

IOWA CONSERVATIONIST

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CANOEING THE UPPER IOWA

BOWFISHING FOR CARP

By John Madson
Education Assistant

On the north bank of the Cedar River, beginning where the town of Vinton ends, there lies a 700-acre area of slow creeks, lakes, marshes and heavy timber called the Dudgeon Lake Game Area.

On the uplands above the river are deer, quail and pheasants. In the slow creeks and deep, turbid waters of Upper and Lower Dudgeon Lakes there are bass, northern pike and catfish. There are also myriads of big carp.

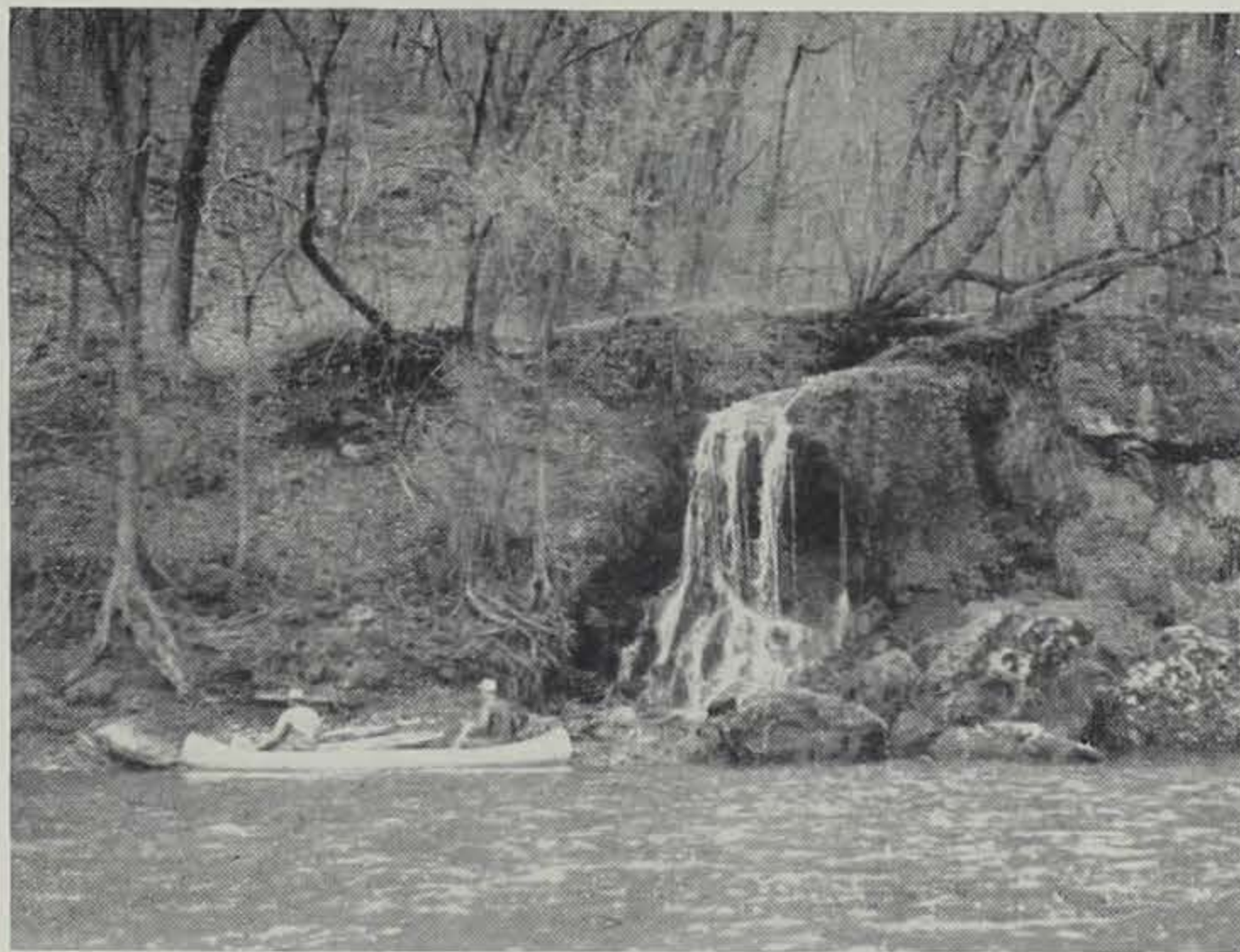
A Vinton archer named Wayne Keefer and I walked along the edge of the upper lake one hot evening last June. The lake had risen in the past few days, and was now covering low benches of grass and weeds. It was a quiet evening, and the air hung dead and heavy above the shallow lake.

Keefer walked slowly and quietly along the lake's edge, ignoring the clouds of mosquitoes around him. He stopped suddenly, pointing to a swirl in the water several feet from shore. He raised his bow and bent it slightly, watching the swirl move slowly along the edge of the flooded grass. When it was about fifteen feet away Keefer loosed his arrow, and at the slap of the bowstring the water was churned into a muddy froth. He brought the fish in quickly, winding the arrow line on a spinning reel gripped through the head with the aluminum fish arrow.

He pointed to the fish's large paunch and remarked, "She was working into the shallows to spawn. Spawning season's about over now, but a few fish are still moving in to lay eggs."

A hundred feet along the bank Keefer stopped again, studying a blade of grass sticking out of the water. For no apparent reason, and with no wind, the grass was twitching in the water. He studied the moving grass stem for several minutes, and then made his move. Drawing his bow back to the ar-

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Ralph Church and Harold Allen Photo.
Many of the beauty spots of the rugged Upper Iowa River are almost inaccessible by automobile or foot. One of these, Melanaphy Springs, is a landmark to canoeists.

By Harold Allen and Ralph Church

The Upper Iowa is one of Iowa's most beautiful rivers. It was known as the Oneota by the early settlers which in Indian is believed to refer to "the people who have sprung from a rock." It flows through one of the deepest valleys in the state, across Howard, Winneshiek and Allamakee counties to enter the Mississippi below New Albin. The river is relatively shallow, with a bottom of limestone rubble, limestone out-croppings and sand. It is fed by numerous springs and spring fed tributaries, and maintains a good water level at all seasons.

One of the most interesting stretches for the canoeist is that from Kendallville to Decorah. The scenery is superb. For a large part of the distance the river valley is narrow, bounded by magnificent limestone cliffs, towering in some places 400 feet above the water. At many points on the face of the cliffs and on their tops are native upland cedars. Good stands of hardwoods and white pine are seen, as well as one of the few stands of native balsam fir in the state. A fairly swift current, numerous sharp bends, and alternating pools and small rapids make interesting canoeing.

The total distance from Kendallville to Decorah is about 30 river miles and makes an easy two-day trip. Bluffton is about the halfway point and makes a convenient objective for the first day. For those who do not wish to camp out excellent overnight accommodations are available in both Cresco and Decorah. The canoe camper will find many likely-looking camp sites along the river.

The only man-made obstructions in the stretch are the barbed wire fences across the river, a dozen or so in the 30-mile trip. These are not difficult to get through, but are hard to see at a distance and could cause an upset. The old canoeing rule about staying on the inside of the turns is worth heeding. The turns are sharp, and logs or other obstructions are often jammed in the angles, undercut by a strong

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WEIGHING FISH WITH A RULER

It's a tough job to accurately estimate a fish's weight. There are many variables affecting a fish's heft: the kind of water, the kind of fish, and the kind of fisherman making the estimate. We recall a time when a dozen weight estimates of a 4-pound bass ranged from two pounds to slightly over 7.

Of practical value to many fishermen are some of the lengths and weights of major Iowa fishes compiled by Dr. Kenneth Carlander in his *Handbook of Freshwater Fisheries Biology*. Taken by fisheries biologists over many years, the figures can be used by sportsmen to closely guess the weights of their catches.

The following tables are necessarily brief and condensed, but offer a rule-of-thumb weighing system for fish of various lengths. The total length measurements were made from the tip of the fish's snouts to the tips of their tails when the two lobes of the tail were compressed together, giving the absolute maximum length measurement.

CHANNEL CATFISH:

Pounds	Inches (Total Length)
1.5	16.4
3.6	21.3
5.1	22.9
6.1	24.1
9.1	28.4
12.1	30.6
14.5	34.4
18.5	35.6

BLUEGILLS:

Ounces	Inches (Total Length)
2.5	5.8
5.8	8.2
13.6	11.4

BLACK BULLHEAD:

Ounces	Inches (Total Length)
2.5	7.3
8.3	10.4
13.9	10.6
15.1	12.1
20.0	12.6
24.0	15.1

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FINAL FIGURES ON DEER SEASON

Conservation Commission biologists have completed tabulation of deer season data received from the eight deer checking stations and from hunters' report cards. Following is a brief summary of the full report given before the Iowa Academy of Science on May 1:

A total of 3,782 deer hunting licenses were sold, and of these 3,575 hunt report cards were returned. All sources of deer kill information indicate a total season's kill of 4,004 animals. This is a minimum figure, for it was not possible to obtain a complete check of non-tagged deer not removed from farms.

Licensed hunters killed 2,401 deer and 61 per cent of the hunters killed one or more deer. Such a figure is extremely high on a national basis.

Of Iowa's successful hunters, 38 per cent killed no deer; 55 per cent killed one deer; 6 per cent killed three deer; .1 per cent killed four deer and .1 per cent killed five deer. Nearly one-third of the deer killed were shot on the first day of the season. Daily statewide kills were:

Thursday	741 deer
Friday	506 deer
Saturday	454 deer
Sunday	356 deer
Monday	282 deer

Hunting report cards show that more bucks (1,054) were killed than does (934), and 334 fawns were reported killed.

Over the entire state an average of 85 per cent of the hunters fired at the first deer seen. Those reporting to checking stations said they averaged 5.7 hours to bag a deer, saw three deer per hour, and shot at 1.5 deer for each deer killed. Crippling loss is believed to have been light for many cripples were killed on succeeding days.

There were 10 bowhunters reported, and one killed a deer. Eighty-five per cent of the gun hunters used 12 gauges.

The bucks checked at Avoca had the fewest antler points and those

at the Spirit Lake Station had the greatest number. The average weight of all bucks checked at stations (including fawns) was 130.4 pounds. The average weight of checked bucks 1½ years or older was 148 pounds.

The majority of deer killed in each county was killed by residents of that county, and 40 per cent of the deer hunters in the state were farmers. Seventeen per cent were business men, and 5.2 per cent were professional men.

Considering the spring increase for 1953, it is believed that from 12,600 to 15,800 deer were present in Iowa at the season's opening in December. With 4,004 deer killed in the 45 open counties, this indicates a total kill of from 25 to 32 per cent. While this is said to be a good harvest in an area where a deer herd is to be maintained, it is believed inadequate for total herd reduction.

A census taken by state conservation officers in late February and early March, 1954, set the present Iowa deer herd at about 12,500 animals, or slightly less than the herd's size at the beginning of the 1953 deer season.

YELLOW BASS POPULATION CHANGES AT CLEAR LAKE

By Dr. Kenneth D. Carlander
Iowa Cooperative Fisheries
Research Unit
Department of Zoology and
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We've known for a long time that fishing is better some years than others. Even in virgin waters there were changes in fishing success. Several of the Indian legends tell of times of good and poor fishing. Various research investigations have shown that fish populations may also change quite a bit from year to year. As we learn more about these changes in the abundance and size of fish we may be able to do more about improving fishing.

The Iowa Cooperative Fisheries Research Unit, sponsored jointly by the Iowa State Conservation Commission and Iowa State College, has been collecting measurements, weights, scales, and other fish population data at Clear Lake since 1941 to determine what changes take place—and eventually we hope to determine why.

The history of the yellow bass in Clear Lake shows some of these population changes most clearly. Yellow bass were not native in Clear Lake, but were introduced from the Mississippi River. They first appeared in the angler's catch in the early 1930's according to available reports. It was not until 1941 that we had any measurements or concrete data, however. In 1941, the yellow bass caught by anglers averaged about 7 inches; in 1942, about 9 inches, and in 1943 about 10 inches.

An examination of scales indi-



When yellow bass were introduced into Clear Lake from the Mississippi some famous fishing was created.

cated that practically all of the yellow bass collected in 1941 had two annuli or "winter rings" on their scales, those collected in 1942 had three annuli and those in 1943 had four annuli. In other words, practically all of the yellow bass were of the 1939 year class (a year class includes the fish which hatched in a given calendar year). The increase in size from 1941 to 1943 was due to the growth of these fish; with no new young fish coming into the catch. A few 1937 year class yellow bass were caught in 1941 and 1942, but not enough to change the average size. Apparently none of the yellow bass which should have hatched in 1938, 1940, and 1941 survived to catchable size.

Because of the war and the lack of students who could continue the studies, we had no further measurements until 1947. From 1947 to 1953 the yellow bass have been quite abundant in Clear Lake. Apparently 1943, 1946, 1948, and 1949 produced good year classes. The average size of the yellow bass in recent years has not been as good as it was in 1942 and 1943. Studies of the scales indicate that the yellow bass have been growing more slowly. The 1948 year class fish were only 60 percent as long at the end of the second year as the 1937 year class fish were at the same age. The growth rate of the yellow bass showed a steady decline from 1940 to 1949, but improved again in 1950 and 1951.

The yellow bass were also thinner, i.e. lighter for their length, in 1947 to 1949. In fact, many of them were scrawny in 1949. In 1951 and 1952 the yellow bass were again about as plump as they had been in 1942, and 1943.

Possibly the slower growth and poor condition of the yellow bass in the late 1940's was due to overpopulation—too many yellow bass. The increased growth rates in 1951

and 1952 were not accompanied by great declines in numbers of yellow bass, however. The "why" of the slow growth will probably have to go unanswered for a while.

Neither 1947 nor 1950 produced successful year classes of yellow bass. The failure to produce was not due to lack of brood stock. In both years there was a successful spawning season and young yellow bass were taken throughout the summer by seining near shore. Yet, by the next spring, these young yellow bass had disappeared. They appeared to be as abundant in the fall of 1950 as they had been in 1948 or 1949, but in 1951 there were no one-year-old yellow bass while there had been in 1949 and 1950. Again we do not know why.

I suspect that the failure of the 1950 year class of bass may have been due to the fact that no young yellow perch were produced during the summer. The larger predators may then have fed upon yellow bass in greater numbers than they did most years when small perch were available as forage.

But why didn't the perch produce young in 1950? Possibly the lack of aquatic vegetation may have been responsible. Perch lay their ribbons of eggs over plants and sticks and in 1949 and 1950 aquatic plants were very sparse in Clear Lake. They had been extremely abundant in 1946 and 1947. Another factor which may have contributed to the failure of perch reproduction was the small size of the perch. In 1949 very few of the perch were as much as seven inches long.

Many lakes have small perch which reproduce successfully. We believe that in most of these lakes the perch are over-crowded and stunted. The scales of these perch usually indicate rather slow growth with seven inch perch averaging about four years old. But scale

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Jim Sherman Photo.

Fishing from the "wall" of Five Island Lake. Such fringes of boulders, thrown up by ice action, have given names to several Iowa lakes.

KEARNEY STATE PARK

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

Kearney State Park is a small park on Five Island Lake in northwestern Iowa. While not as spectacular as other areas there are geological features of the park, the lake, and the surroundings that are worthy of comment.

Five Island Lake is in central Palo Alto County with Emmetsburg at the southern end of the lake and the park is just north of the city. The narrow lake extends for about five miles northeast of Emmetsburg and in only a few places does it have open-water width of as much as a half-mile.

The lake basin is a depression in the deposits made by the most recent glacier, the one named the Wisconsin by the geologists. The Wisconsin ice extended in the form of a lobe into Iowa, reaching as far south as Des Moines. It covered all of Palo Alto County and extended into eastern Clay County. In its travels from the country to the north the ice froze onto and carried along great quantities of soil, subsoil, and rock material of all kinds. This material, called glacial drift, was left as the present subsoil of the area. It attains a thickness of over 100 feet in places, everywhere concealing the underlying bedrock of the country.

The surface of this deposit, the so-called drift plain, is for the most part gently rolling and poorly drained. Along the margins of the drift plain, however, the country is hilly, with a relief of as much as 150 feet within relatively small areas. Such hilly country, a terminal or end moraine, occupies much of western Palo Alto and eastern Clay counties and has a width of several miles. Five Island Lake, however, is within this terminal moraine in the less hilly part of the drift plain, the part termed ground

moraine. Its shape suggests a river valley, and it may be that the basin occupies part of the depression of a preglacial or interglacial valley. Lake basins of this origin are known from other places in the glaciated areas.

A small island lies off-shore from the park, and another is a short distance to the north. The county highway map shows three larger islands in the northern part of the lake. Islands in a lake of this sort are not surprising. They are simply elevations of the drift surface within the general depression occupied by the lake. The islands do not rise far above the level of the lake.

The island close to the park has a fringe of boulders, just as does the lake shore. Many of these were part of a wall formed by the ice freezing to them and crowding them out of the water. Such walls are found along many other naturally formed Iowa lakes.

Although the south end of the lake is not much more than a mile east of the West Fork of the Des Moines River, it is interesting to note that it does not drain directly into it. The outlet is on the east side of the lake, into a tributary of Cylinder Creek. This creek joins the West Fork in the vicinity of Rodman, which is about 10 miles southeast. Such vagaries of drainage are notable on the surfaces of uneroded drift plains. The drift has been deposited in a helter-skelter fashion, and the drainage is anything but direct.

The boulders forming the protective wall along the shore of the lake at the park, and elsewhere along the lake and island shores for that matter, were part of the glacial drift of this area. Any of which were not originally part of the wall have been brought in from the fields, fence-rows, and ravines of the surrounding country. They were once all part of the solid bedrock of the earth's crust, in Canada or the northern United

States. Freed from bedrock by weathering, they were picked up by traveling ice and carried to this part of Iowa. They are called glacial erratics.

The boulders are of many kinds and their shapes, sizes and surfaces vary. Most of them still retain the shape they had when they were weathered from the bedrock. Soft, crumbly rock may have been removed from their exteriors since they were first freed, but running water or glacial action has had little to do with the development of their shapes.

The surfaces of some of the boulders are smooth, others are rough and pitted. The rough and pitted surfaces are the result of differential weathering. Some of these rocks contain minerals more easily weathered than the rest. This results in the development of pits or of a rough surface. The rocks having a smooth surface are either fine-grained or else they have been smoothed by running water or waves.

The rocks are all crystalline rocks, composed of crystals which are solidly locked together, with no pores or spaces between them. They are of many kinds. Most of them are stained, and ordinarily their nature cannot be readily told unless they are broken. It would not be possible in this short article to discuss the various rocks that attracted the author's attention, but three right at the shore near the monument may be described.

One, freshly broken, has large crystals of feldspar, perhaps as much as an inch across, set in a banded ground-mass. This rock is a gneiss (pronounced "nice"). Another gneiss, nearby, is very finely banded. Also nearby is a rock which contains an abundance of a black mineral called hornblende. This evidently weathers more readily than other minerals of this coarse-grained rock and there are pits where the grains of hornblende show up.

The bronze plaque commemorating the trail-blazing of the first U. S. Dragoons is on a glacial erratic. This is a fine-grained granite boulder that is not perfectly rounded, and which acquired its general shape as a result of the weathering which freed it from the bedrock.

Noting the route of the Dragoons as shown on the plaque leads a geologist to reflect upon the variety of country traversed by the soldiers—from southeastern Minnesota with its rugged terrain and limestone cliffs to the loess hills of western Iowa. Then southeast through the area last glaciated long ago. They must have been impressed, as we are today, with the great variety of terrain and the different kinds of rocks which were found on their march.

Young pheasants and quail are commonly called "squealers," largely because of their vocal qualities.—J. M.



State Conservation Officers helped set nearly 1 1/2 million wildlife plants this spring and early summer. Other agencies brought total plantings to nearly 2 million trees, shrubs and plants badly needed by Iowa wildlife.

"PLANT IOWA" PROGRAM TAKES HOLD

Nearly two million trees, shrubs, and roses have been added to Iowa landscapes this year under the Plant Iowa program.

Glenn Raines, secretary of the Plant Iowa Committee, said Sunday reports from nearly all participating organizations showed plantings of multiflora roses alone numbered 610,265.

More than 1,350,000 plantings were reported by the State Conservation Commission. They included 320,000 multiflora roses, 648,500 wildlife shrubs, and 388,000 other plantings in state forests, game and fishing areas and state parks.

Boy Scouts planted 39,250 trees; the Izaak Walton League, 75,000 trees; the forestry extension service 11,742.

The Izaak Walton League also planted 275,000 of the multiflora roses. Future Farmers of America planted 9,478 roses; the Federated Garden Clubs of Iowa, 8,000.

The garden clubs also reported plantings to beautify 2,340 parks and 190 lawns renovated. The garden clubs planted 3,036 trees.

More than 1,600 windbreaks were planted by the garden clubs, Iowa Fruit Growers Association, Future Farmers and forestry extension.

A total of 97 tree planting ceremonies were held with nearly 2,000 persons participating.

The Plant Iowa Program was officially established early this year by Governor William S. Beardsley to encourage "conservation of our natural resources" and "establishment of more beautiful plantings on all public and private lands." More than 15 organizations have cooperated in the program.—*Des Moines Register*.

Softshell or "leatherback" turtles should be handled alive with great care. Their necks are long and powerful, and the turtles can easily reach back to the middle of their shells and deliver a bite that is more feared by some commercial fishermen than the bite of a snapping turtle.—J. M.



Sometimes it seems that most of the fish have gone to school . . . why not the fishermen?

BETTER FISHERMEN: BETTER FISHING

When Nine Eagles Lake was opened to fishing last summer, bass fishing was a little-known art to many southern Iowa anglers. Fishermen were seen still-fishing for largemouth bass with cane poles, bobbers, and using artificial plugs for bait. And many of these fishermen caught fish!

On the trout streams of north-eastern Iowa there are fishermen on the banks with heavy casting rods, cuttyhunk line, two-ounce sinkers and huge gobs of worms. And some of these catch fish, too.

But for the most part such fishermen, wherever they may be, come home with empty stringers. They try hard, but either have never learned by fishing with experts nor have had the time to learn by their own slow experience. These unlucky fishermen are not happy fishermen, and from a fisheries management standpoint unhappy anglers are not good.

The only aim of modern fisheries management is better fishing, but fishing can be no better than the fishermen. An unlucky, unhappy fishing public loses interest in angling, and does not lend its vital support to fish management programs. And, even more important, the public loses out on the finest of outdoor sports.

A partial answer to better fishing through better fishermen is the fishing clinics that are being held by field personnel of the State Conservation Commission.

Area fisheries managers and state conservation officers have been conducting fishing classes for several years now, showing local anglers how to polish up their rusty fishing methods and improve their catches. Most of the clinics have been held in southern Iowa in an attempt to wean fishermen away from the old school of sinker-dunking and teach them to effec-

tively harvest their rich resources of bass and panfish.

Such a fishing clinic was held last month at Lake Darling in Washington County. It was conducted by two area fisheries managers and the local conservation officer, who had called the meeting at the request of local sportsmen. About forty men, women and children were there.

The class was begun with a roll call of the various fish found in the area, and specimens of bluegills, black and white crappies and green sunfish were shown to the group and their features and habits explained.

Next came the equipment used for bass and panfish—light tackle with leaders, split shot sinkers and small hooks. The group was shown the proper use of quill bobbers, how to hook worms and minnows, and how to set hooks and handle the fish when they took the bait.

Trolling with spinner and minnow for crappies and bass was demonstrated. There were the proper methods of knotting nylon, with the instructors using clothesline and looped arms as props. And, because southern Iowa is bluegill and crappie country, the group was shown the use of light fly rods. Methods of tying on plugs and hooks were demonstrated, and Bill Tate, one of the instructors, showed how to hook crayfish for bait.

"You hear that hard-shelled crawdads aren't good bait," he said. "Don't believe it. Most fishermen don't like them because their hard pincers grasp twigs and grass on the bottoms. Just break off the hardshell's pincers and he's as good a bait as a softshell."

"Hook the crawdads tail-first," Tate continued, "but put the hook at one side of the tail. If it's at the side it will tear out easily when you set the hook, and hook in the fish's mouth. If you hook the crawdad solidly in the center of the tail you'll just jerk the crawdad out of the fish's mouth

RECENT RECORDS OF THE OTTER IN IOWA

By Glen C. Sanderson
Game Biologist

when you strike."

When the class got around to the catfish curriculum, two local fishermen took over and explained their methods and tackle. They were men who catch catfish, and the crowd knew it. They listened and learned.

When the program had ended and it was nearly dark, one of the audience came up to Tate. "I've been fishing crappies for years", he said, "but I've never done too well. I got to thinking about this flyfishing, and the fish I'd seen fly-fishermen catch. I couldn't afford a fly rod so I used a cane pole, casting line, and tied on a long nylon leader and a fly. I caught 200 crappies last summer, and that's the most I've ever caught in my life."

Which is a good summary of what the fishing clinics try to get done—teach local fishermen to catch local fish efficiently.

There are fish in Iowa; plenty of them. But the expert, consistent fishermen are comparatively few. In the 1953 Wildlife Biology Seminar at Waterloo, a sportsman asked Dr. Kenneth Carlander of Iowa State College what the greatest need in fisheries management was today, and how fishing could be improved. Carlander answered without hesitation: "Better fishermen!"

He meant better fishermen to catch the old lunkers that die of old age in Iowa waters each year, and better fishermen to help thin out populations before they become overcrowded. And more and better fishermen mean a greater, more intelligent interest in the affairs of fisheries management and conservation.

One approach to this need has been Kids' Fish Days, on which children fish in special waters that have been heavily stocked for the occasion.

These Kids' Fish Days have value, but their value is limited. To children in large urban areas with no facilities to learn the love of fishing, Fish Days may be the answer. In cities near large lakes and rivers, such programs have little practical value. In addition, the State Conservation Commission believes that children should learn that there is more to fishing than hauling bullheads out of a heavily stocked pond.

Most of the old fish management practices are limited in their benefits to fishermen. The only modern fish management practice that offers unlimited benefits to both fishermen and fish conservation is more effective angling for the most abundant local fish species.

There are many problems in fisheries management, but a program of teaching anglers to improve their fishing is one solution. Like any phase of fish or game management, it is only a partial answer. But from here it looks like a good one.

There is little doubt that the river otter is the rarest carnivore now found in Iowa. In March, 1944, the IOWA CONSERVATIONIST reported that the otter was "... considered by most naturalists extinct in Iowa as early as the 1880's. . . ." This same issue gave a few reports and rumors of otters in Iowa up to the early 1930's and stated that Conservation Officer Charlie Adamson of Davenport found otter tracks in his territory during 1943. In 1944 Conservation Officer George Kaufman reported the discovery of an otter den along the Mississippi River in Allamakee County. At that time Kaufman believed that the otter had been present in his territory for several years.

In June, 1953, Conservation Officers reported the otter as common in Clayton and Allamakee counties and rare in Dubuque, Jackson, Clinton, and Scott counties—all along the Mississippi River. According to these reports, there were no otters present in any other Iowa counties. The last otters reported along the Missouri River in Iowa were two trapped in 1929 near Smithland in Woodbury County. These were reported by Conservation Officer Walt Trusell of Sioux City.

Over the past few years the CONSERVATIONIST has carried articles and notes telling the interesting habits and life history features of this large cousin of the mink. Not the least amazing among its adaptations for aquatic life is the fact that it can swim under water for a quarter of a mile without coming up for air. River otters have been drowned in crab pots set at a depth of about 60 feet.

Kaufman reports that in recent years he has received an average of one to three otters each year that have drowned in commercial fishermen's nets on the Mississippi River in Allamakee and Clayton counties. Conservation officers along the Mississippi River in Dubuque, Jackson, Clinton and Scott

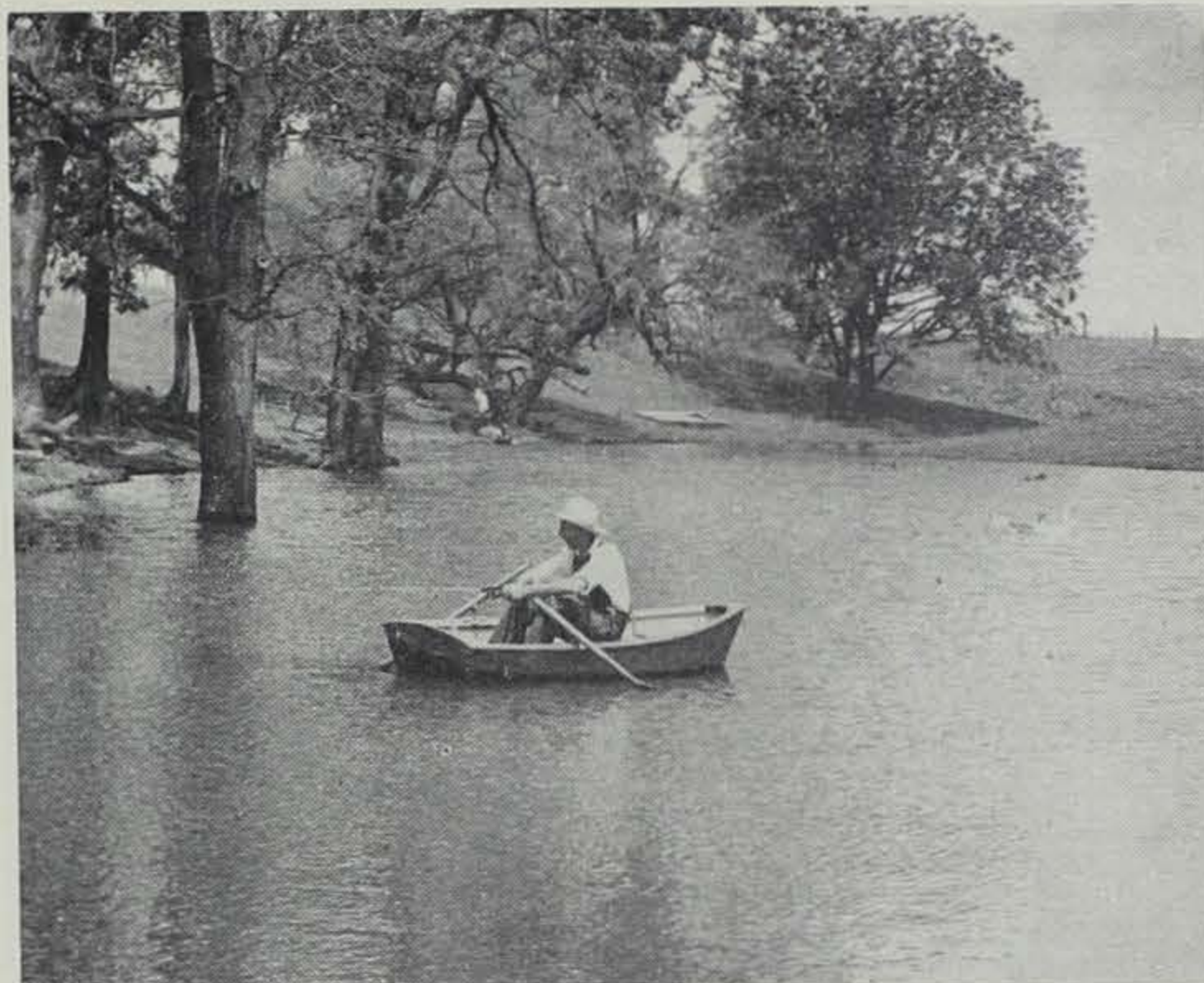
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Ten years ago this was the only known otter den in the state. In recent years these beautiful water animals have become common in several eastern counties.



The overflow of Mill Creek at Lake Macbride is a favorite place for Iowa's Sunday vacationers. Jim Sherman Photo.



If your boat fills with water, just drill another hole in it for the water to drain out.

A SUNDAY VACATION

Like to swim? Sail? Fish? Picnic? Hike?

You can do all these at Lake Macbride State Park, a pleasant 80-mile drive from the Quad-cities.

Often called the "most charming of Iowa's state parks, Lake Macbride is a scenic, sprawling recreation area of 728 acres.

Wooded trails rim the 138-acre lake, the center of all activities in the park.

Here, you can swim in the clear, blue water. Or loaf and sun on the sandy beaches. Lifeguards are always on duty at the beach.

If you're a fishing fan, Lake Macbride is for you.

Roy Reed, park custodian, reported Saturday, that crappie and bullheads were biting good. Some fishermen were having luck with bass.

You dictate your own style of fishing at Lake Macbride. If you're an easy-going pole and line fisherman, you'll enjoy the shady banks, dropping your line into the deep holes where the bullheads lurk.

Like to go out into a boat? You can rent your own boat at Lake Macbride, or bring your own to the lake. Outboard motors, of not more than five horsepower, are permitted on the water.

Sailing is a sport growing in popularity. Many folks drive to Macbride just to loaf on the banks and watch the sailboats cut their capers on the lake.

Lake Macbride is located north of Iowa City near Solon. It's close enough to the Quad-Cities to reach easily in less than two hours driving.

On sunny warm weekends, the lake draws big crowds. But the park is prepared, so you shouldn't have trouble finding a place to picnic.

There are 150 picnic benches and 50 fireplaces in the five picnic areas. Many families prefer to leave the picnic areas behind and

"strike out" by themselves for a scenic spot to spread their picnic lunch on the grassy shore of the lake.

In case of rain, there's a large shelter house for picknickers.

For the swimmers there are dressing rooms adjoining the lake.

There are no cabins, nor is "camping out" permitted at the park.

Macbride is a man-made lake. It was formed by the closing-off of Mill Creek above its junction with the Iowa river. At a point where the overflow enters the river, a beautiful waterfall has been formed.

Water tumbles over a natural stone formation to create one of the most scenic sections of any park in Iowa.

To reach Lake Macbride from the Quad-Cities, the best route is to take Highway No. 6 out of Davenport to Iowa City. From there link onto Route 261 north, traveling 14 miles to Solon. At Solon turn left four miles on route 382. There are signs to plainly mark the way to Lake Macbride. So—there you are! Have fun!—*Davenport Democrat*.

Do you have a boat that leaks or gets full of rain water every week? A self-bailer built into a boat helps. You can build your own self-bailer by drilling a hole low in the transom of your boat and fitting it with a removable plug.

To bail the boat you need only remove the plug while going full speed with your motor. Another use of a self-bailing plug is that it can be removed while your boat is on a trailer or car top. That keeps the boat from filling up with water and putting your car in the ditch as it splashes back and forth.

One 1954 outboard motor is equipped with a built-in bailer. Another new gadget on the market

this year is a self-bailer unit you can attach to any outboard motor. Even a foot-operated bilge pump is available.—*Forest, Field and Stream, Russ Graham, Cedar Rapids Gazette*.

Seton tells of a phase in some foxes that produces a "Samson" fox or "scorched" fox. In such an animal, the fur is short and woolly, with no long guard hairs. The pelt has no commercial value.—*J. M.*

There have been actual cases in which king cobras have killed adult elephants. This usually happened when the elephants were bitten above the toes or on the fleshy finger at the end of the trunk.—*J. M.*

PHEASANTS HARD HIT BY FLOODS

Game biologists of the State Conservation Commission and Iowa State College have said that Iowa's heavy rains and severe floods will probably cut into this year's pheasant crop in some of the major pheasant areas of the state.

In 1944 rains and floods reduced pheasant populations from one-

third to one-half in flooded parts of Story County. The biologists fear that similar flood mortality will be repeated this year in some portions of northern Iowa. Some of the most severe flooding occurred in prime pheasant nesting cover: the sides of drainage ditches, in low meadows and low river lands.

Commission spokesmen stated that while floods can drown young and adult pheasants in their nests, one of the most serious effects is the cold rain on incubating eggs. When first laid, pheasant eggs can stand short periods of low temperatures, but as incubation progresses the eggs become more and more sensitive to chilling rains. Game bird studies in other states indicate that while some young birds survive cool, wet springs, they may be weakened and fall prey to disease later in the season.

Many of the heaviest rains this year have been in Iowa's best pheasant range—north-central and northwestern part of the state. Reports state that at the flood peak, for example, 20 percent of Hancock County was under water.

Studies will be made by the Conservation Commission to determine the extent of the flood kill of pheasants.—*Conservation Notes*.



June, 1954. Portrait of a pheasant nesting area. Jim Sherman Photo.



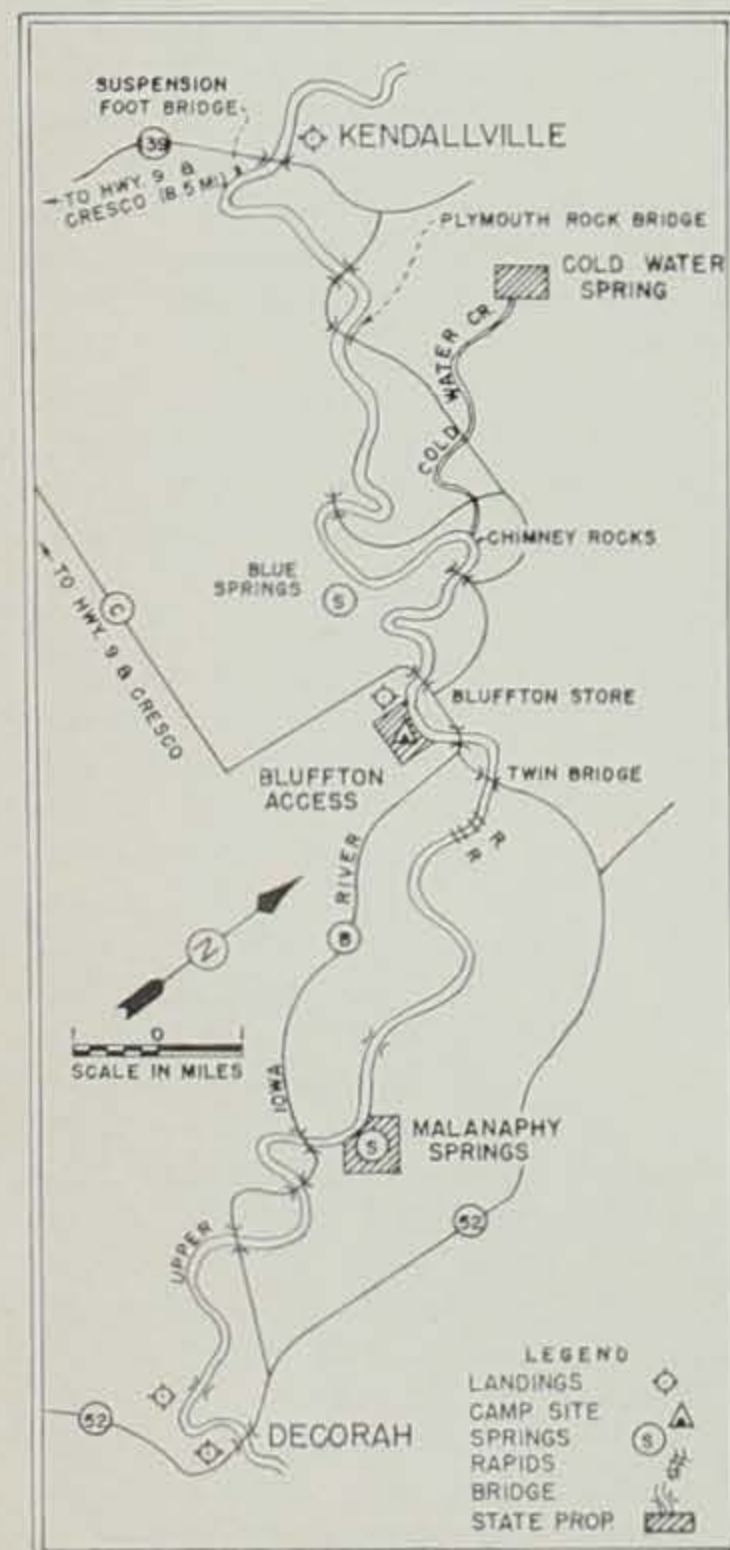
Flowing through long stretches of limestone cliffs and bedrock, the Upper Iowa offers some of Iowa's best smallmouth bass fishing. Jim Sherman Photo.

Canoeing . . .

(Continued from page 49)
 current. There are no dangerous rapids. Occasionally it is necessary to drag the canoe over riffles and shallow spots.

For the convenience of the canoeist all distances mentioned have been converted into approximate traveling times. The total traveling time will be about six hours to Bluffton, and five hours more to Decorah. The times shown are for normal water levels prevailing in June. In particularly low water these times should be increased.

Kendallville is one and one-half miles east and seven miles north of Cresco, on Highway 139. The canoe can be put in on the north side of the river above the bridge.



In the first seven miles (three hours) are three highway bridges and a suspension footbridge. The latter, one-fourth mile from the put-in point, was erected by the county to enable the local children to cross the river to school. About seven-eighths mile (one-half hour) below the third highway bridge, and marked by a long and prominent sandbar on the right bank at the foot of a vertical limestone wall, are Blue Springs. Here a sizable stream of cold, bluish water gushes from the rock wall into the river.

Leaving Blue Springs, the river proceeds straight north about two and three-fourths miles (one hour) and then doubles back south for a similar distance. On the map this loop resembles a huge arrowhead. At the north point of the arrowhead a beautiful little trout stream, Coldwater Creek, enters the river from the left bank through a park-like meadow. Below the mouth of Coldwater Creek, along the left bank, are the spectacular Chimney Rocks, massive pillars of stone 50 feet in diameter and 200 feet high.

Three-fourths mile (one-half hour) below Coldwater Creek is the fourth highway bridge. From here the river winds about two and three-fourths miles (one and one-fourth hours) south and east past a series of impressive limestone walls to the Bluffton bridge. Watch out for the fence directly under the bridge. There is a good take-out place on the right bank below the bridge. The Bluffton store (cold beer and pop) is about one-fourth mile east of the bridge, i.e., on the left side of the river.

From Bluffton the general course of the river to Decorah is south and east. The land along the massive rock wall on the right bank below the Bluffton bridge is owned by the state. It was purchased to preserve the balsam fir trees found there. One and one-half miles (one-half hour) below the Bluffton bridge is the first of seven highway bridges between Bluffton and De-

corah. Twin Bridge is about one-half mile (one-fourth hour) farther on.

Below Twin Bridge for several miles the current is swift. In this stretch, three-fourths mile (one-fourth hour) below Twin Bridge, is the largest rapids in the two-day trip. An old stone barn will be seen on the left bank opposite the rapids. In low water it may be necessary to make a short carry here. After this stretch of fast water there is a distinct change in the character of the river. The bluffs gradually recede from the river. The river widens, the current slackens, and shallow stretches become more frequent.

Five and one-fourth miles (one and three-fourths hours) downstream from Twin Bridge, on the left bank is a beautiful waterfall. This is Malanaphy Springs, presented to the people of Iowa by Dr. Fred Biermann of Decorah. This is an interesting place to explore, and makes a nice spot for lunch.

Below Malanaphy Springs the river flows slowly through farm lands in a wide valley for another six and one-half miles (two and one-fourth hours) under four highway bridges. Just before coming to the last of these bridges the buildings of Luther College can be seen to the left on the high ground back from the river. There are several attractive homes with picture windows overlooking the river on the left bank just above this bridge. In periods of low water it is recommended that this be the take-out point, on the left bank immediately below the bridge.

In normal water the canoeist can proceed another one and one-fourth miles (one-fourth hours) to the usual take-out place. This is on the right bank, some 300 yards upstream from the Highway 52 bridge, where the remains of an old dam and a water level gauge can be seen.

A trip on this unique stream at any season is highly recommended.

A fall trip when the foliage of the hardwoods is at the height of its color is an experience long to be remembered. As there are twelve bridges between Kendallville and Decorah, all easily reached, a trip of any duration can be planned. If a serious job of fishing is to be done in this topnotch smallmouth stream, two days from Kendallville to Bluffton and another two to Decorah is not too much.

A fine fishing bobber can be quickly made by sticking a piece of adhesive tape to a ping pong ball, leaving a small loop for the line. Such a bobber will not damage the finish of a fine fly line, and can be adjusted for any depth.—
 J. M.

The eyes of one of our predacious diving beetles are split into upper and lower halves. The upper half of each eye is used for watching above the water's surface, and the lower half is used to spot food in the water.—
 J. M.

GOOD WEATHER FOR RATTLESNAKES

With the hot days of May and early June, timber rattlesnakes in the rocky, more rugged corners of the state emerge from their deep wintering crevices and bask in the sun on rocks and ledges. They are often concentrated in large numbers at this time, and professional and amateur snake hunters kill them for sport and bounty.

These six timber rattlers were killed on the bluff at Village Creek in Allamakee County. They were part of a haul of 40 rattlers killed this spring by Dewey Sandry and Irvin Sess, both of Lansing. The two men use wire hooks on poles to catch the snakes, then kill them.

There is an optional bounty of 50 cents on rattlesnakes in Iowa, for which the rattles and two inches of the tail must be presented. In 1953, county auditors paid a total of \$563 in rattlesnakes bounties.



These two hunters earned \$20 the hard way.



Jim Sherman Photo.
By the tables, this 16-inch bass weighs about 2 pounds 8 ounces. It actually weighed 2 pounds 4 ounces.

Weighing Fish . . .

(Continued from page 49)

NORTHERN PIKE:

Pounds	Inches (Total Length)
.06	8.1
.65	15.0
1.55	19.7
3.23	24.3
4.06	29.0
5.41	31.3
7.70	33.6
10.56	35.9

WALLEYE PIKE:

Ounces	Inches (Total Length)
7.9	11.9
12.5	13.0
16.7	14.9
29.1	16.6
38.4	19.5
70.4	24.2
117.0	28.0

WHITE BASS:

Ounces	Inches (Total Length)
0.4	3.9
2.9	7.1
6.0	9.1
9.6	11.1
14.0	12.2
21.2	13.2
26.0	14.8
30.8	15.3
43.1	17.4

YELLOW BASS:

Ounces	Inches (Total Length)
2.1	5.2
2.7	6.5
4.8	8.0
5.3	8.4
7.6	9.5
8.9	10.4
9.8	10.9
10.2	11.2

LARGEMOUTH BASS:

Ounces	Inches (Total Length)
1.75	6.2
4.5	7.8
13.0	11.5
1 Lb. 7 Oz.	15.1
2 Lb. 8 Oz.	16.3
6 Lb. 3 Oz. (High)	18.7

WHITE CRAPPIE:

Ounces	Inches (Total Length)
.9	5.1
4.2	7.4
4.5	8.5
8.0	10.6
11.6	11.7
15.5	12.8
19.2	13.3

BLACK CRAPPIE:

Ounces	Inches (Total Length)
1.1	4.8
4.4	8.0
7.3	8.9
13.2 (High)	11.0
20.9 (High)	13.3
23.5	14.0

CARP:

Pounds	Inches (Total Length)
.9	11.9
1.4	14.0
2.3	15.9
4.2	20.7
5.7	22.6
6.8	25.0
9.8	27.3
16.2	30.2
17.7	33.4
37.1	40.5

Weights of fish vary greatly with the health and condition of the fish and the waters that produce them.

Southern fish usually grow faster than their northern cousins because of more fertile waters, more food and a longer warm growing season. In an overcrowded lake where food and space is at a premium, or in a sterile lake with little food, fish are likely to be stunted, thin, or both, and the above tables would rarely apply.

The tables were taken from a comparatively small number of fish and are not exact or infallible rules. But they will give a good picture of the approximate weights for the lengths of the listed fishes. For average Iowa fish under average water and food conditions the tables furnish a method of weighing fish with a ruler.

THERE'S NOTHING REALLY NEW—

Although split bamboo fishing rods are being largely replaced by the new fibreglass rods, the two types have much in common.

Glass rods are made of fine glass fibres that are insulated from each other with special resins applied under great heat and pressure. The basic material—glass—is composed of silica and is manufactured from sand.

Bamboo that is used in split bamboo rods must be extremely tough, and is manufactured from the "rind" or outer layer of selected bamboo stalks. Bamboo growing on the sandy hillsides of Tonkin Province in China has been considered as the finest variety for rods because its rind has a very high content of a substance called lignin. This lignin contains a silica compound that is really a type of natural glass.



Thomas J. Kakac Photo.
At one time Iowa had true timber wolves like this 120-pounder. Our present day "wolves" are coyotes, often called brush wolves.

A PROBLEM OF WOLVES

It hasn't been many years since Iowa had wolves; not the "brush wolf" or coyote of today, but the genuine, old-fashioned, rip-snorting article . . . the prairie or buffalo wolf.

Although there was a statewide bounty as early as 1858, the Iowa State Breeders and Wool Growers Association lobbied in 1892 to increase the wolf bounty to \$5 for every adult and \$2 for every whelp.

As quoted in Young and Goldman's *Wolves of North America*, a typical statement of the day was one of A. J. Blakely, a sheep breeder of Grinnell:

"The wolf, not merely figuratively, is at the door of many an Iowa farmer, but the real wolves, large wolves, prowl over the Iowa farms in increasing numbers, seeking what they may devour. No census like that of their cousins, the dogs, has ever been made. . . . But their name is legion. Much of the best sheep lands of the State, the bluffy, bushy portions along the streams and adjacent to timber belts cannot be pastured with sheep. . . . Sheep can't live there now on account of wolves, and chickens and turkeys must every night roost very high. . . . Really it is a stain, a foul stigma on the civilization and enterprise of the people of Iowa that these wolves remain and are frequently seen crossing our best cultivated farms, and even near the best towns in our State."

"What is the remedy, do you ask? Wipe out all trifling and un-

equal bounties and induce the legislature to provide a State bounty of \$20 for the scalps of the old wolves and \$5 for the young ones. The boys will then arm themselves with the best rifles of long range, will watch and hunt for the game, and speedily exterminate their lupine race."

. . . and they did.—J.M.

Otter . . .

(Continued from page 52)

counties have seen otter signs in recent years, but it wasn't until this past spring that a specimen was obtained from south of Clayton County.

Early in March a beaver trapper, Mr. Sylvester Zimmer of Bellevue, trapping during Iowa's recent spring beaver season, caught a female otter. This animal was taken north of Bellevue and south of Gordon's Ferry on the Mississippi River in Jackson County and was the most southern Iowa record of a specimen taken in recent years. Because the otter was drowned in the beaver set and there is a continuous closed season on the otter in Iowa, the otter was turned over to the Conservation Officer Carl Warren of Maquoketa.

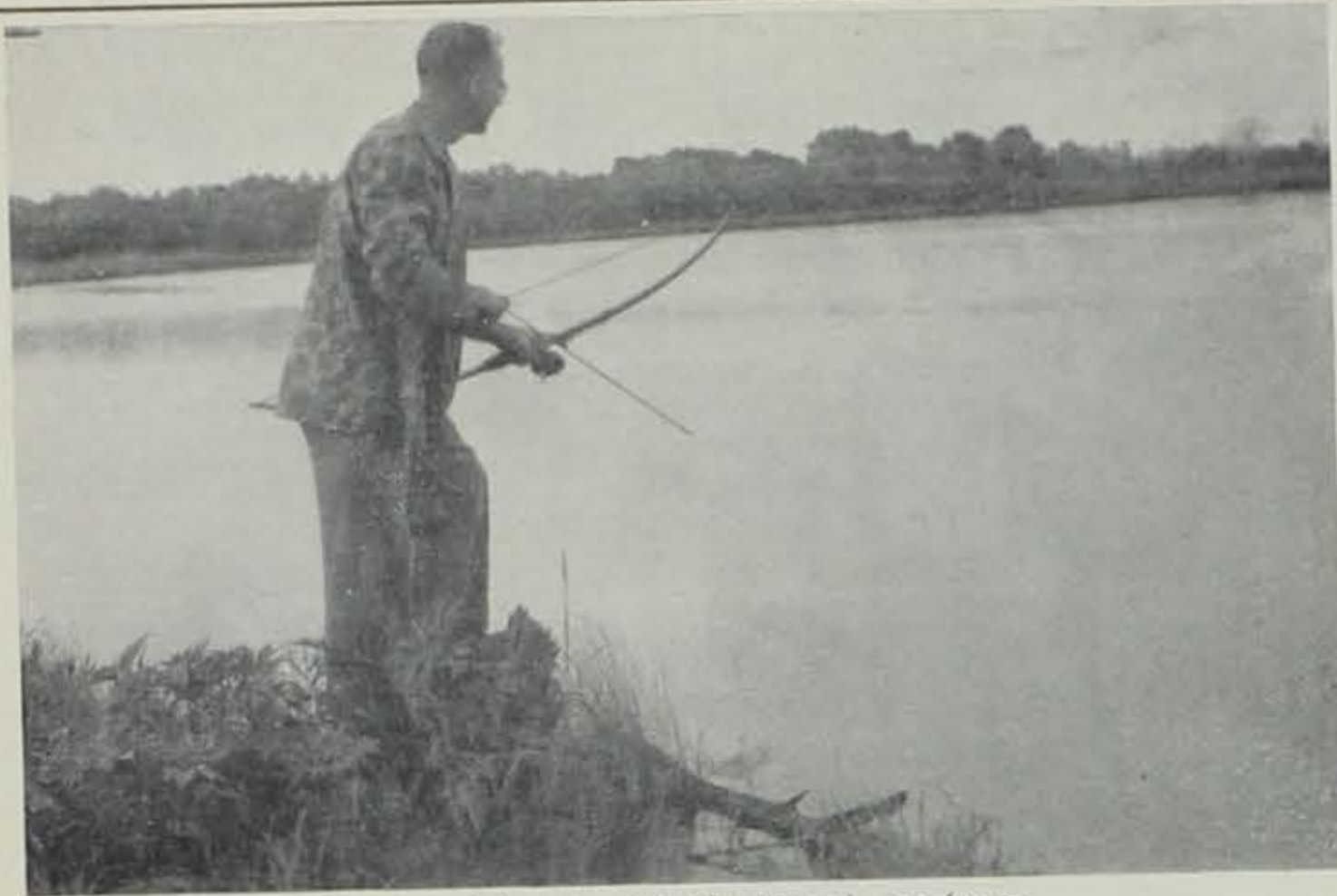
This southernmost record was soon broken; on April 7 a large adult male otter weighing 22.5 pounds was drowned in a commercial fishermen's net in Running Slough, Green Island Bottoms, Jackson County, a few miles south of Bellevue. This animal was also turned over to Conservation Officer Carl Warren.

The following day, April 8, a female weighing 17 pounds, was drowned in a buffalo net in eight feet of water five miles north of Lansing, Allamakee County. This animal was taken by Mr. Charles Hartman, a commercial fisherman, who turned it over to Conservation Officer George Kaufman of Lansing.

These last two animals were weighed and measured and the skulls saved for museum specimens. Only the skin of the first otter was available, but all three skins will be prepared as scientific specimens of Iowa's rarest carnivore. The stomachs of the two animals taken from the fish traps were empty.

In case of snakebite, precaution should be used in giving shots of antivenin. This material, used to neutralize snake poison, is manufactured from horse serum. Some people have violent allergies to horse serum, and in these cases the cure may be more dangerous than the snakebite.—J.M.

Ruddy ducks are among our strangest waterfowl. Although not much bigger than a teal, they lay eggs almost as large as a turkey's. They frequently raise and spread their short tail much as a turkey might do, and their legs are so far back on their body that they can hardly walk on dry land.—J. M.



The bowfisherman—Iowa's newest sportsman.

Bowfishing . . .

(Continued from page 49)

rowhead, he aimed at the roots of the grass and drove his arrow through the back of another carp, not as large as the first one, but still a good two pounds.

Keefer turned to his mosquito-riddled reporter and said, "Lesson number two . . . when the water's high like this they like to come up into the shallows and poke around the grass roots. Some nights they sound like a herd of hogs in here."

Across the lake were five other bow-fishermen, sometimes driving their arrows into fish, and sometimes driving the arrows into the muddy lake bottom. When this happened, the hot night grew even hotter. A hunter on our side, quitting for the night, walked up with three large fish that he had taken with a crossbow. The powerful weapon had shot arrows entirely through two of the fish, hooking and stringing them with one shot.

At 5 o'clock next morning we were at it again, hunting a wide, slow creek that flowed into Upper Dudgeon Lake. The carp were up before us, splashing furiously in the shallow edges as they fed and spawned.

Keefer stalked his fish carefully; walking a short distance and then stopping, sometimes in mid-step, to watch and listen. The morning was overcast and muggy, and the glassy surface of the creek reflected the white sky back into the eyes of the hunter. It was almost impossible to see fish any distance from shore, but those near the bank



A light, inexpensive spinning reel adapts itself perfectly to the bow and arrow.

could be seen dimly at certain angles. The first kill of the morning was a 20-inch carp that swam slowly along about five feet from the bank. At such short range the arrow passed completely through him from gill cover to gill cover.

Although the light was miserable, Keefer took four carp in about twenty minutes, passing up several smaller fish. They averaged about three pounds, a long way from the lakes' record of 9½ pounds. It was, in Keefer's opinion, a poor morning.

His equipment was simple but deadly. Keefer uses a light 30-pound bow that is more than adequate for bow-fishing. His arrows are of hollow aluminum tubing, about 32 inches long, with detachable head and nock sections. The arrowheads are fairly blunt and on each side is a needle-sharp prong of tool steel. With these two-inch-long barbs through them, no fish escaped. The arrows had no fletching or feathers, but were held true in flight by the trailing nylon line.

Several years ago the common line reel for bow-fishing was a simple spool fastened to the bow above the riser, or hand grip. Today many of the bow-fishermen are using inexpensive spinning reels that are either taped to the bow or held in the hand and gripped to the bow by a metal strap fastened to the reel.

Most of Keefer's shots are at short range because of light reflection from the water. He has also found that the longer the shot, the sharper the angle at which the arrow enters the water, and the arrow often planes up through the water. It is possible to kill a fish with an arrow through two or more feet of water, but the average is about five inches.

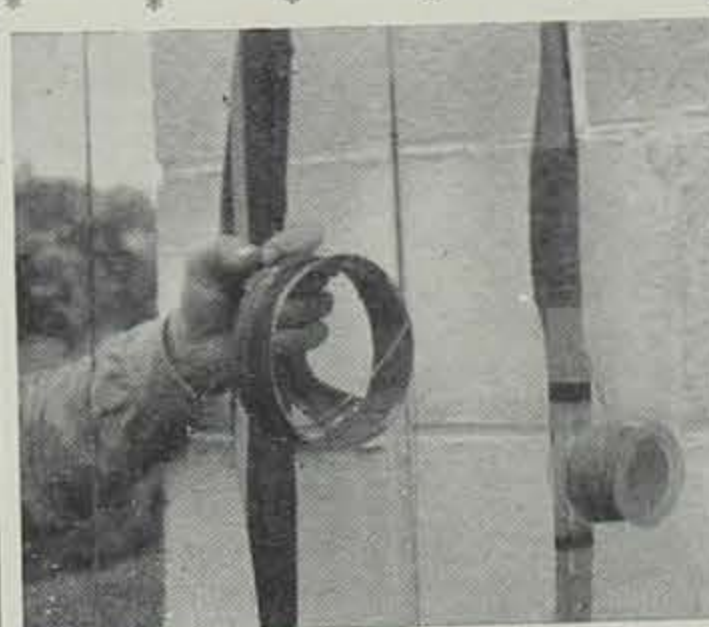
In many waters, as in Dudgeon Lake, a good shot that isn't too fussy can kill a couple of dozen carp in a morning, but most of the experienced archers have grown choosy and shoot only the bigger fish. In the second year of bow-fishing at Dudgeon Lake, no game fish have been shot by accident.

We asked Keefer for some tips on bow-fishing; some of the things he and his friends have learned

from scratch since the rough fish spearing season opened a year ago:

1. The best times to hunt carp are in the early morning and early evening.
 2. The best places to hunt carp are in ponds, sloughs and backwaters, especially when these waters are high and the fish come up into the shallows to spawn and feed. Good shooting may sometimes be had from low bridges.
 3. The average range is about 15 feet. Longer shots become more difficult, owing to refraction of the water and planing of the arrows.
 4. Shoot at fish when they are sideways to you. Shots at fish coming head-on offer difficult targets. Hold your fire; the fish will turn and give you a good shot.
 5. Most misses are too high—aim plenty low.
 6. Try to get the arrow into the fish's head or back. If shot in the tail the fish can fight violently and break line or shake the arrow; if shot in the body or soft abdomen the arrow may tear loose.
 7. A shot in the head or behind the head in the neck or gill region is best.
 8. Work along the banks quietly. The fish are sensitive to vibration and noise. Some bow-fishermen even wear neutral-colored clothing that blends in with the background.
- Equipment for bow-fishing need not be expensive. A simple spinning reel doesn't cost much, and an ordinary wooden or plastic line spool, such as those on which line is sold, costs nothing. Trim off the outer lip of the edge of the spool so that the line can uncoil freely, glue a strip of wood to the back of the spool, tape the spool to the back of your bow above your hand, and you're in business. Good fish arrows can be made from ordinary target arrows. Drive a small finishing nail at an angle into the shaft just back of the arrowhead. Sharpen the nail with a file or stone, leaving about a half-inch of nail projecting. Line can be fastened to the nock of the arrow by either drilling a tiny hole through the arrow shaft and looping line through it, or by using fine wire to wrap the line to the end of the arrow. Use monofilament spinning line of about 6-10 pound test.

Iowa's first general fish-spearing



Simple line spools, efficient and easy to make, are preferred by many bowfishermen.

season was opened early last summer, and provided that rough fish could be taken between sunrise and sunset daily from May 1 through October 31. The season is open in any waters open to fishing, and affects carp, buffalo, dogfish, gar, quillback and gizzard shad.

Although many archers and fishermen were excited about the new sport, last year's low water levels prevented them from doing much about it. This year it's different. Our heavy June rains and floods brought many rough fish up into grassy shallows and basins, and as the flood waters recede there will be many fish trapped in fields and riverbanks. Bow-fishing, Iowa's youngest outdoor sport, should come into its own.

Yellow Bass . . .

(Continued from page 50)

studies indicated that the Clear Lake perch were not stunted but were growing rather rapidly. They were dying early, however, and very few of the perch lived over two years. Again, why?

Perhaps I should not even attempt to answer this one. We have very little evidence. Just a hunch. Clear Lake, with a maximum depth of 18 feet, is thoroughly mixed by the wind throughout the summer and the water sometimes warms up to about 80° F. even on the bottom. The yellow perch is primarily a northern fish and will not survive in really warm water. Possibly the larger perch are less resistant to the warm water than the smaller ones. If this is true, we may expect larger perch in Clear Lake only after one or two cool summers. The summers of 1947, 1948 and 1949 were particularly hot. The summers of 1950, 1951, and 1952 were fairly cool and some larger perch have been noted in these years.

Nineteen fifty-one will probably long be remembered as the wall-eye year at Clear Lake. That year the early season catch was exceptionally good. Our gillnets had indicated large populations of walleyes in 1949 and 1950. Yet, the fishing those years was rather poor. Then 1951! The walleyes had been there for at least two years; most of those caught in 1951 were probably four to eight years old. Why didn't they bite in 1949 and 1950 like they did in 1951? We would like to know. Possibly the failure of perch to reproduce in 1950 and the subsequent shortage of forage, made the walleyes hungry in the spring of 1951.

We can study the fish populations and observe the changes which take place. We know that fishing can be poor even when there are lots of fish to be caught. Perhaps sometime we will know why fishing is good some years and poor others.

One nail on each hind foot of the beaver has teeth like a comb, and it is reported that the animal uses this special nail to comb mud and burrs out of its fur.—J. M.