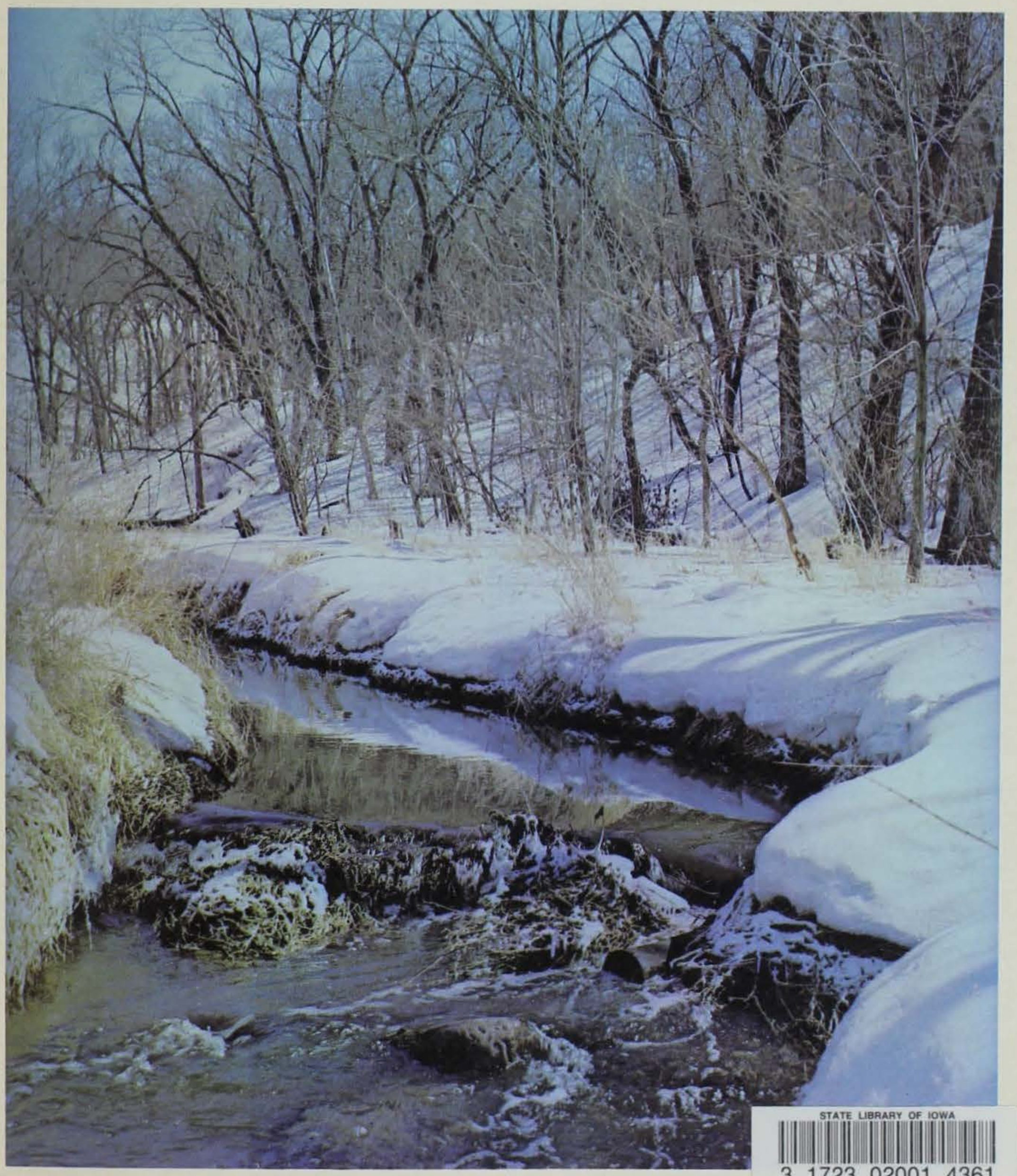
Iowa CONSERVATIONIST

JANUARY 1981



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A Different Look at Winter

or, Wandering Through Winter

By Bob Mullen
Photos by the Author

TOO OFTEN winter brings thoughts of the harsh cold winds which blast us from the north, and of the heavy snows. Most people would probably agree that winter is not the most pleasant season of the year. If we look no farther than cold temperatures, or the end of the snow shovel it's understandable why many people have such a dislike for winter. Many times we refer to winter as the "dead months", or the return of the ice age.

But some people look at winter differently. Of the four different seasons, they see spring as a time of enticement; summer as a time of languish in its warmth; fall as a time of farewell; and they see winter as a time of excitement and a chance to enjoy outdoor activities. The cold crisp winter winds set our blood racing and quickens our step. For wildlife, winter is a time of living life intensely. Animals are using all their powers and capacities to survive. For man and creature

alike, winter is a time of testing. For the trees of the forest, it is a time of resting. Winter is also a time of hope. For all of creation, winter is a time of looking forward to spring with optimism.

What the delicate beauty of the wildflowers are to summer, or the brilliant colors of leaves changing are to autumn, snow is to winter. Snow is the ingredient of the cold months that gives winter its beauty. Some might say "snow, who wants it?" That is easy to answer: children do, skiers do, artists do, the winter sportsman does, plants do, and many types of wildlife do.

The fields and forest after a fresh snow are like a book to be read. The snow provides clean white pages on which is written the story of wildlife by their tracks or feather marks. The outdoor person can read these pages by following the tracks. You can see the dainty tracks of the field mouse as it had hunted for weed seeds or see where it tunneled under the snow as it searched for winter morsels to feed upon. Clearly visible will be the tell-tale tracks of a red fox as it hunted field mice to satisfy its hunger. You might see where the fox thrust his nose into the snow searching for a mouse burrowing below the snow's surface.

If you follow the tracks of a pheasant you'll see where it wandered in search of food, and where it spent the night resting. You might be startled as a big rooster bursts into the air, from the snow at your feet. Along a stream or river you might find the lace work prints of a mink as it wandered in search of food.

In an open field or along a fence row, you might see the tell-tale feather marks in the snow of an owl as it caught its unsuspecting prey. The blanket of snow which covers the land provides more than a storybook on the activities of wildlife. It also acts as an insulating jacket to the earth. The warmth stored up by the earth during the summer is rapidly lost if a blanket of snow is nonexistent. In a test that was conducted, the air temperature was −27° F., but seven inches below the surface of the snow the temperature was +24° F.

Very important is this overcoat of snow for the earth. It prevents winterkill in many types of vegetation. The snow provides moisture to the soil when it melts in the spring. The same tiny air pockets which make the snow such an effective insulation, also act to deaden sounds. This effect is quite noticeable if you've ever walked through the woods during a snow fall. The only sounds you hear are the muffled sounds of the wind blowing gently through the trees, and the gentle sound of the snow falling on the trees and ground. If you stop by a river or lake on a bitter cold night you can hear the rifle-like crack of the ice as it expands and cracks, another sound that only winter provides.

Winter is a time of activity for the skier and snowmobiler. When the snows get deep, those that enjoy snowshoeing are out enjoying their recreation. When the lakes and ponds freeze over it means it is time to break out the ice fishing gear and ice auger. Winter provides a time of solitude for the trout fisherman. The avid trout fisherman faces little competition on the trout streams during the winter, but has some of the best fishing during this time. Winter is a time for rabbit hunting behind some energetic beagles.

Just being outside after the landscape is blanketed by a fresh cover of snow is enjoyable. There's something special about being the first one to break a track along a quite road through the timber. Sunrise on newly fallen snow makes the snow crystals glisten in the early hours.

You can make winter what you want it to be. If you spend the winter inside, waiting for spring, you're missing out on some of the greatest enjoyment and recreation of any time of the year.

PAMMEL STATE PARK

By Kirk Irwin

Photos by Jerry Leonard

THERE IS A 281 ACRE area in Madison County known for its picturesque beauty. This area is located 5 miles southwest of Winterset on Highway 162, and its name is Pammel State Park.

Obtained by the state in 1923, the park was originally named Devil's Backbone Park because of the unique limestone ridge which divides the park in two sections. However, the park was renamed in June, 1930, in honor of Dr. Louis H. Pammel, who was an active conservationist and a former head of the Botany department at Iowa State University. Dr. Pammel was also president and chairman of the Board of Conservation which is the forerunner of the present Iowa Conservation Commission.

Besides the unusual limestone ridge which bisects the park, there is the fascinating highway tunnel which allows passage from one side of the bluff to the other. The tunnel was first built by John Harmon and his sons in 1856. The initial purpose of the tunnel was to divert water from the Middle River on the higher west side of the ridge to the lower east end. The diverted water provided enough power for the operation of a saw mill and a grist mill. When the milling operations ended in 1902, the tunnel was enlarged to accommodate travel through the limestone bluff. The tunnel has not changed much over the years; and it has the distinction of being the only highway tunnel in the state.

The Middle River provides another unique attraction at Pammel. The river runs across a concrete roadway structure which was poured several years ago. Vehicles can actually travel through the river via this structure to get to the lodge facility on the west side. Once in a while it is necessary to close the river crossing due to high water or icy conditions.

The Middle River also furnishes anglers with good to excellent fishing for catfish. Fishing is good from early spring to late fall. Chubs, minnows, chicken liver, nightcrawlers, commercial stink baits, and dough balls are some of the more popular baits for catfish. Anglers can also catch carp, bluegills, and bullheads in the river.

Pammel has over 2 miles of foot trails throughout its hilly and wooded landscape. The trails provide park users access to the hidden natural beauty of the area. Along the trails, bird watchers can see red-headed woodpeckers, bluebirds, goldfinches, turkey vultures, wood ducks, and a variety of others. The trails also abound with the following animals: deer, raccoons, squirrels, opossums, and others. Besides the abundant wildlife, there are all types of trees and flowers present. A few of the more common trees in the park are: buckeye, sycamore, redbud, ash, elm, wild cherry, ironwood, maple, cottonwood, red cedar, walnut, hickory, and several species of oaks.

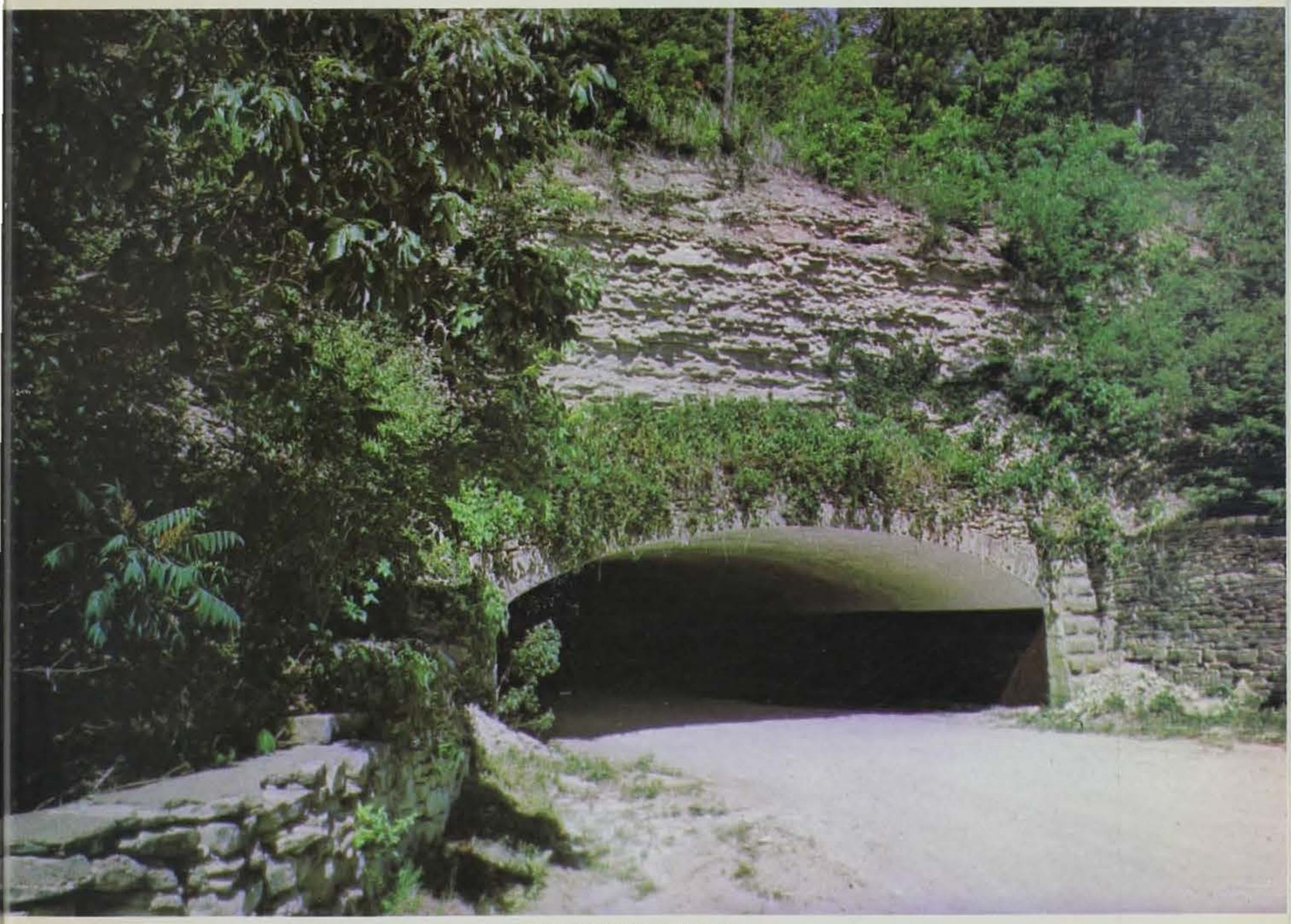
There are five separate picnic areas in Pammel where the park visitor can relax and enjoy the outdoors. All five areas have picnic tables and fire receptacles available. The Backbone Picnic Area also has an open shelter which can be used on a first come, first serve basis at no cost. This area has latrines for the convenience of the hikers, picnickers, and sightseers. The Lodge Picnic Area provides an enclosed shelter with fireplace which can be rented by advance reservation for day-use activities at the price of $12.00 for each 100 users. Firewood and electricity are available to lodge users at no extra charge. The lodge facility is popular for: family reunions, weddings, company picnics, graduation receptions, and other social get-togethers.

Middle River.

Campers often exclaim about the camping experience at Pammel. However, the non-modern campground sees little use. The low volume of campers creates a peaceful, uncrowded condition in a beautifully shaded camp area. It is for this reason Pammel sees many repeat visits by happy campers seeking quiet, relaxing weekends away from the pressures of work.

Each of the 32 campsites has one picnic table and fire receptacle furnished. Firewood is available, as well as a latrine. Also, the campground is open all year, but severe winter weather conditions may prevent access to the camp area.

In the 1930's, the Civilian Conservation Corps (CCC) contributed their time and effort on the following projects in Pammel: the stone foot trails on each side of the backbone ridge; the stone stairway by the lodge facility; the lodge facility; the open shelter in the backbone picnic area; the stone latrines in the



Iowa's only highway tunnel.

backbone picnic area; and the stone entrance portals. All of these projects are incredibly made; and they remain functional today. The projects are a credit to the CCC workers who did so much to enhance many of our state parks.

Pammel is a park for all seasons and for a variety of recreational uses. In the spring, when nature is beginning to bust out with its beautiful vivid colors, recreation activities include: hiking, picnicking, camping, sightseeing, animal and bird watching, mushroom hunting, fishing, sunbathing, canoeing, and just daydreaming. The summer recreationists find the park a place to escape the heat by wading and swimming in the Middle River with the realization they do so at their own risk. The shaded picnic areas, roadways, foot trails, riverbanks, and campground, provide cool places during the summer for a carryover of most of those spring activities mentioned above. The fall recreation seekers can discover Pammel bursting with pretty fall leaf colors. It's a great time for sightseeing, camping, hiking, and picnicking. Winter months at Pammel provide recreationists with the snow cover to do their snowmobiling along the Middle River. Cross country skiers find the foot trails are the places to enjoy their sport. No matter what the season may be, there is something for everyone to do at Pammel State Park.

I invite you to come and see Pammel State Park. It has a natural and historic personality unique to itself. It has hills, valleys, and bluffs. It has trees, flowers, and wildlife. It has a meandering river. It has manmade facilities and structures. And when you witness how all these attributes are magnificently combined in this park, you will be amazed.

DO LONGER SEASONS MEAN FEWER PHEASANTS?

by Ronnie R. George and James B. Wooley, Jr.

Photos by the Authors

HAVE YOU EVER HEARD someone say, *"If the Conservation Commission would just close the hunting season for a year or two, we would have plenty of pheasants."* It is easy to understand this feeling. For many years, the traditional response of state fish and wildlife agencies to reduced populations of almost any game species was to reduce the hunting pressure on that species. Over the years, therefore, many hunters and non-hunters alike came to believe that restrictive hunting seasons were the answer to low game numbers. However, scientific evidence often indicates otherwise.

Biologists have known for a long time that there is little danger of overharvesting cock pheasants during a cocks-only hunting season. Cock pheasants are polygamous (that is one male will readily mate with several females), and only a small percentage of the males are actually needed for reproduction. Researchers reported in 1947 that 1 cock pheasant could breed with as many as 50 hens with close-to-normal fertility, and other researchers reported in 1948 that hen pheasants could continue to lay fertile eggs for 3 weeks after mating only once with a cock pheasant. Under natural conditions, sex ratios as great as 50 hens per 1 cock have never been observed. Although post-hunting sex ratios of 22:1 in Wisconsin and 29:1 in California have been reported, we have found post-season sex ratios in Iowa more typically range from 1:1 to 10:1 depending on hunting pressure and size of the area surveyed.

Despite the best scientific evidence, fish and game agencies have often failed to convince the general public that there is little danger of overharvesting cock pheasants. Public response to declining pheasant populations throughout the Midwest is often manifested in demands for reduced harvest. The winter of 1968-69, with its deep, blowing snow that lasted from December through March, was the most severe winter recorded in 30 years over Minnesota's prime pheasant range. By May 1969, Minnesota's pheasant breeding population was estimated at 65% less than the previous May. Because of this drastic decline, public pressure was sufficient to force closure of the 1969 pheasant hunting season in Minnesota resulting in an estimated loss of 1.1 million man-days of recreation and 184,000 potentially harvestable cocks. Although Iowa experienced a similar reduction in pheasant numbers in the northern one-third of the state, the Iowa Conservation Commission acting on scientifically based recommendations from its biologists maintained a 54-day, rangewide, cocks-only hunting season. Once these regulations had been set, biologists in both states felt that an excellent opportunity existed to document and graphically illustrate the effects of season length on pheasant populations.

Methods

Roadside counts have long been a standard procedure for obtaining population trend indexes for ring-necked pheasants. During the 9-year period from 1968 through 1976, pheasants were censused each spring along standardized roadside routes by biologists and conservation officers in the northern 2 tiers of counties in Iowa and the southern 2 tiers of counties in Minnesota (Fig. 1).

From 1968 through 1976, pheasant hunting season length ranged from 51 to 58 days (average = 55) in Iowa and 0 to 34 days (average = 25) in Minnesota (Fig. 2). During this period, Iowa's daily bag limit was set at 3 cocks; Minnesota's was 2 cocks.

Results

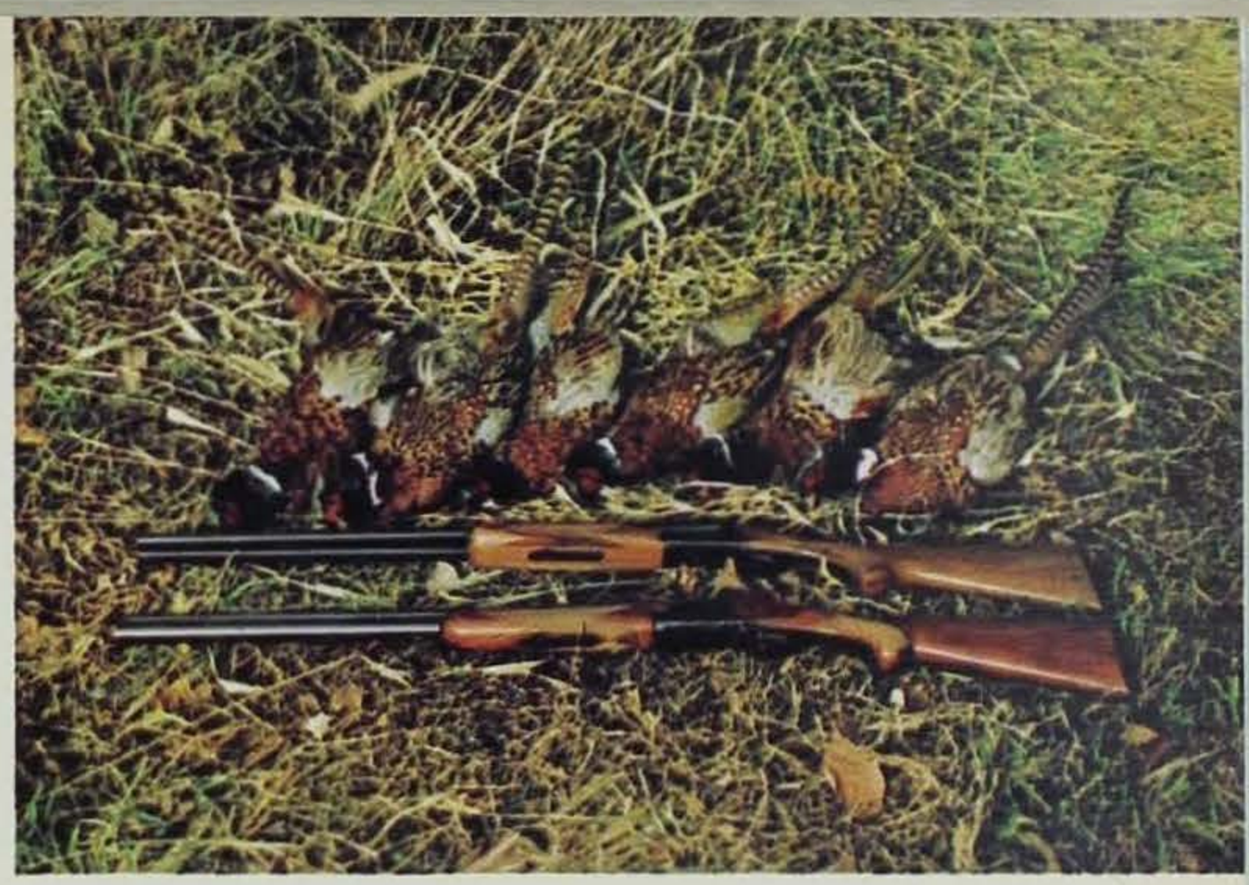
The spring pheasant indexes for both Minnesota and Iowa decreased dramatically from 1968 through 1976 (Fig. 2). These declines were due to loss of habitat resulting from land-use changes and intensive row-crop farming. Despite substantial differences in hunting regulations, no statistical difference was detected between the rates of decline for the 2 states. For any given year, Minnesota's spring index was approximately 40% of Iowa's spring index.

Discussion

After the widely publicized pheasant population decline and subsequent season closure in 1969, Minnesota sportsmen were elated when a substantial increase was reported in Minnesota's 1970 spring pheasant index (Fig. 2). Many laymen undoubtedly viewed this as clear evidence that the population was responding to the 1969 Minnesota season closure. However, Iowa's 1970 spring pheasant index showed an almost identical increase despite Iowa's 54-day hunting season and daily bag limit of 3 cocks in 1969 (Fig. 2).

If cocks-only hunting seasons had any adverse effect on pheasant populations, one would reasonably expect that Iowa's spring population index would decrease at a greater rate than Minnesota's index due to Iowa's consistently longer hunting seasons. However, during the 9-year survey period, Iowa's spring population index was consistently higher than Minnesota's, and annual fluctuations observed in the spring population indexes of both states were remarkable similar. The reason for Iowa's consistently greater annual pheasant population indexes is not known. However, we suspect that deterioration of critical nesting habitat was more advanced in Minnesota prior to and during this survey period.

As pheasant population levels decline, one researcher has suggested cocks in marginal habitat could conceivably be overharvested locally to the point where hens might not be able to find a mate in spring within the radius of their hearing and mobility. We found no evidence that this occurred in Iowa or Minnesota, and the chance of this possibility ever becoming a reality in



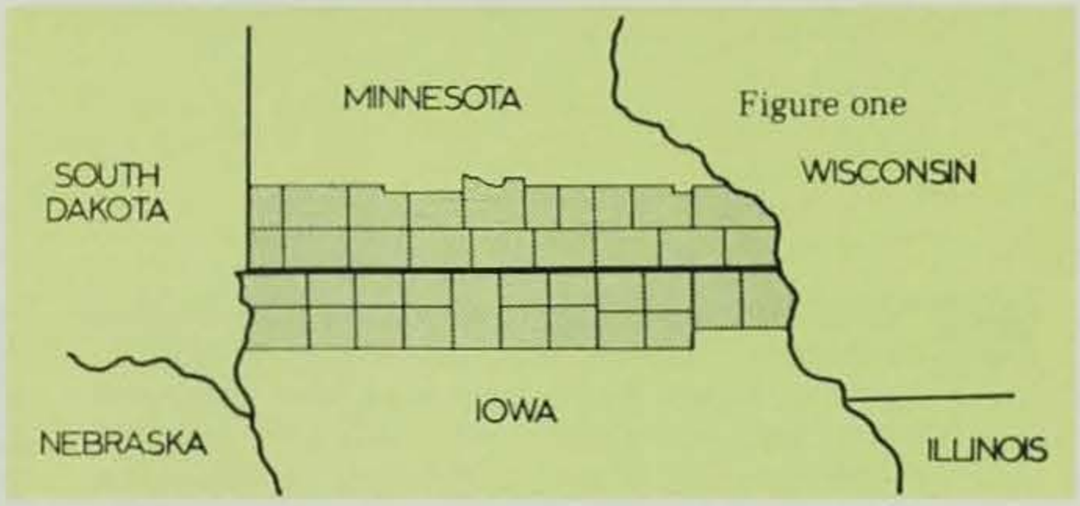


Figure one

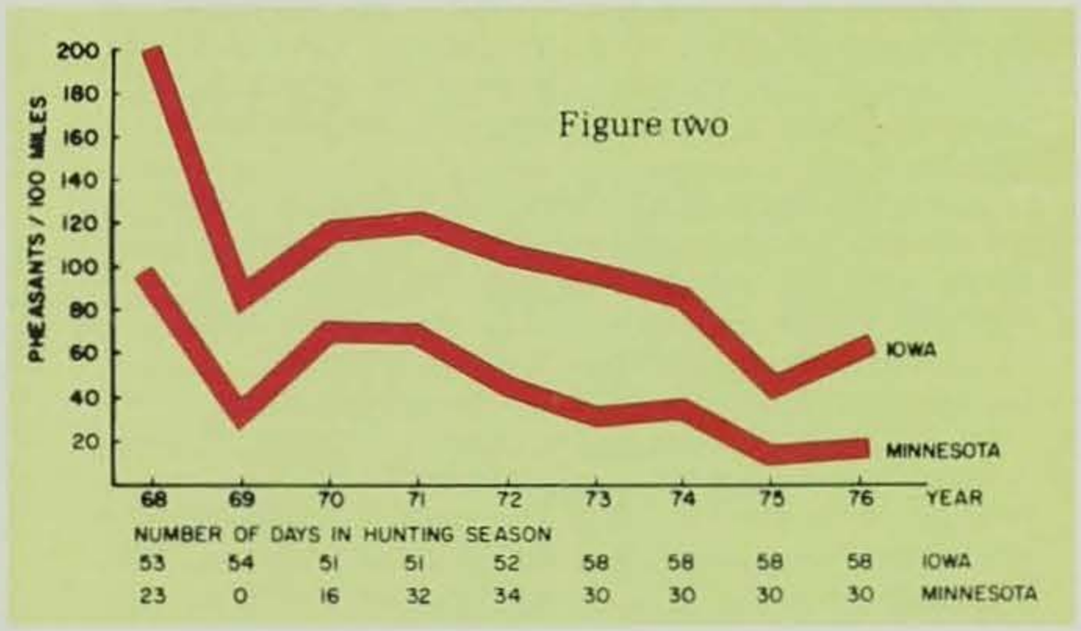


Figure two

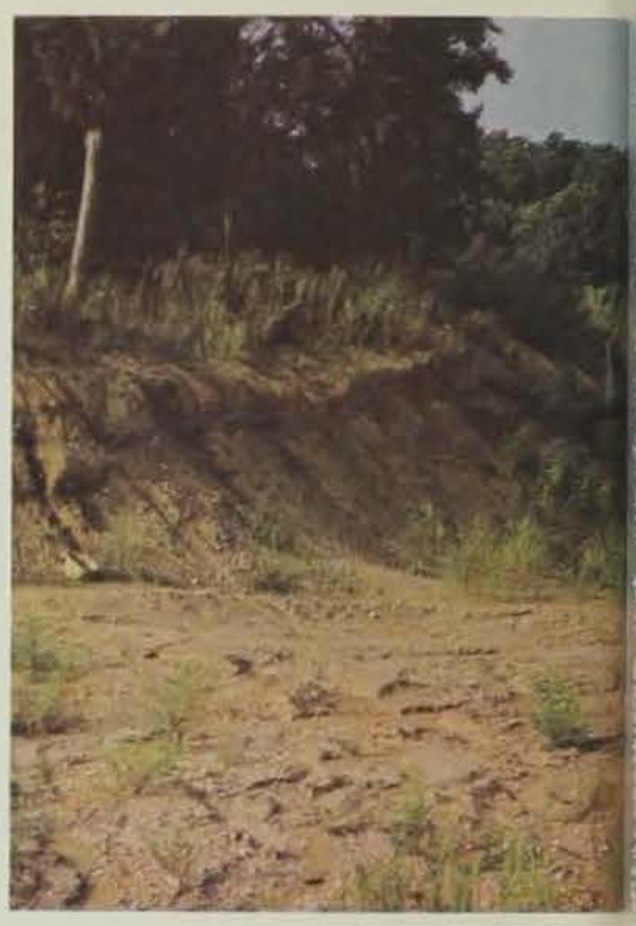
marginal range is remote. Marginal range gets less hunting pressure and sustains a lower percentage kill than good range. Hence, the number of cocks per 100 hens is usually greater in marginal than good range.

Illegal hen kill resulting from accidents or hunter frustration has also been suggested as an additional reason for closing cocks-only hunting seasons during a population low. Illegal hen kill has been calculated at 11% in Minnesota and 9% in Iowa. Researchers in other states have reported that legal hen kills totaling less than 20% of the fall hen population had no measurable effect on future pheasant numbers.

Conclusions

Based on our data, we believe there is no biological reason liberal cocks-only pheasant hunting seasons cannot be maintained in order to provide recreational hunting, even at very low population levels. Unnecessary pheasant hunting season reductions in the past have resulted in the loss of millions of man-days of recreation without increasing future pheasant numbers. In closing, it is important to remember that from a biological perspective, even very liberal cocks-only pheasant seasons are in reality quite conservative since the female segment of the population is excluded from legal harvest.

This study was funded in part through Federal Aid in Wildlife Restoration (Pittman-Roberston Act).



The Peterson Pits area will still be actively worked . . . but also provide public recreation.

Mining, Reclamation and Recre

By Robert R. Pinn and Dr.

MINERAL EXTRACTION AREAS are one of Iowa's more neglected recreational resources, due primarily to public inaccessibility. Such areas as sand and gravel or clay pits are usually filled with crystal clear water supplied by ground water aquifers and most have been stocked with game fish by mining company personnel or, in some cases, by the Iowa Conservation Commission. A few individuals, fortunate enough to know the right people, have had access to such areas for many years; however, the general public has been denied access with large "NO TRESPASSING" signs.

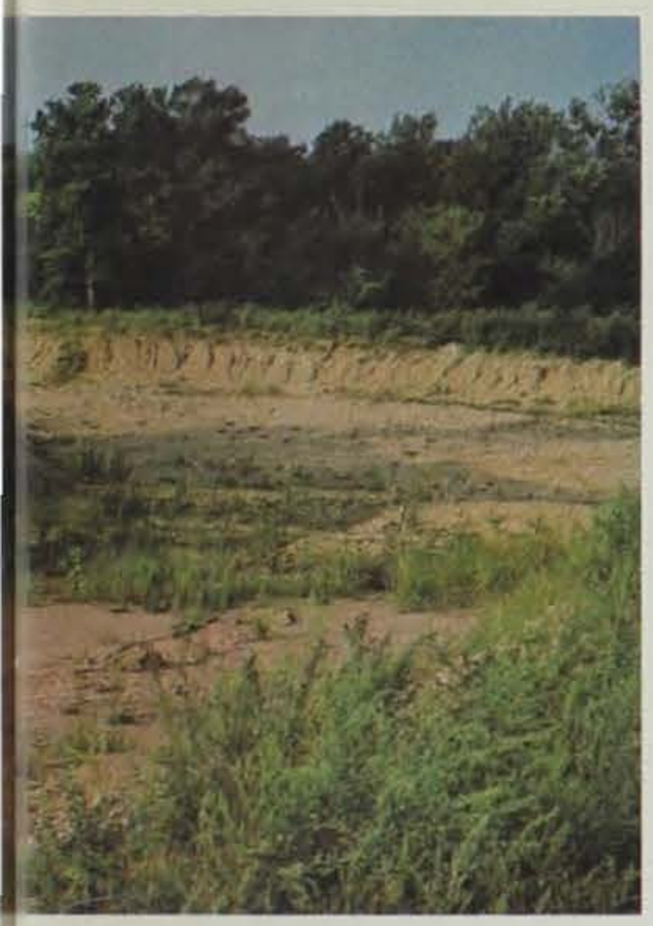
In 1979 the Story County Conservation Board became interested in the public acquisition of one such area in the Story County Skunk River Greenbelt. This tract, which ultimately was named *"Peterson Pits"*, will involve future mining, reclamation, conservation, and concurrent recreational activities on 200 acres of land and water.

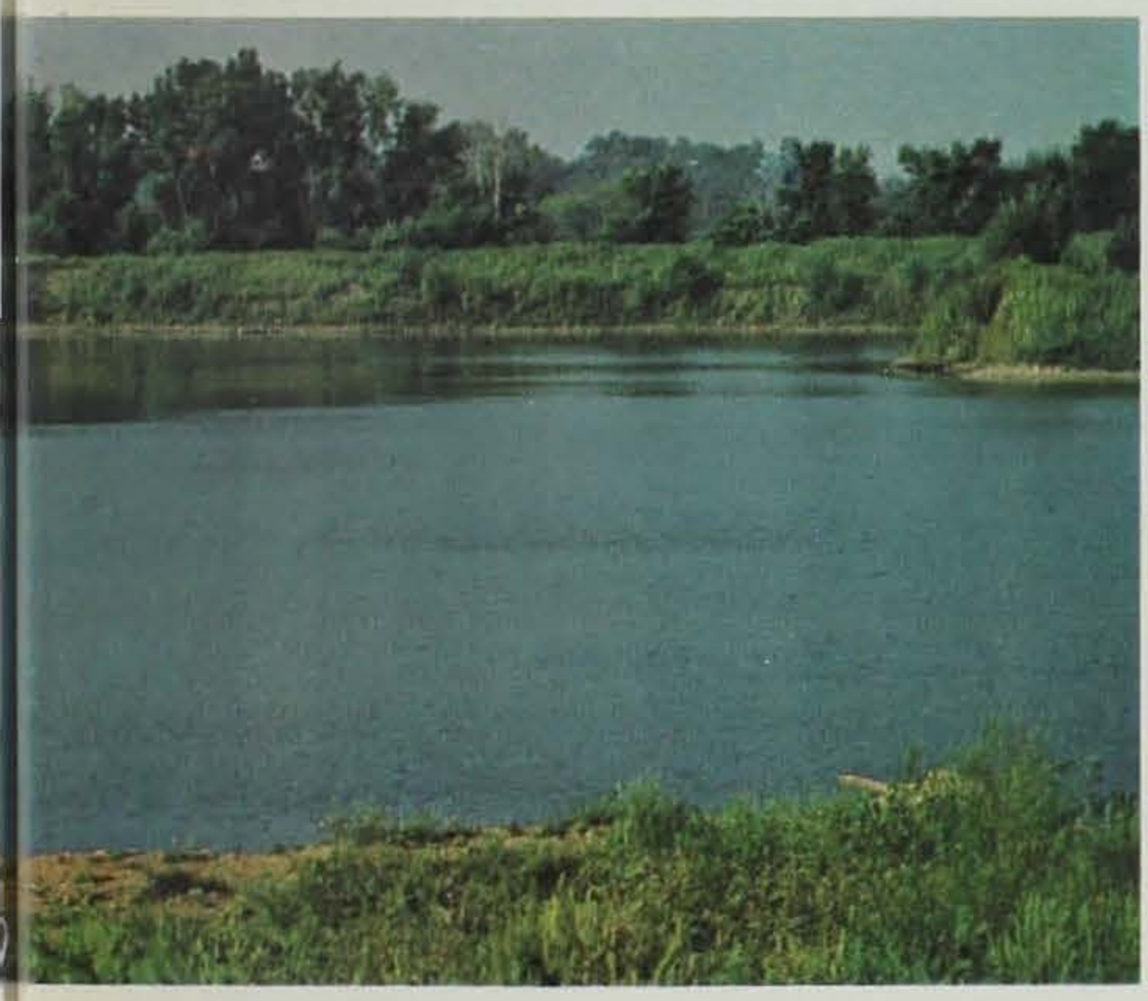
The site today contains four pits comprising over 28 acres of water from which sand and gravel has been mined. The formation is the same one that also supplies the City of Ames' well fields. Three-quarters of a mile of the upper Skunk River bisects the property. The site contains an estimated 4.5 million tons of sand and gravel that can be mined in the future. Currently, 28 acres of the site is farmland. The Skunk River, flowing through gravel substrata and limestone bedrock outcroppings at this site, also provides an excellent habitat for a small smallmouth bass population. A section of an old stage trail passes by a pioneer cemetery, known as McMichael's Cemetery, providing an element of early history.

The pits were owned and mined by the Fred Peterson family of Ames since the 1930's. Due to vandalism and a concern about liability, Fred Peterson for years had maintained a vigilance, with the cooperation of the Story County Sheriff's Department, against trespassing.

After the death of Fred Peterson in 1978, his wife, Helen, and his heirs decided to sell the property. In 1979, Mrs. Peterson contacted the Story County Conservation Board. Next began a series of very complicated negotiations which ultimately involved the City of Ames, the Story County Board of Supervisors and County Engineer, and the Story County Conservation Board. Dr. Merwin Dougal, Professor of Civil Engineering, Iowa State University, and a member of the Iowa Natural Resources Council, spearheaded a joint resolution between the Story County Conservation Board, the Story County Board of Supervisors, and the City of Ames.

As a result of a public meeting in October 1979, the City of Ames agreed to contribute money toward the purchase of the property in exchange for certain access rights to supplemental water supply, during drought periods, the Story County Board of Supervisors agreed to purchase the rights to mine the sand and gravel with redevelopment monies assessed per ton to be returned to the Story County Conservation Board for reclamation and the Conservation Board agreed to contribute the greatest share of the





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...e and Dr. T. Al Austin

$400,000.00 purchase price for conservation/recreational purposes. This agreement is more complex than stated, but does show a cooperative effort by three different governmental agencies to secure a resource area for the public welfare, mainly water, minerals, and conservation/recreational use. The joint agreement defined certain areas for exclusive use as conservation and recreation areas so that the Conservation Board could submit a portion of the acquisition for funding under the "Land and Waters Conservation Fund" program.

The property was successfully acquired on December 10, 1979, and opened to the public for fishing in April 1980. A preliminary parking lot was constructed for approximately 30 cars and was full on the first day in April. An estimated four to five thousand crappies, some weighing up to 3 lbs., were taken out of the pits by fishermen in the first two weeks. The public supported the purchase and the minimal development with virtually no negative input.

Presently the Story County Conservation Board staff, the County Engineering Department staff, and the City of Ames Planning Department are cooperatively working on a short term and long term landuse plan. This plan will guide the use of the site while mining continues. Ultimately major land form changes, as a result of mining, will occur and these are included in the long term plan, but at the same time the plan must allow for recreational use and a water supply augmentation to the City of Ames in cases of emergency. Sounds complicated, but definitely feasible.

It is anticipated that the site, when fully developed, will offer camping, beach facilities, picnic grounds, fishing, boating, canoe accesses, and a target shooting area. The current 28 acres of water may be 75 to 100 acres by the year 2000, which makes long-range planning for mineral removal crucial to the ultimate recreational plan. The key issue is that activities can be segregated and public recreational use can be ongoing.

The nearby "ole water hole" will become more important in modern society as we face economic and social restraints in transportation, distance, and leisure times. Story County Conservation Board went one step toward providing residents of Story County those needed recreational areas in late 1979. They asked Hallett Construction Company (an Iowa and Minnesota mining firm) officials to consider opening up private holdings for limited public water recreational use and to work with local conservation agencies on such endeavors. It is the philosophy of the Story County Conservation Board that if it can be accomplished in the public sector, such areas could be opened in the private sector. If accomplished, such areas of water recreation could be opened in many Iowa counties for limited fishing and boating and associated outdoor activities. To accomplish this endeavor, however, will involve coordinated long-range planning considering concurrent reclamation of sites by private and public agencies.

The "Mighty Mo" has its share of traffic problems.

THE MISSOURI RIVER, Yesterday and Today

By Douglas M. Carlson

A RIVER OF CURVES 600 yards wide winds along most of our western boundary. The Missouri River, with its roiled waters, flows unperturbedly through each bend — a placid, powerful giant. The river may often appear serene and assumedly tamed and predictable, but it has not been made into a child's bathtub, by any means. It has a great amount of water to carry — water moving at as fast a rate as any major waterway in this country. It is a river that is deeply entrenched in our history, and today, provides a great variety of recreational opportunities to the Iowa outdoorsman.

This river is best appreciated by those of us who grew up with the muddy water, but muddy water is as typical of the midwest as are the clear skies overhead. It's the kind of river that has a job to do, a load of dirt to carry, a community of wildlife to support, and a reputation to uphold. It is a river with real substance.

Yet the Missouri does not stay the same, because change is the hallmark of all rivers. The river level can drop and a new sand bar appear, or a bank can be undercut and a landmark may slide into the water. The river can claim its mortgage on adjoining lands and move sandy or fertile acres from one bank to the other. During the spectacle of flood, the river can (or could) completely redesign the landscape of the bottomlands. Some of these changes are not as dramatic as they were before the channelizing of the river, but the forces are still there and they constitute a beauty of their own.

Early explorers saw the Missouri as a wide, shallow river with sand bars and tree snags scattered throughout. The valley was also wide and flat, being partly prairie and partly woodland. The floodplain forests formed a belt along the moist lowlands and tributary streams, while prairie grasses stood head-high and dominated the rest of the landscape. Observations by Lewis and Clark showed prairie lands declined as the river moved south, and forests became more common, particularly below the Platte River. The forest bottomlands contained mostly cottonwoods and willows (same as today), and some of the higher stands had mature growths of red oak, basswood, bur oak, and shagbark hickory.

Many wild animals used these bottomlands, and their abundance made food gathering easy for Indians and

later for the white-skinned trappers and explorers. The segment of Audubon's journal written while along the stretch of river in Harrison, Monona, and Woodbury counties, tells of occassional meals of turkey, wild goose, and pelican. Lewis and Clark's crew ate elk, badger, and buffalo while passing this same stretch. They also made fish seines from willow trees, and baited lines to catch the giant catfish.

Such varied and bountiful harvests attracted the early frontiersmen, and they, in turn, made way for hundreds of homesteaders who saw fit to settle the vast fertile bottomlands of western Iowa. In just a few short decades, much of the prairie had been plowed, and the forests cleared for agriculture. By 1826, only 20 years after Lewis and Clark, cultivated lands occupied about ⅛ of the valley acreage, ½ of the bottomlands were under the plow by 1937, and ⅘ by 1958. Because of the rich soil, flat land, and modern drainage systems, farming has been good. Large-scale farming techniques have been adopted, and even more recently, irrigation was added. Nearly all possible acres are tilled. A drive along I-29, or the Memorial Lewis and Clark Trail, reveals acre upon acre of corn and soybeans, stretching from the Iowa bluffs west to the Nebraska bluffs.

The wildlife inhabiting these lands has changed as dramatically as the plant life. Similar changes have been documented throughout the state, but in the Missouri river valley the elimination of wildlife cover has been much more thorough. Waterfowl are among the few game species which remain seasonally abundant, but their stay is short-lived, as they migrate through the area on their spring and fall journeys.

The great Missouri itself has experienced dramatic changes as well. As early as 1907, river cartage was offered as a hopeful method for transporting grain to market. The hazards of river navigation, however, could be overcome only through major modification of the river channel. As a result of this keen interest in river transport, as well as the everpresent concern about periodic flooding, the U.S. Army Corps of Engineers began in the 1930's to deepen and straighten the channel. From this time foreward, the Missouri was to be gradually harnessed with pile dikes, channel cutoffs, rock dikes, and rock lined banks. By 1964, the channel modifications were mostly complete, and upstream dams were in place to control flooding.

Consequently, aquatic life has changed considerably because of a great loss of aquatic habitat. A recent Conservation Commission report described the Missouri changing from a semi-braided stream before 1930 to a narrow, single, smooth channel which came with an 80% loss of channel area and 66% loss of surface area. Channel scouring caused by the upstream dams has caused additional concern for wetlands loss.

The remaining aquatic habitat invariably supports fewer organisms than before, but there is still an interesting variety of fish. They offer a fishing experience not achieved elsewhere. The fish community contains large numbers of such familiar species as carp, channel catfish, river carpsucker, gizzard shad, goldeye, and emerald shiners. A few of the other fish more unique to big rivers, like the shovelnose sturgeon, paddlefish and blue sucker are not quite so abundant.

Commercial fishing is pursued by a few full time fishermen, but most fishermen are out for weekend ventures. The fish harvest in the mid 1970's for both Iowa and Nebraska was about 48% carp, 24% buffalofish, and 21% catfish. Hoop nets and trammel nets are the preferred gear.

Sport fishing opportunities are recognized from rock dikes, in backwaters, or in oxbow lakes. Anglers often creel about equal numbers of carp and catfish (40% of the total) and a lesser number of drum, crappie, and sauger. Fishing in backwaters like Decatur Lake or Desoto Bend, usually result in catches of crappie, bass, bluegill, and sauger.

Efforts to improve fishing in the Missouri River have been primarily through protection of habitat and catch regulations. A recent effort with dike notching was to slow the silting-in process. A study by the U.S. Fish and Wildlife Service showed highest catches came from around these structures. However, another study showed the long term value of these notches in Iowa was being overpowered by the lowering or degrading of the river channel. Catch regulations are primarily for the protection of small catfish and other game species from commercial nets.

Unfortunately, the entire aquatic resource of the Missouri River is continually loosing ground because of the channel modifications. One of the few hopeful developments that might arrest these losses is a Congressional/Army Corps of Engineer program to restore some of the lost wetlands habitat. This program urgently needs public involvement to urge continued legislative action. Details can be obtained from the Iowa Conservation Commission and the Omaha District, Army Corps of Engineers.

The Missouri River received special recognition in 1980 in the State of Missouri. 1980 was designated *"The Year of the River"* — a project conceived by the Missouri River Society and supported by public and government agencies to promote programs to restore and increase public awareness of the historic diversity and ecological wealth of the river. It is hoped similar enthusiasm is stirred in the state of Iowa. The Missouri is a remarkable river, and coming years should all be *"Years of the River"*.

Drawing by Becky Haefner

The river still supports a variety of fish in its different habitats.

Photos by Ron Johnson

Part II

SOME FACTS ABOUT LEAD POISONING OF WATERFOWL

by Bob Barratt

Is Lead Poisoning a Major Problem in Iowa?

Iowa does have lead poisoning problems, probably less than some states, but certainly more than most. Major die-offs from lead poisoning have been documented in southwest Iowa where wintering flocks occur. Iowa usually ranks about seventh in the number of ducks taken annually among the 14 states in the Mississippi Flyway. There is a direct correlation between ducks taken by hunters and the amount of lead deposited (number of shots fired by the average hunter to bag a duck x number of ducks taken = amount of lead deposited). Louisiana and Minnesota are traditionally the leaders in duck harvest in this flyway. Hunters in Louisiana annually take about four and one-half times more ducks than do Iowans, while Minnesotans take about three times more. Each of these states, however, has ten to twenty times more wetlands than Iowa, thus the lead deposit per acre in Iowa's marshes is far higher than either of the two high kill states. Iowa's hunting pressure per acre of wetland is higher than most any state in the flyway.

Is there a Solution to the Problem?

Yes, there are two solutions. One is to stop all waterfowl hunting, thus largely eliminating the deposition of lead in areas where it is likely to be harmful. This solution would be highly unsatisfactory.

The second, and more practical solution, is to use shot for waterfowl hunting which is nontoxic. Many substitutes for lead have been tested, including other metals, various metal alloys, and even plastics and glass. Nearly all were rejected because they could not perform in a satisfactory manner ballistically. Others, such as most heavy metals, were far too expensive. Still others, such as copper, which performed well ballistically, were found to be even more toxic than lead when ingested by waterfowl. Many different substances were used as a coating for lead shot, including copper and nylon. In tests, however, these coatings were quickly ground away in the birds gizzards, and mortality rates were equally as high as for the untreated lead shot, though in some cases it took longer for the hard coatings to wear away. Canadian scientists have been working on a process to combine lead and iron particles into a product called "sintered shot", but this process has not been perfected. Tests of this material indicate a lower mortality when ingested by ducks, but it does not completely eliminate the problem of lead poisoning. The arms manufacturers and others are continuing their search for a nontoxic shot. To date, however, the only satisfactory substitute for lead shot is that made from soft steel.

Will Steel Shot Give as Good Patterns as Lead?

Yes, steel shot will actually shoot better patterns than lead. It is harder than lead, thus pellets are not deformed when fired as they are in lead. This, plus a heavier plastic sleeve, results in tighter patterns and a shorter shot string. Most shooting experts recommend a more open choke for shooting steel, with an improved cylinder choke for most duck hunters.

Will Steel Shot Shells Damage a Shotgun?

All ammunition manufacturers have stated that their currently manufactured steel shot shells can be used in most modern singles, pump guns, and autoloaders without significantly affecting the choke or the useful life of the gun. The use of a heavy plastic shot cup has virtually eliminated all barrel damage. In some guns with tight chokes, the force of the shot charge striking the forcing cone of the choke may cause a discoloration of the metal about one and one-half to two inches from the muzzle. This is only a cosmetic change and poses no safety hazard. Some older guns and certain double-barrels may experience choke distortion when using steel shot. If you are uncertain about your gun, write the manufacturer giving the model and serial number. They will be glad to advise you. Please remember that maximum lead loads should also be fired only in good, modern guns.

Won't Steel Shot result in Higher Crippling Rates?

No, not if you use the proper shot size. It is generally recommended that you use a larger shot size in steel than in lead (i.e. if you used number 4 shot in lead, go to number 2 in steel). The larger shot size, coupled with both increased velocity and better patterns in steel loads, makes it equally as efficient as lead. Dozens of field tests have been made throughout the nation with no significant difference in kill or crippling rates at ranges up to 40 or 45 yards. Beyond these ranges, lead was found to cause more crippling than steel.

What Do We Do About the High Cost of Steel Shot Shells?

Steel loads are slightly higher in cost than lead at the present time. Ammunition manufacturers indicate that this difference in cost will probably be reduced if steel shot sales increase. Federal has just announced that their new 10-gauge load will have a suggested retail price the same as for their standard lead load for the same gun.

Data shows that the average Iowa duck hunter shoots approximately 25 rounds annually. Even at current prices, the additional cost for steel instead of lead would be about $3. This is a very small amount extra to pay in order to save the tremendous numbers of waterfowl being poisoned at the present time.

Will Steel Shot be Available in Sizes Other Than 12-Gauge?

Federal Cartridge Corporation had 10-gauge steel shot shells available for the 1980 waterfowl season. It is also conducting extensive field tests of 20-gauge shells and some 20-gauges in steel was available this season.

Other gauges will probably never be loaded with steel shot. The 16-gauge, the 28, and the .410 constitute less than one percent of the total shot shells sold. Manufacturers claim that even lead shells in these sizes are unprofitable, and to load them with steel would be prohibitive costwise.

Will I Have To Change Anything About the way I Shoot Ducks?

Yes, several changes may be necessary. Shell shot has a higher velocity at close ranges but loses velocity faster than lead. Thus, you will need a shorter lead at close ranges while swinging further in front of the target at longer ranges. The tighter patterns will necessitate more precise shooting; you won't be able to scratch down as many birds with off-center shots. You will need to judge distances more

THE WARDEN'S DIARY

By Rex Emerson

Did you ever see a hog on point? Well, I did. It was the opening day of pheasant season. Bill Aspelmeier, a special law enforcement officer from the wildlife section was riding with me. As we rounded a curve where the rock road crossed an old abandoned railroad track, we could see a pickup truck parked and some men in the road ditch. Evidently they saw us at the same time, and a man wearing a red cap suddenly ran down the railroad right-of-way and disappeared into the tall horseweeds which bordered the track bed.

We braked to a stop and Bill checked the hunters who were dressing pheasants while I stepped over the short fence into a harvested corn field where it was easier walking. I proceeded in the direction the runner had taken. About one hundred yards ahead of me I could see an old sow looking through the fence and staring at something in the horseweeds. There was something across the fence holding that old sow's attention. That could be where the runner was hiding. The old sow held her point until I got there. Sure enough, the guy was hiding in there. When asked what he was doing he said, *"I'm checking on my hogs"*.

I told him the hogs were out here in the field where I was. He told me his name and said he didn't know the hunters at the other end of the field. He didn't have a gun, and he wouldn't need a hunting license if he had been hunting there, so I let him go check on the hogs.

Back at the road I asked who the guy was who had run.

One man said, *"Oh, that was my brother."*

When asked, *"Why did he run?"*, he said, *"Who can tell what my brother might do?"*

We drove on to their house. The lady who came to the door confirmed the fact that they owned the farm on both sides of the railroad and the old railroad right-of-way had been turned back to them.

When I asked who was hunting over there she said, *"My two sons are hunting, but one of them is supposed to be checking on the hogs."*

The person who ran had left his shotgun behind with his brother. They had been hunting on their own farm, and didn't have over their limit of pheasants. The season was open, so why did he run and hide?

Some day I would like to find out what I missed. If that old sow wasn't so big I would like to have her for a "police" hog.

We checked a lot of hunters that day and a lot of them were nonresident. They come to Iowa from all over the United States to enjoy our fine pheasant hunting. Some of the nicest people you would ever want to meet. We didn't get one complaint of nonresident hunters trespassing without permission. The nonresident hunters spend a considerable amount of money in our state. They could be thought of as a very profitable industry, and practically pollution free. Yet, we abuse them.

The nonresident pays thirty-five dollars for a hunting license. No complaints. They pay three dollars for a habitat stamp, the same as we do. No complaints. But then we make him get a five dollar pheasant stamp and tags. Each one of his pheasants must be tagged. The resident hunter is not required to do this. I have never had a reasonable explanation for this harassment of the nonresident hunter. They should know the Conservation Commission did not ask for this law, but we are required to enforce it. Perhaps some day the Iowa fisherman will go to some other state, and when he buys his license he will be required to pay extra for walleye tags.

We found one young man hunting alone. While checking his license we noticed the safety was off on his shotgun. This was called to his attention. He knew the safety was off. *"That's the way I always carry it, so I can shoot quicker."*

No wonder he was hunting by himself. No one in his right mind would hunt with a person like that. That's one of the reasons we have hunter safety classes. Sometimes it's better to learn in a classroom than from experience.

A kindergarten teacher was showing her students some pictures of animals to see if they could identify them. They were doing pretty well until she held up a picture of a deer. That had the class stumped. The teacher said, *"I'll give you a little hint. What does your mother call your father when he comes home at night?"*

One little boy said, *"I know teacher. It's a jackass!"*

accurately and avoid those long shots which will only waste shells. The end result should be good for you; you will be a better shot.

Can I Hand Load Steel Shot for Duck Hunting?

At this time, components are not readily available. Shot, wads, powder, and cases are different for steel than for lead. Component manufacturers are now developing the technology to provide for hand loading. Manufacturers caution loaders not to try using steel shot with lead type components. They warn that this could be extremely dangerous. Undoubtedly, components will eventually be available as the use of steel shot becomes more wide spread.

What are the Rest of the States Doing about Lead Poisoning?

Many of the states are already more restrictive than Iowa. In the Mississippi Flyway, the states of Minnesota, Wisconsin, Michigan, Indiana, and Missouri already require the use of steel shot on most areas where there is any significant amount of waterfowl hunting. Illinois has been inconsistent with steel shot regulations. In the south, steel shot is required on vast acreages of federal lands. In the 1979 season, the states of Minnesota, Wisconsin, Michigan, Iowa, Illinois, Indiana, Missouri, and Tennessee agreed with the U. S. Fish and Wildlife Service to enforce steel shot regulations in specified zones. Illinois subsequently reversed its decision. Ohio agreed on part of the zones in their state. Arkansas and Louisiana refused to cooperate. Kentucky, Mississippi, and Alabama had no restricted zones, so they were not affected.

The U. S. Fish and Wildlife Service mandated that there would be no gauge exemptions in steel shot zones for 1980.

Canada, with millions of acres of marshes and light hunting pressure, is studying the possibility of requiring steel shot in some areas. Mexico, where waterfowl hunting is insignificant (less than 500,000 per year), has taken no action, and we point out that almost none of the birds which constitute the problem species winter south of the border.

What Happens if we don't adopt a Ban on Lead Shot?

The least that could happen if we continue to poison waterfowl at the present rate is a curtailment in seasons and bag limits as populations dwindle. This is the optimistic view.

The most probable result is that a lawsuit will be filed against the U.S. Fish and Wildlife Service to stop all waterfowl hunting until they halt the use of lead shot. Under the National Environmental Protection Act the courts would in all probability rule against the use of lead shot as being damaging to the environment. They might very well ban the use of lead shot for any purpose unless the user can show that it causes no harm to the environment.

Wouldn't it be better if the duck hunter supported a reasonable ban on lead shot where it has been proven to cause lead poisoning problems?

The Old Box Elder

BY THOMAS J. NEAL

IT HAD BEEN THERE as long as anyone could remember. Nobody had planted it. It was just "always there". It wasn't a pretty tree by our human standards of beauty. It didn't have the perfect symmetrical form of a Colorado blue spruce, or the beautiful flowers of a Hopa crab.

But it did have a certain dignity that only age could give it. It was four feet thick in the trunk. Not especially tall, yet its spreading branches shaded almost half of the back yard. The tree held an old rope swing that had provided hours of enjoyment for three generations of kids. Occasionally the rope had to be replaced, but the limb it was tied to never failed.

In the old days the tree had shaded the horses, Buck and Peg, during their noon rest. Sometimes the boss or the hired man joined them for a short siesta before they returned to work. More recently cars and tractors rested in its shade.

Several times in its life it had held a tree house, and the shouts of children echoed through its branches. Family picnics had been held in its shade for years.

The box elder had withstood a tornado that blew down many lesser trees. Once it was struck by lightning. Even this savage blow failed to kill it. One huge branch was split off and it took several days to clean up the fallen limbs.

There was always an oriole nest at the drooping tip of one of the branches. A screech owl made its home in a hollow limb near the top of the tree. Robins, doves and woodpeckers also nested in the tree, and for a few days each spring it was alive with migrating warblers.

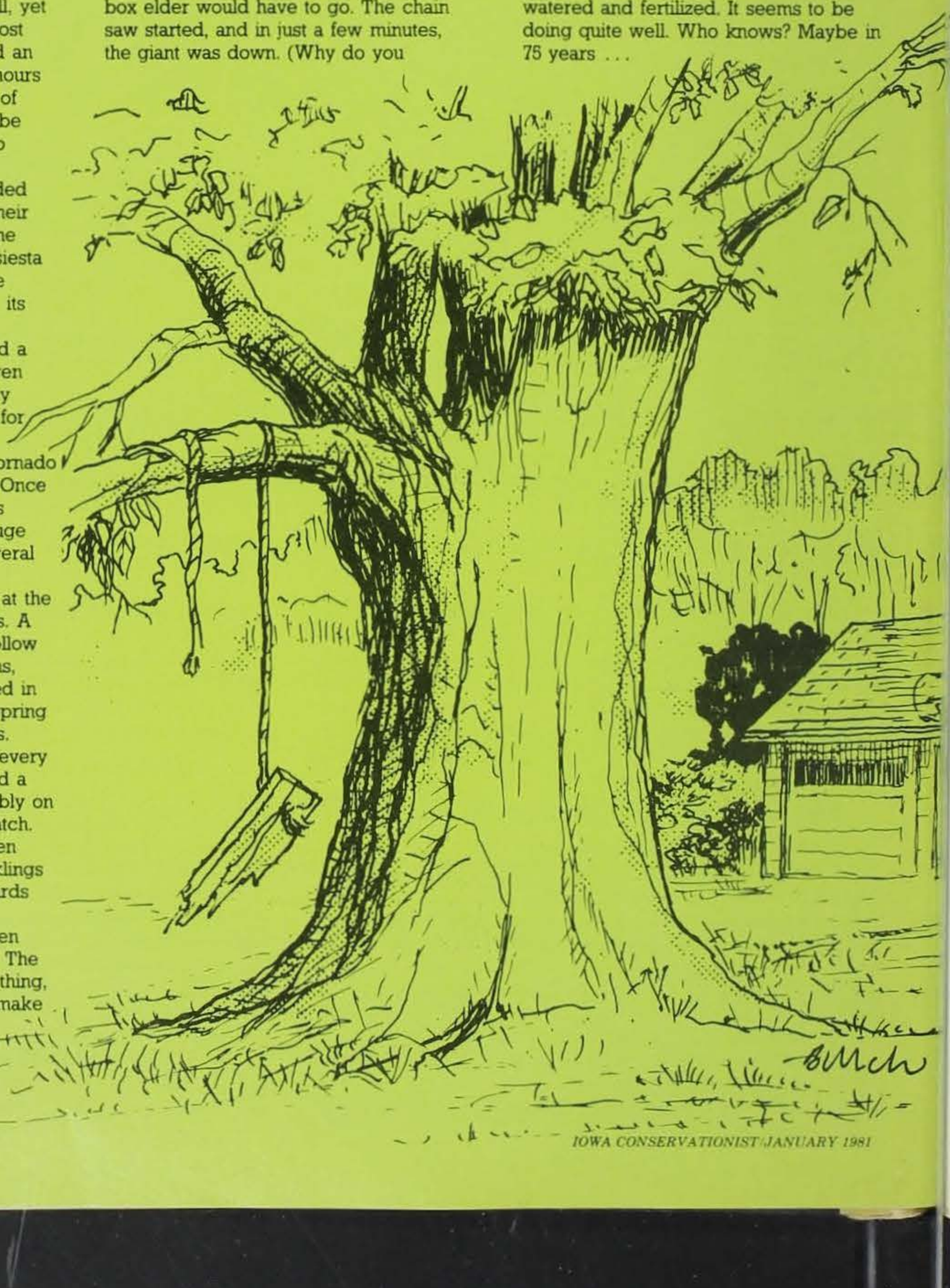
Squirrels ate the ripening seeds every summer, and once old Jip had treed a whole family of coons there, probably on their way to visit the sweet corn patch. Another time a wood duck was seen leading her 14 newly hatched ducklings away from the tree and down towards the creek.

Years ago, the tree had even been used as a source of "maple syrup". The syrup was just as good as the real thing, but it took somewhat more sap to make an equal amount of syrup.

But the box elder was getting old. It seemed like there were always sticks to pick up before you could mow the grass, and leaves to rake up in the fall. The kids were grown up, so they certainly didn't need a swing. Besides, the house was air conditioned now, so who needed shade? And anybody knows that box elder trees attract box elder bugs!

So the decision was made. The old box elder would have to go. The chain saw started, and in just a few minutes, the giant was down. (Why do you suppose that squirrel chattered and ran around so when we were cutting the tree?) It took several days to burn up all the wood and limbs. Finally a stump remover was called, the stump was ground into little pieces, the soil smoothed off, and grass seeded.

A few months later a replacement (a $59.95 thornless honey locust) was planted. The spindly tree was staked, watered and fertilized. It seems to be doing quite well. Who knows? Maybe in 75 years . . .



CLASSROOM CORNER

by Robert Rye

ADMINISTRATOR, CONSERVATION EDUCATION CENTER

WHAT COULD POSSIBLY cause you to visit the Conservation Education Center?

I visited with one group leader as to why he came and brought a group to the Center. Though a long story, it appeared he had been inspired to become involved in conservation.

All of his initial nature experiences had been through camping in state parks in various states. They had been fun experiences, but if one is familiar with the atmosphere found in state parks, one must realize that state park camping isn't wilderness camping. Blaring radios, yelling children, and rumbing cars easily eliminate the wilderness. He felt that he was in a tree infested suburb without curbs and gutters.

A wilderness backpacking trip drastically changed his attitude and behavior toward nature. He was off the beaten road. There were no cars, no recreational vehicles, no radios, no screaming youngsters and no throngs of people. It was just him and some of nature's most beautiful scenery.

Nature provided a gurgling stream and a quiet forest, as well as a chance to observe deer and majestic trees. Nature impelled him to stop and marvel at the morning haze; to drink sparkling water and inhale the fresh air.

He now was going to try his best to use and yet protect these areas from man's destructive progress. He was a confirmed nature-lover or to put it in modern language, a conservationist.

He began doing all the things new conservationists do. He started subscriptions to National Wildlife, Backpacking and other recreational magazines. He clipped the photographs to remind him of his wilderness. His car wore a conserve fuel sticker. He wrote to congressmen urging them to support wilderness legislation.

He went a step further. He read about conserving natural resources. Then he began lecturing his friends about conservation and practicing what he was preaching. He bought returnable bottles before it was mandatory, drove 55 miles per hour, recycled paper, and watched his thermostat.

His friends at first became concerned about his going off the deep end. He was wasting his time because his little bit of conservation was not going to make much difference.

Conservationists are often accused of operating more on emotions than on logic. This may be true, but "logic and man's progress" are destroying and poisoning the environment. Emotions tell us that this must stop. There are both good and bad parts to our actions. The "good" is what we should aim at — nature being used wisely.

People do not enjoy being told what to do. Sometimes, though, environmental management makes it necessary to put restrictions on what people can do with their land and free time. When this happens, people cry that their rights are being violated. When I hear this, I think of how the "rights" of nature have been violated throughout history. Until concerned conservationists came along nature did not have a voice to demand them.

Conservation Education is resource management. This is the theme of the Iowa Conservation Education Council's Winter Workshop at the Conservation Education Center on January 16-17, 1981. Each of us is a conservationist — if only by informing others of wise use activities.

Contact the Conservation Education Center, R.R. #1, Box 53, Guthrie Center, Iowa 50115, (515) 747-8383, about the workshop and pass this on to someone else: Conservation is addicting and you may help someone else get started.

Lookin' Back

Ten Years Ago

the Iowa Conservationist examined the ways Iowans used their recreation time during the winter months. Ice skating and camping were popular as was ice-fishing. Since that time skiing and snowmobiling have become leaders in winter outdoor fun.

Biologists completed yet another study of the mourning dove in a fruitless attempt to allow Iowans to harvest a portion of each year's production without affecting the next year's population. Every state south of Iowa allows mourning dove hunting.

Twenty Years Ago

the magazine announced a plan to reintroduce the wild turkey to Iowa. Twenty turkeys were released in the Yellow River Forest north of McGregor. These first turkeys were a western strain which did not do too well in Iowa. Later releases were much more successful as biologists turned to eastern birds obtained from Missouri.

The plan for building Lake Anita in Cass county was given initial approval.

Thirty Years Ago

the Conservationist featured a story on the methods different animals use to survive the winter. Another story discussed Iowa's poisonous snakes which are the timber rattlesnake, the prairie rattlesnake, the swamp (Massasauga) rattlesnake and the copperhead.

Pheasant hunters were complaining that the birds were getting too smart and had learned to run down the corn rows ahead of the hunter. This rumor still surfaces every now and then.


SERVICE BUREAU
CHARLES FRITZ