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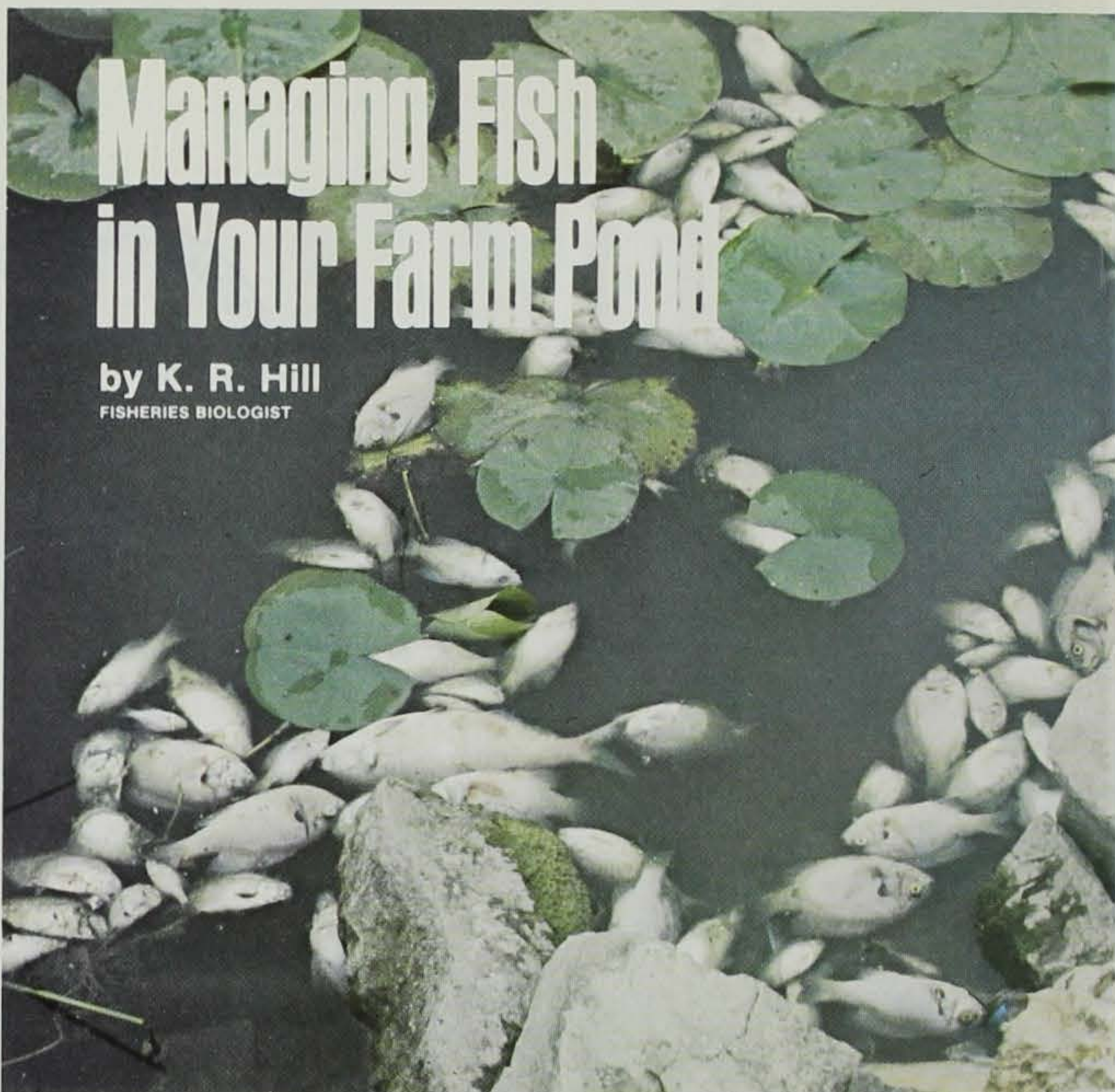
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# Managing Fish in Your Farm Pond

by K. R. Hill  
FISHERIES BIOLOGIST

**M**ANAGING FISH in a farm pond should start when the pond is new and continue throughout the life of the pond. Good fishing cannot be guaranteed, but the chances of having a better fishing pond may be improved by avoiding several commonly-made mistakes. Once the pond is stocked with the proper number of fish in the proper ratio, management becomes (1) a matter of keeping the water clear enough for good food production, (2) keeping aquatic vegetation from becoming excessive, and (3) harvesting the fish in a systematic manner.

Most turbidity problems are nothing to be alarmed about. Turbidity caused from excessive numbers of crayfish will decrease once channel catfish and large-mouth bass start preying on the crayfish. A greenish water color, which upon closer examination is caused by tiny plants or plant

fragments, is normal and beneficial to fish food production. If turbidity persists, especially if the pond watershed is in grass or pasture, contact your local fisheries biologist for solutions.

Aquatic vegetation (seaweed or moss as it is commonly known) is often a problem in Iowa farm ponds. Generally, if the vegetation doesn't exceed 25 percent of the pond's surface area, control is unneeded. A ring of vegetation near the pond's shoreline is normal. If serious problems persist, stimulating a plankton growth will kill the vegetation by reducing light penetration in the water. This may be accomplished by using chemicals designed to control only nuisance vegetation.

The most important factor in managing a farm pond for fishing is continuing a desirable ratio between fish species. The Iowa Conservation Commission will

supply farm pond fish if certain pond requirements are met. The pond must be one-half acre or larger, eight feet deep, fenced to exclude livestock and recently renovated or free of fish. Stocking rates are 1,000 one- to two-inch bluegill per acre, 100 two- to three-inch channel catfish per acre in the fall and 100 two-inch largemouth bass per acre the following spring. These three species are best suited for Iowa farm ponds.

The first three years of life in the pond for the large-mouth bass, bluegill and channel catfish are the most important. Fish stocked in the fall grow very little until the following spring. However, at one year of age, bass will be six to eight inches, bluegill about five to six inches, and the catfish eight to ten inches. Good ponds will produce plenty of natural food so artificial feeding isn't necessary. No further stockings will be necessary



except to replace the channel catfish that are harvested.

Bluegill are unequalled as forage fish for largemouth bass in ponds, and are necessary to provide sufficient food for good bass growth. This scrappy, tasty fish will also contribute greatly to the fisherman's catch. Good ponds in Iowa should support about 250 pounds of bluegill per surface acre. Bluegill spawn from late June through August in shallow water nests and produce hundreds of young for bass forage.

Largemouth bass are the main predators in a farm pond, eating bluegills, frogs and crayfish as adults, but when small (one-half to two inches) they eat water fleas, insects and tiny bluegill. Bass spawn during May and early June in Iowa and approximately 8,000 to 15,000 eggs are laid in a nest in shallow water. Male bass guard the nest during incubation, but after hatching the baby bass are on their own.

Channel catfish are the trophy fish in ponds and obtain weights up to 20 pounds. They feed on dead plant and animal material and benefit both the bluegill and bass populations. Catfish seldom reproduce successfully in ponds with bass and bluegill, even though spawning sites (old tile, cream cans, etc.) are available, because the tiny fry are quickly eaten by bass and bluegill. Periodic stockings of 50 eight- to ten-inch catfish per acre are necessary to provide sustained catfishing.

The most critical part of farm pond management is centered around harvest of the fish. Harvesting the crop is the easiest part, but sometimes it's too easy and fish are overharvested. Bluegill can be fished two years after stocking. These fish should be six to seven inches in length. Since bass do not reach spawning maturity until their third year of life, it is best not to remove any until the pond has had bass for four years. If bass are removed before they

have reproduced, future fishing will suffer because lack of predation will help bluegill overpopulate and become stunted (too many bluegill for the available food which results in slow growth). Bass are extremely vulnerable to angling, so it is important when bass fishing at a new pond to return all bass. This enables them to grow and eventually reproduce. Channel catfish harvest should begin after about three years.

The following specific suggestions will help you maintain good fishing in your pond. Remove six pounds of bluegill to every pound of bass. Do not remove bass smaller than 14 to 15 inches long. Keep all the bluegills you catch and no more than 25 bass per acre per year after bass have been in three years. Keep no more than 15 catfish per acre per year.

The following are several helpful hints that might help improve your pond fishing. If fishing an old pond yields only small (three- to four-inch) bluegills and very few bass, chances are that the bass have been overharvested and more bass are needed. Buy 10- to 12-inch bass, and stock them at a rate of 30 to 40 per acre. If fishing an old pond yields large bluegill (six- to eight-inch) and small thin bass (8- to 10-inch), this indicates an overcrowding of bass (unusual in Iowa ponds with bass and bluegill). This can be corrected by removing bass less than 11 inches. Twenty-five small bass per acre removed should be sufficient. If fishing yields 50 percent of the bluegill caught longer than six inches and the bass average 12 to 15 inches, although smaller and larger bass are caught, the pond has been properly managed and good management and harvest principles should continue.

Raising a crop of fish is a rewarding experience, even though it takes as much time and effort as raising land crops. The benefits are worth it!

□







# Finned Voyagers

by Vaughn L. Paragamian

FISHERIES RESEARCH BIOLOGIST

Photos by Author

*Silence surrounded the small stream and brilliant colors of autumn reflected a chill in the air. The setting was a tributary stream of a major river in the Pacific Northwest. Suddenly a flurry of activity broke out in the small stream, caused by a spawning run of sockeye salmon. These fish had traversed hundreds of miles of ocean and river waters to get here and voyages similar to this are occurring 24 hours a day. Although fish migrations taking place in Iowa are not as extensive in distance, they are as dramatic in importance in that they play a major role in the life of our native fish and our fishing success.*

THE JOURNEYS undertaken by salmon are probably the best type of fish movement known. Homing behavior of salmon, the process of returning to the same water in which the salmon were hatched, mystified man for many years. Recently scientists

discovered that these fish literally smell their way back home using a process called olfactory perception. Early life of most salmon is spent in freshwater nursery lakes or streams, at this time they are called parr. At a more advanced (smolt) stage they develop an urge to seek salt water and move downstream to the ocean. But before they venture on this journey, a process takes place in which the smell or chemistry of the home water is impregnated in their brain, a process called imprinting. The remainder of their life is spent in saltwater until they mature. They then return to freshwater, finding their way back by remembering the odor of their home stream. All fish do not make it back to the same stream; these are called strays and may go up any stream or none at all. The behavior of spending part of their life in saltwater and returning to freshwater to spawn is called anadromy.





Above: Female smallmouth bass with tag.

Left: Carpsucker is a free moving fish.

Right: Sockeye salmon fighting upstream.



None of the fish native to Iowa are anadromous but we do have a fish that travels from freshwater to saltwater to spawn. The American eel, found in the Mississippi River and its tributaries, engages in this behavior each year. This is called catadromy.

Most of the distinctive movement we are familiar with in which large numbers of fish migrate is due to spawning behavior. Many fish travel before spawning to find suitable spawning habitat and seek mature fish of the opposite sex. Pre-spawning concentrations of walleye, white bass, crappie, and bluegill are often the reason for sudden early season fishing bonanzas. On the other hand the pre-spawning behavior of paddlefish often creates a lull in the snagging fishery for this species in the Mississippi River. Paddlefish disperse from winter concentrations below dams on the Mississippi River to spawn in summer in areas of rocky habitat.

Some species of fish are natural wanderers while others are home bodies by nature. Fish like suckers, redhorse and some catfish tend to move freely in search of food through the lake or river they inhabit. Others like smallmouth bass, large brown trout, and some large flathead catfish tend to stay in a particular pool, often referred to as a home pool. In a recent movement study of smallmouth bass in the Maquoketa River, it was found that about 80% of the bass tagged during the investigation tended to stay in the same pool in which they were originally caught. In another tagging study involving channel catfish, an individual fish that was tagged in the Skunk River was recaptured by a fisherman several years later in the Chippewa River, Wisconsin.

Movement studies have become very sophisticated in recent years with advances in the use of electronic transmitters. Several studies by the Iowa Conservation Commission are underway right now. These tiny transmitters are surgically implanted in the fish. Each transmitter sends a different signal which can be received by an underwater receiving device called a hydrophone. Researchers venture out on lakes at all times of the day, in all types of weather, and for hours on end following the wired fish. The first study was undertaken in Red Haw Lake using grass carp (white amur) as subjects. Each fish studied showed individual movement patterns, several wandered all over the lake while others showed limited movement. As we sit

comfortably in our living room chairs, about eight walleye are swimming in Spirit Lake with sonic transmitters. The results of this study will add much to understanding the movement patterns of walleye and help improve fishing success.

Fish also move to areas in lakes or streams where life is more comfortable. For example, in spring and autumn when the temperature of most lakes is uniform, bluegill, bass, crappie, walleye and other fish may be found at most any depth (see Iowa Conservationist, July 1974). However, when the lakes stratifies in summer months, as most lakes in Iowa do, the fish move to a region called the metalimnion or thermocline. This portion of the lake is usually 8-12 feet below the surface and is the most comfortable area in relation to temperature. At this time of year, surface water is too warm and though the deepest regions are cooler, they are devoid of oxygen. In winter months many fish move into deeper water, where it is warmer. A second example is the concentration of fish around cool springs feeding warm lakes or rivers.

Some fish even move to light and dark cycles. Yellow perch, rock bass, walleye, and trout-perch move in toward shore with oncoming darkness and offshore with the approach of light. Channel catfish and bullhead become active feeders at dusk. Catfish can be caught below riffle areas at this time after they move out of their deep water hideouts.

Schooling is a well-known form of mass movement of fish. Schooling fish are often in search of food and they act as a unit. There are many theories as to why fish hunt in schools but the most simple explanation is efficiency. A baitfish may be able to avoid one hungry mouth but the chances of dodging five, ten or twenty are slim. White bass and walleye are well-known fish that often school. After catching one of these fish, an experienced angler will cast to the same spot and his chances of landing a second are very good. One point to remember is that the real lunkers are usually loners. Big fish are not as fast and cannot compete with the smaller to medium sized fish.

*Solitude returned to the small stream about two weeks later. Most of the brilliant leaves had fallen and died as did the spawned out salmon. But a new generation of voyageurs was waiting its turn. In the spring young salmon would hatch from eggs deposited in gravel nests and leaves would appear from winter buds.* ■



# Iowa's New Fish Hatchery

BY VERN SPYKERMAN, HATCHERY MANAGER, AND JAMES BULMAN, DISTRICT FORESTER

**T**HE IOWA CONSERVATION COMMISSION operates eight fish hatcheries. These stations are located in most regions of the state (see map). Because they are scattered statewide, one or more of these hatcheries is within easy driving distance of all Iowans. Each of these facilities is open for public visitation every day of the week, between the hours of 8:00 a.m. and 4:30 p.m. and they offer visitors something different to see and do on a family outing.

Spirit Lake Fish Hatchery is located in northwest Iowa near the town of Spirit Lake. It is responsible for providing walleye and muskellunge for Iowa waters. This station features an attractive visitor center complete with five aquariums. A person visiting this hatchery from now until mid-May will see walleye and muskellunge culture in action.

Decorah Fish Hatchery is located in northeast Iowa near the town of Decorah. Rainbow and brown trout are available for viewing. This facility is located in very beautiful surroundings. A visit to Decorah hatchery in the fall, when the leaves are in full color, will indeed be memorable.

Big Springs Fish Hatchery is located near the town of Elkader. Big Springs is Iowa's largest trout hatchery. This station is also located in a scenic setting and features one of Iowa's largest springs.

Manchester Fish Hatchery is located near the town of Manchester. It is Iowa's brood stock trout hatchery. This station features many large trout visible to visitors and large numbers of very small trout.

Fairport Fish Hatchery is located along the Mississippi River between the towns of Muscatine and Davenport. Nineteen acres of earthen ponds are there for your viewing. If your visit occurs during the summer, these ponds will be filled with largemouth bass and bluegill.

Rathbun Fish Hatchery is located near Centerville and is Iowa's newest hatchery.

Mount Ayr Fish Hatchery, located near Mount Ayr, is Iowa's smallest warm water hatchery. Striped bass are produced here in six acres of earthen ponds.

Guttenberg Fish Hatchery is Iowa's only station hatchery for northern pike. This station is located adjacent to Lock and Dam Number 10, in the town of Guttenberg. The hatchery features an attractive aquarium room with fish common to that area on display.

— T. Jennings

**O**NE of the Iowa Conservation Commission's newest facilities has recently been completed in southern Iowa. This facility is the ultramodern Rathbun Fish Hatchery. The hatchery is located in Appanoose County about seven miles north of Centerville, Iowa. It is situated on 375 acres of land directly below the Rathbun Reservoir Dam.

The hatchery complex includes a 5,000 square foot hatchery-office building, twenty concrete rearing ponds, pollution control ponds, and three employee residences. Visitor related facilities include a visitor center where visitors are informed of Commission programs, an elevated observation walkway through the hatchery building and rearing area, a fish viewing pond, aquariums, and public restrooms. Also located on the hatchery grounds is a mile of nature trail.

Ken Formanek Photo





Ken Formanek Photo



Above: Tomorrow's big catfish.



Catfish starting tanks.



Older fish are moved to circular raceways.

Rathbun Fish Hatchery is a warm water fish hatchery employing the latest concepts in fish culture. It is designed to provide warm water fish in numbers and of sufficient size to meet Iowa's present and future fish stocking demands for public fishing waters. Channel catfish, a fish deemed most important to Iowa anglers in a recent survey, is the primary fish species raised at the hatchery. Other species of fish raised include walleye, largemouth bass and ocean striped bass.

Another new fish culture technique used at Rathbun Hatchery is winter spawning of channel catfish. Adult brood catfish are brought inside the hatchery building in December and the water temperature in the tanks is raised. Because of the elevated water temperature, the catfish naturally believe it is spawning time and eggs are deposited. In Iowa, channel catfish

normally spawn in late June or July. Because of this relatively late spawning date, two summers are required to produce an eight-inch fish. By using the winter spawning technique and heated water, an eight-inch catfish can now be produced in seven months instead of the fourteen months it would take under natural conditions.

Channel catfish at Rathbun Hatchery are raised by utilizing intensive fish culture techniques. The catfish are hatched and grown to a length of six to ten inches, while entirely confined in concrete rearing ponds. Through intensive methods, as much as 100,000 pounds of catfish can be grown in 20 concrete tanks comparable to slightly over one surface acre of water.

All in all the Rathbun Hatchery will employ the newest and most successful techniques known in the operation of warm-water fish hatcheries. Iowa is fortunate to have this fine facility and a visit to it will be most informative.





Photos by Jim Bulman



Above: 2,300 trees were removed from other areas for replanting.

Below: Camping areas received most of the transplanted trees.

THE MOST SIGNIFICANT structure on a lake such as Rathbun is the dam. It holds back the water and brings the lake into being. Little thought may be given by the public to the hundreds of other things that must be done before the lake as a recreational complex can bring enjoyment to the thousands of people who visit there annually.

Most people don't stop to think of how much of the plant life around the lake came to be there and how it is managed so that it adds to the enjoyment of the total area.

Much of the land around Lake Rathbun, now developed into picnic and camping areas, was in corn or beans one year and in public ownership the next. A lot of corn and bean stubble had to be planted with grass to control erosion and to provide a base for public recreation. In addition, trees had to be planted for background and for shade.

The Forestry Section of the Iowa Conservation Commission worked closely with the Corps of Engineers, U.S. Forest Service and other agencies, first to draw up a plan for the establishment and maintenance of vegetation at the lake and later to implement that plan by establishing grass seeding and tree planting. Implementation of the plan was begun in 1971 and completed in 1977. The Forestry Section continues to provide management recommendations to Corps of Engineers personnel at the lake. ■





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A continuous check for insect and disease problems is maintained.

1,300 acres of land were seeded to legume-grass mixtures.



Some hay producing fields are leased to local farmers.

300 acres were replanted to original prairie grasses.

950 trees and shrubs were planted for landscaping.





AS YOU STAND on the bank casting and retrieving a lure, have these thoughts ever crossed your mind . . . "I wonder what the bottom of the lake looks like" or "are there really any fish down there?" Have you ever pondered over why certain areas of the lake consistently produce better catches than others? It is because there is, in fact, a direct correlation between lakebed topography and fish density. Bottom configurations that provide sheltered areas will more readily attract fish.

Looking for and fishing around these areas in a lake has been given the term "structure fishing" and utilizing this technique will, in the long run, provide for larger harvests.

Structures can be provided naturally by physical characteristics such as steep dropoffs, former creek channels, depressions and underwater "islands." Tree stumps, logs and natural rock outcroppings also attract fish.

Many of our lakes, however, are short on these types of habitat. This is especially true of

our older artificial impoundments built prior to 1960. The usual procedure during our early lake building days was to clear all timber and brush from the future lakebed and "grub out" all the stumps. What essentially remained, in many cases, was a bowl shaped mud bottom. This, of course, was not conducive to good angling. There was little natural structure left to concentrate fish and make the angler's efforts more rewarding, at least in terms of fish in the creel.

During the past several years, our efforts have been more strongly focused toward increasing the harvest of several species, especially the panfish, bluegill and crappie. Both species can cause drastic changes in the population balance of a lake if they are underfished and allowed to become overabundant. This phenomenon of overcrowding, called stunting, also occurs when a lake's major predator species, usually largemouth bass, is overharvested, leaving few to control panfish numbers.

## FISH THE STRUCTURE AND FILL THE STRINGER!

by Tom Putnam

FISHERIES BIOLOGIST

Placing tires for reef site at Lake Ahquabi.

Photos by the Author





There are several methods used to increase panfish harvest. A public information program, the Fishing "Hot-spots" Report, keeps anglers informed, on a weekly basis, of the best areas of fishing activity. These reports, which are published in newspapers throughout the state from April through September, include the best areas for crappie and bluegill fishing.

Control of shoreline vegetation is another method of increasing fishing success for panfish. Removal of this nuisance vegetation through biological or chemical means frees more shoreline area for fishing access.

Larger numbers of panfish can also be put on the stringer through habitat improvement programs. Structures are placed on the lake bottom in an attempt to concentrate fish around them. Angling success is often 2 to 3 times greater around these than in unstructured areas, especially during the hot summer months.

A variety of materials is used to construct these artificial attractors. One of the most readily available is natural material such as cedar trees, brush or tree limbs. These are either weighted individually with cinder blocks or tied in bundles, weighted and sunk to make the underwater formations.

Stake-beds are another method of providing additional habitat. These are built of 2" x 2" green oak lumber usually obtained from the commission's saw mill at Yellow River Forest in northeast Iowa. The beds are made in either of two ways. In lakes under a fall drawdown program or in new lakes not as yet impounded, stakes can be driven into the lake bottom with a sledge hammer. Care is taken to place the bed in an area that will be inundated by 10-15 feet of water when the lake reaches its normal level. Stakes are placed about 12 inches apart in each direction and the height of each stake-bed will vary from 4 to 8 feet depending upon the water depth expected in the future. Several hundred stakes may be used in one bed.

In established lakes, stake-beds are "prefabed" on the shore into transportable sized units. Each section can then be carried between two boats and dropped off at the predesignated reef location. Cinder blocks are used to weight the

unit down, holding it in place on the lakebed until it becomes waterlogged. Care is also taken to insure it is set upright on the bottom. Several units are used at each site to construct the size and shape of reef desired.



Above: Cedar tree attractor at Rock Creek. Below: Brush attractor goes in place at Big Creek. Bottom: Cinder blocks are used to hold down stake beds.



A third source of material used in reef-building is found in ready supply at the local tire dealer. Discarded automobile tires are easily obtainable in large quantities and can be fashioned into excellent attractors. Tires can be formed into several different configurations, but the most common is the 3-tire triangle. A hole is drilled into the sidewall of each tire to allow air to escape when submerged and triangles are then constructed by lashing them together with wire or nylon rope. Weighting of each unit is not necessary if care is taken to allow the air it contains to escape prior to placement. The number of units used depends on the area, and as many as 500 tires have been placed in a single attractor in one central Iowa lake.

These reefs are guaranteed to attract gamefish, but special care must be taken to insure correct placement. A lake may have the tendency to develop a thermocline during the hot summer months. As this stratification takes place, water in the deeper segments of the lake (usually in excess of 16 to 20 feet) will not circulate with the shallower water and thus its oxygen supply cannot be replenished. The oxygen deficient layer is essentially devoid of fishlife and a reef placed there will not attract fish during July and August.

If an attractor is placed in too shallow an area, it may freeze into the ice during the winter and will be broken up or shifted out of place during the spring "iceout" period. The top of the structure should, therefore, be at least 4 feet below the surface.

To identify each location a white floating buoy, on which the silhouette of a fish is painted, has been anchored above the fish attractor. Many are in close proximity to the bank and can be fished from shore as well as by boat. So if you are unfamiliar with the terrain of a particular lakebed, take a quick look around for one of these bouys, rig up your rod and take a second check to make sure you remembered to bring your stringer! □



# 1977 Iowa Trophy Turkey Awards

## 1977 Certified Trophy Turkeys

NAME & ADDRESS	WEIGHT	BEARD	SPUR	DATE	COUNTY TAKEN
Ira I. Honnold Des Moines	25 lb. 8 oz.	10"	3/4"	4-27-77	Clarke
John Speake Montrose	25 lb. 7 oz.	10 1/2"	3/4"	5-5-74	Lee
Roy H. Graffunder Lohrville	25 lb.	10"	1 1/4"	5-13-74	Lucas
Lynn W. Newcomb Indianola	25 lb.	10 1/2"	1 1/4"	4-27-76	Appanoose
Rex C. Hight Greenfield	24 lb. 9 oz.	10 1/2"	1 1/4"	4-28-77	Clarke
Chas. W. Thompson Montrose	24 lb. 8 oz.	11"	3/4"	4-27-77	Lee
Mike Woolman Indianola	24 lb. 8 oz.	9 1/2"	83"	4-26-77	Clarke
Terry Jennings Unionville	24 lb.	9 1/2"	15/16"	5-3-76	Appanoose
Lester M. Barta Mt. Vernon	24 lb.	10 1/2"	1"	5-1-77	Lee
Joe Kirchoff Creston	24 lb.	12 1/2"	1 1/4"	5-8-77	Clarke
Ken Madole Iowa Falls	24 lb.	9 1/2"	1 1/16"	5-4-77	Clarke
Larry L. Wheeler West Burlington	24 lb.	11"	1 1/4"	5-9-75	Lee
David Agnew Nodaway	23 lb. 12 oz.	9 1/2"	7"	4-30-77	Appanoose
James E. Price Hampton	23 lb. 12 oz.	10"	1 1/16"	5-5-74	Lucas
Michael R. Coleman Grimes	23 lb. 10 oz.	10 1/2"	1 1/16"	4-30-77	Appanoose
Ronald R. Powell Mystic	23 lb. 9 oz.	9 1/2"	1 1/4"	4-28-76	Appanoose
Doyle D. Adams Indianola	23 lb. 7 oz.	11 1/2"	1 1/4"	4-23-77	Van Buren
Burton R. Coleman Grimes	23 lb. 7 oz.	11"	3/4"	5-12-74	Lucas
Steven A. Billings Johnston	23 lb. 5 oz.	10 1/2"	1 5/16"	5-13-77	Lucas
Richard L. Adkins Adel	23 lb. 4 oz.	9"	1 1/4"	5-1-76	Appanoose
Doug DeHart Keosauqua	23 lb. 4 oz.	9 1/2"	1 3/16"	4-28-77	Van Buren
Dale Haines Exline	23 lb. 4 oz.	10 1/2"	1 1/4"	5-2-77	Appanoose
M. Marie Hollinger Mason City	23 lb. 4 oz.	9 1/2"	3/4"	5-12-76	Van Buren
Robert D. Brennehan Des Moines	23 lb.	10"	1 3/16"	4-24-77	Lucas
Joseph D. Hart Alta Vista	23 lb.	10 1/2"	1"	4-21-77	Appanoose
Paul H. Heuton Schaller	23 lb.	9"	3/4"	5-7-77	Lucas
Tom W. Marsh Farmington	23 lb.	9 1/2"	1 3/7"	4-26-77	Lee
William V. Marsh Farmington	23 lb.	10 8"	9"	4-29-77	Lee
Gary R. Ohrt Charles City	23 lb.	12 03"	1 1/4"	5-8-77	Lee

The Iowa Conservation Commission has begun maintaining records on trophy sized wild turkeys. In order to qualify for an award certificate and shoulder patch, gobblers must weigh a minimum of 23 pounds. The bird must be weighed on scales legal for trade and two people must witness the weighing. Other information needed includes the length of the beard, length of spur, date and county taken and name and address of the hunter.

Hunters who have bagged turkeys in the past that qualify will be recognized. A NEW STATE RECORD-SIZED TURKEY, HOWEVER, MUST BE EXAMINED AND VERIFIED BY IOWA CONSERVATION COMMISSION PERSONNEL.

The current state record topped the scales at 27 pounds and was taken by Greg Smith, RR #2, Donnellson. Smith bagged the big gobbler in Lee County, May 3, 1975.

Following is a list of trophy turkeys that have qualified:

## All Time Top Ten

NAME & ADDRESS	WEIGHT	DATE TAKEN	COUNTY
Greg Smith Donnellson	27 lb. 0 oz.	5-3-75	Lee
Ira I. Honnold Des Moines	25 lb. 8 oz.	4-27-77	Clarke
John Speake Montrose	25 lb. 7 oz.	5-5-74	Lee
Mike Simpkins Farmington	25 lb. 5 oz.	5-2-75	Lee
Roy H. Graffunder Lohrville	25 lb. 0 oz.	5-13-74	Lucas
Lynn Newcomb Indianola	25 lb. 0 oz.	4-27-76	Appanoose
Terry Little Boone	24 lb. 11 oz.	5-1-76	Lee
Rex C. Hight Greenfield	24 lb. 9 oz.	4-28-77	Clarke
Joe Schwartz Griswold	24 lb. 8 oz.	5-3-75	Clarke
Charles Thompson Montrose	24 lb. 8 oz.	4-27-77	Lee
Mike Woolman Indianola	24 lb. 8 oz.	4-26-77	Clarke

## ENTRY BLANK FOR IOWA TROPHY TURKEY

NAME \_\_\_\_\_

STREET/RFD \_\_\_\_\_ CITY \_\_\_\_\_ ZIP \_\_\_\_\_

WEIGHT \_\_\_\_\_ LB. \_\_\_\_\_ OZ. COUNTY TAKEN \_\_\_\_\_

DATE TAKEN \_\_\_\_\_ BEARD LGTH. \_\_\_\_\_ SPUR LGTH. \_\_\_\_\_

## WITNESSES

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

What are your thoughts and concerns about conservation in Iowa. What about wildlife habitat, local conservation problems, land use, or outdoor recreation needs in your area?

The "Iowa Conservationist" magazine is interested in what you think, your ideas, and what's on your mind.

As managing editor of the "Iowa Conservationist" I'd like to hear from you. Write to me. I would like to hear from someone in every county in Iowa and *that means you!*

Last month I received letters from several readers in a handful of counties. Come on; you can do it. I want to hear from somebody in all 99 counties.

I'll try to answer your letters, but don't just limit your letter to asking questions; I want to know your ideas and opinions. And remember, if you don't write, your county may be missed.

Don't put it off! Just pick up a pencil or pen and start writing. Don't worry about what it looks like; the important thing is that I hear from you today.

Write to: Robert Runge, Managing Editor, Iowa Conservationist Magazine, Iowa Conservation Commission, Wallace State Office Building, Des Moines, Iowa 50319.



## Owlsant or Phwl?

CONSERVATION COMMISSION wildlife research teams are currently attempting to crossbreed great-horned owls and ringneck pheasants. In the face of declining pheasant habitat, it is thought that the new strain of birds would be able to live both in cornfields and hollow trees.

In addition, the new birds might offer the hunter some fast-flying nighttime action for the first time ever. It is thought that the new bird would be available to those who work days but might like to get out into the field during the evening. The Commission will take a close look at the safety aspects of possible nighttime hunting, however.

The first few attempts at breeding these birds were unsuccessful since the male owl proved overly receptive to the hen pheasants. Rather than performing a courtship ritual before the hen, the owl carried out what only could be described as a sacrificial type ceremony. The attrition rate on hens was high, although the owl appeared healthy and actually gained weight.

Attempts at using a female owl and male pheasant were also discouraging at first. But an accident near the pheasant cages led to a discovery. A feed deliveryman or some other visiting free spirit left a bottle of odd-smelling beverage in the area of the cages. It apparently was tipped into the pheasant's watering can and that afternoon the rooster pheasant gained the courage necessary to entertain the owl. Things have been going well ever since and some birds are being raised.

Commission biologists are looking forward to summer when the first owlsants will be stocked. These birds will be released near Aprifoolle, Iowa, in June.

## Warden's diary

by Rex Emerson

LAW ENFORCEMENT SUPERVISOR

THIS TIME of the year we spend quite a lot of time checking fishing licenses at farm ponds in southern Iowa. With the weather warming up, farm ponds are a good choice for the fisherman. The fish haven't been feeding much during the winter months and as the water warms up they become more active. Most of the successful fishermen today were using night crawlers for bait. They tried to make the bait appear as natural as possible.

I was particularly intrigued by the method and successful fighting of one bass fisherman. He had a long, light action pole with six pound monofilament line on the reel. A nice big night crawler was selected from the bait can and the small hook was well hidden in the collar of the worm. He used a small split shot for weight and a little quill bobber about three feet from the bait. The bass seemed to be up feeding where the water was warmer. Now, a lot of fishermen try to cast their bait clear across the pond, but

not so with this fellow. He would walk quietly along the bank with the wind blowing toward him and flip the bait out about thirty feet from shore. The line was never held tight and the wind and waves worked the small bobber toward shore. A few more steps along the bank and another short cast. This time when the bobber had worked itself about halfway to the shore, it disappeared. As the loose line began to tighten, a little more line was stripped from the reel to give the fish time to get all of the night crawler into its mouth. The hook was then set with a quick upward jerk on the rod, and the fight was on. That bass came clear out of the water and appeared to be walking on its tail across the surface for a few seconds, and then back down to the bottom of the pond. This was a good one and would have to be handled carefully on such light tackle. In a few minutes the bass was worn out and came peaceably into the shallow water where, with the fisherman's thumb in its mouth, it was lifted by

the lower jaw from the water. I was as worn out as the fish, and I didn't do anything but watch.

This fish must have weighed at least five pounds. The fisherman had two others on the stringer that were only slightly smaller.

The fisherman laid down his rod and reel and climbed up the bank and sat down beside me as he filled his pipe. He said, "After that battle I might as well rest awhile and let the pond quiet down."

As you might know, our conversation was about bass fishing. We talked about such things as the importance of walking quietly around the pond. If you go stomping along the bank you might just as well be home fishing in a bucket.

If you catch a bass that is too small, turn it loose and let it grow some more. Next year it will be bigger and you can enjoy catching it again.

When fishing, using this man's method, chances are the fish will swallow the hook. If you decide to turn it loose, just cut the line next to its mouth. That small hook won't last long in a fish's stomach. If you try to pull the hook out or handle the bass roughly, it will kill the fish.

Many times people make excuses for having bass so small they are ashamed for anyone to see them. They say, "The fish swallowed the hook and I had to kill it to get my hook back."

In the words of the fisherman I was talking to, "These small hooks are quite

cheap and if you don't have some extra hooks along I suspect that you, too, are very cheap."

What size bass is too small? Well, some places in Iowa we have a minimum size limit. In some lakes it is twelve inches and in others it is fourteen inches. Those places are well posted and you should be alert for the signs. In places where there is no size limit, the individual must decide what is too small to keep. For me, if it is under twelve inches, back it goes. This made the fisherman I was talking to raise his eyebrows. His own minimum size limit was three pounds.

As I left the pond I thought, "Now there is the kind of fisherman you really enjoy checking." He had his fishing license, he was a good sportsman, and he had permission from the farmer to be there. Even if the pond is state stocked, you still need permission to be on private property.

From now on, throughout the summer, we will be finding some fish traps in the rivers. This kind of fisherman is not such a good sportsman, as this is illegal in the inland rivers and can also be very expensive . . . unless you're like my old friend who lives down by the river.

The first time I met him was when I caught him running a fish trap. When he paid his fine he said, "Oh well, money is like manure. Neither one is any good unless you spread it around."

However, I see that he does use a pole and line now.





# Classroom Corner

by Robert Rye

ADMINISTRATOR, CONSERVATION EDUCATION CENTER



SMELLS and the sense of smell are frequently used in everyday conversation. "Smells like rotten eggs" (when speaking of cars with catalytic converters), "this hand of cards stinks," or "I came out smelling like a rose" are often heard.

Smells or odors have been used by plants and animals since the beginning of time. As an ant moves along a trail, which he is following by smell, he will attack any ant which doesn't smell like the ants from his community. Even an ant that has rubbed with the body of a colony different from his own will be treated as a foreigner. Similarly, a chemical cue stimulates the removal of dead ants from the nest and if a live ant is rubbed with a dead colony member, he will be carried out like a corpse.

Other insects, such as the butterfly, not only attract a mate with odors, but also find food by odor. Did you ever think about the possibility of a butterfly smelling out the right leaf to lay its eggs on and the kind of leaf the hatching caterpillars must have to eat?

Smell is also used in defense against predation. Some snails retreat to the lowest point available when they sense blood from one of their species. Fish come together and school when other members give off a chemical sign of danger. Rabbits rely strongly on odors to detect predators within their area although they complement this air-smelling ability with keen ears and eyes. What about the fox whose tracks you can see but whose sense of smell perceives the direction of food, water, other foxes, enemies, and you long before you were aware of him and discovered his whereabouts. Did you ever compare the amount of space the nose takes on the face of a fox or any "good smeller" with yourself?

A discussion of smells is certain to bring mention of the skunk's well-known defensive artillery that uses an odorous fluid for ammunition. The skunk's scent is extremely pungent and has long lasting strength. Any dampness in the air seems to revive the odor. When dampened, dogs have been known to bring back memories a year after a spraying. The fluid appears to

affect the mucus membranes, cause retching, vomiting, pain, and temporary blindness when it touches the eyes.

The skunk is not the only animal that uses odor as a weapon. Toads, badgers, weasels, snakes, and several other animals have scent glands more or less similar in nature—but the skunk remains supreme!

In humans the sense of sight is dominant. We also use other methods of sorting and categorizing. Try examining differences and similarities with other senses. This is done best when sight is turned off with a blindfold.

Another activity would be to find human examples that are similar to those in nature. For instance—what flowers can you smell? Why do people use cologne? What is done with rotting materials? What does the smell of gas or smoke tell us?

Some people say they can smell out the right answer to a question. Try asking the following:

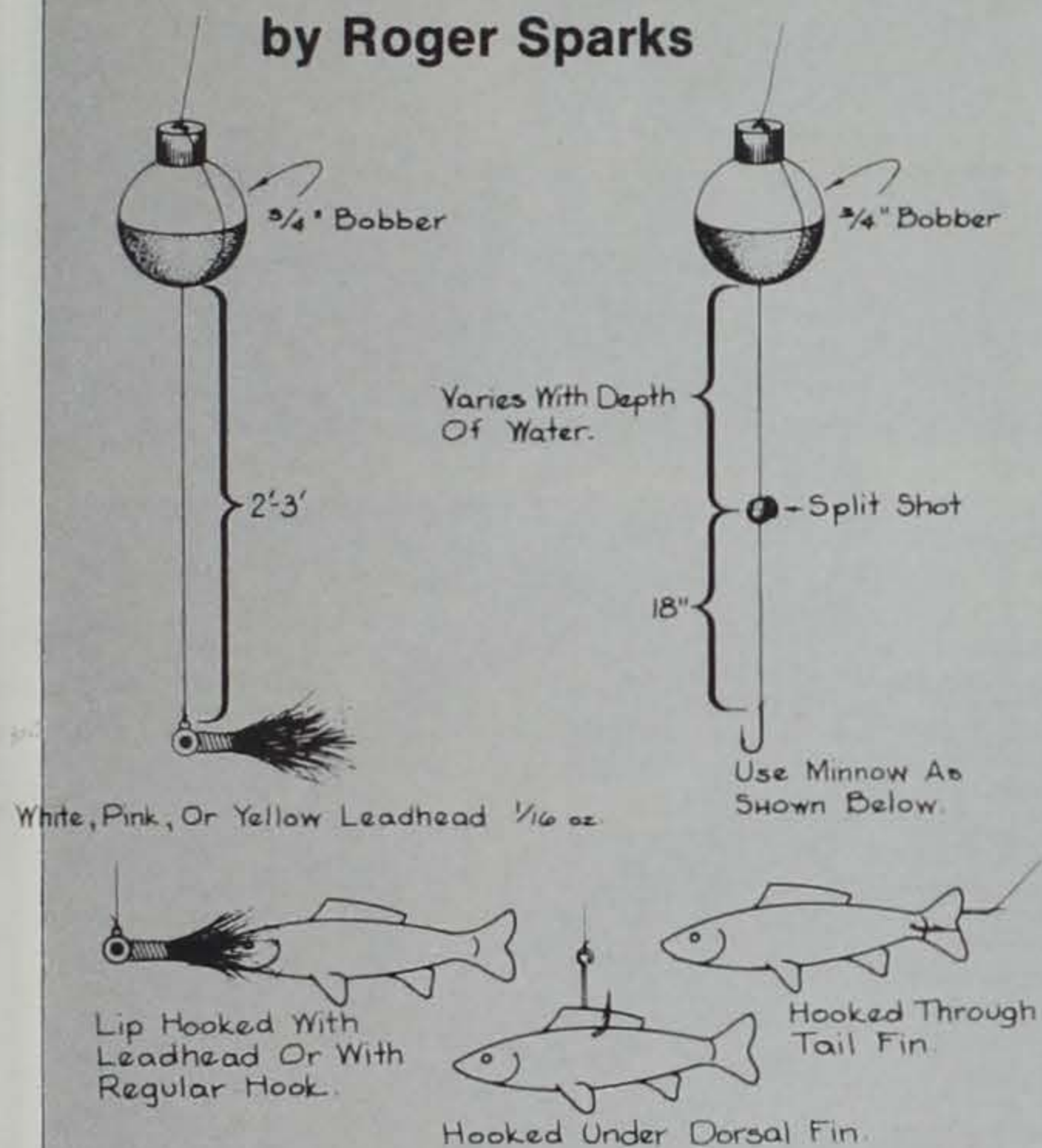
1. *Mink secrete a strong odor particularly during breeding season but also during any period of intense excitement.*  
☐ True ☐ False
2. *Coyotes possess a scent gland on top of the tail and their odor serves to identify coyotes within their group.*  
☐ True ☐ False
3. *White-tailed deer have scent glands between their toes which would allow them to retrace their trail and find the herd.*  
☐ True ☐ False
4. *The badger, being near-sighted, relies on the sense of smell to find rodents to feed on.*  
☐ True ☐ False
5. *White tailed deer use odors as an alarm mechanism when moving in their habitat.*  
☐ True ☐ False

(All True)



# CRAPPIES

by Roger Sparks



**A**S THE LATE APRIL SUN does its thing on the water of Iowa's lakes, crappies oblige by moving to shore where thousands of anglers await their arrival. It must be by design that the crappies' spawning drive so perfectly coincides with that beautiful spring weather!

Fishermen line the shores of southern Iowa impoundments hauling baskets and stringers of these prolific panfish from around submerged snags and riprap areas. Natural lake fishermen congregate around bridges, outlet areas or along stands of bullrushes and take buckets of crappies home to dinner. Mississippi River anglers catch crappies just as soon as the water clears.

Timing is the key. Immediately after ice out, crappies are lethargic and difficult to find. After a week or so of warm weather, crappies begin appearing around shoreline structures and minnow fishermen begin catching a few of them. The real fishing usually begins in late April in southern Iowa to early May in the north.

Crappies begin to spawn when the water temperatures range from 50° to 65°, so be ready. When the "run is on" unbelievable numbers of fish can be taken from just one snag, day after day. This normally continues through the entire month of May, broken only by occasional cold snaps which tend to slow the fishing.

Crappie fishermen may never agree on the best means to entice the fish but when the action is at its peak, leadheads have several advantages over minnows. Leadheads are faster. The time it takes to place a minnow on a hook can be spent catching another fish on a jig. It is easier for the jig angler to move. Taking crappies sometimes calls for walking along the shoreline and lugging a bucket of minnows can be tiring. Still, there are days when even crappies can be finicky and then the bucket of minnows pays handsomely.

Think "small and slow" when crappie fishing. Tiny jigs or minnows on fine wire hooks dropped two to three feet below small bobbers are most

effective. Move the rig slowly and watch that bobber closely. The crappie is justly called "papermouth" and there is no place for "slamming the hook home" here. The real crappie fisherman develops a deft "touch" with his light equipment and employs just the right amount of pressure at just the right time.

Boat anglers clean up on impoundments with flooded brush and timber. Drifting along a brushy shoreline or tying to a submerged tree, the angler drops the leadhead straight down or makes short casts and bounces the lure near the structure. He feels the telltale tap and lifts quickly into what usually turns out to be a crappie, but sometimes is a part of the snag (serious crappie fishermen buy jigs by the dozen).

While springtime is unquestionably the best season for crappies, fair fishing can be had all summer long. After spawning, the fish scatter into the deeper waters of the lake. Without going into lengthy studies of oxygen content, thermoclines and stratification, remember that crappies may be caught from deeper, open water areas in the summertime. A good technique is to drift-fish tiny feather or rubber-tailed jigs. Rig a pair of leadheads, 1/16th ounce or smaller, about a foot apart. Position the boat so it will drift along a shoreline or across a point. The water should be 10-15 feet in depth and the breeze should be just strong enough to keep the jigs off the bottom as they drift along perhaps 30 feet behind the boat. Above all, keep moving until the right combination of wind and water depth begins to produce fish. Nice catches of crappies are consistently taken in July and August by anglers experienced in this method.

Whenever, wherever, however, the crappie provides more than just fun to the Iowa angler. A basket of crappie fillets, pan-fried over a campstove is plenty of incentive to do it all again the next day. For sure, the crappies will be waiting and willing. □

## LOOKIN' BACK

in the files of  
the CONSERVATIONIST

### Thirty Years Ago

the *Conservationist* ran the results of the 1947 fish creel survey which showed that anglers caught 334,285 lbs. of fish from seven lakes in northwest Iowa. Over 88,000 fishermen were surveyed. An up-and-coming wildlife artist named Maynard Reece had won the contest for the 1948 waterfowl stamp design. He then worked for the Iowa Department of History and Archives.

### Twenty Years Ago

the magazine featured a story on the 1957 deer harvest. Hunting was allowed in 51½ counties and the season lasted three days. Six thousand licenses were issued. These hunters plus landowners harvested 2,813 deer. Also in this issue was a story on Iowa's owls, an upcoming issue of the *Conservationist* will take another look at the state's owls.

### Ten Years Ago

the *Conservationist* contained predictions of the level of success for anglers in 1968. The whole fishing picture for Iowans has steadily improved since 1968 and despite a strange year in 1977 more fish are being caught by more anglers than ever before. With our new hatchery and updated facilities elsewhere, the future looks bright for Iowa anglers.





CE Phelps