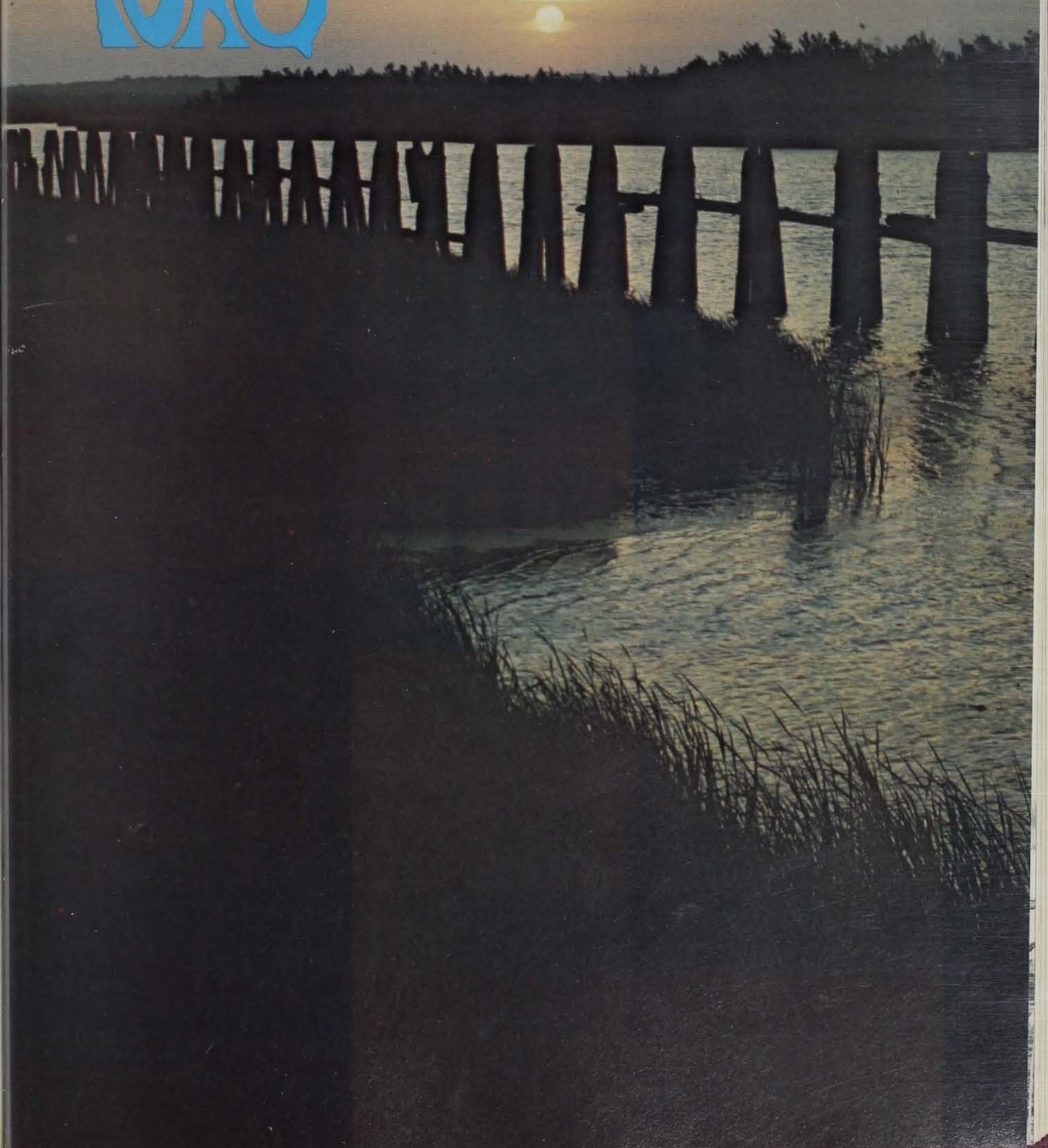


JULY, 1974



# conservationist





## CONSERVATIONIST

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FRONT COVER: SUNSET OVER DECATUR BEND (PHOTO: JERRY LEONARD)  
 BACK COVER: GEESE OVER THE MISSOURI (PHOTO: KEN FORMANEK)

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Always handy sandbars give boaters many rest areas.

# Fun on the M



Photos by: Jerry D. Leonard

The meandering Missouri of years ago left many oxbows and backwaters.

Countless points provide almost private camping areas.



Due to the monumental man-made changes on the Missouri, much of the variety and vastness of the great river are gone. Fragments of the natural beauty of the river still exist and offer some unusual scenery, recreation opportunity, and a taste of the Missouri of the past.

Numerous oxbows and cutoffs provide recreation for pleasure boaters, water-skiers, swimmers, fishermen, mushroom pickers, and explorers. Some of the

# e Missouri

larger areas are developed into multi-use areas and provide camping and picnicking facilities as well. Others are accessible by boat from the river and offer excellent fishing and waterfowl hunting.

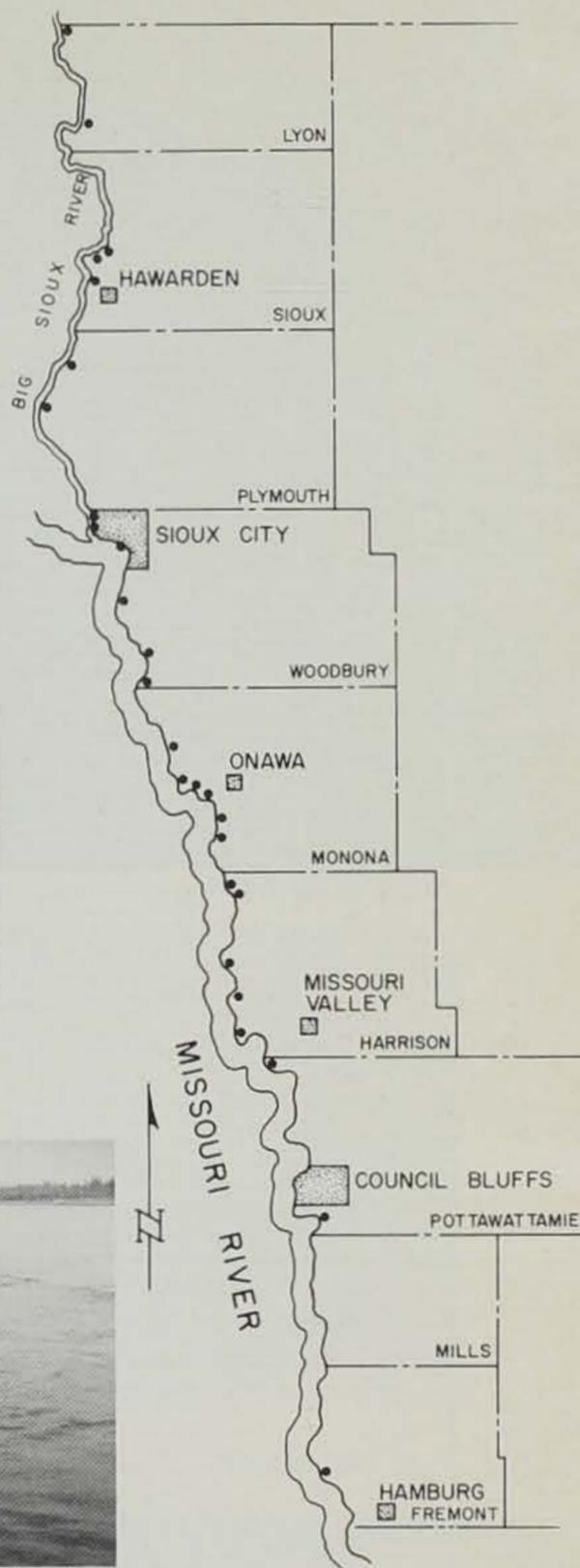
One way to enjoy the river is to pack a tent, some food and fishing tackle into a boat and run a stretch of the main river. The Missouri is a large, fast flowing stream and a good boat and dependable equipment are a must. Under normal conditions, sand bars formed below wing dams serve as campsites. A nearby backwater pond will probably hold some jumbo crappies and maybe some bass and bluegill. Old pilings are usually present and provide excellent hangouts for these fish.

The main channel itself offers fair channel catfishing at times. Catfish angling picks up in June and continues through September. Fish immediately above and below the wing dams on the main river, especially near submerged logs and snags. Fish the deeper holes in the backwater areas during the daytime and the shallow bars at night.

Access to the Missouri has been a problem in the past, but in recent years, new areas have been added and more boat ramps and access areas are planned. Use the list included here and plan a trip to the Missouri this fall.

## LEGEND

- RIVER ACCESS
- CITY OR TOWN



Photos by: Jerry D. Leonard



A fairly large boat and good size motor are nearly a necessity to cover this size river.



There are over 13,000 surface areas of Missouri River along the Iowa border.

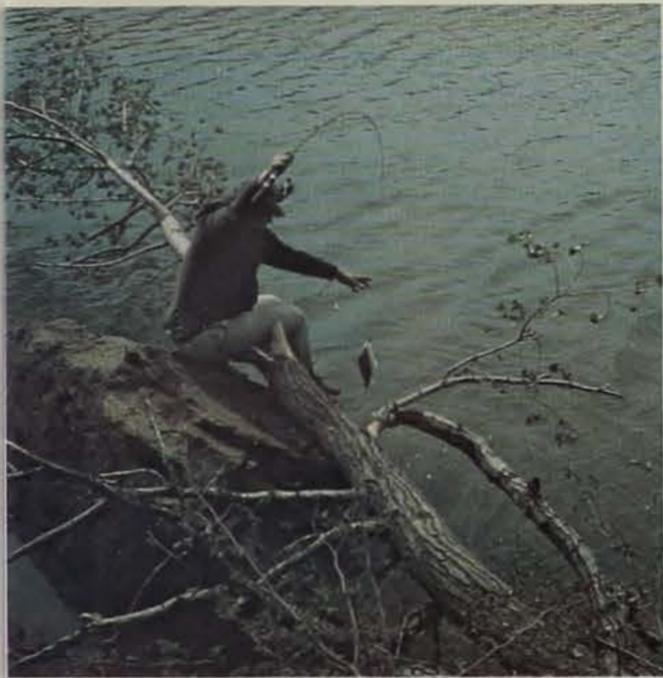
Old pilings offer hiding places for lunkers in many of the oxbow areas.





Photos by Ken Formanek

<b>MISSOURI RIVER</b>				
<b>County</b>	<b>Name of Area</b>	<b>Location</b>	<b>Camping</b>	<b>Boat Ramp</b>
WOODBURY	Sioux City Municipal Boat Dock	Sioux City		●
	Weedland Access	4 mi. SW Sgt. Bluffs Interchange		●
	Snyder Bend Access	4 mi. SW Salix Interchange		
	Winnebago Bend Access	5 mi. SW Sloan		
MONONA	Whiting Lighthouse	5 mi. SW Whiting Interchange		
	Sunset Island Access	6 mi. W Onawa Interchange		●
	Middle Decatur Bend Access	8 mi. W Onawa Interchange	●	●
	Carter Access	6 mi. SW Onawa Interchange		
	Louisville Bend Access	5 mi. NW Blencoe Interchange		●
	Huff Access	2½ mi. SW Blencoe	●	●
HARRISON	Deer Island Access	4 mi. NW Little Sioux		●
	Little Sioux Access	½ mi. NW Little Sioux Interchange		●
	Harrison Co. Conservation Access	6 mi. SW Mondamin Interchange		●
	Tyson Access	6 mi. W Modale Interchange		●
	Western Iowa Fish & Boat Ramp	W. Highway 30		
POTTAWATTAMIE	Wilson Island	6 mi. W Loveland	●	●
	Long's Landing	2 mi. S Lake Manawa Interchange	●	●
FREMONT	Waubonsie Access	Adjacent to Highway 2 Bridge		



Photos by Jerry Leonard

# Decorah Fish Hatchery

Ron Johnston  
Hatchery Manager

Picture if you will a towering limestone cliff overlooking a lush, green stream valley. Located in this valley are a trout stream, several clear water ponds, and a lane shaded by colorful maple trees leading to three rustic buildings constructed of native stone. The buildings are nestled at the base of a steep hill and are surrounded by large pine trees. Sound like a place you would like to visit? You can, without leaving Iowa.

The preceding describes the setting of the Decorah Fish Hatchery. The hatchery is located approximately two miles south of Decorah in Winneshiek County (see map). This station is unique in that it is the only hatchery in Iowa propagating both cold and warm water fishes.

Fish production occurs in ten ponds totaling 6.5 surface acres and 14 concrete raceways. Siewers Spring emits between 4,000 and 5,000 gallons of 49°F water each minute and serves as the water supply for the hatchery. Not all of the water flowing from the spring is used by the hatchery—some of it spills over a rock dam and forms a small trout stream, Trout Run.

## Cold Water Culture

Rainbow, brown, and albino rainbow trout are reared at this facility. The hatchery is now maintained as a rearing and stocking station. No trout are actually spawned or hatched at the station. Normally in June of each year three-inch trout are received from Backbone Trout Hatchery and reared to about 11 inches (one-half pound) before they are stocked. During 1974, a maximum capacity of 75,000 trout is being reared to stocking size. This number is not sufficient to fulfill the stocking needs of this station and additional fish are supplied from Big Spring Trout Hatchery.



Photos by: Ken Formanek

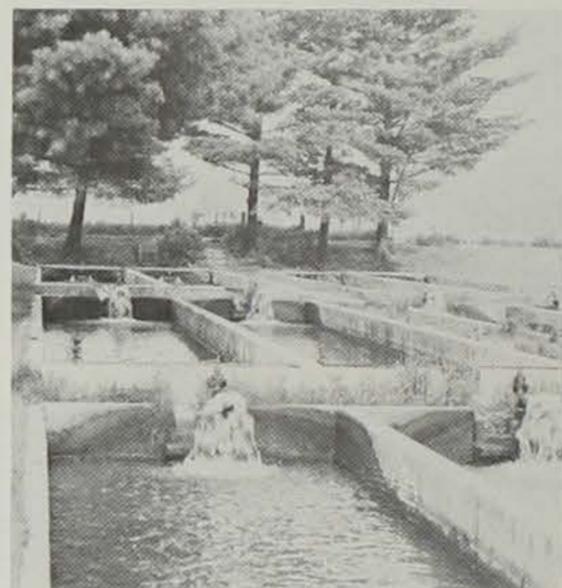
Because of the cold water in which trout thrive, they are a slow growing fish and normally 18 months are required for them to grow from hatching to catchable size. Most of the trout production occurs in the concrete raceways and the fish are fed a commercially prepared dry pellet food twice daily. Their growth is constant throughout the year because the 49°F spring water passes through the rearing structures before it cools to freezing during the winter months.

Fifteen streams surrounding Decorah are stocked by this station. Trout stocking normally begins in April and continues into November. During peak planting times, over 3,300 trout are stocked weekly.

## Warm Water Culture

In the past the warm water portion has produced such species as smallmouth bass, northern pike, muskellunge, and largemouth bass. During 1974 production, emphasis will be on northern pike and smallmouth bass. Smallmouth brood fish are kept in the station and allowed to spawn in one of the ponds. The bass fry are then captured and placed in a rearing pond where they attain a size of two or three inches within 60 days. This year 17,000 bass will be taken from the rearing ponds.

During the latter part of April, small northern pike were shipped to the hatchery from Lansing, Iowa. The production quota for 1974 is 14,000 three- to six-inch northerns. These



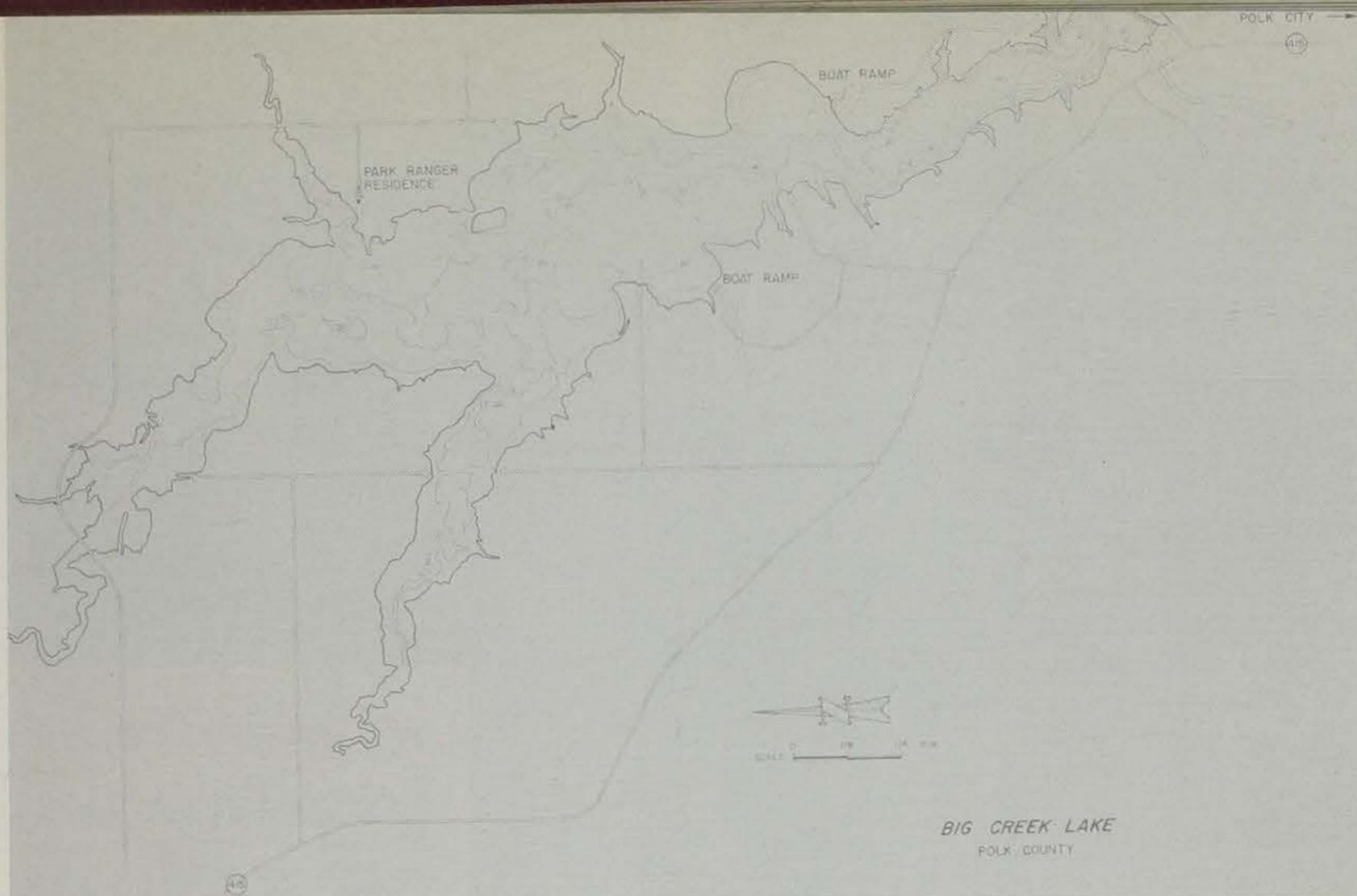
The trout are raised to catchable size in these concrete raceways.

fish will be stocked into waters specified by Fish Management Biologists.

## Visitors

Visitors are welcome, during daylight hours, every day of the year. Trout can be observed at all times, but the best time to observe warm water culture is during the summer months. Normally, between the hours of 7:30 A.M. and 4:00 P.M., hatchery personnel are available to answer questions or to explain the hatchery operation.

If in the vicinity, you are urged to visit the hatchery. The scenic experience will be rewarding and a visit with hatchery personnel will answer any questions you have about the hatchery programs in Iowa.



# BIG CREEK

## The Everyone Area . . .

By Bob Runge  
Contributing Editor



In the late fifties, the U.S. Army Corps of Engineers went to work on a reservoir plan for the Des Moines River in Polk County. By the mid-sixties, after much research in cooperation with private groups from the vicinity and the State Conservation Commission, the total plan included the Big Creek Area as well as the Saylorville impoundment.

The State of Iowa has leased from the Corps 2,025 acres including the 860 acre Big Creek Lake. An area of 425 acres has been opened as a state park on the east shore. As of now, the ICC has already purchased over 1,000 acres around Big Creek and has plans to acquire approximately 1,970 acres

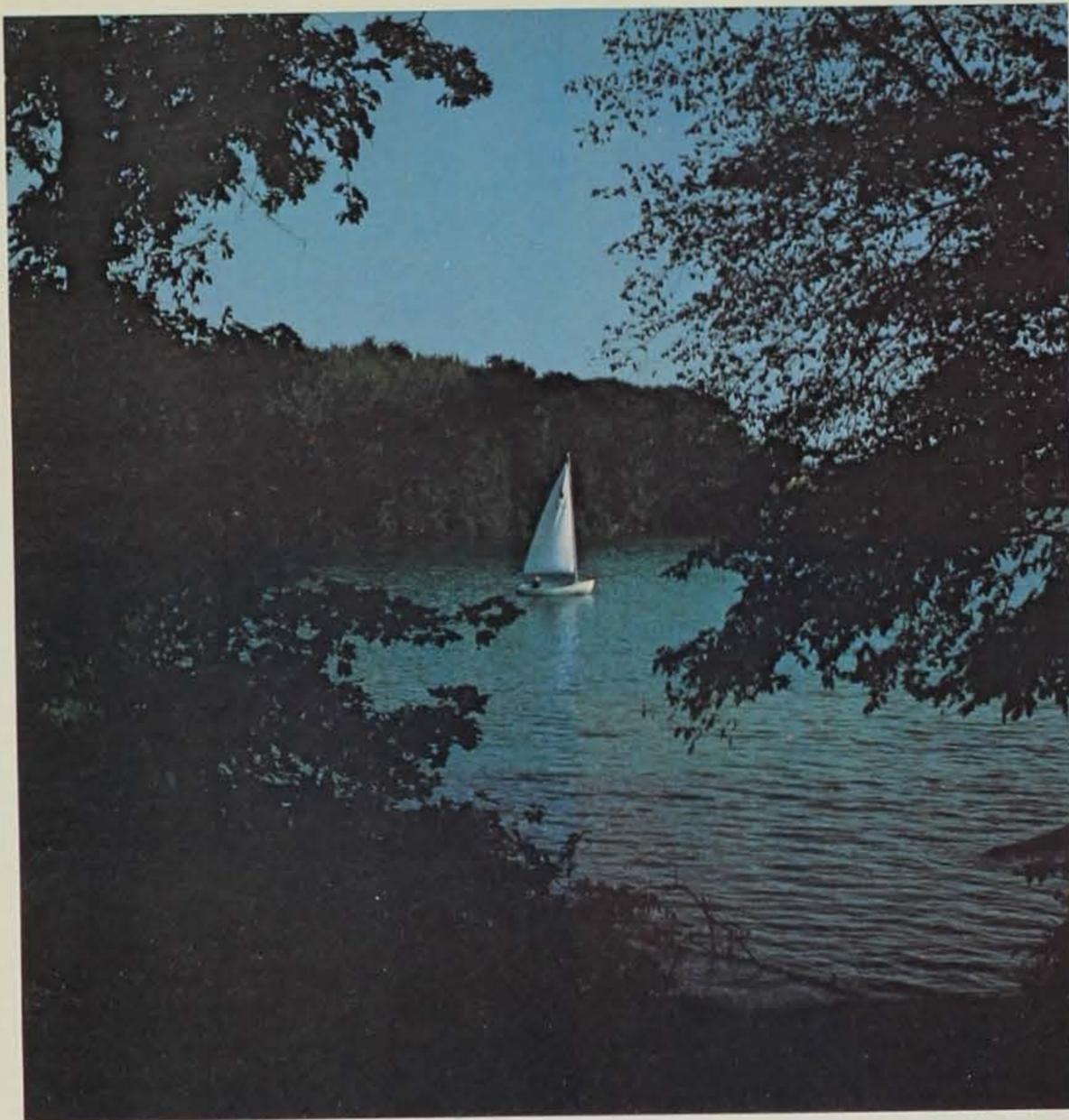
for a total of nearly 4,000 acres in all. A 1,300 foot beach, the largest in central Iowa, will eventually be opened and informal picnic grounds are already in use. Other developments such as a concession operation and campground are in the planning stage.

Although by no means a new idea, it was decided by the Iowa Conservation Commission to develop Big Creek as a "total recreation area." Some county-owned parks are managed very successfully in this manner. In the past, many state parks have offered recreation for only the summer months and then only until the park closed in the evening. Planners determined that Big Creek should overcome these limitations as best possible.

To offer year around use it was decided to allow hunting on the lake for waterfowl. There will also be over 1,000 state-owned acres posted for

upland hunting. The season doesn't begin until summer-type use of the area has long ceased. When the majority of the hunting seasons are over, the ground is soon covered with snow. Snowmobilers will be allowed to use the area and a designated course will be laid out on the east side. Throughout the entire year fishermen and boaters will have twenty-four hour access to the lake through boat ramps outside the park boundary. Big Creek offers fine fishing for a variety of species. The Commission has imposed a 14-inch-minimum limit on bass in the lake to help insure good fishing for years to come. Boaters will find Big Creek an excellent area for small vessels. A six-horsepower limit will satisfy the fisherman while also providing the sailboat enthusiast both room and safety. This around the clock access is not the case in other state parks

*Continued next page*



**Big Creek offers excellent sailboating.**

From sailboating to snowmobiling, the "total use" recreation area concept could very well be the best answer for providing outdoor recreation for Iowans. Big Creek is the first area of its size to be developed along these lines and hopefully will prove to be an area everyone can enjoy throughout the year.

whose gates close at 10:30 P.M.

Far from being inefficient, state parks provide recreation for thousands of Iowans every year. However, these areas exclude the hunter even when no one is using the park for other purposes. Big Creek will hopefully show that this sport can be provided as well. This is not to infer that hunting should be allowed on all state park lakes and upland areas. Many are not at all suitable for this purpose and they do provide thousands of acres of refuge. Nor would we open all state park lakes to twenty-four hour fishing. This would present an overwhelming security and management problem.

However, when properly planned, new state purchased areas can be designed with these uses in mind. The State is pursuing this broader concept at several other large areas: Brushy Creek near Ft. Dodge, Pleasant Creek near Cedar Rapids, and Volga River in Fayette County.



**Fishermen congregate below the spillway as well as up on the lake.**



Walleye fingerlings are sprayed with fluorescent paint. This process seems to be the best way to mark large numbers of small fish.

After most of the paint wears off an ultraviolet light is needed to test for mark retention.

## Fluorescent Colored Fish? *You're Kidding!*

By Jim Christianson  
Fisheries Biologist



What, a yellow fish! This may be the typical reaction when someone hears about spray marking fish with a yellow fluorescent pigment. In fact, marking fish with anything is likely to raise several questions; one being, why mark them?

With the ability to identify a particular fish or groups of fish, the fisheries biologist is able to assess certain values concerning a fish's life history. For example, age and growth; success of stocking; and population density (eg., number of walleye in a particular lake) can be determined. With these measurements possible, the fisheries manager can better understand a particular fish population and management to maintain good fishing or improve poor fishing.

In search for a satisfactory marking procedure, other than body part manipulation which is very time consuming, fingerling fish (1-6") have been subjected to many techniques. In the past, fish have been exposed to dyes or stains for coloration markings and tattooing, and radioactive exposures for accumulation and later pick-up. Among these methods, a tech-

nique was experimented with in 1959 involving exposure of small fish to fluorescent pigment granules which were embedded into the epidermal tissues of the fish under a compressed air force. This procedure has been tried successfully under varying conditions in the laboratory and under field tests on a variety of fish species. Because of the migrating habits of members of the salmon family, many movement studies have been carried on using this pigment spray technique. However, walleye, a very important predator in Iowa, have not been studied using this technique to date.

A spray pigment marking study was carried on involving 255 fingerling walleyes (3-4") which were held approximately two weeks prior to this in the raceway for acclimation purposes. The fish were seined from the raceway and placed in a 3 ft x 3 ft x 4 ft holding pen for easy accessibility. From this pen, 25 to 30 individuals were counted onto a "sandwich" type device consisting of two separate sections of wooden frames and 3/8"-mesh webbing stretched onto the frames. The fish were sprayed on both sides by simply flipping this holding device over. A generous amount of yellow pigment was used and forced into the epidermal tissue under pressure. The fish were immediately released back into the

raceway at which time the fish were a bright yellow color.

For an individual to see these fish at this time, the exclamation "A yellow fish!" may have seemed appropriate, but this coloration was due to the excess powdered granules not embedded but just cohering to the fish. After a few hours, this coloration sloughed off and the fish were a normal color under natural light. But when inspected under ultraviolet light (black light) tiny fluorescent specks appeared to distinguish these fish from non-marked individuals. These experimental fish were inspected bi-weekly under ultraviolet light for mark retention and daily for the first week and bi-weekly thereafter for mortality until termination of the study. Mark retention was fairly high at 92.4% and mortality was 20%. One pound of pigment marks approximately 1,500-2,000 fish at a cost of about \$.02-.03 per fish compared to \$.05 per fish when marked by fin chopping.

Fluorescent pigment marking does show promise as a fast and effective means of batch marking large numbers of fingerling fish for short-term studies. With further experimentation, the procedure should prove a valuable addition to our fish management set of tools to be used to provide fish for the Iowa angler.

Photo by: Wayne Lonning



Unsecured articles often end up as lost articles.

## Some Thoughts on Trailering . . .

By Rod Parker  
Water Safety Officer



A majority of the boats in Iowa are in the trailerable 1,500-pound-weight range and spend 95% of their lives aboard their own set of wheels.

In addition to expanding your traveling range, a good trailer will keep down the cost of boat maintenance. By keeping your boat on a trailer you avoid mooring charges and you can more easily keep the boat clean and the bottom free of fuel-robbing deposits. This makes selecting and maintaining the boat trailer nearly as important as the boat itself.

One of the first points to consider when matching a trailer to your boat is the weight of your boat. This figure should include all gear normally carried in the boat plus the weight of full fuel tanks. To help determine the total weight, remember that gasoline weighs approximately 6.5 pounds per gallon. A good rule to remember

when buying a trailer is to add 25% to the listed weight of your boat and this will give you a trailer with the proper capacity for your boat and gear and an additional margin of safety.

Generally boats weighing 2,000 pounds do not require a tandem axle trailer, while it is a must for boats in the heavier weight range. There are several advantages and some disadvantages to the tandem axle trailer. The tandem places less weight on the rear of the towing vehicle and handles much better in crosswinds than does the single axle trailer. The tandem axle trailer costs more to purchase and is more expensive to maintain, having twice as many tires and bearings.

The type of boating you do will also influence your choice of trailer. The ideal trailer for the fisherman and duck hunter would not in most cases be suitable for the weekend power boater. The sportsman will want a trailer with good ground clearance and large tires to withstand hard back-country use and unimproved launching sites. The pleasure boater would do well to also select a trailer with as large tires as possible, together with a low-ride or tilt type trailer to ease the launching of his heavier deep-hulled type of boat.

Regardless of the type of trailer you select, it should provide ample rollers and pads to distribute the weight of the boat evenly through the full length of the hull. All rollers and pads should be adjusted so that they conform to the boat's hull and provide maximum support at all points.

Assuming that you now have selected the proper trailer, let's consider the legal requirements of ownership and use. First, the trailer must be registered and licensed at the county treasurer's office, and this registration fee is based on the weight capacity of the trailer. Most new trailers come equipped with taillights and a license plate light. To be sure they are working, connect your trailer and towing vehicle and turn on your lights; then have someone step on the brake, and don't forget to see that your license plate is properly lighted.

If your trailer's loaded weight is 3,000 pounds or more, it must be equipped with brakes. A final requirement is the safety chain. It must be equal to the weight of the loaded trailer. The safety chain should be securely bolted to the trailer tongue and crossed to form an X before connecting to the towing vehicle.

The hitch and ball should be strong enough to withstand the strain of a fully loaded boat and trailer. The hitch should attach directly to the vehicle's frame, not the bumper.

One exception to the rule of not using bumper hitches is the use of a bumper hitch on the front bumper of large truck campers and motor homes to maneuver the boat at the launching ramp. These vehicles are difficult to safely back up at crowded launching sites and the front hitch can serve a useful purpose in this manner. Regardless of the type of hitch you choose it should be installed by a competent mechanic or by one of the shops that specialize in trailer hitch installation. To properly select a suitable hitch you should know the approximate gross loaded weight of the trailer and the tongue weight. Generally the tongue weight should be about 5% of the total weight, any less than this amount will usually cause the trailer to sway and fish-tail at highway speeds. The tongue weight can be adjusted by either moving the boat placement on the trailer or moving the axle assembly forward or back. If making more than

very slight changes, it is best to leave the boat alone and move the axle assembly. This can be accomplished by jacking the trailer up until the wheels are off the ground and there is no weight on the axle assembly, then loosen the bolts holding the assembly and move it in the appropriate direction.

Probably the most troublesome and yet least noticeable aspect of trailer maintenance are the wheel bearings. The frequency of your wheel bearing maintenance should be geared to the type and amount of use your trailer gets. The bearings should be cleaned and repacked at least once a year and probably once a month if you frequent shallow launching areas that require you to submerge the wheels to load and unload your boat. Wheel bearings can be repacked by your local service station, or with a minimum of tools you can do the job yourself. Most libraries carry automotive maintenance manuals that outline procedures for repacking wheel bearings. The average boater would probably already have the few simple tools needed for this job in addition to the peace of mind gained from knowing his trailer bearings have been properly maintained.

Another good check on wheel bearing condition is heat build-up in the wheel hub. You should check the hub for warmth after the first mile or so, then every hour or less on long trips. Any sign of heat in the hubs indicates a need for repacking.

While you are checking those bearings, take a good look at your trailer tires. They should be inflated to the pressure given on the side of the tire,

and this inflation should be checked throughout the boating season. The tires should be rotated each boating season to even out any abnormal wear patterns. Proper balancing can lengthen the life of your trailer tires, in addition to lessening vibration of the boat when being trailered at highway speeds. You can extend the life of your trailer tires if you remove them in the Fall and reduce the pressure and store them in a cool dry place.

Before starting the season check the condition of your winch and winch line. A few drops of oil or light grease on the gears and bearing surfaces will keep it working smoothly all season. The winch line should be checked each Spring and replaced if it shows any signs of rot or fraying. If the line is replaced, it should be with line equal in strength to the weight of the boat plus 50%. Although most electric winches are equipped with steel cable, the safety hazards resulting from a steel cable breaking under stress far outweigh its advantages for the average boater. Regardless of the type or quality of line used on your winch, never stand directly behind it when there is tension on the line.

#### Launching Tips

Now assuming you have your boat and trailer in top condition and have arrived at the launching area, stop in the parking lot and make your final preparations for launching. Remember there are many other boaters waiting to use the facilities and the faster you can load or launch your boat means more recreation and

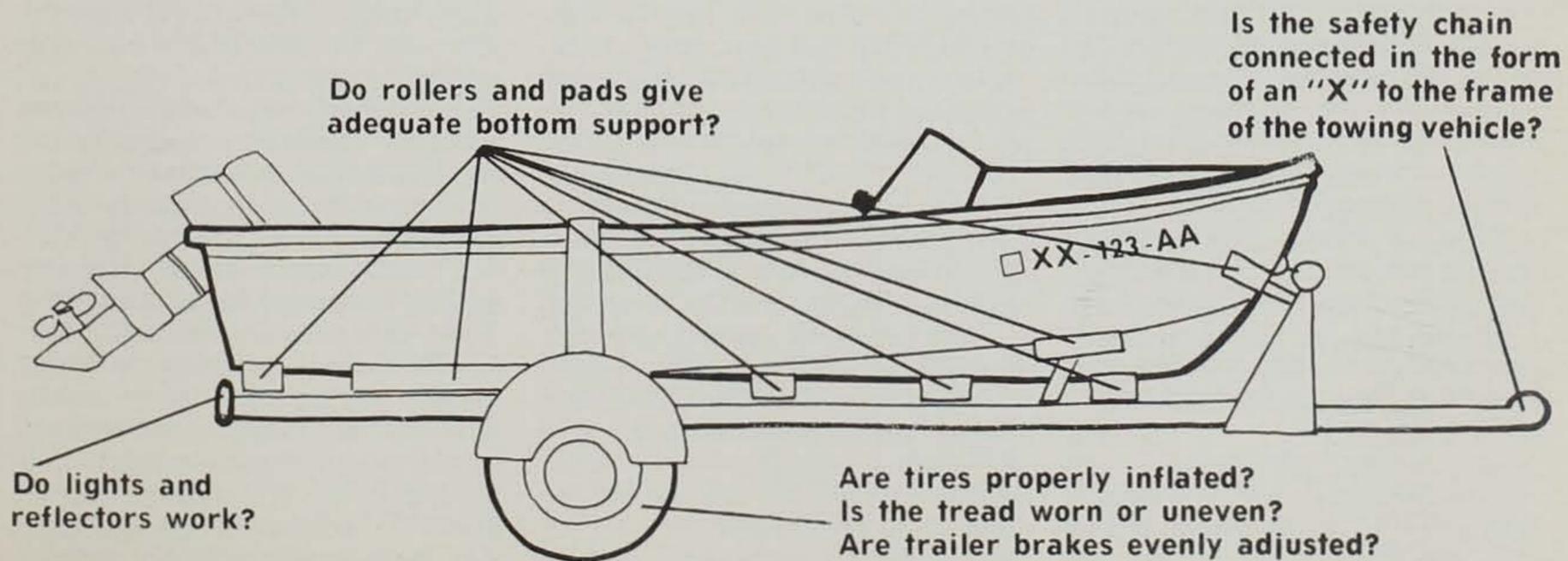
fewer hot tempers for all. Your parking lot preparations should include removing all tie-downs and straps, check drain plugs are in, check and load all safety equipment, and disconnect lights (to prevent burn outs due to cold water hitting hot bulbs).

Now you are ready for your turn at the ramp. Designate one of your party to direct you down the ramp, particularly at steep or unfamiliar launching areas. Back into the water until stern of the boat just begins to float free, then with a safety line attached to the boat disconnect the winch and push the boat free of the trailer. If you have a tilt-type trailer leave the winch line connected to control the speed at which the boat rolls down into the water. Secure the boat to the dock and remove the trailer and vehicle from launching ramp immediately.

When loading your boat, if your trailer has adequate rollers and guides you can learn to drive your boat at least 3/4 of the way on to your trailer. This method is not only much faster but also eliminates all but the last few inches of winching. With a well built and properly maintained trailer you can enjoy many years of boating pleasure, whether your favorite spot is across town or in a neighboring state.

#### TRAILER SAFETY CHECK-LIST

1. Lights
2. Hitch
3. Safety chains
4. Tires
5. Tie-downs
6. Mirrors





The Natural Stream

## Death of a River From Channeliza

One characteristic of rivers is that water does not flow in a straight line. Usually the river flows in a winding, meandering pattern, which causes the edge of the channel to become the cutting edge and the opposite side is the depositing edge. It is the shallow waters that create ideal conditions for aquatic life. Short generation organisms such as algae grow there and are fed upon by many kind of invertebrates. Fish come to these areas to feed and spawn, and the young-of-the-year are raised in the shallow waters. Eventually the river meanders enough so that most of the flow bypasses the meander. These so called oxbows are the richest areas for aquatic life. If it were not for these oxbows, the productivity of a river would be decreased.

Other important shallow water habitats are trapped floating debris and trailing branches from trees. Large fish populations often congregate under these snags and log jams, because of the high food production and cover they offer.

The effects of channelization are various, but usually channelization in Iowa results in shortened stream beds, less desirable fish habitat, loss

of vegetative bank cover, increased water temperatures, and less fall-in of vegetation and insects.

The channel straightening results in a stream or river shortening because many of the natural bends or meanders are removed. This loss of river bed varies with the stream, but in Iowa most channelized rivers are only 50 to 75% of their natural length. If all conditions were the same, we could expect only 50 to 75% as many fish as before. Channelization not only reduces the stream length but also creates poorer fish habitat. Vegetation along the river bank is destroyed by channelization which results in reduced shading, and ultimately higher water temperatures and reduced leaf and insect drop, both of which reduce desirable fish habitat. Studies in Iowa have shown nearly a 90% reduction in fish caught by anglers once the river is channelized!

Channelization usually involves dredging or deepening of the channel which lowers the stream bed below that of the aquifers with which it had been in equilibrium. When this occurs the flood plain is drained and dries out. The wildlife habitat that once supported deer, rabbits, etc., is

drained and the much needed wildlife cover dries resulting in a loss of wildlife.

It is evident that the river and its flood plains are a well designed system for the prevention of floods and the maintenance of high aquatic productivity in the river channel. Disturbing this system, results in a reduction of fish and wildlife production. Because the functioning of the aquatic organisms is decreased the ability of the stream to cleanse itself is lessened. The end result is a shorter river, less productive of fish and wildlife that has lost nearly all of its aesthetic values.

Wildlife species as well as fish are adversely affected by channelization. In the State of Iowa, creeks and rivers unchanged by man have provided extremely valuable and needed wildlife habitat. These streams have also provided drainage for adjacent farm lands while providing belts of the only wildlife cover remaining in many sections of this "clean-farmed" state. The aesthetic values in an environment beautified by the tree and shrub growth found in the greenbelt adjacent to the stream are quite pleasing. This bank cover is especially valuable



After the bulldozer

Photos by Jerry Leonard

# elization

By Kay R. Hill and Tom Berkley

in that it includes a continuous strip of cover which provides food, dens, escape cover, and travel lanes for many animals.

If channelization is done in the name of flood control it should be realized that the problem is increased downstream due to unretarded runoff at higher velocities. The increased downstream floods are also damaging to many species of wildlife such as muskrats, mink, rabbits, and beaver, as well as ground nesting birds. Floods usually occur on most streams during May and June when these animals and birds are nesting or caring for young in dens. Nests and dens situated downstream from a channelized segment of stream have less chance to survive the destruction from accelerated runoff than those located below unstraightened, un-cleared sections of stream.

Bitter criticism of federal projects which include channelization is increasing throughout the United States. One well known outdoor writer calls it gutterization, "a process which reduces beautiful free-flowing rivers to straight and sterile ditches." A politician has stated that "Channelization is an over-used engineering

device that has severely degraded the wildlife, water quality, and recreational and scenic values of thousands of miles of the nation's waterways and nearby lands."

True as the above statements may be, the threat of further destruction of important wildlife habitat is continued. The U.S. Army Corps of Engineers plans to straighten 232 miles of the Cache River and its tributaries in northeastern Arkansas, with the resulting drainage of 170,000 acres of the best winter duck habitat left in that state. This could and would affect the duck population of the entire Mississippi River flyway. Several states in this flyway, including Iowa, are "on record" opposing this program.

Flood control projects, drainage projects and similar activities do have some benefits, but these are usually local in scope and benefit relatively few people. Damage to fish and wildlife and natural resources far outweigh any limited public benefits.

It should be apparent that fish and wildlife are adversely affected by channelization and the loss of cover through clearing. The Iowa Conservation Commission has in the past

recognized the losses, and has opposed this type of destructive activity. Channelization plans by federal agencies have been altered or eliminated entirely due to the efforts of the Iowa department. It is hoped that other state departments will recognize the needs of fish and wildlife and that they will also fight to eliminate the destruction resulting from such programs.

The individual sportsman can assist in the fight to preserve existing streams and related habitats. An aroused public still has something to say about the use and/or abuse of outdoor resources by governmental agencies. All major clearing and channelization projects are planned and executed by agencies of the federal government and are funded through tax moneys. An alert sportsman can learn of plans for flood control or other activities which will destroy fish and wildlife habitat and express his views to his senator and representative in Washington, D.C. Without an indication of these views politicians sometimes fail to know what the desires of the public really are.

Remember, once a stream has been destroyed, it will never be returned to its natural state. It is quite literally lost and gone forever.

# The LOST CAVE of "DEAD MAN'S LAKE"

By Don Blasky

Nature bestowed Iowa with some of the best agricultural land in the world. Who would dream that within this fertile land would also be some of the most unique geological features found anywhere? One such area is Pilot Knob State Park located four miles southeast of Forest City (which in early times was known as "Pucker Brush").

The "Knob" within the park is not the highest point in Iowa but it commands a view of the surrounding country that is nowhere surpassed. Standing on Pilot Knob one feels that he is on the very top of Iowa, and according to geologic lore, it is literally true. From the Knob, a larger area of fertile land may be seen than anywhere else on earth.

The early settlers of the area saw this area as a place of recreation and relaxation. The earliest settler in the area was Thomas Barse, who brought his family into the area in 1855. He settled about 3/4 mile east of Forest City on Lime Creek.

Within Pilot Knob State Park, there are two lakes, one man-made 15-acre lake and a smaller natural lake of less than 2 acres. This smaller lake is known as "Dead Man's Lake." It has been stated that the lake has no bottom at its center and is like a great funnel containing a hole in its center. The supply of water is not affected by draught and neither is it raised or lowered by local rainfalls, but remains at the same level year in and year out. The fact that nature placed this little lake high up above the surrounding country, with neither inlet nor outlet so far as the water supply is concerned, is a marvel for geological study.

Many rare plants grow in the lake, which is now about half covered with moss and peat. On the edge of the open water grows a rare pond lily that attracts many sightseers.

There is something weird about the

surroundings of the lake. Something that is "creepy" and awe inspiring, as the evening comes on; perhaps more so some years ago before it was included in a state park, and before it became a popular picnic area. There is yet a weirdness about the surroundings that make people hesitate to remain there overnight, in spite of the fact that it is more or less of a resort during the summer days.

There are many different stories told of how the lake got its name. Most of the tales are familiar to people in northcentral Iowa, including the one about the farmer cutting wood in the area. As legend has it, a farmer who lived in the area was cutting wood by Dead Man's Lake. When his sled was full of wood he decided to take a shortcut across the lake in order to get home earlier. Tracks showed in the snow where he had entered upon the bog with horses and sled, but no tracks could be seen coming from the bog. It was assumed that he broke through the ice. Thus Dead Man's Lake for a name.

The following story is probably the authentic one. Dead Man's Lake was named, and the occasion for it being so named, was before the advent of the white man to this section. It is a historical fact that the Indian tribes had made this spot their headquarters for many, many years, but had abandoned it a few years before the first white man came up the Winnebago River. However, they did return occasionally to this particular spot, and later many of the first settlers remember these pilgrimages.

The first white man who followed the winding course of the Winnebago River (later called Lime Creek) to a point south of Pilot Knob, visited the spot because it was the highest of the range of hills in the section. He would leave the river and climb to this high point to get a better view of the unknown wilderness to the north and west. From the height of Pilot Knob he discovered the little lake nestling high upon the lower surrounding hills, and marveled that such a body of water should be located at this high

elevation. When he visited the lake he also discovered that it had but one lone inhabitant—an old Indian that proved to be a permanent fixture there. By the exchanging of signs and by diagrams in the sandy soil on the lake bank, this white man learned much of the lore and history of the country. Also the tribe to which the old Indian belonged. He also learned that the lake was known as "Woetg la Las Joui Olu" meaning the "Lake of the Dead Man". His tribe had left him there and named the place "lake of the dead man" because he was dead so far as his tribe was concerned. He had mixed in the tribes politics and had become disappointed and soured like many white men do after they have been disappointed in politics. The old man had wanted to be the head man in the dispensing of powdered roots and herbs and mixing of medicine for his tribe. His disappointment led him to cease mingling with his tribesmen and shortly after, when his tribe moved west, he refused to go with them. At any rate, he stayed at the lake. It was his tribe that named the locality the "lake of the dead man." Present day slang probably would have called it "lame duck."

The one most peculiar incident in the finding of this lost Indian here by the first white man was that he was living in a neat little log cabin just above the lake. Here he was living when the first white man came. Here he stayed and apparently never left his solitary retreat. Just to the east of his log cabin, in the hillside above the lake, was the opening of a large cave into which he made his daily visits, the reason for which no white man ever knew. No white man ever set foot in this cave. When this Indian died, about 2 years after the coming of the white man, his body was taken into the cave by returning members of his tribe and buried. In leaving the area the Indians obliterated the opening of the cave and its exact location has never since been discovered for a certainty. For many years after there was an apparent indication of such a cave on the hillside east of the lake but in recent years it has wholly disappeared. Some years ago some men tried unsuccessfully to find the opening. Since the State's ownership, no one is permitted to do any digging or prospecting for the cave.

# Classroom Corner

By Curt Powell

Summer is here again and with it most formal education, such as school, has come to a close until fall. It is not a time when education itself should stop! There are many things to learn informally during vacation, leisure hours, or weekends. Outdoor recreation is a valuable time to learn more about our resources.

Fishing is a form of outdoor recreation that can be rewarding as sport as well as put food on the table. Iowa has tremendous fishing potential that many of us take for granted. There are plans in the future to make our fishing resource even greater than it presently is. But there is a great deal to learn before one begins fishing. Not only types of tackle, bait, and how to fish, but also what species of

fish are available. There are many species of fish in Iowa that can be caught. Identification is an important key, since fishing laws may be different for each kind of fish. Many books have been published on fish identification and angling methods. They can be found in the public library and in book stores. Many of these books are excellent guides for beginning and experienced anglers.

A moment ago, I mentioned fishing laws. Did you know that Iowa residents under 16 years of age do not need a fishing license? Or that owners or tenants of land and their children may fish on their land without a license? Or that a special stamp is required to fish for trout in Iowa trout waters? These are just a few of the

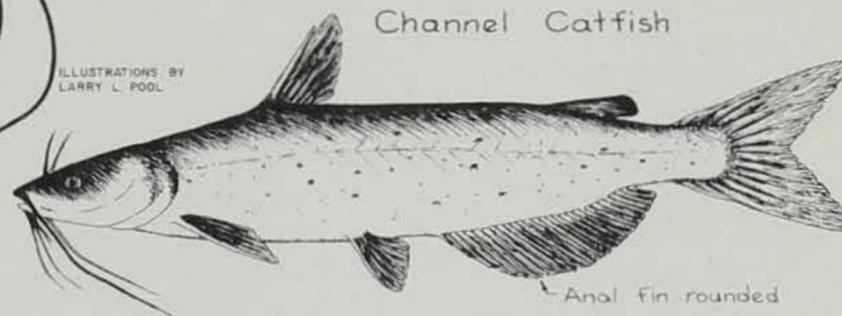
laws you should be familiar with. There is a booklet available titled 1974 IOWA FISHING REGULATIONS that can assist you. Ask your local Conservation Officer for a copy or stop in a sporting goods, bait, or tackle store and see if they have copies. The booklet is free.

There are many more things to learn about fishing other than just catching them. Do you know how a population of a lake or a stream is determined? Is it possible to tell how old a fish is by merely its size? Does water temperature make a difference in what types of fish may be caught and where? What is Iowa's most popular fish? There are just a few questions for you to ponder and try to answer! Enjoy July!



IOWA'S STANDBY  
THE CATFISH

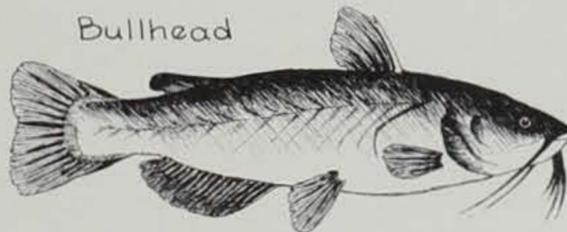
ILLUSTRATIONS BY  
LARRY L. POOL



Channel Catfish

Anal fin rounded

Nearly all Iowa fishermen have come across a member of the catfish family (Ameiuridae) at one time or another. These fish live in both clear and muddy water and can stand a relatively wide range of temperature and water conditions.

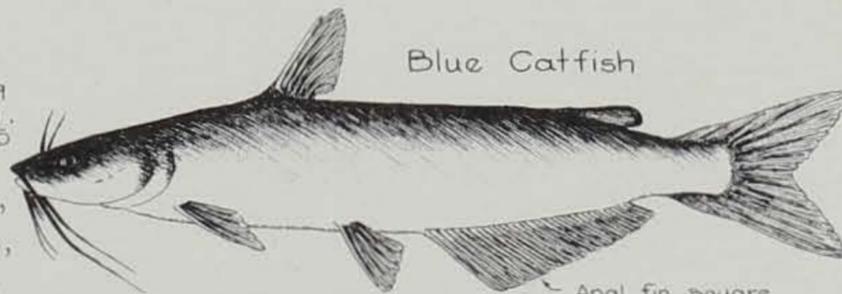


Bullhead

All of the catfishes are edible and bullheads and channel catfish are considered a delicacy when taken from Iowa lakes or streams. Probably more people fish for the catfish family than any other species in the state. There is some confusion in identifying these fish. Bullhead and channel catfish are found in lakes and streams statewide. Flatheads are common in the major rivers while blue catfish are occasionally taken from the lower reaches of the border streams.

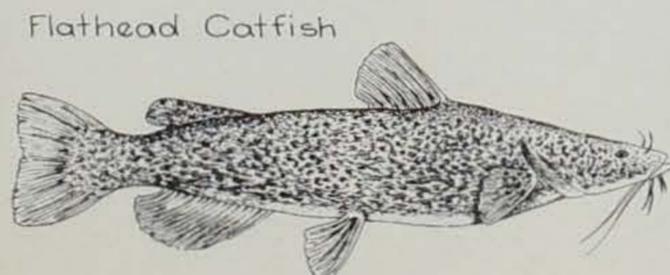
A few simple rules will enable the angler to know the difference in most cases.

1. Look at the tail:
  - A. Deeply forked -
    1. Anal fin rounded with 24-29 rays, it's a channel catfish.
    2. Anal fin square with 30-35 rays, it's a blue catfish.
  - B. Not forked -
    1. Anal fin rays 17 or over, it's a bullhead.
    2. Anal fin rays 17 or less, it's a flathead catfish.
    3. Another help here is to look at the head. In the flathead it will be markedly depressed with the lower jaw projecting. The fisherman should also notice the color of the fish. The channel and blue will be silver-gray in color. In most cases the channel will be marked with spots. The flathead will be a mottled brown to yellow while the bullhead is olive brown fading to white or cream on the belly. After some experience these fish become comparatively easy to identify. Usually the best fishing for these species occurs in the spring, but the sport continues with good success throughout the summer.



Blue Catfish

Anal fin square



Flathead Catfish

