

IOWA CONSERVATIONIST

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THE HORSE LEECH FOR FISHING

FUNDAMENTALS OF FISHING

Part 5

Care and Cleaning of Fish

The care of fish, in the estimation of many sportsmen, is even more important than the care of game. Fish flesh is extremely delicate and is quite sensitive to spoilage. While it may even be desirable for animals' flesh to ripen somewhat, fish flesh will be ruined.

There are many ways to handle fish between the stream and the frying pan. If you're still-fishing the fish may be kept alive in a live-sack hung over the side of the boat, or on a good chain stringer. A live-sack, its neck held open by wire, is good for keeping panfish suspended in water. This is fine when the boat is still for long periods, but if dragged rapidly through the water the fish will drown. Lifting the bag (or a stringer) in and out of the boat each time the boat is moved will also quickly kill most fish. Many guides prefer to keep fish in wet sacks in the boat, under seats and out of the sun, rather than killing them by leaving them in the water on stringers or in bags while the boat is moving.

The best stringer is the clip-type chain stringer on which fish are clipped by large safety pins. This is far superior to the old cord stringer that passes through fish's gills and quickly kills them. With the chain stringer the pin is passed through the fish's lower jaw just behind the jawbone. Never pin the two jaws together, and avoid passing any stringer through the gills.

Catfish and bullheads may be held for long periods if their gills are kept moist. Transport them in a cool, damp sack and they may still be alive when you arrive home. They will also last a long time on a stringer. Many fishermen believe that game fish, especially those scrappers that are highly excitable, will deteriorate rapidly even if kept alive in a live-box or on a good chain stringer.

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Some southern Iowa landowners have posted their property against leech hunters who block farm roads and gates. Officer Roy Downing has seen many No Hunting signs, but "none quite like this one."

1955 IOWA DEER SEASON SET

A 1955 statewide deer season has been announced by the State Conservation Commission. The season will be a split one, with a season for bows-and-arrows only extending from October 29 to November 20, both dates inclusive. Hunting hours for the bowhunting season will be from 6:30 a.m. to 4 p.m. daily.

For shotguns and rifled slugs only, the season dates will be from December 3 to December 5, both dates inclusive, with daily shooting hours from 9 a.m. to 4 p.m.

The deer hunting license fee was reduced from \$15 to \$10 by the last legislature, which also set a daily bag limit and a season bag limit of one (1) deer. Under the new regulations a limit of 6,000 licenses will be sold. If license applications exceed 6,000 a drawing will be held to determine the applicants receiving licenses. During the 1954 season a total of 3,880 regular deer hunting licenses were sold.

Owners or tenants of land and

their children may hunt, kill, and possess one deer without a license on that land, but may not remove the deer from said land in whole or in part unless it is tagged with a seal provided on request to the Conservation Commission. Applications for licenses may be sent immediately to the State Conservation Commission in Des Moines, and must be accompanied by check or money order for \$10. No applications will be accepted later than October 12.

Deer of any age or sex may be taken by both bowhunters and gunhunters. Ten, 12, 16 and 20 gauge shotguns shooting rifled slugs only may be used during the three-day "gun only" season and bows of 40-pound pull or more shooting broadhead arrows only will be permitted during the bow-and-arrow season. The use of dogs, domestic animals, automobiles, aircraft or any mechanical conveyance, salt or bait is prohibited for taking deer.

A metal locking tag issued with

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By John Madson
Education Assistant

Of all the fish baits used by Iowa anglers, there is probably none as startling and unusual as a creature that's been catching fish in southern Iowa.

It's a giant leech—not the little bloodsuckers of our lakes and ponds, but a black strap of muscle that may measure nearly a foot long. Bringing about \$1 a dozen to southern Iowa and Missouri bait dealers, it is being hailed by some fishermen as a bait supreme.

Sometimes called the "great horse leech," *Haemopsis lateralis* is one of the biggest leeches in America. Like all leeches it is very contractile and can lengthen or shorten its body at will; contracted it may measure four or five inches long and a half-inch across, but extended it can stretch out to 11 inches. Unlike many of its smaller relatives, it does not live strictly in water. It regularly takes to the land in a search for earthworms and soft-bodied insects and in some cases it may travel overland for several miles to rich garden areas and new hunting grounds. While there are some records of its attacking the legs of wading birds, livestock and even man when in water, it doesn't seem to be the vicious bloodsucker that its smaller cousins are.

Roy Downing, state conservation officer for Appanoose and Monroe Counties, reports that hunting leeches for fish bait has become quite a pastime in the Centerville area. The leeches are usually hunted near the edges of old sloughs, drainage ditches, creeks and dead river channels filled with quiet backwaters. The best area is the gently sloping shoreline that is covered with a thin layer of flood-deposited silt. In such locations a layer of leaves is usually left in the fall and a thin layer of flood silt is deposited over this material in the spring. Just beneath the surface of the mud in the decaying vegetation are many worms and insects. The leeches evidently hunt down these creatures in their burrows to at-

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FARMER MEYER BUILT A BARN

By John Madson
Education Assistant

Two things separate Irwin Meyer's place in Clayton County from the average Iowa farm.

First, there's the lost gold.

There's an old story about a government paymaster on his way to Fort Atkinson in 1843 with \$60,000 in gold and two companions. Just west of McGregor, not far from Bloody Run Creek, the three men put up for the night at a government stable.

During the night the paymaster became uneasy and carried the chest out into the darkness to hide it. When he returned he complained of being ill and a few hours later he was dead of a heart attack. The secret of the hidden gold died with him. In spite of thousands of searches it has never been found, and the land around the area has been dubbed Gold Mine Farm.

The second unusual feature of the farm is its barn. Not as spectacular as the gold cache, but a lot more important in the long run, standing as a sign of good farm management. It was raised in 1922 when Meyer was a young man and the day it was raised they fed 125 men at dinner. There are 55,000 board feet of lumber in that barn, and every plank and beam came from a single 100-acre patch of timber. From this timber came the lumber for 12 other out-buildings: a smaller barn, a bull barn, machine sheds and hog houses. Lumber from the woodlot was also used for all the buildings on another Meyer farm. For over 70 years the timber has supplied posts, poles, framing, fuel and thousands of board feet of building materials. Yet, to walk through it today, you'd hardly guess it had ever felt an axe. To a forester, that's even more interesting than the hidden gold.

As well as having all the hard-



Irwin Meyer's vast cattle barn was built entirely of native wood; is as solid as it was in 1922. Working closely with forester Bill Ritter, Meyer has made the most of a 100-acre woodland.

wood lumber he can use, Meyer cashes in on his timber. Last winter Conservation Commission Farm Forester Bill Ritter cruised 20 acres of the Meyer woods and marked 123 trees for cutting. This meant 32,000 board feet of basswood, red and white oak and hard maple that sold for almost a thousand dollars. Done with the help of a forester, the harvest did not harm the timber in any way.

Meyer also builds his hog houses from his own native lumber. His newest 12-sow house cost him just \$364 for cutting, hauling and construction. About the same time a neighbor had one custom-made, and spent \$720. So in a single year this 100-acre patch of woods has meant about \$1,300 to Irwin Meyer, not to mention the money saved in taxes, since the timber land, held under timber reserve, is assessed at about \$4 per acre.

Working closely with Ritter, Meyer has his farm classified and follows a close management plan designed for his woods.

Under this plan, on one particular 10-acre plot of timber, he may cut 2,000 board feet per year for 10 years or 25,000 board feet every five years without harming the forest. Only big, mature trees are selected for cutting. These may be trees that are sound but beginning to go downhill, trees that are taking up too much room or defective trees that are going bad. Young trees that are coming along well are reserved, as are slightly defective trees that are holding their own and which may improve. These trees with slight defects may be used as emergency lumber or to fill out at sales. If injured reserve trees begin rotting

or splitting faster than they are putting on valuable growth, they pass out of the reserve class and enter the harvest class. If an old, crooked tree is too far gone for lumber, it may be cut up for fuel. Such wolf trees, worthless for lumber, may be left standing as den trees for birds and animals. Foresters like to see two or three of these den trees on each acre of woodland.

Most of Meyer's timber is white and red oak, hard maple, basswood, cottonwood and ash, and it might be thought that these trees

are too slow-growing to be an important source of lumber. A lot depends on light, location, water and soil. On one 10-acre area in Meyer's woods nearly 2,000 board feet of lumber are being added to the timber supply each year. One red oak stump, recently cut, showed that in the last three years of its life it had added over two inches to its diameter. Not as fast-growing as some softwoods, perhaps, but Meyer is in no hurry. As he walked through his woods one day he pointed to some straight-boled oak seedlings and said, "They're coming along pretty well. The grandchildren will be able to use 'em."

In spite of his long experience in timber-cropping, Meyer admits that he is no forester. He doesn't have to be. He simply follows the advice and recommendations of his farm forester, keeping in close touch with lumber values and marketing and milling methods. Ritter is only one of several farm foresters around the state who work closely with farmers, advising them how to use their timber crops in the best way over the longest period. Other farm foresters are Allan Allyn, Fairfield; Don Campbell, Albia; Duane Stoppel, Adel, and Gene Hertel of Ames.

While Meyer may not be a forester, he's a professional farmer in every sense. He's a corn and hog farmer but his pride is his Shorthorn cattle. The office of his farm home is lined with enough blue ribbons to reach from there to the state fair, and he has sold champion cattle in 29 states, including three to the ranch of Actor Fred MacMurray. Although Meyer is a cattleman, he does not graze his timber. He regards it as a valuable crop and knows that the greatest enemies of Iowa

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Conservation Commission foresters bring farmers the latest in harvesting, milling and marketing methods. Many farmers now consider a timber a crop that not only saves land, but money as well.



MAN THE HUNTER

By Joel F. Webber
Texas Game and
Fish Commission

Man the Hunter emerged from the dark corridors of Time when he ceased existing as an animal and became an intelligent being. This probably occurred nearly a million years ago. Man the Sportsman is a comparative newcomer, separated from the predecessor, Man the Hunter, by the fortunate process of evolution. Man the Sportsman, in all likelihood, is no older than the Bronze Age.

Man the Hunter enjoyed a game-vista such as the world will never see again. He suffered no restrictions such as licenses, bag-limits or penalties for illegal methods. He hunted to provide sustenance for himself and his family.

Since Man the Hunter was a migratory person, rock-shelters, caves and even hollow trees he called "home." He appeared on the scene where game was the most plentiful and stayed until it was entirely consumed. Often, this required 30 generations of descendants and a thousand years' time.

Man the Hunter took no pleasure from the chase. He waged wars of extermination against the game. His hunting instincts were ruthless; he killed anything and everything he deemed edible, even his fellowman.

Only theory can establish the period when Man the Hunter began using weapons in his pursuit of game. Man the Hunter in his intellectual infancy had no weapons at all. His methods were drastic and cruel. He drove his game into bogs, dropped heavy stones on it from above; or he just stalked his quarry until it dropped from sheer exhaustion.

Occasionally, Hollywood dreams up a plot with prehistoric settings. Man is pitted against such formidable reptiles as the *brontosaurus* (thunder-lizard), the *diplodocus*, a huge reptile with two brains, one of them located at the root of its tail, and *tyrannosaurus*

rex, exceedingly dangerous if only because he was carnivorous. These zany movies are interesting if only because of their inaccuracy.

Man the Hunter and the giant lizards did not inhabit the earth at the same time, being separated by a time chasm. Yet, Hollywood still earns a lot of moola from a unique interpretation of paleontology. Who argues with a producer with a million dollars to spend?

The first hunting weapons, it is believed, were used during the Upper Paleolithic (Old Stone Age). These were mostly axes and blades of stone. William Howell, the distinguished anthropology writer and teacher, believes the best stone weapons were produced during the Solutrean Period (25,000 B.C.). Twelve thousand years later, during the Magdalenian Period, stone weapons degenerated while the hunters employed new materials, bone and horn. These materials did not last long.

Still later, the Aurignacians were great hunters. They were artists, too, and drew pictures, called speleographs, on the walls of caves they inhabited in France and Spain. These caves also surrendered the weapons and the bones of the game they killed. It was during this same Aurignacian period that the cave-bear, cave-lion, cave-hyena, bison, hairy mammoth and woolly rhinoceros became extinct. Man the Hunter was a great game hog, as the record would seem to indicate.

Man the Hunter's ingenuity grew with his intelligence. He learned to fashion weapons to kill at a greater distance and with more ease and safety. He conceived the *atlatl*, a device for hurling a short javelin, the sling and bow-and-arrow, all deadlier than natural "weapons" of the game which depended upon fang, claw or prodigious strength. None, except the insects which he ate as a last resort, was to prevail against Man the Hunter. Later, he learned to weave and devised slip-nooses, snares and the laying of traps.

When the chariot wheels of the Bronze Age thundered onto history's stage, Man the Hunter came into his own. Already, the Persians had domesticated the greyhound and the falcon to provide far-seeing eyes and rapid pursuit of game. However, the Bronze Age, according to what we might term the eternal time scale, was merely yesterday, about 6,000 years ago.

The Bronze Age produced new and deadlier weapons for Man the Hunter. In India and Africa, he was using the cheetah, the swift feline with unretractable claws. Now, Man the Hunter's weapons were more effective, made of metal instead of stone. The edges could be resharpened and saved the time consumed in making new ones. Man the Hunter tipped his weapons with metal and designed coverings of the same substance for his body against the animals.

When Man the Hunter invented gunpowder, the doom of the animals was sealed. But when this invention materialized is not known. Certainly, it is of antiquity. One British ballistics expert believes that gunpowder was used in some form by Alexander the Great (356-323 B.C.), who reported encountering an explosive substance in his campaigns against the Hindus. Likewise, the Greeks, he believes, used gunpowder in the Trojan War (1184 B.C.). Marco Polo, the doughty Italian explorer and adventurer, reported finding gunpowder in China, where it was merely an amusing plaything and never used in hunting or warfare.

If the first use of gunpowder by Man the Hunter is lost in antiquity, so are the weapons that discharged it. The first guns of record almost stagger the imagination in their simple construction and difficulty of operation. Early guns were short lengths of pipe, metal or wood and bound with rings of rope or metal to control the pressures within the barrels. They were fired by matches, flints or wicks, and frequently exploded in their users' hands, indicating

the weapons were equally dangerous at either end.

After the 17th Century, gunsmithing became an art and a science. Beautifully chased barrels and hand-carved stocks became popular. During our own Revolutionary War, gunpowder was improved. English-glazed powder was eagerly sought for by traders and warriors. The first of the rifled barrels appeared on this continent. Man the Sportsman was steadily improving in his effort to exterminate game and himself.

All of these things have been accomplished since the Bronze Age. Now, since Man, including Man the Hunter and Man the Sportsman, has been around for nearly a million years, he really hasn't made much of a dent upon the earth's history—too much of that is unwritten, except that which is a matter of conjecture and theory.

The great game herds of the world have almost disappeared. Only Africa now remains. In our own United States, the bison has become almost extinct, except for small exhibition herds. The slaughter of these noble beasts was a scandal. Yet, Man the Hunter of prehistoric times has his own story of game waste: In a small, primitive village in France, more than half a million horses were hunted and eaten in less than 5,000 years. That's a lot of horseburger!

Fortunately, Man the Hunter in his primitive aspect no longer exists. Technically, he is referred to as "preliterate" and is found in a few remote sections of the world, notably Australia and Africa.

Today, guns and ammunition are the result of unending research for metals to withstand the pressure of increasingly more powerful charges. Some day, perhaps, Man the Hunter and Man the Sportsman will hunt with atomic power. The game, thanks to intelligent programs of game conservation, will exist even in token herds for those who wish to indulge in what are now called the "ritual sports."

Man the Sportsman will never equal the record established by Man the Hunter, his primitive ancestor. He will become even more of a gentleman hunter, the sportsman. He'd better, for with atomic weapons, he may become extinct!

A pair of bobcats captured as adults in the fall of 1928 in New Jersey were kept in a zoo. The female died in 1950 and the male in March, 1953. At the time of his death, the male showed signs of aging and was not in perfect physical condition, but in spite of this fact he weighed 30½ pounds when received by the American Museum of Natural History. The cat was over 25 years of age at the time of his death.—G.S.

The porcupine averages about 18 pounds in weight, but specimens weighing 40 pounds are known.—H.H.



Jim Sherman Photo.

Shooting blue herons is not a test of good shooting, good hunting nor good sense. They are protected by state and federal law and the hunter who killed this bird was prosecuted.

OLD MAN HERON

By Dr. Roy Abbott
Iowa State Teachers College

I am so well hidden in the rushes, the great blue heron never glimpses me as he fans close overhead and alights in a patch of shallow water a few yards beyond. Knowing that the slightest sight of me will send him squawking hoarsely away, I lie close, fearing almost to bat an eye.

After alighting, he wades slowly along picking up and setting down his great feet—they're seven inches from front to back—with such delicacy I can see hardly a ripple. He is trying to be quiet so not to frighten the fish from the shallows. Presently he stops, bends his long neck into a flattened S-curve and stands like a statue on long spindly legs. I am too far away to see clearly, but, knowing something of his physical make-up, I know that still though he stands, his pale-yellow eyes are searching the water at his feet.

What is he looking for? His dinner, no doubt. Nor is he fussy as to what may constitute that dinner—just so it be some live wriggling thing. If he were here where I am now, he would make a meal of the many field mice which keep sliding near me through the grass. But out there in the water where he usually feeds, fishes, frogs, tadpoles and water snakes are the commonest items on his menu.

He can swallow astonishingly large creatures. True, his six-inch dagger-like beak is divided clear back behind his eyes, but his neck appears too slender to gulp a black bass weighing a pound and a half. Yet fish of this size have been taken from the stomach of these birds.

A good deal of food is required

to satisfy this long legged fisherman, but he must use most of it for energy, for even at his best he rarely weighs eight pounds. If you can imagine six or seven pounds of flesh scattered over the bony framework of a bird three feet in height and four feet in length, you can see he must be pretty thin in spots. And he is. One that I shot some years back was so unbelievably scrawny and tough that even my pet horned owls rebelled at his rank stringy flesh.

How long will he hold that statueque post? For an hour or two perhaps—until something edible comes within range—for he has vast patience. There! That something must have arrived. For suddenly his neck straightens, his long beak stabs, there is a gulping contortion of his neck, and once more it is curved back between his shoulders ready to impale his next victim.

I am sure he is hunting to satisfy his own stomach, for it is late August and those noisy insatiable brats of his are by now full grown and gone from the parental nest.

Hence, my heron yonder is now strictly on his own and will remain a bachelor until next March when once more he'll get the urge to find a mate and raise another family. When that time comes, he and madam heron, along with other mated pairs, will fly away to some heronry where they nested before, for it's the way of herons to go back to the same nesting site year after year.

Their nests are huge, ugly, flat-copped affairs, built of grass and coarse sticks, high in the tops of tall trees, usually in some spot hard to come at by man.

On arrival at the nesting grounds, there's first a bit of housecleaning, this to be fol-

lowed by the laying of four to five pale blue eggs. The eggs need about a month to hatch, but once the young are out of the shell, the peace and quiet of the neighborhood is gone for the next few months. The parents must be constantly going and coming to and from the hunting grounds—for often they travel 20 miles or more, round trip. As each parent arrives with a load of provender (they swallow it and then disgorge it into the mouths of the young), they are greeted noisily by their ever-hungry brood.

So, old man heron, or "great blue crane," as some people mistakenly call you, knowing what a strain you've been under for the past three months, I can see what fun it must be to stand out there and play Izaak Walton all by yourself and with no thought of a family to be fed. Stay there as long as you wish for all I care—for what would a swamp be without you?

FISH WORMS GET FANCY TRADEMARKS

The U. S. Fish and Wildlife Service reports the case of the Louisianan who prized the fish-worms he raised for anglers so highly that he got the government to give them a registered trademark.

The man wrote to the U. S. Patent Office and said his worms were very special and needed a special name. He asked if he could register them as "Louisiana Pinks" and restrain any other worm raiser from using that name.

After a conference with Fish and Wildlife Service officials, the Patent Office decided to accept the application so now fishermen can bait their hooks with trademarked worms.—Boone News-Republican.

Although just a little longer than 2 inches, the common jumping mouse may make leaps of as much as 10 feet in length.—H.H.



Kent Vittengl Photo.

If left alone, bullsnakes will avoid man, but if they are goaded they can get ornery. A snake's strike is fast, but has been found to be slower than the punch of a trained boxer.

WILL A BULLSNAKE STRIKE?

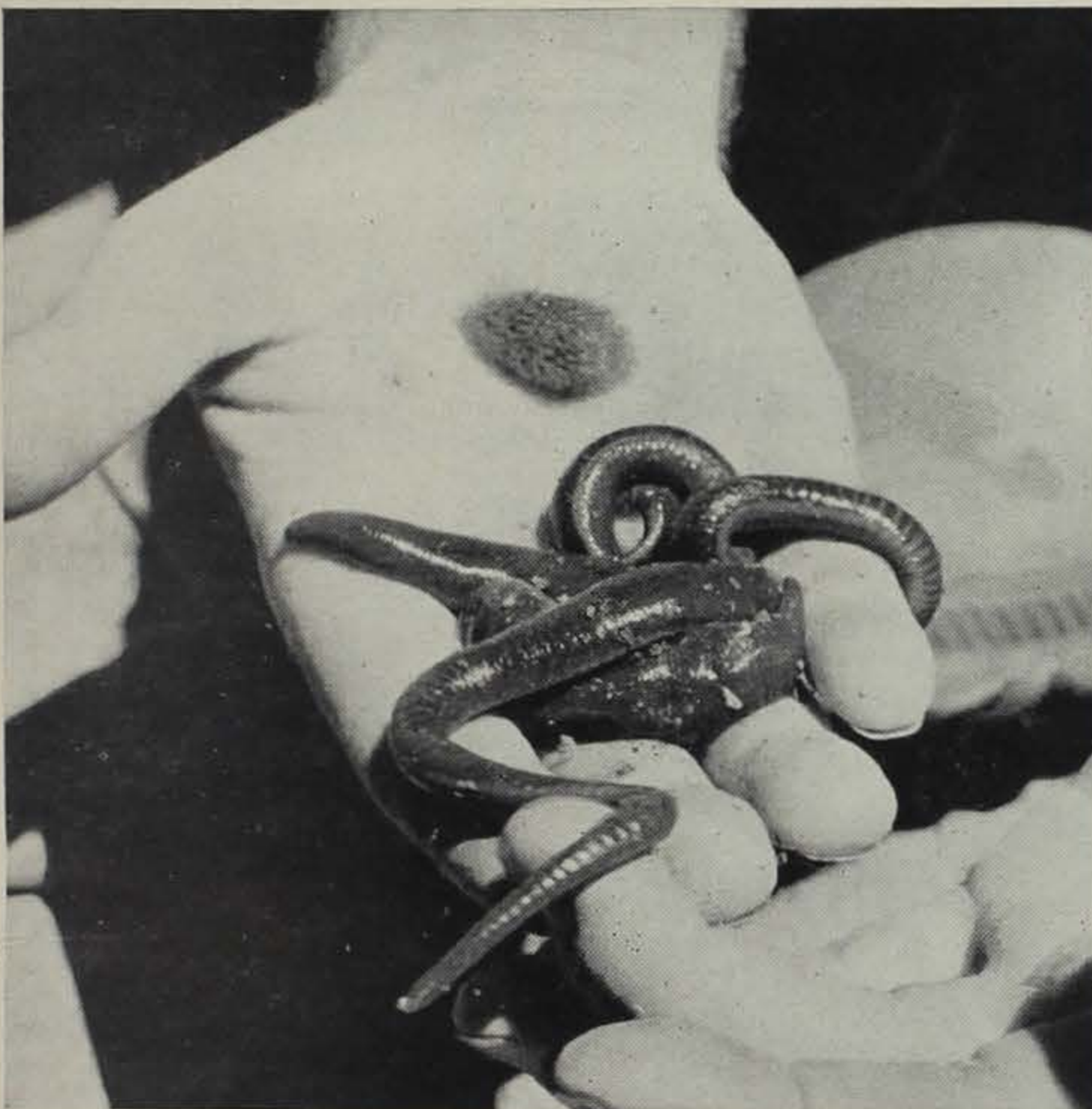
The ability to strike is not limited to poisonous snakes; many non-poisonous species, when angry, frightened or hurt, will also strike man.

Lloyd Kiefer, conservation officer supervisor for eastern Iowa, teased this big bullsnake on a Cedar River sandbar just as it emerged from the water. The enraged snake struck at Kiefer's boot, and although photographer Kent Vittengl of Cedar Rapids had his camera set at high speed the photograph was blurred.

Bullsnakes, fox snakes and other reptiles that kill by constriction or squeezing may strike a small animal just as a rattlesnake

will. Their object is to K.O. their prey just long enough to loop their body around it. By the time the animal recovers from the shock of being struck it is enmeshed in a deadly embrace.

In some cases a person struck by a non-poisonous constrictor may believe he has been bitten by a rattler. A bullsnake or fox snake, when extremely nervous, can vibrate its tail rapidly and if it is lying in dry leaves a buzzing rattle is sounded. Sometimes, following this buzzing noise, the snake may strike at a human and another "rattlesnake bite" is reported. Such bites, even if they do break the skin, are harmless. A rattlesnake's bite can be identified by a pair of deep fang wounds and almost immediate swelling and great pain in the affected area.



The great horse leech is a dark, lead-colored leech with dim orange stripes along its sides. At its "tail" is a large sucking disc and at the head end are the small jaws and five pair of eyes. Round object is an egg case.

Horse Leech . . .

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tack and devour them. From above, such tunnels look much like a small mole "run" and the leech hunter digs into the moist mud at the end of a fresh run. If the leech is not there, the entire tunnel is excavated. For such digging, Roy uses an army machete although any knife or similar tool would be all right. With an empty coffee can and some mosquito dope he is fully equipped.

In short, the leeches are found within a few feet of the water's edge by examining the smooth mud for places where creatures have been tunneling just below the surface. Because of their habit of overland migration, horse leeches are not confined to a single small area. They have been reported in the Okoboji vicinity, near Lost Island Lake, and near Centerville. While they may be common in many other areas, they aren't easily seen and most fishermen are unaware of them.

These giant leeches are most heavily hunted in southern Iowa during the spring when stream and pond edges are still moist. The peak of leech hunting coincides with the peak of catfish fever in late April, May, and early June. Later in the summer the muddy shores have begun to crack and dry, stream banks are heavily grown and poison ivy and mosquitoes have arrived. Like night-crawlers and other baits, leeches are evidently best found early in the summer.

As many as 200 leeches may be found in a couple of hours in the right area, and some good leech hunters can pick up 300 in a single morning. At 10c apiece, this

counts up, and leech hunters come to the Centerville area from Missouri and many parts of Iowa. It's even gotten to the point where some farms have been posted with "No Leech Hunting" signs. Once found, the leeches may be kept in empty coffee cans without apparent harm. They should be kept cool and out of direct sunlight. Downing claims he has lost leeches kept in dirt but that they seem durable when kept in an empty container.



The leeches are hunted on the muddy margins of stagnant pools and bayous. They follow the tunnels of worms and other animals and may be found by digging through the tunnel's roof.

Like any fish bait, some fishermen swear by leeches while others don't even use them. They do have advantages. For one thing, they are about as delicate as a strip of rawhide boot lace. They will stay alive on a hook all day, twisting and contorting with plenty of action. Some anglers break them up into small pieces; others fish with the entire leech. Downing hooks a leech through the middle, letting the two ends hang free as he drifts the bait downstream for catfish. Roy advises against still-fishing on the bottom with a whole leech since the creature will attach its sucking disc to sticks and stones on the bottom. He has pulled in baits that had picked up good-sized sticks, something that doesn't help fishing.

When Roy recently brought in a few of the leeches, Jim (I'll Try Any Bait) Harlan took some out on the Des Moines River and caught two fine catfish and a smallmouth bass in short order. He reported that the leeches worked well as bait, but that they seemed sensitive to heat and direct sunlight.

These horse leeches are in the same broad class as earthworms, and are similar in many ways. Like earthworms, they are hermaphroditic and reproduce by passing an egg capsule along their bodies and over their heads. These cocoons are sometimes found in burrows, encased in a frothy substance that is the general size and shape of a cocklebur.

Leeches may occur on land or in water, but most American species are aquatic. Some of the big land leeches of the tropics, highly predacious and swift to attack man, may be very dangerous, and there

are accounts of such leeches killing ill or drunken men who have fallen along jungle trails. Predacious leeches cut into their victims with teeth so sharp that the incision is hardly felt, and secrete "hirudin," a substance that prevents blood coagulation. Extracts of hirudin are sometimes used by surgeons who wish to control blood clotting during certain operations.

There seems to be no danger of Iowa's horse leeches attacking the fisherman. Downing has carried the great leeches in his bare hands for hours without harm and we have placed them on our forearm and they showed absolutely no disposition to attack. Handling them is no more distasteful than hooking nightcrawlers and considering their durability and action on a hook, they may be just the ticket for many waters. And, while a 10-inch horse leech isn't very pretty, and is nothing you'd invite to a birthday party, it evidently looks good to fish.

HOT-WEATHER ANGLES FROM THE FISHERMAN

When live-bait fishing for pan fish from a boat, do not fail to drop your hook into the water right beside you. Fish like to congregate in the shade of a floating object, and sometimes you can make a respectable catch in your own neighborhood. The method is frequently successful, particularly with crappies. Whenever you approach a dock, try a few casts around it.

When bass are in deep water, let your lure sink right to the bottom and then fish it slowly. It is almost impossible to fish it too slowly.

In summer fishing for bass during daytime, try casting into deep water. When you find an open space surrounded by weeds, you may be on a hot spot. You can tell by the feel of your plug working freely and then being held by the weeds. Cast your lures so that they will cross the open spot and leave by way of the weeds.

In summer, when bluegills are down deep and don't seem interested in anything you offer them, try crickets. Have a lot of them, as they don't stay on the hook well.

Don't string fish by running the stringer in the mouth and out the gills. So harnessed, a fish cannot breathe properly and soon dies. Some fishermen string fish through the lower lip, some through both lips. When you use the safety-pin type of stringer, the fish can breathe better if strung through both lips.

Moles feed principally upon worms, and insect grubs.—H.H.

Classified ad noted in the Camdenton (Missouri) *Reveille*:

REWARD—\$50 reward for the conviction of the degenerate sons of illustrious mothers that scratch fleas with their hind legs, that have been shooting deer during the night on my property. Pat Hawkins.

PHEASANT CALLED INDEX TO PROSPERITY

The economics of agriculture is the subject of many complicated theories. So many it's difficult to keep up with them.

One of the most entertaining was advanced recently by Lloyd Vance, game supervisor of the Nebraska Game Commission.

Mr. Vance, as reported by United Press, appears to believe there's a relation between the number of pheasants and the economic health of agriculture in Nebraska.

Pheasants increase, he says, when the prosperity of farmers decreases.

"When a farmer can no longer produce at a profit on all of his land he will cease working part of it," he says.

Game Supervisor Vance here enters into conflict with quite a few of the boys who earned their Ph.D.'s in economics. They'll argue that farmers tend to stir up more land when prices go down.

"It's in the idle fields that pheasants will find good natural nesting areas," says Mr. Vance. Meaning, apparently, the fields idled by farmers who quit work-

ing them because their incomes are going down.

Mr. Vance concedes that "less farming resulting from lower farm incomes is a terribly high price to pay for an increased bird population."

Here Mr. Vance seems to be in conflict with Mr. Vance, unless the United Press fouled him up.

He started with the theory that lower farm incomes result in less farming and he ends up with the theory that less farming results in lower farm incomes.

It's natural, we suppose, that when a game supervisor finds himself with less and less game to supervise he tries to seek cause and effect.

We were thinking about this the other day as we drove in north-west Iowa. We were seeing more pheasants along the roadside than we'd seen in Nebraska for many a month.

So many, in fact, that we began looking farther back across the fields for signs of a great depression. But the neat farmsteads, the finely tailored fields, the sleek



Jim Sherman Photo.
When this fellow is going good, is the farmer going broke? Authorities disagree.

herds of cattle seemed to throw a monkey wrench into the Vance theory.

But maybe those Iowa pheasants are a hardy breed that thrives even when the farmer has money in the bank.—Max Coffey, Omaha World-Herald.

NOT A DULL MOMENT

If you are a qualified fisherman, well versed in the arts and tricks of the business, you can get plenty of good fish from the Mississippi at Guttenberg right now. By "good fish" I mean bass, crappies, bluegills, catfish, northerns and walleyes.

My stringers last week contained all those varieties except bluegills. Probably had I used worms for bait I could have had bluegills, too, but I didn't put a worm on a hook. But other fishermen brought in nice strings of big, fat, plump bluegills—they were hitting if and when the angler located the schools.

I watched two early morning fly rod anglers—between 5:30 and 6 o'clock—on the rip-rap right where the cutoff to 12-mile slough runs in. Even in the quite heavy shower that fell at that time they took their limits of big mouth bass in less than an hour, using what looked like, to me, Johnson minnows with pork rind, and quite large streamer flies.

One afternoon four chaps went up along the lock wall to where the first outlet tunnel is located, anchoring off maybe 50 feet. Using minnows for bait, in a couple of hours they brought in their limits of walleyes, the fish ranging from two to four pounds.

For myself I got no walleyes worthy of mention, but downstream at a certain wing dam I caught and put back no less than 20 sand pike that measured about a foot each in length. Too, I caught any number of tiny sand pike, ranging from 6 to 10 inches. Looks like there'll be plenty of catchable sand pike for next year.

I got some very nice big mouth bass—from two to three pounds—and I caught many that were between 10 inches and a foot in length. These I put back in the river. I had absolutely no use for them.

My surprise fish was a northern that would, I think, weigh all of 8 pounds. Funny thing about this fish is that I caught it while fish-

ing for bass in a shallow eddy, using a very small minnow.

Crappie fishing was excellent the first two days I was there. One evening we brought in our limits of big crappies, fat black fellows that really took off when they hit.

Never got one turtle, but I caught more than my share of dogfish, and they were big ones, too. Lots of sport, because those dogfish resent being hooked and landed. I think they cut more capers than a gar. Then, too, I took several silver bass, but these were too small to be counted. Everybody caught sheepshead. I saw plenty of stringers with 30 or 40 of these white perch strung on.

Other fishermen may disdain those flathead catfish that run from a pound to three pounds, but these furnished me my happiest sport. They struck hard and put up quite a show before coming to net. And for good eating, there's no tastier fish. I caught no sizable channel cat, but quite a few fiddlers that went up to 13 or 14 inches.

I enjoyed those four days. Not one dull moment and plenty of action. Had a wonderful fishing pal, Bill Benskin, and we went wherever fancy dictated—to the spillway, in the 12-mile slough, up next to the locks, downstream along the wing dams, and along the miles of rip-rap. Should you want a mighty nice guy to go along with you at Guttenberg, ask for Bill at the Guttenberg Boat Line; it won't take much coaxing.

The boys at the Guttenberg Boat Line treated me fine. There's scarcely nothing they won't do to make the fishing trip pleasurable, and even successful. Their boats are good, their minnows are plentiful and the right sizes, and they have worms, too—both garden worms and nightcrawlers. They own the fishing barges and most everybody catches fish off those barges.

This sounds silly, but I'll tell it. I spent exactly \$14.15 during those four days, which amount doesn't include the gasoline I used in my car. I had a gorgeous room in a modern home and I ate my meals at the City Cafe. My practice is to hit the river in the very early morning, loaf during the mid-day, then hit it hard from 4 p.m. until dark.

It's really fun, for me at least, to loaf along that river and watch the craft and the people. If you so desire, you can put a rowboat through the lock at no expense. Huge tows pass up and down the river, and always there are scores of fishing boats anchored as far as the eye can see. Maybe I'm prejudiced, but I sure do enjoy my fishing trips to the big river.—Manchester Democrat.

Snakes of the United States all feed upon live animals or animals that they have recently killed. Some snakes of the tropics eat plants.—H.H.



Jim Sherman Photo.
Gun hunters will have a three-day season this year, and for the first time in modern history deer may be hunted in every Iowa county. Two seasons have scattered the Iowa herd, opening up many new areas for hunting.

Deer Season Set . . .

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the licenses or on request by land-owners must be affixed to each deer before the carcass can be transported. All hunters required to purchase licenses must possess a 1955 deer license and wear a red license number and insignia provided with the license when hunting deer.

It has been estimated that Iowa's deer herd numbered about 11,000 animals in late winter. With this spring's reproduction the present herd is thought to be about 15,000 deer. During the 1954 season about 2,700 deer were killed. Ten deer were reported to the

Commission as being killed with bow-and-arrow, and the majority of these kills were with single arrows. The county with the largest deer kill was Allamakee, producing at least 354 deer. In general the counties with the most deer reported shot last year were the upper two-thirds of the Missouri River counties, Allamakee and Clayton Counties on the Mississippi and the inland counties of Winneshiek, Butler and Bremer.

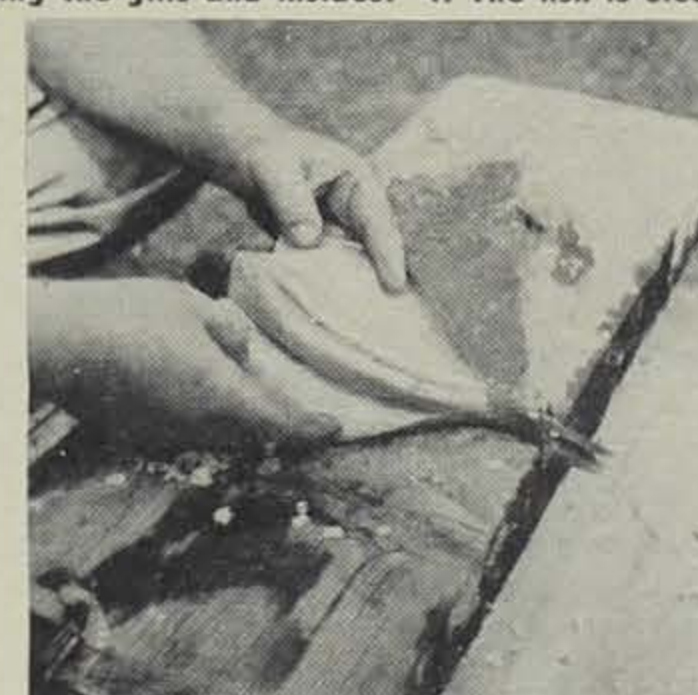
Since the 1953 deer season, hunting pressure has dispersed Iowa deer from former areas of concentration and caused the herd to scatter over the state, and deer are now numerous in areas that had few deer three years ago.



Chuck O'Farrell cleaning bullheads. 1. He makes a head cut through the spine. 2. The skin is stripped off with pliers. 3. The head is snapped off, pulling the viscera with it. 4. A properly cleaned bullhead.



For bluegills and panfish, Chuck first scales fish thoroughly. Then, 1. a head cut is made through the spine. 2. Deep cuts are made on each side of the dorsal fin. 3. The dorsal fin is lifted out. The head is then pulled off, removing the gills and insides. 4. The fish is cleaned.



Skinning fish such as perch and walleyes. 1. Head cut is made through spine. 2. Cuts are made on each side of the dorsal fin. 3. Skin is worked off the fish from top to bottom. Fish is almost cleaned as it lies in a "basket" of skin. 4. The head is then snapped down and off, pulling away belly skin and viscera.

Fishing Fundamentals . . .

(Continued from page 153)

Such anglers prefer to kill their fish as soon as they are caught, claiming that a freshly-killed fish is superior to one allowed to die slowly in water.

From the Idaho Fish and Game Department come a few tips on the care of fish. While dealing mainly with trout, they apply to all spiny-rayed fish:

1. Clean fish as soon as possible, but don't wash them. Some fishermen clean each fish as soon as caught; others wait until they return to camp. If a fish is dropped on the ground, it may be rinsed immediately to remove trash and such, but should not be placed in water after it is opened.

2. Most skilled trout-cleaners open the fish with one slit from vent nearly to the jaw, make another slit horizontally under the "chin," cutting between the first cartilage and the lower jaw. Pinch the viscera loose from the backbone at the back of the throat, and with a sharp pull, pull all the viscera away in one piece. The fish is then clean and dry with

head still attached and body cavity standing partly open.

3. Don't wash the fish, or put it in water. Water contains bacteria and even sterile water will speed deterioration of the meat.

4. Fish in the creel, cleaned or uncleaned, should be laid in dry grass well separated from each other. In very hot areas a well-wrapped and insulated package of canned ice or similar cooling agent can be placed in the creel to help keep the contents cool, but neither dry ice nor ordinary ice is recommended for this purpose.

If fish are to be kept in camp for a time, hang them on a string in a safe place overnight, and then wrap them separately and put them in a cool place. Old timers say "Wrap them in your bedroll as soon as you have cooled it out in the morning." Others enclose the package in various types of insulating packing to exclude daytime heat.

6. Fish should never be placed in direct contact with ice, since moisture from melting ice causes fish to deteriorate.

7. Keep fish dry until ready for final preparation. They may look

dry and wrinkled but the washing involved in the final cleaning and dressing will take care of that, but nothing will restore freshness to fish that have begun to deteriorate.

According to veteran anglers, the most important point in holding dead fish is to keep them dry and cool. Dry grass and leaves are used to pack cleaned fish, since green grass may heat badly. Dry material allows the air to circulate freely around the fish and keep them dry. When the fish is gutted the body cavity is wiped out with a dry material but not washed, and it is kept out of the sun. Some fishermen believe that the stomach, if not removed as quickly as possible from a dead fish, may taint the flesh with digestive juices. Gills should be removed immediately if the fish is dead and cannot be cooked for some time, since the blood-filled gills will begin to go bad almost at once.

Chuck O'Farrell, Supervisor of Rough Fish Control for the Conservation Commission, believes that all fish should be eaten as quickly as possible.

"If you catch them in the late afternoon or evening," Chuck ad-

vises, "eat them that night for supper. While fish are often cleaned and kept overnight, they do lose some flavor. Eat them as soon as possible after catching them if you want the best."

Other fishermen believe that freezing fish should be used only as a last resort. They maintain that freezing allows juices to escape, the same juices in which lie the true flavor of the fish. If the fish must be frozen, fast-freeze them with repeated dippings in water, building up layers of ice like wax on a candle. These thick layers of ice will help prevent drying of the cleaned fish.

There are many methods of cleaning fish, and pictured here are a few of Chuck O'Farrell's techniques. A professional fisheries man who was born and raised in the Spirit Lake area, Chuck knows his business. He says that while his methods aren't the only ways to clean fish, and possibly aren't the best, they do work well for him.

Chuck usually scales crappies and other panfish, and skins northern, walleyes and perch. Scaling

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Fishing Fundamentals . . .

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panfish rather than skinning them may surprise many Iowa anglers, but Chuck's fishing waters in Iowa's great lakes are cool and clean, and he can take advantage of the delicious flavor of a fish's skin. In warmer, more sluggish waters, unskinned bass and panfish may taste "skunky." For this reason, many Iowa anglers prefer to skin bass and bluegills taken in late summer when lakes and ponds are low and their waters are warm. In some cases, skinning such fish can spell the difference between good eating and throwing them away.

These various methods of handling and cleaning fish are proven ones, but aren't the only ways to do it. You may have some favorite methods of your own that are even better. If so, the CONSERVATIONIST can always use them, and we'd like to hear about them and pass them on to the rest of the boys.—J.M.

BEATING THE HEAT OF DOG DAYS

On those camping trips this summer you'll want to be comfortable and selection of a suitable campsite is very important. Big and heavily foliated trees offer the coolest shade and, therefore, make ideal spots for pitching a tent. A camp on a knoll or a rise will catch more breeze than one in a canyon or a depression. Big barn-size boulders or rocky ledges will hold heat like a reflector.

Keeping cool on a lake or stream is sometimes as difficult as setting up a decently aired camp. One way to keep cool is to soak your shirt and then put it on again. Spread a soaked handkerchief under your hat. Another way to keep cool is to wade out neck deep in the water and stay there until thoroughly chilled. Your clothes will dry out swiftly and the danger from catching cold is nil. Be sure to leave your wallet and watch on the bank, though.

Cold drinking water is no problem near mountain creeks and streams, but around many lakes it presents another worry. Metal water containers heat up fast unless they're wrapped in strips of wool blanket and kept wet. Portable coolers are growing in popularity and are handy for short trips or where ice is available. Soft drinks, beer, or canteens of water can be chilled by lowering them by ropes or wires into cooler depths at bottoms of lakes or streams. Water bags, too, will keep liquids cool by evaporation if hung in the shade.—*The Fisherman Magazine.*

The Arctic hare has a peculiar habit that produces tracks quite different from the usual rabbit type. Occasionally it will hop along, kangaroo style, on the hind feet only for some distance before dropping down to all fours.—G.S.

BEST FISH STORY OF THE YEAR

An Editorial

Word has finally leaked out that the Conservation Commission is feeding fish in Green Valley and Rock Creek lakes in an effort to reduce the high fishing success in those waters.

Seems we're feeding those lucky fish with bran, meal, liver or hamburger. A Creston angler has even jumped us about pumping compressed nitrogen into Green Valley Lake to dull fish appetites.

Now, while such feeding isn't authorized by the main office, we've heard that some of our conservation officers do it on the sly. Take Gene Hlavka at Rock Creek Lake. Knowing that local anglers held a dim view of fish-feeding, Gene recently bought a war surplus submarine. During the day he keeps it sunk in deep water near the dam and at night he loads the torpedo tubes with liver and bran and cruises out into the lake beneath boaters, happily firing his "torpedoes" in the interests of better fishing.

Pat Tilley, conservation officer at Creston, couldn't find a submarine for Green Valley Lake so he just bought some war surplus navy frogmen. Then he cornered Creston's ground beef supply at 40 cents a pound until he had several tons of meat. On dark, windy nights his frogmen swim out into the lake and serve the bass hamburgers.

Say what you will about our game wardens, they're resourceful. Rich, too.

All right, so we're being ridiculous. But no more ridiculous than the idea of feeding fish so that fishermen can't catch them. Everett Speaker, superintendent of biology for the Commission, says, "In every Iowa artificial lake ever opened, the high success of opening day has leveled off. In each case, this old story about our feeding fish has cropped up."

To keep fish fed to the point where they wouldn't be hungry would take tons of feed every day. It would require lots of manpower, many boats and a great deal of time.

What happened to fishing in the two lakes was expected. Green Valley and Rock Creek were virgin lakes, never fished. They contained plenty of fish that were hungry and naive, and the fishing during those first two weeks of June was phenomenal. A little later on millions of fish eggs hatched into fry, the warming lakes were filled with plankton foods and the shorelines teemed with young frogs and insects. That's rugged competition for bait-fishing.

As the lakes were subjected to tremendous boating and fishing pressure, many of the fish became wary. A black bass will stay dumb for just so long—if he lives, he gets smart. As a result of



A few prickly pear cacti thrive in the rocky regions of western Iowa. Hard to find and painful to pick, they are links between Iowa and the West.

these factors and others, fishing success in the two new lakes has dropped off. Why not? It always happens, and always will.

One of the basic principles of the Conservation Commission is to furnish the most recreation for the most people. This can't be done by feeding fish in order to empty creeks.

So don't worry about us filling these new lakes with food just to ruin the fishing and "save" the fish. If we get any hamburger, we'll eat it ourselves.

Farmer Meyer . . .

(Continued from page 154)

woodlands are fire and overgrazing.

"Too much timber has been cut from too many hillsides," he told us, "then the hillsides go downstream. I keep my fields contour-planted, and keep timber on the slopes where it belongs."

There's a huge demand for good lumber, and Iowa white oak and walnut is at a premium. The finest trees are used in face veneers and furniture, less valuable trees going for lumber, ties, posts, poles and fuel. White oak may be used for boats, barrels and interior trim, and red oak for hardwood flooring. Basswood is used as fillers for veneers and as patterns, while ash makes tool handles, furniture, boat oars and playground equipment.

What with his timber, his crops and his cattle, Farmer Meyer doesn't waste any time hunting for the lost gold of Gold Mine Farm. His father always believed that it had been found years ago, but Meyer doesn't care whether it was or not. He's too busy to worry about it, for there's enough gold in his fields and woods for any man and his family.

The Armadillo, a small primitive mammal of the south, gives birth to either 4 or 8 young at a time.—H.H.

Iowa's kinship with the far west is borne out in many ways: the vast stock yards in Sioux City, buffalo bones in old creek beds, and bloody invasions by Sioux dog soldiers. Another unique tie, unknown to most Iowans, is our cactus.

Along Iowa's western border, in such wild areas as Gitchie Manitou Park in the northwestern corner, prickly pear cactus can be found hidden among the red quartzite outcroppings. These plants, and the yucca in other western Iowa parks, remind us that while we aren't exactly a western state we certainly don't belong to the east.

In many regions of the southwest, the prickly pear cactus is an important wildlife and cattle food. Fruits and seeds of the cactus are eaten by dozens of small animals and deer, antelope, javelina and mountain sheep may eat the fruits and thorny slabs (stems) without being injured by the spines. In some cattle ranges the fleshy, spine-studded stems are seared with flame throwers in an effort to burn off the spines and make the cactus useful to cattle.

Skunks do not have a corner on the wild animal perfume market. All animals have scents of some kind, and those from the musk glands of wolverine and mink are particularly offensive.—J. M.

Following a heavy flood which submerged some Des Moines streets years ago, a 10-pound catfish was found stranded in a gutter by the receding waters!—J. M.

The paddlefish, or spoon-bill catfish, is found in only two places in the world: in the Mississippi River and in the Yangtze River of China.—J. M.

There are about 25 different kinds of deer in the U.S. and Canada.—H.H.