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Morels: Favorite Iowa Mushrooms

Big Catfish? Now's The Time!

Early spring is to catfishermen what November is to the duck hunter—a time for action when the chance for the heftiest bag is better than any other time of year.

This fact was underscored recently by Harry Harrison, fisheries biologist for the Conservation Commission. For a good many years, inland streams of central Iowa have been Harrison's particular bailiwick and channel catfish his special concentration. He knows catfish of the Mississippi river valley—when they bite, where they bite and why they bite—like few others. And he knows how to go about getting a mess for dinner, too!

"Early spring is the time to fish for big catfish," Harrison said recently. "Old Whiskers does his heaviest feeding early in spring after several months of dormancy. By the end of winter, accumulations of terrestrial food have either become in short supply or no longer hold much interest. Spring brings a supply of "foreign foods" that are different. These spur the appetite and encourage big catfish to bite."

Water Temperature

Stimulated appetites are of such rampaging dimensions they apparently overcome other things, Harrison pointed out. For one thing, big catfish are less finicky about when they bite when spring rolls around. Despite muddy (turbid) water, "cats" bite either day or night with equal vigor. A rule-of-thumb is to fish after water temperatures reach 60-65 degrees, but this also is something that takes a back-seat to a vigorous appetite. There are cases, says Harrison, when big catfish bite in almost any water temperature, although the best time seems to be after water reaches the mid-sixty range. Fish anytime after, even though water temperature may vary a little.

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Morel mushrooms, favorites of many, make their appearance in April. Spongelike in texture, morels abound in the Missouri river bottoms and wooded areas throughout Iowa.

Larceny In The Henhouse

R. K. Davis

Fox, mink, weasel, raccoon, and other predators often are the culprits that commit larceny in the henhouse. Predators are like people, however—neither all good nor all bad.

They live by preying on other animals. When those animals or insects are destructive, the predators' work is beneficial. When predators turn to man's flocks, however, their destruction must be controlled. This bulletin is designed to help the poultryman prevent damage or, in case of damage, to identify the culprit and get him.

The poultryman can prevent most predation losses. Locking the door before the hen is stolen makes good horse sense.

If he expects predators are on the prowl, the poultryman should shut his birds in their houses from sundown until sunrise or later. Birds that roost on open range or that venture out on the range before sunrise invite trouble.

The poultryman should dispose of sick birds and dead ones so no animals—wild or domestic—can acquire a "taste" for poultry. Use poultry disposal pits for this purpose.

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That highly-prized springtime delicacy, the mushroom, is about to have another hey-day in Iowa!

By far the favorite of the early spring mushrooms is the Morel, more scholarly termed *Morchella conica*, *Morchella esculenta* or *Morchella similibera*. All are properly called Morel, but the first is the most common in Iowa. Morels make their appearance about the time oak trees begin to bloom in April and are around through the month of June. The fact that the Morel is widely distributed, highly palatable, and fairly distinguishable as a "safe" variety, makes it highly-prized among all mushrooms.

A certain amount of apprehension has always surrounded mushrooms. A degree of it is probably justified because of some harmful species which might be mistaken for completely safe varieties. But over-concern is not necessary and should not deter interest in seeking out edible kinds like the Morel.

We talked over this point rather painstakingly recently with Jack Musgrove of the State Department of History and Archives. Musgrove, who has hunted and identified every kind of mushroom in Iowa, lists the following guideposts for the mushroom hunter:

... **Let caution be your guide.** If you're not an expert on mushrooms, it's better to stick to one variety like the Morel. Pick only this type and leave others about which you are uncertain.

... **Do not attempt to eat any mushroom until it has been checked and declared safe by a person who really knows mushrooms.**

... **Pick only very fresh mushrooms that show no decay, sloughing off or mold.** When sorting, discard the whole mushroom that shows even the slightest spot of decay or mold. This applies to all mushrooms, including edible ones.

Besides their eating qualities, much of the fascination of mush-

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ARE FEMALE PIKE A FICKLE LOT?

Female walleyes and sauger are more inclined to wander and wander farther than males of the same species, tag returns of fish taken in a special Mississippi River survey indicate.

Fisheries Biologist Bob Cleary has directed a special project in the Mississippi over a two-year span. The study consists of capture, tagging and releasing walleyes and sauger each spring, then tabulating information from anglers who later creel the tagged fish. The aim of the project is to learn more of pike movements, the

TAGS, PLEASE

Anglers on the Mississippi River are urged to report all tags from walleyes and sauger taken in these waters. Fish will carry a small aluminum tag clenched to the lower jaw. Report all such tags to your local Conservation Officer for delivery to the Commission's biology section.

size of the pike population, and the degree of angling success for the species.

The special project Cleary is directing is one of several being carried on in the Mississippi through the joint efforts of the Iowa Conservation Commission and the Upper Mississippi River Conservation Committee. The two agencies are making detailed studies of the sport fishing potential of the river, with special emphasis on when, where and how the best angling takes place. Cleary is 1959 chairman of the fish technical committee.

In April, 1958 the project was continued with the capture, tagging and release of 767 walleyes and sauger at Lock and Dam No. 10 at Guttenberg. A similar operation was conducted at Lock and Dam No. 17 in the vicinity of New

Editorially Speaking

A Duty To Keep Informed

Lester F. Faber
Assistant Director

There is much talk these days about the need for wise use of our natural resources. At the same time, tables and charts and rows of figures are being published showing the rapid increase in numbers of people who have become outdoor recreationists.

As the result of the increased need to cope with the problem of more people using the natural resources, "conservation" and "wise use" have become synonymous in the minds of thinking citizens who have an honest concern for the future.

Citizens who do think straight and feel responsible for the present and the future are sorely needed. Our own and future welfare is at stake. Each of us must do our utmost to learn about the proper use of soils, water, woods and wildlife.

We must keep posted on new developments in the conservation field and must learn how and when and where to contribute our efforts to do the most good. One way is to read the good publications that contain information on the basic concepts of conservation and set out ways and means for real accomplishments.

It is essential that we all take an active interest in Conservation by first learning right from wrong and then make the move to help where it counts.

The science of Conservation is coming of age and with it the responsibility for some mature thinking about it.

Boston, Illinois, where crews caught and tagged 151 pike. As of January 1, Cleary had 108 tags returned from the 1958 Guttenberg operation and 28 from the 1957 release at Guttenberg. As of the same date, 13 tags had been returned from the New Boston project, Cleary said.

The percentage of tag returns by November 1, 1958 was 14 per cent compared with a 10 per cent return by November 1, 1957. The difference may be in river conditions during 1958, Cleary suggests.

"Indications are that the lack of customary June floods on the Mississippi in 1958 has reduced the inter-pool travel of walleyes and sauger. This migrational restriction in turn seems to have made the walleye and sauger more vulnerable to angling," Cleary said.

There apparently is no "top heavy" angling success for either species, but each is being caught in proportion to the total number within the sample. For a reason yet to be determined, tagged fish seem to ignore the calendar and what is considered peak feeding months. Tagged walleyes were caught in the greatest number during May; untagged in March. Most tagged sauger were creel in April; those without tags in March. The fall feeding periods of tagged fish is a month ahead of the untagged ones, Cleary said.

In April, 1957—first year of the unique study—389 walleyes and 766 sauger were tagged and released

below Lock and Dam 10. In the next 12 months, 39 walleyes and 120 sauger were retaken by anglers. Tags and angler reports disclosed that most fish apparently did little moving, but others felt a strange calling to far-distant places. Most walleyes (55 per cent) and sauger (63 per cent) were retaken in their home pool, but one probed 106 miles—all of it upstream! Another made a conquest downstream, roaming 113 miles from the point where she was tagged.

"Indications are that the female of both species is more the wanderer—and at a pretty good clip! One female sauger moved 106 miles in 50 days. The pike that moved out of their home pools averaged about 50 miles before they were caught," Cleary said.

LOCATING WALLEYES

Once you have found walleyes, select two or three coordinates on the shore or skyline so that you can find the exact spot again. Coordinates may be a silo, or barn roof notched between a couple of trees, a tree or oddly shaped tree stump on the shore. Get coordinates in two or three directions from the spot. This will make for more accurate location of the walleye spot next time you want to find it.

If moving on land, mink carry their young by the scruff of the neck—if in water, "pick-a-back."



Jim Sherman Photo.

Bluegills are year-'round favorites of the angler and spring's the time to go after them.

FLIES AND BEETLES FOR BLUEGILLS

Some fishermen get so smitten with catching bluegills on spiders and poppers in May and June they forget all about these little slab-sided scappers at other times of year.

We don't ignore bluegills are terrific sport when they are gorging on surface insects during summer months. They are. But why wait? These gritty gamesters are up to a good scrap anytime, and that includes spring just as soon as the ice goes out.

Fish for them early in the season as you do at other times of year, but go underneath and deep for them. Natural baits, particularly red garden worms are good, just keep them down. Try gaudy wet fly patterns with bright red and yellow hackles. Black gnat flies are effective and the little bright plastic beetles are good producers. Some of the fly-rod size darting and spinning lures also get results.

Whatever the bait or lure, keep it small and clinch on a little split-shot a foot or so out front to keep it down. Fish slow with occasional quick jerks of the rod to give life-like action to your lure or bait. Keep a tight line so you can strike back quickly. If you're fishing live bait with a bobber, wait for the bluegill to make its run before you set the hook.

Besides fine sport, taking good numbers of bluegills will improve future fishing for all kinds of fish. In farm ponds, taking bluegills out will give all fish more room to grow. It's good for the pond and adds weight to those hefty bass you'll be after some early June morning.

TROUT TRICKS

When working a pool where you think trout may be able to see you, keep your body low. Many times water will be shallow enough that you can cast from a squatting position.

WINNING PHOTOS



FIRST PRIZE — WILDLIFE



FIRST PRIZE — SCENIC COMPETITION

LAKE MILLS YOUTHS WIN PHOTO HONORS

Two Lake Mills youths recently took top honors in an amateur photo contest sponsored by the Iowa Federation of Women's Clubs.

The winners are James Gunder-son, a Lake Mills high sophomore, for his photo of a raccoon fishing for crayfish along the Winnebago River at Lime Creek. Scenic photo winner was Jim Groe, a graduate of Lake Mills High. Groe's photo was taken at Rice Lake and showed the tracks of a boy and dog in snow against the background of a setting sun. Groe is now working in Minneapolis where he is enrolled in a

night class in photography. The photo contest was sponsored by the conservation department of the I.F.W.C. Contest rules required that all photos be taken on any of Iowa's state-owned recreation areas. Many photos were taken and submitted to State Conservation Commission members who made the final selection. Individual clubs held local contests to determine which photos would be submitted for final judging.

Announcement of the winners was made by Mrs. John Crabb, chairman of the State Conservation Commission.

NORTHERN PIKE

Fish around weedbeds for northern pike. Northerns like to lay in weedy spots, watching and waiting for their quarry. Look for them to make a strong rush from such spots. They often will make a run right back into weedbeds after a vicious strike at your lure or bait. Wait until they run before you set the hook.

SKIPPING

Spin fishermen have found they can effectively skip their bait or lure over rocky bottoms by holding their rod at arms length overhead. Operation of the reel with the rod in this position is simple once the knack is mastered. The method is effective on many kinds of game fish and particularly so for trout.

Nature's Notebook

Outdoors in April

- Heavy bloom of wildflowers, particularly bloodroot, trillium, hepatica, bluebell, Dutchman's breeches and pasque flower.
- Foliage begins to appear in April.
- Migrations of fish—northern pike, bullheads and dace—begin spawning runs during April.
- Fish like the sunfish begin to feed enthusiastically as they prepare for spawning.
- First insects, bees and butterflies, begin to appear.
- Heaviest migrating month for birds of all kinds. Majority of songbirds return. Early nesting birds, robins, bluebirds and shrikes, take up housekeeping chores.
- Mushrooms begin to appear in mid-April, including morels and inkycaps.
- Migration of small ducks, teal and shovellers, may be seen in April. Some remnant and straggling flocks of geese may also be in evidence
- Shore birds, such as yellow-legs, return from southern wintering grounds this month.
- Young of squirrels and rabbits will be particularly common during April.

ONE WAY TO GET LURE DOWN DEEP

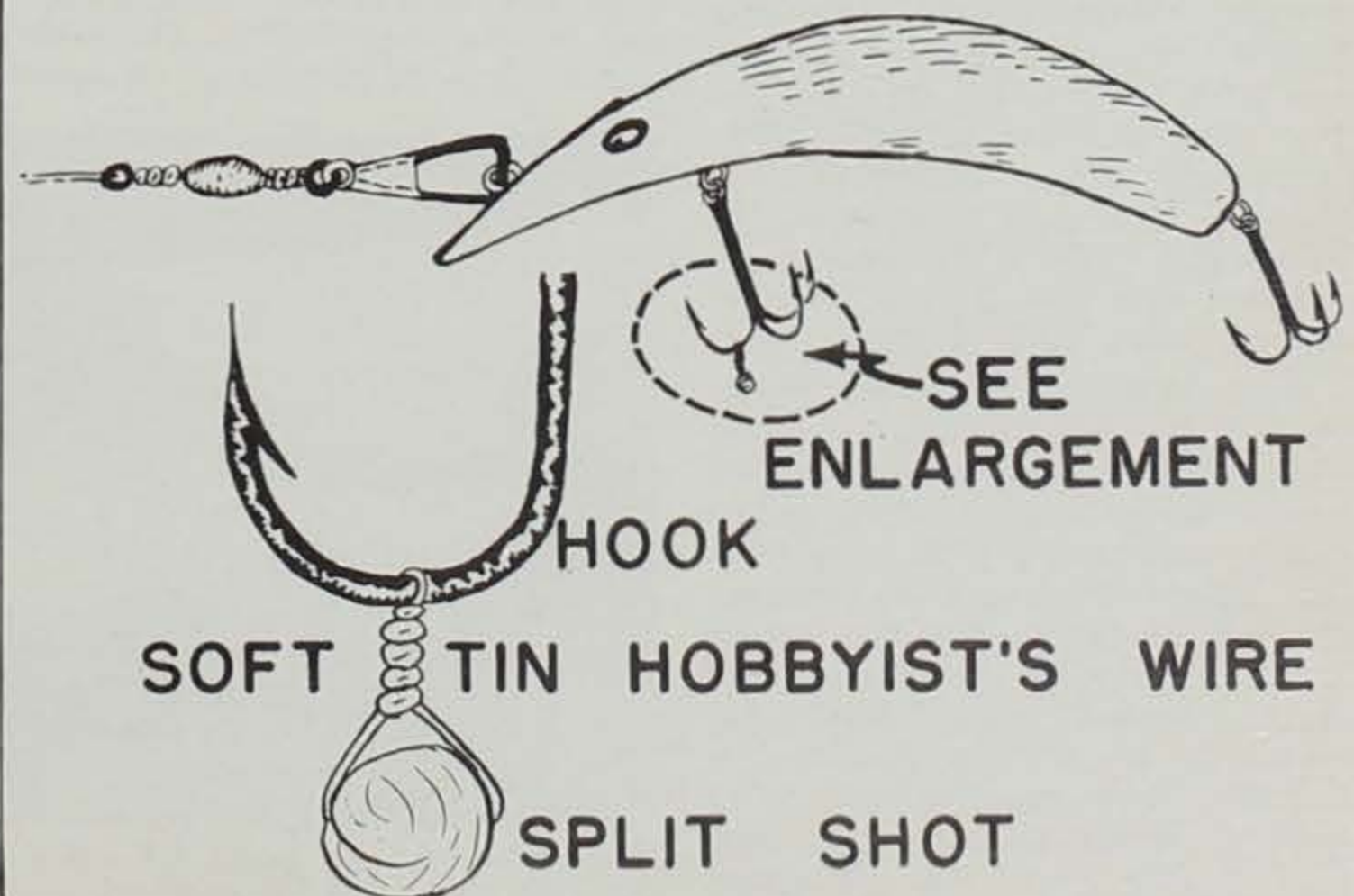
Every once in a while anglers discover that their fishing plugs or lures will do a better job of producing fish if they get them down deeper than they were manufactured to run.

What most of us do is add split-shot or a sinker a foot or so ahead of the plug. While this method works pretty well, it has its drawbacks. When a lure rigged this way is cast, the weighted leader ahead of the lure has a tendency to go ahead of the lure causing foul-ups. At other times, and even though the lure reaches just the right spot without fouling, the extra weight destroys the plug's action. This depends upon the par-

ticular lure or plug, of course. We heard of an idea the other day that shows promise of overcoming this problem.

The angler who passed the suggestion along says he shapes a triangle from a piece of strong, but malleable, wire such as that used to string beads. Into this triangle he places his split-shot and then seats the shot securely with several twists of the wire around one of the barb's of the plug or lure's front treble hook.

Our angler friend reports that he has given the "bathtub test" to several types of plugs and the results have been the same each time. His observation shows that plug and lure action is not hindered and the lure gets down to the desired depth with little or no chance of a foul-up along the line.



THE IVIES

David H. Thompson
and
Roberts Mann

There is a fad nowadays, especially among youngsters and high school students, of wearing a type of headgear known as an Ivy League cap. The name was copied from the title used by sports writers for and association for football and other athletic contests, of several eastern colleges and universities. That nickname arose from the fact that so many of their old buildings are mantled with luxuriant growths of ivy.

Strictly speaking, an ivy is one of five species of woody vines with evergreen leaves. They are famous for their ability to climb and creep over the walls of buildings. However, there are some other kinds of woody climbing vines, also known as ivies, which shed their leaves each autumn and belong to much different plant families. Further, there are several plants popularly called ivies because they have long trailing stems, although none of them is woody and they do not climb.

For example, Ground Ivy is one name for Creeping Charlie or Gill-over-the-ground, a peasy weed that spreads by means of long stems or "runners" that take root at intervals. It has little purplish flowers and is related to catnip in the Mint Family. Kenilworth Ivy, used in homes and greenhouses, is another crawling plant with weak stems that root freely at their joints. It belongs to the same family as our common mullein. Germany Ivy, also used in hanging gardens because of its long, twining stems, has composite flowers and is related to such plants as burdock and Canada thistle.

The true ivies are members of the Ginseng Family. Their woody vines cling to wood or masonry surfaces by means of innumerable aerial rootlets. They are peculiar in that leaves on the older vines have from 3 to 7 lobes, depending upon the species, but those of the young creeping vines tend to be narrower and have fewer lobes. In autumn, clusters of small greenish flowers bloom on the younger growths, followed by little black or yellowish berries that do not ripen until the following spring. These berries contain a poisonous substance. It is also present in the leaves and stems which may cause a severe skin rash if they are handled by susceptible people.

Best known and most widely used is the English Ivy, a European species. Its leaves are dark green above, much lighter underneath, and rather stiff. At least two dozen varieties have been developed, some of them for use as ground cover in heavily shaded places. Irish Ivy, which has larger leaves, is an African species frequently used in England as a ground cover beneath big yew trees where grass will not grow.

WILDFLOWER OF THE MONTH



HEPATICA

- Common Name:** Hepatica.
- Other Names:** Hepatica triloba. Also sometimes called Liverwort, although this term often refers to an entirely different wildflower.
- Name Derivation:** Apparently gets its name from the word hepatic, which means of, pertaining to, or affecting the liver. The petals forming the flower of Hepatica are liver-shaped.
- Family:** Hepatica is a plant or flower of a genus of herbs of the crowfoot family.
- Description:** The earliest flower of spring, appearing before its leaves, and generally found half hidden among the decaying leaves of autumn that cover the woodland floor. The blossom is about 7/8 inch broad, with 6-12 lustrous sepals varying in color from lilac white to pale purple and light violet, beneath which are three leaflets closely resembling a calyx, or the outer floral envelop. The three-lobed olive green leaves last throughout the winter, the newer ones together with stems and flower-stems are extremely hairy. About 3 inches high. Common from the seaboard west to Minnesota and Missouri.
- Where to look:** Common throughout Iowa. Most common in woodlands that have not been burned over or overgrazed. Look for it on the south slopes of hillsides. (Description from Mathew's *Field Book of American Wildflowers*)

It does not do well in North America.

Of the deciduous ivies — those that shed their leaves in autumn — the favorite in our country is the Boston or Japanese Ivy. It climbs and clings to walls by means of short many-branched tendrils that have tiny adhesive pads at their tips. The apple-green leaves assume beautiful hues of red, orange and bronze in autumn. Its little bluish black berries hang on until

late in the spring.

Our native American Ivy, a member of the Grape Family, is commonly called Virginia Creeper or Woodbine. It has large, compound leaves, each with five toothed leaflets, and is a harmless beautiful climber. It should not be confused with Poison Ivy, that 3-leaved villain of the Sumac Family.

Dear old Alma Mater, with her Halls of Ivy!



Conservation employees handle fish with knowledge they'll be returned safely to water later. Fish are handled firmly, but not rough handled. Anglers can take a tip from them. Jim Sherman Photo.

FISH WON'T TAKE ROUGH HANDLING

"Never handle a fish with dry hands." You've probably heard that since you were knee-high to a musky, but do you know why it's part of the fisherman's lore? Well, here's the scientific explanation:

The outer layer of skin on a fish, unlike our own hide, is made up of living cells. This is possible because fish live in water, and living cells must be in a liquid medium to survive.

But exposing live tissues to the world around him would make the fish easy prey to infection. So to protect himself from attack by fungus or bacteria, he exudes a coating of mucus or slime over his skin.

The slime also comes in mighty handy in other ways. It acts as a lubricant, so the fish can glide through the water without friction. And even more important, it helps to make him water-tight. Without that coating of slime, the freshwater fish would actually be in danger of becoming water-logged. Here's why:

If you've studied physics, you remember that two solutions of unequal strength, separated by a semi-permeable membrane will tend to equalize themselves. This process, you'll recall, is known as osmosis. And the weaker solution—which in this case is the fresh water—will always go into the stronger solution, which in this case is the somewhat salty solution inside the fish.

So if it weren't for their coating of mucus or slime, trout, bass and other freshwater species would eventually have their insides flooded with water and would die. In many salt-water fish, the result would be just the opposite: their body-liquids, a weaker solution than the sea water, would go running off to join the ocean, leaving the fish drier than a prune.

In more ways than one, then, slime is important to the fish that wants to stick around for a while. And too much handling might remove a dangerous amount of this protective covering. However, the amount of handling ordinarily required to take a fish off the hook isn't very likely to remove that much of the slime, whether your hands are wet or dry.

Far more likely to kill the fish is *rough handling!* Squeezing, especially around the gill region where the vital organs are, is probably the biggest cause of death among fish that are hooked and then thrown back in. So instead of worrying about whether your hands should be wet or dry, forget it. Just handle the fish as gently as you can.—Rosemary E. Clarke, *New York Conservationist*.

It is reported that the mud minnow can survive freezing in ice during winter and that it will revive when the spring thaw comes.



Indoor rifle ranges are popular with all age groups. When properly supervised, they are good sources for teaching youngsters gun skill and safety.

Do-It-Yourself Fan?

Your Own Target Range

One of the most frequent questions from prospective sponsors of junior shooting programs is "how do we go about building an inexpensive target range?" Many groups, who might otherwise undertake the task of setting up a rifle range for the youngsters of their community, defer action because they think elaborate indoor or outdoor facilities are a necessity to such a program.

Actually, nothing could be further from the truth. The facilities can be as elaborate or as simple and inexpensive as the sponsoring group wants. To illustrate, let's consider the basic requirements for the simplest, most inexpensive outdoor and indoor ranges.

OUTDOOR—Safety and accessibility should be the primary considerations in choosing an outdoor site. The range should be located in a spot where there is no danger of the firing injuring anyone or damaging any property, yet it should be close enough to town

so that it is easy to get to. The impact area should be backed by a steep hill free from rocks and boulders or an adequate artificially constructed backstop. If possible, the range should face in a northerly direction so that firing can be done at any time of day without the sun shining in the shooter's eyes. While this isn't absolutely necessary, it makes for much more flexible use of the facilities. Funds permitting, it is also a good idea to fence the range area to prevent people from straying into it. In any case, it is wise to post the land in the firing area to warn passersby to stay clear.

Outdoor ranges for youngsters are usually 50 feet, the official distance for NRA organized junior competition. In building the facilities, however, remember that the program may expand and it might be that you will want to lengthen the range to handle 50 and 100 yard firing.

There are a number of com-

mercially available small galleries or bullet traps on the market, but if you want to make your own, an inclined steel plate with a sand box bullet catcher at its base will serve very well.

The steel plate should be 1/4" thick and should be set at an angle of at least 45 degrees. The sand box should contain at least four inches of dry sand.

Lighting

The targets can be illuminated by means of a frame in front of the backstop. Four or five 100 watt bulbs should do the trick for a four point range. The lighting fixtures should be well out of line of fire and protected against stray shots.

The target butt, on which the target frames are hung, should be of simple construction, built of 2 x 4's spaced 6 to 8 feet apart. Drive nails into these 2 x 4's and hang the target frames on them. The frames should be made of strips of material about 7/8" x 2" in dimension and should be placed at height most convenient for prone or off-hand shooting. Just be sure that the bullets go into the side of the hill or backstop.

It is a good plan to cut away part of the hill behind the target frames, so that a near vertical surface is exposed to the line of fire. This will lessen the chance of ricochet and make the range safer. If no suitable hill is available, an artificial backstop can be built without too much difficulty.

Cover Firing Line

The backstop should be 18" from front to back and should be made from 2" planks. The filling should be sand or dry earth and the structure should be long enough to cover the entire firing line. Particular care must be taken with this type of backstop to insure that there is a clear area in back, and shooters must be cautioned to shoot only into the backstop. In

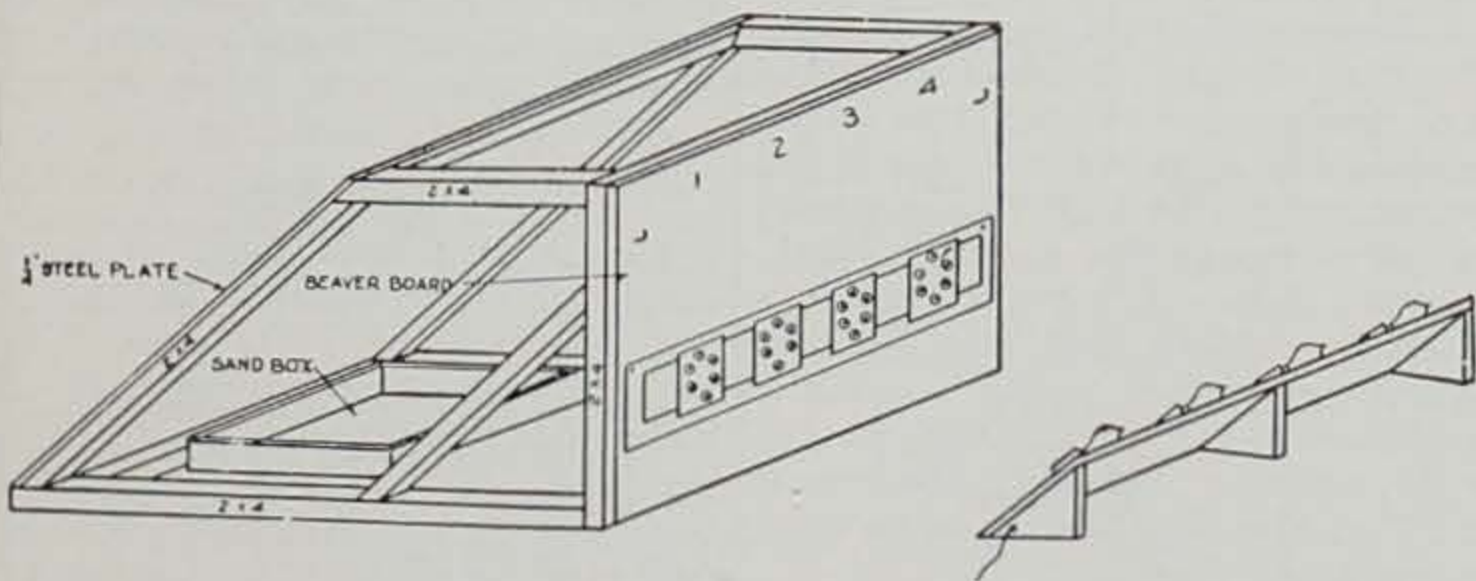
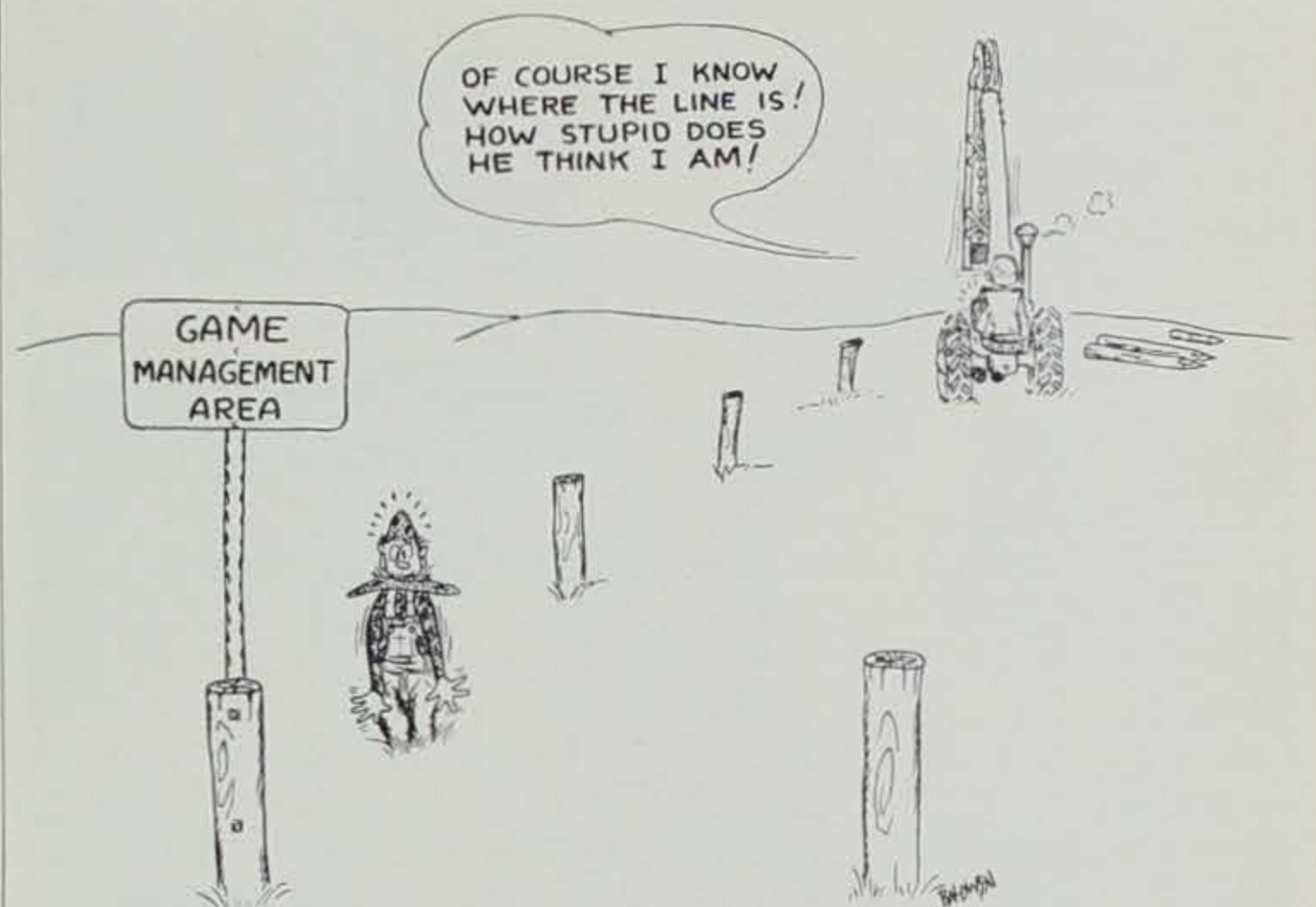
addition, boards must be replaced periodically when firing tears them apart.

INDOOR—For a standard 50-foot range, all that is needed is a large room at least 65 feet long (approximately 15 feet are needed for a backstop and for space back of the firing line). The width of the space necessary depends on the number of firing points wanted. A rough rule is to allow four to five feet for each one. Basements of school and town buildings or community centers are often ideal and often old warehouses or garages can be utilized. In any case, the area should be thoroughly checked to make sure it is safe to use and special care should be taken to avoid any fire hazards.

In constructing the range itself, a backstop made of steel plates is vital. The impact area should be well protected against any stray shots that might miss the backstop, and the room should be well heated, lighted and ventilated. Any windows between the firing line and backstop should be fitted with steel baffles to guard against stray shots, and the back wall should be of good solid material.

In developing plans for either outdoor or indoor facilities, it is a good idea to check with your local authorities to be sure you are conforming with all safety and fire regulations.

The outdoor and indoor facilities described above are adequate for the needs of most junior programs. The expense involved for materials is modest and community effort usually results in donation of a great deal of time and effort involved. More elaborate ranges can be built for correspondingly greater cost, but these plans are well within the reach of almost any sponsoring group.—*Ted McCawley, Remington Arms Company.*



Adequate indoor targets can be constructed at reasonable cost. This drawing shows the features considered basic in the construction of any indoor target area.



Jim Sherman Photo.
Wading and floating bait is one of the best ways to take catfish. Whether casting or spinning, get plenty of line out ahead and fish a lot of territory.

CATFISH—

(Continued from page 121)

Summer catfishermen like to do their fishing at either end of the stream stage—either when it's on the rise or falling. This is another reason early fishing is a desirable time to get in a lick or two at big catfish.

"Water stage is not too important in the spring. Unless water is a raging torrent, it's good enough to fish," Harrison said.

When you set your sights on springtime catfish, the old stand-

ard of where you fish is less important than how you go about it. Any streams known for catfish will have them. Locate and fish areas where water is deep, standing or slowed. Food in such areas is no longer suspended or carried along by current and eventually settles to the bottom.

"Remember," says Harrison, "catfish are bottom feeders. Unlike sight-feeding fish, they do not prey on other fish and therefore will not give chase to anything but the slowest moving bait or

lure. Fish the little pockets and eddies where food will settle to the bottom. That's where you'll find catfish."

If you drift, either from a boat or as a wading, "float" fisherman, fish a lot of area and don't doddle long at any one stand. If you wade, run out plenty of line and keep your bait down, bouncing along just off bottom. Above all, be mobile and cover a lot of territory. Spend only 10-15 minutes at a particular spot. If you don't take a fish in that length of time, move to another spot.

What about bait? That's an important part of fishing for big catfish, not so much in terms of kind but in size. There's a lot of mouth and gullet to fill on a big catfish and he prefers a meal that compliments his eating equipment. Good baits are worms, nightcrawlers, cut bait, and carp or sucker entrails, either fresh or soured slightly. Fresh meaty or fleshy foods, or anything that is similar are good. These may be melt, shrimp, chubs or minnows. Fish worms or 'crawlers in gobs showing lots of wriggling ends. If entrails is your bait, put plenty on the hook, say the entire entrails from a 10-inch carp. This makes the point—keep your baits king-size for big catfish!

"There is really no sound reason to smell up the place with potent, rancid catfish baits," Harrison says. "Don't compare a catfish's sense of smell with your own. It's no match! Catfish can detect even the slightest odor and that's all your bait needs to have. The wild,

eye-smarting stench baits don't accomplish that much more, so why put up with the discomfort?"

Tackle of the catfisherman has expanded a great deal with development of spinning gear, but casting equipment is still preferred by many. Either type, a good rod and reel with 75-100 yards of line is a must. The rod should have butt sufficiently stiff that you can really haul back when the strike comes. There may be a lot of line between you and your quarry. You must overcome distance and the natural stretch of your line. This is particularly true if you're spinning. When that bobber disappears and the run begins, really lay back onto the strike and set the hook quickly and firmly. A big catfish may mouth a bait before he makes his run, so take this into consideration. For best sport and fewer casting headaches, use a line of small test, say 10-12 pounds at most. Play your fish out all the way. It's the best sport and you'll lose fewer fish. Hooks in size 2/0 are considered fairly standard for catfish. Keep them good and sharp and check their sharpness occasionally while fishing.

Now that April's here, catfishin' fever will make its profound entry on the fishing scene. All winter long, there has been considerable dreaming of a fighting "cat" on the end of a line, or a later scene—by the platter, butter-fried and delicious. But, like we say, spring's here and it's time for action. And you'll never have it so good as now for big catfish!—K.C.S.



Jim Sherman Photo.
The late Fred Carlson of Des Moines takes water temperature, a factor in catfishing. Carlson died as this issue went to press. An ardent catfisherman, Carlson will be missed by anglers throughout Iowa.

MUSHROOMS—

(Continued from page 121)

room hunting is in finding them. It takes a sharp eye and enough thorough searching that an outing for mushrooms has some of the appeal of a storybook treasure hunt. And a real "find" of Morels, whether it's a first or repeat, is about as thrilling.

"One of the state's most popular and consistent producers of Morels is the Missouri river bottoms of western Iowa, however, any river bottom or wooded area where there is heavy leaf mold on the ground is ideal for Morels," Musgrove said.

"Check the pastures and along railroad tracks. Since the spores of mushrooms wash downhill, search the areas below where you make your first find. Timbers with a lot of Mayapple are often productive and do some thorough looking around ash and cottonwood trees. Once you've located a good area, keep it in mind for future seasons. Chances are you'll find mushrooms in the same spot next year."

Mushrooms do their best when weather is "muggy." Choose a warm humid day following a rain to do your hunting. Mushrooms grow close to the ground, so don't be afraid to turn back a lot of leaf mold in looking for them.

When you find one, keep looking. There's a good possibility you'll find more.

"The simplest and one of the best ways of preparing mushrooms for the table is to wash them with salt water, roll them in flour and fry in butter. Par-boiling or overnight soaking is not necessary or important to the flavor of the Morel," according to Naturalist Musgrove.

"Drying or canning are good ways to keep the Morels for future use. String them on a string and let them dry out. When you're ready to use them, soak them and prepare them in the same way as outlined above," Musgrove said.—K.C.S.

CAMPING

Sheets of plastic, such as polyethylene, are available in nearly any size and at little cost. Try placing a sheet under the floor of your tent or sleeping bag when camping. It will seal out much dampness from the ground and the cold-clammy discomfort that goes with it. While you are fishing, spread them out in the sun to dry, turning when you return. These plastic sheets, used as a ground cloth, will keep your tent or sleeping bag dry and deter moisture rot.

LARCENY—

(Continued from page 121)

The flock owner should predator-proof his poultry house. This means closing all openings through which predators can enter. Hardware cloth, poultry netting, sheet metal, and concrete are predator-proofing materials. Open windows need a cover of half-inch mesh hardware cloth. The smallest openings in the siding and about the foundation also must be closed.

A weasel can slip through a hole only 1 inch in diameter. A mink may glide through a rectangular hole 1½ x 2 inches. If mink and weasel are not a menace, 1 x 2-inch mesh wire fabric or 1-inch chicken wire is adequate.

Raccoons find unusual ways to enter henhouses. A full-grown raccoon can pass through a 3 x 3½-inch opening under the eaves.

Ratproofing and rat control are "must" jobs for the poultryman. He can use the same materials for ratproofing as for predator proofing. Ratproofing, however, must take place inside the house as well as outside.

When building a poultry house, put foundation footings 2 feet deep. Eliminate double walls and bad floors. They are rat harbors.

Gas rat burrows with Cyanogas, use poisons containing Warfarin, and clean up trash. Trash piles or carelessly stored grain, lumber, and supplies, favor rats. Rats attract weasels which like chicken, too.

Some folks tie up their dog on the turkey range at night to keep predators away. A dog must be active if he is to succeed. Lanterns and floodlights on the range may help prevent predation. Turkey roosts should be 6 to 8 feet from the ground at the rear.

The flock owners can fence predators out of poultry pens by burying the bottom of the fence and stringing a charged wire at the top. Plowing a furrow against a turned-out strip of fence wire is the easiest way to bury it. Two-inch poultry mesh will turn the larger predators but openings smaller than 1 inch in diameter are necessary to turn weasels.

Poultrymen use a simple, two-strand electric fence to repel some predators. The bottom wire should be 6 inches from the ground. Proper safety precautions for electric fencing should be followed.

We may lose poultry to predators because we have upset nature's balance. If predators find too little food, they take some of ours.

One sure way to balance harmful and useful wild animals is to balance the wildlife food and cover on farms. Local soil conservation districts offer assistance in balancing farm wildlife plans.

There are natural controls which any poultry man can use. Do not connect poultry housing or range to woods, streams or other wildlife land by a strip of cover—a "travel lane"—such as a shrubby fence-

row or bushy draw. Keep poultry from these lanes. Clear away any convenient perches for hawks or owls within 100 yards of the poultry range.

If predators manage to slip through a poultryman's defenses, he must weigh the threat of future damage against the effort and expense of control. He must know what animals did the damage and how it did it so he can select the right control method.

By noticing certain easily recognized signs the poultryman can put the blame for a poultry kill where it belongs. The following key will help. Look on the bird for answers to the questions:

How was the bird killed?

1. Teeth marks span back between wings?—see "FOX."

Was bird attacked about head and/or neck with:

a. Little or no damage—just a small injury on the neck? See "MINK" or "WEASEL."

b. Head attacked and/or pulled off, crop eaten, feathers cut off—not pulled out? See "RACCOON."

c. Neck, head, and body showing large talon marks, feathers pulled out? See "GREAT HORNED OWL."

2. No definite point of attack but:

a. Entrails eaten from rear? See "OPOSSUM."

b. Large teeth marks in center of the back, much destruction and mauling? See "DOGS" and "SKUNKS."

FOXES—Foxes work in the gray of dawn. They kill the bird by biting it over the back between the wings. They usually eat warm entrails and the breast. The fox may kill only one bird and carry it to its den. Common months for their poultry raids are from April to August. Large kills occur in June when a mother fox is teaching her young to hunt and kill.

MINK AND WEASEL—The mink and its vicious little cousin, the weasel, attack the bird on the side of the head or neck. They usually leave only a small injury in the neck where they remove the blood. They may eat some of the head and leave teeth marks under the wings. Mink and weasel may kill large numbers at one time.

OPOSSUM—The opossum usually is not an important poultry

predator. When it does attack a fowl, it usually pulls out the entrails from the rear and eats them. It may eat other parts of the bird. Two or three birds are the maximum raid for one opossum. Opossums also steal eggs.

SKUNKS—Skunks do little damage to any poultry. A skunk will get sick chickens which roost on the ground outside the house. He is likely to attack and start eating anywhere on the chicken. The same methods control skunks and opossums.

RATS—In many cases, rats destroy more poultry than other animals. They do more than they are blamed for. They kill chicks or weaklings and drag them under cover if possible. The odor of decomposition may be the first sign of the kill.

RACCOON—A raccoon kills a bird by attacking the head, pulling it off, and eating into the crop.

DOGS—The work of dogs is marked by much destruction and mauling. Their heavy teeth marks also will differentiate their work from that of foxes. Dogs may enter the poultry range in daylight.

About **HAWKS**—It is old-fashioned to call all hawks "chicken hawks." Modern poultry methods have removed them from the list of poultry predators. Today, hawks pick up only stray birds or weaklings.

GREAT HORNED OWL—The great horned owl may do some damage for which foxes are blamed. The owl attacks the bird's head, driving its talons deep into the brain and spine sometimes puncturing the jugular vein and the windpipe. Big talon marks should be evident on the back of the bird. The owl pulls feathers from its kill, scatters them, and rips deep into the breast meat.

Do not confuse the large horned owl with the trim, monkey-faced barn owl, the little screech owl, or other harmless owls.

Trapping is to get the culprit that killed the bird. Some poultry predators are easily trapped. After you determine what did the damage, select the trapping method which will get him. There are methods that fit certain animals.

Fox—A carelessly set trap will not catch the fox. Traps and areas around them must be free of sus-

picious odors or signs.

A fox likes to get up on an elevation such as a log to observe something about which he is curious. Take advantage of this!

Wearing clean gloves, place the carcass of the fowl, recently killed by the fox, about 10 feet from the fencerow, gully, or other cover lane which the fox uses to approach the area. Cover the carcass lightly with weeds or straw.

Put a bale of straw about 20 feet from the cover lane. Use one or two No. 2 traps. Dig a bed for them in the bale and cover them with straw. Use new traps which have been boiled, stored outdoors, and handled only with clean gloves. Anchor the traps to the bale.

Mink and weasel—A simple set to get mink or weasel raiding a henhouse is the leaning-board set. Lean a 6- to 8-foot, 10-inch plank lengthwise against the henhouse foundation. This creates a dark runway irresistible to mink, weasel and rats. Conceal two No. 1 steel traps in this runway. Located near the entrance used by the thief, this set should get him.

Raccoon, Opossum, Skunk—A baitpen set is good for catching these animals. Make a V-shaped pen about 7 inches wide at the open end to V. It should be 12 inches high and roofed with tin, a flat rock, or sticks. The pen may be constructed of stones, logs, bricks, or anything handy.

Locate it near the scene of the last kill—along the trail the animal uses. Bait the pen with meat—all the better if it is smelly. Sardines, salmon, or a piece of the recently killed chicken attract raccoons.

Set the trap in a shallow depression in the open end of the V with the jaws nearly flush with the ground. Cover it with chaff, leaves or loose soil. Be sure that nothing gets under the trap pan to keep the trap from springing.

Prevention is the best protection against the great horned owl. Poultrymen who permit birds to roost in trees or in houses with open windows invite attacks by great horned owls. Since this bird usually returns to its kill, steel traps set near the carcass and concealed by litter or feathers should catch it.

Keep traps set only at night to avoid taking scavengers which operate in daylight. The pole trap catches everything but the bird doing the damage. This makes it illegal.

A trap set near a kill may get the culprit. It may get an innocent victim, however, since other animals and even pets may visit the carcass.

Shooting may solve some fox problems. Most foxes raid in the gray of dawn. A concealed person using a .22 rifle or a shotgun loaded with No. 2 or No. 4 shot can shoot the fox as he approaches the poultry range. A full-choke gun usually will kill a fox up to 45 yards.—Ohio Conservation Bulletin.



Tight houses foil burglars!

Illustration by Tom Crane

MILL CREEK RECREATIONAL RESERVE

C. S. Gwynne
Professor of Geology

Mill Creek Recreational Reserve is on a small tributary of the creek of that name, just east of Paullina in southwestern O'Brien County. The big feature of the reserve is the lake, with its sandy beach and pleasant shore line. The total area of the reserve is 157 acres; of the lake 25 acres.

A valley uninterrupted by barriers was originally present where the lake now is. The lake basin was completed by the placing of an earthen dam across the valley. Three small natural waterways bring water into the lake from a drainage area of about 5 square miles. The dam is only a short distance above Mill Creek. A good view of the valley of Mill Creek may be had from the dam.

The reserve area has an interesting location with respect to the boundaries, in northwestern Iowa, of the deposits made by the last glacier. All of Iowa was covered by the first glacier, the Nebraskan. This was a million or more years ago. Except for the northeastern corner, the state was covered by the second, the Kansan glacier. A third glacier, the Illinoian, advanced into southeastern Iowa. Whether it also came into northern or northwestern Iowa is of no importance to us here.

The fourth and last stage of glaciation, the Wisconsin, brought many changes to northern Iowa. This is one with which we are particularly concerned. In the first substage, called the Iowan, the ice advanced over much of the area. Following the retreat of the ice of this substage, great quantities of dust were blown from the barren drift surface. This accumulated as loess on the Iowan and Kansan drift surfaces alike.

Early geologists placed the boundary between the Iowan and Kansan of northwestern Iowa along a line through northeastern Sioux, southwestern O'Brien and eastern Cherokee counties. Thus placed, it was not considered exactly satisfactory, but it was allowed to stand. The area of the Mill Creek Reserve was just about on this boundary.

Then discoveries were made that resulted in a relocation of the Iowan drift border. The loess had long been known to be thickest at the Missouri River bluffs. Measurements made by soil scientists had showed that there it averaged about 130-150 inches in original thickness. Twenty-five miles southeast they found it to be only 70 or 80 inches. Thence eastward the thinning was more gradual but consistent, across O'Brien County, Osceola to the north of O'Brien, and Cherokee to the south. It seemed apparent that the loess had

come from a common source, a barren drift surface to the west and the flood plain of the Missouri River.

Barren Iowan Drift

Then recently the discovery was made that south of a line running generally southeast through Plymouth, Cherokee, Ida and Sac counties the loess had a thickness of over 400 inches. This zone of thick loess must of necessity be close to the source, in this case the barren Iowan drift surface. Thus it marked the approximate boundary between the Iowan and the Kansan. Furthermore, in this boundary-area the loess surface seemed to be one such as would be made by deposition from the wind. Also, the country to the south was much hillier, much more cut up into hills and valleys, so that it resembled the surface of the Kansan drift.

The discovery of the great thickness of loess described above, together with the noted differences in topography, led to the placing of the boundary between the two drifts sheets along the line through the more southerly counties named above. The vicinity of Mill Creek Recreational Reserve no longer has the distinction of a position right at the border of the Iowan drift. It is 25 to 30 miles north of the border. The area was not affected by later advances of the Wisconsin ice.

No Stones in Loess

That does not leave the reserve area any less interesting or attractive. At the surface is the blanket of loess, about 60 inches thick where uneroded. Beneath lies the unweathered Iowan drift, with a sharp break between the two, and below that is the Kansan drift. The loess of course has no stones. The drift is full of stones, glacial erratics, so-called, big and little. Exposures of the loess and drift are to be found along the woods and valley-sides of the vicinity.

The topography, the "lay-of-the-land," is one resulting from glaciation, and from the work of running water, both pre-glacial and post-glacial. The Iowan drift of northwestern Iowa forms only a relatively thin deposit over the pre-existing land. The pre-Iowan surface, on the Kansan drift, was one of the valleys and intervening upland, largely the result of stream erosion. The surface of the Iowan drift has the impress of this underlying surface, because the drift is so thin. Most slopes are long and gentle.

Since the time of the Iowan the post-glacial streams have been at work, cutting into the drift and the loess, widening the valleys somewhat, and deepening them. Note however that nowhere in all of O'Brien County have they cut down to the bedrock. Only from records do we have any knowledge of what lies beneath the subsoil of Mill Creek State Park.

It might sound from the foregoing as if there was not much of

geological interest to be observed right at the park. Not so! Take a look at the pieces of broken concrete placed to protect the shores of the lake. They are filled with mineral and rock fragments of many kinds. These constitute what is called coarse aggregate in the making of the concrete. They came out of the drift, from some gravel deposit made by the glacial melt-water. There was such a gravel deposit being worked right at the site of the lake at one time. In the concrete these pieces of aggregate are clean so that their nature can be clearly observed.

These pebbles and pieces of broken rock are of three general origins. Some were deposited as sediments in ancient seas, later hardened to rock. Some are igneous, formed from molten rock either at the earth's surface or beneath it. Others are metamorphic (changed in form) resulting from igneous or sedimentary rocks, deeply buried, much affected by heat and pressure. All came from the country over which the glacier moved, where they were part of the bedrock.

If you want to take time off from your fishing or other recreation at Mill Creek State Park, stop and examine the broken concrete rip-rap. Goodness knows what you may find! No gold, diamonds, or uranium ore, but a wide variety of minerals and rocks, once part of the earth's crust.

Frogs breathe by swallowing air. They don't have ribs and therefore can't breathe by expanding and contracting their chests.

What's Ahead For You, Mr. Reader

DeSota National Wildlife Refuge—A new waterfowl area that may rival the nation's best. Read about it in May.

Pike Prospects For 1959—Read Biologist Earl Rose's story in May.

Fishin's Fine in 1959—A new series starting in May and continuing through the 1959 fishing season. A new top Iowa fishing spot each month.

Wildflower Of The Month—New feature starting with Hepatica this month. May will feature Sweet William. The series will continue through fall.

Coming Features:

"Bumpin' For Bronzebacks"

The Early Days of Iowa Conservation

Parks: Where Do We Go From Here?

Many others

CONSERVATIONIST: "WORTH TEN TIMES THE COST"

The IOWA CONSERVATIONIST in February reported the first subscription change in the 17-year history of the magazine.

What has been the reaction of readers to the new rate? To date, the Commission's public relations section has had no correspondence unfavorable to the new subscription price of two years for a dollar. On the other hand, several subscribers have written praising the change and the magazine.

An example is this excerpt from a letter penned by Edward Neil of Crawfordsville: "I am enclosing a dollar for the extension of my subscription to your wonderful publication, IOWA CONSERVATIONIST."

"I look forward every month to the next issue. To me it is worth much more than the few cents a copy that it costs. The increased subscription rate is certainly all right with me and I'm sure it is with many others as well. The IOWA CONSERVATIONIST, to me at least, is well worth five to ten times its small cost.

"I would also like to subscribe for a friend who will also enjoy it."

Thanks, Mr. Neil, for your new subscriptions and your comments. You can be sure we will continue to do our utmost to make each issue of IOWA CONSERVATIONIST interesting for all our readers. Several new features on spring and summer recreation are planned for future issues. We hope you'll be watching for them.
—Ed.

SHOT AT DUCK ALSO BAGS FISH!

B. J. Mitchell of Kansas City, Missouri, swears he went duck hunting and came up with a fish.

Mitchell said he was in a blind high on a bank at the Lake of the Ozarks and shot a mallard just as it was alighting among his decoys.

He rowed out to collect the duck and heard a splashing among the decoys.

"And there was a pound-and-a-quarter white bass flopping around that had been hit with one of the pellets," he said. "I picked it up, too."—United Press.

QUARTERING STREAM

When trout fishing, quarter the stream with your cast. This will give more realistic float to your fly or bait and keep your line tight and ready to set the hook if you get a strike. A cast downstream will put an unrealistic drag on your fly. Casting upstream will put slack in your line making it nearly impossible to set the hook should you get a strike.