

APRIL, 1974

# conservationist



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Cover Photo:  
"Keeper" Walleyes from Lake Rathbun.  
See Page 7.



Fred A. Prewert, Director

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# NYMPHS FOR TROUT

By Jon Gibson  
Information Specialist

Choose the most correct statement:

- (a) cheese is the best bait for rats,
- (b) cheese is the bait for trout,
- (c) both of the above are true, or,
- (d) neither of the above are true.

The most correct choice is (a) or (d) depending upon how effective cheese truly is as rat bait. Contrary to popular opinion the trout fisherman who baits with cheese can get the living cheddar kicked out of him by the angler who fishes artificial nymphs.

Natural nymphs are immature insects in the aquatic stage of their life cycle. Artificial nymphs are life-like imitations of small organisms, primary aquatic insects.

By fishing nymphs, the fisherman will catch more trout most of the time. Anglers who use one of the other forms of fly fishing, other artificial lures, or natural or man-made baits may have their day but the nymph fishermen will creel

more fish over the course of the season.

Often the abrupt introduction into their new environment makes recently released trout reluctant to feed. When these trout do feel like feeding they are likely to take just about anything that happens to drift, swim, or crawl by. Under such conditions it is unlikely that the nymph angler will be outfished by this bait-dunking counterpart. Soon, however, surviving trout begin feeding on stream naturals and nymph fishing begins to pay off.

## The Creel Doesn't Lie

Proof of the nymph's superiority however, rests with the creel success of northeast Iowa nymph fishermen. Last summer I was fishing on Coon Creek in Winneshiek County with a nymph fisherman from Massachusetts — (that's the state where witches are drowned and trout anglers who aren't fly fishing purists are stoned.) The stream had been recently stocked and a number of fishermen lined the banks. Needless to say, my partner's eastern accent raised a few eyebrows. When he started creeling brown trout faster than all of the local anglers combined more than eyebrows were raised — like the question, "What're ya' usin'?" In this Iowa clear water stream nymphs were hotter than dynamite!

Nymph fishermen can catch trout with more consistency than most other anglers. After about 12 hours the trout lose their hatchery recklessness and begin to show the wary character they are so well regarded for. From that point on trout are more often taken on lures or bait resembling the natural stream organisms. Research by fisheries biologists indicates that over 80% of a trout's diet can be composed of nymphs.

Many aquatic insects exist in the nymph stage for longer periods of time. For example, the helgrammite, nymph of the dobson fly, spends 35 months in the aquatic stage and only one month as a



The nymph patterns appearing in this article were tied by Scott Reiniger of Des Moines. Mr. Reiniger, well-known fly tyer and long rod angler agrees with the author that these nymphs can be very effective for Iowa trout.

— Ken Formanek Photo

Angler using nymphs on stream in Yellow River State Forest.

— Commission Photo

Photo by Ken Formanek



(Cont. on p. 14)



Fishing, mushrooming and camping in Iowa's State Parks and forests.

Photo by Wayne Lonning

## three for the price of one!

by Sonny Satre  
Information Specialist

Attention campers, fishermen, and outdoor chefs! For a scrumptious family treat in late April or early May, try a platter of freshly fried fish and morel

mushrooms taken from one of Iowa's State Parks. The two go well together as you will discover when these golden brown, tasty morsels quickly disappear

from the campside table.

Morel mushrooms begin making their welcome appearance in southern Iowa in mid-April but normally the peak of the

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season according to briar-scarred veterans is when burr oak leaves are the size of a fox squirrel's ear! This usually occurs about the first or second week in May.

Just like the water witch who searches for water with a divining rod, an experienced mushroomer carries a licky stick to help seek out hidden morels under heavy vegetation and thickets. A good mushroom hunter NEVER tells even his closest friends where he finds these popular fungi. According to many successful hunters though, they will admit their favorite haunts are around dead elm trees and rotting logs found in the wilderness sections of many state parks.

Prior to 1972, it was illegal to remove any form of plant life within the boundaries of our state parks and this ruling applied to mushrooms. Now mushroom hunting is permitted though other forms of plant life such as wildflowers and other plants are still protected.

During the mushroom season, spring fishing is in full swing too. Panfish such as crappies, bluegills and bullheads are quite easily fooled by small lures and nightcrawlers and according to the Commissions annual Big Fish record listings, most lunker largemouth bass are caught in April and May. Trout fishermen can expect to find northeast Iowa streams well stocked. Early walleye and channel cat angling can provide plenty of action this time of year, too!

Many of Iowa's state parks and recreation areas have lakes and streams which support good populations of fish. For a good prescription to end winter doldrums and begin the spring season with some good wholesome recreation (and perhaps a few additional calories) combine camping, mushrooming, and a fishing outing. Listed below are Iowa state parks and forests which offer some fine camping and angling along with the opportunity to search for the mysterious and sometimes elusive morel.



Photo by Wayne Lonning

Seeking out the elusive morel.

**STATE PARKS**

NAME	COUNTY	TYPE OF WATER
Backbone	Delaware	Lake & Trout Stream
Beeds	Franklin	Lake
*Big Creek	Polk	Lake
Bob White	Wayne	Lake
Dolliver	Webster	Des Moines River
*Elk Rock (Red Rock)	Marion	Red Rock Reservoir
Geode	Henry	Lake
Geo. Wyth	Black Hawk	Lake & Stream
Honey Creek (Rathbun)	Appanoose	Rathbun Reservoir
Lacey-Keosauqua	Van Buren	Lake & Stream
Lake Ahquabi	Warren	Lake
Lake Darling	Washington	Lake
Lake Keomah	Mahaska	Lake
Lake Macbride	Johnson	Lake
Lake of 3 Fires	Taylor	Lake
Lake Wapello	Davis	Lake
Ledges	Boone	Des Moines River
Lewis & Clark	Monona	Lake
Nine Eagles	Decatur	Lake
Palisades-Kepler	Linn	Cedar River
Pine Lake	Hardin	Lakes
Red Haw	Lucas	Lake
Rock Creek	Jasper	Lake
Springbrook	Guthrie	Lake & Stream
Walnut Woods	Polk	Stream
Wapsipinicon	Jones	Stream
Wilson Island	Harrison	Stream

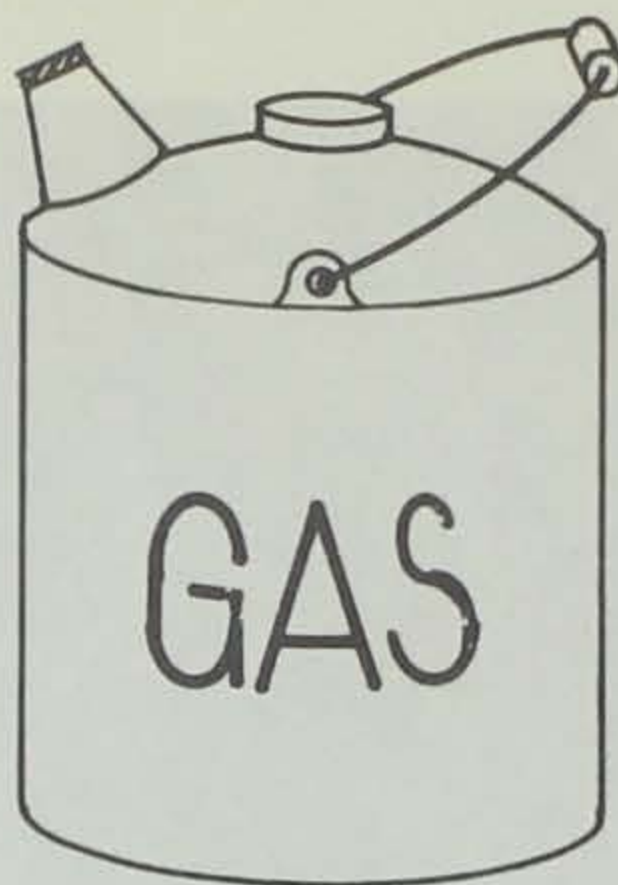
**STATE FORESTS**

NAME	COUNTY	TYPE OF WATER
Stephens Forest	Lucas	Ponds
Shimek Forest	Van Buren & Lee	Ponds
Yellow River Forest	Allamakee	Trout Stream

\*Camping Permitted Nearby.

Julius "Sonny Satre, Information Specialist, has been with the Information and Education Section of the Commission since 1963.





# Inflation and the energy crisis hits state areas

By John Stokes  
Chief, Division of Lands  
and Waters



John Stokes first joined the Commission in 1950 as a district forester. After holding forestry related positions in other states, he returned to Iowa in 1960 to serve as Assistant State Forester and later State Forester. In 1968 he was named Chief of the Division of Lands and Waters. Stokes holds a Bachelor of Science Degree in Forestry from Iowa State University, Ames, Iowa.

State parks, waters and forest areas may look a bit different to families who camp in or visit them this summer. Inflation and the energy crisis have hit the Iowa Conservation Commission just as hard as they have hit individual families who use our state recreation areas. A number of adjustments have been made and more are planned during the normal vacation periods this year.

We have experienced cost increases during the last year in just about every activity related to recreational areas. The Commission has absorbed the increased costs so far by cutting back on expenses in many areas and using equipment and facilities for longer periods of time. The cost and availability of several products and services vital to operating state recreation areas are causing particular concern. These include fuel oil for heating, gasoline and garbage hauling. Smaller necessary items such as soap, cleaning agents, toilet paper, and small tools have also risen dramatically in cost.

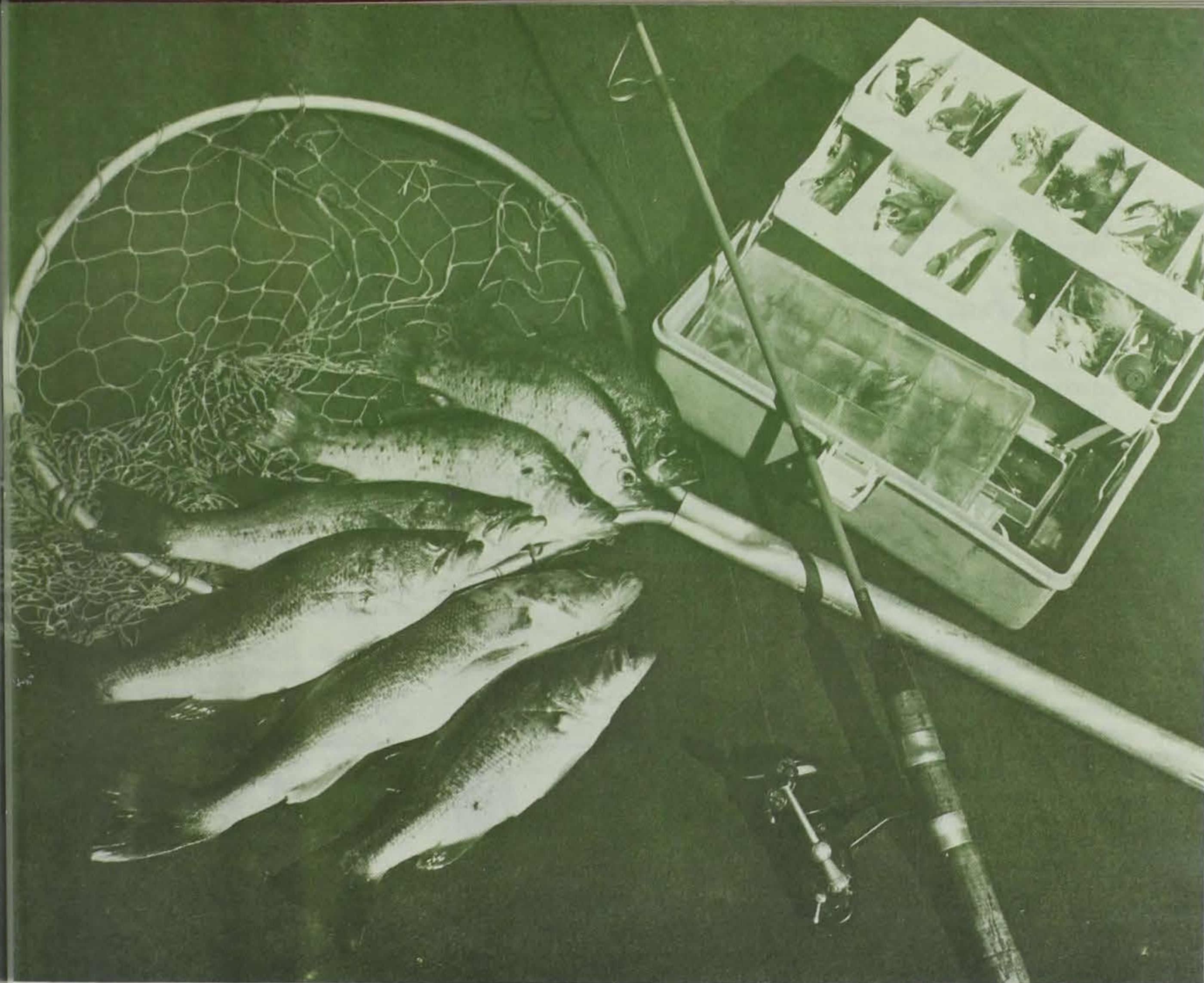
Park officers will be on duty full time as they have been in the past, however, the frequency of their patrols through the park will be reduced to limit the use of gasoline. We will, through the use of radio communication and telephones, be available to take care of any emergencies that may occur in our state parks or other recreational areas.

It is planned to reduce certain maintenance activities by 20% to meet the gasoline restriction. State parks and forests are being appraised to locate areas where mowing can be halted or reduced to once a month rather than every two weeks as it occurs under present policy. Temperatures in state buildings were reduced to 68° or lower when possible during the winter months under the energy conservation policy for state departments. All picnic units will be reviewed to see if they are used to capacity. Most tables, fire rings, and fireplaces are built in Commission shops by area personnel or in area shops utilizing inmates under the joint Social

Services Department-Conservation Commission prison labor program. But the higher cost of lumber and hardware for picnic tables has accounted for a price increase of from \$35.00 to \$50.00 per unit. It is planned to use facilities such as tables and fireplaces in new areas or in parks with heavier use. Funds to build as many picnic tables as were built in previous years are simply not available.

The Conservation Commission has asked the current session of the legislature to increase our maintenance and operation appropriations to cover some of these increased costs. Contracts for garbage hauling and disposal in our state parks have increased \$26,500 for fiscal year 1973-74 over the amount appropriated for such contracts and it will go up to \$36,300 in fiscal year 1974-75. The collection of garbage in state parks was placed out to private contracts during 1972 so that the Commission could comply with all of the rules of the health and environmental departments concerning the hauling and disposal of refuse. Our state parks system does not lend itself to develop individual sanitary landfills nor is the necessary equipment available to maintain such landfills. It should be pointed out that the influx of park users into the majority of our state parks on a normal summer weekend approaches the population of a mid-sized Iowa city.

It is too early to estimate the effect the energy crises will have on our state recreational areas. Indications are that many Iowans will be camping closer to home this year not only because of the concern as to the availability of gasoline, but also because of the increase in gasoline prices. Many people indicate they will camp for longer periods in parks or other recreational areas near their homes. The Conservation Commission will do all in its power to accommodate campers and other park users to make their visit to an Iowa recreation area an enjoyable experience. ★



Crappie, bass, walleye taken from Rathbun in 1972. Fish run larger now.

— Ken Formanek Photo

# RATHBUN LAKE-1974

By James Bruce  
Fisheries Management Biologist

How would you like to catch 2000 crappie? Such catches were reported by angling groups at Rathbun Lake during 1973 and much the same kind of fishing can be expected during 1974.

Creel survey data gathered between April 1 and September 30 during the past year shows that approximately 200,000 fish were taken from the lake and outlet area during this period. Before someone suggests that the lake may be fished-out, it should be remembered that Rathbun contains 11,000 acres of water and the harvest of 200,000 fish represents something less than 10 pounds per acre.

The lake is capable of sustaining a greater harvest than is presently being taken.

The average angler's catch at Rathbun during 1973 consisted primarily of crap-



James Bruce came to the Commission in 1972 from Arizona where he also served as a fisheries biologist. He holds a B. S. degree in Fish and Wildlife Management from Iowa State University.

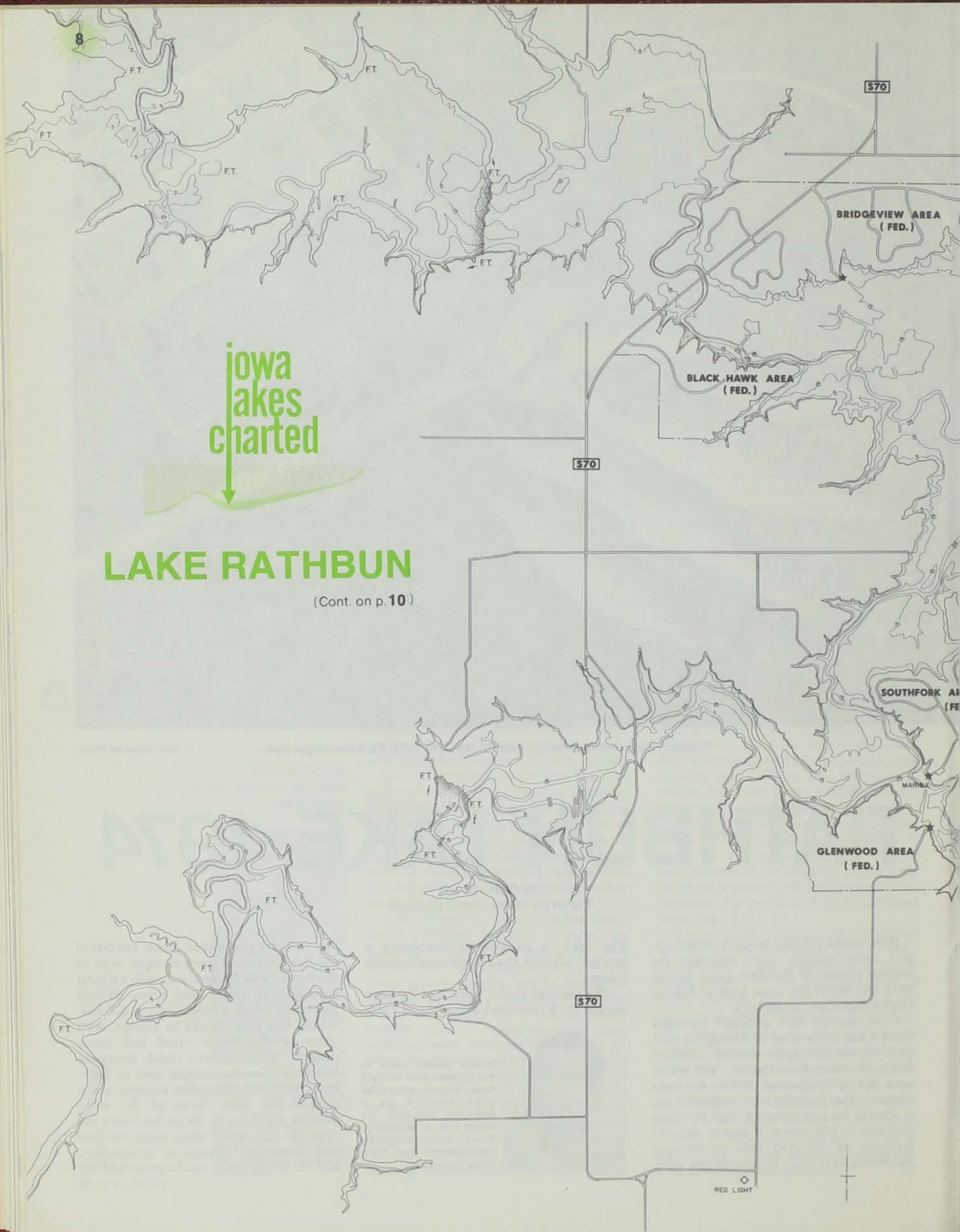
pie. Seventy percent or about 140,000 of the fish harvested were crappie, most in the 9 and 10-inch size class, with a liberal sprinkling of 11, 12, and a few 13-inch fish being taken. The size of crappie harvested this year should be similar, with more of the larger sized fish being present in the angler's creel. Everyone has their favorite crappie spot at Rathbun with fish being taken at many areas around the lake. Some of the more popular areas are at the outlet below the dam; the rip-rapped areas along the dam and along the highway at Bridgeview; and the brush coves and bays around the

(Cont. on p. 9)

Iowa  
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# LAKE RATHBUN

(Cont. on p. 10)



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main body of the lake and Honey Creek. Angling method is also a matter of personal choice with many successful anglers using leadheads, beetle spins, or minnows.

If your taste doesn't run to crappie there is still a lot of fishing available. Walleye fishing was good last spring and late summer, with many anglers making good catches at the outlet below the dam. Good catches were also taken along the deeper shoreline, rip-rap along the dam and the Bridgeview area. Walleye fishing will probably be somewhat slower this year but many limit catches will be taken and these fish will be large enough to make it worthwhile. A good number of 3-4 pound walleye are present in the lake. Effective walleye lures include the beetle spin and some of the leadhead and rubber or hair combinations such as the beetle grub. White and black seem to be the most popular colors.

Largemouth bass, bluegill, channel catfish and bullhead are also present in good numbers with not too much angling pressure directed their way. The angler who goes out for bass should do all right in the upper end of the reservoir and along shallow shores in evening. Favorite largemouth bass lures include the rubber (plastic) worm and various bucktail or skirted spinners and plugs.

Channel catfishing has been light although Rathbun catfishermen have done well and a number of catfish up to 7 pounds have been taken at the outlet below the dam.

If you desire something more exotic, Rathbun has been stocked with musky, striped bass and white bass. Small numbers of white bass were taken last year and more should be caught this year. There have been no confirmed reports of either musky or striped bass being taken by anglers. However, this may be the year that some angler will catch a state record striped bass at Rathbun Lake. The striped bass is relatively new in Iowa, having been introduced in 1971. It is similar to the white bass; the great difference is the maximum size of these two species. A four pound white bass would be considered a trophy. A 40 pound striped bass would be considered large, and fish in the 15-20 pound class are not unusual in freshwater areas where this sea-going bass has become established.

The preceding has provided a summary of the fishing available at Rathbun Lake; the following indicates where a good deal of this fishing originated. This table lists the fish stocked in Rathbun by the Conservation Commission, from the initial stocking in 1969 through 1973.



Two to three pound walleyes are common in the lake and the tail waters below.

— Wayne Lonning Photo



— Wayne Lonning Photo

#### 1969

Channel Catfish 202,000 fingerlings

#### 1970

Channel Catfish 200,000 fingerlings  
Channel Catfish 587 sub-adult  
Walleye 3,400,000 fry  
Musky 34,500 fry  
Musky 1,000 advanced fry  
Largemouth bass 424,000 advanced fry

#### 1971

Largemouth bass 496,000 advanced fry  
Walleye 11,000,000 fry  
Musky 1,010 6"-10"  
White bass 2,800 adult  
Striped bass 500,000 fry

#### 1972

Walleye 9,000,000 fry  
Striped bass 2,174 3"-4"

#### 1973

Walleye 9,000,000 fry  
Largemouth bass 63,335 fingerlings

Prior to stocking, the Chariton River from Chariton to the dam was treated to kill the existing rough-fish population. This work was done to prevent massive reproduction of carp and other trash species which could preclude satisfactory survival and reproduction of the desired game species. This treatment was not designed to eliminate the existing fish population, but rather to reduce it to a manageable level. Fish which survived the chemical treatment have also contributed a great deal to the fishing at Rathbun. Two species which are in this category are the crappie and the shad. Crappie escaped this treatment in 1969 in numbers adequate to reproduce and provide the bulk of the fishing as previously mentioned. The gizzard shad, while not a game species, is very important to the fishery, as it serves as the basic food for the game species and has in this manner allowed for the excellent growth of these species and the good fishing which has resulted.

During much of 1973 all of the boat launching facilities were partially inundated by water due to unusually high spring and summer runoff. All of these facilities have been or will be repaired soon, and boat launching should be somewhat more convenient this year. It should be noted that Honey Creek State Park will be closed for a period sometime during the summer for road surfacing; every effort will be made to notify the public, via the news media, when the park is closed.

Highway travel to Rathbun will still be somewhat hampered this year by detours around areas of road construction. But if you're interested in great fishing, a trip to Rathbun will be worth the inconvenience. ★

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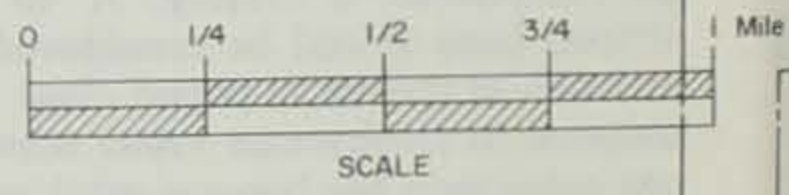
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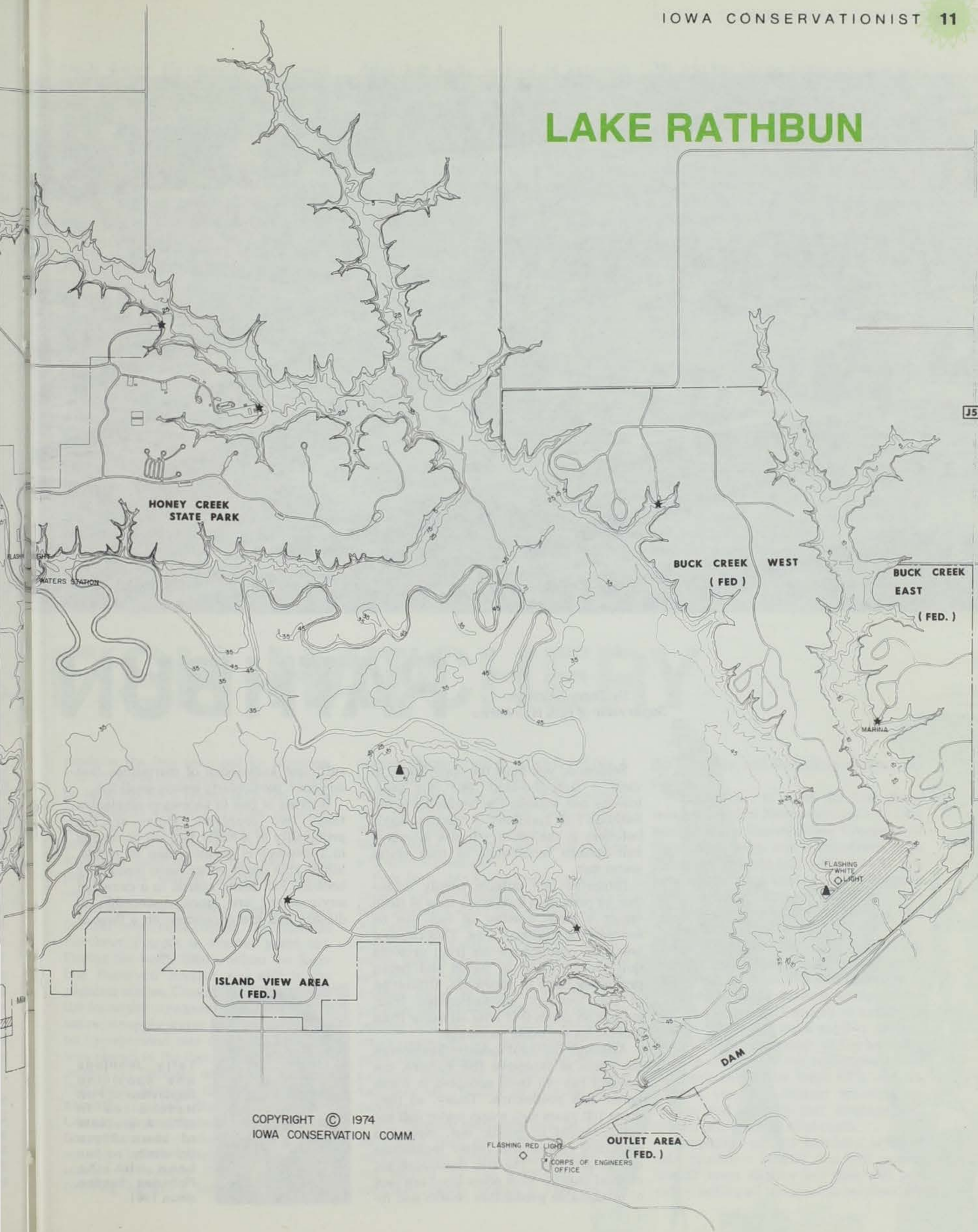
WATERS



**LEGEND**

- NAVIGATIONAL LIGHT
- ★ BOAT RAMP
- ▲ NAVIGATIONAL HAZARD
- FT FLOODED TIMBER

# LAKE RATHBUN



COPYRIGHT © 1974  
IOWA CONSERVATION COMM.

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OFFICE

OUTLET AREA  
(FED.)

DAM

FLASHING  
WHITE  
LIGHT

MARINA

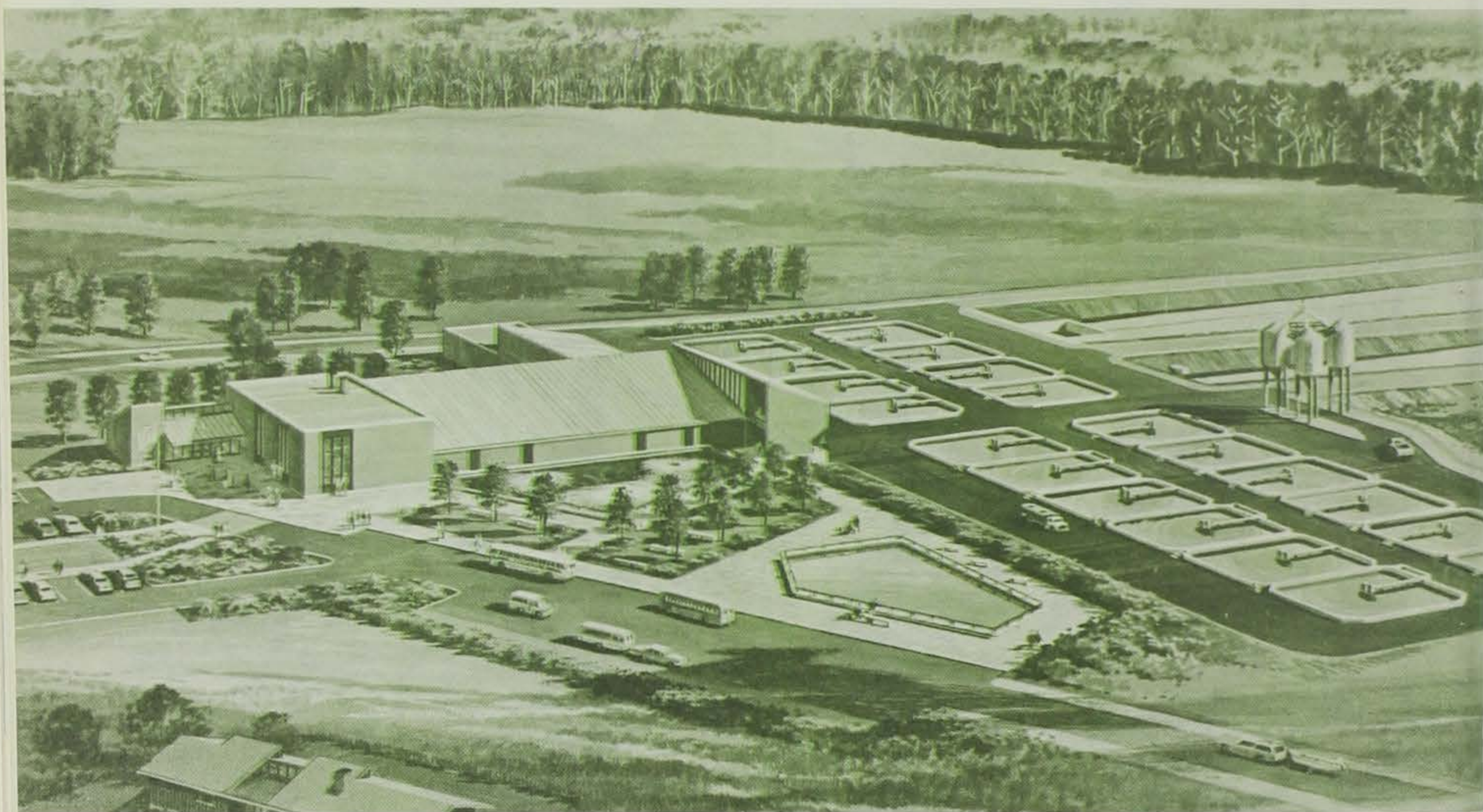
BUCK CREEK WEST  
(FED.)

BUCK CREEK EAST  
(FED.)

HONEY CREEK  
STATE PARK

WATERS STATION

J5T



By Terry Jennings  
Supervisor of Fish Hatcheries

## RATHBUN

Seldom do you have the opportunity to view a first-of-a-kind. But this year, Iowans can witness the beginning of the Rathbun Fish Hatchery — the first major hatchery in the country to use intensive fish culture techniques to rear warm water fish.

Intensive fish culture simply means that by providing food and a flow of fresh water a large number of fish can be reared in a confined area. This concept was first practiced when trout growers quit rearing trout in ponds and began producing them in raceways. Utilization of this concept revolutionized trout culture so much that now all major trout hatcheries are using raceways.

Although the trout industry has proven the value of intensive fish culture, the concept has not been accepted in warm water fish production. Today, as they were 100 years ago, warm water fish are being reared in ponds. But, most fish culturists realize that better techniques can be attained. The two disadvantages of pond culture most often cited are lack of predictable production results and in-

sufficient knowledge of mortalities that do occur, particularly among small fish.

Rearing of fish in raceways eliminates these two problems. However, the probability of a major fish kill occurring in raceways is greater than in ponds. Major kills could occur more frequently because fish being reared in a crowded environment are more susceptible to disease and are dependent on a flow of



**Terry Jennings** was appointed Supervisor of Fish Hatcheries in 1972. A graduate of Iowa State University, he has been with the Fisheries Section since 1961.

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fresh water for survival. Although disasters at a hatchery are a possibility, modern technology has greatly reduced the chance of occurrence.

The major reason, for the lack of acceptance of raceway culture techniques by warm water fish culturists is the lack of research into developing techniques to train most warm water fish to accept dry commercial food. Not until the early 1960's were the techniques for feeding dry food to channel catfish developed. Hatcheries can now produce largemouth bass on a dry diet. Techniques for feeding other warm water fish commercial diets are presently being investigated and eventually all of the major gamefish will be reared on a dry food diet.

The Rathbun hatchery is being constructed to accommodate this vast new potential for rearing channel catfish now and other game fish in the near future.

#### Why Rathbun?

The hatchery will be located below Rathbun Reservoir in Appanoose County. This site was chosen because it provided the best combination of the four ingredients needed for a modern hatchery — water quality, water quantity, available land, and a long growing season. Rathbun Lake will provide high quality water in sufficient quantities to

dated and badly in need of extensive repairs, the Rathbun Hatchery Project was reactivated.

During March, 1972, the Commission authorized a consulting firm to design a hatchery using raceway culture techniques. The initial design was completed August, 1972, and two months later the Conservation Commission formally approved construction of the facility.

The Rathbun hatchery will be an ultra-modern warm water facility. Hatchery facilities will include a 5,000 square foot hatchery-office building; twenty concrete rearing ponds; three pollution control ponds; three residences; and a parking lot. Visitor related facilities will include a center where visitors will view aquaria and receive information on Commission programs, an elevated glass enclosed walkway overlooking the fish hatchery and rearing area, a fish viewing pond, landscaped hatchery grounds, and interpretative nature trails throughout the remainder of the area.

In addition to hatchery personnel, a fish disease biologist, an area fish management biologist and the statewide supervisor of fish hatcheries will be stationed there.

#### Improve Fishing Statewide

Initially, emphasis will be placed on

Mt. Ayr hatcheries, which are now used mostly to rear catfish, will be available to upgrade our statewide largemouth bass stocking program. Increasing the number of bass being stocked will provide more fish to the bass fisherman and should provide larger panfish by decreasing stunting problems.

Research will be conducted to develop techniques that can be used to rear walleye, northern pike, and muskellunge on dry commercial feed. Success will enable the Commission to increase production of these species and allow their release into new areas of Iowa and provide better angling for these highly desired species.

Future fish production priorities may change. For this reason the design of this hatchery includes features that allows a great amount of flexibility in species production.

#### Expect 600,000 Visitors/Year

When completed about 600,000 visitors per year are expected at the hatchery. This large number called for elaborate visitor facilities. Visitors will be welcome during normal working hours any season of the year, though the best time to visit will be between the months of April and October.

Cost of this fish hatchery is estimated to be about 3.8 million dollars. Thus

# FISH HATCHERY

produce the fish required for stocking. The 375 acres on which the hatchery will be built has been leased from the Corps of Engineers and will provide sufficient land for a quality operation without private encroachment. The extreme southern location in the state will provide the longest possible growing season.

Although the Rathbun Hatchery has not yet been constructed, the Rathbun Hatchery Project is several years old. During the early 1960's, when the Rathbun Reservoir Project was still in the planning stages, Commission officials had the foresight to request a pipe, that could serve to supply water for a fish hatchery, be incorporated into the dam. The tube was placed in the dam, but the hatchery project lay dormant until about 1970. At that time several thousand acres of recently created State, Federal, and County impoundments were placing heavy demands on the State's hatchery system. Iowa's hatchery system was unable to supply the fish. Because existing hatchery facilities were out-

rearing channel catfish, a fish listed No. 1 in fishing preference by most Iowans. Approximately 100,000 pounds of catfish will be reared annually and stocked where needed throughout the state. Striped bass, walleye, and muskellunge will also be produced.

Fish from this facility will greatly increase the opportunity of all Iowans to take desirable sized fish in local waters. An example is the catfish rearing program. Presently, 26 county conservation boards scattered throughout Iowa are provided catfish for rearing in wire, floating cages in their local lake. This program has proven highly successful in putting fish in the angler's creel and many requests have been received to expand this program to all counties containing suitable waters. Rathbun hatchery will enable us to meet these requests.

But because emphasis will be placed on catfish does not mean that anglers seeking other warm water species will not benefit by the operation of this hatchery. Ponds located at Fairport and

the hatchery will be built in at least two phases.

The contract to build the first phase was awarded in November, 1973, to Connor Brothers Construction Company of Sigourney, Iowa, and is scheduled to be completed by late fall, 1974. The \$2 million construction costs for this contract will be paid entirely from revenue derived from the sale of hunting and fishing licenses.

An attempt to secure financing, either through legislative appropriation or by increasing the cost of fishing licenses, is being made in the current session of the Iowa legislature. If money is secure, it will be possible to build another portion, hopefully the remainder, of the hatchery in 1974 or 1975. If the remainder of the hatchery cannot be built with one additional contract letting, spiraling inflation and construction stagings will greatly increase the total costs.

Completion of this hatchery will not only provide a facility that will greatly benefit Iowa anglers but also will provide a facility all Iowans can be proud of.★



Mayfly Nymph



Tiny Aquatic Beetle



Commission Photo

## NYPHHS (Cont. from P. 3)

winged adult. Several factors influence how, when, and upon what particular nymphs a trout does feed, however.

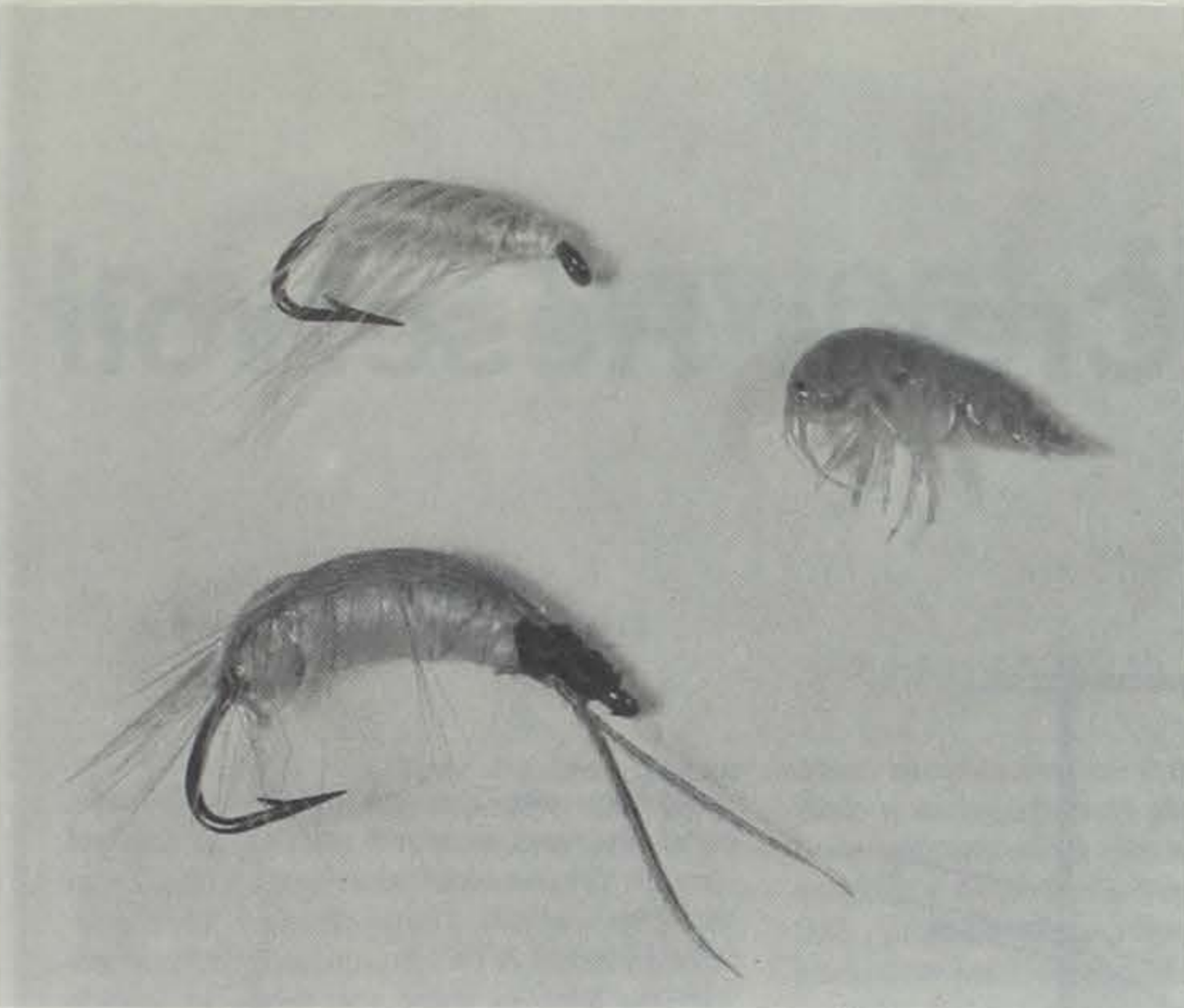
### Timing Is The Key

With respect to their nymphal feeding habits, the seasons of the year play a significant role in determining how much and upon what species the trout are feeding. During winter, trout feed mostly on small fish. At this time terrestrial insects are not available to supplement the trout's diet and most nymphs are not very active until the weather warms. Of the few nymphs that are present in appreciable numbers those of the stonefly and caddisfly are probably the most common ones taken.

From early spring through late summer, nymphs form the vast bulk of a trout's menu. Some of the more important ones are stonefly nymphs, mayfly nymphs, predaceous diving beetle nymphs, and crane fly nymphs. Although trout continue to feed on aquatic insect larvae in the autumn, terrestrial insects that fall into the stream after being stunned or killed by the first few frosts of fall are the principle food for trout. During this brief period in the early fall, dry flies, especially those imitating ants, crickets, and grasshoppers, can sometimes outfish nymphs.

Time of day determines when trout do much of their searching for food. Nymphs are vulnerable to host of predators including fish, crayfish and turtles. Only

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Water Scud (miniature crustacean)



Caddis — cased and uncased (note empty case)

during the darkness of night do nymphs freely emerge from their daytime shelters underneath rocks in order to feed. As the sunset approaches trout begin searching for nymphs. Watch for small swirls on the surface — caused not by the trout feeding on the surface, but by the thrashing of their tails as they frantically pick up emergent nymphs. Stream drift is the assortment of nymphs that are dislodged from the stream substrate and carried downstream with the current. This nightly feeding spree, combined with the nocturnal feeding habits of Iowa's most popular trout species, the brown, make dusk and dawn the most productive times to fish.

#### Big Trout — Big Nymphs

Studies by trout biologists indicate that big trout prefer to feed on the largest nymphs in a particular stream. Since different nymph species occupy different stream habitats, the alert angler will check under rocks for nymphs in slow water pools, in rapids and in the fast water just above and below rapids.

Investigations also indicate that if there are two or more nymphs of approximately the same size in the stream, then trout will feed by abundance and not selectivity. This implies that taste has little influence on what nymphs a trout eats, but that those aquatic insect larvae which happen to be present in the largest number and the largest size will be those most often taken.

#### Equipment

With respect to fly fishing equipment the following tips should be considered. Since the best nymph fishing occurs when the water is low and clear, the smaller the leader tippet the better. To avoid scaring trout many Iowa fishermen use two pound test monofilament leaders at least eight feet long.

It's wise to remember that trout are easily spooked by sudden movements, usually streamside forms, and contrasting colors. An upstream approach to each fishing spot is the best. Such a tactic keeps the fisherman behind the trout since fish normally face into the current. Medium-dark, drab-colored clothing which will blend with most streamside backgrounds will also make the angler's movements much less detectable by trout.

#### Retrieves

Of the two popular ways of retrieving nymphs, the traditional way is to cast the nymph upstream and let it drift back naturally along the stream bottom. This method is the "free-drift" retrieve and strikes are detected by slight pauses in the downstream journey of the line. Although the pause may be due to the nymph bumping into rocks, set the hook instantly, for trout will immediately spit out the counterfeit.

Another effective method is to fish the nymph like a wet fly. This involves

casting the line downstream and slowly retrieving the line in short jerks, letting the fly remain suspended in the current between jerks. This technique somewhat imitates the actual ascent of nymphs from stream bottom to surface as they molt their skins and become winged adults. Experience shows that free-drift retrieves are naturally more effective at dawn and dusk when stream drift occurs, but don't be leary of trying both methods under any conditions to see just what the trout want at any particular time.

Nymph fishermen comprise only about 1% of all Iowa trout fishermen, but they catch a whole lot more than 1% of the trout. The sensation of dragging a hefty old brown trout out of his rocky fortress on a nymph, perhaps tied by the angler himself, is a feeling hard to beat.

Please choose the most correct answer to the following question: Most Iowa trout fishermen don't use nymphs because? —

(a) they can't find "Nymphs" brand cheese at their local grocery

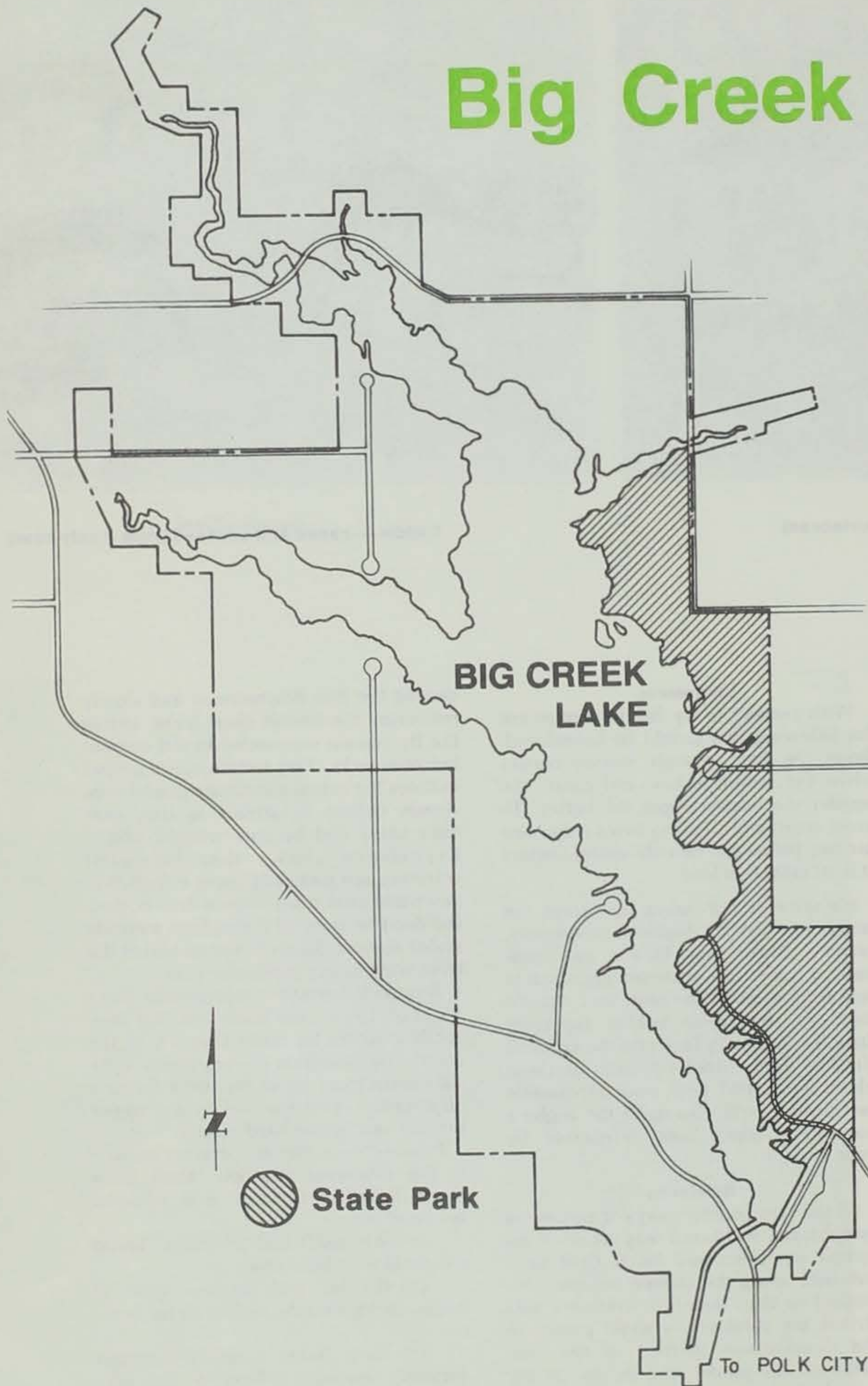
(b) the fur and feathers make it harder to squeeze the cheese on the hook, or,

(c) they haven't fished nymphs seriously enough before to see why they're one of the best bets for Iowa trout.

If you answered either (a) or (b) please return to the beginning of the article and read again. ★

# Big Creek Reservoir

By Tom Putnam  
Fisheries Management Biologist



Where can I catch largemouth bass, walleye, and channel catfish in central Iowa? Where can I also have a chance at a blue catfish, muskellunge or smallmouth bass? A twenty minute drive north of Des Moines puts you there — beside the newest public water in Iowa, Big Creek Reservoir. Located two miles north of Polk City, this 866 acre lake was impounded in June, 1972, and promises many hours of outdoor recreation for boater, angler, picnicker and camper alike.

Recreational development of the public lands surrounding Big Creek began during the summer of 1972. When completed the facilities will include numerous picnic areas and foot trails around the lake and a beach and bathhouse concession on the east-central shore. Two new concrete boat ramps have been built on the east and west shores of the lake.

#### Fish Stocked

Although the area is in the initial stages of recreational development, a vigorous fish stocking program has already been undertaken to insure the establishment of desirable gamefish populations. Largemouth bass, one of the midwest's most popular sport fish, were stocked in 1972 and 1973 with great success. Bass from the initial stocking have grown to an average length of nearly 13 inches in only two seasons. Bass stocked in 1973 also fared well, attaining a length of 6 inches in one summer. This relatively rapid growth was due to two factors. One was the large number of native green sunfish in the creek before impoundment that were available for forage. The other was the new lake environment which affords less competition for food due to overall low fish numbers in the lake.

A 14 inch minimum size limit has been placed on all bass at Big Creek and those caught measuring less must be returned to the water. Although a restriction of this sort was used extensively in the past to afford protection to young spawning



# Iowa's newest fishing hotspot



Tom Putnam began working for the Commission in 1971, after earning a B. S. degree in Fish and Wildlife Management from Iowa State University.

bass, such is not the case here. The size limit was imposed to protect part of the bass population so this segment would be available to prey on the increasing panfish populations. This technique may keep the panfish in check so they don't become too numerous resulting in slower growth and a smaller size than the angler desires.

A creel survey was conducted during the spring and summer of 1973 to determine the amount of fishing on the lake and the species and sizes of fish harvested. Few bass were taken measuring over 14 inches in length, but those caught of that size had an average weight of nearly 2 lbs! Another 23,000 bass less than 14 inches were caught and released. This number represents many enjoyable hours of bass fishing as well as a sizable population of fish which will soon be legal "keepers".

Walleyes, a favorite sport fish of more northern waters, were also stocked as fry in 1973. This species is sure to hold the interest of many an open water fisherman as well as his cold weather counterpart and will provide plenty of action especially during spring and fall. A fisheries survey last fall indicated a healthy population of walleyes that had already attained a length of nearly 9 inches. At this rate of growth a few should be found in the creel this summer.

The old Iowa standby, channel catfish, is also on the stocking list to give the bottom fisherman a run for his money. "Cats" were put in as fry in 1972 and as large fingerlings in 1973 when bass had grown large enough to prey on the smaller size. Although the catfish have not yet had the chance to grow to the "keeper" category, they should be showing up on the stringer sometime this summer.

Last year adult bluegill and black crappie were repeatedly stocked to establish a decent panfish fishery and to provide food for the energetic appetites of the bass and walleyes. Young fish produced by these fish were numerous in last

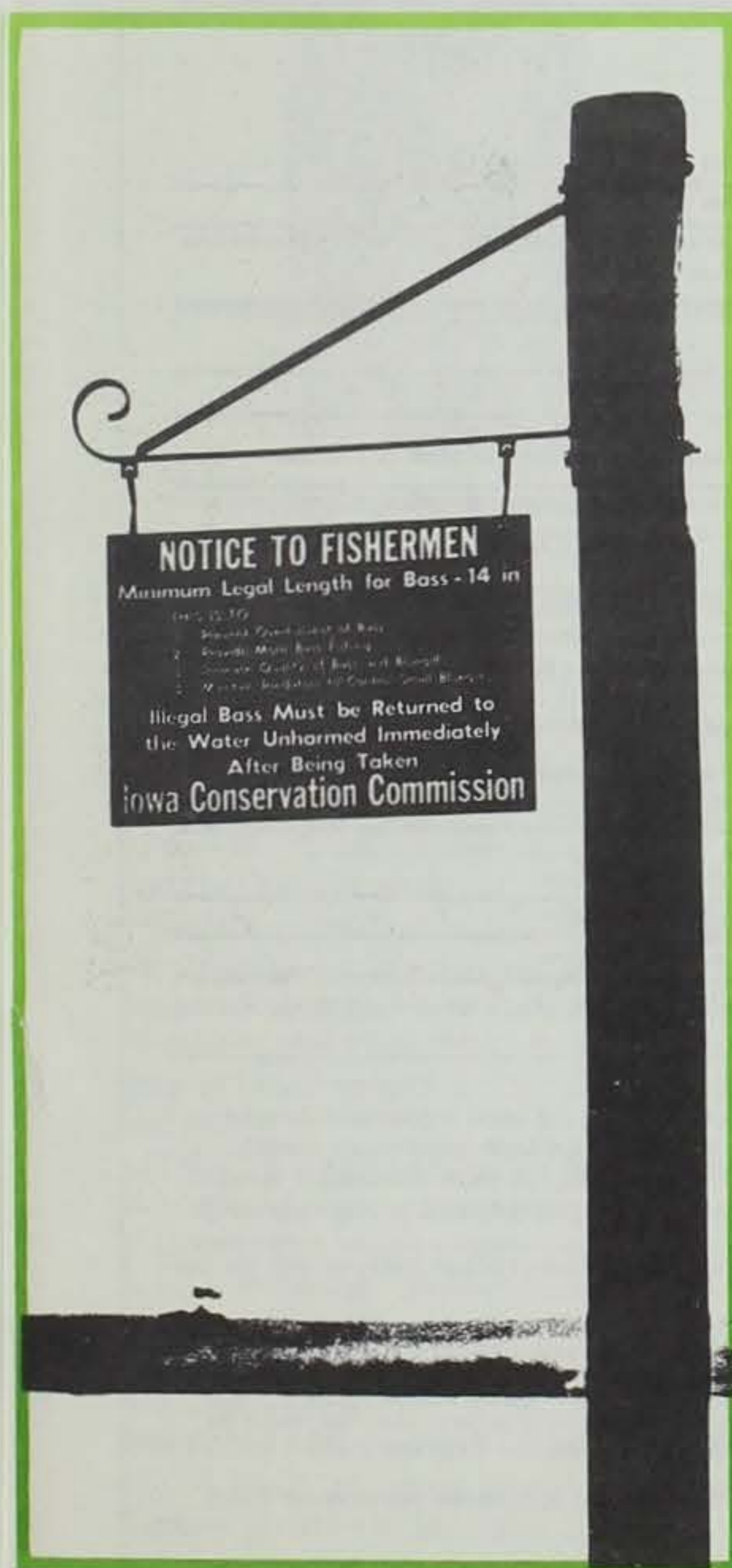
year's surveys. Crappies were especially prevalent and averaged 4.3 inches in length. These panfish will probably not be of any fishing significance until the spring of 1975.

Big Creek was also the recipient of a species new to Iowa's public lakes, the blue catfish. This catfish is light blue in color along the back, and should not be confused with the channel catfish which may exhibit similar coloration during the spring spawning season. Blue cats can be distinguished by their heftier body structure and by a count of the soft fin rays in the anal fin. Blues have 30 or more rays in this fin while channels have 24 to 29. This species of catfish can attain weights of over 50 pounds, almost twice that of channel cats, and should provide plenty of action as well as a tasty treat for the table.

Iowa's trophy fish, the muskellunge, has also been placed in Big Creek to provide even more suspense as to what is fighting at the other end of that line. Muskies were stocked in 1972 as fry and one was retrieved in last fall's survey measuring over 24 inches in length. Prospects of success are promising for this species offering a real challenge to Iowa plug casters.

Added to all of this fishing variety is one final species, the smallmouth bass. Although smallmouth were not stocked, a few existed in the creek before impoundment. This remanent population had what appeared to be a very successful spawn in 1973 and should provide an occasional bronzeback to the creel for years to come.

Although it will still take one or two years for Big Creek to reach its prime, plenty of fishing excitement is still available to those who don't mind returning an occasional sub-legal bass or small walleye. So start cleaning out that tackle box and oiling that reel because it won't be long before it's time to try out your gear on Iowa's newest fishing hotspot — Big Creek Reservoir. ★



# Warden's diary

By Rex Emerson  
Law Enforcement Supervisor



Rex Emerson

"You mean they're still hunting deer this time of the year?" That is what I asked Orlan Handeland, the officer in Linn County, when he told me over the phone that he had some information about a man shooting a deer. I really wasn't quite that surprised, because poaching can happen any month of the year.

It was late afternoon when Orlan called. I headed for Linn County immediately. We needed to contact the witness and get a written statement as to

## 1974 IOWA FISHING SEASONS AND LIMITS - March 1, 1974 to February 28, 1975

Inland Waters of the State					Boundary Rivers
Kind of Fish	Open Season	Daily Catch Limit	Poss. Limit	Min. Leng. or Weight	Mississippi River, Missouri River and Big Sioux River
Carp, Buffalo, Quillback, Gar, Dogfish, Gizzard Shad, Sheepshead, Sucker, Redhorse, Chub, Sunfish, Bluegill, Crappie, White Bass, Bullhead, Rock Bass, Yellow Bass, Striped Bass, Warmouth, Minnows and Sand Sturgeon.	Continuous	None	None	None	Same as inland waters.
Rock Sturgeon	Continuous	1	1	None	Same as inland waters.
Paddlefish	Continuous	2	4	None	Same as inland waters except no catch or possession limit on Mississippi River.
Perch, Yellow	Continuous	25	50	None	Same as inland waters except no catch or possession limit.
Trout*	Continuous	5	10	None	Same as inland waters.
Catfish	Continuous	8	16	None	Continuous open season, no catch or possession limit.
Largemouth Bass	Continuous	5	10	**None	Largemouth and Smallmouth Black Bass. Continuous open season. Aggregate daily catch limit 10; aggregate possession limit 20.
Smallmouth Bass	Continuous	5	10	**None	
Walleye and Sauger (natural lakes only)	April 27 to Feb. 15	Combined Walleye and Sauger	Combined Walleye and Sauger	None	Continuous open season. Aggregate daily catch limit 10; aggregate possession limit 20.
Walleye and Sauger (other inland waters)	Continuous	5	10		
Northern Pike (natural lakes only)	April 27 to Feb. 15	3	6	None	Continuous open season. Daily catch limit 5; possession limit 10.
Northern Pike (other inland waters)	Continuous				
Muskellunge or Hybrids	April 27 to Feb. 15	1	1	30 inches	Same as inland waters.
Frogs (except Bullfrogs)	Continuous	4 doz.	8 doz.	None	Same as inland waters.
Bullfrogs (Rana Catesbeiana)	Continuous	1 doz.	1 doz.	None	Same as inland waters.

\*Trout fishing in a designated area of the Maquoketa River (posted with signs) within Backbone State Park (Delaware Co.) is restricted to artificial lures and flies only.

\*\* In the following lakes a minimum size limit on largemouth and smallmouth bass shall apply:

- |   |   |
|---|---|
| A. Beeds Lake - Franklin Co., 12 inch minimum length.         | E. Silver Lake - Delaware Co., 12 inch minimum length.    |
| B. George Wyth Lake - Black Hawk Co., 12 inch minimum length. | F. Big Creek Lake - Polk Co., 14 inch minimum length.     |
| C. I-280 Park Lakes (2) - Scott Co., 12 inch minimum length.  | G. Cold Springs Lake - Cass Co., 14 inch minimum length.  |
| D. Poll Miller Lake - Lee Co., 12 inch minimum length.        | H. Wilson Park Lake - Taylor Co., 14 inch minimum length. |

Where waters are located within the confines of State, County, City Parks or State Fish and Game Management areas, fishing will be permitted only when such areas are open to the public.

**EXCEPTIONS; BORDER LAKES:** In Little Spirit Lake, Dickinson County; Iowa and Tuttle (Okamanpedan) Lakes, Emmet County; Burt (Swag) Lake, Kossuth County; and Iowa Lake, Osceola County, the following shall apply: (1) Walleye - daily catch limit 6, possession limit 6; (2) Northern Pike - daily catch limit 3, possession limit 3; (3) Largemouth and Smallmouth Bass - daily catch limit 6, possession limit 6. Open season on above fish shall be April 27, 1974, to February 15, 1975. (4) Spears, and bow and arrow may be used to take carp, buffalo, dogfish, gar, sheepshead, and quillback from sunrise to sunset during the period May 1, 1974, to February 15, 1975, inclusive.

**IN ALL WATERS** the possession limit shall not exceed 50 fish of all kinds in the aggregate except that the aggregate possession limit shall not apply to fish named on which there is no daily catch limit.

exactly what he had seen. On his way home from town the witness had seen a car stopped on the road, and a man out in the field shooting at something back in the woods. Not many people would have thought to take down the license plate number of the car. Without it we probably would have reached a dead end right there.

We went to the area where the shot had been fired, and found an empty shell casing from a high-powered rifle. Further search back in the woods revealed a spot where a deer had been field dressed.

Some blood and hair were collected in a plastic bag.

It was getting dark by this time. A check was run on the two-way radio to learn the name of the owner of the car and a search warrant was issued. This was going to be a night time search, so two officers from neighboring counties were called in to assist.

When we arrived at the address two of us took the search warrant and approached the back door while the other two officers went to the front. We knocked on the back door several times

without response. Then, the two officers that had been at the front door came around the house, one holding the arm of the man we were looking for and the other officer holding a shotgun. The man had gone out the front door carrying the shotgun and the officers had quickly disarmed him.

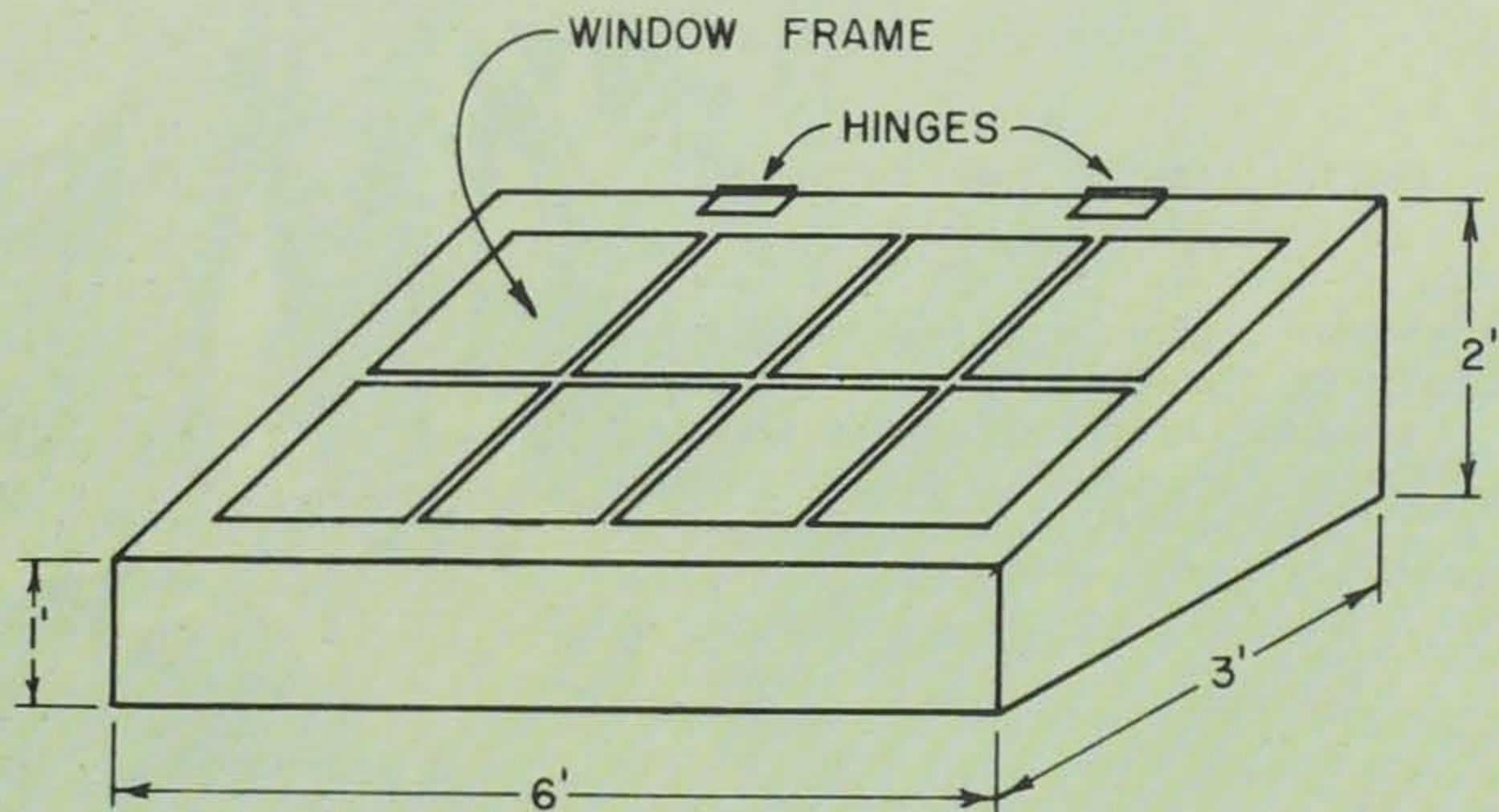
The search warrant was read to the very uncooperative individual and the deer meat was found hanging in an old shed, along with two illegally taken beaver skins.

## Classroom Corner



By Curt Powell  
Administration

Conservation Education Center



Have you ever been "framed"? To some people this may mean to be accused of doing something that they really didn't do. Others might feel that they are being boxed in. In either case you might say that the "heat is on"!

Sunshine and warm rain are necessary ingredients for good plant growth. It is essential that the heat be on to produce abundant plant life. How do these things help a plant grow? Let's "frame" some and see!

This time of the year is not the most ideal time for growing certain plants out-of-doors. But, many plants can be started in a hot frame (greenhouse or indoor planting frame) and then transplanted outdoors when the air temperature and soil temperature are just right. What is this thing called a "hot frame" and how can it teach us more about how seeds become plants and how plants grow?

Hot frames or small greenhouses, as they are really known, can be a source of pleasure and learning for those interested in plant growth and gardening. Locate the small greenhouse on the south side of your house or school to take advantage of the sunlight and preferably in front of a window so it's accessible from inside or outside. The sunlight will provide the heat needed to cause the seeds to germinate and also, once the plant has started to grow for photosynthesis to take place.

Our small greenhouse is built with a three by six foot window sash, two hinges, and scrap  $\frac{3}{4}$ " marine plywood (see illustration).

Plant your seeds in wooden boxes or frames and water them well. Place them in the greenhouse and let nature do its thing! After a week or so, you might want

to dig up one of the seeds and check to see if it has germinated. The seed will have swollen and a tiny root may have started to sprout from it. Also, the small plant may have started to grow from the seed. Keep the seeds watered well.

After the plants are of sufficient size and weather conditions permit, transplant them outside. This combination of sunlight, soil, rain, and weather conditions permit healthy plant growth. Can you find these same ingredients in your state park, forest or management area? This is the ideal time to hike to one of these state-owned areas and notice the plant growth beginning. Perhaps a hike around your own yard will suffice. The plants found in your yard and state area grow naturally, but the process is the same as in your greenhouse. There are many wildflowers starting to bloom and it's a perfect time to visit outdoor Iowa.

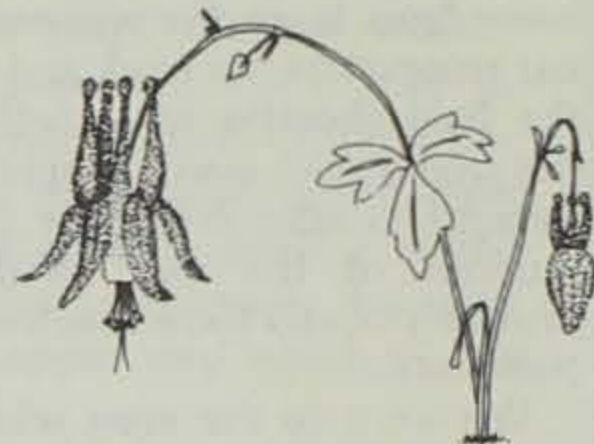


Illustrated by Larry Pool

## Common Iowa Wildflowers

Check your local Library for books on Eastern Wildflowers.

### COLUMBINE (Aquilegia)



Brightly colored, scarlet blossoms found on rocky slopes and shaded edges of woods. Petals form tubes ending in red spurs with nectar within  
Blooms -- May

### DUTCHMAN'S BREECHES (Dicentra cucullaria)

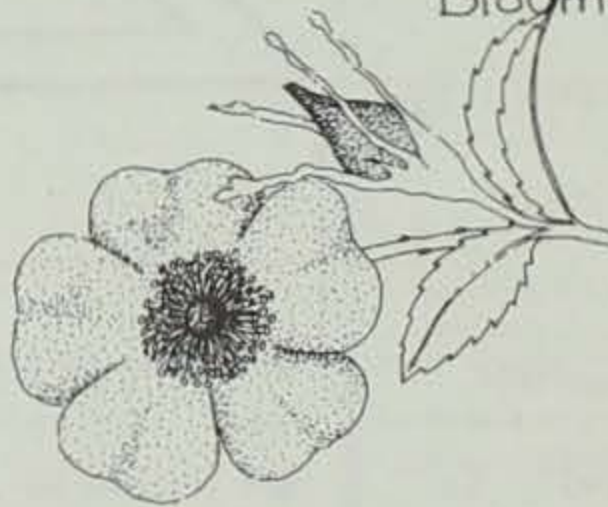


Fragrant, drooping flowers on a tuft of fern-like foliage. Flowers resemble "breeches" on a slender clothes line with a nectar pocket in each leg. Flowers vary from a white to a bright pink.

Blooms -- Mid April to early May

### WILD ROSE (Rosa blanda)

Iowa's official state flower since 1897, the rose has a noticeable, and pleasant fragrance. Pinkish-white to bright pink in color. Found in many fields, woodlands, and roadways around the state  
Blooms -- Late May to early June



### JACK-IN-THE-PULPIT (Arisaema triphyllum)

A deep woods favorite with inflorescence in the center of a pale green pulpitlike spathe. In the summer the spathe withers away revealing bright red berries also known as "Indian Turnip"  
Blooms -- Late April to early May

### DOG-TOOTH VIOLET (Erythronium albidum)

A member of the lily family, vary small in size. Found in moist woods and meadows, creek bottoms and along rivers. The narrow, pointed leaves, mottled with brown, seem to spring from the earth.

Blooms -- Late April to mid May



Look and enjoy but do not destroy