

IOWA CONSERVATIONIST

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HABITAT: THE KEY TO GAME ABUNDANCE

Last Call:

WINTER STORAGE OF BOATS AND MOTORS

When you put your boat away for the winter you will likely be more apt to do a thorough job of preparing it for another season afloat than you are when you get all steamed up about getting on the water when the tulips bloom in the spring.

The average outboard boat will last for several seasons if it is properly maintained, a leading boating foundation recently declared. The same thing can be said for a trailer. And they are just as subject to deterioration during the lay-up as during the boating season.

When ready to call it quits for the year, carefully check the hull, sand down and refinish any areas which need it. Use marine dough or plastic wood to fill nicks in the rails and topsides. Check for any damaged ribs or stringers if you have a wood boat. If you noticed any minor leaks during the season, care for them now.

Clean the boat thoroughly, inside and out. Be sure the bilges are free of gasoline and grease. Remove the drain plug when washing and be sure to drain out all cleaning solutions. Be sure to wash all grease or soil off rubber rails and windshield cowling.

If you have upholstered seats in your boat, wash the upholstery with a mild detergent to remove all grease and dirt, then rinse and thoroughly dry them before replacing them in the boat for the winter.

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The still hunter who stays nailed to one spot is in better shape to take deer when one comes on the scene. This photo was taken during Iowa's recent bow season; however, observations of the author are just as valid for the gunner in this and future seasons.

THE STILL HUNTER

W. W. Shapton

When you ask men why they hunt, they are hard put to give honest answers. Some say they just like to be outdoors, others mention the feel of the woods. If your question falls on the ear of a deer hunter, he will tell you that deer hunting is one of the greatest thrills possible to experience.

Pressed further he tries to describe the "crunch" of a deer picking its way down a runway on a frosty morning. Still too far away to see, a cautious step is all that can be heard. Did it stop? Slowly on again. Is he coming your way? Is the wind right? Is it a doe? Another hunter maybe? There it is again, just a dry rustle of leaves. Eyes strain till they hurt.

A branch moves and a patch of gray appears. Your ears ring. Then another step. A tail flicks. Up comes the head. A big buck. Squeeze. He's yours.

In that interval, maybe a minute or two, a boy becomes a man and some men became 10 feet tall. The thrill is something that has to be experienced. It can not be described. It's the thing that brings the old hunter back to camp year after year, and the thing that will take thousands of sportsmen afield this fall.

There are countless thrills to deer hunting, but the still-hunter probably enjoys his moment most of all. Still-hunting in the true sense can be complicated, but watching a runway is still-hunting

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John A. Fish
Assistant Superintendent
Federal Aid Section

Anyone who has tramped the fields or wandered along a stream, certainly has wondered what it was like before civilization.

Iowa was once a tall grass prairie with forested streams. Its prairie was dotted with marshland and potholes.

The coming of the white man was accompanied by the sounds of the axe, the crackling of fire, and the soft sound of virgin prairie being plowed to extinction. Later wet lands were drained to further expand agriculture. The hunter's gun fed and clothed families by the harvest of abundant game.

What impact did this have upon the wildlife? Drastic changes came about in populations of bison, elk, and prairie chickens. A number of other species responded to these changes, and showed an increase. But, as the state became more populated and agricultural practice expanded, game abundance, steadily declined. Almost too late, people concerned with the decline of wildlife, were aroused to action.

Three separate actions were taken, each following the failure of the former. Each was thought to be a sure cure for our ailing wildlife populations.

The killing of prey by predators, appeared to the people to be detrimental to game, so mass indiscriminate warfare against certain species under the name of predator control was undertaken. This action was doomed to failure from the beginning for the following basic principles were not recognized:

... The vast majority of wildlife species meet death by predation. This is the rule rather than the exception, and is a normal action to the life of any game species.

... If it were not for predation, the increase in living things within a few generations would result in total disaster, and there would not be enough space on this world for all of them.

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RARE DUCK TAKE IN MINNESOTA

What would be the mathematical chances of bagging two tagged ducks with consecutive band numbers?

Well, it would take a Univac or a good many people spending long hours over their slide-rules to get an answer. Yet, that is exactly what happened to Del Gysler of Park Rapids, Minnesota, as reported in the Minot, North Dakota, *Daily News* on October 22.

Gysler took two banded ducks 45 minutes apart on opening day of the Minnesota duck season. The first, a canvasback, carried the number, 616-50816; the other, a redhead, 616-50817. Don Swanson, a Park Rapids, Minnesota, newspaper publisher, witnessed Gysler's unusual experience.

It's possible the birds were banded at the same time as ducklings; the bander thinking both ducks were either canvasbacks or redheads. This would seem logical for it is almost impossible to tell the difference between the two species at the duckling stage. After banding, the birds apparently moved together in the same flight pattern; possibly in the same flock. Whatever happened, Gysler's daily double must surely go down as about as rare as a duck bag can get!

The pocket gopher is one of the few animals that can run backward as fast and as easily as it can move forward.

The polar bear is a powerful swimmer and has been seen swimming in the Arctic seas 30 miles from land.

The black widow spider gets her name from a nervous habit of sometimes eating her spouse.

Deprived of its food, a mole will die in about a day.

Editorially Speaking

A CHALLENGE FOR IOWANS

Lester F. Faber
Assistant Director

One of the fundamentals of a democracy is that when people know the truth about their situation, the people will respond to any need or challenge the truth offers. Usually this statement is connected with a discussion of the basic concepts of government but it also applies to other aspects of government in relation to people's needs or desires.

In Iowa we have an ever-increasing use of state parks and at the same time a deterioration of the parks and facilities. In published articles and verbal statements alike, this situation is often mistakenly associated with the lack of ability or efficiency of the State Conservation Commission.

One truth to be recognized is that the use of Iowa's parks has increased over 130 per cent in the past ten years. This use is indicated by a record of 6½ million park visitors in 1957. Iowa now ranks fifth in the nation in number of state park visitors in relation to its population. This heavy use certainly indicates a desire by Iowans for state parks that provide the needed facilities.

Another truth is that to adequately maintain the parks and facilities money is needed. With the 130 per cent increase in use of parks in ten years the money available for maintenance and operations has remained about the same, or on the basis of money spent in relation to number of visitors, has actually been reduced.

If the cause of the present park problem is the lack of ability or efficiency of the Conservation Commission the citizens of Iowa would see to it that improvements were made. If the cause is a shortage of funds to do the necessary work then we are just as sure that the people want adequate financing for an up-to-date park program.

The future state park system to a large degree depends on the citizen and his attitude. Because of the known and indicated interest now shown by the use of parks we are sure that the people of Iowa will respond to the truth and the challenge set before them.

Nature's Notebook

December Events

- ... Wintering flocks of ducks, mostly mallards, in evidence during December.
- ... Winter residence of perching birds—cardinals, bluejays, titmouse, and nuthatches—during December. This is the time to put feeding stations in operation for the winter months.
- ... December is the period for rare winter migrants—grosbeaks, pine siskin, red pole, red and white-wing crossbills and snowy owls.
- ... First bloom of witch hazel may be noted in December. This flowering shrub is usually in bloom at Christmas time. Visitors to southern Iowa or Union Park, practically in the heart of metropolitan Des Moines, may find witch hazel.
- ... Tracks of wild animals in December—another good reason for getting out-of-doors.
- ... Some mushrooms, particularly velvet stem, may be found in December.
- ... Some insects may be observed this month. Watch for flight movement of honey bees on warm days. Morning cloak butterflies may also be noted.
- ... Frogs, fish and turtles in deep hibernation in December. Many animals also in hibernation.
- ... Mating period for some birds occurs in December, particularly the mating and nesting preparations of the Great Horned Owl.
- ... Lapland longspur and horned larks may be seen along roads this month.
- ... Wintering of rough-legged and red-tailed hawks occurs in December.

MUSKRAT: "LITTLE BROTHER TO BEAVER"

David H. Thompson
and
Roberts Mann

In the Algonquian Indian languages he was called Musquash. The Hurons called him Ondatra and that has now been adopted as his scientific name. But the best Indian name of all meant "little brother to the beaver." He gnaws like a beaver, swims like a beaver, builds houses like a beaver, and looks like a little beaver. We call him Muskrat because, also like the beaver, he has a pair of musk glands used to leave messages for others of his kind.

This is the most important fur bearer to professional trappers and the American fur industry. More than any other wild animals, the muskrat converts millions of acres of cattail marshes and weedy shores into a crop of fur and flesh. To the farm boy with a few traps it means money in the pocket and experience in the skills of outdoor life. Our womenfolks prize rich warm coats of Hudson seal, the trade name for muskrat fur. The dark red meat has a wild game



Jim Sherman Photo.

Sometimes called "little brother to the beaver," the muskrat resembles the beaver in many ways, including his industry and proficiency in water.

flavor but, because the word "rat" is unpleasantly suggestive, muskrats appear on menus under such names as Marsh Rabbit and Maryland Terrapin.

Sometimes these animals become a pest, raiding cornfields and other farm crops near the water's edge, but they do the most damage to earthen dams, dikes, levees and canal banks which are occasionally destroyed through leaks started by their burrows. In our Cook County forest preserves, however, the muskrat plays a star role in establishing and maintaining natural landscapes and a natural balance among the wildlife of almost a hundred bodies of water which have been created or restored during the past thirty years. Neither they nor any other wild animals may be hunted or trapped in any of the preserves.

In cattail marshes and other shallow weedy waters, muskrats pile up great heaps of aquatic plants to build a house or lodge

Heery Woods State Park

C. S. Gwynne
Professor of Geology
Iowa State College

A fine geological feature of Heery Woods State Park is the pile of boulders at the dam and upstream along the river-bank. These boulders are completely different from the rock which directly underlies the subsoil of the park and the surrounding country, and were brought to this part of Iowa by continental ice sheets, or glaciers. Since they differ from the underlying bedrock, they are in a sense erratic to the country, hence are called glacial erratics.

Each boulder once formed part of the bedrock in country far to the north. The nearest place any of these might have come from is in the Minnesota river valley, southwest of Minneapolis and about 170 miles from the park. There, the surface bedrock is of the same general sort as some of the boulders. Most of the boulders, however, came from much farther away.

Let us see what they are like. In the first place, they are crystalline rocks. This means that they are solidly interlocking masses of mineral crystals. Most of these rocks are described as being igneous in origin . . . formed from molten rock. Some igneous rocks are made when molten rock pours out from a volcano in the form of lava. Others are formed when the molten rock, called magma, solidifies below the surface. Most of the igneous boulders in this group are from masses of igneous rocks which were thus formed within the earth's crust. That makes them intrusive igneous rocks rather than extrusive. Many of these boulders at the dam are a kind of intrusive igneous rock called granite. The intrusive igneous rocks are composed of visible

mineral grains. Cooling was so slow that the crystals could grow to good size. Extrusive igneous rocks, on the other hand, are without visible crystals. They are composed of crystals, but crystals so small that recognition without magnification is impossible.

If these intrusive igneous rocks were formed below the surface, perhaps as much as a few miles, one might wonder how they ever came to be found at the surface of the earth. This is explained as the result of slow uplift of the crust and slow erosion of the material above the hidden igneous rock. After hundreds of millions of years, the rock of which these boulders was a part became the surface bedrock.

At the surface it was subject to weathering. The minerals in it were attacked by the gases of the atmosphere and by water soaking into cracks. Such igneous rock has natural cracks called joints. Weathering proceeded most rapidly along the joints. The solid bedrock became overlain by clay and sand, along with unweathered pieces of rock up to boulder-size. Of course, much of the finer material might be washed away. However, weathering always seems to keep ahead of the wearing away by running water and wind. That explains why there is still soil and subsoil over most of the land surfaces of the earth in spite of all the rain and wind.

Some 300,000 years ago glaciers formed in the north, in Canada. These were similar to those of Greenland and Antarctica. The ice, a mile or more thick, slowly moved out in all directions. It froze to the soil and subsoil of the country over which it moved, carrying it along. There were four epochs of glaciation, separated by long inter-

that has, inside, a warm living room reached by an underwater entrance. From this home they range out to feed on the succulent roots and stems of such plants, even under thick ice in winter. However, in streams, farm ditches, and in many ponds and lakes—especially during summer—muskrats live in burrows dug deep in the banks. Those burrows start beneath the surface and slant upward to an enlarged chamber above the water level.

The muskrat is a thickset short-legged animal with a foot-long body about the size of a small cat. The adults average two pounds in weight but, rarely, reach four. It has a 10-inch black scaly tail which is flattened vertically—unlike the broad paddle-like tail of a beaver. This tail is used as a rudder, or to scull slowly, or to smack the water as a danger signal. The fur is dark brown on its back, with very thick water-

proof underfur and long reddish-brown guard hairs that glisten.

The "rat" has small beady eyes and ears which are nearly hidden in the dense fur. The hind feet are large, webbed between the toes, and used like the flippers worn by skin divers. While swimming the small forepaws are folded underneath the chin. Like all rodents, it has a pair of chisel-teeth or incisors above and below, separated from the grinding teeth or molars by a gap, and its lips can be closed behind the chisel-teeth to keep water out of the mouth while gnawing beneath the surface.

A muskrat is clumsy and slow on land, seldom venturing away from water in daytime, but it is a courageous scrapper when attacked or cornered. Next to trappers, its greatest enemy is the mink which raids muskrat houses and burrows to eat its young.

In trappers' language they are "Mushrats" or just plain "rats."



Glacial erratics—another name for the boulders (center) were placed and formed by glacial action; are important elements in the geology of Heery Woods Park.

vals when the climate was similar to that of today.

The first two glaciers extended as far south as the Missouri River. The third extended from Illinois into southeastern Iowa. The fourth had several advances and re-advances, but the first of these was the last to affect Butler County and the park area. It covered much of northern Iowa.

When the glaciers melted away, they left the country covered with a thick mass of debris which had been the soil and subsoil of country to the north. Now it is the subsoil over much of the Mississippi Valley. Included within this mass were boulders such as make up the collection at the dam. Northern Iowa has been noted for the great number and large size of these boulders. Those at the dam were brought in from somewhere in the surrounding country. Some were so large that they were broken up for easier handling. The unbroken ones are generally rather rounded. They were made round by weathering, not by stream or glacial abrasion. They have essentially the shape they had when first freed from the surrounding bedrock by weathering alone. The surfaces of most of the boulders are somewhat rough. This is because some of the minerals weather more easily than others.

One boulder is quite striking in appearance in that it has pits about an inch in diameter and an inch or so in depth. These are places where there were inclusions, or segregations, of a different material in the rock. It weathered away more easily, leaving the holes.

Among the rocks at the dam, there are also pieces of broken limestone. These are angular. Some have been used as a sort of pavement sloping down to the water. Limestone is one of the sedimentary rocks, and was formed as a sediment in the area. The material was either precipitated from solution, just as common salt may be precipitated from solution upon evaporation, or else it had come from the shells of marine invertebrate animals, all broken down to a powder. It is a soft rock, more



A weathered, pitted rock, typical of many found at Heery Woods State Park, is shown in this photo.

easily broken than the rock of glacial erratics. The sea in which the limestone originated was one of the many with which Iowa and the Midwest was covered hundreds of millions of years ago. Soft at first, the material gradually hardened to rock.

This same limestone makes up the pillars at the entrance to the park. Some of the stones in the pillars contain fossils which are easily visible. These are the impressions, or the replacements of the broken shells, of some of the small sea animals.

The limestone probably came from one of the quarries in Butler County, possibly one of those at Greene or Shell Rock. This limestone is part of a formation called the Cedar Valley, which outcrops along the Cedar River. The Cedar Valley formation in turn is part of what the geologists call the Devonian system of rocks. The Devonian period extended for approximately 50 million years, beginning 350 million years ago.

The park has an area of approximately 500 acres. It is in the valley of the Shellrock River at Clarksville, in eastern Butler County. The development of the valley is another part of the geological story of the park. Erosion by the waters of the Shellrock River through the ages has done the trick. Very accommodating of it to have provided such an interesting setting for a fine state park,

TRY IT

VENISON SAUSAGE
CATCHING ON

There's a new dimension in deer eating in Iowa these days, thanks to the ingenuity of sportsmen and locker plant operators.

Some thought and effort, either individually or collectively, has resulted in a couple of new or near-new products made from venison that anyone can make themselves or have made. They are economical, delicious to the taste and cut waste that might otherwise result. The products are summer sausage and link breakfast sausage.

First of all we might just review in a few lines something of the problem that brought about these discoveries.

In just about every deer eatin' household, the problem of how best to use the lesser cuts of venison has always been something of a stickler. The steaks and roasts and loin get a pretty good working over right at the start. Everything else—hamburger, boiling meat, etc.—get shoved back farther and farther in the locker or freezer. Then one day, long after the choice eating has been forgotten, what's left is discovered still sticking about, get's a quick evaluation as "too old" and is promptly demoted to the garbage. Quite a waste, especially if you traveled very far to get that white-tail!

Something of a problem, too, has always been the "gamey" taste of venison and how to glamorize it so that it is enjoyable for every member of the family. Deer meat is one of those items of food that has a pretty wide latitude of mildness or strongness, depending on age and where taken. Many like the "wild" flavor of deer meat; others find it objectionable. It was almost a foregone conclusion, then, that deer hunters would search for new ways to prepare venison so that anyone could eat and relish it.

Dean Schlick, a Charles City jeweler, had no particular trouble with the "wild" taste of venison at his house, but he was caught by the first dilemma. Some of the less desirable cuts and hamburger from the deer he shot in Wyoming were pushed back until they were finally thrown out with the declaration that they were "too old" to use. The waste bothered Schlick and he was determined to do something about it.

After a successful Wyoming deer hunt last year, Schlick went to Louis and "Chick" Jensen, operators of the Jensen Brothers locker plant in Charles City, and had a sample "stick" of summer sausage made from part of his deer. The sample got passed around to some of Schlick's friends and had them clamoring for more.

This year, Schlick, Wally Burkholz, Wayne Swant and Gerald Arndt, the latter three also of Charles City, again headed west



A Merry Christmas is in store for the sportsman dad of this household with a copy of "Iowa Fish and Fishing"—the gift that keeps on giving with information on Iowa fish, fishing waters, and how to catch every species found in the state. Copies of the book are \$2.50 and may be ordered from the Iowa Conservation Commission, East Seventh and Court Ave., Des Moines.

for the deer country of Beula, Wyoming. The four brought home two bucks and two does and, while their bag differed, their agreement on how to use their venison was unanimous. Not a one had any made into hamburger—except for steaks and roasts, all went into summer sausage. Schlick put all into summer sausage, except for T-bone and sirloin steak!

I visited with "Louie" Jensen recently in his Charles City locker plant, and came away with his recipe for venison summer sau-

sage. The recipe is based on 100 pounds of meat, so that lesser or greater amounts can be figured quickly and simply:

- ... Cut and set aside best cuts for steaks and roasts.
- ... Trim meat from balance of bones.
- ... Proportion 20 per cent pork to 80 per cent venison (a proportion of 80 pounds of venison; 20 pounds pork per 100 pounds of meat.)



Venison summer sausage is mild and delicious. More and more are finding it an economical answer to the problem of how best to use lesser cuts of deer.

- ... Grind venison through $\frac{1}{8}$ inch grinder plate.
- ... Grind pork through 1 inch grinder plate.
- ... Mix 3 pounds mixed curing compound, 1 pound sugar, 4 ounces pepper, 2 ounces ginger, 1 ounce paprika.
- ... After mixing, regrind through $\frac{1}{8}$ inch grinder plate, and cure for 48 hours. Remix, adding 8 ounces sugar.
- ... Stuff in beef middles (casings) and cure overnight in casings.
- ... Smoke for 18 hours in cool smoke, then raise temperature until 145 degrees F. is reached. Hold at this temperature for 30 minutes. Chill in cold water.

If the recipe is followed properly, the end result should keep well. Refrigeration will help keep the sausage moist. If stored outside the refrigerator, the air will dry the sausage out eventually, Jensen said.

"One thing for the hunter. Cool or chill your deer quickly and properly, and keep it clean," Jensen said.

While fresh meat works best, hunters who have a quantity of venison hamburger that has been frozen can still have it made into summer sausage, according to "Chick" Jensen.

"It's a little harder to work with, but it still can be done," "Chick" said.

Conservation Officer Bob Daubendiek at Decorah, has had for several years some of his venison made up into link breakfast sausage. Like the summer sausage Daubendiek's breakfast sausage has made a big hit with everyone who has tried it.

Daubendiek's recipe for this delicacy also is based on 100 pounds of meat:

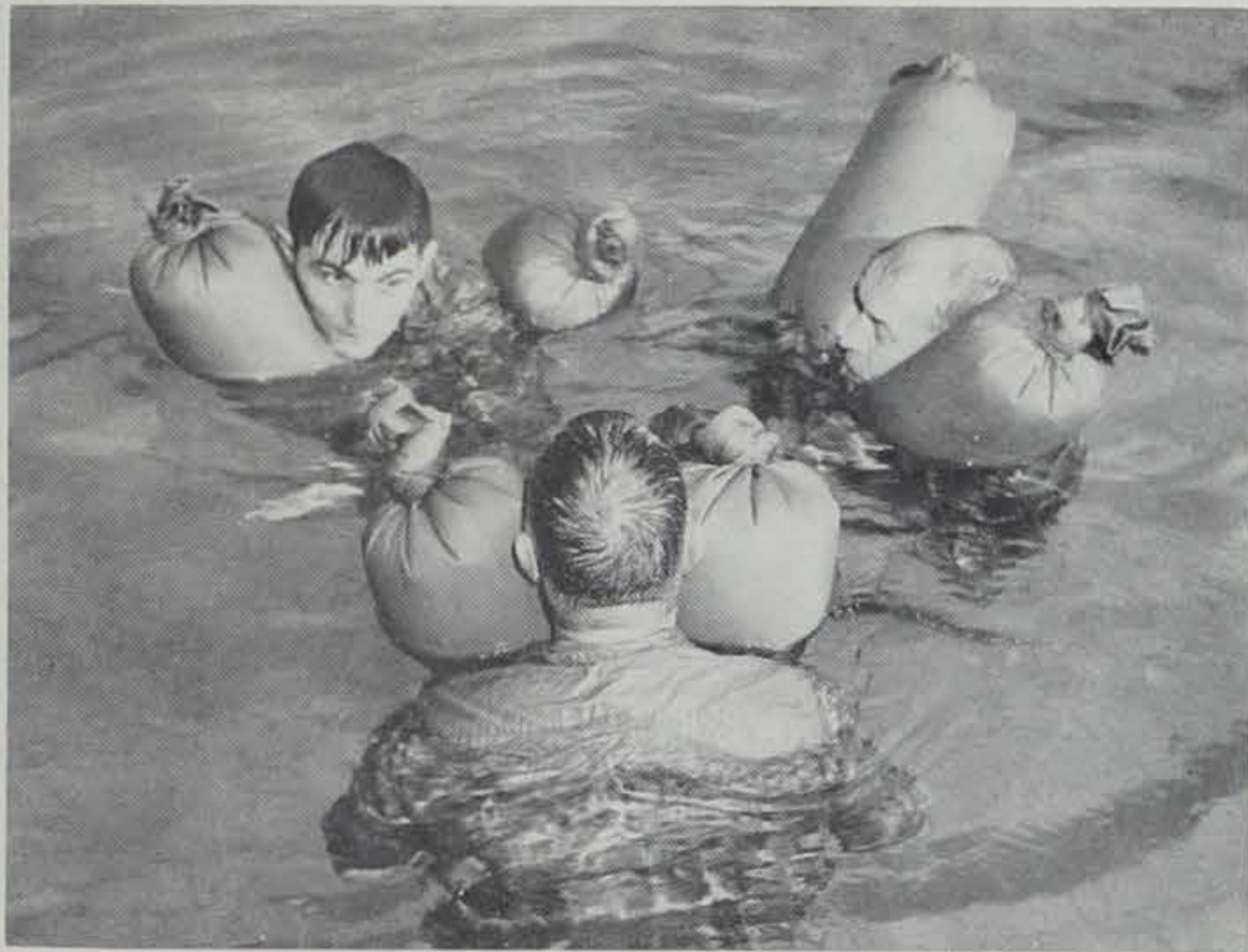
- 50 pounds pork
- 50 pounds venison
- 4 ounces quick action pickle
- 2 pounds pork sausage seasoning

Grind venison three times through a fine plate. Grind pork once through a coarse plate. Mix on table with pickle and seasoning and run through sausage plate. Run into weiner-size links. Cold smoke with temperature less than 100 degrees F.

The tongue of the African chameleon is longer than its whole body.

Plant life furnishes fish with protection, oxygen, food and spawning sites.

Of the 150 different kinds of sharks, only five are usually regarded as man-eaters.



All Photos by George Tovey
Survival in water sometimes depends upon quick disrobing and ability to use items of clothing as emergency life preservers. Park officers Ray Turner (left, facing camera) and Harry Hunter (right) and Equipment Supervisor Bob Ferren (back to camera) participate in this drill at recent Water Safety School for Lands and Waters Division personnel.

First Aid instruction, often coming with no advance warning, was an important part of the Water Safety School. Here Ray Turner of Ledges State Park; Harry Hunter of Pammel and Wayne Partridge of Lake Keomah State Park (left to right) give first aid to Ira Carrier of Nine Eagles State Park, the "victim" of head, arm and hand injuries.

WATER SCHOOL FOR PARK PERSONNEL

THEY WORK FOR YOUR SAFETY

Water safety to most is a seasonal thing—a code of conduct that's paramount in thought and practice during the boating and swimming season, but often dropped after that last fall fishing trip or when the swim suit is retired to mothballs for another year.

But there is one important exception. For the 27 park conservation officers and lake patrolmen at the 13th Annual Water Safety School at Fort Dodge, November 10-14, it was demonstrated that improvement in the skills of swimming, rescue, survival and first aid in and around water, is a year-around job.

What adds to the importance and urgency of such off-season training programs as this is the tremendous interest in water recreation in Iowa and across the nation. Park attendance continues to soar. More and more people are heading for water. Boating interest continues to surge in almost unbelievable proportions. Iowa, with the sixth largest park attendance in the U. S., has planned for staggering increases in park use with 12 previous schools of this kind. The most recent looks ahead to 1959 which holds prospects for continued increases in park visitors, particularly those offering water recreation.

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Instruction during the intensive five-day school was divided into swimming instruction and drill each morning; first aid instruction, field problems and teaching of first aid every afternoon. Depending on previous qualifications or certification, each park conservation officer or lake patrolman was enrolled in either beginner, intermediate swimming or a special review course for water safety instructors, and in first aid classes designated as standard first aid, advanced first aid, and first aid instructor's special course of review.

At the end of the school, eight had advanced through beginner instruction; 13 were certified as intermediates; and four successfully completed the water safety instructor's review course. A total of four without previous first aid had successfully passed from standard to advanced first aid; four were certified as instructors; and a total of 18 instructors had passed the review for first aid instructors.

Water safety instruction throughout the school emphasized two principles—safety of the public under or around the jurisdiction of park officers and patrolmen and safety of self. In his relationship with the public, the park officer and patrolman must be prepared for emergency rescue work. To meet such urgencies, rescue instruction during the school included familiarity and drill with all types of rescue equipment, including boats, torpedo buoys, ring buoys and other apparatus used in rescue operations. Swimming strokes and all standard towing and carrying-out methods were demonstrated and offered as drills.

Safety of self in water included daily practice and perfection of all types of swimming strokes with emphasis on sustained and survival swimming. Drills in survival swimming included entering deep water fully clothed, disrobing, and then using items of clothing as emergency life preservers.

First aid instruction at the school covered emergency treatment of most of the common injuries and situations including fractures, sprains, cuts, snakebite, over-exposure, bleeding, burns of

all degrees, shock, etc. Artificial respiration and emergency aids such as the making of improvised splints and proper bandaging of wounds were included in both classroom lectures and demonstrations. A portion of the time devoted to first aid was earmarked for teacher training to better qualify officers to teach first aid in their home communities.

Bob Edwards, district first aid and water safety representative for the American Red Cross, was in charge of instruction. A capable teacher and expert swimmer, Edwards presented a well planned and coordinated program and had the faculty for presenting his material in an interesting, constantly moving manner. A high point in the instruction was several spontaneous situations set in motion by Edwards that called for quick thinking, judgment and action. At one point in the school, Edwards sent his students out-of-doors to scour alleys in a small radius for anything they thought would make a good, improvised splint. The officers demonstrated their resourcefulness with an assortment of oddities including cardboard cartons and other castoffs. One group returned with an asphalt shingle which, while it had seen a better day, worked as a good emergency splint.

Ten of the 27 attending the school have taught first aid as a course of instruction in their home communities. Some 15 others have taught first aid classes at home. It's a valid observation that one of the most important benefits of the school is that it reaches down into the community to continue teaching through persons better qualified to teach. Safety in, around or near water is the concern of all. It should be gratifying and a little comforting to know there are water specialists who have and continue to think, plan and work year-around to make water recreation safer.—K.C.S.



Rescue work of disabled swimmer is aided in this drill by inflated trousers which give additional buoyancy to sinking swimmer. Bob Ferren tows Parks Officer Carrier in the rescue drill. Twenty-seven park officers advanced through the school. More than half have lectured on first aid in their home communities.

HUNTING—

(Continued from page 89)

in its simplest form. In many respects it can be the easiest and most enjoyable way of bagging a deer.

The old timer may prefer to follow a track and match wits with his quarry on the move. A newcomer can do worse than pick a likely spot and wait. Each has its converts, each has its place, and the longer you keep at it the more you'll be convinced that the Lord's on the side of the deer.

There's an old saying around deer camps that every hunter has one chance. Whether it's true or not I wouldn't know. But if you hunt with that conviction—always believing the next minute may be it, you'll be ready when your chance comes.

Being ready means a lot of things and it starts before you leave home. Long before you shove off you'll be the victim of "The Fever." This is something all deer hunters get and first symptoms are noticed as early as September. The Fever isn't a condition, it's a contagious disease.

There's a lot more to this getting ready business than meets the eye.

Assuming your duffle bag isn't already bulging, there are matters that need attention. Clothes should be warm, windproof and light. Shoes should be waterproof and above all, they should fit. Books have been written on "grub lists," and how to sight-in your gun, sharpen your knife and read a compass. Consult these tips by experts. The books won't mention it, but the thing I consider most important: Don't forget your license.

With camp set up, and your wood cut, it's time to end the foolishness. I might say right here that I don't hold much with those who go deer hunting just to have a party. There's a time to hunt and a time to party but you can't do both and kill a deer.

I am convinced that an extra day spent going over the ground before the season opens is worth as much or more than an extra day on the other end of the hunt. It's a matter of record, in Michigan at least, that about two-thirds of the total number of deer killed are taken the first three days. There is further evidence to show that the first day's kill is equal to or even exceeds the combined total for the second and third days. Translated into practical application this means that where you stand at daylight the first morning should call for some serious deliberation.

Old time still-hunters can size up a country with a minimum of prowling. Chances are they can't tell you exactly what they look for either. Buck sign is always important—rub marks, signs of fighting, location of preferred food and active runways. Or, it may be



From a tree perch, this hunter has a good vantage point from which to spot deer anywhere in his area. The trick is to stay put, for, as sure as you move, you'll spook a deer that has been gliding your direction.

a combination of things. Deer, and especially bucks, when not disturbed, have definite routes of travel. They follow certain lines of cover, use the same ridges to and from feeding areas, or cross streams and fences at particular places. I have more than a strong suspicion, too, that once the shooting starts, the veterans have a battle plan that includes some schedule changes. Pre-season runways are quickly traded for thicker cover. They now sneak from place to place and seldom show in the open. They spend a lot of time in the densest thickets and may bed down in places impossible to approach quietly and unobserved. For this reason the runway you pick for the second day may be entirely different from that selected for the first. Think that over.

Pick your stand so you can command as many approaches as possible.

If it's a feeding area you're watching don't make the mistake of getting too close. Deer do a lot of feeding during the night which means they might be at that favorite feeding spot just before daylight. By covering the approaches from some distance away, you can get the late feeders as they leave as well as those that come in to top off in mid-morning.

You'll need to be at the feeding areas early the first morning to be successful. Forty-five minutes before daylight is not too early. This means knowing how to find the spot with a flashlight and picking landmarks that can be verified in the dark.

In country where hunters are

numerous, first morning stands of another type are usually preferred. In this situation a half hour's cannonading will be enough to alert every deer in the area. Even those that haven't been spooked or shot at will pick up man scent everywhere. Deer will be on the move. While they may attempt to reach some well known escape cover, they will be shuttled back and forth considerably in the process. Some will sneak, and some will run and you can turn this to your advantage.

Fingers of swamp that reach out into the old stumpings will draw running deer like a magnet. A notch in a hill is another bet, but here again figure to catch them out front, or you may be able to get only one shot. Other natural features can be found such as the end of a lake or sizeable beaver flooding which will influence general direction and funnel all the animals from a large area right into your sights.

Not to be overlooked is the direction of major parking areas, drive-in points or campsites. These or similar concentrations of hunter activity will push the deer outward. Select your stand out on the rim of one of these carnivals and your luck will confound the experts.

A deer stand may or may not be a physical thing; it depends upon the individual. Some people stand on stumps, others sit with their feet in a hole. Natural blinds are often used and occasionally an energetic fellow will carry an axe just to build one. The crux of the problem is to see without being seen. If you can stand still, very little else is needed. The old saying "that deer can see movement farther than you can see deer" is true, at least in principle.

Personally, I prefer to stand rather than sit, and keep my feet on the ground, not on a slippery stump. I also stand in front of whatever cover is available, not behind it. This has three advantages. It gives an open view of the area being watched, breaks up your silhouette, and screens any hurried movements in turning around when you hear something coming from the rear.

The place for your rifle is in your hands, not against a tree. A hurried grab for a gun out of reach will only transform a walking target into a runner. And when you grab your gun, make sure the target is a deer. When the gun gets too heavy to hold, put the butt down on the ground in the old army position of parade rest. This not only saves thumbs but is positive insurance against a nickname like "four-toed Jake."

The subject of smoking can be covered in four words. Smoke if you must. Keep the hand motion to and from your face to a minimum, however, or you may unknowingly give your trophy the highball. If you've packed a sand-

wich it's a good idea to get that out of the way during the first lull. Eat it all too, not just half of it. You can't be at your best with your mind on the other half of that sandwich.

I can't remember ever standing at a place for more than an hour without a half dozen other spots coming to mind where the possibilities seem better. Fight this feeling with all your might. As soon as you take a hundred steps you'll jump a deer that was silently working his way toward you. This will happen more often than not but you'll probably have to learn the hard way before you're convinced. If your mind wonders, put it to work selecting a tree to dress out the kill.

Stick with your runway, don't waste valuable time walking.

Another phenomena hard to explain is the sudden appearance of a deer right in front of you. You'll swear it must have crawled up out of a hole because you were watching and listening all the time. It will happen, mark my word. When it does, I'll leave it up to you as to how to get your gun up and go into action. Every way I've ever tried was always wrong.

What to look for isn't learned from books. Old timers say, "deer don't walk, they glide." I believe them. A spikehorn's head will look queer whereas a doe will be slim and graceful. No need to describe the looks of a rack, a deer with a rack doesn't have a body. You won't see anything else. Then two

to one your first shot goes right between the horns.

Deer are black, gray and sometimes red with all gradations in between. They crawl, walk, trot, and have three extra speeds forward beyond that. They can broad jump, high jump, and swap ends without touching the ground. They sometimes sound like men walking and will rustle leaves like squirrels. Those that you don't see, don't make any sound at all and these kind are most numerous. What you'll sometimes think is a deer will turn out to be a log, stump, stones, or even a man. It's no coincidence that hunters with telescopic sights see fewer deer than other people.

Nothing has been said about the direction of the wind but a glance at a chimney before you leave the shack should tell you on which side of the ridge to stand; not even a "muley" will run downwind. The sizzle of rain on the old stove pipe should mean "hit the brush with something that sheds water." Deer, like people, can't lay still long when they are wet. They'll spend the day looking for dryer spots and you may intercept one between beds. A good rain cuts down the competition.

Maybe some of these tips will prove valuable to you. Maybe they won't. But in either case I'm sure that you'll experience that same unexplainable thrill when you bring that first deer into your sights. So roll out—not just over—hunting season is here.—*Michigan Conservation.*



George Tovey Photo.
Hunting for game is one of the rewards we reap from adequate game habitat. It's a fundamental principle of conservation that game simply cannot exist where nesting and protective cover are absent.

* * * * *
definite habitat. Each habitat must provide these essential items:

- ... Sufficient food must be available each day of the year, and easy to obtain. Only numbers of individuals that get enough to eat will survive. Wildlife also require nourishing food, the same as domestic livestock. It can not be supplied in forms of supplements or concentrates such as fed to cattle or poultry. The soil must be fertile enough to supply them.
- ... Water must be available to game. It is as essential to them as it is to humans.
- ... Protective and nesting cover is important to suitable habitat.

Individuals require certain types of cover for various means. They must have cover to escape from

their natural enemies. They must have shelter from the severe elements they encounter. They must have cover to produce their young. Wildlife species must have living space to expand their numbers and to share with other species. We are losing vast amounts of suitable habitat each day. Some of the major problems toward this destruction are: no plant replacement of habitat destroyed, undesirable grazing, improper drainage, pollution of our streams, and uncontrolled use of chemicals.

Whether we like it or not, it has been our use of the land and water to meet our own needs that has shaped the pattern for wildlife abundance. Preservation and restoration of habitat is the first important step towards game abundance or if we allow the habitat to be destroyed so game populations also deteriorate. If the habitat disappears, so must the species.

HABITAT—

(Continued from page 89)

- ... Predation always kills the weak, diseased and crippled first. This aids the continuation of strong and healthy species.
- ... All wildlife are able to withstand heavy losses under normal conditions, and still maintain their abundance.

As predator control failed to increase game abundance, the concept of rigid law enforcement was initiated. Game laws were enacted that literally prevented hunting of game which resulted in adverse results. For instance, the restriction of hunting deer in a given locality allowed them to out-produce the range capacity to feed them all. Death by starvation was the result.

It is far better to harvest the surplus than to let them starve. Good conservation means wise use of our resources, and the elimination of wastes. Whenever there is an abundance of game, it should be harvested.

A case in point at the present time is the mourning dove which is hunted in 29 of the 48 states. The major portion of the annual production is wasted to predation,

disease and accidents, rather than being harvested.

Restrictive game laws are still applied whenever the breeding stock of any game specie falls below the point where surplus game is not being produced, but the fact remains that game laws only limit the take of game. *Game laws do not produce one single pheasant or quail!*

Artificial propagation was the third sure cure attempted to gain habitat abundance. This method was successful only to the extent of restoring game where some disaster had resulted in reduction of adequate breeding stocks. The loss of pen-reared game suffered tremendous losses to predators, for they had no chance to develop the alertness needed for survival. The key to game abundance did not lie in the above attempts.

The key to game abundance then is habitat improvement! By way of explanation, we must first review what we know about game and what we call their "homes" or habitat. It is known that each species grow up and compete for conditions in life in one certain environment. For instance, polar bears can not exist in the jungles; likewise, alligators do not live in Alaska. Each wildlife species is adjusted to and requires a certain

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"Sorry, Mr. Iowa Hunter! We're saving these doves for hunters in southern states."



Check and repack wheel bearings before retiring your boat for the winter. Mounting on blocks during winter will also add life to your boat trailer. *George Tovey Photo.*

STORAGE—

(Continued from page 89)
Check over all your hardware for any pitting or corrosion and give it a good cleaning. Tighten all screws and bolts. Check over your lines and anchor to be sure they are in proper condition and stow them carefully, being sure all lines are completely dry.

Check over your steering cable pulleys; clean and oil them. Also carefully inspect your steering cable for frayed spots. You may want to add some extra cable guides if there was excessive wear caused in certain spots by the action of the cable rubbing against an exposed member.

Cover the entire boat, either with a regular boat cover, a tarpaulin, or old blankets. Don't store excessive gear in the boat over the winter.

If you're a trailer boating family, store the boat aboard the trailer under cover, if possible. This will assure that it gets proper support along the keel and will not develop any curve not meant to be there. If you have no trailer, block your boat up on chocks, being sure to have even support along the entire length.

And, don't forget the trailer. Lubricate all pulleys, winches and rollers. Remove the wheels and repack the bearings. This is especially important if some water may have slipped past the seal on the wheel bearings. It could cause considerable damage over the winter. If you had any trouble with your stop or turn lights during the season, this might be a good time to get them operating properly for next season.

And just to be on the safe side why not jack up the trailer and rest the axle on chocks to take the weight off the tires during the lay-up period.

Many boatowners take reason-

ably good care of their outboard during the boating season, but then neglect to take the half-hour or so it takes to properly prepare it for winter.

If the cooling system is not properly drained, the water remaining could freeze and cause cracked or damaged blocks. Water condensation on the piston or cylinder walls could cause damage that would exceed that of many hundreds of hours of running time. And without removing all traces of fuel from the fuel system, gum deposits that are very hard to remove could be formed.

A chief engineer for a leading outboard manufacturer offers a list of simple procedures which will protect your outboard during the winter months. Checking off this list as you lay-up your outboard for the winter will assure long life and dependable operation for the motor.

Fresh water flushing. Although modern motors resist salt-water corrosion and deposit, flushing the motor internally will remove all danger. With most motors, you can simply insert a hose nozzle into a hole in the upper pump body which is marked "water flush." A cloth dampened with fresh water will remove any salt deposit from the exterior parts of the motor.

Drain cooling system. Set motor in a vertical position and revolve the fly-wheel manually several times, getting all water from the pump and cooling passages.

Drain fuel. The best way to do this is to remove your fuel line plug and run your engine until it uses all fuel in the carburetor. Or it may be done in a test tank if you have access to one.

Clean carburetor. Remove the carburetor sediment bowl and wipe it clean. Clean the fuel filter with

some clean benzine. It is far easier to prevent formation of gum deposits now than it is to remove them in the spring.

Remove and clean spark plugs. With plugs removed, pump some good motor lubricating oil into the cylinder opening, rotating the engine several times manually to distribute the oil evenly over cylinder walls, pistons and rings.

Internal parts may also be protected by squirting some lubricating oil directly into the carburetor through the removable button on the air silencer while manually rotating the fly-wheel.

Protect all throttle linkage from possible rust or corrosion by applying a coating of grease to moving parts.

Drain gear case. The lower unit gear case should be drained thoroughly by removing the drain plug on the motor's skeg. When completely drained, refill with outboard gear oil through another port a few inches above the drain.

Inspect the propeller. If it is damaged or appears bent, take it to a dealer for repair or possible replacement.

Clean hood. To protect the exterior finish, wipe the motor hood and lower unit with a soft cloth to which you have applied a few drops of oil.

Select storage space. A clean, dry location, not exposed to dampness and dust is best. Clamp the motor on a rack or a piece of solid planking off the floor and away from an area where it might be damaged during storage.

Cover motor. The motor should be wrapped in an old blanket, piece

of canvas or heavy waterproof paper.

With this simple procedure, which should not take more than 30 minutes, your motor will be ready and waiting to take you out on the water when the bug bites you next spring.

MANAGEMENT AREAS WELCOME HUNTING

Game management signs found on state-owned areas are sometimes a source of confusion to Iowa nimrods who mistake them for refuge markers or "no hunting" areas.

Game management markers indicate boundaries of state-owned areas where game management practices, under the control and jurisdiction of the State Conservation Commission, are being carried on. Hunting and hunters are welcome on these areas, of course, for hunting and harvesting game are important aspects of good game management.

Even if the nimrod is a bit hazy on the exact meaning behind game management signs, their color should clear up any confusion as to whether or not they are open to hunting. Game management signs are white and include the wording, "this area open to public use subject to special regulations that may be posted."

Refuge markers on the other hand are yellow and the word "refuge" is prominent in the wording of the sign. These signs indicate sanctuaries for waterfowl and are out-of-bounds to trespassing for any reason.



Boundaries of Game Management Areas are marked by signs like this. They mean hunters are welcome. *Jim Sherman Photo.*