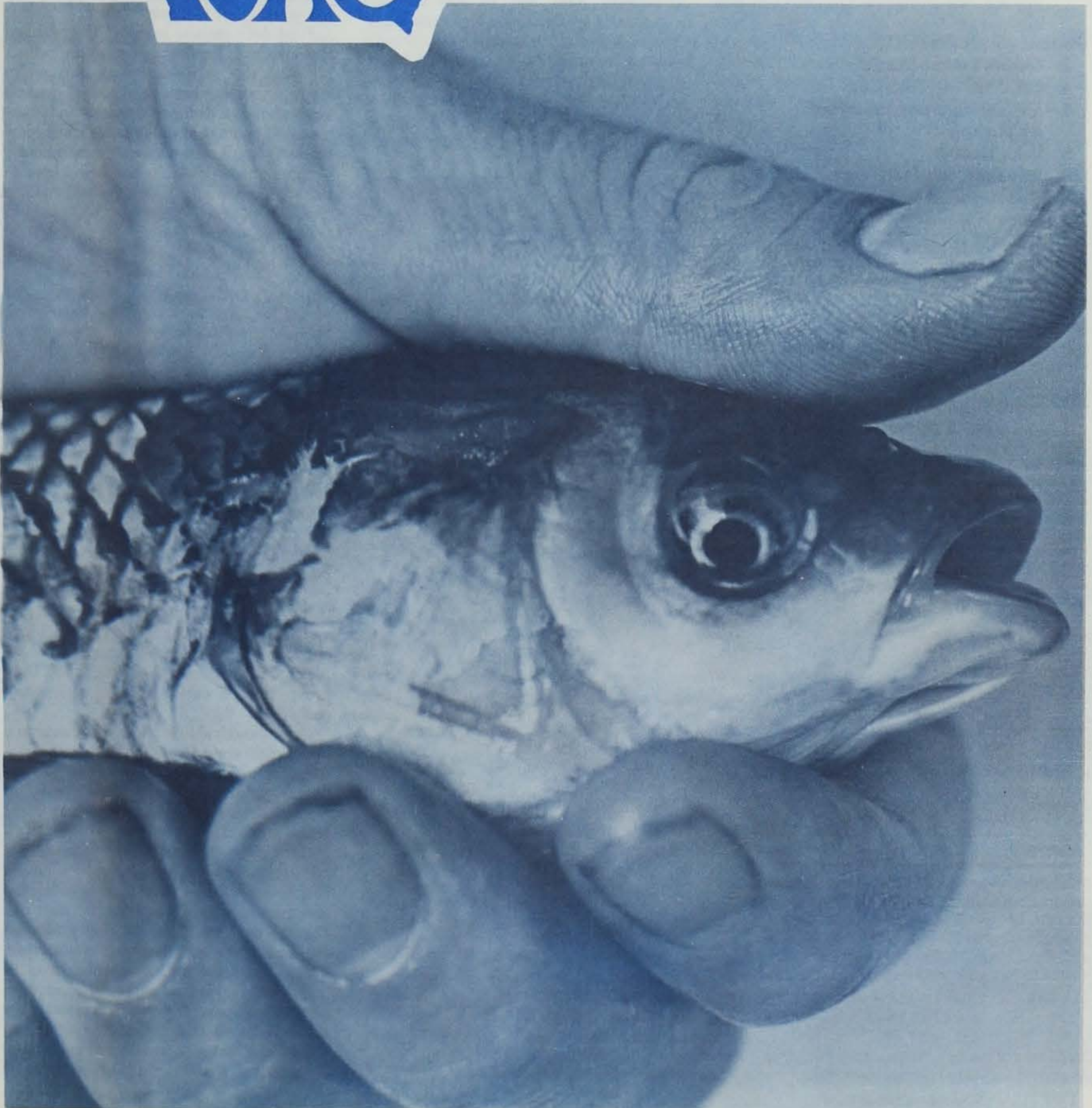




JUNE, 1974



conservationist





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Cover Photo:
Iowa's New Exotic
—the White Amur
photo by Wayne Lonning



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IOWA'S LATEST EXOTIC

by
Larry Mitzner
Fisheries Biologist



Larry Mitzner —
With the Commission since 1966,
Larry was Outstanding Fisheries Employee in 1971.

Iowa recently acquired a new addition to its fish family; the white amur or grass carp. The new species is native to eastern Asia and related to the native minnows of the state. White amur consume large quantities of aquatic vegetation and have a good potential to improve the quality of fishing and boating by biologically controlling aquatic weeds.

Why are aquatic weeds such a bad thing? Why would white amur be a good solution to weed control? Could amur be controlled? Answers to these questions will give a better understanding of why the white amur was introduced.

First, let's pursue in detail the problem of nuisance aquatic vegetation which initiated the introduction of the white amur. Excessive growth of rooted aquatic vegetation is a definite nuisance to fishermen and boaters at many Iowa lakes, particularly small man-made impoundments.

Aquatic weeds also present problems to fisheries managers. Rooted vegetation is wasteful because it provides little food to fish populations. The nutrients used by weeds are better utilized by microscopic plants called algae. The well being of fish are wholly dependent on these small plants for their food source. Microscopic animals and insects consume algae which in turn are eaten by small fish and finally become vital food items for larger fish, which are most important to fishermen. Also, small panfish can escape predation in weedy areas. If too many young fish escape, the remaining food supply will become depleted resulting in slow growth and too many small panfish.

Obviously, some degree of aquatic weed control is needed, but present chemical and mechanical methods are expensive and often ineffective. Control of weeds at all fishing areas is impossible so it is now limited to boat ramps, docks and swimming areas. These are the problems, and white amur have the potential of biologically controlling the weeds as they grow, just as cattle harvest grass in a pasture.

Even though white amur may become a beneficial species there is some controversy about possible harm to the environment and native fishes. Prior to introduction the habits of the white amur were studied very carefully. In no instance was there any evidence of detrimental competition between native fish species and grass carp. Unlike the common carp, amur don't root out vegetation. Vegetation is simply clipped off and chewed prior to swallowing. White amur are not numerous even in their native range simply because of restrictive spawning requirements. Eggs and fry are also very sensitive to the environment and require exact conditions for survival. They have been introduced

worldwide and no instance of successful natural reproduction in small impoundments has been reported.

The next question is, "What is the best approach to biological control of aquatic vegetation?" To answer this question a four year research program was developed to evaluate the effect of white amur on nuisance vegetation in Red Haw State Park near Chariton, Iowa. The program was a planned sequence of events designed to determine the total weight of vegetation at maximum growth prior to stocking white amur. Afterward white amur would be introduced and the studies continued to determine if the fish could control weed abundance. Also, growth, body condition, food habits and mortality of the white amur would be observed.

The research program was imple-

mented on July 18, 1973, and on July 24, 530 white amur averaging slightly less than one pound in weight were stocked. Since then both white amur and aquatic plants have been observed very closely.

Was the new introduction successful? After one year of study at Red Haw several facts have been established. White amur ate vegetation exclusively, consuming nearly 33 tons of weeds and they grew rapidly reaching about 3½ pounds the first year. Consumption of 33 tons of vegetation was small compared to the 90 ton in the lake originally. Vegetation replaced itself by growth soon after it was consumed. So, white amur is definitely helping to solve the weed problem at Red Haw, but there simply aren't enough of them. This year an additional 250 fish will be stocked early in the summer. Apparently white amur offer

limited value to fishermen since only one was caught last year.

Based on one year of study the use of white amur to biologically control aquatic weeds appears promising. Facts gained from research of white amur can be readily used to properly manage white amur populations in other lakes with nuisance aquatic vegetation. In preparation for future introductions the Fisheries Section has a stock of young white amur at the Fairport Fish Hatchery. In two years these could be used as brood fish to propagate additional fish for further stocking. At this time it seems very possible that nuisance aquatic vegetation at many Iowa lakes can be controlled within the next few years resulting in enjoyable, higher quality boating and fishing.



Photo by Wayne Lonning



Former Iowa record channel cat



Big Cats like this keep Glen Harms going back for more

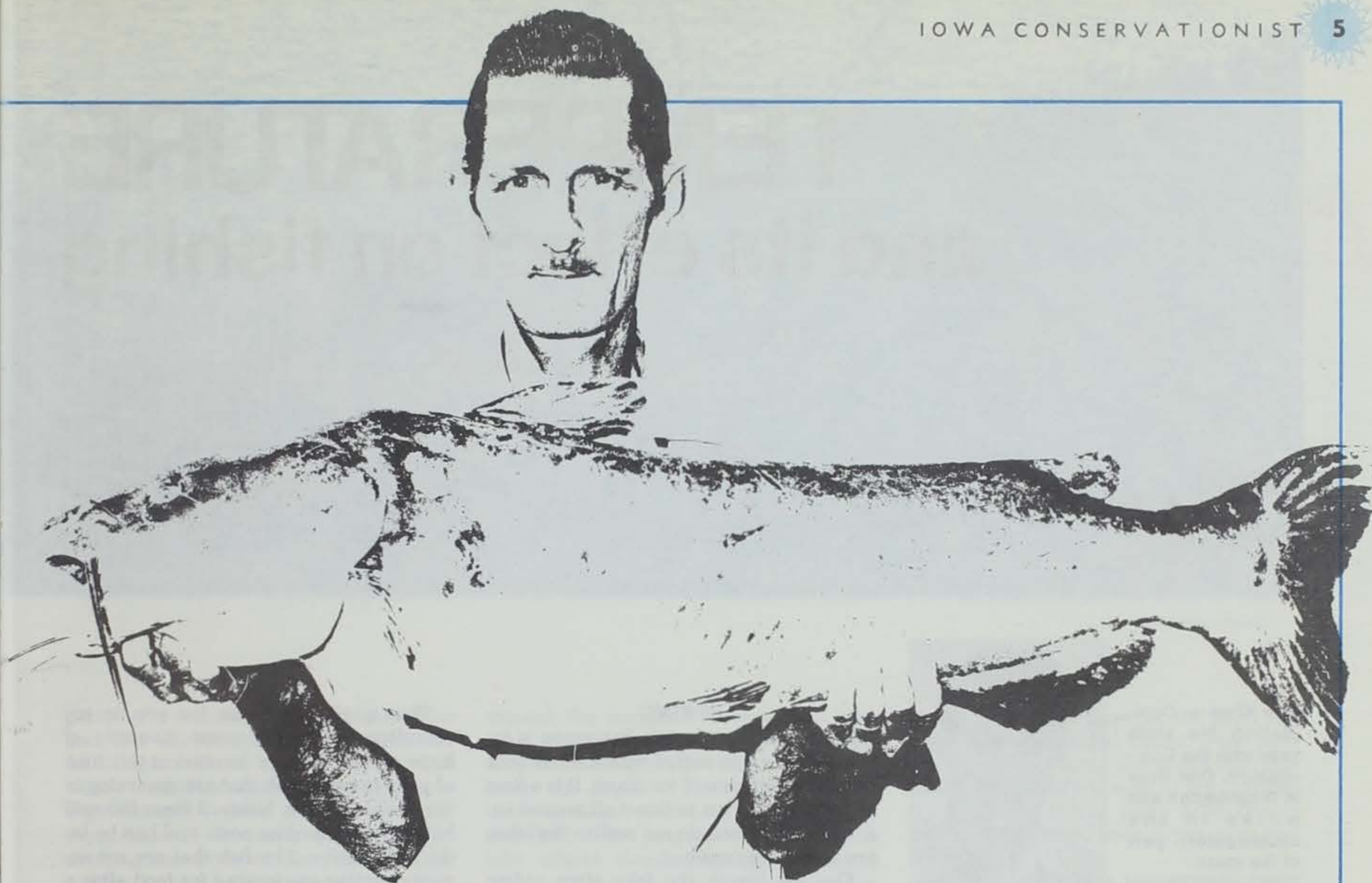
LET'S GO F

In nearly every stocking program for Iowa artificial lakes, the channel catfish holds an important role. Along with bass, bluegill and crappie, the catfish soon becomes an immediate source of fun for the Iowa fisherman. Out of these four, the cat becomes the giant. It is his size alone that lures many anglers to the water's edge.

One such angler is Glen Harms of Shenandoah. A fisherman all his life, Harms has been catching "Big Cat" for over thirty years. The former state record holder's 30 lb. fish was shaded by a single ounce last year. He will not divulge his secrets, but the newcomer to the sport will profit from his advice.

"Any good fisherman, that has patience to wait and fishes the same way I fish, could catch big catfish," Harms said. He then proceeded to

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FOR "BIG CAT"

by Bob Runge, Contributing Editor

outline a plan for the "Big Cat" novice.

"When you find a lake that has big cat, inquire around and find out what baitfish the catfish have to feed on in the lake. That's your bait," he advised.

Among other hints he will give out are time and weather patterns he feels are best. Harms believes a combination of good conditions is critical.

"I have always caught my biggest catfish after dark and usually in the fall, but I feel you probably could catch them all summer. There are times when I feel the "sign" is right. A north wind that usually makes fishing poor for smaller fish seems to help big cat fishing."

"The barometer doesn't seem to make any difference but I won't fish in the rain because I never have much fun getting wet," he joked.

The one thing Harms stresses is the work involved in big cat fishing.

"You're going with the intention of catching a big cat and it gets boring to wait for one fish where you could have caught your limit of small ones", he said.

"Another thing — most fishermen try to set the hook too soon. I let him run till he is pulling line out at a steady rate."

"Once you get him hooked he may take all your line out two or three times. I only use 15 pound test and that's where the fun is," Harms said.

One thing is certain. The fisherman who wants to learn the big cat game should be willing to spend some time learning how. Try a variety of baits and methods until something works.

The following lakes are definitely big cat territory:

Lake Ahquabi — Warren County
DeSoto Bend — Harrison County
Lake Macbride — Johnson County
Lake Manawa — Pottawattamie
County

Prairie Rose Lake — Shelby County
Storm Lake — Buena Vista County
Viking Lake — Montgomery County

Catfishing for keeper size fish can be described as good in nearly all of our lakes, especially in southern Iowa. Farm ponds are another good bet as the channel catfish are probably the most popular stocked fish in the state.

The state record is waiting to be broken again. Somewhere, probably in one of our artificial lakes, there may be a "Big Cat" waiting for you this season. Get your gear out, study up and get out after him.



TEMPERATURE and its effect on fishing

by
Donald Kline
Fisheries Biologist

Don Kline — Completing his sixth year with the Commission, Don lives in Washington and works in the southeastern part of the state.



Have you ever come in contact with a layer of cold water while swimming in a lake? If so, you may be aware of the layering (stratification) that occurs in many of Iowa's lakes. Understanding the effects of seasonal temperature changes of lake water can greatly improve your fishing success.

Why is water temperature important to fish and fishing? Fish are "cold blooded" organisms, so their body temperature is identical to that of their water environment. Their behavior changes with changes in water temperature.

To better understand seasonal changes in water temperature, lake stratification, and fish behavior we will divide the year into four periods that generally correspond to our four seasons.

SPRING

Interest among Iowa's fishermen is intense during this period which starts with the disappearance of ice cover. It is a time of renewal and we notice it all around us. A lot of fishermen do not realize the lakes are also being renewed.

The ice leaves the lake after a few weeks of warm sunny days and a few days of brisk winds. We notice the days getting longer and the sun rising higher in the sky. The sun is available for a longer time each day, and its more perpendicular angle eliminates reflection of its warm rays by the water surface. Heat is absorbed by the surface water which is mixed with deeper water by wind action.

Mixing occurs during most of this period and water currents develop that circulate the lake's nutrient supply at the same time the lake is being warmed. The nutrients provide food for microscopic plants, an important portion of the food chain — the chain of life that ultimately ends in the fish you catch. The spawning activities of fish are geared to take advantage of the abundant food supply, as young fish leave the nest during this period.

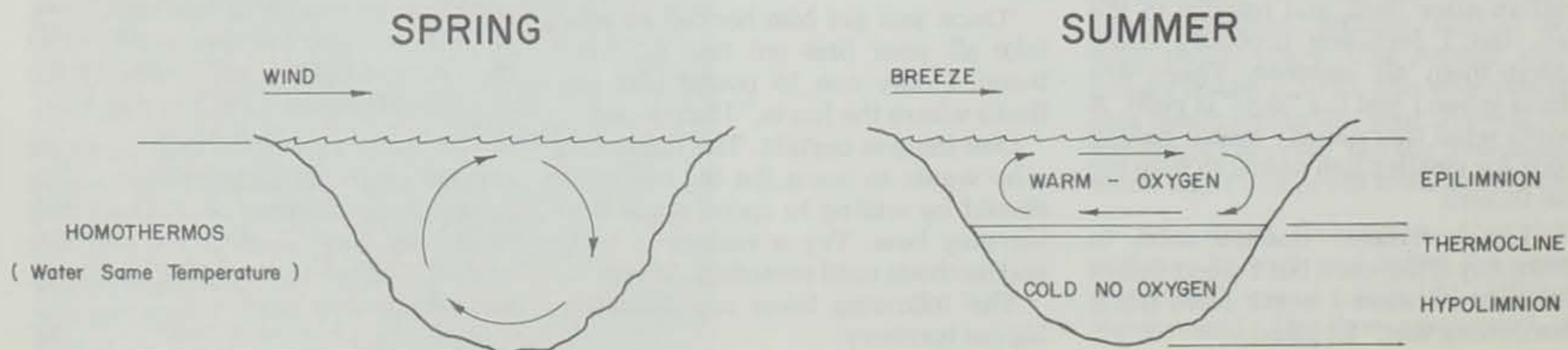
This is also the time for you to try shoreline fishing. A great diversity of lures and tackle may be used at this time of year to catch fish that are spawning in the shallow water. Many of these fish will be actively guarding nests and can be induced to strike. The fish that are not actively nesting are looking for food after a winter period of little or no growth. The fish become more active as their body temperature increases and the increased activity results in a need for an even larger supply of food.

This period continues until late May or early June. During the latter part of this period, the winds diminish and the temperature increases, causing a rapid warming of the surface water. At this point, the lake enters the second period.

SUMMER

The time it takes for the lake to enter period two depends on local climatic conditions, but by mid-summer most lakes are stratified and fish activity has changed.

The surface water warms rapidly and wave action has decreased, the circulation currents no longer continue to turn over the entire lake. During this





Commission Photo

period, the warmer, lighter surface water and the colder, heavier bottom water form separate and distinct layers. The wind circulates only the upper layer (epilimnion), while the lower layer (hypolimnion) becomes stagnant. The dividing line, layer of water between the epilimnion and hypolimnion is called the thermocline. For practical purposes, we have two lakes during this period. The "upper lake" continues to circulate and provide conditions suitable for fish life. The "lower lake" has stagnated. Once stratified, the "lower lake" will contain less oxygen than the "upper lake" and may become completely anaerobic (devoid of oxygen). The oxygen content of the "lower lake" is further decreased because of decomposition of once living plants and animals. Most oxygen producing plants live in the "upper lake" and the oxygen they produce is not circulated to the "lower lake".

The thickness of the layers do not remain constant during the entire period, but change as local climatic conditions change. No wind for brief periods will stop the circulation occurring in the upper layer and the thermocline will move up

toward the surface. Thermoclines have been noted at depths of four feet during August. Although high winds will tend to lower the depth of the thermocline, the usual depth in most lakes is between 12 and 16 feet. The geographic location of the lake affects thermocline formation and depth, so contact the fish management biologist in your area. He will furnish you with valuable information concerning stratification of particular lakes.

Fish find it necessary to change their behavior to respond to the changes that have occurred in their environment. The sharp change in temperature at the thermocline and decrease in oxygen, below, force the fish to confine most of their activity to the upper layer. This factor produces a natural crowding of fish that is beneficial for maintaining a balanced fish community. Thus, lakes that stratify tend to provide the best fishing. Lake Geode, Lake Macbride, and Lake Wapello are three such lakes.

The sun has risen to a position that is almost directly overhead and fish react to this situation by moving to deeper water or finding shaded areas. Fishing for largemouth at this time becomes a mat-

ter of finding the home of the bass. Old stumps, docks, flooded timber, weed beds and other areas lying just above the thermocline are likely places to try. Panfish try to find a hiding place in shallower water, so fish weed beds, brush piles, and docks.

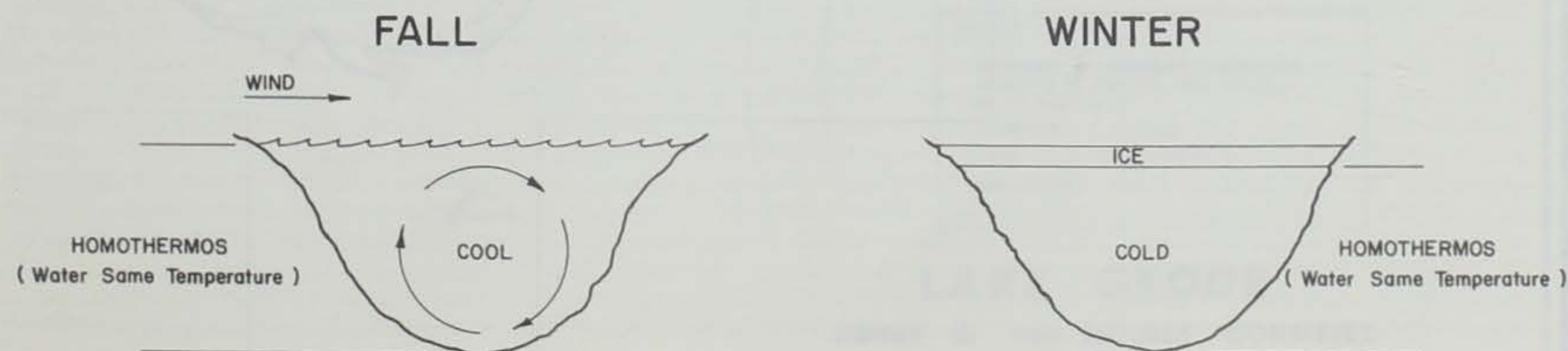
The surface water temperature tends to become the same as the air temperature and can reach 90° during August. The temperature drops sharply in the area of the thermocline. By using a thermometer, the thermocline can be found. Remember, below this point, oxygen is usually limiting and no fish will be present.

FALL

After the relatively calm, stable conditions of late summer and early fall, our weather begins to change rapidly as we prepare for winter. The wind usually picks up and the sun assumes a lower angle in the sky. The nights become chilly, and our lakes respond to these changes in a complete reversal of the pattern of events that took place in the spring.

The surface water cools to the same temperature as the bottom water and is circulated by the wind action. The lake

cont. on p. 10

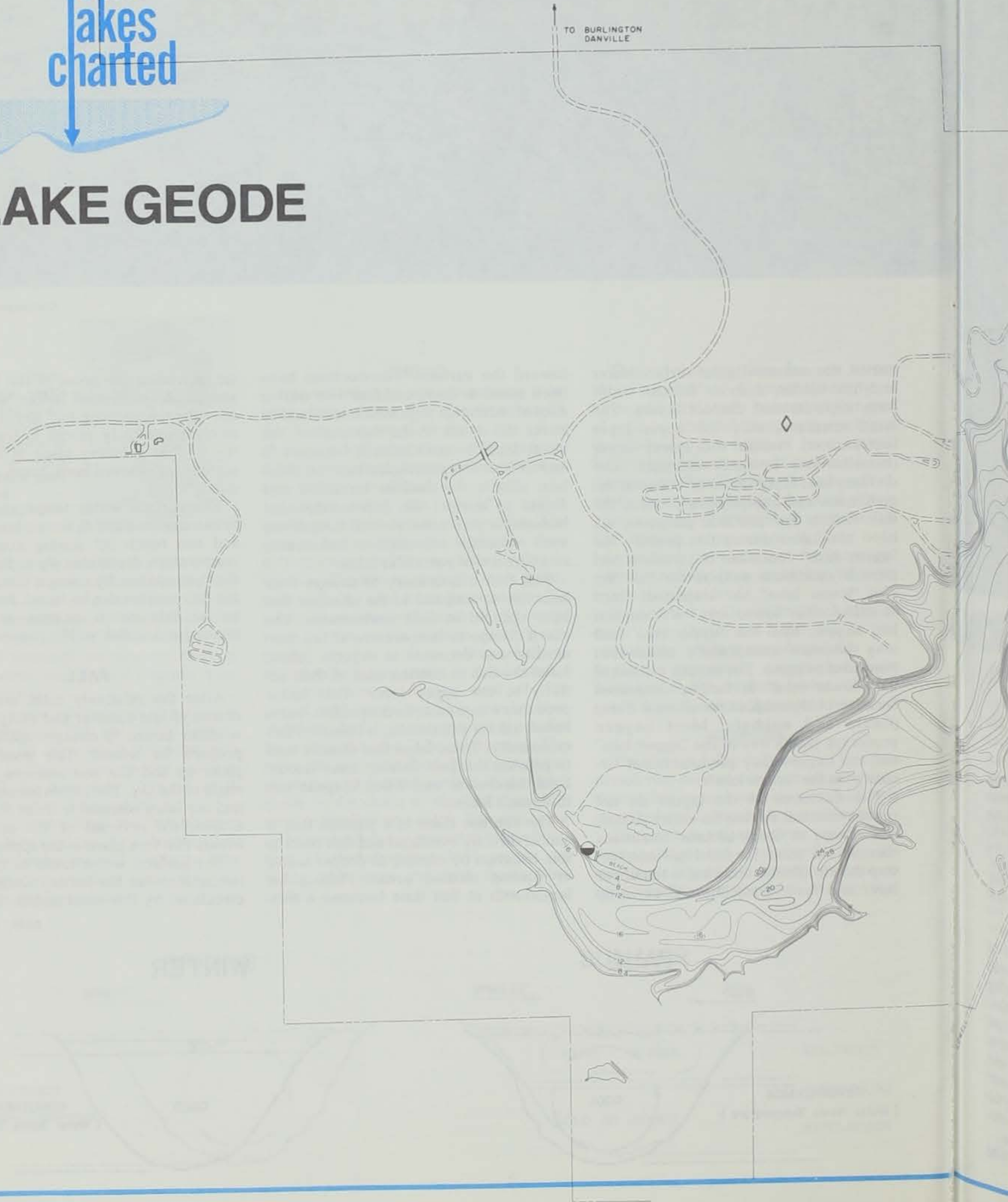


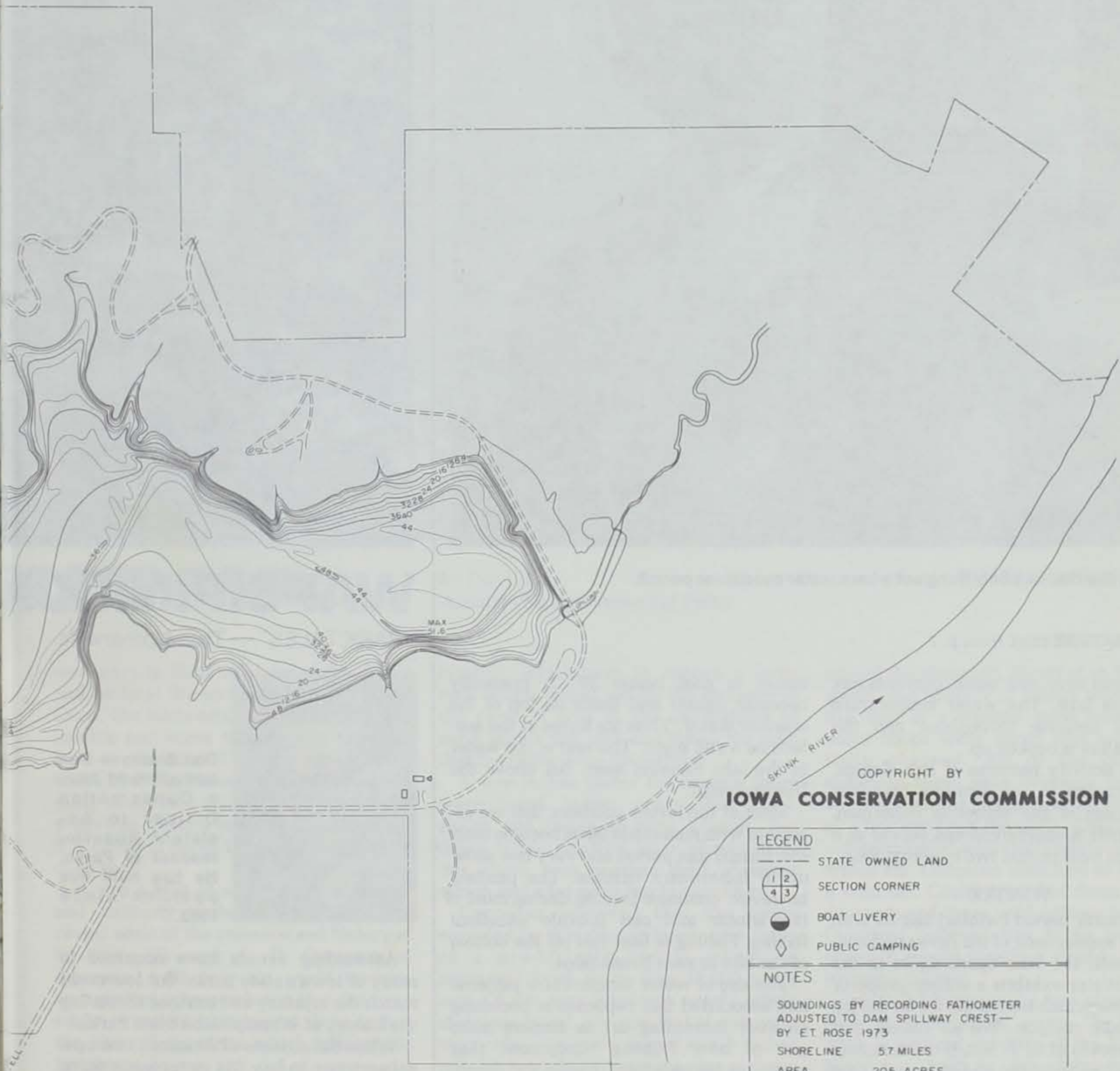
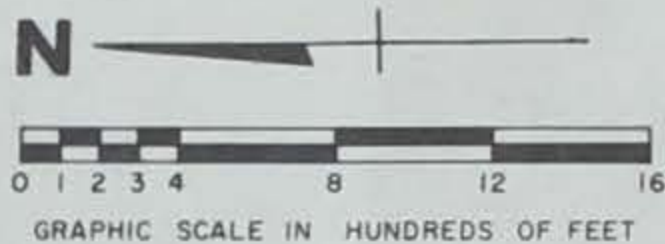
Iowa
lakes
charted



LAKE GEODE

TO BURLINGTON
DANVILLE





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IOWA CONSERVATION COMMISSION

LEGEND	
	STATE OWNED LAND
	SECTION CORNER
	BOAT LIVERY
	PUBLIC CAMPING

NOTES	
SOUNDINGS BY RECORDING FATHOMETER ADJUSTED TO DAM SPILLWAY CREST— BY E.T. ROSE 1973	
SHORELINE	5.7 MILES
AREA	205 ACRES
MAX. DEPTH	51.6'

LAKE GEODE

HENRY & DES MOINES COUNTIES



Lunkers like this can only hang out where water conditions permit.

TEMPERATURE cont. from p. 7

again turns over and water currents mix the entire lake. The water temperature becomes uniform throughout and the stratification is broken up.

Again activity patterns of fish change. The decrease in temperature improves the success of the shoreline fisherman. This period is short-lived and serves as a transition from period two to period four.

WINTER

The fourth period (winter) begins with the first appearance of ice cover and continues until the lake opens again in the spring. Water exhibits a unique property at this time which leaves the ice on the top of the lake surface. We all realize that water freezes at 32°F. But, if the complete mixing of water at the end of period three continued until the water cooled at 32°, the lake would solidify completely. Fortunately, as water cools, it gets heavier until it drops to 39°. At this point, the water reaches its maximum density and actually sinks. As the surface water con-

tinues to cool below 39°, it gradually becomes lighter and floats on top of the warmer water. Thus ice forms at the surface on a still night. The rest of the water in the lake remains near, but above the freezing point.

Most of the larger predator fish we associate with man-made lakes become inactive during this period and very few show up in fishermen's catches. The panfish, however, continue feeding during most of the winter and can provide excellent fishing. Fishing is best just off the bottom of the lake or near brush piles.

The use of water temperature patterns and associated fish responses is becoming an ever increasing art as anglers make use of new fishing equipment that measures temperature, oxygen and depth. These tools make it easier to locate good fishing areas but cannot replace the human element of fishing. The person behind the rod has to develop a good knowledge of fish and fishing before he regularly comes home with a full stringer.



WAPSIPINICON STATE

"PARK TALES" — True & otherwise



Don Blasky — Don has climbed from a Conservation Officer to Assistant Superintendent of Parks. He has held this position since 1963.

Astounding events have occurred in many of Iowa's state parks. But few could match the mystery and intrigue shrouding the history of Wapsipinicon State Park.

When the citizens of Anamosa took up a subscription to buy 184 picturesque acres near their city for the sum of \$23,000 and turn the land over to the state for a park, they did not know they were taking the initial step in a discovery that was to startle the most scientific minds of the time.

When work on the park began, it was

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WAPSIPINICON STATE PARK

by Don Blasky,
Assistant Superintendent of Parks

1924 Ku Klux Klan Meeting

necessary to blast out some of the debris and rocks at the entrance to Horse Thief Cave. The name originated from stories of bandits and horse thieves who used the cave as a hideout. The blast revealed the bones of at least nine humans and possibly many more, of a race living thousands of years ago. What a tale this cave could tell if it chose to delve into the dusty history of its past!

It was a man of science whose energy and curiosity made Horse Thief Cave reveal some of the romance and history of its past. He was A. D. Corcoran of Anamosa, a 63 year old world traveler and student who predicted that the cave might reveal rich treasures, long before the blast of dynamite which fulfilled his prophecy.

Mr. Corcoran was hired by the park superintendent as an authority competent to take the measurements of the cave and supervise the blasting.

Twenty trustees from the prison at Anamosa were furnished to do the

blasting, which was to remove a large rock which almost cut off the entrance to the cave. It was in the excavations of earth under this rock and inside the cave that the relics were discovered.

A few inches under the surface there were found Indian relics, flint chips, shells, and bones of many animals. Far down below the first layer of ashes and dirt there was another drift of ashes which told a far more fascinating story.

Corcoran believed that the relics revealed by this deeper layer were those of a pre-historic people whom he estimated lived more than 12,000 years ago! Of the nine whole or nearly whole skeletons found, one was that of a gigantic man, who was more than 6 feet 6 inches tall. His vertebrae were the size of those of a small beef. His bones and those of the others were of the most primitive men. The skulls were round, similar in shape to those of the half animal "round heads". The jaws protruded like those of an ape, and the teeth stood out like a wedge, as in

men of the stone age. Bones of an infant, a youth, and another of lighter proportions like that of a woman were also found. Some bones were found that were partially charred. All of the complete skeletons found gave evidence that they were buried in a sitting position and were all a few feet from the walls of the cave.

Intermingled with the bones were those which Mr. Corcoran identified as those of a wild cat. Could it be that these people domesticated these wild animals for pets? Corcoran believed this to be true and claims it would signify a strange kinship between the two.

Another historic event took place in the park in more recent years. On June 6, 1924, a national meeting of the Ku Klux Klan was held in Wapsipinicon State Park. The picture reproduced here was taken by Mrs. Tom Stimpson of Anamosa. The meeting lasted one day and into the night. The next morning after all had left, a man was found hanging from a nearby tree!





PFD's must have this tag

Photo by Wayne Lonning

Coast Guard Approved:

By James E. Horan
Boating Safety Coordinator

Most boaters in Iowa know by now that the little stamp or patch attached to their life jackets means the U. S. Coast Guard approved their personal flotation device (PFD). But what does that mean? Did the Coast Guard approve it before the PFD was sold at the retail level in Iowa? Or was some system worked out at the factory which made the flotation device? Furthermore, just who is the Coast Guard to approve or disapprove of anything in Iowa anyway?

The answers to these questions bear witness to a unique relationship between government, industry, and the boating public. The results of this cooperation, although sometimes controversial, are usually a benefit to all boaters.

The Approval System

The beginning of Coast Guard involvement in pleasure boating was the Motorboat Act of 1940. At that time it was recognized that boating, especially motor boating needed standards to insure a

minimum level of safety for an expanding boating public. The Coast Guard, therefore, was given the responsibility of developing an approval system for lifesaving devices (PFD's) and fire extinguishing equipment.

This responsibility and accompanying authority applied to motorboats only, however. It did not cover sail boats or canoes.

Prior to 1940, the Bureau of Marine Inspection and Navigation was using an ap-

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proval system in their work with commercial boating. After 1940 the Coast Guard used this same system to develop their own for recreational boating.

The Type I life preserver and Type IV ring buoy were approved in 1946. By 1954 another type became available. The Type II buoyant vest was developed especially for recreational boaters. Also the well-known buoyant cushion became an approved Type IV flotation device.

So, by the end of 1954 we had a life preserver, buoyant vest, buoyant cushion, or ring buoy to hold us up. Was it enough?

It seemed to be for awhile. But by the 1960's it was apparent that boating was enjoying (or in some cases suffering) the same increase in participation affecting most of the recreation industry. Water skiing became one of the most popular boating activities. Fishing, sailing, and canoeing increased in popularity also.

Along with these changes though, boating accidents and drownings went up also. But why drownings? All the necessary equipment was approved and on the market. Why should drownings necessarily increase?

A look at accident and drowning reports brought out some suggestions. A key problem appeared to be what we might call "wearability." In other words, the reports indicated that many boaters were just not wearing their lifesaving devices. But why weren't people wearing their flotation devices? Was it a social stigma, were they uncomfortable, or was it something else? Here is a good place to point out the process normally used by the Coast Guard when solving such a problem.

First, interested private and public organizations, such as the American Boat

parties and appointed by the Secretary of Transportation, reviews the problem and the proposed standard and then makes a recommendation to the Coast Guard Marine Safety Council. From there the standard is shipped on to the Commandant, and with his approval, it is published in the Federal Register.

Through this procedure, the Type III special purpose device came into being. In the interest of boating safety, the Type III device was designed to be comfortable and more "wearable", especially during activities in which the wearer is likely to fall in the water. Although a slight sacrifice was made (the device has a lesser requirement than the Type II buoyant vest for turning an unconscious person from a face down position to a face up vertical or slightly backward position) the major gain was in "wearability." The Type III special purpose device is very comfortable (and popular) for water skiers, fishermen, and duck hunters. As a result, the approved system has paid off in terms of public benefit. It is too early to tell for sure yet, but indications are that these devices have been accepted and are being worn.

As with any program of this size, various situations may exist which do not conform to the general requirements; for example, "white water canoeing." Participation is by a small percent of the boating public and the activity itself is unique. The available Coast Guard approved devices just wouldn't satisfy the requirements of the white water canoeist. Another example is highspeed motorboat racing. The cockpit in these machines is usually too small to permit racer and approved device at the same time. In each of these situations, a Type V classification allowed for Coast Guard approval of a

ffects the state's enforcement and education program.

One forthcoming regulation in particular shows that either the need was deemed to be nationwide by the Coast Guard, or they can't cope with state or regional differences in safety requirements. The regulation pertains to "bailing devices" and an "extra means of propulsion". The bailing device must be able to handle at least 5 gal. per min. and the extra means of propulsion is either an oar, paddle, or motor.

In Iowa, however, many of the lakes and streams are shallow and although water depth is sufficient for boating, a person could often wade to shore. Another way of looking at it is that if your boat is taking on 5 gal. of water per min. you will want to have your life jacket on because you will probably be treading water soon anyway. Then there is the extra means of propulsion. There are three points to consider. First, if the wind is blowing, you will soon be blown ashore. Second, chances are good somebody will see your distress signal. Third, if you have an average size powerboat, an oar or paddle won't help and you will need to get a small outboard motor. Of course if you have acquired a boat that doesn't have a place for you to hook up your extra motor, it's back to the oar, paddle, or possibly a sail. Anybody who has tried to row or paddle a 16' tri hull knows you have a problem right from the start. There are probably no oar locks; but if you figure out how to row, you need two people — one on each side. Otherwise you go around in circles or exhaust yourself racing around the boat trying to keep direction and momentum at the same time. As for a sail, how many motorboats have you seen equipped with a main sail?

What Does It Mean?

and Yacht Council, Boating Industry Association, Underwriters Laboratories, and State Boating Authorities, are contacted and the problem is defined.

After further consultation, the Coast Guard proposes a "standard" to the Boating Safety Advisory Council board composed of State boating safety officials, boat and equipment manufacturers, boating organizations, and members of the boating public.

This body, representing all interested

substitute device. Use for specific circumstances such as these, Type V classification makes the program all encompassing.

The approval system is not all perfect, though. For example, a state or even regional variation in the need for a safety requirement may not be reflected at all in the final standard. In reverse, the need may be oversimplified by the Coast Guard to the point where the regulation appears ridiculous to the public. This of course af-

One important reminder though if you do get caught out on some of our larger lakes and lose all power in rough waves, be sure to have a sea anchor on board. A bucket with 30'-40' of line attached to it works to keep your bow headed into the waves. Tie one end of the line to the bucket and tie the other end to the bow of the boat and throw the bucket in the water. It could very easily keep your boat from capsizing.

The real question raised here is does

cont. on p. 15



Photo by Ken Formanek

Mount Ayr Fish Hatchery

by Dennis Lynch
Hatchery Manager



Dennis Lynch — A graduate of Simpson, Dennis now manages the State Fish Hatchery at Mount Ayr.

One of the smaller facilities in the state, the Mount Ayr fish hatchery in south-central Iowa rears several warm water species including channel catfish and largemouth bass. Located at the base of the Mount Ayr city reservoir, the hatchery utilizes this water for fish culture activities.

Development of this facility began in 1941 with the construction of four and one-quarter acres of rearing ponds to meet the needs of the expanded management operations in Iowa. In 1960, three and three-quarter acres of additional rearing facilities were developed. An office-maintenance building and manager's residence were finished in 1964.

Historically, this hatchery served as a rearing facility for largemouth bass and bluegills. However, the increasing demands placed on the Iowa Conservation hatchery system changed the operation of this station from that of bass and bluegills to the hatching and rearing

of walleye pike, the rearing of northern pike, channel catfish and bass.

Presently, extensive culture of channel catfish and experimental culture of striped bass ("ocean strippers"), an exotic fish to Iowa, are being carried out. Extensive culture, generally associated to warmwater fish propagation, uses large static ponds as rearing units in which fish are fed and raised.

The magnitude of growth in the warm-water fish culture program is indicative of the importance placed on these fish by management to meet their goals for better fishing.

If you are planning a trip to this area and the Mount Ayr Fish Hatchery, events of special interest occur in the months of May, June, and September. Rearing activities are also carried out on a daily basis during the warm months of the year. Management and hatchery personnel are always on hand to explain this operation and answer your questions. We welcome your visits. ☆

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Classroom Corner



By Curt Powell

The out-of-doors is a fascinating place for conservation education games and activities. There are many things to do. CLASSROOM CORNER, this month, would like to take the opportunity to give you some ideas concerning games that might be played or participated in through the use of your imagination and natural materials at hand. One should remember that good conservation practices must be followed in using natural materials.

There were some new ideas brought out recently at a U. S. Forest Service workshop sponsored by the Department of Public Instruction and the Iowa Conservation Commission. This workshop involving teachers, state, county, and federal agency personnel was held at the Conservation Education Center. One of these ideas involved make-believe or role-playing as an animal. An example: pretend that you are a deer or a squirrel. What do you need to live; how do you react to other animals; what is your general behavior?

A game called "What's In the Bag" might be interesting to your group. It involves using your sense of touch. All you need for equipment is a paper sack and a few natural items such as a rock, a

walnut, a stick, or a feather. The object of the game is to have the students identify all items in the bag using only their sense of touch.

"Nature collages" presents an unusual opportunity for students to express their creativity. All that is needed is paper (preferably construction paper) and Elmers glue. Natural materials are glued to the paper to suit the individual student's desires. Interesting designs and colors appear which can be fascinating.

How about tracking wild game? This can be most fun in the winter. It can teach you about the area (habitat) in which the animal lives. It could give the range of that animal. The tracks could identify the animal, or tell if it's running or walking. If the animal is running, what may have caused it to run?

There are many other educational games that can be played to learn more about conservation. Perhaps you have some ideas yourself. The most popular educational game is enjoying the Iowa out-of-doors. This enjoyment is called "recreation". Visit Iowa Conservation Commission areas, participate in out-of-door activities, and "re-create" yourself.



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the Coast Guard need to issue a minimum regulation in this case at all. We feel that this type of regulating should be substituted with an incentive program for individual states to make their own regulations where needed. In Iowa, we have different categories of water areas and in some of them there are special zoned areas where special safety problems exist. So in this way safety regulations apply where they are necessary but not just carte blanche all over the country simply because it seems easier to administer that way.

In the way that the Coast Guard applied their system, it appears to have worked. But the process is too slow. It would have been much faster for representatives of water skiers to have gone directly to the boating industry and asked them to develop a personal flotation device which

while meeting the Coast Guard regulations also satisfies the water skiers special safety needs. In this manner, industry in cooperation with water skiers could have developed a prototype, tried it out, applied for Coast Guard approval, and assuming they got it, gone on mass production sooner. Everybody gains the advantage. The Coast Guard provides the original incentive by adopting regulations which provide greater general safety while allowing for differences in activity or location. The industry, naturally a vested interest in consumer safety, builds a better image while making a profit. The boating public, of course, derives the greatest benefit. They receive a product which greatly improves their own safety while also having played a part in developing that product.

If this article implies self-sufficiency it was so intended. We feel that the states, the public, the industry, and the Coast Guard should rearrange their priorities and methods to simplify the process al-

lowing for each group to achieve their goals with the least amount of detail and time.

There are certain areas, however, where the Coast Guard is capable of functioning more effectively than the individual states. Some people may wonder why the Iowa Conservation Commission does not set up an approval program for PFD's. The ICC simply does not have the facilities, manpower or ability to intercept samples of all the PFD's shipped into Iowa by out-of-state manufacturers and test them for safety. The Coast Guard can and does send inspectors to factories and, having obtained samples, tests them for material strength, seam strength, stress under temperature, etc.

Through the interest and participation of all concerned, we ought to be able to enjoy a minimum of regulations, a maximum of personal safety, and of course the reason we go boating in the first place — many hours of fun and relaxation.

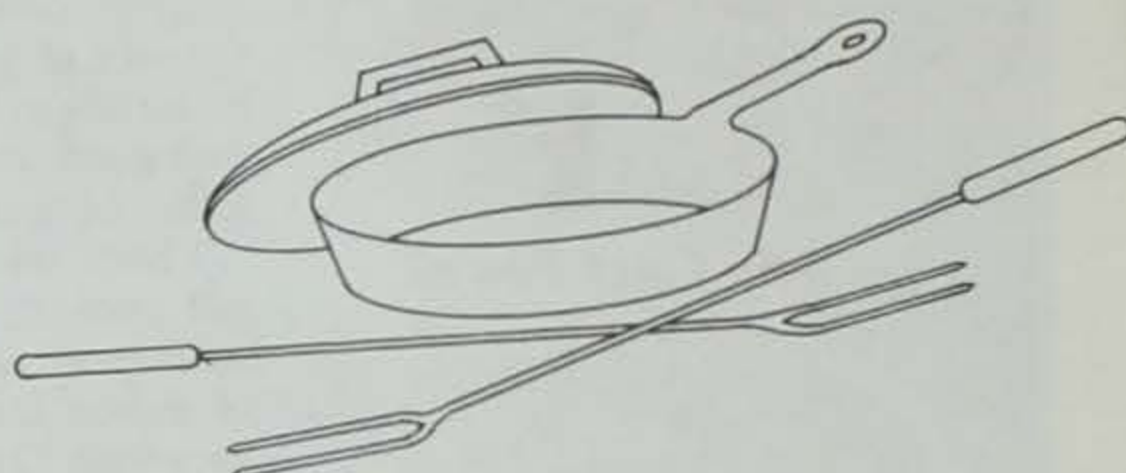




Field Glances



Illustrated by Larry Pool



With the camping season in full swing, many lowans will be visiting our state parks in the weeks to come. Many fine facilities are available to campers in our state parks. Depending upon the size and location, a state park has everything from showers and electricity to concessions and cabin rentals. A detailed guide to Iowa state parks may be obtained from the Conservation Commission.

When it comes to camping, nothing can be more pleasurable than outdoor cooking. The "fire ring", mounted on concrete blocks, is made available for cooking in our state parks. These rings are permanent and no attempt should be made to move them.

Firewood is usually in ample supply and the camper should ask park personnel where it can be purchased. In the past, serious damage has been done to small trees when campers strip branches for hot dog sticks. Park visitors are encouraged to bring metal holders with them.

An old fashioned cast iron frying pan is invaluable for outdoor cooking. Its "even heating" ability makes cooking over the campfire as easy as possible. With a lid it becomes a great popcorn popper.

Whether cooking or just enjoying an evening outdoors the friendly campfire becomes the focal point of the camp. Care should be taken in building it as well as in putting it out.

