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Number 4

April, 1967



After a long winter's wait, fishermen brave early spring weather to get back in the swing of "baitin', pluggin', and jiggin'."

SPRING FISHING ROUND-UP

K. M. Madden, Superintendent of Fisheries

★ ★ ★ ★ ★



CAMPING'S COMING

Watch our May issue
of the
Conservationist.

★ ★ ★ ★ ★

The areas below the dams on Iowa's inland rivers are very productive in the spring. Fish are moving in search of food after a long winter and some of the species are making their spring spawning run. Then they are stopped in their movement by dams and congregate below them.

Dams along the Skunk, Des Moines, Iowa, Cedar and Wapsie Rivers provide such areas where fish can be found in large concentrations. Catfish which are probably the most fished for species on inland rivers are abundant in these areas along with walleye, crappie, and northern pike. Most of the above species can be taken on minnows, along with jigs, spinners, night crawlers and prepared bait for catfish. Many of our larger sized fish will be caught during this period of the year.

Some areas below dams will have a spring run on white bass and when this happens the action can be fast and furious as the striper travels in schools and takes almost anything thrown near it.

For a change of pace in early spring fishing, go after suckers and chubs in some of the small feeder streams and creeks. Many anglers overlook these species, but they do provide good sport when using a small hook and red worms. Many expert fishermen started this way as young boys.

EARLY CATFISH ANGLING IN WESTERN IOWA STREAMS AND LAKES

In lakes, especially those such as Black Hawk, where a high gizzard shad population is present and the shad suffer extremely high mortality due to sudden temperature changes, catfish start feeding on these dead fish early and those anglers who acquire shad gizzards for bait are very successful.

In the streams, after spring floods have gone by and the water has become clear with water temperatures about fifty degrees or more, catfish will be feeding more vigorously than in summer. They will also be found in more shallow water in the upper reaches of the streams feeding on anything easy to find. Cut carp or dead chubs make excellent bait to use at this time. Some fishermen prefer to use carp entrails for bait. A mild spring with little flooding will increase the chances for successful early spring catfish angling.

Missouri River

In the past, lack of access and public right-of-way to the river made it extremely difficult for any but the dedicated fisherman to successfully fish the Missouri River main stream. Therefore sport fishing on the Missouri River could only be considered as marginal. Commercial fishing near the populated areas is most common.

The bulk of the sport fishery now present consists of crappie, channel and flathead catfish, white bass, walleye, sauger and an occasional northern pike is making its appearance. Carp fishing is common and in many instances preferred. Some particularly good fishing can be found at the mouths of some of the tributaries of the Missouri River.

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CIRCULATION THIS ISSUE 62,045

Conservation Forum



Earl Rose, Chief of Fish and Game, presents award to Officer Frank Tellier.

Iowa's Conservation Officers often work in close coordination with officers of neighboring states. Occasionally, a tangible token of appreciation is presented to these men, and it is a visible symbol of the appreciation extended to our officers for the extra effort they exercise.

An award to Conservation Officer Frank Tellier, of Lyon and Osceola Counties, is representative of the goodwill that exists between Iowa and South Dakota conservation departments as a result of officers in adjacent territories extending a helping hand to each other.

As a tribute to Frank and all of his fellow Iowa officers, we reprint in its entirety the letter that accompanied the South Dakota award.

—Ed.
Mr. Earl Rose, Chief, Fish and Game,
State Conservation Commission

Dear Mr. Rose:

The South Dakota Wardens of Region III would like you to present this small token to Conservation Officer Frank Tellier.

Officer Tellier has been very cooperative with the South Dakota Wardens in working the Sioux River area and we are very appreciative of his cooperation.

We have enjoyed working with Frank very much and if at any time or in any way we can return his courtesies, please feel free to call.

Sincerely

C. B. Gunderson, Asst. Chief Warden
Mitchell, S. D.

development; Jasper County, Ash-ton-Wildwood Park, acquisition; Chickasaw County, Split Rock Park, development; Franklin County, WKW Conservation Park, acquisition and development; Decatur County, Slip's Bluff Park, acquisition; Polk County, Camp Creek Area, development; City of Winterset, Outdoor Sports Area, development; Monroe County, Miami Lake Area development; Hancock County, Eldred Sher-wood Park, development; Webster County, John F. Kennedy Park, development; Muscatine County, Cedar River Access, acquisition and development; Page County, Pioneer Park acquisition and development; Buena Vista County, Buena Vista County Park acquisition; Floyd County, Meyers Forest Area, acquisition; City of Adel, Island Park acquisition and development.

The Howard County, Hendrick Park development was given conditional approval.

A proposal for central park re-development by the Fairfield Park Board was denied.

Fred Hendrickson of the Attorney General's office gave a report on the progress of lawsuits pending.

A report was made on the status of Conservation bills in the 62nd Session of the Iowa legislature.

Travel was approved for the following: Midwest Pheasant Council, Marshall, Indiana; Reservoir Fisheries Symposium, Athens, Georgia; Conservation Business Management Association, Chicago, Illinois; Hunter Safety Workshop, Washington, D. C.; and to pick up forestry nursery stock at Havana, Illinois.

Fish and Game

Approved were:

A resolution of necessity on Hendrickson Marsh, subject to approval of the Natural Resources Council.

A construction permit for road improvement on Birge Lake in Emmet County.

A report of a meeting held in Estherville concerning boundaries of an area for a Canada Goose refuge at Ingham Lake.

IOWA FISH QUIZ . . .



Good fishermen can identify even the small fish they catch, and know something of their background and habits.

Lloyd Huff, Polk County Conservation Officer.

1. Which Iowa fish is called the "switchtail"?
2. Which large Iowa fish feeds mostly on plankton?
3. Which single native fish has been estimated to produce over ten million eggs at one time?
4. One specie of fish lays eggs that are poisonous, and should not be used for human consumption, or made available to domestic animals. Name this fish.
5. Before the recent stockings, have muskellunge been found in Iowa waters?
6. Which specie of bass will lay more than half a million eggs per female?
7. How many species of minnows are native to Iowa waters? 34, 42, or 51?
8. Which fish in the sucker family attains the greatest weight?
9. From early spring to the middle of June, crappies dominate the catches of Iowa anglers. Why does crappie fishing slow down after the middle of June?
10. Which fish in the sunfish family has respawning and re-nesting activities which are of great advantage since nests are destroyed by floods or the eggs devoured by predators of different kinds?

Sale of state-owned land at Muscatine Slough.

A request to permit use of Chukar Partridge in field trials.

A land purchase option on 40 acres at \$16,000 at Goose Lake.

A land purchase option on 303 acres for \$135 per acre at North Bear Creek in Winneshiek County.

Authority to advertise for construction of wells at Browns Lake, Woodbury County.

Lands and Waters

Approved were:

A land purchase option on entrance to Pine Lake including several buildings at a cost of \$15,000.

Contract for remedial work on

Continued on page 27

LINN COUNTY GETS \$\$\$



The Federal check for \$32,527.17 being accepted by Director, E. B. Speaker.

Linn County became the first Iowa county to receive a cash payment the latter part of February from the Federal Land and Water Conservation Fund. Attending brief ceremonies in Des Moines were, left to right, William Brabham, Superintendent of the Planning and Coordination Section; Everett B. Speaker, Director of the State Conservation Commission; Lester Fleming, Planner, and Glenn Sarsfield, Director of Administration.

On a dollar for dollar matching basis the Linn County Conservation Board received \$32,527.17 for the first segment of the county's Pinicon Ridge Park Project. This federal grants-in-aid program is administered in Iowa by the Commission and a total of \$67,736.10 has been apportioned to Linn County by the Commission from funds currently available to the state. Linn County was the first to receive a grant because it was the first agency to complete an outdoor recreation plan and submit it to the Commission's Planning Division for approval.

Over all, \$1,279,677 has been apportioned to all public agencies in Iowa counties who qualify as political subdivisions. Funds apportioned to Iowa are subdivided on the following basis: Fifty percent of the money apportioned to Iowa each fiscal year will be reapportioned to its political subdivisions on a county basis. Twenty percent of this amount will be divided equally among the counties according to each county's proportionate share of the total state population based on 1970 projections.

Part of the moneys included in the Land and Water Conservation Fund grant to Linn County came from the sizable contributions the successful "Operation Golden Eagle" program has made to Iowa outdoor recreation. Money from the fund is derived from the sale of the Operation's Golden Passport and from other federal recreation fees and revenues. Operation Golden Eagle is a program administered by the Bureau of Outdoor Recreation. The operation is designed to portray to the American public the need for making more lands and waters available for outdoor recreation purposes.

COMMISSION MINUTES—

Continued from page 26

Rock Creek to Culvert Builders, Inc., at a cost of \$14,122.

A weight embargo of 5 tons on a bridge in Wanata State Park, Clay County.

No action was taken on relocation of a concrete pipe conduit at Lake Manawa pending further negotiations with the State Highway Commission.

County Conservation Board

Approved were:

Ranney Knob River Access, Cherokee County.

Acquisition of a house for custodian museum addition and Forest Park, Dallas County.

Acquisition of 100 acres at cost of \$13,000 for Haynes Maquoketa River Area, Delaware County.

Acquisition of 17.31 additional acres for an artificial lake in Des Moines County.

Acquisition of 6 acres for Highway 18 Safety Rest Area, Floyd County.

Acquisition of 120 acres as a wildlife area at a cost of \$16,000 to be called the Grammer Grove Game Area, Marshall County.

A 10 year lease for \$1 on .25 acre of land additional to the 12½ acre park, Pilot Creek, Pocahontas County.

Acquisition of 32 acres as a gift, Fife's Grove Park, Ringgold County.

A development plan revision for a 119 acre Botna Bend Park near Hancock to include: A 6 or 7 acre buffalo range, enclosure fence, water line, a small shelter building, purchase of buffalo at a cost of \$1,990.

New Technique for Identifying Iowa Suckers (fish, that is)

by

Kenneth D. Carlander

Iowa Cooperative Fishery Unit
Iowa State University, Ames

Seventeen species of suckers, the family Catostomidae, are reported for Iowa in "Iowa Fish and Fishing" by James Harlan and Everett Speaker. It is difficult to identify some of the closely-related species, particularly when the fish are young and under 5 inches long.

Gene Huntsman, on an Iowa Cooperative Fishery Unit project, used a new method, electrophoresis, to study chemical differences between the various species. Electrophoresis is a method of separating the various proteins in blood or tissue extract on the basis of the ionic charges of the proteins. This technique had been used on a variety of fish and other animals and it had been found that most species had characteristic protein patterns which could be used in separating them from other species. The technique had not been tested for most of the species of suckers found in Iowa.

Gene first tried the technique with blood from the various species but the patterns were not clear enough to separate most of the species. Blood proteins seem to vary so much between individuals of the same species that it was difficult to recognize patterns distinctive for a species.

Proteins from muscle extracts however proved to be very useful. Mr. Huntsman collected small pieces of muscle from many suckers of various species. The meat was quick-frozen and could be stored frozen until he was ready to run the tests. The muscle sample was then homogenized with a food blender and a phosphate buffer solution. After further treatment, the muscle extract was placed on special gelatin tubes and an electric current was passed through the tubes for a specified length of time. Staining of the gelatin indicated where various proteins were concentrated. The number, position, and darkness of the stained bands could then be studied, to determine whether the patterns were similar or different.

Although there were minor differences in the patterns of individual fish, Mr. Huntsman found that he could distinguish and identify the flesh (or muscle extract) from white sucker, northern hog sucker, spotted sucker, lake chub-

ATTENTION—BOAT OWNERS

To avoid confusion in boat numbering, the following specifications are offered by the boat registration department of the Conservation Commission.

A. Numbers should be painted on, or attached to each side of the bow (forward half) of the vessel. They should read correctly from the left to the right and be in such position as to provide maximum visibility.

B. Numbers should be in block characters of good proportion, not less than 3 inches in height.

C. Color should contrast with background and be clearly visible and legible.

D. Leave an equivalent of one letter space between the IA and the numbers and also between the numbers and the final letter designation.

E. The decal supplied by the Conservation Commission should be placed 4 inches from the numbers or final letter designation towards the stern of the boat.



Starboard (right) side of boat.



Port (left) side of boat.

F. The passenger capacity number should ride above the waterline when the boat is fully loaded, and be placed on the starboard (right) side of the boat within 9 inches of the transom.

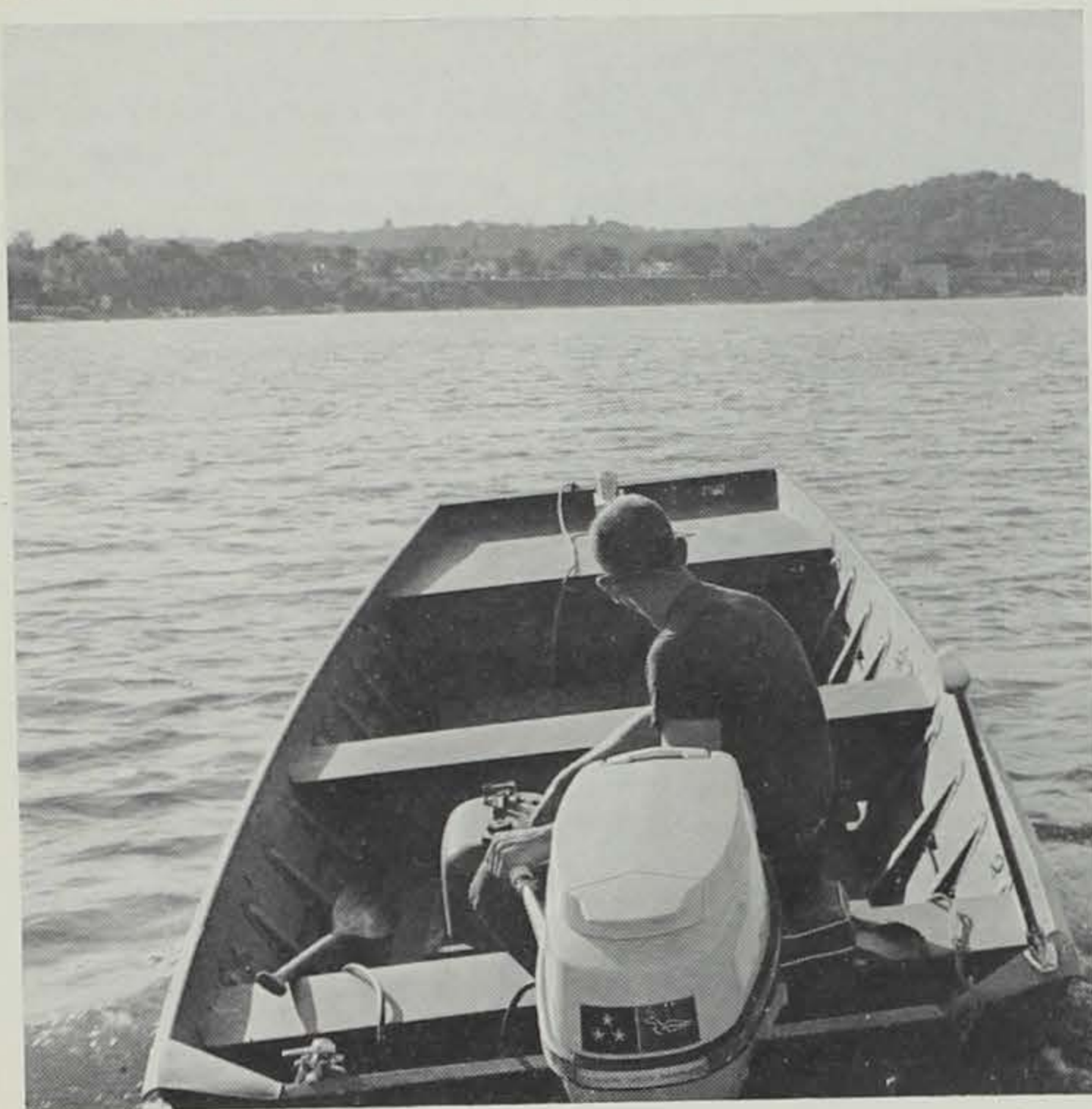
If you are applying for a registration, \$2.00 on a new boat or on a renewal application will license your craft until July 4, 1967. After that time a \$4.00 fee will register your boat from July 4, 1967, through July 3, 1969. Do not send cash.

sucker, river carpsucker, highfin carpsucker, quillback carpsucker, smallmouth buffalo, black buffalo and largemouth buffalo. These species could also be distinguished from the golden and northern redhorse, but he could not distinguish between these two species. He believes that by modifying the technique these two redhorses could also be separated on the basis of the proteins in their muscles.

The protein patterns also give some indication of relationship of the various species in the family.

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SPRING FISHING ROUND-UP . . . Continued from page 25



Access to the river is no longer the problem it was in the past. Numerous access points are now being offered, some of which are in the process of being developed.

The act of fishing the Missouri River can be as rewarding as you make it; whether it is for the fresh air, sunshine, or exploring the surroundings.

GOOD FISHING ON THE MISSISSIPPI RIVER

Spring melts the river ice and fish move out of the deep water into sloughs and backwaters. This spring fish run contributes the best pole and line fishing for the angler if he knows fish habits.

As spring season water temperatures increase, the walleye and sauger pike begin traveling upstream. This usually occurs at about 46 degrees Fahrenheit. Water levels, too, are a factor for spring pike fishing. If the stage is low near the channel, they are then caught by drifting the sandbars and sloughs. In case of a fast rising stage, anglers may have difficulties locating the fish during spawning season.

Northern pike, largemouth bass, crappies, bluegills and suckers are the first fish to leave the river and migrate into shallow lakes and grassy areas. Here the water is warmer and there is abundant food creating ideal habitat for reproduction activities.

The best northern pike fishing extends from Sabula to the Iowa-Minnesota boundary line throughout the spawning season. Anglers know that artificial baits in the fairly shallow waters and grasslands produce many good catches of big fish.

Crappies, bluegills and a few bass have been taken already. These species locate in the slack waters and eddies and the successful fisherman hooks them with worms and small minnows. However, one should remember to submerge the bait about one foot deep because they are feeding near the surface.

Willows budding foretell when good strings of catfish are sure catch bets with night crawlers and cheese.

Expert anglers recommend exploring the lower reaches of tributaries to the Mississippi when fish migrate upstream. Also, at this time, carp, buffalo and redhorse suckers are on the move and catchable.

THE MISSOURI RIVER, CUTOFFS AND OXBOWS

A forecast prediction of fish and fishing is probably one of the most universal subjects known to man. It is as unpredictable as the weather. With all the modern equipment the weatherman has, he is occasionally swayed, so to speak. There is no problem of telling you what the weather was yesterday or as you've heard so many times, you should have been here yesterday or last week, they were really hitting.

The State Conservation Commission has made personal field con-

tacts. Fisheries Biologists for western Iowa have worked this material up as creel data. From this creel data, we can conclude our western waters are most productive in the following order: Artificial lakes, oxbow lakes, cutoff lakes and rivers. Each varies with the number of fish and species composition. The following may be of assistance in fishing western Iowa waters.

Oxbow Lakes

Browns Lake, located approximately three miles west of the town of Salix, has a high population of largemouth bass. The winter fishing produced good crappie fishing. The northern pike picture is good for this area. Try a spoon or dare-devil before the vegetation is up too high.

Blue Lake located approximately four miles west of the town of Onawa compares basically the same as Browns with the exception of having a walleye pike population now the most numerous in the two to four pound class.

Lake Manawa located on the southern edge of Council Bluffs has consistently produced our largest largemouth bass. Use a surface lure that makes some noise along the vegetated areas and next to the old tree snags. Manawa has some real lunker catfish. They are there, believe me. The early spring produces the best catches of bullheads, which are annually stocked.

"Cutoff Lakes"

Snyder Bend, located approximately three miles west and two miles south of the town of Salix, has offered good white bass fish—at the lower end of the bend where it joins the river. Sauger and walleye are taken there on occasions. Crappie fishing has its ups and downs in this area. Try them around the snags and brush piles.

Winnebago Bend, located approximately five miles west and one mile south of the town of Sloan, compares to Snyder Bend in fish and fishing, however, there is more crappie habitat offered. This area has a public access road at its lower end where it joins the Missouri.

Decatur Bend Lake, located approximately seven miles west of Onawa, has a good population of channel catfish, pike and, of course, the lowly carp. Try around the willows that are hanging in the water on the west or north shore. I am sure you will take fish here if the weather is right.

DeSoto Bend, our largest cutoff lake, is a Federal Fish and Wildlife area located approximately six miles west of Missouri Valley and opens May 1 from 4:30 a.m. to 10:00 p.m. daily. This area has consistently produced numerous crappie which are now ranging from seven inches to 10 inches as an average. They will be more of a problem taking off of the hook than catching. Try for these near the old river piling, snags and brush piles. Walleye and sauger will be taken during the first three or four weeks the lake is open to fishing (May 15 to September 15). Try the south shore using chubs or large minnows and trolling in and near the bar channel areas. There is a good supply of channel catfish in this lake. These are more readily taken during July and August.



SPRING ANGLING IN THE IOWA GREAT LAKES

With spring bringing April showers and warm sunny days, every sportsman is anxiously awaiting the chance to try out his new or old rod and reel. As winter's cold winds leave and the waters again ripple with warm southerly breezes, the early angler will seek out his favorite spot to cast for a perch, crappie or largemouth bass. Perch

and crappies will be hitting well on a sunny afternoon along the numerous rock jetties in Big Spirit Lake. Fly fishermen can expect some good catches of crappies, bluegill and largemouth bass in Center Lake, Dickinson County.

Early spring fishermen can be found sitting along the lake banks seeking out bullheads as they leave their winter haunts to move into warmer shallow waters in search of food. Prospects for this species are excellent in Little and Big Spirit Lake, East Okoboji, Minnewashta, Lower Gar, the canal areas of West Okoboji as well as Lost Island Lake in Palo Alto County.

The early opening of the walleye and northern pike season on April 29 should provide excellent fishing in Big Spirit, East and West Okoboji lakes.



FISHING THE ARTIFICIAL LAKES

Be prepared for the early spring fishing in Iowa's artificial lakes. Largemouth bass merge from the winter depths hungry and in search of food. Natural food is scarce so crayfish, minnows, worms and deep running artificial baits are very effective.

Later, as the water temperatures rise, surface fishing near rocky shorelines, stumps, logs or submerged trees in early morning and late evening is very productive.

Start crappie and bluegill fishing soon after a few warm days usually in mid-April. Minnows, other live baits and wet flies are proven crappie getters. Bluegill prefer worms and small flies.

Later in the year during the hot weather months, both species are readily taken on surface baits in late evening in shallow water areas.

FARM POND FISHERMEN BEWARE

Spring is here! Grass is getting green. Ice is gone and waters are getting warm. Early in the spring at about 60 degrees water temperature, largemouth bass start actively feeding.

Don't overlook the farm pond offering earlier fishing. Normally smaller, the pond water will warm quicker, the fish are in deeper water and still a bit sluggish. The fisherman fishes them "still" and much slower than average summer fishing. A night crawler or fishworm with or without a spinner is very enticing to the bass in early spring.

Smaller bodies of water have smaller fish. Don't you believe it! A 7-lb. 8-oz. 22-inch largemouth bass was caught from a Jasper County farm pond in May, 1966, by Dallas Chastain of Monroe. Two species of Iowa's record fish were caught in farm ponds. Bluegill, 2-lb. 1-oz., 11½ inches, caught June, 1966, in Wayne County and bullhead, 4-lb. 8-oz., 17¾ inches, caught April, 1966, in Taylor County. The several 18 to 20-lb. channel catfish taken from farm ponds haven't topped the state record; but these mentioned fish aren't likely to be turned back for lack of size.

Thanks to farm ponds, we are catching big fish earlier in the season. Can anything be better? Possibly. Did you ever taste a fish early in the season?



THE PERENNIAL TROUT

The natural foods of trout are almost exclusively insects in their different stages of development. There can, therefore, be little argument to the fact that trout can usually be taken by an expert fly fisherman.

Baits, such as worms, larvae of insects, grasshoppers, beetles, various colors of salmon eggs, cheese concoctions and marshmallows are also highly effective at times for trout. Bait fishing is used by the novice fisherman as well as the seasoned angler.

For those few who wish to seek out only the larger winter carry-over trout, and sometimes a trophy sized trout, the better streams often winter up to 600 trout per mile. These trophy trout call for different fishing techniques such as the use of minnows or sucker sides cut to imitate minnows. When trout approach 15 inches in size, their diet changes in the main from insects to minnows, crayfish and even frogs at times. By the time they are two to three pounds, they are full-fledged meat eaters. Therefore, when scouting the trout stream, notice the minnow population in each hole (without making yourself conspicuous). Chances are, if the hole is void or there are just a few minnows, there might be a lunker hiding under that log.

In the spring a man's thoughts lightly turn to fancies, especially in the case of some 14,000 Iowa trout fishermen. The first warm spells in late March and early April find many hardy addicts, sometimes knee deep in snow, in pursuit of the ever elusive trout in north-east Iowa.

Stocking of these streams begins as early in April as the winter thaws and roads permit. The trout planting program is continued weekly into late fall.

PAN FISHING IN OUR NATURAL LAKES

The spring angler in the natural lakes can look to the crappie and yellow bass for family fun and individual sport. Crappie fishing is most productive from May to the middle of June. They are found in abundance near brush piles, canals, abrupt shorelines and vegetation. Crappies are not normally taken when the water is rough or choppy. Then the wise angler seeks out the protected and sheltered spots. Early morning and late afternoon hours produce the best catches. Pan fishing gear need not be expensive; the fly rod, casting pole or even the "old willow stick" with a bobber is all that is needed. Minnows, flies and the dependable garden worm are all good.

Yellow bass fishing, although limited to a few lakes in Iowa, does provide family fun. They are abundant in Clear Lake and in some of our artificial lakes. The yellow bass, small in size compared to other pan fish, offers a tasty meal. Preferred gear and baits are the same generally as used for crappies. Cut bait works very well also. Yellow bass are found in shallow waters, along and near the docks, sandy and rocky areas. Clear Lake and Beeds Lake are top fishing spots for this sporty pan fish.

SPRING FISHING ROUND-UP. . . Continued from page 29



The productive areas below Mississippi River dams, such as No. 12 at Bellevue, lure fishermen early in the spring.

The question of what should be the first fishing trip of the season will certainly instigate a great debate in any group of Iowa fishermen.

Trout fishing in Iowa's north-eastern streams will have many ardent devotees. Channel cat will be the quarry for those who are loyal to the beauty and solitude of Iowa rivers. Walleyed pike will be recognized as the only worthwhile opponent by many fishermen who prefer the Mississippi River or Iowa's natural lakes as a destination for their first expedition of the year. Some sophisticated experts have learned that dragging a gob of night crawlers very slowly across the bottom of one of Iowa's numerous farm ponds can produce largemouth bass of a size to astonish anyone. This early season fishing is particularly effective due to the lack of submergent vegetation. Me, I'll take bullhead fishing from the Ventura grade at the west end of Clear Lake and a horde of Iowans will agree.

Warm sunshine and deep blue skies, even before the first leaves appear, combine to give the fisherman the first hint of how great it is to be outdoors once more. Early evening fishing is sometimes even more successful. Warm clothing is still necessary and a gas lantern will provide both heat and light.

Bait may be garden worms or night crawlers. A large gob of worms on a long shank hook about number four size, is all the terminal tackle needed. Both spinning and casting equipment are popular and entirely suitable.

Many people make the mistake of tying a heavy sinker to the line in order to cast farther from shore. This lead anchor frightens fish in the immediate area when

it hits the water and when a bullhead does mouth the bait, he feels the drag of the sinker and drops the bait immediately. A slip sinker will avoid this problem. Many people lay their rod on the ground, disengage the drag, and watch for the line to start moving out as the signal to strike. This avoids any drag and produces much faster fishing.

Some fishermen use spinning tackle with very light monofilament line and no weight. The bait is cast a short distance from shore or boat and allowed to lie on the bottom. The combination of light line, no sinker and no reel drag is the most effective combination for fooling Mr. Bullhead.

Conservation Commission biologists call this "quality fishing" due to the large average size which will run better than one-half pound with most of these bullheads measuring ten inches or more. Large schools of fish close to shore commonly provide a large catch in a very short time.

Most of Iowa's lakes in the north central and northwest part of the state provide this same splendid early fishing. Big Spirit Lake is one of the most popular.

Not the least of the bullhead's attraction is its well known eating quality which many people rate as "tops."

Bullheading is known as the sport of children and the "one gallus fisherman." A visit to one of Iowa's lakes in early spring will belie this supposition. Fishing tackle in use will range from the willow pole to the most expensive tackle available. The fishermen will include men, women, and children from all walks of life. Everyone will be "having a ball" and truly life will be worth living.



A string of bullhead beauties.

FISH QUIZ ANSWERS . . .

1. The shovelnose sturgeon.
2. The paddlefish.
3. The American eel.
4. The longnose gar.
5. Yes. One reported from the Skunk river near Ames in 1892, another from Clear Lake in 1945. The Clear Lake musky weighed 30 3/4 pounds and was 54 inches long.
6. The white bass.
7. 42.
8. The bigmouth buffalo has been known to attain a weight of over 80 pounds. Individuals of 20 pounds are common.
9. The young fishes of the year supply an abundance of food at this time.
10. The smallmouth bass.

Foresters Inspecting Federal Beautification Practices

John Stokes
State Forester

In 1966, the Federal government made available to Iowa farmers and other rural landowners beautification practices to implement the nation-wide program on beauty.

These cost sharing practices permit landowners to utilize trees and shrubs along roadsides for beauty purposes and also trees and ornamental shrubs in farmstead windbreaks around the dwelling and other buildings. The practices known as H-1 and H-3 are of particular interest to the Conservation Commission because of the habitat that will be available for Iowa game birds and animals throughout the State. The aesthetic benefit over the State should be outstanding.

District Foresters, under a cooperative agreement with the Soil Conservation Service in Iowa, serve as Technical Inspectors for the Agricultural Stabilization Conservation Service who administer the program for the U. S. Department of Agriculture. Landowners sign up at their County ASCS Office to participate in the cost sharing projects.

District Foresters are notified of each landowner sign-up and inspect the windbreak or roadside site prior to planting. Recommendations are made in design, species to use, land preparation and care of trees when the inspection is made. Landowners are assisted in acquiring trees and shrubs from private commercial nurseries in the area. Trees and shrubs from the State Forest Nursery may not be used in these practices. The use of state stock is prohibited in windbreak, ornamental, or landscaping projects.

In 1966, District Foresters checked 856 windbreaks in the State. A total of 279 were planted when final checks were made by the Foresters in late summer of 1966. Approximately 185 other projects were started in 1966 and will be completed in the spring of 1967.

The program got a late start in 1966 and many landowners could not get all the trees and shrubs needed before the planting season ended.

The work of checking windbreaks has continued through 1966 and into 1967. To date, over 700 landowners have signed up for beautification practices to be completed this year.

The impact of the beautification practices will be evident in a few years as the trees and shrubs continue to grow, producing a pleasing rural landscape and a substantial increase in the wildlife habitat in Iowa.

BELLEVUE STATE PARK OFFICER PHOTOGRAPHS EAGLES

Eagles—Bellevue's Elusive Winter Visitor

Kenneth Formanek
Park Officer

Photographing the bald eagle has indeed proved to be a challenging and educational experience. Challenging in the respect that this sharp-eyed bird can be extremely wary of man. Although I am often startled by the sight of "baldie" soaring fairly low and di-



rectly across town, he is apparently heading out to check fishing prospects at an air hole on Mill creek. It appears this bird is willing to tolerate a certain amount of man if it has to.

Perhaps the most rewarding aspect of such a photographic venture is the knowledge gained simply by watching this majestic creature. Habits of the subject must be learned in order that one may be placed in the right spot at the right time to get the picture. Use of blinds proves too time consuming, leaving my preferences to the game of calculated chance.

Feeding activity seems to be the busiest for the eagle during the first light hours of a normal winter day. Should weather show signs of spoiling, this bird will stay feeding longer in preparation for the oncoming storm. Usually by 2 p.m. most of the birds have retired to some secluded spot already roosting for the night.

The buildup of eagles appeared to reach its peak the third week in January. Fourteen were counted in the immediate lock and dam area January 18. That week, also, temperatures tumbled to subzero readings bringing the ice cover of the river to within about 100 yards of the dam. The favorite feeding area of the eagles was drastically reduced in size! It was time to photograph, for conditions were then just right!

Through special permission of the Army Corps of Engineers personnel at Lock and Dam 12, the dam was used as a perfect vantage point to record the eagle in action.

Even while wearing layers of insulated clothing during this subzero weather I can readily state the area of the dam to be one of Bellevue's coldest spots. Camera equipment froze up within minutes and had to be slipped beneath my parka to thaw while eagle activity was slow. Suddenly out of nowhere it seemed the air was again filled with soaring and diving birds. It was time to start snapping shutters!

Fishing activity of the eagle is truly a sight to view. This powerful bird gracefully soaring above may suddenly break into a sharp dive, talons outstretched and sure of its catch. During these feeding movements I've noticed most fish caught are small (about four inch size) and the greatest share are consumed while the bird is in flight. Few eagles will carry their catch to a tree branch and eat it there; while fewer still will take their catch to the ice.

My eyes were drawn to an old bird that had just tackled a big one (more than 10 inches in size)



and was unable to surface its catch. Only a few yards from ice, and like any good fisherman, baldie, with wing tips treading water, towed in its prize. Elated over landing such a catch the bird began enjoying its feast. But not for long! In a few short moments three of its comrades arrived and all decided each must taste this morsel. Competition is keen while feeding on the ice. Therefore not much of it is done.

The voice of the bald eagle is a rather weak screeching or whistling sound. Not at all what one would expect from such a mighty looking bird. When excited or disturbed it sounds out with a weak twitters call.

Young bald eagles may often be mistaken for their relative the golden eagle. Both birds have entire bodies of dark brown featheration. Only through careful observation or having the bird in hand can differences be noted.



Differences then are told through feather coloration and the fact that golden eagles have legs densely feathered down to the very base of their toes. Bald eagles lack this. Studies show that three to four years must lapse before the young bald eagle achieves the prominent white head and tail which make the appearance of this bird so striking.—Reprinted from Bellevue Iowa Herald-Leader.

Wildlife Exhibit to Open Ward Garrett, Supervisor

With the coming of spring, many Iowans feel a deep seated urge to get out for a breath of fresh air after being cooped up all winter. For an educational and fun-filled first outing, why not take your family for a sunny Sunday drive and attend the Wildlife Exhibit opening? This fine exhibit, located at the Research Station near the Ledges State Park, will open its doors to Iowans at 10:00 a.m., April 30. Viewing hours are 10:00 a.m. to 8:00 p.m. daily.

All Iowans are cordially invited to visit this very popular spot, now in its sixth season. The Wildlife Exhibit will be open from the last Sunday in April until late October.

Included in the Exhibit are all of Iowa's native game birds and animals, displayed in a circular pattern in near natural surroundings. Visitors enter the Exhibit and in about an hour's viewing time have made a complete circle around the display of nearly 50 pens. Strict sanitation insures pleasant viewing at all times. Specimens of nearly all waterfowl that migrate through Iowa may be seen in a large pool in the center of the Exhibit. Visitors may also study and learn about our national bird, the bald eagle, as well as a golden eagle, otters, timber wolves, coyotes, foxes and many others.

Exhibit personnel are always on hand to answer any questions about the habits and values of Iowa's wildlife. Visitors may also wish to inquire about the requirements necessary to attract wildlife to land they own.

Beautifully landscaped grounds, fine restrooms and good drinking water will add to your pleasure of visiting the Wildlife Exhibit. To reach Iowa's finest native animal display, drive to the Ledges State Park located four miles south of Boone. Signs at the Park's main entrance will direct you to the State Conservation Commission's Wildlife Exhibit.

Last year nearly 300,000 persons toured the Exhibit. If "you-all" come this season, a record number of Iowans will become better acquainted with native wildlife and enjoy themselves at the same time, too. That is a hard combination to beat—see you at the Wildlife Exhibit!

* * *

A bobcat's eyes adjust well to extreme light conditions. They are small and elliptical in bright light, large and round in dim light.

* * *

Most antelope fawns are born in late May. At this time the does seek the semi-solitude of rolling country with low vegetation.

* * *

State lands are public lands, and wherever possible they are managed wisely and developed for recreation.



Save a buck on ICE FISHING ROD & REEL

Milan Aschbrenner
Pine Lake Park Officer

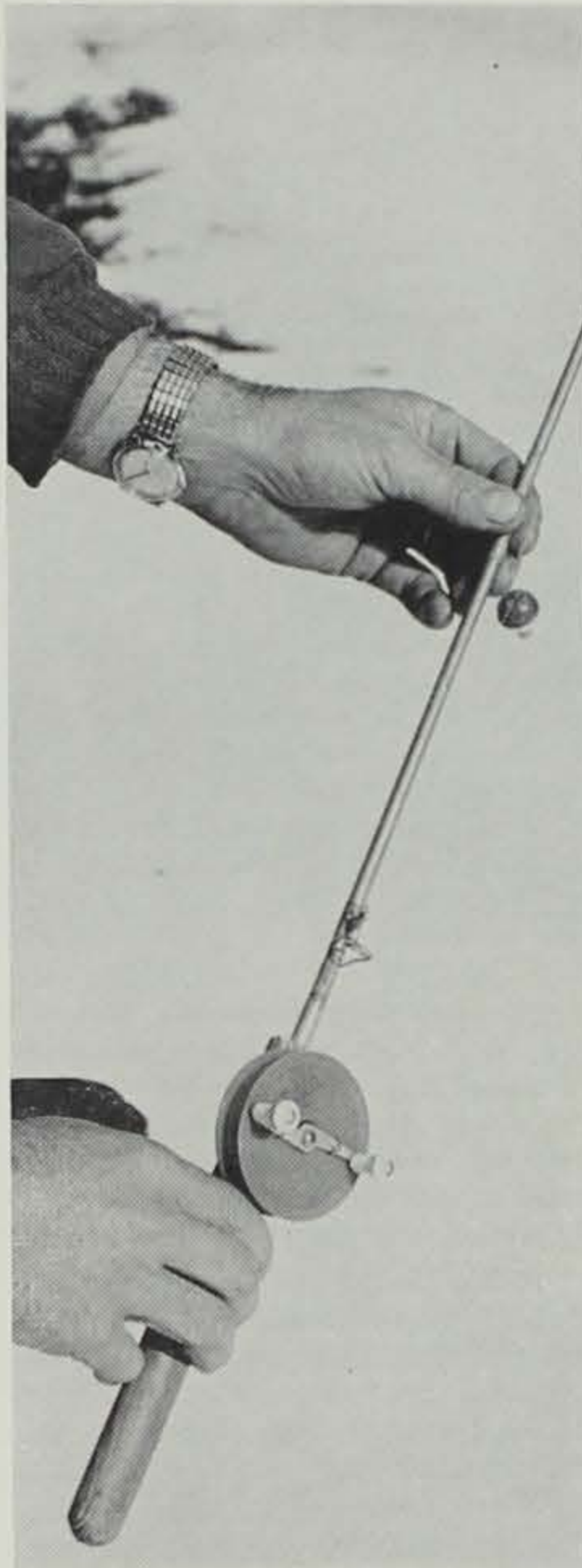
When you put that new monofilament line on your summer fishing reel, save the spool that it came on from your dealer's store. With a little effort, imagination, and some junk parts, it can be made into a very efficient ice-fishing outfit for next winter's use.

Begin with a short length of wooden dowel, or shape a wood handle to suit yourself from a broom handle or 2-inch lumber. A hole must be drilled in the small end of the handle to accept the rod itself. This may be made from a broken tip section of a glass casting rod. Drilling a snug-fitting hole in the handle and using a little glue, you next insert the tip section which has been cut to length. The rod is now ready.

Next, drill a hole through the diameter of the handle and add a bolt that is just long enough to pass through the handle and the plastic line spool you have saved. Nuts and lock washers anchor the bolt to the handle and hold the spool in place, while permitting it to turn.

Two small holes are drilled in the plastic spool to allow you to tightly wire on the handle from a discarded direct-cranking casting reel. You now have the reel handle to permit taking up loose line.

You will need only a few yards of line for your ice-fishing rig, and will probably have it already on the spool as surplus from loading your summer reel. Be sure that the rear end of the line is fastened securely to the spool, and if neces-



sary drill a small hole or two to do this.

Presto! There you have it—next winter's ice-fishing rod and reel, and without a cash outlay.

New Technique—

Continued from page 27

The white sucker, northern hog sucker, and redhorses do not show the band referred to as number 5 and these species are usually considered as more closely related to each other than to other members of the family. One rather surprising discovery was that the protein pattern of the black buffalo was more nearly like that of the bigmouth buffalo than it was to the smallmouth buffalo. On the basis of mouth and general form, the black and smallmouth buffalo look more alike.

Mr. Huntsman hopes to test the muscle extract of other members of the sucker family to see if he can determine their relationships. Now that the muscle extract can be used to distinguish between the 3 species of carpsuckers, even when they are small, perhaps we can find other differences which can be used for identification in the field without bringing meat samples to the laboratory for electrophoretic analysis.

The coyote weighs from 20 to 50 pounds, and his den is characterized by a semicircle of earth around the entrance, formed after the animal digs his hole.

* * *

All Americans can help fully develop the 2.3 billion acres of public land in the United States for recreational use for all.

* * *

Only about 3 to 4 pounds of meat can be expected from a 15-pound snapping turtle.

* * *

More than half the 40 million gun owners in the United States are recreational shooters.

* * *

More than 8 million Americans spent money or traveled specifically to watch birds and other wildlife.

* * *

Badgers are surprisingly good swimmers and have been known to venture half a mile from a lake shore.

NEW UNIFORM WATER-SKI HAND SIGNALS ADOPTED

Roy Downing, Superintendent of Waters



A new set of uniform hand signals has been approved and adopted by the National Association of Boating Law Administrators. Proposed by the National Water-Ski Association, these signals will greatly aid the skier by providing one signal for each situation, instead of the past confusion of having several signals in use by various organizations.

