardens from Iowa, Minnesota, Wisconsin, Michigan, Missouri, Indiana, Illinois, and the U.S. Fish and Wildlife Service. Iowa and Minnesota are tied with five team wins each, since 1967. Only two traveling trophies are award-

ed at the Bisil Irwin, one for high individual shooter, and one for the best, five-man team. Ashby has won it three times, Roemig and McGeough once.

McGeough says there are basically three advantages to being on the team. First, it keeps the officers familiar with range procedures and commands. The competition creates an interest in maintaining a shooting proficiency. Also, the team member's excellent shooting ability helps create credibility between the firearms instructors and their men, as well as with other law enforcement agencies.

Although all the contests feature stiff competition, it is friendly between the officers. At the state shoot last year, Pierce held the lead in the two-inch revolver competition when he offered to loan his gun to McGeough, who was in the same competition. McGeough returned the favor by taking first place, moving Pierce to second.

Book Review

THE AUDUBON SOCIETY ENCYCLOPEDIA OF ANIMAL LIFE edited by John Farrand, Jr.

606 pages. Illustrated with photographs. Published by Clarkson N. Potter Inc. Distributed by Crown Publishers, Inc., One Park Avenue, New York City; 1982. Price \$45.00

This one-volume encyclopedia may be the most comprehensive available on animal life in general. The 350,000-word text was produced by a group of distinguished scientists who are authorities in their respective fields.

Photographic coverage is rich and diverse, with more than 1,000 full-color and black and white photographs by outstanding wildlife photographers.

All groups of animals — protozoans, sponges, mollusks, insects, starfishes and other invertebrates, as well as fishes, amphibians, reptiles, birds, and mammals — are covered in depth. Fascinating aspects of life in the animal world are depicted: physical characteristics, courtship, mating, birth, growth, habitat, defense mechanisms, feeding, and ecological adaptations.

Animals are grouped according to the most recent classification. An extensive introduction to the book includes an explanation of this modern classification and discusses animal evolution.

Based on the highly respected seven-volume *WORLD OF NATURE* series, this book is an affordable and lifetime reference work that will prove valuable to naturalists, students and general readers alike.



How Do You Rate as a Hunting Partner

There's the story of the hunter who was determined to find the perfect hunting partner. After more than a few years, he was sure that he had finally found a candidate that met all of his high standards. Unfortunately, they hunted together only once. He later learned that the man he had chosen was also searching for the perfect hunting partner.

Perfection, of course, eludes all of us. How often have we forgotten to pack in an extra sandwich or box of shells or that our partner drinks his coffee with milk? These faults are universal, and we could all compile our personal list of such shortcomings. However, when it comes to hunting safety or hunting ethics, forgetfulness or carelessness provide no excuse.

When you go afield this fall, whether it's with an old hunting buddy or with a new friend, keep the following points in mind. They are just some of the things that will help make you that "perfect" hunting partner.

- If you'll be hunting on private land, be sure that you've obtained permission in advance. Landowners who find uninvited hunters on their property have every reason to be upset. Besides, it is against the law in Iowa to trespass on private land. It doesn't help the public image of hunters, and your partner(s) deserve better.
- If at all possible, stop by the landowner's house be-

fore you start hunting. Take the time to introduce your partner(s) to him, and check to see if there are any areas on his property that you should steer clear of. Most landowners don't mind if you bring a friend or two along, but don't invite the whole gang.

- If you are hunting with a novice, explain to him the habits and characteristics of the game you are hunting and the proper etiquette for the kind of hunting you're doing. Taking unfair advantage of game by a novice may be an act of ignorance, not callousness.
- When you're out in the field, keep in mind that you are not in competition with your partner(s). Instead of arguing over who shot a bird, compliment your partner on making a nice shot. Adopt this attitude, and both you and your friends will have an enjoyable day afield and pleasant memories of the hunt.
- Make sure that everyone in your group understands that safe gun handling should always be the foremost concern. Be especially careful not to shoot across your partner's path, swing your muzzle in his direction (even if your gun is unloaded), and be sure to always know where your partner is.
- Keep in mind that the measure of the hunt is largely a measure of yourself, whether you are hunting alone or with others.

CLASSROOM CORNER

Have you spent time listening to your area biologist? They have a lot of good information on fish and wildlife.

An interesting point made recently was that fish and wildlife management is seldom the management of fish and wildlife at all. It is the management of people.

A majority of the biologist's time is spent reviewing what people are planning to do with wildlife habitat, trying to determine how much of the resource is available for people to use, and otherwise trying to get people to interact with wildlife and habitat in a desirable way.

Regulations, the main stay of most fish and wildlife management efforts, are almost all people management in nature. They restrict how many people may use an area, how many animals people may harvest, how and when people may harvest them, and what you can do with them once you have them.

Regulations may be either social or biological. The first are ones based on people considerations and have little to do with wildlife biology. Hunter Safety and trespass laws are examples. Biological regulations are designed to benefit or protect wildlife. The 14 inch minimum for bass taken from certain waters is an example of biological regulations.

In either case, it is the responsibility of the management agency to insure the resource is available for future generations.

How are these regulations determined? No one really knows how many fish or wildlife we have in Iowa. We know pretty closely how many types of animals, but the number of individuals in each population remains unknown. There is no way one can see or count every last one of any wild species.

Biologists spend a great deal of their time conducting a population census or inventory. This is how they are able to achieve an *estimate* on the total numbers of wildlife populations. They can tell if it is increasing or decreasing from the last years.

Inventory information is gathered in a systematic manner by repeating the same count in the same manner at the same time every year. This sampling process assumes that a representative site has been selected and conditions are similar each year.

Some census that the Commission does are: The August road site count for pheasants, the gobbling survey for turkeys, the raccoon spotlight count, and the aerial deer count.

The deer count, as an example, the plane travels the same lines every year when the count is made. They don't count every deer, just the ones along this selected route. The biologist follows this up by setting up ratios for determining the best guess for deer in this habitat in a county or area.

You can develop your own census or one with your class. First, devise a method for counting some type of wildlife in your area that does not require you to see the animal. Set up routes, say by the students to and from school, or as an entire class by some representative habitat. Take the information and set up some laws for your species. (You can count in school "critters" if your surroundings just won't work.)

Also, obtain a synopsis of the hunting or fishing regulations. Decide which regulations are biologically based and which are social. Review old copies of the Iowa Conservationist and determine which activities are people management and which are wildlife.

1983 Boating and Water Safety Poster Contest

By Sonny Satre

Boating Safety Coordinator

It's time for the Third Annual Boating and Water Safety Poster Contest, held each year in conjunction with Iowa Safe Boating Week. The contest is conducted by the Iowa Conservation Commission, in cooperation with the U.S. Coast Guard Auxiliary, Des Moines Power Squadron, and the Iowa Chapter of the American Red Cross. Co-sponsor of the contest, the IMT Insurance Company of Des Moines, is providing the prizes and plaques to be awarded the winners.

School children in fourth through sixth grades throughout the state are eligible to enter, and students will have the chance to win one of the cash prizes. The first prize winner will also be invited to attend the signing of the Safe Boating Proclamation to take place in the Governor's Office at the State Capitol.

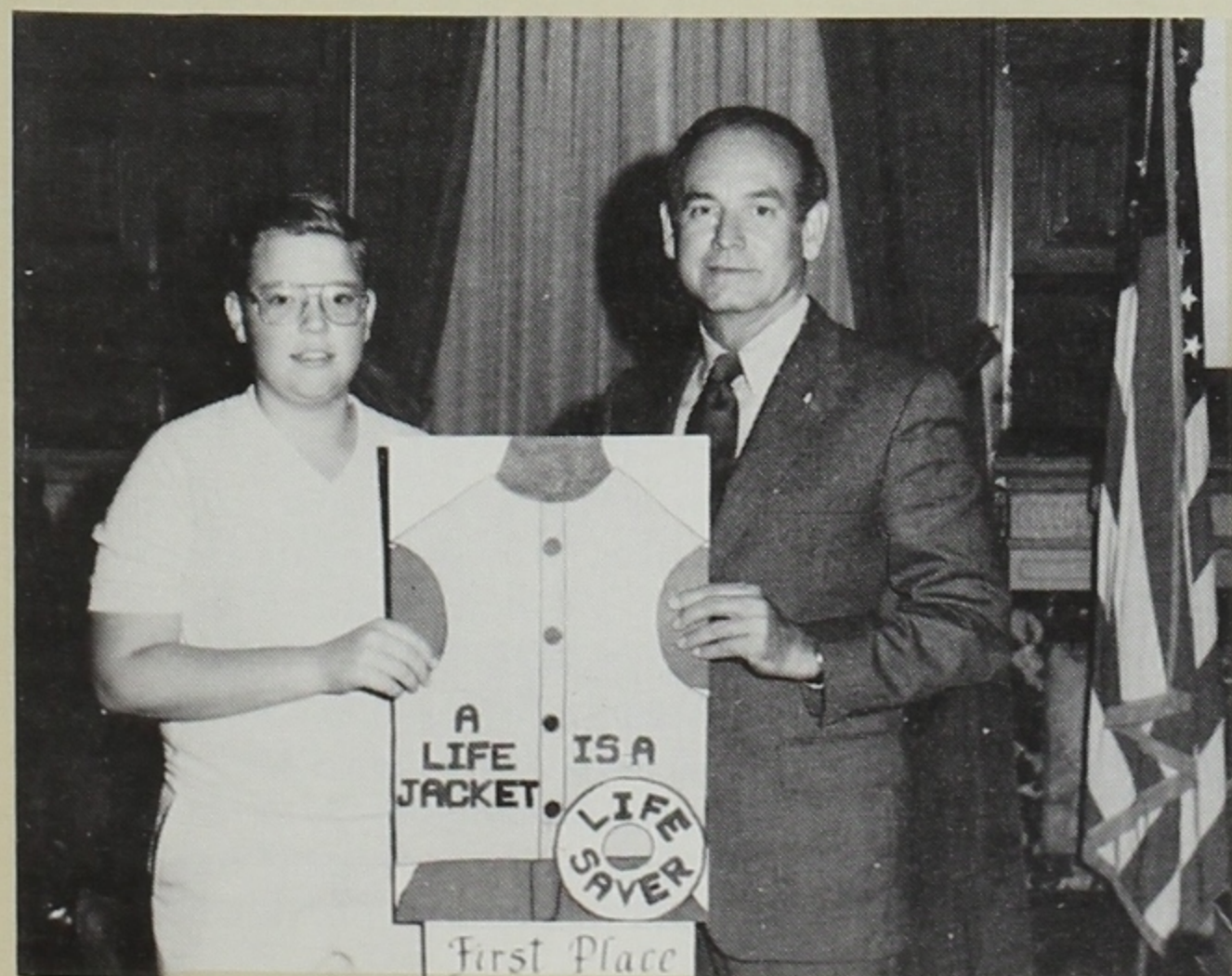
Prizes for the contest are: First prize — \$100 savings bond; second prize — \$75 savings bond; third prize — \$50 savings bond. Each winner will also receive a plaque.

The theme for this year's contest is "Learn to Swim — the No. 1 Rule for Water Safety". Suggestions for the theme are:

1. Know your ability to swim.
2. Choose a safe place.
3. Never swim alone.
4. Never dive into strange waters.
5. If in trouble, don't panic...save your strength.
6. Always swim with, or diagonally across, the current.

These ideas are suggestions only. As long as the theme is depicted in some way, the poster will be accepted.

The Boating and Water Safety Poster Contest is an important method for promoting water safety education. Good luck to all the participants.



Contest Rules

1. The poster must be drawn on poster paper 15" by 20" or 14" by 22". Students may sketch their design lightly with pencil, but it must be colored. There is no limitation as to the type of media — such as paint, crayon, cut paper, etc., but it should be easy to reproduce.
2. Posters must be designed on a verticle plane rather than horizontal plane.
3. The official entry form must be completely filled out and attached to the back of the poster.
4. Posters may be packed and wrapped flat or mailed in a sturdy sealed mailing tube. Entries must be postmarked or received by February 1, 1983.
5. Entries will not be acknowledged or returned. All entries become the property of the Water and Boating Safety Committee of Iowa.
6. Winners will be contacted by mail and listed in the Conservationist Magazine.
7. Children of the judging committee may not enter.
8. The right to modify any poster for reproduction is reserved.
9. Magazine illustrations or copyrighted material may not be used.
10. Each winner will be awarded a savings bond and a plaque. Other deserving participants will receive honorable mention.

To Parent or Teacher:

To the best of my knowledge, this is the original work of my child/student and represents his/her level of ability.

Signature of Parent/Teacher

Check One: () Parent () Teacher

All entries must be postmarked no later than deadline date of February 1, 1983. Address to: **Iowa Conservation Commission, Wallace State Office Building, East 9th and Grand Avenue, Des Moines, Iowa 50319.** Fill out entry form completely and secure it to the lower left hand corner of the back of the entry.

Official Entry Form (Please Print)

NAME _____ PHONE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

NAME & ADDRESS OF SCHOOL _____

GRADE _____ DATE OF BIRTH _____

1982 Winners

Last year's first place winner was David Scott Sherer of Woodbine. His drawing — "A Life Jacket is a Life Saver," was judged best from among the 800 entries received. David attends Woodbine Community School. He received a \$100 saving bond and was in attendance for the signing of the Safe Boating Proclamation in the Governor's Office at the State Capitol.

Other winners and their prizes were as follows:

- 2nd place — \$75, Shawn Bennett of Harvey who attends Pella Middle School in Pella;
- 2nd place — \$75, Karen Grimm of Woodbine who attends Woodbine Community School;
- 3rd place — \$50, Brian J. White of Washington who attends Lincoln Elementary School in Washington;
- 3rd place — \$50, Stacey Alexander of Des Moines who attends Hanawalt School in Des Moines; and
- 3rd place — \$50, Scott Surprenant of Denison who attends Denison Middle School.



Rebirth of Black Hawk Lake

By
Lannie Miller

In January of 1979, I wrote an article for the "Conservationist" entitled, "The Black Hawk Lake Dilemma-Its Causes and Cures." The article explained that Black Hawk Lake had fallen on hard times following a severe winterkill during 1974-75 which eliminated all of the game fish, leaving only bullheads and rough fish such as carp and buffalo.

Since that time, many things have happened to Black Hawk Lake. A winter aeration system was installed in October of 1978 that has proven to be very effective in preventing winterkill. The aeration system consists of two types of aerators, a fan type or axial flow and a bubbler type or helixor unit. These aerators keep a portion of the Town Bay area ice free thereby providing for the oxygenation of water.

The initial test of these aerators in the winter of 1978 proved that they could effectively prevent winterkill in Black Hawk Lake. The next step was to chemically renovate or remove the existing fish population and restock it with desirable fish species. Black Hawk Lake was chemically renovated

on September 10, 1979. Over 6,000 gallons of chemical was used and a total of 500,000 pounds of dead fish were picked up by fisheries personnel. Game fish such as walleye, tiger musky, channel catfish, crappie, bluegill and largemouth bass were stocked in 1979 and 1980.

A chemical renovation is very similar to a winterkill situation in that most of the fish are removed from the lake. Winterkill occurs frequently in the shallow, natural lakes of northwest Iowa and data was needed to determine what trends the fish population would take in the years following these disasters. This renovation gave us a tremendous opportunity to gain valuable insight into this phenomena and for this reason, a research project was initiated in 1982. This research project consists of an angler creel survey which begins in April and ends in October. Creel surveys give us valuable data on angler harvest. Another segment of this project consists of netting, seining and electrofishing once a month in eight different locations around the lake. Fish are weighed, measured and tagged to determine growth rates and



Picking up dead carp and buffalo following chemical renovation. (Photo by Tom Putnam)

also population estimates. Fishermen are asked to report any tagged fish to area Conservation Commission personnel.

Let's look at how the fish and fishermen are doing. The three species of fish which dominated the creel in Black Hawk Lake during 1982 were bullheads, channel catfish and crappie. The bullheads that survived the renovation in 1979 brought off a huge spawn in the spring of 1980. These bullheads are now averaging eight inches and are providing many hours of enjoyment and some very tasty meals. Spring and early summer are the best time to catch bullheads in Black Hawk Lake.

Black Hawk Lake has always been known for its tremendous catfish fishery and it looks like this trend will continue in the future. Fishing for catfish during 1982 has been extraordinary, with most fish averaging 12 to 16 inches. Approximately 10,000 seven inch channel catfish are stocked each year by the Iowa Conservation Commission. Growth rates are excellent, so five to ten pound catfish should only be a few years away.

Crappie fishing in Black Hawk Lake, like most Iowa lakes, is best in the spring months of May and June. Crappie were averaging eight to ten inches in size and provided excellent



Photos by author

fishing in 1982. Seine hauls made during the summer of 1982 indicate good reproduction which will insure good crappie fishing for years to come.

Other species of fish are also being caught by anglers in Black Hawk Lake. Walleye up to three pounds have been caught in Black Hawk Lake, but the average size is ten to twelve inches. Another year's growth will put these into the "keeper" category. Three million walleye fry are stocked each year. Several legal (30 inch +) tiger muskies have been caught during 1982. These fish were stocked as fingerlings in 1979. Anglers have also been harvesting a good number of bluegill that are averaging seven to eight inches.

Although Black Hawk Lake still has some problems due to its shallow nature, it has come a long way since the devastating winterkill in 1974. With proper management, Black Hawk Lake is on its way to becoming one of northwest Iowa's better fishing lakes. Two modern campgrounds, four boat ramps, great fishing and a lot of friendly Lake View residents are waiting to make your vacation an enjoyable one. Why not give Black Hawk Lake a try and see what I mean?

Lannie Miller is a fish management biologist stationed at Lake View. He is a graduate of Kansas State University and has been employed with the Commission 8½ years.



Top: Cooler full of crappies.

Middle: Monitoring oxygen levels in Black Hawk Lake during winter months as part of aeration study.



Bottom: Walleye, showing tag, used for research study.



Ron Johnson

“You See, I Have This Farm Pond”

by Joe Schwartz

Each day field biologists, people at district offices, and personnel at the Central Office in Des Moines receive many questions dealing with all aspects of fish and wildlife, but probably the most frequent deal with some aspects of farm pond management or the biology of fish found in ponds. The conversation usually begins with “I’ve got this farm pond...”, and goes from there. I’ve tried to answer below the most frequently asked questions; however, if you have other questions or want detailed management guidelines, write the Commission for our booklet entitled, *Iowa’s Farm Ponds* or contact one of the four District Offices located throughout the state. Addresses and phone numbers are:

Spirit Lake — Northwest
(712) 336-1840

Lewis — Southwest
(712) 769-2587

Manchester — Northeast
(319) 927-3276

Brighton — Southeast
(319) 927-5736

Q. I just built a new pond. How can I get fish stocked?

A. The Conservation Commission will stock your pond at no cost if it meets the following requirements:
1. New or renovated and free of

fish. 2. Surface area of at least ½ acre. 3. Maximum depth of at least 8 feet. 4. Fenced to exclude livestock. Contact your ICC District Office, SCS Office or your local Conservation Officer for what to do to get fish. You can also purchase fish from private hatcheries if you wish. A list of hatcheries and what fish they sell can be obtained from the Commission.

Q. Do I have to let anybody fish the pond if stocked by the ICC and does the Commission publish a list of ponds stocked each year?

A. The answer to both questions is no. Fishing rights on private land in Iowa are by permission only. We do



Ken Formanek

nd And . . . ”

not publish a list of stocked ponds because this would bring large numbers of fishermen to these ponds and would be undesirable to the fishery and very likely result in the closure of the land to public recreation. Our surveys show that many landowners would allow fishing if permission is requested.

Q. Why don't the bass in my pond grow? They only get to be about 10-12 inches.

A. Your pond doesn't contain bluegills. This species is necessary to provide food for bass. Without bluegills in the pond your bass will never attain large size. Stock 50 to 100 bluegills per acre.

Q. We stocked channel catfish back when the pond was built and had good fishing for several years, but now we can't catch a cat. What's wrong.?

A. Channel catfish won't reproduce successfully in a pond with bass and bluegills. All the original stocked fish have either been caught out or have died. To maintain catfish in a pond, stock 100 8-inch fish per acre every 2-3 years.

Q. How many fish can I take from my pond?

A. You can remove as many bluegills as you can catch, about 15 bass/acre, and 15 catfish/acre each year without harming the balance.

Q. What is balance?

A. This is a term biologists use to describe a fish population that yields satisfactory crops of harvestable fish. It is one that contains all sizes of fish, not all small fish or just a few large ones.

Q. Is it alright to stock crappie in my pond? How about bullheads?

A. We don't recommend it. Crappies usually don't do well and seldom grow to acceptable size in farm ponds. Bullheads often become overcrowded, very slow-growing and muddy the water with their feeding activities.

Q. What about stocking walleyes or northern pike?

A. These fish can be stocked and will cause no harm. Neither species will reproduce, however, and 8" fish must be stocked periodically if the population is to be maintained. Why buy these species when you can have big bass in your pond for nothing?

Q. What causes grubby fish?

A. There are 2 common parasites in Iowa fish that people often refer to as grubs. The yellow grub is a small (about 1/8 inch) worm found most often in bass, bullheads and bluegills. Black spot is the other parasite and is found mostly in bluegills. Neither worm is a parasite of man and the fish are safe to eat. They are impossible to eliminate from your pond, but the problem can be lessened by eliminating aquatic vegetation. This reduces the number of snails in the pond and these parasites spend part of their life cycle in snails.

Q. We have pond weeds and moss in our pond so bad in the summer that you can't swim or fish. Is there any way to get rid of them?

A. There are two methods to rid a pond of aquatic vegetation. You could use chemicals made for this. They can be purchased at most farm chemical stores. Another method is with biological means. Pond owners can now buy a fish named white amur or grass carp that eat pond weeds. They are very effective and I recommend grass carp over chemicals. Contact the Conservation Commission about how to buy this fish.

Q. I would like to water cattle in my pond. Does this cause any harm?

A. You bet. It can be very damaging to the pond and to the fish found there. Cattle damage results in ruined bank slopes and sod which could weaken the dam or spillway. Livestock wading in the water destroy spawning nests and will result in muddy water which is harmful to sight-feeding fish. It's best to water cattle with a pipe through the dam.

Q. Everytime it rains hard I think I lose a lot of fish through the outlet pipe of my pond. Should I put a screen over it?

A. No. Some fish wash out of every pond when a good overflow occurs, but this is not a problem because there are so many fish in a pond. Screens tend to become clogged with trash and then the water won't drain out of the pond properly.

Q. The fish in my pond are in terrible shape. It's loaded with small bullheads and bluegills and no bass. What can I do?

A. Sounds like you need to renovate the pond and restock with the proper fish. You can do this with rotenone anytime in the summer. It's a chemical which will kill all of the fish in the pond. Wait a month for the water to detoxify before restocking. Contact a district fisheries biologist for the specifics on how to renovate your pond.

Joe Schwartz is a district fisheries supervisor for southwest Iowa stationed at Cold Springs State Park. He has been with the commission since 1971 and holds a B.S. degree from Ohio State University and a M.S. degree from Iowa State University.



Officers in the Air

Aerial Surveillance Catches Nighttime Poachers

Hunting at night, using a powerful spotlight to freeze a deer in its tracks, or a raccoon in a tree, is illegal. Not only does it violate every code of sportsmanship, it is dangerous and has been used as a convenient guise for livestock and farm equipment thieves. It used to be difficult to catch poachers using spotlights, but that was before conservation officers took to the air.

From the air at night, officers can see spotlighters for miles. With radio communications to vehicles on the ground, the copilot can accurately direct officers to the scene of the crime for the arrest. The State Highway Patrol provides the pilot and the airplane and some ground assistance to Conservation Commission officers who coordinate the effort.

Aerial nighttime surveillance is proven effective. In a past year's experiment, one flight resulted in almost 50 arrests of poachers and other offenders.

While fines for poaching have not increased in recent years, civil damages have risen dramatically as a result of a law passed in the 1982 legislature. The charge for civil damages assessed on each deer taken illegally is \$750; \$200 for each turkey; and most furbearers are \$100 each. Four separate, recent cases resulted in a total of more than \$15,000 in civil damages alone! Those funds go back to the Conservation Commission for wildlife management.



Left: State Patrol plane takes off at twilight for night time surveillance.

Lower Left: Patrol Pilot and Conservation Officer coordinate air and ground enforcement effort.

Below: Aerial surveillance results in apprehended spotlihter.

Bottom: Conservation Officer locates poachers and directs ground officers to scene of crime.



PLANT TALES OF THE MONTH

BY DEAN M. ROOSA AND MARY JEAN HUSTON

The growing season is past; the autumn leaves crunch underfoot and are soon to be covered with snow. Although the woodland is dormant, there are still interesting plants to be seen — you just have to look more carefully.

Both of this month's plants are members of the Celastraceae family. A notable characteristic of this family is the fruit. When mature, the seed coat bursts open and folds back, forming "wings" and exposing the colorful aril, a fleshy seed coat.

Wahoo

Euonymus atropurpureus

Wahoo, or burning bush, is another woodland plant that is more noticed in autumn than when it is blooming. From May to June, tiny purple flowers are borne in clusters on the branching parts of the twigs. Like its relative bittersweet, the fruits mature to smooth, three-lobed capsules. These burst to expose showy red seed clusters.

Growing to a height of 25 feet, wahoo brightens woodlands with its brilliant autumn foliage. The twigs are greyish-blue. Leaves are opposite and grow to five inches in length and to two and a half inches in width.

Another common name for wahoo is arrowwood, supposedly because Indians used the straight branches for arrow shafts. Such growth may have been stimulated by cutting or burning the shrub and harvesting the resulting straight branches.

Bittersweet

Celastrus scandens

If you are very observing, you may have noticed the twining vine along the edge of the woodlands last summer — the one with the tiny scentless white flowers. Through the summer, the fruits matured; eventually the capsules burst, leaving the showy reddish-orange seed clusters for which bittersweet is so well known.

The bittersweet vine grows to a length of 30 feet or more and prefers sunny locations in rich soil. It is often seen along roadsides. The leaves are arranged alternately along the stem, and grow up to four inches in length and two inches in width. Their shape is oblong, with a pointed tip; the leaf margins are finely toothed. Individual fruits are the size and shape of a pea; each splits into three sections with one or two brown seeds inside.

Native Americans used bittersweet for medicinal purposes. It was used as a salve for skin problems and as a treatment for tuberculosis. The Menomins used bittersweet in a mixture with other plants for relief from pain during childbirth. The plant and its leaves are considered poisonous by some, although actual cases of poisonings are not known. Related European species have caused poisoning of horses and people.



(Wahoo photo by Roger Laushman)

(Bittersweet photo by Kenneth Formanek)



SNOW SPORTS BIG AT BIG CREEK



Cold weather is upon us and for certain wildlife as well as some people it means hibernating — avoiding any encounter with “old man winter.” Cold north winds blow and a soft white powder blankets the ground. However, all outdoor activity need not cease. One preventative measure to take to avoid that “cooped-up” feeling, is a trip to a state or county park.

Big Creek State Park, located 2 miles north of Polk City off of Iowa highway 415, offers a number of winter activities for those willing to brave the elements.

Snowmobiling and ice fishing are popular interests among Big Creek’s winter visitors. The park’s bike trail which runs along the east side of the lake is used for snowmobiling and cross country skiing. Ice fishing is permitted on the entire lake but most anglers do their fishing between the east and west boat ramps. Each year many buckets are filled with large crappies before the ice houses must be removed from the lake Feb. 20

The recreation area west of the park is under game management and hunting is allowed. Pheasant, quail, rabbit and squirrel are common in the area. The lake itself is a popular waterfowl hunting location.

Although winter isn’t the peak season for park visitors, Iowa’s state and county parks offer a variety of winter recreational activities. Check with your nearest park ranger, find out about the activities offered, go sledding, ice skating, or just enjoy cool season nature study. You might find being outdoors in the winter very invigorating and a sure cure for cabin fever.

BACK COVER: *Winter scene at Big Creek State Park by Ron Johnson*

