IOWA CONSERVATIONIST

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SPORTFISHING THE LOWER MISSISSIPPI

BIXBY STATE PARK

By Charles S. Gwynne
Professor
Department of Geology
Iowa State College

The geologic story of Bixby State Park really begins with the flooding of the continents by ancient seas. Glaciers played a later part, and finally post-glacial erosion has completed the picture.

The park, an area of about 300 acres, is a few miles north of Edgewood in southwestern Clayton County. It lies along Bear Creek, an eastward-flowing tributary of the Volga River. The outermost tributaries of the creek are no more than 3 or 4 miles west of the park. The total drainage area above the park is about 5 square miles. These figures are worth knowing when one considers that the valley has been made by running water.

At the park the valley of Bear Creek has canyon-like characteristics. It is relatively narrow, the sides are steep, and cliffs fringe the upland. Great blocks of rock stream down the valley slopes, even to stream level. Through the valley courses a stream which is usually clear. The stream channel is floored with rock fragments of all sizes. Tributary valleys, within the park, are steep-walled, with high gradients.

The geological story of this park begins for us with the deposits laid down in the late Ordovician sea, about four hundred million years ago. These deposits are now hardened to soft, earthy limestone. They are exposed along the road which leads into the park from the south, down a tributary valley. Water flowing down this ravine has cut deeply into the bedrock. This limestone is part of the Maquoketa formation, so named by geologists because of its occurrence along the Little Maquoketa River in Dubuque County.

Above this limestone begin the beds of the Niagaran series, which extend to the top of the Bear Creek valley. The lowermost of these beds are exposed on the west side of the road leading down into the

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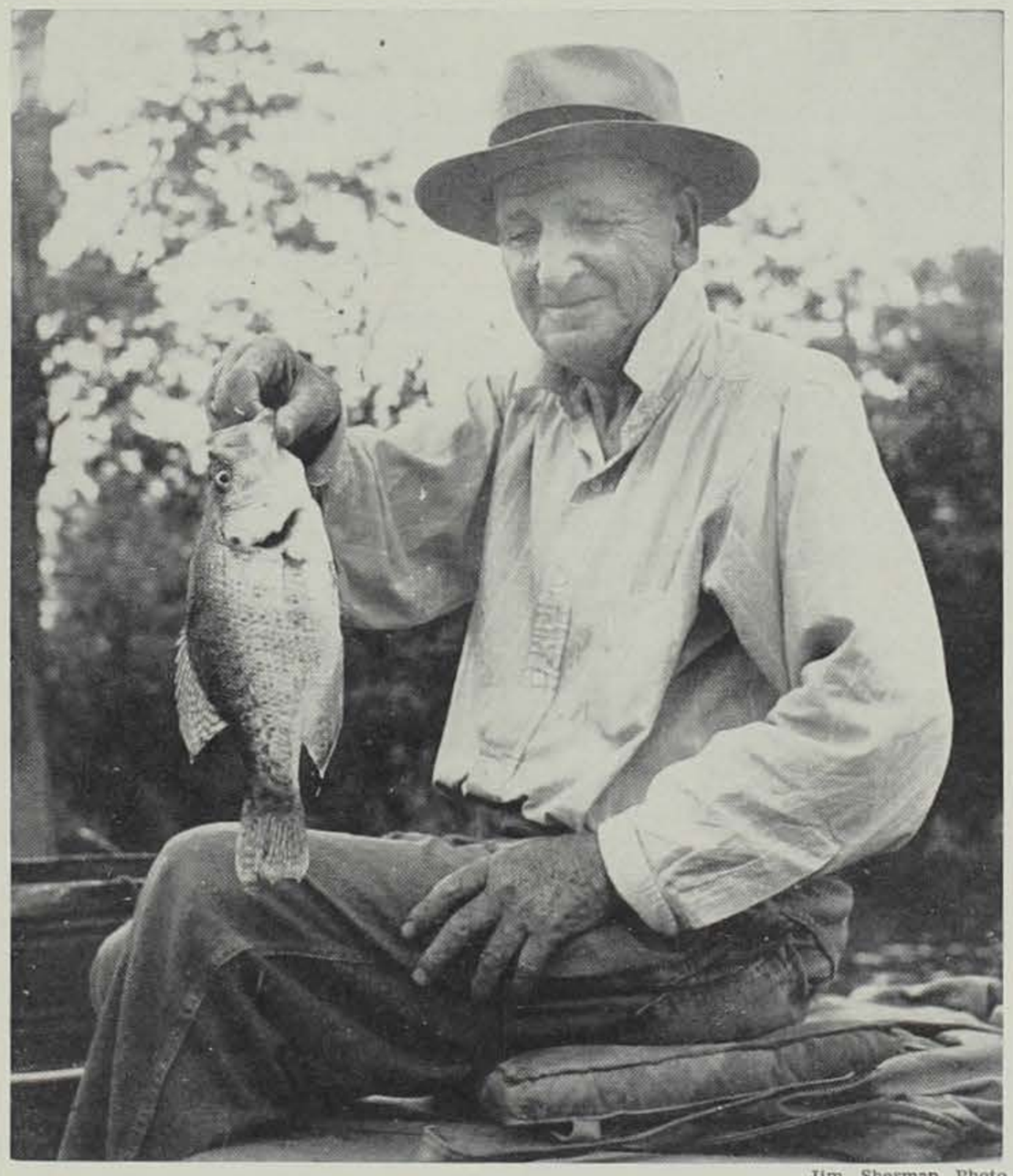

Jim Sherman Photo.

Some of the finest crappie fishing in the country is found in the lakes and sloughs of Iowa's lower section of the Mississippi.

TROUT LURES 'AU NATUREL'

By Bill Tate
Area Fisheries Manager

Many trout fishermen believe that trout streams are fished out soon after stocking. For a time, everyone catches trout on salmon eggs, worms, and hamburger, and then it stops. The trout have all been caught . . . what else?

Early spring shocking experiments prove that the trout have *not* all been caught. This year's survey, for example, showed an excellent carry-over of rainbows and browns in our better trout streams. The trout were there all the time, but why didn't they take bait?

Well, like any of us, trout prefer "home cooking". For a time they will take salmon eggs and hamburger, but as they begin to discover the natural foods of the stream, the ordinary bait fisherman is out of luck.

Staple trout foods in our Iowa streams are the aquatic larvae (naiads) of the mayfly, caddis fly, and stonefly groups and the "scuds" of freshwater shrimp. Imitations of these insects and shrimp are deadly trout lures.

The immature forms of the larger mayflies live in the silty stream bottoms of quiet water. Their imitations should be fished slowly

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By John Madson
Education Assistant

A couple of years ago two Muscatine fishermen decided to try their luck in northern Wisconsin. They were after northerns and muskies in particular, but they weren't passing up any walleyes or bass.

After several days of good fishing, their guide casually asked them where they hailed from in Iowa. When they told him Muscatine, the guide nearly fell out of the boat. Ironically enough, he spent *his* vacations with relatives just north of Muscatine, fishing for walleyes in the Mississippi.

The guide had the right idea, for there is highly concentrated walleye water in the Muscatine area. Below channel dam 16 there are plenty of fish, and they run big. Three years ago a sample of 225 walleyes was taken in nets just below the dam and finclipped for future identification. Half of these fish weighed from three to eight pounds. Another catch yielded a twelve-pounder.

This is the water for live minnows and minnow-spinner combinations. Two of the most effective baits at dam 16 last summer were live minnows and a pearl minnow spoon called "The Killer". It is typical all up and down the river that a certain bait or lure will lead the field for an entire season, and stores for miles around will soon be sold out of the particular favorite.

Although most walleye fishing is just below the channel dams, there is some fancy walleye water at Fairport, about eight miles north of Muscatine. In the river at Fairport (on the Illinois side) are the Andulasia Islands, flooded lowlands that teem with walleyed pike.

Farther south on the river, walleyes are gradually replaced by their first cousins, the saugers. They're scrappy little fish, these "sand pike", but they never approach the walleye in size.

Fishing below the channel dams is fine, but the real slam-bang river fishing is in the maze of wild

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GUNS SPELL DANGER TO YOUNGSTERS

The campaign for gun safety has long been waged by the State Conservation Commission, the National Rifle Association and many local wildlife clubs, but in spite of all the urging for people to be careful with guns, it has become a much too common occurrence to hear of accidental shootings.

Just such an accident happened in Eagle Grove recently when 12-year-old David Ohlerking, son of Mr. and Mrs. Fred Ohlerking, was hit by a bullet from a 22-calibre rifle in the hands of a playmate.

Many accidents with "unloaded" guns have happened in Iowa in the past few years. When an incident of this type happens "right at home," however, the need for some type of positive action on the part of the citizens of the community is forcefully brought to our attention.

The National Rifle Association has long been an advocate of local junior shooting clubs, where adults teach youngsters the right way to shoot and handle a gun with safety. Such a club can be sponsored by a senior NRA club, the local Izaak Walton League or the high school.

The sponsoring unit can build a good range for practically no cost; and the price of three or four 22 cal. target rifles is not exceedingly high.

Such a program would take a little time from the lives of busy adults, but on the whole it would seem to be at least a partial answer to a very disturbing problem.

It is the natural desire of every boy to like to play with and to shoot a gun. Whether this desire is met by "plinking" at targets and bottles, or in hunting small game, it is still a thrill.

Since such is the case it would be much better if youngsters could do their "plinking" in an organized way, with adult supervision. A junior shooting club would provide such a way and also be one of the best ways of teaching gun handling and safety to the community's future hunters and sportsmen. It is a great deal of fun both for the kids who participate and the adults working with them.

If such a program will, in the future, prevent happenings like the one mentioned, the community will be well rewarded for the few hours it has spent in training its youngsters. — *Eagle Grove Eagle.*

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Frank Tellier Photo.
The National Rifle Association has long advocated junior shooting clubs where adults teach youngsters the way to shoot and handle a gun with safety.

After a gestation period of only 12 to 13 days, the tiny grub-like baby opossums are born and crawl "hand over hand" up the belly fur of the female and down into the pouch where they attach to a nipple.—G.S.

Starlings will sometimes imitate the "Bob-white" call, and the covey call of quail.—M.S.

Jim Sherman Photo.
What is needed over most of the state is ground cover, low growing plants at least a foot tall offering protection from the elements and concealment from enemies.

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GROUND COVER IS GAME COVER

Cover isn't enough to preserve and increase the small farm game of Missouri, according to Mel Steen, chief of the Conservation Commission's Fish and Game Division. "What is needed over most of the state is 'ground cover', and by that I mean low-growing plants at least a foot tall and offering some protection from the elements as well as concealment from enemies," he said this week in a statement to all Commission personnel.

Steen continued, "I've had people point with pride to forest lands and hillsides covered with tree and brush growth and tell me that cover wasn't lacking. The fact is that this is not the kind of cover that our two chief species of game need—rabbits and quail are threatened by the scarcity of low-growing vegetation that will persist through the winter, wildlife's darkest hour. Until landowners get that kind of cover—and let's say 'ground cover' from now on—these two farm game species will be in jeopardy."

In a general way, Steen said, north Missouri suffers most from a deficiency of cover, while south Missouri lacked adequate food supplies for game. "However, food and cover for farm game is inadequate over the entire state, and should be uppermost in the minds of sportsmen who want to continue to bag bunnies and quail." —*Missouri Conservation Commission.*

There is a tendency for hen and cock pheasants to flock in separate groups during the winter. Also, the cocks will move out first from the roosting cover. This often gives one a misleading picture of the sex ratio. A very large sample must be obtained to help smooth out these variations. — R.N.

ANOTHER YEAR, ANOTHER BOAT

Tom Campbell bought a new boat the other day. There are many new boats this spring in the river town of Burlington, but one of Tom's old friends tells why this one is different:

* * *

Dear Sirs:

It is fifty years since Tom Campbell and I went on our first fishing trip. We still go fishing together . . . how many times in that half century would be hard to guess. Mostly our destination was some slough or meandering water along the river (the Mississippi), going first by row boat and later by motor boat, free to go wherever we chose. We seldom fish from the same boat because we both have a lone wolf complex, resenting any interference with our regular fishing routine from even our best friend.

Several weeks ago the boat Tom has been using began leaking badly. It was taken from the water several times for repairs; each time without the desired results. Yesterday I went with Tom to appraise the construction of a boat that was being advertised for sale in the newspaper. Tom bought it for $77 delivered at the Carthage Lake Club.

This all seemed commonplace and natural to me until I woke up this morning and the thought came to my mind, what a blessing fishing is to old people like Tom and me. Tom is retired and goes fishing two or three times a week; I am still in the harness. Tom is eighty-six and I am eighty-one.

I wonder how many men of eighty-six buy themselves a new fishing boat.

s/ Carl H. Stempel
Burlington,
Iowa

USE OF A FLUSHING BAR MEANS BETTER HUNTING

By Paul Leaverton
Superintendent of Game

The modern power mower, not the shotgun, is the pheasant's deadliest enemy.

In the old days, hen pheasants were not as seriously affected by mowing. Horse-drawn mowers were slower, and offered escape. With the high speed power mowers of today, the picture has changed. A nesting pheasant may be dead before flying even occurs to her.

During a normal year the hen pheasant begins nesting in late April, and the egg-laying peak is reached in mid-May. There is little desirable natural nesting cover so early in the season, and the hen is forced to nest in the largest amount of good cover available: hayfields.

By early June the pheasants are incubating their eggs, and only a few have hatched. During this time they sit tight on their nests, and a careful observer may even touch them without flushing them. With the first June cuttings of hay, nearly half of these nesting hens may be destroyed.

This first haying is the most serious bottleneck in pheasant production today. Of the eighty per cent of pheasant nests destroyed each year, half are destroyed by mowing. Egg predation by "varmints" may be high in some cases, but it does not often mean the death of the hen. Mowing almost always does. If a clutch of eggs is destroyed by crows, the hen pheasant will usually renest. If the clutch is destroyed by a mower the hen is often destroyed too, or is so badly crippled that there is no possibility of renesting.

We cannot depend on fencerow production to offset this loss. Hen pheasants do find fencerows desirable for nesting, but they are travel lanes for many animals. Heavy fencerows may contain many pheasant nests, but few are successful and most are destroyed or deserted. To a large extent, the same is true of roadside ditches.

Nor can we depend on marking the nests in the field and bypassing them with the mower, leaving small islands of hay, each containing a nest. It has been found that predators such as crows quickly learn what these islands of alfalfa contain, and make the most of it. And it is out of the question to expect farmers to leave wide borders of uncut hay around their fields simply because they contain pheasant nests.

The best answer we have to this pheasant bottleneck is the flushing bar. This is a long wooden or metal beam that projects from the side of the tractor several feet in front of the mower. Hanging from this beam are four to six steel cables, each with an attached weight. These cables and weights, dragging through alfalfa ahead of the cutting bar, alarm the hen before the deadly blades reach her. The nest may be destroyed, it is true, but the hen that lays the golden eggs escapes unharmed.

Many flushing devices have been tried, but the best so far is one developed by the Ohio Conservation Commission. This flushing bar may cut the loss of nesting pheasant hens in half. Actual use of the bar has shown that mortality of hens can be reduced 45 per cent, mortality of chicks may be cut 70 per cent, and deaths of young rabbits reduced almost 80 per cent. These hens will renest, and the majority of chicks that hatched before haying time will be saved.

Unlike some of the older models, the Ohio flushing bar is all steel, and almost indestructible. It is simple to make, and the material cost is around $12.

This offers an ideal project to sportsmen's clubs. One group in Jefferson County last year financed the building of ten flushing bars by the vocational agriculture class in a local high school. The sportsmen furnished the money for the material, and the boys built flushing bars for use on their home farms. Such programs are of great value to increased pheasant production, as well as farmer-sportsmen relations. If sportsmen are genuinely interested in increasing pheasant production, here is their chance to show it. Complete blueprints will be sent free of charge to anyone writing the State Conservation Commission, East Seventh and Court, Des Moines.

Without a flushing bar, as many as half the pheasant hens nesting in an alfalfa field are doomed, the majority in the first hay cutting. This may be twice as many birds as are killed on the same area during fall hunting. It is a needless waste, for a good flushing bar can cut the loss in half.

Walter M. Lauffer Photo.

In Ohio, the tractor-mounted flushing bar has reduced the mortality of nesting hens 45%, and of chicks 70%.

ORPHAN WILDLIFE

Iowans are again being urged by the Conservation Commission not to molest deer fawns that are found in the wild. Many fawns will be discovered in the next month by sportsmen and picnickers who, with good intentions but bad judgment, will "kidnap" them. Although these fawns may seem to be lost or abandoned, such is not the case, since does frequently leave their babies during the day and return to nurse them at night.

If such a fawn is "rescued" from its home thicket, it must be turned over to the local conservation officer. It is unlawful to hold any baby game animals that were not legally taken during a regular open season.

In addition, deer are easily tamed and lose their fear of man. Such pet deer can be frightfully dangerous when they become adults, for they are well-equipped with antlers and hooves. In the past, several accidents have been caused in Iowa by pet deer.

The little spotted fawn of June loses its fear of man in a year and becomes a dangerous wild animal equipped with razor sharp hooves.

When you put a fish on your stringer, do it this way. Puncture the lower lips and pass stringer through the lips. This does not injure the fish and will not drown them as the gill method often does.

Why is it that fishermen commonly dub fish as "pretty smart individuals" when most of the bony fish lack the cerebrum, that portion of the brain which is traditionally the center of thought and reasoning? B.C.

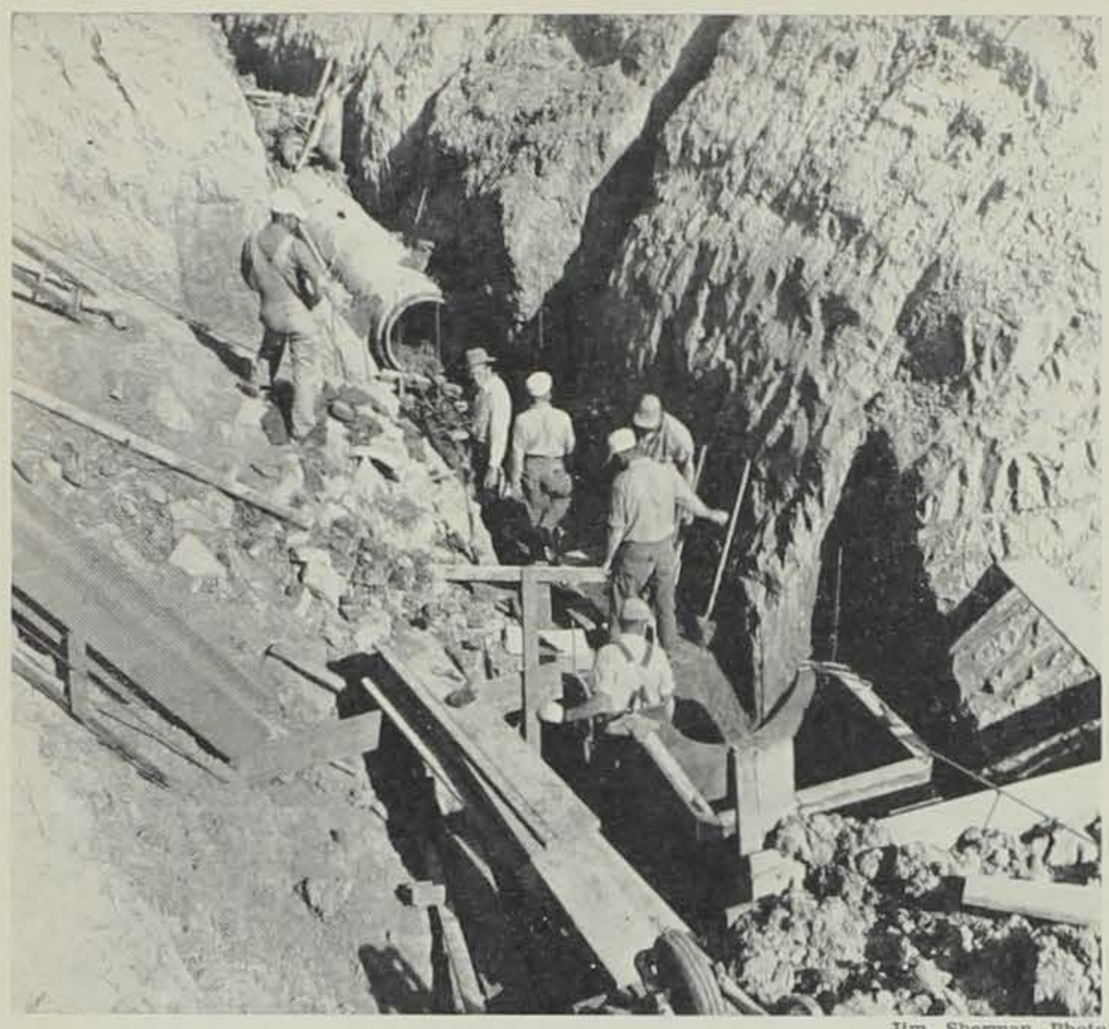
NEAR FATAL DEER-CAR ACCIDENT

On May 12 a car driven by Leo Rodamaker, a Minnesota feed salesman, struck a buck deer one mile north of Floyd on Highway 218. The deer was killed instantly, and Rodamaker narrowly escaped the same fate.

The 1953 Chrysler overturned several times and struck an embankment near the highway. The car was demolished and Rodamaker suffered a compound fracture of the right arm and a broken back. At late reports his condition was still listed as critical.

This is the most serious accident known to have been caused by deer on Iowa highways. Deer have been the only fatalities to date, but property damage is increasing at an alarming rate. From January 1 until May 1 of this year, ninety-three deer have been killed in accidents, 73 per cent by automobiles. Before May 1 of last year sixty-three deer had been killed, and during the same period for 1951, forty-five. During the first three weeks of May, Conservation Officer Ward Garrett of Pottawattamie County reported thirteen deer killed by automobiles. Including the Rodamaker accident, there have been car-deer accidents so far *this year* that have caused property damage totaling $7,245. The Rodamaker accident was the sixth this year in two and one-half miles of highway 218.

There are 29 kinds of ducks and six kinds of geese found in Iowa during migration.



Jim Sherman Photo.

Workmen laying the 30-inch tile that will carry overflow water from the re-impounded Goose Lake.

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THE REBIRTH OF A MARSH

By Lester F. Faber
Superintendent of Federal Aid

By this fall, Iowa sportsmen will have nearly 6,000 acres of new hunting grounds . . . submarginal lands that have little agricultural value but which furnish priceless wildlife habitat. Acquired and developed by the Pittman-Robertson Federal Aid Program, many famous old sloughs and marshes are being reborn. Of these thousands of acres of public hunting areas, some are marshes that were drained but never successfully farmed.

One of these is Goose Lake in Greene County, a favorite waterfowling area of the old days. Records state that it was excellent duck and goose habitat, and one story even tells of special trains that ran from Jefferson to bring in duck hunters.

In 1863 the American Emigrant Company claimed title to the lake under the Swamp Land Act. For nearly fifty years there were legal battles for ownership of the lake, but in 1912 the Federal Supreme Court settled the argument in favor of the State of Iowa.

With the first request for drainage in 1913, Goose Lake was doomed as a duck marsh. Although anti-drainage petitions containing 15,000 names were filed, drainage was started in 1920.

Five years later the old Board of Conservation made its first application to the Executive Council to restore the lake. But no action was taken until 1947, when the 52nd General Assembly granted permission to the present Conservation Commission to return the area to its best use . . . waterfowl habitat. Four more years of negotiating the abandonment of the drainage district followed, but in the spring of 1953 the first construction began and Goose Lake started its comeback.

By present plans, the marsh will cover 350 acres and will average eighteen to twenty-four inches in depth. It will be flooded by means of a drop-inlet control structure that has been built over the existing thirty-inch tile outlet. This will hold all available water, and surplus water may be drained away by lifting stop logs in the control structure.

Goose Lake has an extremely small watershed, and restoration is somewhat of a gamble. However, engineering surveys by the Conservation Commission and private engineers indicate that the area can be restored, but about two years will be required to soak the lake bed before it will start filling. After that there should be sufficient water to provide ideal conditions for waterfowl.

An experiment to provide better duck and muskrat habitat will be carried on in the marsh. Before flooding a series of level ditches about thirteen feet wide and five feet deep will be dug in the lake bed with draglines. The "spoil" will be used to provide additional den space for muskrats and nesting and resting places for ducks. The ditches will be situated where there would normally be only a few inches of water at the lake's highest level. Such ditching has been successful in Wisconsin, where it has been used by the Conservation Department and private fur farmers, and can be a valuable tool in providing extra wildlife habitat on shallow marshes.

Goose Lake is five miles north and one mile west of Jefferson in Greene County, and the area will be open to public hunting and trapping. In addition to waterfowl, the area is expected to provide good pheasant habitat.

The cost of such Federal Aid projects is split between the government and the state. The government furnishes 75 per cent of the cost from taxes on sporting arms and ammunition, and the remaining 25 per cent is furnished from State Fish and Game Funds. It is a small investment for the restoration of our badly depleted waterfowl habitat.

WILD MALLARD CAUGHT IN TRUCK DOOR HANDLE

Probably the most unusual way in which a duck was ever captured in these parts came to light Tuesday morning when "Red" Gillispie, Savannah, Mo., truck driver, stopped at the Sierp Oil Co., service station here and discovered, or, rather, Bill Findley, employee at the station, discovered, a live mallard duck fastened in the right door handle of his truck.

Gillispie said he knew the duck hit his truck a short distance south of Atlantic on Highway 71, but he did not know it was caught in the door handle. When released and taken into the service room of the station the bird walked around and apparently had not been injured much. He had been caught by his neck and right shoulder.

He was soon drinking water and eating food offered him. He will be kept at the station until he is fully recovered and will then be turned loose to find his wild mates. —*Villisca Review.*

The puffing adder or hog-nosed snake does not blow poisonous powder or spray from its mouth, as is generally believed. He is entirely harmless.

BIGGEST FISH OF THE '53 SEASON

Cliff Meloan (Joe and Cliff's) already has caught what should prove to be the biggest fish of the season.

In addition to dispensing hamburgers, Meloan also handles a line of fishing tackle which is displayed in one corner of his sandwich shop.

His latest display is a board on which is mounted one each of all the Lazy Ike plugs produced—about 63 in all.

The other night a slightly befuddled gentleman entered the shop and casually tossed his topcoat over the board.

And when he was asked to remove the coat, he reached out and jerked (or attempted to jerk) it off. By the time one of the countermen came to his rescue at least half of the plugs had a firm grip in the lining of his coat . . . and they were there to stay.

After 30 minutes of futile struggling, the careless customer was sent home without his coat (he lives nearby) and the help waited until closing time before settling down to the painstaking job of dehooking.

Next morning the coat—somewhat the worse for wear—was returned to the owner.—*Cedar Rapids Gazette.*

Most snakes can travel no faster than four or five miles per hour—the speed of a man walking. However, one of the speediest snakes, the whipsnake (which does not lash at its victim with its tail), can go about as fast as a top-notch runner can run.—G. S.

TAGGING RETARDS GROWTH

Conservation Commission biologists have tagged various species of game fish for years. The purpose of this tagging is to provide accurate information on growth, populations, habits, and to make possible more effective fisheries management. Such tagged fish may turn up years later, revealing interesting facts.

Last April Commission gill-netters at Spirit Lake caught a female walleyed pike bearing tag No. 749. At the time of tagging on April 21, 1947, the fish was 24¾ inches long and weighed 5½ pounds. Scale samples showed that she was then seven years old.

On April 16, 1953, she was recaptured in the gill nets. She weighed 8¾ pounds and was 27½ inches in length. The fish was thirteen years old, a matriarch of the walleye tribe. The tag in her jaw was quite loose, and was removed.

It was apparent to the biologists that the tag had retarded the walleye's growth, since the fish had grown but 2¾ inches in six years, and had gained only 3 pounds, 4 ounces in weight. On the other hand, untagged walleyes show a calculated growth of nearly 28 inches in ten years at Spirit Lake. According to fisheries biologists, tagged fish just don't grow as fast as untagged fish.

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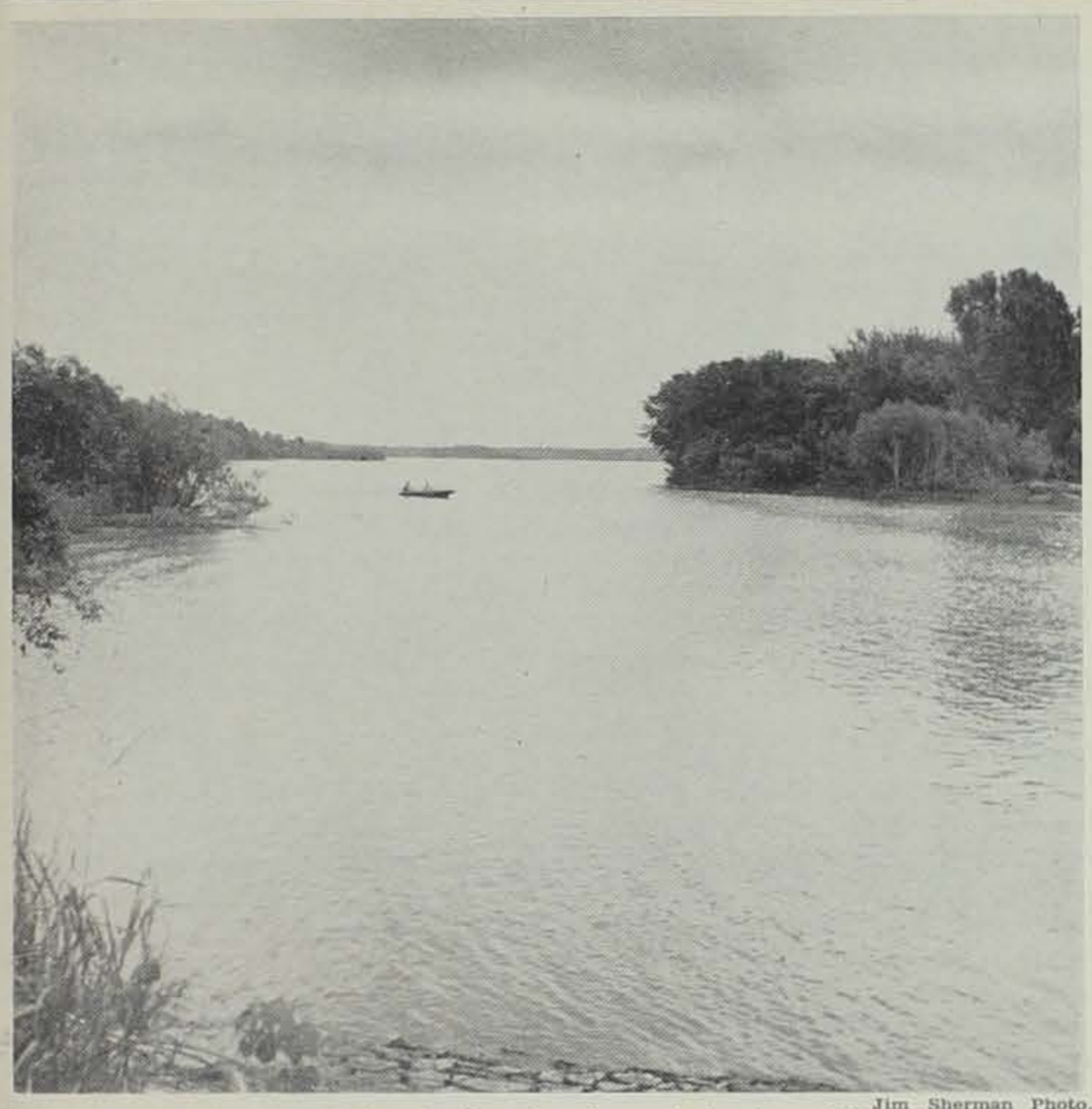
Walleyes show a growth of nearly 28 inches in ten years in Spirit Lake.



Jim Sherman Photo.
"Fishing below the channel dams is fine, but the real slam-bang fishing is in the maze of wild sloughs and back waters."

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Sportfishing . . .

(Continued from page 137)

sloughs and backwaters for miles below the dams.

About fourteen miles south of Muscatine is the sort of place we mean. It's the "Big Timber", which was formed when a levee was built inland from the river. This area inside the levee is more than three thousand acres of fish and wildlife paradise. Although much of the Big Timber has now silted in and is fairly shallow, water action near the southern end has kept it deep. To repair the levee last summer, this southern end was dredged next to the levee, where there are now holes thirty feet deep. Some of these holes contain large sunken trees, and are fishing water de luxe.

The Big Timber black crappies average eight or nine inches, but many will go larger. And, when Pool 17 is drawn down in the winter and the fish are concentrated, there is excellent crappie fishing through the ice in the deeper holes.

It is in this Big Timber area that commercial fishermen have been forced to discard nets bulging with fish. The catch was almost entirely game fish, with so few rough fish that it didn't even pay to sort them out!

Three miles south of the Big Timber is the famed Lake Odessa, now "on loan" to Iowa from the Army Engineering Corps. At normal water levels the lake is 2,500 acres of broad pools, heavily wooded islands, and hidden bayous. There is no silt problem here, for the lake is fed by two small streams and seepage from the nearby Mississippi. It is tremendous fishing water; bass and crappie habitat without parallel.

Some bass taken from Odessa run six pounds, and at least one has been taken that weighed eight. In one day, two men fishing at the south end of the lake near a sand bar caught their limits of four- to seven-pound bass. They were using deep-running plugs.

Many local fishermen take bass from the banks of drainage ditches at Odessa. Burris Ditch, the outlet of the lake, is a favorite. There are also many lateral ditches, all of which furnish good bass fishing. Yankee Chute, a long slough on the east side of the lake, also is a hotspot for bass. Most of the good bass fishing in Odessa is in the southern half of the lake, from "Sand Run" on down. There is some fishing done with surface plugs and lures and flies, but the old local standbys are crayfish, minnows, and frogs.

Speaking of frogs, don't forget that this is bullfrog country. They grow big, and in this lifetime or the next you probably won't eat anything more delicious than french-fried froglegs. They are usually taken with a spotlight and a gig, but some froggers take them on hooks, dangling a lure above them until they snap at it.

The crappies in Odessa may average a pound or more, depending on the season. At least one crappie has been taken from the lake that weighed just under four pounds. Early summer and fall are the best times. In the bluebird weather of an early duck season many hunters fly fish for crappies from their blinds, catching calico bass almost as big as their decoys.

Crappie fishing is best in the brushy areas in the center of the main lake, as well as in the main slough in the north end.

There are bullheads everywhere in the area, but only a little angling for catfish. But down the river from Muscatine, we notice the transition we have expected all the way from Lansing. That is, catfishing.

Down around Fort Madison, Old Whiskers is an important part of the fishing picture. Although it may be sneered at by inland purists, a lot of this fishing is with trotlines. It is an important sport, and local fishermen treat it much the same ways as foxhunting is in other areas.

On hot summer nights when the air is heavy and sleep comes slowly or not at all, the boys get together and head for the river. Here they sit, talk, and sleep between runnings of the trotlines.

The late Ecil Benson, conservation officer for Lee County, told of such an excursion. Ecil came upon an old-timer on the river bank, sitting on the running board of a Model A and surrounded by a dozen empty beer cans. He was quite contented, but a companion was urging him to help run trotlines. The old man looked up at Ecil and complained "Ever time I've ever been on a fishing trip, there's some dawgone fool who wants to fish!"

Big cat are also taken below the river dams on pole and line, using an assortment of baits that include worms, clams, minnows, chubs, prepared baits, soap, carp chunks, grasshoppers and other insects. From above Fort Madison to below Keokuk, catfish assume the importance they have in the inland rivers. Flatheads are frequently taken that weigh over forty pounds, and channel cat may run up to eighteen pounds.

Although there isn't much bass fishing in this general area, commercial fishermen report heavy catches of bass in their nets. These fish are released, but while they are known to be in the river, only a handful of anglers go after them with plugs and flies.

Taylor's Slough, just southwest of Fort Madison, is good bass water and has given up many three- and four-pound fish. The same is true of nearby Hoenig's Slough, and both areas have good populations of crappies, catfish, bluegills and bullheads. There is also good walleye fishing below channel dam 19 at Fort Madison, something that may be expected of any channel dam in the river.

In three short articles, it is impossible to cover all the Mississippi River fishing in Iowa. If any area or group is slighted because they have been ignored, we can only apologize, for thousands of acres of prime fishing water were not even mentioned.

Just one more thing. The Mississippi is a giant of nature, and is to be treated with the same strong respect that one gives an ocean or a mountain. For all of its broad serenity, it can be a killer.

When the river men who were born on its banks speak of their Mississippi, listen to them. These men were raised in hip boots, and from what they say you can learn a lot about the river's moods and how to fish it. You won't find men quite like them anywhere else, for the Mississippi is the only place they want to be. It doesn't take much fishing on The River to get that way.

An interesting little story came our way the other day. Seems that Larry Leroy Lukehart has been begging his Mom for a fox cub . . . she made several attempts to get him one from friends up near Gladbrook . . . but it was taking Larry too long a time and he couldn't wait. With his dog he wandered out in the Country Club vicinity and found a fox den . . . the pooch started excavating at one hole while Larry stood watch over the other outlet . . . and b'golly a tiny fox cub popped right out into his arms. The little fellow was added to Larry's personal zoo collection which is something we must see.—*Marshalltown Times Republican.*

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Jim Sherman Photo.
The 2,500 acres of pools and hidden bayous in Lake Odessa is tremendous fishing water containing bass and crappie habitat almost without parallel.

Jim Sherman Photo.
The ice cave at Bixby attracts considerable attention. During the summer months ice forms on the walls of this cavern.

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Bixby Park . . .

(Continued from page 137)

park. They are in thin strata and contain much chert. Above, the beds become much thicker. They are described as massive. Most of the Niagaran series is dolomitic limestone, and is the hardened deposits of the Niagaran sea. The massive beds are much more resistant to erosion than the underlying thin ones. A small falls in the stream which the road follows down into the park is over some of the resistant beds.

The upper slopes of the Bear Creek valley are underlain everywhere by beds of this Niagaran series, but these are not generally visible because they are covered with soil and subsoil. It is only along the steep-walled ravines that the succession can be made out. However, the beds which form the rim of the valley are particularly massive and resistant. Hence the cliffs.

Steamboat Rock, from which a wonderful view of the valley may be had, is a huge block of this massive dolomite which has been separated by weathering, and lie in all positions, clear down to stream level.

The rock fragments of the valley bottom are mostly dolomitic limestone, derived from the valley sides somewhere upstream. There are also many fragments of chert and chalcedony. These are varieties of quartz and are very hard. Indians made arrow heads and other articles from them. Note the variation in shape of these dolomitic limestone and quartz fragments in the stream channel. Not many of them have been well rounded by stream action. They have not been worn sufficiently long by running water. As time goes on they will be carried farther and farther down stream, and become smaller and more rounded. With every flood there is further shifting of the rubble on the valley bottom.

Long after the retreat of the last of the ancient seas which quietly and slowly covered our mid-continent area, came the glaciers, about a million and a half years ago. This part of Iowa was glaciated twice and possibly a third time, with wide intervals between. A deposit of glacial drift was left. This can be found in the surrounding country-side but not in the valley.

The drift contains all sorts of strange stones carried down from the north by the ice, and a few of these may be found among the rocks along the stream channel. Erosion by Bear Creek and its tributaries has carried away most of the drift with its contained stones. Even among the stones in the stream channel there are only a few of these glacial erratics. They are easily distinguished from the fragments of dolomitic limestone and chert by their color and texture.

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Jim Sherman Photo.
Bixby State Park is an area of about 300 acres a few miles north of Edgewood in southwestern Clayton County.

The last glacier receded from this area a matter of tens of thousands of years ago. Running water has been at work on the area ever since. It must also have been at work during the interglacial times. There were also times when wind-blown slit was deposited. This, the familiar loess, is present as a mantle above the drift in the upland area away from the park.

Since the valley is the work of running water, one wonders how long it has been in the process. How long has it taken for weathering and running water to remove all of the sedimentary rock that once extended from wall to wall of the present valley? This is a difficult question to answer precisely. Quite possibly some of it was done in pre-glacial or interglacial times. Certainly it would seem improbable that it could all have been done since the retreat of the last glacier.

Recently the writer visited this park after a long dry spell. In spite of the drouth the stream was still flowing in good volume. Where then did the water come from? Springs or seeps, one or both, provide the answer. The valley is cut below the level of the permanent water table, the top of the zone of saturation in the ground. The water fell as rain, and the subsoil and bedrock below have held it as a sponge.

Of course, the ice-cave at Bixby attracts attention. The cave is formed by a recess among some large blocks of rock on the south side of the valley near stream level. At the time of a recent visit by the writer the cave was closed by a barrier, and rightly so because it is a dangerous place. But the ice could be seen within, and the chill of the place could be felt at the barrier. This was in October.

The ice forms from moisture in the air. Striking the cold surface in spring and early summer the moisture forms ice. Remember that the average daily mean temperature in Iowa is not so many degrees above the freezing point of water. Spring water you will also remember, is cold even in summer. It is not surprising that some protected places on northward facing slopes should remain a little below the freezing point into the early part of the summer. Some of the ice possibly persists into the winter.

Jim Sherman Photo.
The limestones of Bixby State Park tell a geological story extending over four hundred million years.

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Other parks in northeastern Iowa have cliffs of Niagaran dolomite. Other parks have valleys as deep and scenic. Each has its own geological story and features of special interest. Bixby State Park has its story clearly written for all to read.

WARDENS' TALES

Wes Ashby, Conservation Officer, for Dubuque County, writes:

"In southern Dubuque and northern Jackson counties there is a beautiful clear-water stream bearing the strange name 'Teddymore'."

"Thereby hangs a tale. It seems that when the early French settlers were searching for lead at the base of a cliff near the river's mouth, they found a pike of human skeletons and skulls.

"On questioning their Indian coworkers they learned that one tribe of Indians had trapped another on the top of the cliff and had exterminated them. When the losing braves saw that their cause was lost they threw their women and children off the bluff rather than have them captured. In the ensuing slaughter many of the warriors leaped or were forced over the cliff to their deaths.

"The French miners, upon hearing this story, christened the stream 'Tete du Morte', or 'Head of Death' in English. Over the years, natives of the region have corrupted the French name to 'Teddymore'."

Iowa hunters usually shoot about 65 per cent of the cock pheasant population during the fall season. This will leave an average of one rooster for each three hens in the spring brood stock.—R.N.

Jim Sherman Photo.
After trout begin to discover the natural foods in the stream, the ordinary bait fisherman with ordinary bait is out of luck.

Trout Lures . . .

(Continued from page 137)

along the bottom in the deeper pools. These grublike creatures are rounded in cross-section and have plume-like gills on their abdominal segments. The largest mayfly naiads are yellow-dun in color, sometimes reaching one and one-half inches in length.

Mayfly and stonefly larvae found in swifter running water are far more important as trout food. Occurring under flat rocks in riffles, they are smaller and are flattened from top to bottom. They are light brown, gray, or black in color. Nymphs of these colors tied on ten to sixteen size hooks are the most productive flies for Iowa trout fishing. The artificial nymph does not have to be an accurate imitation or the original to be successful. Trout lie in swift waters to feed on these insects and the broken water cuts their vision to such an extent that they will take anything that is about the size and color of the nymphs they happen to be feeding on. A good imitation can be made by trimming the wings and most of the hackle from wet flies.

Such a nymph is best cast upstream in fast runs and deeper riffles and allowed to drift with the current. The main difficulty is in detecting a strike quickly enough to set the hook. Watch the fly as it drifts along, taking up slack line as it approaches you. If there is a flash of color or the line slows perceptibly, strike lightly but quickly. With practice the line can be stripped smoothly through the guides to prevent slack as the fly is carried toward you. A quick stripping motion of the line with the left hand while raising the rod tip will hook your fish. Once this upstream cast and natural drift is mastered, many more fish will be taken than with an upstream retrieve.

Wet flies which represent spent or dead flies can also be fished with a natural drift. Those that represent the female insect returning to lay her eggs underwater (mostly caddis flies) may be successfully fished with an upstream or cross stream retrieve.

Caddis flies are very numerous in some of our Iowa trout streams and grublike artificials are sometimes effective. Many Iowa species of caddis larvae build a case of sand grains or debris which they carry about with them. The abdomens of the larvae are usually white, pale yellow, tan or pale green in color. The naked nymph should be fished with a natural drift in fast water at the heads of pools. Those that represent cased larvae can be fished with a natural drift or slowly along the bottom in quiet water.

Scuds or freshwater shrimp are found in most of our Iowa trout streams and are abundant in most spring areas. They are usually about the size of wheat grains, but some may be much larger. They are grayish to pinkish in color, and are translucent. Dubbed muskrat under fur or gray wool yarn treated with a light mineral oil will give this translucent effect in water. These materials are widely used for body materials for artificial scuds.

At times brown trout feed almost exclusively on the little shrimp and all trout consider them delicacies. The headwaters of our larger streams and our small springfed brooks support enormous numbers of scuds. It is best to fish scud lures near spring outlets and where spring runs enter trout streams. A slow retrieve with an erratic jerky movement in pools will do the trick. In fast water inhabitated by shrimp a natural drift is effective.

Maybe you think that some of your favorite pools are fished out. Perhaps they are. But before you put away your rod, serve up a few of these artificial nymphs and watch what happens.

Jim Sherman Photo.
Many trout fishermen believe the streams are fished out shortly after the opening. Experiments, however, prove this is not so.

NO! NO BUFFALO

It seems strange — doesn't it — that the state of Iowa, A.D. 1953, should be plagued by deer. Small herds in the western section of the state were encouraged to go forth and multiply. They did so, surprisingly. And now they are no longer looked upon with an aesthetic eye, but as a doggoned nuisance. They have no regard whatever for the rights of agriculture, don't even hesitate at a barbed-wire fence, and look upon a paved highway as a delightful place to stalk around. They have no fear of car headlights, either, and nearly 500 collisions have occurred in Iowa during the past two years. Luckily there have been no human fatalities, but car damage has been heavy. A bill to provide control measures will be before the senate at the present session of the legislature. Imagine! And let's be careful, Commissioners, about conserving the buffalo.—*Washington Journal.*

Contrary to what some newspaper stories report, biologists have long known that many mice have a birdlike voice which a fertile imagination may call "singing."—G.S.

The new Illinois Natural History Survey Circular "Housing for Wood Ducks" is a must for those who would attract wood ducks to artificial nest boxes.

NEW WOOD DUCK BOX BULLETIN

"Housing for Wood Ducks" is the name of a beautiful new 50-page bulletin by Frank C. Bellrose of Illinois Natural History Survey. Mr. Bellrose is the acknowledged National authority on wood ducks. The bulletin is illustrated with remarkable wildlife photographs. Pictures give descriptions of various types of boxes or houses that can be provided at small expense for encouragement of nesting by wood ducks. The boxes were designed to replace natural nest sites destroyed by logging operations. It contains a diagram plan and directions for building nest boxes that have proved, under Illinois conditions, to be most practical and durable through a study made of their use over a period of 15 years.

To persons interested in encouraging these handsome and colorful game birds to nest in suitable habitat near their homes, this 50-page booklet should be of special interest. "Housing for Wood Ducks" will be sent free to anyone requesting a copy from the Illinois Natural History Survey, Urbana, Illinois.

A word of caution to boat owners: Check the transom of your boat to make absolutely certain it is strong enough to support an outboard motor. If your boat has suffered the depreciation so many boats sustain through a winter, it can easily be that the screws holding the transom to the hull are loosened — or dryrot may have weakened the wood where the screws are located—or even the material of the transom itself may have deteriorated until it won't hold the motor under hard going. If you ever suffer a wrecked boat transom while operating an outboard motor, you'll never forget the experience. That is, if you live through the experience.—*Manchester Democrat-Radio.*

MAYFLIES

By Roberts Mann and David H. Thompson

Back in the time of Aristotle, the Greeks applied the name Ephemeron to an insect we know as the Mayfly, because it lived only a single day. Actually, although the winged adult may die the same day it matures, the young which produces it must go through an underwater existence ranging from several weeks to two years, depending on the species. The Greek name was quite apt, however, because the adult mayfly is a delicate defenseless creature with a pair of gauzy triangular wings held upright when at rest, and a smaller second pair which are often overlooked. The soft slender body varies in length from one-quarter inch in the smaller kinds to one and one-half inches in the larger ones, and is tipped with two or three bristle-like tails, often twice as long as the body, which small boys mistakenly call "stingers".

Mayfly eggs hatch into water-dwelling six-legged larvae with seven pairs of gills. Some species, the "sprawlers", are flattened and streamlined for clinging to rocks in swift streams. Another group, the "clamberers", are found among weeds in the quiet water of lakes or stream pools and, because they are out in the open, make an important part of the diet of fish. A third group, the "burrowers", are large larvae reaching two inches or more in length and living in soft bottom muds where they slowly tunnel through the mucky silt—literally "eating" their way, like earthworms. These are often dredged up and sold as bait, called "wigglers", especially to ice fishermen seeking perch and bluegills.

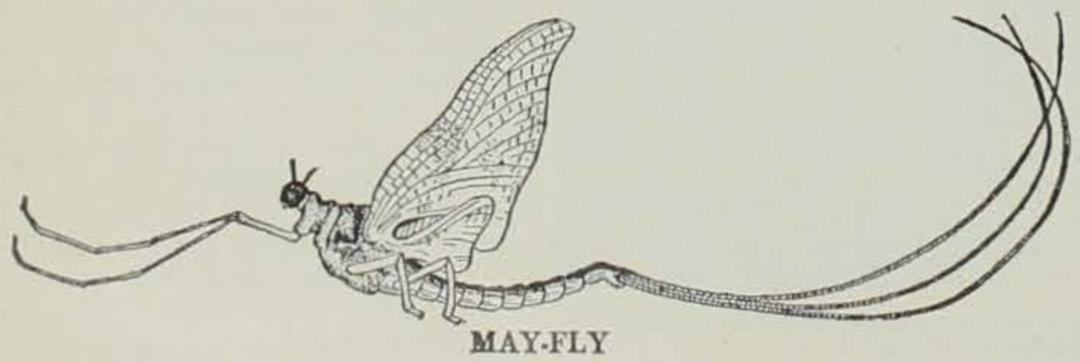
Adult mayflies, with only feeble imperfect mouthparts, do not eat but all mayfly larvae have chewing mouthparts by which they feed on algae and other plant material, both alive and dead. As these larvae approach maturity they become hunchbacked from the swelling wing pads beneath the outer skin, and increasingly restless. Finally they swim or crawl to the surface. There, the skins of some species split so swiftly that the adults almost explode from their juvenile husk; others must struggle for several minutes to free themselves.

Mayflies are unique in that the winged adult passes through another molt before it becomes fully mature. Emerging from the water, they fly to some nearby tree, bush, or other shelter where they rest for a day or more, depending on the weather, before this final molt. Then these "duns", as fishermen call them, shed their dull gray skin and appear in colors ranging from pure white, through shades of yellow, green, brown and red, to almost black. On that day, as evening approaches, they go through their mating flights, lay their eggs—and die.

Some kinds dive to drop their eggs on water; others drop them from high in the air; while still others light on the surface to lay their eggs. In many trout streams, unusually good fly fishing for brown trout can be had when certain of the large burrowing mayflies swarm and go through their brief performance.

Mayflies are found in most parts of the United States but are more abundant and show a greater variety of kinds in the Great Lakes region. They are food for many birds, bats, toads, and dragonflies, as well as fishes. Many artificial flies used by anglers are imitations of the mayfly. Different species hatch at intervals from March to November but along our Chicago lake front the largest swarms appear about the first of July. Then they flock to street lights and store windows at night, often forming heaps a foot or more high and making pavements dangerously slick with their crushed bodies.

Immortality awaits an ode to Ephemeron.—*Forest Preserve District of Cook County.*



MAY-FLY

TO A MAN'S HEART VIA HIS BAIT CAN

One night last week, when the temperature was warm and the soil was moist, my wife picked me up a couple dozen big nightcrawlers. I think that is a beautiful way for a loving wife to show her affection. Could be that all the fishermen homes in Delaware County would be much happier if the wives would see to it that the husbands have plenty of fresh, live bait. During the day when the husband is slaving to provide for the family, the wife could dig him a can of nice lively garden worms; then at night when he's dog-tired, she could pick up a few dozen nightcrawlers for him; and it would be a gorgeous evidence of her affection if, during the afternoon, she take the minnow bucket and the seine and go to some creek and get him three or four dozen active minnows. — *Manchester Democrat-Radio.*

Area Game Manager Tom Berkley demonstrates a fox set to a group of "students" near Oakland.

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YOU CAN LEARN TO TRAP FOX

The first state trapping school was held in 1949. Since then, hundreds of Iowans have learned the dark and mysterious art of fox trapping in one easy lesson. Most of them had never trapped before.

Trapping classes are set up by the Conservation Commission of fifteen or more farmers or sportsmen making a request to their local conservation officer. An instructor is scheduled and a class area, usually a local farm, is designated.

The day before classes the instructor may make several sets in the area. The class is shown any fox or coyote sign around these sets and told why the traps were placed in that particular location. The secret of success is placing the trap within a few yards of a fox trail or crossing. Scents are ineffective if the animals don't come near enough to be attracted by them.

The set taught is a "dry-hole" type . . . a Victor No. 3N trap buried beneath a half-inch of dry-powdered soil. Instructors do not use gloves or boil the traps, since there will be human scent in the area, anyway. Smoking and spitting while making a set is avoided, and students are instructed to walk directly to a set with as little fuss as possible.

There's more to it than that, but those are the fundamentals. It was all that a Bloomfield farmer needed to trap sixty-eight foxes in the year after he attended the school. The next year he took seventy-seven foxes and last year he trapped forty-four. Of the total catch, thirty-five foxes were taken at the same trap location.

So far this year there have been twenty schools scheduled, running into June. This is the "spring session." Twenty more schools can still be scheduled for summer and early fall.

Since 1949 nearly eight hundred farmers and sportsmen have attended the state trapping school. Since such schools make effective trappers out of inexperienced ones, they are providing the best answer to fox and coyote predation.—J.M.

FOX DOPE

On my way home from Andrew the other night I spotted a fox in the road and as I neared him with my machine he scurried over the bank. But in passing the spot where he had been I observed a carcass of what appeared to be another fox. I brought the car to a halt and reversed to the spot. True enough, here was the carcass of a red fox killed by an auto apparently. And it was partially consumed . . . no doubt by the fox that I had seen moments before. I jockeyed my car into a position where I could reach my hand to take the fox without getting out of the car. About the time my hand was within 12 inches of the carcass I was met with a sharp bark that sounded like a growl. I jerked my hand into the car and quickly shut the door. I now rolled down the window and was again met with a series of barks. That was enough for me. I left the dead fox to his pals and headed for home, happy that my hand had not been bitten by a fox who was either standing guard over a dead pal, or consuming him, or both.—*Bellevue Leader.*

Conservation officers and rural mail carriers reported 1,400 broods of young pheasants during the 1952 reproduction surveys. They reported an average of 6.5 young per brood.—R.N.

"Bob-white" is the call usually associated with the male quail. Some variations of the call are, "Bob," "Bob-Bob-White," "ah-Bob-white," and "White."—M.S.

In a study of banded quail in Oklahoma in 1943 it was not unusual to find that the banded birds in fall moved as much as nine miles.—M.S.