

IOWA CONSERVATIONIST

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NEW LIFE FOR OLD DUCK MARSHES

FUNDAMENTALS OF FISHING

Part III THE SPINNING ROD

By Frank Starr
State Conservation Officer

It is interesting to note that spin-fishing technique, a new sport to most of us, can be traced back through the centuries, starting with primitive Indians who cast lines in a spinning manner from wooden pegs or spindles.

Credit for the invention of the spinning reel goes back to the Englishman, Holden Illingworth, who patented it back in 1905. Since that time spin-fishing has become popular with fishermen in many parts of the world.

The spinning reel differs in many ways from the conventional casting reel that we have grown up with, the most important difference being that the spool of the spinning reel does not revolve after the cast is made. The spool oscillates back and forth during the retrieve so that the line is wound back on the spool in an even manner and the angler is ready for the next cast.

No More Backlash

The weight of the cast bait or lure is the only force that peels the lines off the spool and once the bait strikes the water the cast is completed and the line stops unspooling. This outstanding feature of the spinning reel eliminates backlashes that even the best fishermen experience.

Most spinning reels are mounted underneath the rod, and the end of the spool or its axis is pointed toward the tip of the rod.

The theory of spinning reels can be easily understood by taking a common spool of sewing thread in one hand and peeling the thread off over the rim of the spool. It's that simple.

Formerly, most of the spinning equipment used by American anglers was manufactured in foreign countries, but today our factories are mass-producing many brands

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Jim Sherman Photo.
A duck marsh should look like this, and not a barren, lifeless puddle. Under the new marsh management program several famous old duck lakes are being revegetated, and tomorrow's shooting may be like yesterday's.

Canoeing the Iowa River—Alden to Liscomb

By Ralph Church and Harold Allen

Throughout most of its length the Iowa River is a typical prairie stream—shallow, meandering, with sand and mud bottom, high mud banks and a slow current. Its character is very different, however, in the stretch from Alden, 5 miles upstream from Iowa Falls, to a point a short distance below Eldora.

Here the river runs through a deep, narrow valley, bounded by limestone and sandstone cliffs. The bottom is hard, the current

swift enough for interesting canoeing, and the scenery excellent. The river is shallow even in this stretch, however. It is no place for lake boats and a motor is more a hindrance than a help. A metal canoe has definite advantages over a canvas one in this shallow rocky water.

At Iowa Falls there is a large 26 head foot power dam. It is only a short distance below Alden, so most canoeists running the river will wish to start below the dam. If you have the time, how-

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John Madson
Education Assistant

Until recent years West Swan Lake, Rush Lake, Eagle Lake and East Twin Lake in north-central and northwestern Iowa were famed duck marshes, the mecca of thousands of hunters.

They were heavily grown with river and roundstem bulrush, cattail, arrowhead and duckweed and smartweed, with shorelines of dense marsh grasses and sedges. They were ideal duck habitat, raising native waterfowl and attracting south-bound migrants.

Waterfowl Towns

Part of northern Iowa's chain of shallow prairie lakes, they supported enormous gun pressure, and the area's fame even named three nearby towns: Curlew, Plover and Mallard. This district was the workshop of the old market hunters and special excursion trains visited the lakes and pot-holes on weekends with city sports out for a few days' gunning.

Then, as civilization and its intensive agriculture crowded in on the lakes, these things vanished in a few short years. A combination of factors conspired to wipe out the aquatic vegetation; the silt-laden water was probably the most important since it blocked off sun from the plant roots and in the spring many of the seeds simply never awakened. The lakes lost their great value as fishing and hunting areas, becoming shallow basins filled with muddy water and practically no vegetation.

Certain old management methods had hastened the decline of these marshes. Sportsmen and farmers in the area believed, and understandably so, that if a little water was a good thing, more water would be even better. Dams were built at the outlets, filling the marshes to the brim. This was supposed to make the marshes into real fishing lakes, which they were not. Immigrant carp and other rough fish rooted the bottom and helped destroy vegetation. Emergent vegetation is also often sensitive to sharp rises in water

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GIZZARD SHAD INCREASE IN NORTH TWIN

By Joseph H. Kutkuhn

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On calm days last summer, vast schools of small silvery fish could be seen feeding at the surface of North Twin Lake.

They were gizzard shad or "skip-jack," a widely distributed freshwater relative of the herring that has been present in North Twin for some time, but never before in such numbers. We do not know the specific causes of this "eruption" of shad. Spawning conditions last spring must have been ideal to permit such an increase in the shad population.

The sudden increase of gizzard shad in North Twin Lake, although representing a greatly augmented food supply for certain fishes, has aroused the concern of anglers fishing the lake. To be sure, the superabundance of this and other so-called undesirable species has been and continues to be a headache to conservation agencies.

However, large populations of gizzard shad are quite typical of many warmwater lakes and reservoirs. Furthermore, sharp fluctuations in shad abundance seem to be fairly commonplace. This fish is apparently much more sensitive to sudden environmental changes than its hardier cousins. And if adversely affected by such changes, it is more than capable of rapidly replenishing its numbers. Given ideal conditions, it is a very prolific breeder. (But to what extent an exceptionally large shad population may be harmful to the existing desirable fishes is not known.) Surely it represents a food supply of great potential. The general opinion is that large numbers of shad may seriously compete with other fishes for living space. Indirect competition with young game fishes for food is also considered a possibility.

Since in most instances shad cannot be entirely eradicated, much



Closely related to herrings, gizzard shad become "weed fish" in Iowa lakes, competing with game fish for food and space. Tons of them are netted each year by Iowa's rough fish removal crews.

emphasis has been placed on their control. One of the chief questions has been: Can the predatory game species (walleyes, northerns and bass) control these fish? In some parts of the country such control has been reasonably realized. But in many localities, the game fish cannot keep pace with the fast-growing shad. Shad often attain a size by the end of their first summer which the game fish cannot utilize with the result that desirable control may not be achieved. Often man has had to step in and help by promoting rough fish removal programs. (Certainly other factors enter the picture but the principle of maintaining predator-prey balance seems to hold the spotlight at present.)

The 1954 investigation at North Twin Lake showed quite convincingly that the game fish were doing their best to keep the shad under control. Just how effective they have been in this control remains to be seen. The fact that a large majority of the game fish, especially the adult yellow bass, yellow perch, walleyes, and bullheads, fed mainly on gizzard shad during the 1954 summer is encouraging. Of the adult game fish that ate forage fish, 86 per cent utilized the small shad as compared to the 1953 summer when only one-half per cent of the fish-eating game fish that were examined contained shad. The chief forage fish in 1953 happened to be young-of-the-year yellow bass. These outnumbered the shad 27 to 1 in game fish stomachs examined at that time. Systematic fish collections made throughout each summer to determine relative forage fish abundance indicated that small yellow bass predominated in 1953. And as was expected, small gizzard shad were the dominant for-

age available throughout the 1954 summer and there were fewer small yellow bass in 1954 than in the previous year. The proportion of shad to bass in the 1954 collections was overwhelmingly greater than the proportion of bass to shad in 1953.

It is fairly obvious from our information that fish food habits can and do reflect changes in abundance of food items. Moreover, such information suggests that fish are not overly selective as to the specific kinds of food they eat. The fish apparently ate that species of forage fish which was most abundant at that time. One might even say they were opportunists. Certainly they took advantage of a good hatch of yellow bass in 1953. But even more important, they also took advantage of an even better hatch of gizzard shad in 1954.

In making use of a greatly increased food supply last summer, it is not unreasonable to assume that several of the most sought-after game species grew more than they might have under more normal conditions. Prospects for good yellow bass fishing at North Twin Lake this coming summer are excellent. We also think it safe to predict that some very nice walleyes will be taken this spring. (And there were.—Ed.) In the angler's favor is the fact that a food supply comparable to that which was prevalent last summer may not be so evident and the fishes' appetites might be extra keen.

Generally speaking, an abundant food supply during the summer months means that the chances of a fish taking your lure are pretty slim. This "lure-shy" characteristic seems to be typical of walleyes,

which are seldom taken on tackle during the hot summer months, even though food habit studies show that they are feeding voraciously.

That's not usually the case with the scrappy yellow bass, however. Studies have shown that although they may be gorging themselves with shad, as they did at North Twin in '54, they'll take your lure or bait. The secret seems to be in fishing during the early morning hours when the "stripers" are actively feeding. Most North Twin anglers think it's worth a try.

CARP FOR AN ANGLING ADVENTURE

Bill Blanchard scoffs at the drivel I write—anyhow, he calls it drivel. Why, insists Bill, fishing is excellent! You fellows, declares Bill, are so silly. All you fish for, he goes on, is for cheap, scavenger fish that are no good to eat and certainly no sport to catch. Bill wound up like this: "You go with me and I'll show you both sport and big fish."

So I went with Bill Blanchard. The lightning was flashing and the thunder was rumbling and the wind was blowing. I inquired if he thought anything would hit under such conditions. Bill's opinion was that if a man were too timid to venture forth, he'd better hang up his stuff and quit talking about fishing. We went.

Well, Bill furnished the bait, the boat and the motor. We fished for carp. Now, don't turn up your nose. We fished for carp—and we caught carp. We lost more than we caught. If I remember correctly Bill got eight and not one was under six pounds. I got four and the biggest was above 12 pounds.

Now, with all due regards for my friends who go all-out for bass, walleyes, northerns and catfish—and I'm one of that gang too—you're positively silly when you call yourself a fisherman and pass up carp.

There isn't a fish anywhere, fresh or salt water, that for its inches has the pull-power of carp. I'm a spin-fishing enthusiast, but when you go carp-fishing, leave your spinning outfit at home. Carp will tear your spinning outfit into so much junk. In fact, if you aren't a really seasoned fisherman, you're going to lose three out of four carp you hook—and if you aren't really good, you'll miss two out of three strikes you get from carp.

Now that day with Bill Blanchard, when he got a carp strike there was action—and right now. They take off. No Cadillac or Lincoln gets going faster than does a carp. And don't think you can hook and land a five-pound carp like you can the same size catfish. It just isn't done.

Ordinarily I'm not a humble fisherman. But Bill Blanchard really humbled me. Whether you believe it or not, if more of us took

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With painful slowness, these lichens are etching away the rock and creating the thin "soil." Yet, in a single generation, man and erosion can destroy the work of ages.

ROCKS, LICHENS AND GRANDFATHERS

First of all there was nothing but the rock. It was a world of sea and stone in which nothing moved. Man was undreamed of, and higher life was only a dim stirring in the sea.

Then, after a long time, a visitor travelled to the rock on a warm wind. It was the tiny spore of a distant lichen, a primitive plant that was little more than a fungus. The spore settled on the rock and prospered.

That spore soon became a visible lichen, a small, living discoloration on the stone. During the warm, moist days it grew, and when the rain stopped and the sun burned down on the rock the lichen slept, awaiting the return of moisture. From the air it drew water vapor which combined within the lichen to form carbonic acid. This weak acid slowly etched the face of the living stone, dissolving minerals used in the lichen's growth. As time passed spores were sent off to other parts of the rock, and the lichen's crust spread.

By now the rock was doomed. The mother lichen furnished a rooting place for the spores of mosses and larger lichens. The roughened areas eroded by the acid gave fingerholds to the wind and rain and small particles of rock began to crumble away. To this was added wind-blown dust that was caught and held by the mosses and foliose lichens. Slowly, painfully, small cracks began to appear in the rock and fill with dust and powdered stone.

For life there must be death, and as the lichens and mosses died they decayed, breathing life into the dust. Little pockets of thin soil began to appear, and the

stage was set.

There finally came a seed, also borne by the wind since there were no birds in that world. It alighted in one of the pockets of rock dust and moss remains and was buried. A young plant sprouted and grew, sending its root tendrils into small cracks that were being opened in the rock by cold and heat. Here the first plant lived for a year, giving off other seeds that germinated, grew, and died.

From the stopping place of the first lichen spore there now grew hardy annual herbs that added to the deepening bed of soil. Farther out grew mosses and foliose lichens and at the outer edge of this plant circle the original crustose lichens still worked at the naked stone. The old boulder continued to weather and soften and the roots of the plants cracked and split it.

To this cradle of life came the first of the grasses; small hardy spears that continued to enrich the mineral dust with organic material, and forming a black, rich soil with their remains.

This all happened long before the memory or coming of man. Through the long, weary millenia the barren rock became a sea of grass that even tempered the elements themselves. And after awhile man came . . .

. . . My grandfather found the place where the rock had been, and he settled the land that had been pioneered by the lichens. He was a good farmer for his time, and a hard, honest worker, but he plowed downhill. The summer rains followed his furrows and the patient labor of ten million years muddied the creek behind his barn. A gully was cut through the black humus and into the glacial clay, and my grandfather moved to another farm.

He has been dead for only twen-

ty years, and the farm still shows the scars that he left. But I walked through the big gully again this spring and saw nature hopefully making another start. On the boulders in the gully banks were a few small lichens.—J.M.

NO IOWA ELEPHANTS YET, BUT BE PATIENT . . .

By John Madson

Even without black panthers and mountain lions, Iowans have enough exotic birds and animals to fire anyone's imagination. Through the years almost everything but wombats and ostriches have been reported in the state, and most of the reports were authentic.

For instance, about six years ago a group of fox hunters near Osage bagged an unusual fox and turned it over to the local conservation officer. It turned out to be an arctic fox, a small white animal that was a long way from home. The skull of the fox was preserved and its worn teeth indicated that it had been a captive animal that had escaped or been released. The owner was never found, but it's a cinch that it didn't just wander down from the arctic circle.

Southern Souvenirs

Most creatures of this kind are either escapees or have been set free by their captors. Almost every summer an alligator turns up in some Iowa river with a fanfare of news stories and much concern over children that are late for supper. Such alligators are always small ones, and obviously souvenirs of southern vacations.

Last month there was quite a fuss around Clinton, where some anglers reported seeing a 5-foot mother alligator and her seven young. The big one got away, six of her progeny were destroyed, and only one small, innocuous alligator remained to back up the story. The adventure collapsed when the mother 'gator and most of her babies proved to be a hoax.



Although fallow deer are found only in the Old World, this one was shot in western Iowa.

Other alligators have shown up in the Skunk River near Ames, Black Hawk Creek near Waterloo, and in the Des Moines River. These were not natives, for an alligator could never over-winter in Iowa; in autumn's chill waters the reptiles would become inactive and almost paralyzed, sinking to the bottom to drown. So perishes a colorful myth.

Odd Deer

About 15 years ago a small, muskrat-like animal was found along the Mississippi in northern Iowa and when no one around the Conservation Commission could identify it, Jim Harlan took the animal to Dr. George Hendrickson at Iowa State College. Hendrickson recognized it as a nutria, a small South American furbearer that had been introduced to Louisiana and other deep-south states. It was undoubtedly a released specimen although some still think that it may have hitch-hiked up the Mississippi on river barges.

During Iowa's first deer season (Continued on page 152)

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Iowans are beset by strange and fearsome creatures, ranging from gorillas to black panthers. Don't laugh; you may catch an alligator on your next fishing trip.



Paul Slater and the Champ. Thousands of us would mortgage our homes to catch such a carp on pole and line, but the big fish was only worth \$2.

A RECORD CARP?

One of the biggest carp ever taken from Iowa waters, and possibly a record fish, was caught in early June by a Mississippi River commercial fisherman, Paul Slater of Fort Madison.

The giant carp weighed 59½ pounds and measured 48 inches. Slater caught the fish on a small Number 1 hook on a trot line. The hook was baited with cut bait about the size of a pea, a common practice among rivermen who may get four trot line baits out of a single angleworm.

Bill Fuchs, State Conservation Officer at Fort Madison, detailed the catch in a recent letter:

"Mr. Slater said the fish offered little resistance. Apparently it did not realize it was hooked until he had it beside the boat. His big landing net barely went over the fish's head. He put his free arm under the fish, tipped his aluminum boat to the side, and rolled the fish in. Then the fun really began. Everything loose ended up in the river."

"Oldtime fishermen say this is the largest carp known to be caught in this area," Fuchs continues. "A few think they have seen larger fish in the river. The carp was donated by Mr. Slater to the Green Bay Chapter of the Izaak Walton League for a fish fry. Paul Jobe, club secretary, and Slater butchered the fish with a carpenter's saw, a hand-ax and some sharp knives. The fish has not been eaten as yet (June 20). On the market it would only have been worth a couple of dollars."

Scales of the carp were sent to Earl Rose, Commission biologist, who aged the fish by counting the *anulli*. These are annual growth rings on the scales, similar to the rings in a tree. The biologist counted 14 of the rings, indicating that the big fish was from 13 to 15 years old.

Conservation Commission offi-

cialists said that they cannot remember a larger carp being taken in Iowa. The world's record carp taken on hook and line, according to *Field and Stream Magazine* records, weighed 55 pounds, 5 ounces, and was caught in Clearwater Lake, Minnesota in 1952. The all-time record carp, according to the same magazine, was an 83-pound, 8-ounce fish caught in Pretoria, South Africa by commercial methods.

Carp . . .

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Bill's viewpoint and instead of weeping dry tears about the lack of bass, walleyes and catfish we'd go after those big carp. We'd be doing fishing a great favor.

How big do these Maquoketa and Wapsie carp get? Well, I've seen any number that go above 15 pounds. And I've seen some that went above 20 pounds. One day a couple of years ago this same Bill Blanchard came in after a couple of hours fishing with eight carp that weighed more than a hundred pounds. Now you so-called game-fish anglers, where can you equal that?

Well, I'm humbled. Instead of bawling about bass and catfish, I'm going after carp. Jerry and Bill are building a huge livebox, and nobody ever tasted fish better-flavored and more eatable than smoked carp. And, besides, I agree with Bill that the smack and lunges of big carp are not outside the category of Canadian north-erns—and the costs are so little. —Manchester Democrat.

Earthworms are very beneficial because of their influence in increasing soil fertility. By opening up the ground and permitting access of air they help freshen it, and by bringing up earth from below to the surface, they serve to develop a thicker layer of humus. —H.H.

GAME — AND THE EDGE OF THE TIMBER

In spite of the storybooks that fill forests with bears, lions, wolves and witches, few mature forests teem with game. Dense, solid stands of unbroken timber may offer little in the way of hunting while open fields and grasslands can be a hunter's paradise. Depending, of course, on what the hunter is looking for.

Most of us in Iowa are after the open-land game species: quail, pheasant, rabbits, and waterfowl. We aren't concerned with the true forest species: ruffed grouse, bear, woodcock and turkey. Except for squirrels, nearly all of our gunning is in the open field.

Maybe that's why many of us are most conscious of game cover prospects on farms and marshes, a logical reaction in a prairie state. We tend to overlook the value of forests to our game supplies, and what they can offer.

First, a point in game management:

Ideal cover is seldom one distinct cover type. It is a combination of cover types. You may kill pheasants where railroad rights-of-way meet cornfields, or shoot quail along a brushy creek that flows through cropland and pasture. Few game species exist in a single cover type, but like places where one type of vegetation joins another. This constitutes the *edge-effect* of game managers, the *edge* being where one type of desirable cover ends and another type begins. The edge of a timber, if it is not heavily grazed or burned, can be ideal game cover for most Iowa game species.

It has been estimated that there are some 2 million acres of woodland in Iowa. Except for squirrels and a few other mammals this woodland does not offer highly attractive game cover. But nearly all of our game species, birds and mammals alike, will live in the

edges.

With our limping arithmetic, we figure that this 2 million acres, if contained in a single square block of unbroken forest, would measure roughly 55 miles to the side or about 220 miles around.

Iowa's 2 million acres of forest is not in a single block. It has been said that the average Iowa woodlot is about 30 acres in size. Two million acres, broken into 30-acre parcels, contains 66,666 areas. Each of these areas, if square, would be about 5.5 acres to the side, or 1,144 feet. Considering the inequalities of the border, it may be safely assumed that a 30-acre field would have an outside border of nearly 5,000 feet.

Roughly, our woodland borders total 333,330,000 feet, or about 63,111 miles of edge.

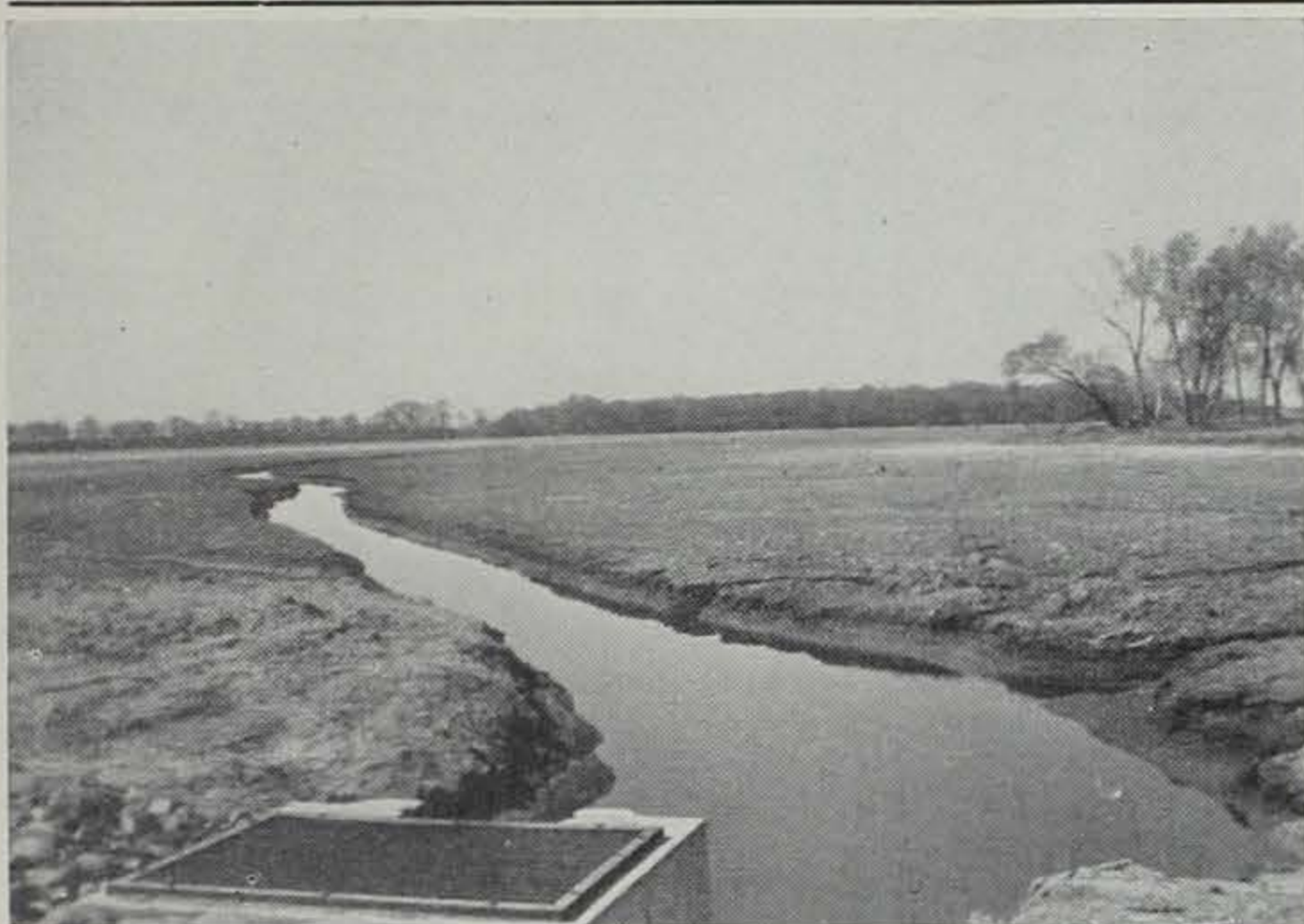
In a high-powered agricultural economy, where fields are worked right up to the naked fencelines, this woodland edge is of tremendous potential value to wildlife. Some of our finest hunting for quail, rabbits, squirrels, and even pheasants is near the borders of cornfields and the grassy edges of adjacent woodland. In county after county much of the best quail territory is in the border of small, overgrown woodlots. In many parts of Iowa the bottom-land timbers and their brushy cover spell the difference between just hunting, and hunting and getting.

Some of these forest edges are poor habitat as they stand today. They may be grazed to pool-table smoothness, burned or have undesirable plants. In most cases, if livestock is taken out and the area is left alone, natural reproduction will fill the area. In other instances man must give nature a hand. Multiflora rose, mulberry, wild plum, wild crab and other shrubby, low-growing plants can

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Jim Sherman Photo. The "edges" between forest and field produce some of our finest quail shooting. These woodland borders can be prime wildlife habitat if well-managed and protected from fire and livestock.



The drained basin of West Swan Lake, June 14, 1954. A botanical desert, it supported few muskrats or waterfowl, and almost no valuable fish.

New Life for Old . . .

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levels, and higher lake levels helped kill the plants upon which waterfowl and furbearers depend.

Conservation Commission officials and planners noted this, and remembered the extremely heavy growths of vegetation in the marshes during the droughts and low water of the 1930's.

They also took a cue from the smaller marsh areas that drained themselves naturally and kept a healthy crop of aquatics and attracted waterfowl year after year. Remembering all this, the men decided to start from scratch.

Rebirth

First, water control structures by which water levels could be manipulated, were built. In some cases there were old drainage ditches nearby into which the lakes could be drained, but in other instances new ditches were dug. With such water control structures and drainages, it was possible to let the lakes down at will, and fill them the same way, rainfall permitting. Old seeds of aquatic plants that were buried in the silt of the lake beds would be exposed to heat and sunshine, and once the turbid water was drawn off these seeds would germinate.

Water control structures were built on East Twin, West Swan, Rush and Eagle Lakes, and the



Glen Yates of the Federal Aid Section grins a welcome to the bulrushes and smartweeds of West Swan Lake. These plants and their allies offer vital food, cover to muskrats and ducks.

old permanent dams were either remodeled or abandoned. Beginning about four years ago, these lakes were drained and their muddy beds bared to sun and rain. In the first year after drainage, in an area that had been a botanical desert, Waterfowl Biologist Jim Sieh marked off a square foot of Rush Lake bottom and counted 224 sprouts of cattails, bulrush, arrowhead, smartweed and others, ranging from 2 inches to 36 inches high.

In one season after the drainage program began, the empty lake basins were masses of aquatic vegetation and were being reborn as duck marshes. Another part of the program was the acquisition of lakeshore, which is left to grow up to natural grasses and sedges, providing upland cover for puddle ducks, pheasants and even some animals. Where bare pasture formerly met muddy lake shore there is now heavy cover—and nesting ducks. Though these lakes are now drawn far down, Biologist Sieh was startled this spring by the sight of a canvasback leading her ducklings into West Swan Lake. Formerly a famous canvasback area, it had been years since cans had made extensive use of the lake.

Every Spring?

This program of marsh rejuvenation will probably be a continuing one. Federal Aid officers and field men would like to draw down these lakes each spring or as often as needed, giving the aquatics a new lease on life and northern waterfowl a new reason for dropping in.

After the vegetation is well established the stop-log type water control structures will be raised and lake levels will rise with them, depending on rainfall. Because of the small watersheds of these northern marshes, and because of the unpredictability of rainfall, it is risky to drain the lakes every spring and hope they are refilled by the following fall—the ideal procedure. It will be safer to drain the marshes in the

fall, allow the vegetation to grow and become established through two full growing seasons, and then refill them. Lake levels could thus be held for several years with good vegetation and waterfowlers would only lose out on one duck season instead of running the risk of losing several.

At present the program is limited to lakes with good water control structures and outlets. Other lakes badly need the same treatment, but must wait on construction of control structures. In the meantime there is little point in seeding them; there are plenty of viable seeds in the lake bottoms, all they need is a chance to germinate.

Fishing and Boating

Sportsmen should not be disturbed about marsh growth hindering boating, or drainage killing all the fish.

In the first place, there's little fishing to ruin. Oldtimers remember when there was, and when these shallow prairie lakes offered fine panfish and northern pike. But eroding watersheds took care of these, filling some of the lake basins with 20 feet of silt and dooming important fishing. If northern pike can be brought back it won't be to such barren puddles of silt-laden water. Northerns often do best in marshy lakes with plenty of vegetation and no fish can thrive in a lake with little or no plant life. After vegetation is restored and the lakes are refilled there will be stocking of sight-feeding game fish in some areas.

In the second place, these lakes were never boating lakes and barring a multi-million dollar dredging project, never will be. Bill Brabham, manager of the Ingham-High Game Area in which many lakes and marshes are included, told us that "West Swan Lake is only a few feet deep out there in the center, and the other



Florida Wildlife. "If you think of anything we've forgotten, forget it."

lakes around here are even shallower. They're prairie lakes—duck marshes—and they're a lot better suited to duckboats than big outboards."

This points up the Conservation Commission's policy of managing any area for what it is best suited: uplands for upland game, timber for squirrels, Clear Lake for wall-eyes and yellow bass, and marsh areas for waterfowl and furbearers. Marshes, for the greatest recreation for the most people, should be managed as waterfowl areas first, and as fish-producers and boating areas secondly.

Good Trapping

As we looked out over West Swan, we wondered how a duck hunter could ever drive a boat through the heavy growth of bulrush.

"There'll be plenty of openings out there by fall, after the water level is raised," Brabham said. "The 'rats will see to that when they build for the winter."

Which is still another point. You won't have muskrats, the mainstay of Iowa's fur market, in a wasteland. Muskrats and ducks have a lot in common; they both need food and their food means aquatic growths. To the hunter and trapper these aquatic plants mean mallards in the dawn, and sugar in the fur check.



A year later, on June 14, 1955, aquatic plants covered the naked bed of West Swan. When refilled, the lake may be a duck hunter's paradise.



Church and Allen Photo.

"Eager beavers" is not just an expression. Ralph found a big cottonwood that was being felled by beavers for the tender bark of the upper branches.

Canoeing Iowa River . . .

(Continued from page 145)

ever, the run down from Alden is worthwhile. The 4 3/4 miles from the Wood's Highway 20 Bridge, 1 mile east of Alden, to the Washington Highway 20 Bridge just west of Iowa Falls will only take about 1 hour. There are many shallow rock riffles and the current is quite fast. The Washington Bridge is at the head of the dam pond, about 1/2 mile above the dam. Foster Park, on the right bank at the upper end of the pond, is a good camp site. The dam may be portaged on the right bank. Take out about 100 feet above the dam and put in just below the overflow chute. The portage path is steep.

If the trip is started below Iowa Falls, an easy place to put in is on the left bank below the second railroad bridge downstream from the power dam. A car can be driven to the river there.

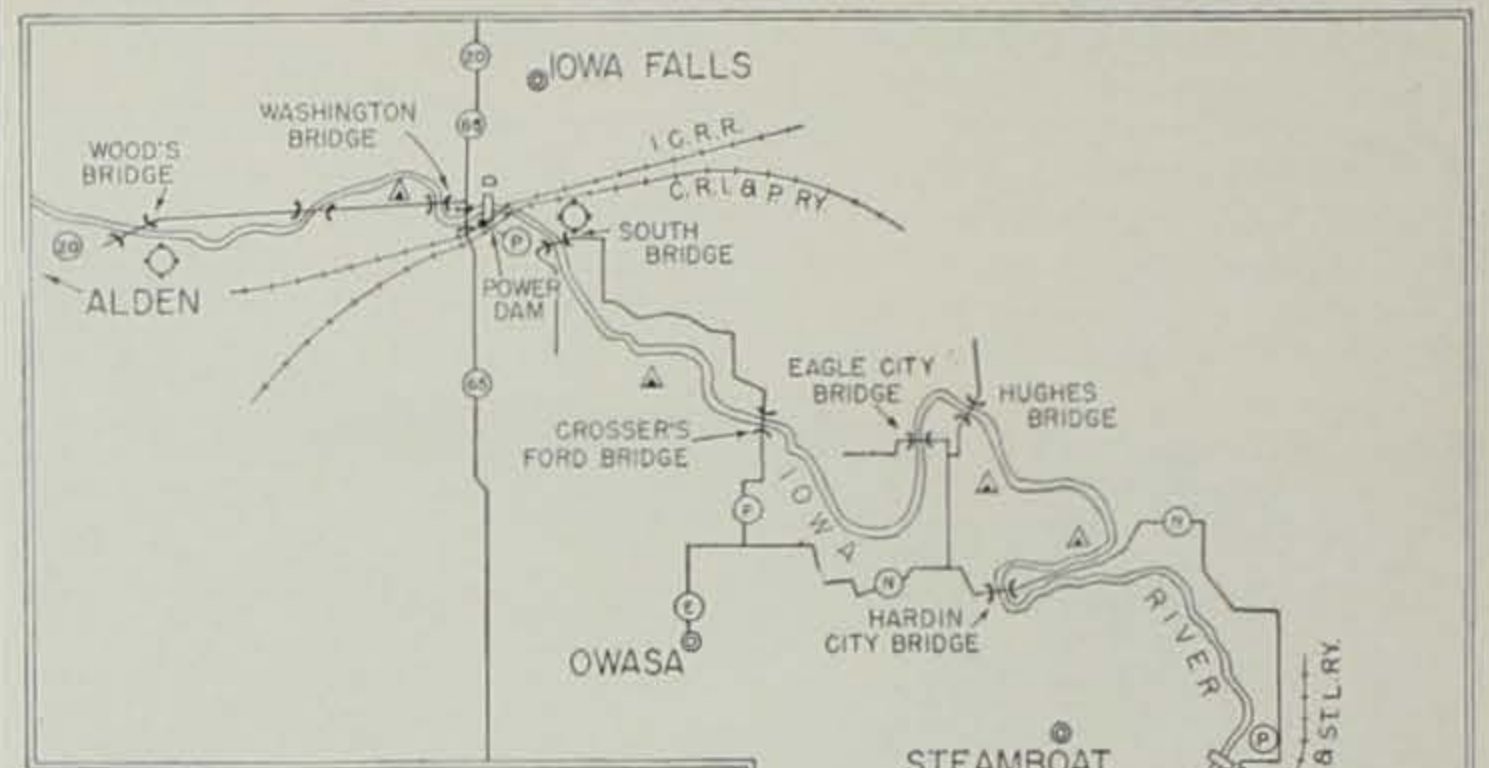
Busy Beavers

Below the put-in place, the river skirts the golf course on the right bank, and 3/4 mile (1/4 hour) below is South Bridge. Crosser's Ford Bridge, north of Owasa where Highway E crosses the river, is 4 miles (1 3/4 hours) farther downstream. Limestone outcroppings are frequent, the bottom is rock, the current is quite fast in places with many shallow rapids, all providing interesting variety for canoeing. About 1 1/4 miles (1/2 hour) below South Bridge, beaver have been very active, and have almost succeeded in damming the river. "Busy as a Beaver" has a new meaning when you see where they are chopping away on trees three feet in diameter. Near Crosser's Ford Bridge the river becomes deeper and wider and the current slower. Four miles (1 1/4 hours) below is the Eagle City Bridge. This was the site of one of the extinct towns of Hardin County.



Church and Allen Photo.

Experienced canoeists, Church and Allen have covered hundreds of miles of river together. One secret of enjoyable canoeing: go with an old friend.



The old dam and mill site can still be seen from the river.

From the Eagle City Bridge it is 1 1/4 miles (1/4 hour) to the Hughes Bridge. Watch for the single strand barbed wire fence, throat high, just below the Eagle City Bridge.

Five miles (2 hours) below the Hughes Bridge is the Hardin City Bridge where County Highway N crosses the river. The river is winding and shallow in this stretch, with occasional riffles. The current is relatively slow, and the bottom mostly sand. The valley is narrow, bounded by high rolling hills. Large trees overhang the stream. The open, park-like hillsides provide excellent campsites. There is a large riffle just above the Hardin City Bridge.

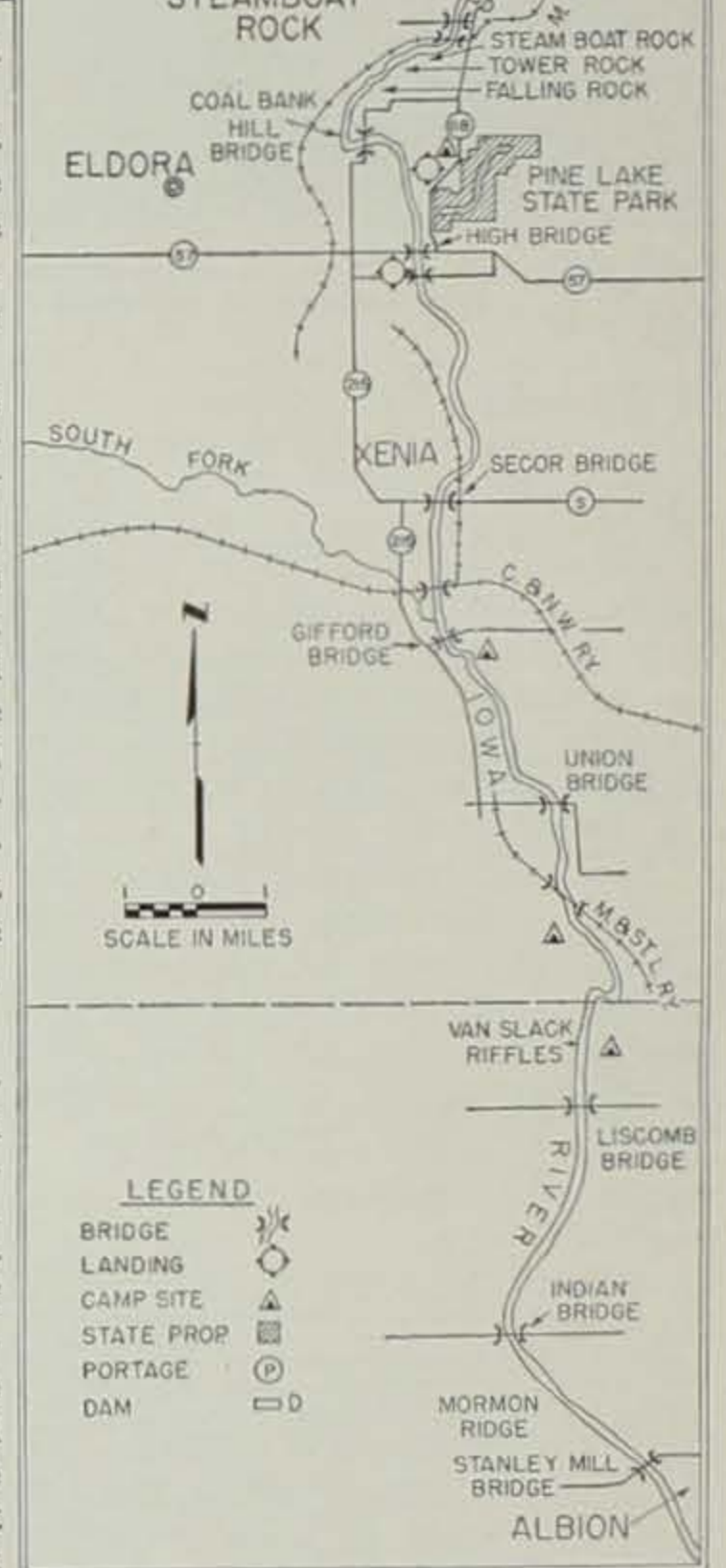
Outlaw Hideout

This section has had an interesting history. Hardin City in 1855 was one of the most flourishing towns in Northwest Iowa. The Jesse James gang is supposed to have used it as one of their hideouts. Its rough timberland was a refuge for horse thieves and counterfeiters. And in the 1850's the finding of a trace of gold in the vicinity of what is now Steamboat Rock brought two or three thousand miners to the site in a real Iowa "gold rush."

It is 6 1/4 miles (3 1/2 hours) from the Hardin City Bridge to the dam at Steamboat Rock where a portage is necessary. The carry is short and easy, starting on the left bank close to the dam.

The town of Steamboat Rock, celebrating its centennial this year with Iowa Falls, gets its picturesque name from a large rock projecting into the river south of town, just below the highway and railroad bridges. The original appearance was that of a river boat at anchor, but the illusion has long since been destroyed. Another impressive landmark, Tower Rock, projects from the river bluff on the left bank just below Steamboat Rock. The river enters the sandstone country in this vicinity. The current is faster, riffles and sharp bends are frequent. Sandstone cliffs border the river and the path of every small stream over the cliffs is marked by a rock bar and riffle at its mouth in the river.

From the dam at Steamboat



Rock to Coal Bank Hill Bridge near Eldora is 3 miles (1 1/4 hours). In this stretch, on the left bank, are towering sandstone cliffs known as Falling Rocks. Two miles (3/4 hour) downstream is the take-out place in Pine Lake State Park, on the left bank just above the Eldora High Bridge. There is an excellent campsite on the river bank at the take-out place only a short distance from the Park's two lakes.

While the stretch from Iowa Falls to Eldora is recommended for an easy two day trip, the river is fair canoeing water for some distance below. It is an additional 18 1/4 miles (6 1/2 hours) to Indian Bridge, northwest of Albion in Marshall County. Generally speaking the water in this section is shallow, and a sharp watch must be kept ahead for the channel which criss-crosses the river frequently. The river is particularly nice in the 2 miles (3/4 hour) from the Secor Bridge to the Gifford Bridge. The Secor Bridge, 4 1/4 miles (1 1/4 hours) be-

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Spinning tackle is deadly pike gear on Storm Lake; it is best used for casting since the light rod and spinning reel weren't designed for trolling. Jim Sherman Photo.

Fishing Fundamentals . . .

(Continued from page 145)

and types of spinning reels, rods, lines and lures. In fact, the angler can buy just about any kind of outfit he might desire.

An angler should buy a reel that is produced by a reliable company. It isn't necessary to buy the most expensive reel on the market, but bear in mind that you get exactly what you pay for.

Some reels are equipped with automatic line pickup bails or arms that drop into place when the bait is retrieved; other reels feature the manual or finger pickup. I have been using a reel with the manual pickup for years and find it simple and pleasant to use. Here again the angler will have to decide what is best for him. Both will do a good job. The friction clutch, which can be adjusted to be less than the breaking strength of the line, is another important feature of the spinning reel. It allows the line to pay out when either the fish or the angler exerts too much pressure and makes it possible for the spin-fisherman to catch large fish on the light lines used for spinning.

The line capacity of the spool should be large enough to accommodate 200 yards of 6-pound test line or more. Remember, the heavier test lines will be larger in diameter.

Southpaws and Lines

The prospective spin-fisherman may become alarmed when he discovers the reel handle located on the left side, just the opposite of the conventional casting reel. The location of the reel crank is a definite advantage as it allows the angler to make his cast with the right arm and the retrieve with the left, and it is not necessary to shift the rod from one arm to the other as with a casting outfit. Some reel makers even produce reels with cranks on the right side for southpaw anglers.

My personal choice of lines is the

nylon monofilament and it will provide a high degree of satisfaction and efficiency for all types of spin-fishing. The angler may also purchase braided nylon lines. Lines are available with tests as low as three pounds and as high as 12 pounds and more, but I have found that a 6-pound test line is an excellent all-around choice.

Buy Good Rod

Spinning rods are made in a great variety of actions, lengths and weights, prices ranging from a few dollars to extremely expensive models. Remember again—you get just what you pay for, although it isn't necessary to buy the most expensive rod on the market.

Glass rods have now reached such a high degree of perfection that they are choice of most anglers. Top quality glass rods are made from glass cloth of the finest filament which means that more layers of thin, expensive cloth are

used. The cheaper rods are made from coarser glass and a close examination will help determine the quality of the rod you are buying. The 7-foot, hollow glass, regular action rod seems to be standard with most spin-fishermen; I have been using this type for 6 years and have found that it meets the requirements of the most critical fishermen.

Top quality American glass rods are extremely light in weight and are built with power in the butt section for long accurate casts, and fine tip action to play the fish. When you buy your rod be sure to mount the reel on it so that the outfit can be checked for balance, for like a fine shotgun you will find that a properly balanced spinning reel and rod will provide more pleasure and catch more fish.

Simple, Deadly

Commonly asked questions are: "How difficult is it to get the hang of spin-fishing, and will it catch more fish for me?" Both answers are easy. With a few instructions to get you started out on the right foot and some practice, you will find that spin-fishing is simple to learn for youngsters and old-timers alike. Spinning will also—from my personal experience — catch more fish for you.

A spinning rod and reel allows the angler to cast a variety of baits and lures with ease and accuracy, and whether you use your outfit on smallmouths or drift baits under old snags on your favorite catfish stream, you will find this spinning a versatile, efficient method.

Catching Big Ones

The first spinning rod and reel that I saw in action in my territory was used by John Gilchrist of Cherokee back in 1947. When John first used his new equipment on the Little Sioux River (one of Iowa's finest catfish streams), he found certain types of water that were difficult to reach with ordinary equipment were made to order



On rivers, spinning tackle can often put bait in areas inaccessible by other methods. The friction clutch of a spinning reel can tame fish that would wreck other tackle. Jim Sherman Photo.

for the spin-fisherman.

The light, sensitive spinning rod is also an excellent panfish tackle. Many crappies are caught in Storm Lake by using spinning rods with "pencil bobbers" and small minnows, a stillfishing combination that's very effective. Six-foot lengths of flyline (and leader) can be tied to the end of spinning line and thus permit the use of light flies for panfish and trout.

Soft baits such as blood, chicken livers that are usually easily shaken from the hook, are ideal for the spinning rod. Sinkers with spinning gear are not necessary (depending on current) and the fisherman can drift his baits along the stream bottom with ease and in the natural manner necessary to take an old catfish waiting for a choice morsel to come along.

The light, transparent line is a decided advantage when fish are wary, and it also allows you to cast very light lures that may be more effective than larger ones. An advantage is that light lures—even slightly weighted flies—can be cast long distances and cover lots of water on the retrieve. The average casting rod can't handle this light stuff, and the fly rod is limited on distance.

While some fishermen use spinning equipment in trolling for walleyes and other fish it was not developed for this kind of fishing. A trolling rod should be stiff and have a lot of backbone to allow the angler to set the hook. If you use your spinning rod for this kind of fishing, keep your rod in your hand at all times. The spool of the spinning reel does not revolve and a heavy strike might result in the loss of your equipment over the side of the boat. Spinning gear is in the light tackle category and allows the angler to exact every ounce of fight from his fish. You just don't horse them in with this kind of tackle and still you can catch the big ones.

I know of one catfish taken on spinning gear from the Little Sioux that weighed over 18 pounds. Many lunker walleyes have been taken from Storm Lake on spinning rods and the writer once accounted for an 11½ pound carp on a 6-pound test line, a thrill never to be forgotten.

So regardless of what kind of fish you want to catch, there's a place for a spinning rod and reel in your equipment, and you'll find spinning a new and delightful method of fishing your favorite lake or stream.

The snapping turtles are the largest (except the marine turtles) living in the United States. The Alligator Snapper of Gulf States may weigh up to 120 pounds. The common snapping turtle of further north, living in Iowa, may weigh up to something a little less than 40 pounds.—H.H.

There are 250 species of turtles. Fifty kinds live in the United States.—H.H.

Elephants . . .

(Continued from page 147)

a European fallow deer was shot near Council Bluffs and positively identified. It caused quite a stir locally until it was learned that it was an escapee from a zoo.

Less spectacular, but of greater interest to biologists, was the mule deer that was shot during the last deer season. It was rumored that there "were others just like it" in Decatur County, but they haven't been found. Mule deer have not been known to be in Iowa in modern times and are now found in the western third of the United States. Yet, one turned up in Iowa. No one knows why or how.

Now and then porcupines are released in Iowa by sportsmen returning from Canada or from the west. There have been several "quill-pigs" found around the state by 'coon hunters and their unhappy hounds.

Tropical Visitors

Some of our larger railroad yards may harbor exotic critters that arrive in carloads of tropical fruit: boa constrictors, the beautiful little "banana possums" and tarantula spiders are sometimes found in warehouses or just wandering aimlessly around the railroad yards. Since refrigeration and spraying of fruit shipments these tropical immigrants have decreased.

A few years ago Conservation Commission biologists received excited calls from several Des Moines residents who reported strange lizards around their premises. Three of these mysterious creatures were captured and found to be chuckawallas, desert lizards that don't get much closer to Iowa than Texas and New Mexico. After some mild excitement, a Des Moines woman admitted that the three lizards had escaped from friends who caught them in the southwest. About the same thing happened after the Boy Scout encampment in California a couple of years back when Des Moines and other Iowa towns were invaded by ugly but harmless horned toads that the kids had caught in the desert.

Storm-Driven

Sometimes, when America's sea-coasts are racked with hurricanes, strange birds may be driven into Iowa. Jack Musgrove of the State Historical Building cites records of frigate birds (man o' wars) in Iowa—big oceanic voyagers who normally occur only over oceans. Jaegers, or predatory gulls, have also been found in Iowa, as well as water turkey, wood ibis, eiders and scoters, coastal waterfowl that were driven off their main migration routes by storms.

To spice up such actual examples of exotic visitors, there are always a few fanciful tales of black panthers, mountain lions and timber wolves. For some reason, most of the panthers are black, although American cougars seldom have the black phases that

occur frequently in African and Asiatic leopards.

Our "mountain lions" are often seen but never quite killed. Iowans who do see them are *very* lucky; hunters and ranchers in the southwest may live out their lives in prime lion country with never seeing one of the big cats. And as far as timber wolves are concerned, there hasn't been a real, old-fashioned, 120-pound lobo killed in Iowa for probably 40 years.

Call Tarzan!

But wildest of all are the stories of Iowa apes. There have actually been cases of monkeys being captured or shot in Iowa woods—monkeys that escaped from menageries or private owners. About 25 years ago there was a gorilla or apeman or something scaring the folks in western Iowa. In our book, however, the record is held by the Iowan who once complained that a baboon hit him over the head with a stick, climbed a nearby tree, and then laughed at him!

Game . . .

(Continued from page 148)

turn the woodland borders into prime wildlife country. Most of these plants are available at the Conservation Commission Nursery at Ames; others are available from private nurseries. Planting up forest edges to game cover could be a fine project for a sportsman's or 4-H group.

So far, we've only mentioned the edges of Iowa woodland, and their staggering magnitude. But how about the 2 million acres of woodland? Some of it is either too heavily grazed and open to support much else than squirrels, or is too thick and tangled to afford good hunting.

Much of it is broken forest—timbers filled with small glades, openings and fields. These openings break the dense canopy of the forest roof and give grasses, brush, shrubs and tree seedlings a chance. When a mature forest is regularly opened up, succulent second growth begins and many game animals and birds move in.

Before the white man, leagues of virgin eastern forest did not provide the best deer range. Deer live mainly on browse and mature trees are simply too high for deer to feed on. As pioneer settlers opened up small farms in this vast forest, second growth and browse sprang up around the edges of the clearings. In some northern and eastern states the small farms didn't pan out and were abandoned to second growth and wild game. Whitetail deer populations skyrocketed and these abandoned farms and roads nurtured a deer herd that was possibly greater than before the coming of man.

The same thing has happened, to some extent, in Iowa. It can also happen, to a lesser extent, with our small game if our forests are properly handled. Good forest management opens up the forest to smaller growth; it prohibits the

heavy grazing that destroys "mast", or nut droppings, as well as seedlings, long grasses and other cover. A well-managed forest is not a neglected one. It is neither stripped bare of all cover nor allowed, like Topsy, to just grow. It is managed as a crop for posts, poles and lumber and game.

An open forest can have brushy clearings for quail, and rabbit. Deer can browse there, and rear fawns in nearby thickets. Hollow "wolf" trees, worthless for lumber, may be left for the 'coons, squirrels and possums.

We're still not saying that the heart of a forest is Grade A wildlife habitat for Iowa game birds and animals. But the forest edges can be, and every forest's got an edge. Don't sell it short.—J.M.

Canoeing Iowa River . . .

(Continued from page 150)

low the High Bridge at Eldora, was the site of two early Hardin County towns: Secor on the left bank and Xenia on the right.

Mormon Tragedy

About 1 1/4 miles (1/2 hour) below the Secor Bridge the South Fork of the Iowa enters from the right. The South Fork is thought by geologists to be the original river before its course was changed by glacial action near the present site of Alden. This would account for the absence of a flood plain from Alden to Gifford. On the right

bank below Indian Bridge is Mormon Ridge. The Emmett party of Mormons camped here during the winter of 1844-45. They suffered severely from cold, exposure and lack of provisions, and many are buried here in now unmarked graves. The survivors, after wandering in western Iowa and South Dakota, returned to Nauvoo, Illinois, and in 1846 joined the main Mormon migration in its trek to Utah, via southern Iowa.

FISH BOOKS ARE GONE

Supplies of "Iowa Fish and Fishing," the handbook of midwest angling, are now exhausted.

Written in 1951 by James Harlan and Everett Speaker of the Iowa Conservation Commission, 20,000 copies of the \$2 book have been sold. It was widely acclaimed nationally by sportsmen and professional fisheries workers and is now a textbook in four colleges and is read and used by thousands of fishermen across the country.

The 240-page book, containing 24 colored plates of fish by artist Maynard Reece and many photographs and drawings, also includes sections on life histories of Iowa fish, how to catch them, and scientific keys for their identification.

Harlan said that a new edition of the book is being planned and should be available by next spring. It will contain additional colored plates and enlarged sections on how to fish in Iowa waters.



The SMALL BOAT.

PROBLEM CHILD OF WATER RECREATION.

- SO EASY TO OWN,
- SUCH FUN TO OPERATE,
- BUT HOW DANGEROUS WITHOUT PROPER PRECAUTIONS!

ONLY ABOUT 10 PER CENT OF THE 90 MILLION AMERICANS WHO SEEK RECREATION IN, ON OR NEAR WATER CAN SWIM REASONABLY WELL.



PRECAUTION (2) - DON'T USE TOO POWERFUL A MOTOR.



PRECAUTION (3) - IF BOAT CAPSIZES OR FILLS WITH WATER STAY WITH THE BOAT - HANG ON UNTIL HELP ARRIVES.



PRECAUTION (4) - DON'T OVERLOAD THE BOAT. EDGE OF BOAT SHOULD BE 15 INCHES OR MORE ABOVE THE WATER LINE.

STAY WITH THE BOAT!

PRECAUTION (5) - PULL FOR THE SHORE IN CASE OF APPROACHING STORM.