IOWA CONSERVATIONIST

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IOWA'S WINTER FISHING PICTURE

GEOLOGY IN ALLERTON LAKE STATE PARK

C. S. Gwynne
Professor of Geology
Iowa State College

Allerton Lake State Park has no utcrop of limestone or sandstone, s have some of our state parks, ut it has other matters of geo-ogical interest. Its chief feature s, of course, a fine lake, and that eads naturally to a consideration f the origin of lake basins, this ne in particular. Then the source f the lake water, and some of the esults of its getting to the lake, omes in for consideration. A little ooking around and we find other natters of interest to a geologist.

The lake basin, like almost all hose of southern Iowa, is partly natural, partly man-made. The unning water did most, having arved out the valley in which the asin lies. Then man completed he job by putting a dam of earth across the valley.

All of the water of the lake omes, of course, from rain. Part of it is runoff from the land sur-ace, through small streams. Part nay be water that runs directly nto the lake along the shore. Some comes from underground sources. That is to say, having allen as rain it soaks into the ground, to reappear as seeps along he upper reaches of the valley, or along the lake shore. More comes from this source when the water table, the top of the zone of saturation in the ground, is high.

The water which runs off the land carries sediment with it. If you would like to see what running water can do in a short time and how sediment can be carried away, just take a look at the "clay bank" in the "borrow" pit at the west end of the causeway. It is fur-rowed by the tiny trenches cut by the rain water coursing down the slope. And such sediment carried by the streams which feed the lake or by water running di-rectly into the lake along the shore, tends to fill up the basin. So

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Jim Sherman Photo.

Ice-fishing production can be top sport, particularly when it involves a five-pound northern pike. Fish in the foreground are perch. Both will be excellent eating during a season when fresh fish are doubly appreciated.

IN THIS ISSUE

K. M. Madden
Superintendent of Fisheries

People with seasonal occupation peaks are finding winter fishing to be a top-notch economical winter outdoor recreation. Farmers, construction people, and many other groups who think that they are too busy to fish during the summer are flocking to the areas for this relatively new form of fishing recreation. The butcher and baker and fishing stickmaker are reaping a harvest from this use of leisure time. Resort areas, river towns and cities next to these areas are finding the unhurried business of these winter fishing enthusiasts both pleasant and profitable. Modern technology is giving more people more free time in which to seek constructive recreation. Winter fishing fits the bill, both for the recreational-bent individual and for its constructive effect on fish populations.

You can enjoy the winter "fish hunt" and feel that you have contributed as a true conservationist to better fish management of Iowa's waters.

The fertility of Iowa waters and the tremendous reproductive capacity of fish guarantee an almost unlimited supply for all anglers. The facts are most waters have more fish than can possibly grow to keeper size without a lot of help from fishermen. The more fish you can outwit, the faster the remainder grows.

Pan fish do not live as long as the predators, therefore applying a fundamental principal of all nature (creation) that there are many more pan fish (bluegill, crappie, perch, etc.) than predators (walleye, northern pike, bass, etc.). Fortunately for the finny tribe, man catches his fish about in proportion to their numbers but the rate is modified by his skill—or lack of it—and the gullability or eagerness of the fish to take a hook. That means everybody, but an expert fisherman will catch from 10 to 15 pounds of bluegill, crappie or perch to every pound of walleyes, northern pike or bass. Removal of the lawful limit would not change the proportions taken, but you might

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GLEN W. YATES

YATES NAMED TO HEAD FEDERAL AID

Glen W. Yates has been appointed to the position of Superintendent of the Federal Aid Section of the Conservation Commission.

Announcement of the appointment was made at a regular meeting of the Commission December 2. The appointment of Yates took effect immediately.

Yates has served the Commission for 23 years. He was first employed in 1934 as a Conservation Officer at Northwood and Osage in northeast Iowa. He served as Area Game Manager for east and northeast Iowa from July, 1948, until May, 1949, at which time he was appointed Assistant Superintendent of Federal Aid to head up the Commission's Federal Aid Section.

Yates, 52, is married and has three children. He succeeds Lester F. Faber, who was appointed assistant director of the commission last month.

A recent experiment in Virginia indicated strongly that grazing of fields of winter wheat by geese tend to increase yield and also the future fertility of the land.

RABBIT HUNTING: "MR. HOTFOOT" AND THE DISTANT HORIZON

Keith C. Sutherland
Editor

Take a winter day when snow blankets the outdoors, a little time to spare, and the urge to be in the open. Mix these ingredients with a shotgun and a dog and the sportsman has the recipe for what many agree is Iowa's fastest and most fascinating sport—rabbit hunting!

Statistically speaking, more rabbits are bagged by Iowans each year than any other game animal. And with good reason! He's a worthy opponent for any nimrod, and his flashing speed and zig-zagging departure when flushed has left more than one crack upland game and waterfowl shooter scratching his head in astonishment. This is the reaction, of course, as "Mr. Hotfoot" shifts into high and disappears, unscathed, over the distant horizon!

Found in good numbers throughout Iowa, and particularly abundant in southeast Iowa this year, the cottontail waxes fat on Iowa corn which should tell you something of his eating qualities. When properly cared for afield and prepared in the kitchen, he's about as good as table delicacies come. But more about preparing him for the platter later. First, let's put him in the game bag.

The fact that rabbits are prey of a great number of predatory animals demands that his habitat be in heavy cover such as that provided by dense rose and plum thickets, heavily-grassed sloughs and ditches, and brush and woodpiles. Once his cover requirement is taken care of, the other main requisite for the cottontail's sustenance is food. It is logical then that cover near corn, which is an important staple in rabbit's diet, will be the most productive for the hunter.

Snow Helps

Anytime during the open season (which extends through January 31) is a good time to go rabbit hunting, but most hunters would probably favor any morning after a fresh snow as the best time. A fresh snow discloses fresh tracks that are easily followed and with some certainty that they were made within the past few hours. Tracks take the guesswork out of rabbit hunting in another respect. They tell the hunter where rabbits are located or where numbers of them are concentrated. Snow in this respect is quite a time-saver for the hunter is able to spot productive areas from a distance and spend his time hunting these places. Without snow to guide the nimrod, he is liable to spend considerable time looking for an area which might offer no visible signs of rabbit life or movement.

Snow on the ground is a desired thing for other reasons. It makes for a sharp contrast, outlining rabbits that would be lost to the eye otherwise and it serves as somewhat of an equalizer. Although the cottontail relys on his speed for escape from natural enemies and the gun, snow—particularly heavy snow—makes for tough going and an easier target.

A mention of snow as a weather phenomenon is reminder enough that weather conditions are a big factor in rabbit hunting and for that reason should be elaborated on somewhat.

In extremely cold weather, rabbits are inclined to "sit tight" and it takes some doing on the part of the hunter to move them. Hunting under these conditions, cover should be worked thoroughly and slowly. Kick and stomp brush and wood piles lustily, keeping a sharp eye on all sides for a darting cottontail. Ordinarily a few kicks into a woodpile or up-and-down pumping atop a brushpile is enough to convey to a hiding bunny that it's high time to seek quieter surroundings!

When weather turns fair and warm, rabbits take advantage of it and come out of hiding. This is day following a sharp cold spell. During these times they can be seen sitting outside their burrow (not really their own, but thos abandoned by such digging animal as woodchucks) enjoying the sur Many think rabbits have this habi because it permits them to dr their dampened coats that hav picked up moisture from the frost walls of their burrows. Whateve the reason, it presents the hunte with another excellent shooting op portunity. Many prefer these day walking sundrenched banks an "plinking" cottontails with han guns.

Dogs Are Assets

There is perhaps no other singl factor that adds as much to th overall success of rabbit huntin as the presence of a dog. Tops i popularity are the short, squa little Beagle and Bassett hound By stature and temperament the are made-to-order for rabbit hunt ing and the rabbit hunter. Buil low to the ground for easy nego tiation of dense cover, they hav excellent noses for following rab bit trails. The manner in whic they work is slow and methodica keeping rabbits moving and ci

(Continued on page 191)

Jim Sherman Pho

To insure best eating qualities, field dress rabbits immediately after they fall to the gu Filling the body cavity with grass, or snow when it is available, also will help kee meat in prime condition for the skillet.

The causeway at Allerton Lake State Park shows the rip-rapping necessary to protect shoreline from erosion, the result of wave action.

Allerton Lake . . .

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here we have a silting problem. The water coming out as seeps has been at work too, in a different way. An analysis would show that it has acquired a mineral content in the course of its passage through the subsoil.

Although there are no outcrops of limestone in the park—there is none in Wayne County in which the park is located, and few in this part of southern Iowa—the riprap on the dam and causeway gives us an idea of the sort of the country. It is limestone, a variety of sedimentary rock. Like sandstone and shale it was deposited as a sediment—in this case a limey mud—in an ancient sea which spread far over the continent and existed for some million of years. That was a few hundred million years ago. The quarries from which the riprap came are located in northern Missouri. Ordinarily one might expect to find marine fossils, the relics of ancient marine life, in limestone, but none here. At least the writer found none. There are some however, plainly visible in the limestone blocks supporting the sign at the entrance to the park. Crushed limestone has also been used to surface the park roads.

The limestone on the causeway has an interesting feature. It is curiously mottled or spotted. This marks it almost at once, in this part of the country, as probably having come from a formation called the St. Louis. The rock is called a limestone breccia. The origin of its peculiar structure is none too certain, but a good guess is that the limey mud was broken into fragments, by disturbance on the ocean bottom. Later the limey mud containing these fragments was cemented to a hard rock.

But there are pieces of other kinds of rock in the vicinity of the lake. Take that "clay bank" in the burrow pit at the west end of the causeway as an example. As it exists today, lacking in vegetation, small pieces of many kinds of rock lie about on the surface. They obviously have been in the subsoil, and the clay and silt of the subsoil have been washed away from them. The occurrence of these pebbles and small stones give us a clue to the origin of this subsoil. It is a mixture of clay, silt, sand, pebbles, cobbles, known as glacial drift or simply as drift. Furthermore, having no stratification most of it is the variety of drift known as till.

And how is this till to be accounted for? It is a deposit left by the glaciers which once covered the land as far south as the Missouri River. The glacial ice moved out in all directions from centers in Canada. In doing this it froze onto the soil and subsoil of the country over which it moved, and carried it along. It also wore away the bedrock surface. Then when the climate changed and the glaciers slowly disappeared the burden of debris was left in the area which had been covered with the ice. Thus in the till are all sorts of rocks native to the northern part of the United States, and to southern Canada.

This till of southern Iowa was deposited in two periods of glaciation, known as the Nebraskan and Kansan. The Kansan glacier disappeared 500,000 years or so ago. Since then the till has been affected by weathering. The water soaking into the ground and carrying substances in solution has decomposed and changed the original constituents. Unweathered till is generally grayish in color, but the exposure at the "clay bank" is in shades of brown. This is the result of weathering. The iron in various minerals has been changed to a rustlike substance called limonite. Also calcareous (limey) material has been generated and then precipitated out in the form of limestone concretions. These are light gray, almost white in color, odd in shape, and not more than an inch or two across. There are many lying on the surface at the "clay bank."

Above the drift in this part of Iowa is a deposit of wind-blown silt and clay, called loess. It is generally not more than a few feet in thickness, thicker on the hill-tops than on the slopes. Presumably the area of the park is mantled with loess, but the writer saw no exposure of it. It contains no pebbles, and the general absence of pebbles at the surface would indicate its presence.

The lake lies at the head of the South Fork of the Chariton River. In fact the valley extends only a few miles to the south, and the area drained into the lake is not more than a few square miles. From the lake the South Fork flows northward about six miles. There it makes a sharp eastward turn. Then it follows a course to the northeast and joins the Chariton in the northwestern corner of adjacent Appanoose County. The Chariton then flows southward to join the Missouri River in central Missouri.

The divide between the Chariton and Grand River watersheds must lie just south of Allerton Lake. It is not a sharp divide, but indistinctive and in an area of very gently rolling almost flat country, a mile or more in width. From the south side of the divide the runoff drains into the West Fork of the Medicine River, a tributary of the Grand River, which also flows southward to the Missouri. Allerton is on a part of this upland area. Most of the terrain of this part of Iowa is rather hilly, made so by running water through the ages. But here, in this almost flat area, we have some country not yet cut into by the headward eroding streams. In places it is a few miles wide. It is interesting to note that the water from the two sides flows into the Missouri at points only about 12 miles apart, but at a distance of some miles from Allerton Lake. Most of the slopes into the lake are gentle. Being at the upper end of the drainage system, erosion has not yet had time to cut deeply into the land.

The lake when full has an elevation of 1,047 feet above sea level. It is of course slowly accumulating a deposit of silt. If there were to be no interference by man, presently the lake would be gone and a stream would flow through the lake bed. After a while the spillway would be worn down, and the stream would begin cutting into the lake bed. The level of the entire area would gradually be lowered. Now 1,000 feet or so above level, it would get lower and lower. All this of course assuming no crustal uplift and no more glaciers. The aspect of the park area would be quite changed over the thousands of years.

The dam was built by the Rock Island Railroad around 1890. The area was acquired by the Conservation Commission in 1947. Later the lake area was increased from 106 to 141 acres by changes at the dam. The old shore line has thus been "drowned." That is why, at present, there are small trees in the water along the shore. Beyond the "drowned" area there may be a rather sharp drop-off in the lake bottom in some places. This drop-off, if present, is due to the presence of a low bluff formed by wave erosion when the lake was smaller. Erosion by the waves will now cut into the shores of the lake, and in time form new bluffs.

The park is about 2 miles west of Allerton in south-central Wayne County. It has an area of 381 acres of which as noted, 141 acres are lake. Features of geological interest are not striking, but are present, just as they are everywhere.

The Brook

"I come from haunts of coot and hern,
Alas, a fatal sally!
For through what heaps of junk I churn
As I go down the valley!

"By dirty dumps I hurry down
Where refuse lies in ridges
And folks bring garbage out from town
To heave it off the bridges.

" 'Mid wrecks of motor cars I flow
The bus, the truck, the flivver.
Oh, men may come and men may go,
But I go on forever!

"I slip, I slide, I gloom, I glance
O'er pipes and rods and wires;
I make the golden sunbeams dance
Among the worn-out tires.

"I chatter over pots and pans
In little sharps and trebles;
I bubble out among the cans
That quite conceal the pebbles.

"Till last polluted do I flow
To the polluted river;
Ah, saboteur! You come and go,
But I go on forever!"

—Tom Pease in *British Columbia Wildlife Review.*

HOW FAST DOES A BIRD FLY?

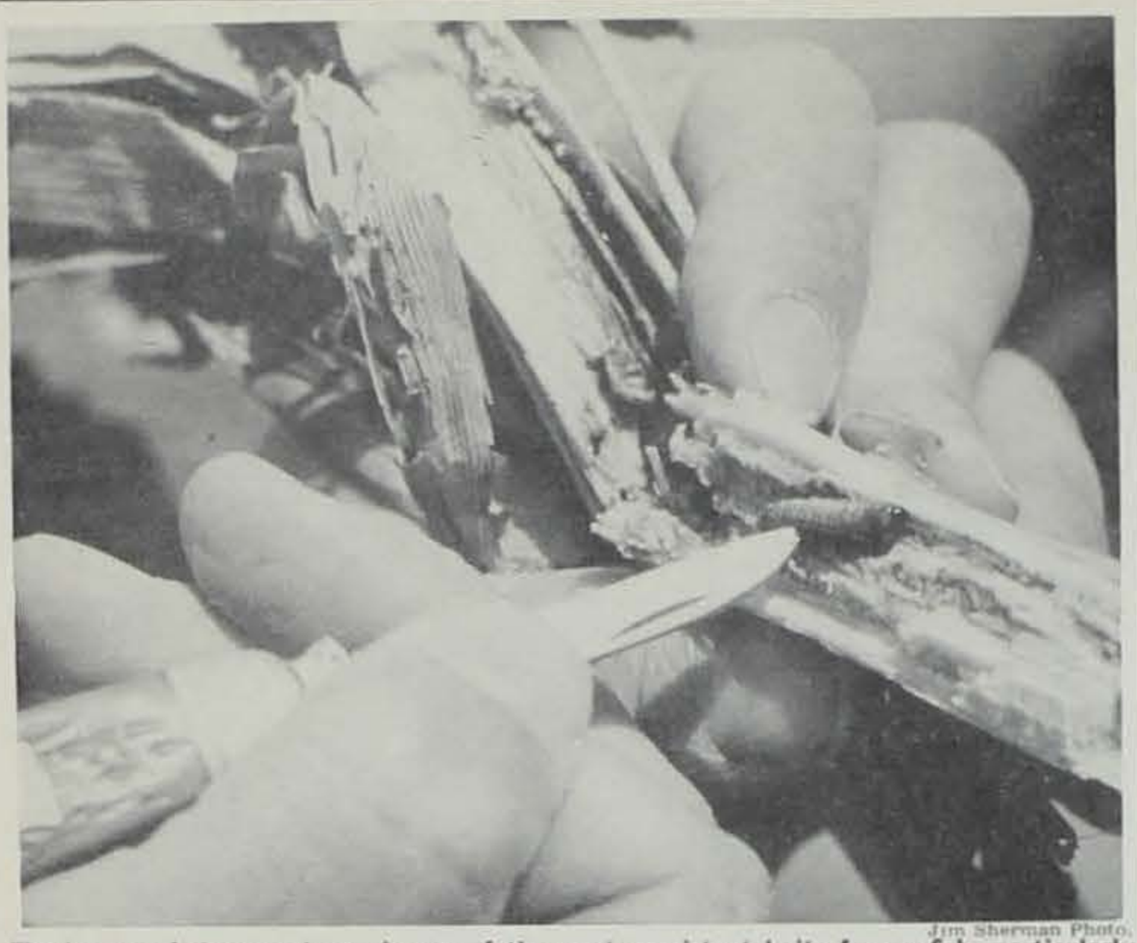
In the days of oxcarts, birds were pretty fast travelers, but in the jet age they're strictly pikers.

The champion is probably the swift. It reaches speeds of 200 miles an hour—pretty fast for wings made of feathers.

Most birds stay well under the 60-mile limit. Duck speeds usually range from 40 to 70, geese up to 60 and the loon around 50.

Mourning doves are fairly fast. They've been clocked at 55. Starlings hit 45, pigeons 35 and most cardinals, meadowlarks, woodpeckers and flickers about 25. The English sparrow is content with 20-mile-an-hour flights.—*Outdoor California.*

Male sea horses and male pipefishes belong to the only group of fishes that has the kangaroolike pouch for incubation of the young.



Jim Sherman Photo.

The larvae of the corn borer is one of the most consistent baits for panfish, particularly bluegills. Splitting a few corn stalks with pen knife will turn up enough for a long stint of ice-fishing.

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NATURAL BAITS FOR ICE ANGLING

Jim Mayhew
Fisheries Biologist

The use of natural baits for ice-fishing is undoubtedly the most widely used method in Iowa. Contrary to the beliefs of many, the "dyed-in-the-wool" natural bait fisherman is truly a purist unsurpassed by any other type of angler. He must outwit his quarry on a strange battle ground and beat his prey at his own game. Bait hunting is often as much pleasure as the fishing itself. Excitement, exercise, and inevitable communion with mother nature's complexities are the results of the bait fishermen's effort. Truly man can learn much about nature's innerself by observing the habits of aquatic life while securing his bait.

It has been said that if all the favorite natural baits were laid from end to end they would certainly reach around the world. Every ice fisherman, like his brethren fly or casting purist, has a special bait that will lay 'em on the ice as fast as he can fish. To consider all the natural winter baits would be impossible for this article, but there are several effective time-tested baits all fishermen can use. The majority of these can be classed as minnows and chubs, insect larval forms (undeveloped insects), and adult insects.

MINNOWS AND CHUBS

This class of natural baits are mainly employed to catch predator type fish such as yellow perch, crappie, walleye, northern pike, largemouth bass, smallmouth bass, and white bass. Some of the common bait minnows used in Iowa waters are fathead minnows, bluntnose minnows, spottail shiners, common shiners, and creek chubs. All species of small minnows will catch a fish, but this list included the minnows easily found and kept. It is far more advisable to seine a supply of minnows in the late fall and keep them in live boxes than have to seine each time you fish. This is because Iowa streams freeze over with several inches of ice during the winter which prevents seining. Of course, those who wish convenience may have it by purchasing minnows from a local bait shop.

Recently several companies have marketed preserved minnows for ice fishermen. In the hands of an expert these baits are extremely effective, but the novice may find them frustrating and unproductive. Since these minnows are dead when preserved, movement to stimulate life must come from angler action. Only experience, trial and error can produce satisfactory catches.

For the minnow fishermen, the one specialized piece of equipment needed is a minnow seine. By law, it must not be more than 15 feet long. The mesh should be not less than one-quarter inch in diameter and should be of knotted twine. There are numerous woven nets available, but when used extensively the netting will slip causing numerous large holes that allow bait to escape.

In general, for best results it is advisable to seine downstream in fairly deep pool just below a riffle. Most species of bait minnows are abundant in this habitat. After a "haul" is made the bait should be sorted and placed in an aerated minnow pail. Storage of live bait is most satisfactory in live boxes, placed in a stream or pond where sufficient oxygen is available throughout the winter.

INSECTS AND INSECT LARVAE BAITS

For catching bluegill, yellow perch, and sunfish through the ice, insect larvae are by far the most popular. Many of these baits are the undeveloped forms of insects seen commonly throughout the summer. These include: corn borers, weed worms, wasp larvae, beetle larvae, wood grubs, termites and maggots. Other baits are larval forms of aquatic insects, such as mayfly nymphs, hellgrammites, and caddis fly larvae.

The corn borer is probably the most widely used bait for winter fishing. They are easily found during the winter by simply splitting a corn stalk lengthwise and digging out the larvae with a small pen knife. A winter's supply can be stored in a small box and probably over the objection of the "little woman," kept indefinitely in the refrigerator. Weed worms are very similar in appearance and equally successful. This larvae can be extracted from the stem of the ragweed plant in the same manner as the corn borer is taken from a corn stalk. Mud-dauber and paper-making wasp larvae are also excellent bait for winter pan-fishing. The nest of these insects can be located under the eaves of barns and sheds or attached to large trees. As a word of caution, make sure there has been a good frost or freeze before opening the nest of a wasp or one can soon learn what mechanical mechanism the wasp has for protection.

Wood grubs and termites are also excellent winter baits. These forms of insect larvae can be found in rotted stumps and trees in any timberland. By carefully peeling off the bark of a stump or tree a winter supply can be gathered with little effort. These, also can be stored indefinitely in a cool place.

Hellgrammites, caddis fly and mayfly nymphs are always abundant in areas where they occur. They live mostly under rocks and stones in a riffle area of streams. One of the simplest means of catching hellgrammites and mayfly nymphs is to stretch a minnow seine below a swift riffle and then turning over rocks upstream. In this manner nymphs are dislocated from rocks and carried into the net. The larvae must be kept in water, and under optimum conditions they will not survive for long periods. As a result seining must be done practically every time you go fishing.

Leeches are also a good producer of panfish during winter ice cover. This bait is located in backwater streams bayous below the natural line of vegetation. The leech hunter usually finds the mole-like burrow of the creature and follows it with a small spade or machete until the worm is found. Leeches also may be kept for several months in wide-mouth gallon jars with a perforated lid.

Many of the soft-bodied larvae are tender and must be hooked with care. Usually a single pass through the body is enough to hold the bait on the hook. Many expert ice fishermen tie the larvae to the hook with light cotton thread.

The most popular adult forms of insects used in ice fishing are grasshoppers and crickets. Since these insects occur only in summer months a supply for winter fishing must be obtained early in the year. Both grasshoppers and crickets may be kept alive in a glass jar with holes punched in the lid, and stored in the icebox at about 45 degrees. The method of fishing with these is identical to open water angling.

Although the natural baits presented in this article are by no means a complete list of all those in use, they all have distinct popularity throughout the state. The availability of supply may govern the type or kind of bait used by an angler, or perhaps he prefers that favorite "secret" weapon. However, like all individual sports, the final choice should be left to the angler. Experimenting with different baits can also be a rewarding part of ice-fishing.

A given distance, "as the crow flies," may be farther than supposed. Crows often fly in a zigzag pattern.

WILDERNESS PRESERVE PLAN HAS VALUE

The proposal before Congress to set aside some 50 million acres of the least developed land owned by the federal government in the western mountain states as a wilderness preserve is drawing vigorous opposition. This opposition comes from states where this land is located and from special interest groups.

The two most vocal organizations are the Industrial Forestry Association, composed of private timber companies, and the National Reclamation Association.

This opposition is not unexpected. The lumber companies fear a curb on their future expansion. The reclamation association visualizes the day when present supplies of land suitable for reclamation are depleted.

Development of the areas proposed for the wilderness preserve is not economically feasible today. However, hindsight proves that millions of other acres that were thought to be useless a half century ago were capable of being put to productive uses.

It would be most surprising if the states in which the proposed wilderness preserves are located did not show an interest in attempting to keep these lands open to economic development. They are thinking of their own growth.

Their representatives in Congress are expected to seek an amendment to the bill which would permit the states to have some voice in making the final decision with respect to what lands are included in the preserve.

There is a broad public interest in preserving these wilderness areas for recreation. The nation should be planning ahead for a greatly expanded national population that will need more recreation facilities than are now available.

The long term interest also lies in keeping these lands available for emergency timber, mining and reclamation development in the years to come. Unless that is done, there will be a continual eating away of these areas on the gamble that an immediate profit can be made from them.

This process will destroy the recreational value of the areas. It will not contribute measurably to the economy of the area. Placing the lands in a national preserve will preserve their recreational use until the time when other more urgent pressures for their use, if they ever do develop, will become so evident that no question can possibly be raised as to the merits of their economic development. Then there will be no room for debate over the question of what is in the public interest.

The opponents of the proposal, who argue that the bill would prevent the use and development of these areas forever, should be reminded that nothing is ever quite so permanent as the present appears to be.—*Editorial, December 2, 1957, Des Moines Tribune.*

Jim Sherman Photo.

Before storage for winter, run the outboard until all gasoline, including that in the carburetor, has been consumed. A tank or garbage can does this job in good shape. John Summers, mechanic at a Des Moines outboard motor shop, demonstrates this step.

Jim Sherman Photo.

A pressure-type grease gun is best for forcing lubricant into the gearbox of the outboard. Note the white grease running from the overflow fitting at top of photo. This indicates new lubricant has reached the gear mechanism.

STORING YOUR OUTBOARD MOTOR FOR THE WINTER

For some fortunate Iowans who plan to use their outboards in warmer climes this winter, storage is an unknown quantity!

For the great majority of others, however, it is time to put the "wraps" on the outboard for another season.

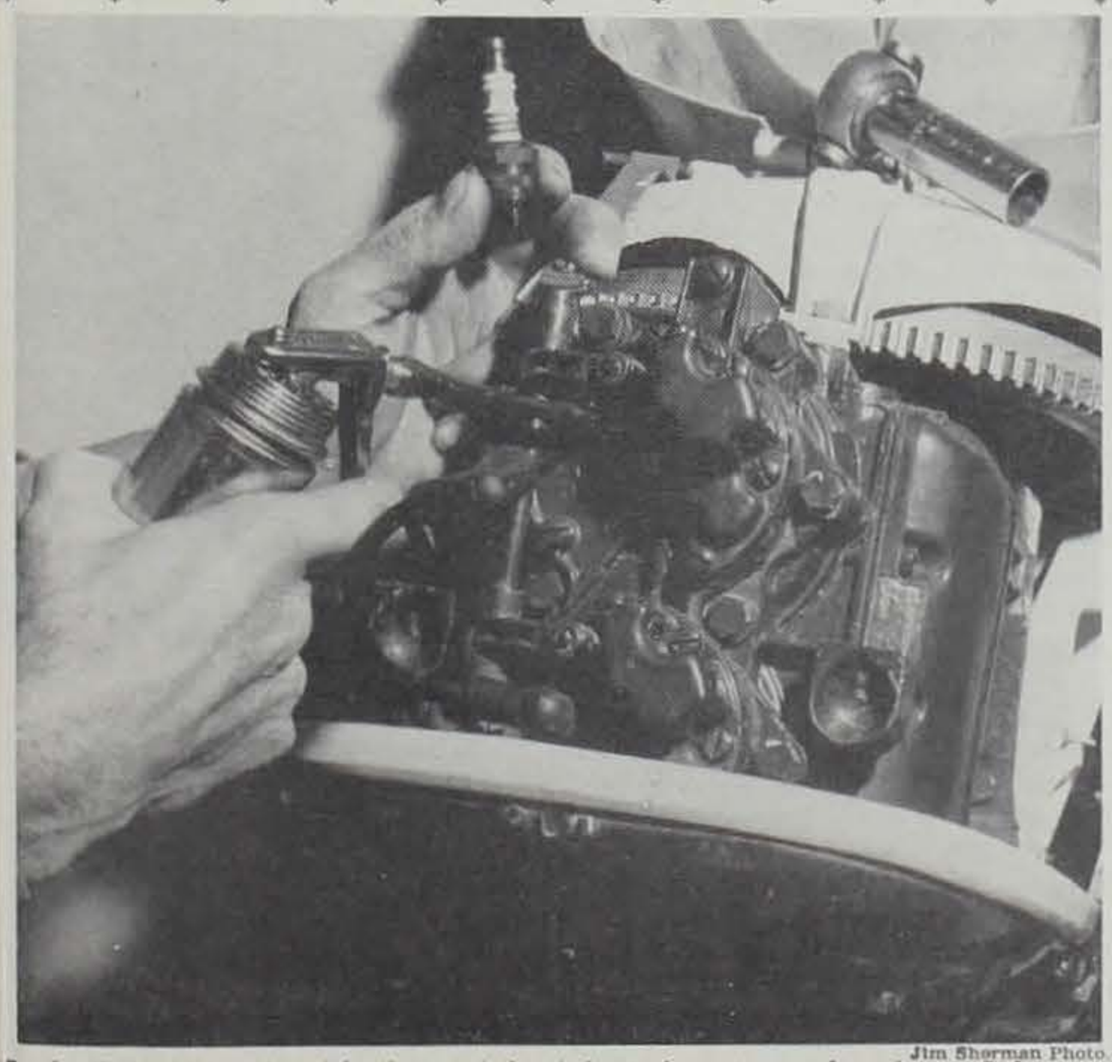
By acting now, the nimrod stands to gain in a number of ways. First, he has assurance that his outboard is in the best shape to withstand the rigors of winter; second, that the outboard will be rarin' to go with the same old "snap" when spring fishing rolls around; and third, the angler who acts now stands a better chance of getting service work done during the winter "lull" of things. It's a simple truth that mechanics who have time on their hands now won't have when spring and "fishin' fever" arrives!

For many anglers, proper storage of the outboard begins with delivery of the motor to a competent service department for the necessary work. For most, storage of outboards is an annual "Do-It-Yourself" project. Whether done in the service shop of a sporting goods store or in your garage or basement is of no real importance. What is important is that there are certain things that should be looked after now for the best outboard operations come spring!

Check Plugs, Points

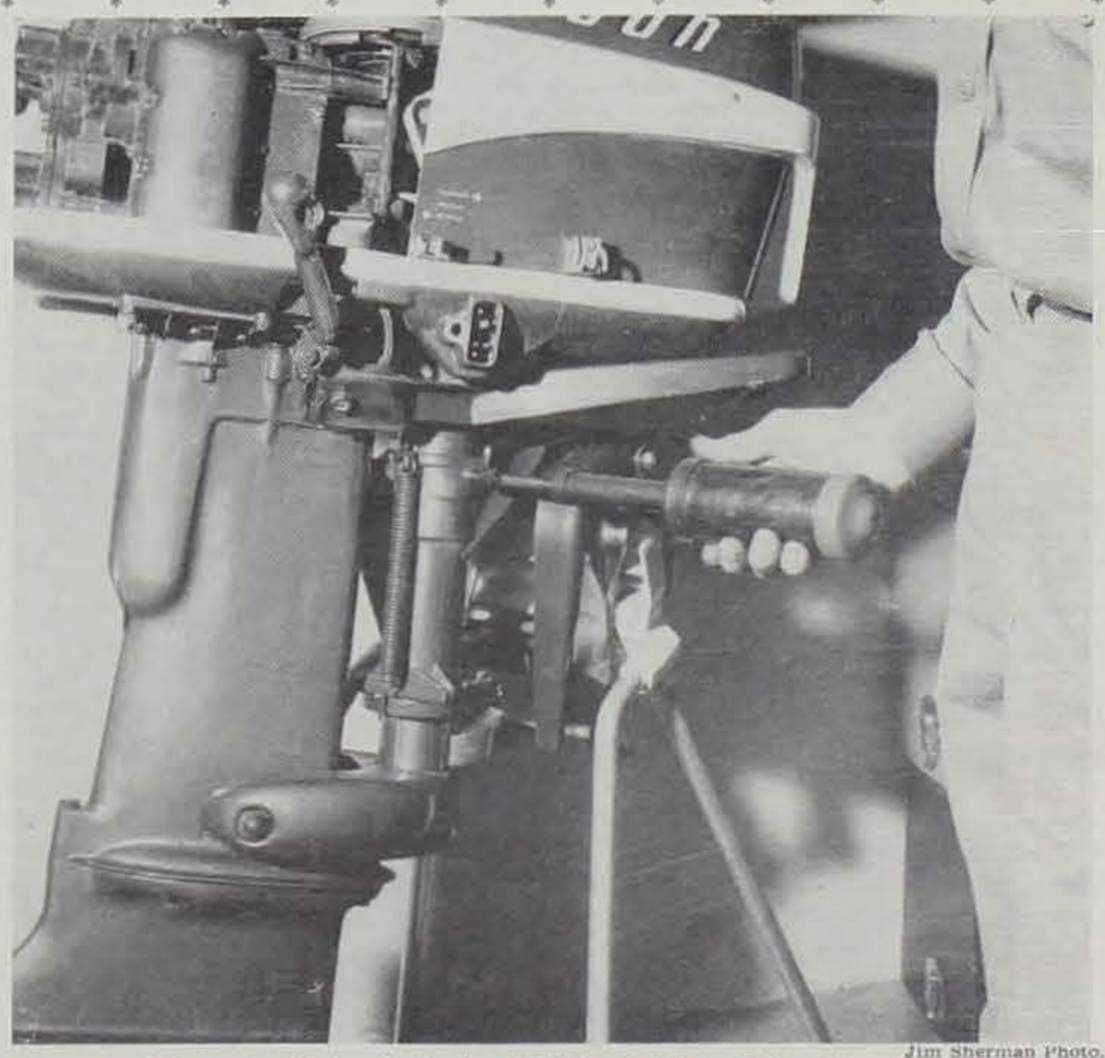
A good beginning might be a check of the motor's plugs, points and condenser—a job for your service shop unless you're a good outboard mechanic! If you noticed a little sluggishness at the end of last season, chances are you'll help your outboard's disposition with

(Continued on page 192)



Jim Sherman Photo.

Fresh oil should be placed in the sparkplug holes before storage for winter. Before use next spring, remove plugs and turn motor over a few times. Failure to do so might result in bent rods because of undue stress on them by compression.



Jim Sherman Photo.

All grease fittings should be checked and lubricated for winter storage. To make sure all receive proper attention, outboard owners should refer to service manuals that came with their motors.

Jim Sherman Photo.

Popularity of ice-fishing is gaining in Iowa and across the nation as this photograph of West Okoboji lake attests. The fascination of seeing fish through the open hole and the "snugness" of the shack while winter howls outside are reasons why.

Winter Fishing . . .

(Continued from page 185)

get in trouble by being late to dinner.

The big fish specialist and the fellow (the majority) who just likes to catch what happens to bite is helped by the efforts of the ice fisherman. Weights of schools of fish increase at a constant rate, so when you take your 15 fish or 10 pounds out of the group the individuals left put on weight faster than usual. A strange but proven natural force or stimulus causes predators to grow faster too. You don't have to be concerned about catching too many walleyes, or northern pike (bass don't usually cooperate too well under ice) because you are only forcing these fish eaters left in the lake or stream to face a longer life, and of course, they will eat more of their little finny friends as they grow bigger. Don't worry about damage to the fish crop, but if you have not carefully analyzed all of nature's devious ways and come prepared you might suffer from frostbite.

A mid-winter flight over Iowa would pin-point three major areas in which ice fishing is popular and productive. It's not a new sport on the Mississippi River for hundreds of people utilize the backwater lakes and sloughs of the Father of Waters in their quest for bluegills and crappies. These crowds mix fishing and visiting in a way that is not possible in any other outdoor recreation. They are different than the hot stove league experts. They *do* catch fish. The more daring souls utilize a unique combination of courage and equipment to venture out on the thin ice below the locks and dams of the river. They are rewarded with phenomenal catches of walleye and sauger pike both in numbers and size. Their success is independent on all of the elements of fishing skill and luck that the summer fishermen employ.

The second general area that would be well populated and dotted with individuals and huts is the natural lake area of northwest Iowa. Those who had the foresight and prefer using a winter fish house and who have obtained the necessary permit from the State Conservation Commission are comfortably seated inside their heated dark hut, intently watching the beauties of the underwater world unfold. Their blood pressure is raised by the sight of countless fish gracefully moving through their fields of vision. Those not wishing to or having the foresight to construct a winter shack may be seen by the hundreds on the open ice in heavy winter clothing watching intently through their small window to heaven. Those who want to explore the depths will have a head cloth to cut out overhead light so they can better see the under ice wonders. Foot long perch, quick frozen and stiff, may be scattered in irregular patterns indicating that fish have been located. From the air, you can almost follow the fish by the concentration of fishermen.

The third and newest area where winter fishing has been productive and popular is the artificial lake region of southern Iowa. Bluegills are the primary species of fish sought and once the fish are located excellent catches result. Many anglers of southern Iowa are amazed at the clarity of the mud bottom lakes during the quiet water periods of winter ice cover during which the fish are less active, plankton growth is reduced, and silt from runoff is not contributing to the turbidity or cloudiness of the water. Many anglers use this period to scout or explore the bottom features of the lake, not only to locate fish, but to mentally map future expeditions, the contours and fish cover of the lake bottom. In all three areas, experienced summer fishermen now claim winter fishing has as much allure as open water angling.

Commercial fishermen from the Atlantic to the Pacific have "meat" fish for sale. The cheapest way to get meat (if that is all you want) is to buy from a fish market.

If you want to explore your favorite fishing water try ice fishing. You will be amazed at the beauty of the underwater gardens or the rhythm of ripples in stream sand. Colors are soft and never the same. Black unfathomable depths have a mysterious challenge. Fish distribution and movement are both educational and fascinatingly graceful. Fish activity patterns, schools and individuals remind you of people. Sometimes you see aimless masses and then there will be the "door-to-door" salesman type. Occasional philosophers will look over your bait, but contemplation is hard to weigh. Fish tracks (turbid areas) tell you of great hordes of fish close by. Nervous hurried evacuation of small fish signals the approach of "Big Stuff." Rockpiles, reefs, bars, weed beds, deep holes, and mud flats give you a treasure map of the area that is exclusively yours forever.

Every Iowan who looks and fishes through a hole in the ice can find and take real treasures—beauty for the heart and a mess of firm, white fish for the skillet.

PROPER GUN CARE

Looking ahead a little to Christmas, a good many fortunate hunters will receive guns in their Christmas stockings. Undoubtedly a good many others invested in a new gun during the present hunting season.

Whatever the reason for a new gun, there is one primary consideration about a new weapon—owners will want to give them the best care because of the financial outlay they represent and the fact that a well-cared for gun will give more years of good service than a neglected one. Pride of ownership also will be enhanced by a gun that looks and works as the manufacturer intended it should when he shipped it from his factory.

A great many shooters have the mistaken notion that there is no need for cleaning a gun that has been fired with non-corrosive ammunition. Fact of the matter is that guns do need cleaning, for while there is nothing in the bore residue to cause rust, there is also nothing to prevent it, if the gun remains idle for long periods.

The one possible exception to this fact is non-corrosive, .22 caliber rimfire ammo with grease lubricated rust preventive. However, if more than one brand i used, it's best to play safe an clean the rifle bore.

To clean the gun bore thor oughly, dip a brass bristle brus of proper size into nitro-solven and scrub by pushing (from th breech) and pulling the brush com pletely through the bore with eac stroke. Let the gun stand severa minutes, then dry bore with snug-fitting patch. (Use a sof cloth, such as flannel, for cleanin patches.) If the gun is to be use within a week, swab the bore wit a good brand of gun oil. If you gun is to be stored, give the bor a good coating of gun grease.

The rifle chamber may be kep clean and oiled by use of a bristl brush such as those furnished fo cleaning large caliber revolver Slightly bend the twisted wir handle to get into the chambe easily.

After cleaning the bore, wipe a metal portions of the gun with dry, clean rag. Then wipe with piece of chamois well saturate with a good grade of gun grease

The care given a gun upon th return home, depends, of course on the kind of weather the nimro encounters in the open. For ver cold weather hunting, remove a ordinary oil and grease from gu parts with gasoline. Lubricate mov ing contact parts with "Ice Ma chine Oil" or graphite. After eac hunting trip, completely dismantl clean and oil all parts.

Now for proper care of woo parts. Many gun stocks are fac tory finished with thick lacquer c varnish which mars relatively easy leaving a white scar and unexpose wood left to the ravages of weatl er. It is difficult to permanentl preserve such a finish. A goo grade of floor wax or brown sho polish will help, but sooner or late the stock must be refinished.

There is one finish that is quic and about as good as any. Remov old finish, sand and de-whisk stock in the usual way. This com pleted, mix equal parts of whit shellac and boiled linseed oil. Wit a woolen rag, rub in mixture a fe drops at a time. Plenty of elbo grease when rubbing is the secr to this finish. With wood com pletely covered, allow to dry tho oughly, repeat with plenty of rub bing! Several applications give good looking, durable finish, whic is mostly within the wood surfac

A few drops of boiled linsee oil briskly rubbed into the surfac from time to time, will keep th finish in excellent condition.

After all, excellent condition what you are after for continuin pride of gun ownership and to performance of your gun in a shooting conditions. And shoul you decide to trade it for anothe or sell it later on, a well-cared fo gun will bring just that much mo from a prospective buyer!—*K.C.*

About 70,000,000 pounds of wi rabbit are harvested every ye in the United States.

MIDWINTER MISSISSIPPI ANGLING

R. E. Cleary
Fisheries Biologist

The Mississippi has all the characteristics of a river and at the same time most of the characteristics which go to make up a lake; one being its capability of supporting a successful winter fishery.

Since the Mississippi lacks the stability found in most lakes, ice fishing success varies with water levels; some areas affording fine angling one winter and practically none the next. If the water stage in a given slough drops too low before freeze up, most fish will move out of it into more suitable wintering habitat. This feature, among others, makes it difficult to forecast winter fishing hotspots. We do know however, through our Mississippi River Creel Census, that ice fishing was most productive in Pools 9, 10, 14 and 16 during the winter of '56 and '57, and the major angling pressure was found in Pools 9, 10 and 11.

In Pool 9 the sloughs and ponds in the vicinity of the Lansing Bridge and Chain of Lakes area near Ferryville, Wisconsin, were most heavily fished. In Pool 10 the Harpers Ferry country and the lakes and sloughs north of Prairie du Chien, Wisconsin, furnished some fabulous crappie fishing through the ice. In past years the Spring Lake area across from Cassville, Wisconsin in Pool 11 and the Sodus and Rock Creek areas in Pool 14 saw heavy angling activity.

There are two sure ways of locating winter hotspots on the river: one is to get directions from a bait dealer or sporting goods dealer (Their business depends on your success); the second is to use your eyes—if you can't spot the anglers—the beaten paths through the snow will generally lead you right to them.

Up to this point we have dwelt solely on the ice fishing resource with its catches of crappie, bluegill, yellow perch, and occasional bass and northern. The Mississippi does have a double-barreled winter fishery and its "choke barrel" is to be found in the open water or pike fishery below the dams. Walleyes and saugers can be and are taken below every dam in the Iowa stretch of the river, the best winter angling is usually found below the Lynxville and Guttenberg dams or in the tailwaters of Pools 10 and 11.

This fishing necessitates the use of a boat or access to a barge and there are times when the river is ice-bound almost to the toe of the dam. Here, even more than in ice fishing, the concentration of boats is the visiting anglers' clue to where the fish are biting. The preferred gear is the spinning or casting rod with a monofilament line. The trick is getting the minnows or artificial bait down into 30-50 feet of fast flowing water. A one-half or three-fourths ounce sinker on a drop staging will usually put the minnow down where the pike lie and if the drop line to the sinker is 12 feet to 18 feet in length, then the bait and hook will normally be held up out of rocks on the bottom. With this drop sinker a three-way swivel is necessary to keep the monofilament from twisting. It is a good idea to fasten the sinker to the swivel with a lighter weight monofilament than is on the reel. Since it is usually the sinker that gets snagged, this lighter staging will break first, allowing the angler to retrieve the 3-way swivel and his hook. Always have plenty of spare tackle along when fishing in this manner.

The artificial bait most used is the lead head or jig, in weights up to three-fourths ounce. For some reason a yellow skirt or feathered portion of the jig is seemingly the cost effective color. Perhaps because yellow is the most readily visible of all the primary colors. The secret to river pike fishing is the slow-motion, up-and-back retrieve—the slower the better. Pike bite gingerly during the winter and extra sensitive perception is needed since it's a 50-50 chance that the slight drag on your line is a 10 pound walleye and not your heavy sinker or drag. Walleyes and saugers hug the bottom facing upstream and it will pay off to cast at right angles to the current and pull your bait over a larger lateral area. This makes certain that more fish will see it.

Whether fishing in the open water, below dams, or through 15 inches of ice, you will soon find that fish have definite feeding habits as well as locations. Our creel census information indicates that the sauger, crappie, and white bass bite at a faster rate in the afternoon, while the bluegills were more readily taken in the morning. It doesn't always follow that big fish want deep water, but it was noticeable as the sun waned in the afternoon, the larger specimens definitely started working into shallower water; assumedly from the deep. Evidently they needed the additional light in the shallows to feed by.

Most ice fishermen preferred live bait such as minnows, worms, nymphs, larvae and the like. But with more and more people becoming aware of the effectiveness of ice-flies and panfish jigs and flashers, this preference may undergo a great change in the not too distant future. At least the "complete angler" should have and be prepared to try artificials if his live offerings lack appeal.

There is one thing about river ice that must be mentioned—*it's treacherous!* Anytime there is current it tends to cut into certain areas and by-pass others. Just because you spud through 10 inches to dangle your minnow doesn't mean that you won't put your foot through a thin spot if you step back to admire the symmetry of the hole you just chipped out. This applies particularly to running sloughs and channel ice. Ice found in river lakes, pot holes, and dead sloughs is usually of the more stable variety. Safety-wise it's a good idea to have a partner when winter fishing the Mississippi, or any river for that matter.

Jim Sherman Photo.

Hunt thickets and other heavy cover for cottontails. Those bordering cornfields are particularly productive. Snowfall is important to the hunter, telling him something of concentrations and travel routes of "Mr. Hotfoot."

Rabbit Hunting . . .

(Continued from page 186)

cling without pushing them to the extent that they "hole up." Taking station at some point on the circle, the hunter merely waits until his dog brings his circling quarry into range and bowls the bunny over as he swings past.

A great many other kinds of dogs make excellent rabbit hunters and have only to be given the opportunity to prove themselves at this sport. The scrapping little terriors, dachshunds, and poodles are in this group. Even a number of dogs that might be looked upon as "lap" varieties are excellent rabbiters that will both please and astonish owners if given a chance to show their "stuff" in rabbit country. It seems a pity to deprive dogs with such a talent the opportunity to display it.

As promised a few paragraphs back, a word or two is appropriate here regarding the care of rabbits once they fall to the gun. Because shotgun pellets ordinarily pierce the intestines allowing juices to escape into the meat, rabbits should be partially or fully field dressed immediately.

Field dressing may include skinning out the carcass completely or simply drawing the animal. Skinning in the field is a preferred method of most hunters. It is done quickly while the rabbit is still warm and, with head, feet and hide removed, saves a great deal in terms of weight. This is particularly appreciated near day's end when the hours of walking, climbing fences and crossing ditches and gullies begin to take their toll on the fatigued hunter. Every bit of weight that can be saved is just that much better. A number of plastic bags manufactured for refrigerating fruits and vegetables can be slipped into the hunting coat or a pocket without bulk. These are excellent to hold and protect your cleaned game for the trip home.

Drawing Rabbits

Whether you skin your rabbits or not will have no effect on the taste of your game, but leaving them undrawn will. For this reason, rabbits should at least be drawn immediately to remove damaged intestines that would affect taste of the meat if left unattended.

With a hunting knife, make an incision beginning between the hind legs, cutting all the way to the lower edge of the rib case. Hold the hind legs apart and with your fingers reach inside and pull the intestines free, working along the lower region to dislodge the bowel and any dropping that may still be lodged inside the bowel tract. Once freed, the cluster of intestines can be pulled out and should bring the esophagus with them.

Once the intestines have been removed, place grass or snow inside the body cavity, leaving it in place long enough to absorb the natural body warmth of the animal. When this is accomplished, the grass or snow can be shaken out. Attending to rabbits in this manner will assure prime condition of the meat for the trip home and later for the skillet.

If you happen to have a hunting companion who has been goading you about a "muffed" shot or two with other game, invite him to join you on a rabbit hunting venture this winter. It's a safe bet his marksmanship will be put to the acid test and you'll both have some of the top sport Iowa offers.

NUTRIA: PROBLEM IN SOME STATES

The nutria has joined the carp, the English sparrow and the starling as something somebody took a lot of trouble to introduce and other people are now spending a lot of time to control.

A few years back some misguided individuals praised the nutria highly as an animal that would eliminate pond weeds, furnish fine furs and equally fine meat. In fact, except for not laying hardboiled eggs, it was just a shade less desirable than one of Al Capp's Schmoos.

And now the Fish and Wildlife Service and some state conservation agencies are seeking a practical means of controlling the unwelcome visitor.

The South American rodent, looking like a cross between a beaver and king-size muskrat, became established in the United States nearly 30 years ago and large numbers now inhabit the Gulf Coast, the West Coast and the Mississippi River drainage.

The nutria is a vegetarian and competes directly with waterfowl and muskrats for the natural feed in the marshes. Trouble is reported in many places and the nutria are consuming great quantities of duck potato, chufa roots and other feed needed by wintering waterfowl on federal refuges in Louisiana, the Fish and Wildlife Service reports. In this area there are many cases of nutria decimating all vegetation over large areas in search of roots and tubers.

Nutria brought into this country by fur farmers in 1899 failed to become established. Others being kept in an "escape proof" enclosure in Louisiana gained freedom during a severe storm in 1939. These, and about 50 pairs released later, apparently are responsible for the millions now infesting the coastal country.

Trappers show little interest in the animals because of the difficulty of preparing the low-value skins.

Several releases have been made in South Carolina, but, as far as we know, the animals have not become established.—*South Carolina Wildlife.*

The snapping turtle can feed only under water and unlike most other turtles, cannot draw its head or tail into its shell.

Storing . . .

(Continued from page 189)

new parts to replace those old, worn gas and power thieves.

Next step is to put the motor in a test tank and give it a "dry" run. An old oil drum or garbage can will serve the purpose nicely. Run the motor completely dry of all fuel, including that in the carburetor. Run the motor at about one-half throttle with the shift in the neutral position. Pull the choke out and leave it out until the motor stops. This will lubricate and protect internal parts of the powerhead while the motor is in storage. If the motor was last operated in salt water, it is important to run the motor in fresh water before preparing it for storage.

With this step completed, place the motor in an upright position and remove the shroud. Retard the throttle all the way and slowly pull the manual starter grip several times to drain water from the water pump. Next, drain and clean the carburetor float chamber, filter bowl and fuel line. Drain and clean the fuel tank.

You are now ready for maintenance of the drive shaft and propeller. Remove the top and bottom grease fittings from the prop shaft housing and insert a force-type lube can with fresh lubricant into the bottom fitting. Force the old lubricant from the top fittings, wiping or catching the used lubricant as it is forced out. Keep up the process until new lubricant begins to appear. When it does, you are certain that new lubricant has reached all vital parts of the propeller drive shaft and gear box. Replace the grease fittings. Remove the propeller. Clean and lubricate the shaft. Replace the drive pin if it is bent or worn.

Wipe With Oil

Final step is in the care of the outside of the motor. Replace the shroud, wipe all external surfaces lightly with oil to protect the finish. Store your motor in an upright position in a dry, well-ventilated room. To prevent accidental starting, retard the throttle all the way.

Check points and steps to follow in winter storage of outboards differs with makes and models, of course. Our effort here is designed to outline some of the most important steps in winter storage whatever the outboard make or model happens to be. With so many on the market, it's wise to check the manufacturer's instruction booklet that accompanies any new motor. After all, he knows your motor better than anyone and is anxious that you get the best and longest service from it.

You can help get the most out of your outboard motor by thorough and faithful storage winter after winter!—*K.C.S.*

A 200-pound shark has a liver weighing about 30 pounds.