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IOWA CONSERVATIONIST

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TO FISHWAY THE CEDAR RIVER

By E. B. Speaker
 Superintendent of Fisheries

WOULD you like to know the intimate personal history of that prize-winning catfish you caught last year in the deep hole at Houligan's bend? Would you be interested in a cradle to the frying pan story of the Cedar River's big smallmouths? Of course you would, if for no other reason than to satisfy a curiosity built up by hours of speculative meditation when the fish weren't biting.

The fisheries technicians, whose job is to give you fewer periods of fishless meditation and more of fish producing action, are curious too; but their interest in absolute information on fish movements, growth rates, abundance, food, spawning requirements, and a multitude of other vital fish management facts is much deeper than curiosity. They must know these facts to produce more fish inexpensively for the angler under natural conditions.

It is believed that a new method of fish habit study, to be undertaken this year, may reveal facts of tremendous value in fish production. The entire study hinges on the use of a new type fishway.

Prior to the war the Iowa Institute of Hydraulic Research, a Division of the State University of Iowa, carried out research and investigative work for the Iowa Conservation Commission on development of effective types of fishways for use in Iowa streams. The results of these studies were published in the Report of the State Conservation Commission for the biennium ending June 30, 1940.

The studies were made in the laboratory at Iowa City, and a number of the best fishway designs were constructed to full scale and placed in actual operation in the Iowa River. After exhaustive tests a modification of the Denil type, a fishway designed by Denil, a

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An exhaustive study of the channel catfish is being made in the Des Moines River by fisheries biologists. It is hoped that findings will point the way to management practices that will increase the populations of this fish in Iowa's 15,000 miles of streams. If this string makes your mouth water, be patient for a few weeks. The season opens April 15. Jim Sherman photo.

YOU CAN'T FIND 'EM WHERE THEY AIN'T

By Harry Harrison
 Fisheries Biologist

DURING the past decade the popularity of catfishing in Iowa has zoomed like a V-2 rocket until it has become the favorite outdoor sport for more anglers than all other kinds of fishing combined. Along with this increase in public interest has come a demand for better catfishing.

Recognizing this fact the State Conservation Commission has undertaken the study of the channel catfish in an endeavor to determine exactly what management procedures are needed to increase the populations in Iowa's fifteen thousand miles of streams.

This study has been aided by the inauguration of a biological survey of the Des Moines River system, with particular emphasis on the living requirements of the channel catfish. This work has been underway during the past year and considerable progress has been made, with much yet to be determined.

At present, shelter types most used by catfish are fairly well understood by the scientists. For the tyro catfisherman to be successful, he too must understand the catfish's need for and use of shelter.

Each kind of small fish has its special method of escape from enemies. Some seek shelter under stones or other objects in the water; some swim in large schools, making possible the escape of most of the school when attacked by enemies; others rely on speed in swimming or remain in very shallow water. Small catfish hide under leaves, sticks, stones and other such debris.

In general, the younger the fish the greater its need for protective

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TWENTY-FIVE YEARS OF IOWA PARKS

By V. W. Flickinger
 Chief Division of Lands and Waters
 (Part Two of two Parts)

IN 1935, in accordance with the recommendation of the Plan and also in the report of the Brookings Institute concerning governmental functions of the state published in 1933, the Forty-sixth General Assembly, meeting in 1935, abolished the Board of Conservation and the Fish and Game Commission and

created in its place a new agency to be known as the State Conservation Commission, providing for a membership of seven who would serve for a term of six years so staggered that not more than three would retire during any one year.

It further provided that the Commission would appoint a Director who was empowered to employ such assistants as might be neces-

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Iowa Conservationist

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COMMISSION

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G. L. ZIEMER, Director
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JANUARY COMMISSION ACTION

THE January meeting of the State Conservation Commission was held at the Commission offices, 10th and Mulberry, Des Moines, on January 20 and 21.

Members present were E. B. Gaunitz, J. C. Jenson, Mrs. Addison Parker, F. W. Mattes, F. J. Poyneer, R. E. Stewart, and E. G. Trost.

The Commission:

Authorized Director to write Iowa Senators and Representatives in Congress stating that the Commission favors a larger appropriation for grants-in-aid to the states under the Pittman-Robertson Act for wildlife restoration.

Authorized increasing new conservation officers' salaries to full salary at the end of six months service, but re-affirmed policy of one-year probation period.

Cancelled present special police credentials and issued new credentials to the following: State Conservation Director, Chief of Division of Lands and Waters, Chief of Division of Fish and Game, State Boat Inspector, Special Investigator, District Supervisors, and Supervisor of Predatory Animal Control.

Issued scientific collectors permit to Ira N. Gabrielson, President of the Wildlife Management Institute.

Approved the purchase of projection equipment and authorized Commission projectionist to show films to groups of 400 or more.

Authorized the placing of an exhibit at the Sports and Travel Show to be held at the Coliseum March 25-April 2.

Approved the assigning of lease on the Averill cottage at Palisades-Keplar park as requested by Mr. Averill.

Approved land exchange with the town of Arnolds Park of tracts adjacent to the Gardner Cabin in Dickinson County, subject to Executive Council approval.

Authorized the purchase of necessary equipment and buildings to carry on the hatchery program at the game farm.

Adopted Administrative Order No. 91, allowing pole and line fishing in Little Spirit Lake until March 1, 1947.

Approved the winter gill-netting program outlined by Chief of the Fish and Game Division.

Authorized reduction of deer herd in the Josh Higgins Wayside area to alleviate damage done by the excessive deer population in that vicinity.

Requested cost estimate of fishway in dam at Linn Grove in the Little Sioux River.

Authorized installation of a fish screen in the dam at the outlet of Tuttle Lake.

Rejected Martin option on a 160 acre tract in Clay County.

Rejected Grover option on an eight acre tract above the dam at Independence on the Wapsi River.

Authorized allocation of \$300 from Fish and Game funds for material and repair of building at East Swan Lake in Emmet County.

Authorized installation of four rough fish traps on four north Iowa lakes at a cost not to exceed \$150 each from Fish and Game funds.

Authorized construction of a fish trap at Lake Delhi at a cost of approximately \$300 from Fish and Game funds.

Made available the 1870 acres of Yellow River Forest area in Allamakee County for research work by the Central States Forest Experiment Station, with joint supervision by the Commission.

Authorized condemnation on the 1½ acre Parker tract along Clear Lake adjacent to the McIntosh Woods tract.

Approved and exercised the Schossow option for 4.7923 acres in the Sunken Grove area in Pocahontas County at \$85 per acre from Pittman-Robertson funds.

Meeting adjourned. Reconvened January 21.

Authorized the attendance of Chief of Lands and Waters Division, Superintendent of Forestry, and State Forester at a joint meeting of the U. S. Forest Service and the Forestry Departments of the midwestern states in Milwaukee, Wisconsin on February 4-6, subject to Executive Council approval.

Closed present Eligibility List of conservation officers.

Granted permit to the American Legion Post of Hampton, concessionaires, to construct a parking lot in Beeds Lake State Park.

Accepted Clifford L. Niles' conditional gift of the bluffs along the Wapsipinicon River opposite Wapsipinicon State Park, subject to Executive Council approval.

Approved offer of the town of Panora to give the state the tract of land in Guthrie County containing the Lenon Mill site.

Approved transfer of the Glenwood Wayside tract in Mills Coun-

Wardens' Tales

Shop Talk From the Field

CONSERVATION Officer Ralph Lemke of Estherville reports an unusual pheasant in Emmet County. He writes: "On January 14 Hans Christiansen, a retired farmer living in Ringsted, and I saw a hen pheasant that was solid yellow. She was just a little lighter than an ear of corn and had no dark streaks at all but was solid golden color. Both Mr. Christiansen and I had a good look at the hen at about twenty feet while she was sitting. We then flushed her, saw her on the fly, and again on the run at some distance."

Conservation Officer Vern Shaffer of Murray, in company with Special Enforcement Officer Bill Rooker and Harry Maltby of the U. S. Fish and Wildlife Service, was investigating reports of early duck shooting on the Des Moines River. Shortly after daylight they were surprised to see an old river character and his companion roll around the bend and set three illegal hoop nets. The men were arrested and ordered to appear in justice court at a nearby town later in the morning. The officers arrived in town just in time to hear a storekeeper call out his front door, "Hi, Duke. How are they bitin' down on the river?" and the reply, "Pretty good. I caught three game wardens before six o'clock this morning."

Conservation Officer George Kaufman of Lansing writes: "I am sending in an otter skin for the fur collection. This otter was found by Ed Delphey of Harpers Ferry in the Mississippi River bottom near there. It had a double spring trap fastened to its leg but the chain had been twisted off. It was still alive when found and Ed took it home in his hunting coat, fed it some carp and horse meat. It was dead the next morning. I tried to back track where it was caught but didn't have any luck. It looks as though it had been traveling the hills as these animals often do and had been caught in a fox trap. This, however, is only a guess. I saw in that vicinity where six other otters had been traveling. I went to the den we found two years ago but the otters apparently are not using that site this year."

ty to the city of Glenwood in compliance with state laws applying to such transfers.

Authorized exchange of 80 acres of timber land adjoining Keosauqua State Forest owned by Alva Hoskins for 40 acres of agricultural land in this forest area, subject to Executive Council approval.

Meeting adjourned.

Conservation Officer Frank Starr, Storm Lake, writes: "I recently had a call from Henry Anderson of Meriden requesting me to tag five beaver he had taken under permit. After I had tagged the skins he said that he had something unusual to show me and he did have. In back of his place there was a flock of sixteen guinea hens and running with them was one lone cock quail. Mr. Anderson said the guinea hens had adopted the quail and that it remained in their company adjacent to his farm buildings at all times."

Harold Morgan, conservation officer in charge of Maquoketa Caves State Park, reports that the bald eagle is definitely on the increase in that vicinity and that apparently there is considerable discussion regarding the difference between the bald eagle, the American emblem, and the golden eagle. He writes: "In any stage of plumage or age the legs and feet of the bald eagle are feathered only part way to the toes. The golden eagle is full feathered on its feet. Not until the bald eagle reaches maturity, as it enters the fourth year of life, are the head and tail pure white. The immature birds are without the white head or tail, are uniformly brown with dark bill. The bald eagle gets its bright yellow eyes as it reaches maturity. In immature birds the eyes are brown."

1946 QUAIL HUNTING EXCELLENT

Compilation of information contained on quail hunter contact cards reveal that quail hunters enjoyed excellent shooting during 1946. Pheasant hunters required 3 hours and 6 minutes for each bird bagged but quail hunters throughout the state averaged approximately one bird to each hour and a quarter of hunting. Many of the hunters contacted were hunting quail for the first time and their ratio of birds killed to birds flushed was very low. More than 75 per cent of the hunters contacted used quail dogs and their success increased to a little more than a bird per hour compared to an hour and a half for the dogless hunter.

Studies of more than 2,400 wings sent in by cooperating quail shooters reveal a statewide ratio of six young birds to each adult brought to bag, indicating an excellent hatch and survival of young birds, with each pair of quail hatching and carrying into the hunting season more than twelve young. Biologists report an excellent seed stock of quail to date "at least equal to that in 1946."

In 1946 between the dam at Humboldt and Rutland in the Des Moines River approximately 2,000 channel catfish per mile were found.

Carp rarely attain a total length of more than two feet or a weight exceeding ten pounds in the streams. They grow much larger in Iowa's lakes.



(The "Iowa Conservationist" goes cost-free to more than eight thousand Iowa public schools each month)

"Come and Go" Birds

ALL over Iowa the window feeder and feeding station have become familiar objects on the school ground. Hundreds of thousands of birds have gratefully eaten the food provided. Hundreds of song and game birds lived through the February blizzards that otherwise would have perished. It may be in the future that a hungry bird, sighting a schoolhouse, will say, "There's the cafeteria". The Iowa schools have done a good bird feeding job.

The most critical winter period for the birds has passed, but for our own enjoyment we should continue to keep food in the feeders, for soon we will witness one of the most exciting parades in all outdoors, the spring migration of the birds.

Many of these spring travelers may be attracted to our feeders

and they will be dressed in their brightest feathers of the year. Why are these birds in their fanciest costumes in the spring? They are just like people and enjoy making a big show on important occasions. Spring migration is very important to the birds, because at this time of year they are either courting or on their honeymoons.

Migration is the word used to describe bird movement from south to north in the spring and north to south in the fall. Migration is mysterious, even to the scientists who have made a life study of birds, and many of the hows and whys of bird movement are not yet thoroughly understood. Many of the secrets have been found out, however, and we may share them with the ornithologists (bird students).

Why do birds go south in the winter? To escape the winter cold and find places where natural food is abundant.

Why do they come back in the spring? To nest and raise families where there is plenty of food, pleasant summer sunshine and an abundance of room.

Some of the birds here in the winter (the junco and tree sparrow we saw at the winter feeder) go far north to nest. Some (house sparrow, blue jay, cardinal and others), our "permanent residents", generally do not go north.

If they do decide to travel they may be replaced in our fields and along the streams by the same kind of bird but one that has spent the Christmas holidays in Missouri, Arkansas or one of our other southern states.

For some of the migrating birds Iowa is seen only from the air on their migratory journeys, and others cross the state in short flights, feeding as they go along.

Most of the birds we call our "summer residents", like the bluebird, robin, brown thrush and catbird, fly in from the south, unpack their suitcases, and fill the air with melodious music, the theme of which is "Spring is here and I'm home again".

The new arrivals have had many experiences and have visited strange lands and heard strange languages. Many have crossed mountains and seas to return to the Hawkeye state to begin the serious business of raising families.

The beautiful Baltimore oriole spends its winters in Colombia in Central America. The hummingbird, in Panama, can watch the mighty ships as they pass through the locks. The bobolink tries Paraguay; the kingbird, Costa Rica. The yellow-billed cuckoo, or rain crow, spends its winters in Venezuela; the redstart, Ecuador. The saucy house wren replenishes its pepper in southern Mexico. The purple martin snaps up insects over the wild Amazon valley in Brazil, and the nighthawk calls in the evening skies of Argentine cattle country. If you see a catbird this summer, dancing crazily in an alder thicket, you may be sure that it is practicing a new rhumba step picked up in Cuba during the winter.

Soon these birds will all return. If you keep your window feeders full this spring and summer perhaps some of these feathered musicians will come and sing for their supper, songs that sparkle with the romance and adventure of the tropics.

QUONSET HUT TO HOUSE GAME BIRD HATCHERY

The state game bird hatchery has been assured a temporary future home with the purchase of a surplus quonset hut and the 1947 game bird program will be carried out as planned. All incubator equipment was destroyed in a fire in January. New incubators and brooders have been purchased. Sportsmen's groups in all sections of the state have made applications for two-week old game birds to be raised and released to the wild. To date applications for more than 9,000 quail and 10,000 pheasants have been received from cooperating sportsmen's clubs. The Commission expects to have orders for several thousand more birds of each species.

Plans for permanent game farm buildings have not yet been acted upon by the Commission.

The Sportsman Speaks

"Remarks" from The Sportsmen's Questionnaire

West Bend: "All lakes in northwest Iowa need to be restocked and cleaned up and if paying more for a license will help, I am all for it."

Milford: "I want to support the blue laws of our state and hope you will select days for pheasant hunting that will not include Sundays."

Jefferson: "Why not raise license fees on out-of-state hunters also. If they can hunt outside their own state they can afford to pay to help stock the game they take out. Make it high enough to replace the game they take out."

Waterloo: "Issue a license to seine or spear carp that are ruining our game fish."

Pocahontas: "If fishing is no better than this year it certainly would not justify higher license. Why not take the sales tax on sporting goods to finance things related to sport. We do not need some of the state surpluses."

Centerville: "I am not in favor of stocking ponds with state fish and quail on farms who will not allow fishing and hunting on these farms later on. There is a pond one and a half miles from my farm that was stocked with fish from Lake Wapello four or five years ago and today there is a sign, 'No Fishing or Hunting Allowed'. There have been young quail liberated on my farm and I am glad for anyone to hunt them who is a true sportsman."

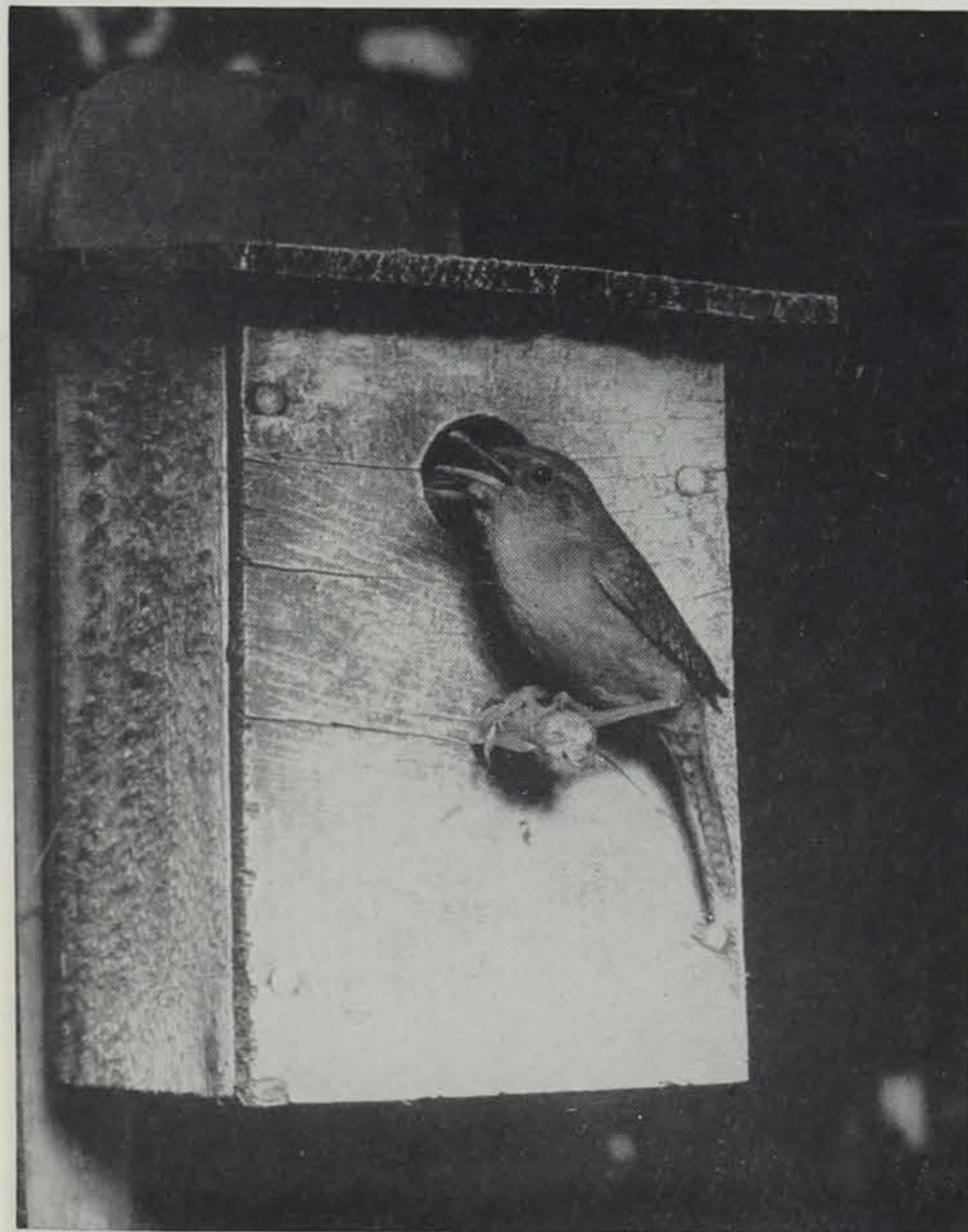
Fort Dodge: "Give them good hunting and fishing and no real sportsman will kick at the cost of a license. You need not increase your payroll to collect bigger license fees. A tax on hunting and fishing equipment immediately starts a new payroll and makes everyone mad. Boost the license all you want to—but give them more for it."

Marion: "I favor the game warden patrolling the rivers. Every time I go fishing I find traps and bank lines along the river and have never yet met a game warden."

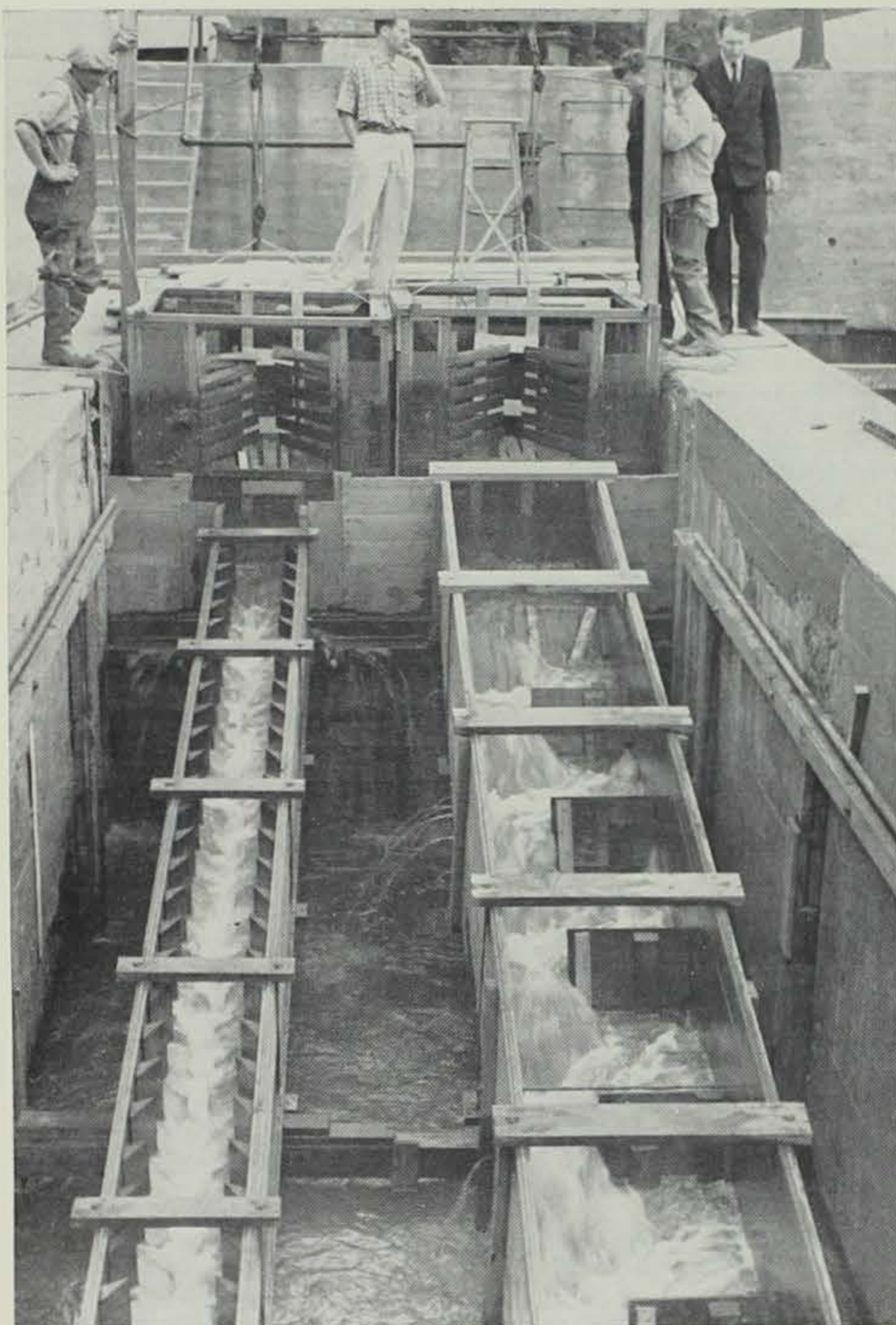
Nevada: "Need of more sanitation at lakes and rivers. Also rearing ponds to increase size of fish before releasing."

Des Moines: "I feel the extra licenses the returned service men

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The saucy house wren winters in southern Mexico and perhaps owes part of its peppery temperament to its association during the winter months with our Latin neighbors.



Two fishway types installed in the dam at Iowa City during experimental studies. The Modified-Denil Fishway, left, has been adopted as the most satisfactory in Iowa streams. Note fish traps at the head of each unit. A. M. McLeod photo.

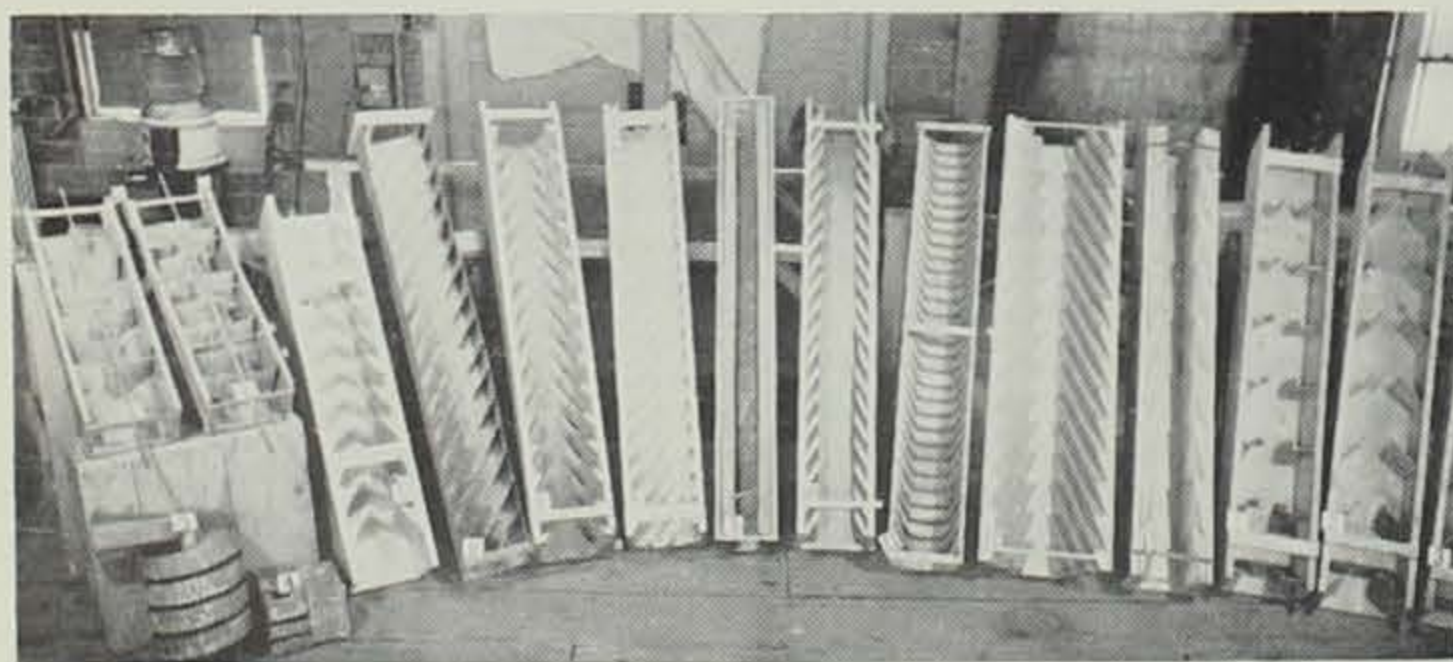
Fishways . . .

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Belgian, was found to be most satisfactory for Iowa streams.

Because of war shortages little was accomplished in testing the fishway on a large scale basis. Two or three isolated fishways were installed and although they were successful as single units, no attempt was made to study the fishway as a management technique in the entire course of a stream.

In 1946 the Conservation Commission approved a plan to install fishways in the dams of the Cedar River. The object was to determine (1) the efficiency of the Iowa Modified-Denil Fishway under natural stream conditions, (2) which and in what proportions each species of fish would ascend the fishways, (3) at what seasons of the year and what distance upstream each kind would travel, (4) what effect various heights of the dams would have on the efficiency of the fishways, and (5)



A few of the dozens of fishway models studied in the laboratory at Iowa City. Several of the most effective were constructed to full scale and placed in experimental operation in the Iowa River. W. W. Aitken photo.

effectiveness of fishway live traps in removing rough fish from streams.

There is a total of twelve dams on the Cedar from the Mississippi River to the Minnesota state line. It is hoped that when the project is completed all dams in the Cedar River will be equipped with this modern fishway.

A trap will be affixed at the top of each to capture all fish ascending it. The game fish will be tagged or otherwise marked and released above the dam. By using this method it will be simple to determine how far and at what season of the year each species will migrate upstream. No records can be made of downstream migration since the fishway is designed for upstream use only. This program should reveal whether fish merely ascend to the pool immediately above, concentrate in the better pools affording more food and shelter, or distribute themselves evenly throughout the course of the stream.

Even allowing for considerable climatic variations and differences of stream flow, it is believed that a relatively brief period will be required to pass the bulk of migrating fish over the dams. Since the migration of most river fishes takes place from April through early June, it is possible most fishways could be closed for the balance of the year to conserve

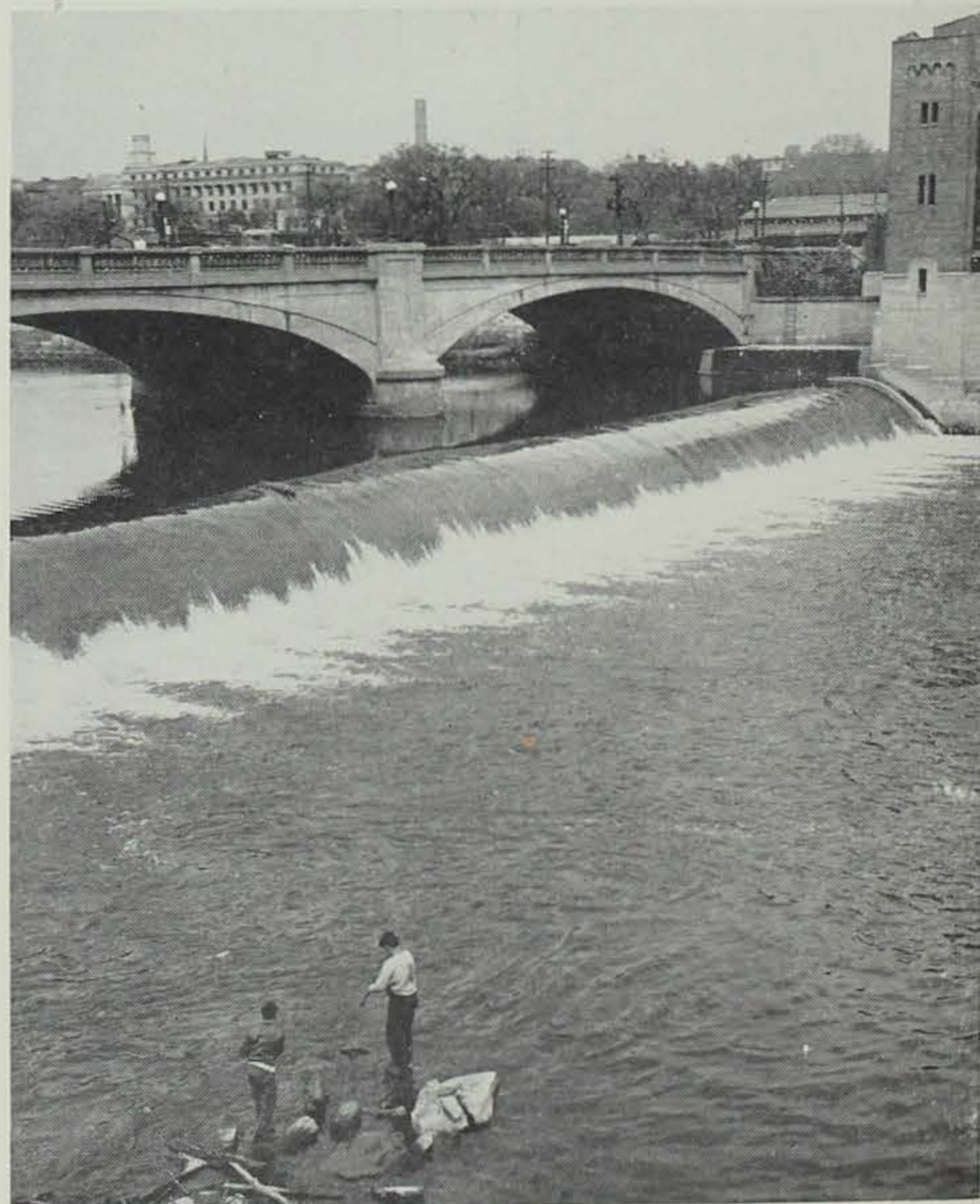
water supplies needed in summer months when rainfall is limited.

To date, rough fish removal with conventional nets and seines has been quite ineffectual in actually reducing populations to a marked degree in rivers. In previous experiments it has been found that certain species of rough fish, particularly carp and quillback, ascend the Modified Denil Fishway in large numbers. It is hoped, therefore, that large tonnages can be trapped and removed with a minimum of expense and effort from the Cedar River in the 1947 operations.

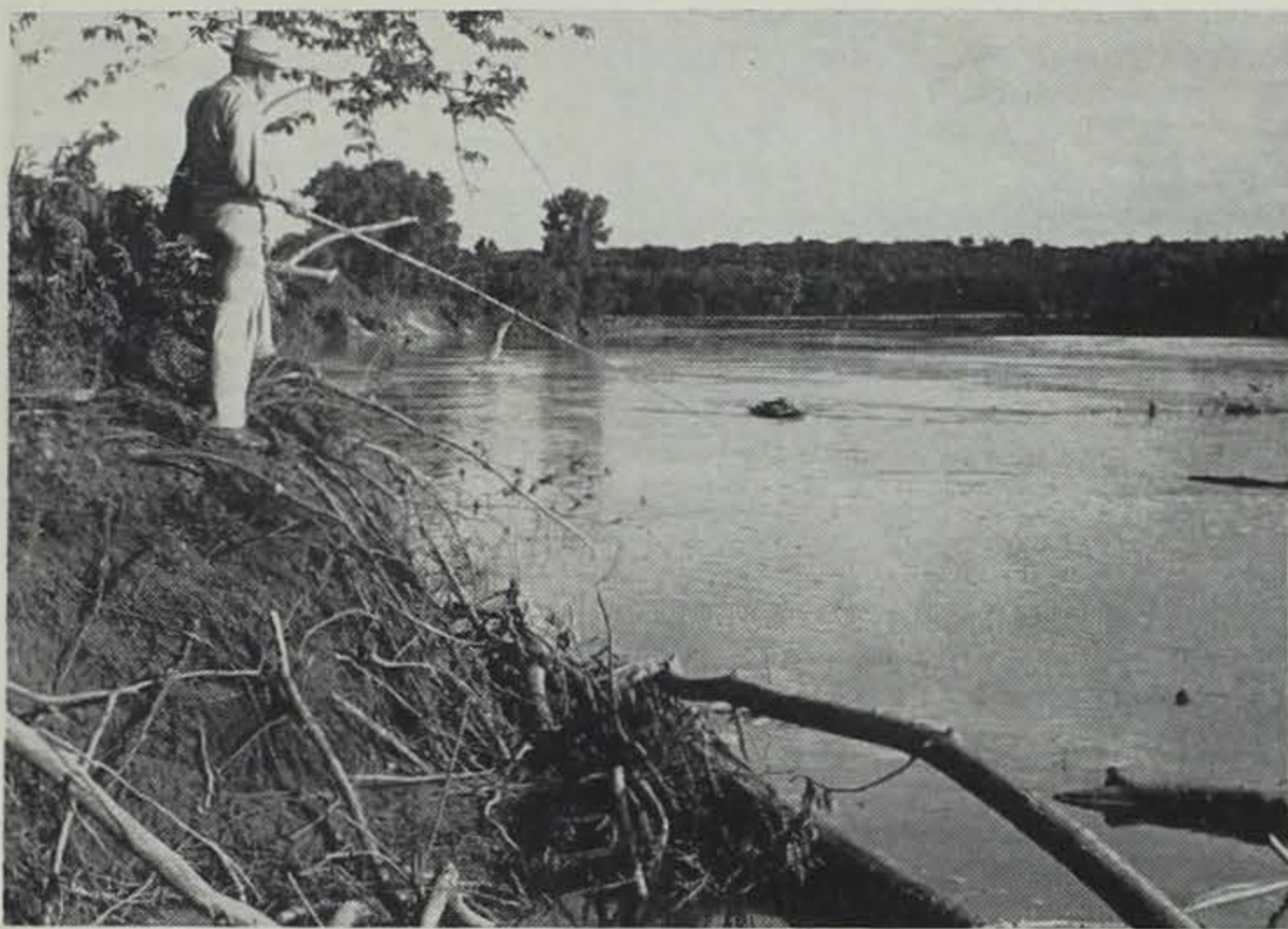
From north to south, fishways equipped with traps will be located in the Cedar at Charles City (2), Cedar Falls, Waterloo, Cedar Rapids and the Palisades-Kepler State Park in 1947. The dams at Nashua and Waverly will require a double lift fishway, and will not be in operation this year. Studies are being made at this time on dams above Charles City.

Although other fishways may be installed at a few points in the state this year, the Commission is anxious to complete exhaustive studies on the Cedar before recommending the Modified-Denil type indiscriminately for all waters.

To win the reputation of being a choice fish a species must attain sufficient size and occur in numbers to be considered of value as food. The flesh must be firm, flaky, of good flavor, and free of small bones. On all counts the channel cat ranks as tops.



There are 194 dams on the inland waters of Iowa, some dating back 100 years. This power dam at Iowa City is owned by the State University and was used in fishway experiments.—Jim Sherman photo.



This picture of a typical stretch of catfishing water in the Des Moines River reveals several shelter types, drift in the foreground, submerged logs in the channel, and submerged shelf shelter 100 yards downstream from the angler. Jim Sherman photo.

You Can't . . .

(Continued from page 113)

shelter. Newly hatched fry fall victim to aquatic insects, crayfish, and they often serve as the main course in minnow banquets. As they grow larger, the number of enemies that are able to catch them become fewer. In comparison with the fry an adult fish has few natural enemies.

Shelter has an additional beneficial effect on fish populations. Fish seemingly find something which meets their environmental requirements and which is conducive to their well-being in the presence of shelter. In the channel catfish, their liking for seclusion during the daylight hours is obvious to all catfishermen. The desire for darkened shelters may cause catfish to leave areas of bountiful food in favor of waters with better shelter conditions, even though the food supply may be relatively scanty.

The kinds of shelter offered channel catfish in the Des Moines River, in the order of their importance, are as follows: (1) drifts, (2) submerged shelves, (3) submerged logs, (4) boulders, and (5) crevices in limestone bedrock.

Drifts are accumulations of trees and logs jammed together and anchored in the stream by large limbs projecting into the river bottom. They have their origin, for the most part, in trees felled by undercutting action of the stream and by beaver cutting. The drifts increase in size by the addition of floating logs, drift wood, leaves, etc.; and, because they are suspended above the bottom and partially block the channel, water flowing under or past is speeded up. With the increase in water velocity the bottom is scoured, thus creating an area of deeper water. This, together with the thick canopy formed by surface floating debris enmeshed in the tangle of limbs, results in the type of shelter most used and desired by catfish. The drift has an

additional beneficial effect on catfish production in that it supports large numbers of immature caddis and stone-flies, important items in the diet of catfish of all sizes.

The submerged shelf shelter is formed by under-cutting on the outside of turns in the course of the river. The sand and gravel of the river bottom extends under the silt and clay that form the cut-bank. As the water flows along the bank it washes the sand and gravel from beneath, thus producing an overhanging shelf. It is under this shelf that the catfish finds its second most important shelter type. For the most part, the shelf may extend back only a matter of several inches; however, in places where there are dense growths of roots holding the overlying materials, it may reach back several feet.

Submerged logs sometimes provide for a variation of the shelf type of shelter. The submerged log type of cover is not of great importance in the Des Moines River

WHERE YOU GOIN'

Chances are that the boulder under which you hooked that big cat last summer has moved since then. And—strange as it may seem—it has probably moved **UPSTREAM**, perhaps barely a measurable distance; on the other hand, maybe a matter of several inches.

The phenomena of boulders moving upstream is not uncommon in prairie streams such as those in Iowa. The movement is affected by the sand being washed from beneath on the **upstream** side, and, as more and more sand is washed away, the boulder tumbles or slides forward, inching its way into the current.

When it comes to moving slowly that old boulder would make the proverbial snail blush with shame, and, furthermore, he is not in any way humiliated in this day of supersonic speed. After all, he inched into Iowa from the north on a great glacier long before the earth was charmed with the presences of the human being, and he has every confidence that he will be around long after we humans with our atomic age speeds have become extinct. What's our hurry anyway?

—Harry Harrison

because of the preponderance of the former two shelter types. Their utility is further lessened by their becoming buried in drifting sand or being washed away.

Boulders present better shelter when occurring in piles; the recesses thus formed are excellent hiding places. Boulders occurring singly also offer good cover where the sand has washed from beneath the edge, particularly on the upstream side.

Crevices in bedrock are a most important shelter type in the Des Moines River where the river is running over stone outcrops. In these areas the numerous cracks and depressions found in the river bottom offer very desirable shelter to catfish. When these cracks or depressions are covered by slab rock, the shelter thus formed is considered best.

Some of these shelter types may be reproduced artificially, thus improving catfish environment. Sportsmen desiring to improve catfish shelters in their favorite streams should consult their local conservation officer. The primary object of the improvement is simply to imitate the above described shelters as nearly as possible by artificial means.

One of the easiest and most permanent of these stream improvement projects may be carried on by merely anchoring with heavy cable trees that are standing on a river bank edge that is being undercut. The stream, in its tireless cutting, will soon drop the cabled tree into the water where for many years it will provide catfish environment.

The **successful** catfisherman selects a stream or section of stream in which there is an abundance of shelter. Streams in which drifts and cut-banks are particularly numerous are best. While fishing, especially during the daylight hours, he works his baits in and around the shelters. If no strikes result within ten to fifteen minutes he moves on to another.

Catfish that ordinarily roam the whole stream to feed at night usually will be congregated somewhere in shelter areas during the day. All you have to do is find them. Simple, isn't it?

PUBLIC SERVICE

The Iowa Electric Light and Power Company of Cedar Rapids will spend \$6,000 to repair the dam at Troy Mills on the Wapsipinicon River. The dam is no longer used for power development. The town of Troy Mills has long maintained a park site on the pool above the dam and numerous private cottages have been built along the shores. The power company is repairing the dam to maintain the pool solely for the enjoyment of the people in the community.

During breeding season sex of channel cat can be distinguished by color. Females are yellowish underneath and males are much darker.

REDUCE DEER HERD NEAR CEDAR FALLS

A reduction or dispersal of the deer herd centered in the Josh Higgins Parkway along the Cedar River between Cedar Falls and Waterloo has been recommended to the Conservation Commission by departmental technicians. Investigations following numerous complaints by farmers of serious crop damage in the vicinity reveal that more than 100 deer are concentrated in the area. Extensive damage to corn, alfalfa, soy beans, truck garden crops and to tree plantations have been investigated. The recommendation advocated the use of state conservation officers in destroying the deer with the venison being given to charitable organizations.

This procedure was followed in 1943 in the Ledges State Park vicinity when more than 100 deer were killed and the large herd in that vicinity dispersed. Since control measures were taken in the Ledges Park damage has been decreased to a minimum; however, as a result of the dispersal, small herds have mushroomed over wide areas and, in some instances, are becoming nuisances from an agricultural standpoint.

The game technicians have advised that because of the critical situation in the Josh Higgins area immediate steps be taken to reduce the herds.

THE NOSE KNOWS

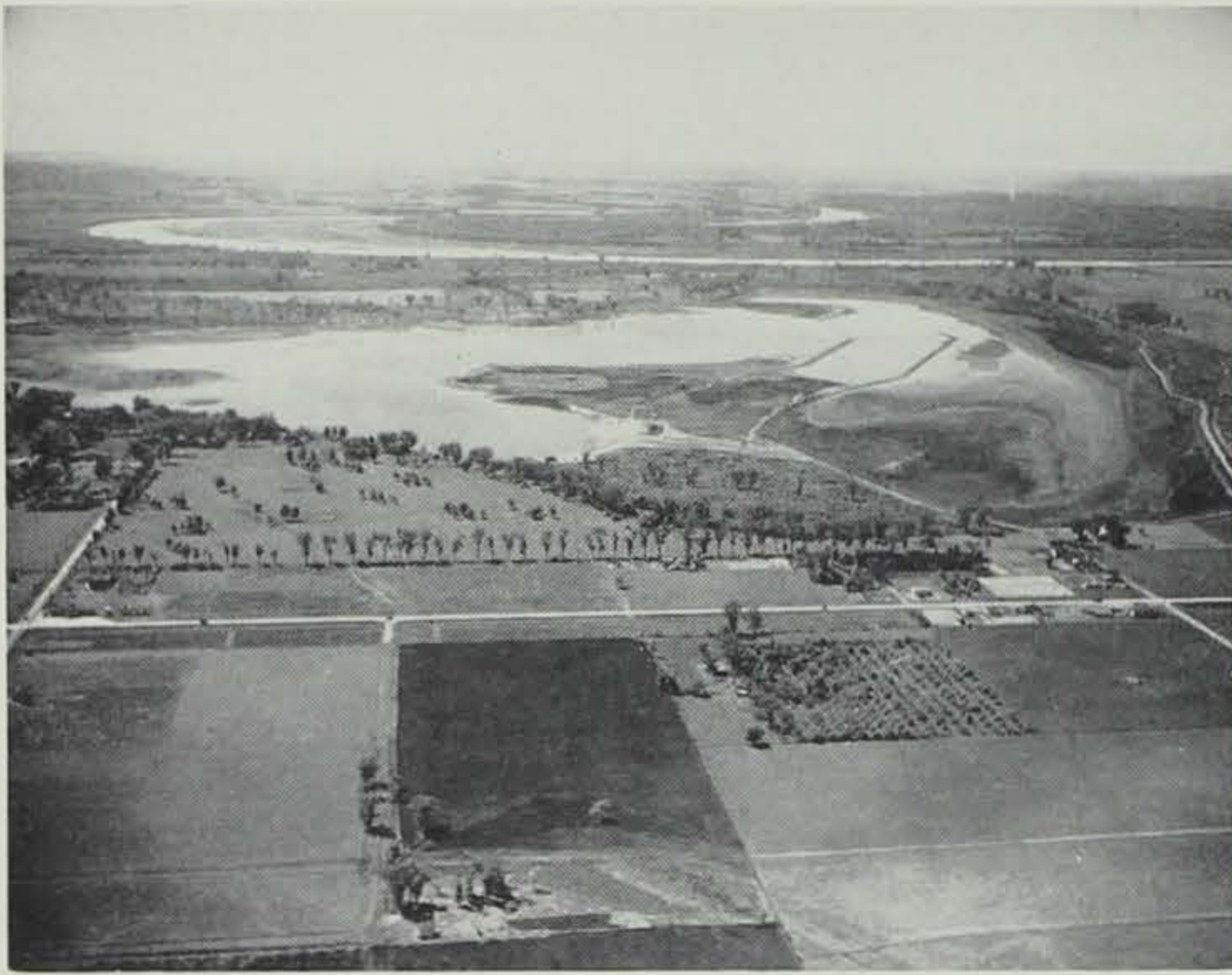
A squirrel in our neighborhood is working overtime these days. Last fall we gathered about a peck of nuts and acorns, and during the recent cold spell we cached the supply in the hollow of a tree near our front door. The squirrel soon discovered the food and ate until he must have been tight as a drum. Then he thought things over. It wouldn't do to leave all that food there because some other squirrel might find it. So he began the task of packing all those nuts and acorns out of there and burying them, squirrel fashion, in the snow all over the neighborhood. He has been very inefficient about the job. He makes no note of where he places each nut. He just makes a little excavation, pushes the nut in, covers it up, and hurries back to the tree. He doesn't even put a stick in the ground to show the location. And now he'll have to hunt all over the west end of town to get a little bite to eat. Very foolish, it seems to us, but the little cuss seems to know what he's doing.

Washington Journal

ADDRESS PLEASE!

A \$1.00 subscription to the "Conservationist" was received February 13 from Francis C. Blum. No address was given. Anyone knowing Mr. Blum please advise him of this oversight or send in his address.

Fish living in southern waters grow larger and faster than their northern brothers and sisters.



In twenty-five years Iowa has built her state park system from one area of 1,200 acres to eighty-six areas of over 36,000 acres. This view of Lake Manawa, dredged by the Conservation Commission, shows the winding Missouri River in the background.

Iowa Parks . . .

(Continued from page 113)

sary to carry on the work, and for three divisions to be known as Administration, to handle records, accounts, etc., Fish and Game pertaining to fish and wildlife, and a Division of Lands and Waters "which shall include matters relating to state waters, state parks, forests and forestry and lakes and streams including matters relating to scenic, scientific, historical, archaeological and recreation matters." The law became effective April 30, 1935 and the Commission was formed about May 1, 1935.

At the end of the biennium, June 30, 1936, the park development program was in full swing and at that time had reached a new high of 65 areas with a total of 17,216 acres, 4,590 acres of which were acquired in two years' time. Much of this increase was made possible from a \$500,000 special appropriation by the Forty-sixth General Assembly which could be used for "acquisition of lands, purchase of supplies, materials and equipment, or for employment of necessary personnel in connection with the C. C. C. program." Certainly the acquisition and development of state parks was looked upon with favor by the people or this appropriation would not have been possible. At this time, also, the attendance was over the two million mark.

As the system continued to grow, it became evident that the method of classification as suggested in the Plan, would be desirable, as not all areas were of state park caliber. Accordingly on February 13, 1941 the Commission adopted a policy of area classification similar to that suggested in the Twenty-five Year Plan, and as recommended by the National Park Service and the National Conference on State Parks. Under this plan sixteen areas were qualified as state parks, forty-eight as

recreation reserves, thirteen as state monuments, seven as waysides and one as a parkway, with a total of over 44,000 acres valued at \$6,650,000.

Iowa has in the past twenty-five years developed an outstanding state park system. On the basis of the eighty-mile spacing recommended in the Plan, certain sections of the state are without recreation facilities. Studies are now under way to determine the possibilities for establishment of sites in these sections of the state. Many of the recommendations of the Twenty-five Year Plan are now fact. Its original proposals are sound and it will continue in the future, as it has in the past, to serve as a guide and counsel for projected developments.

In 1942 as the Commission studied the problems of providing recreation for the people, they became convinced that the state park and recreation program depended upon the proper and wise use of the soil, waters, forests and smaller vegetation.

Expansion had been rapid and the Commission believed that it was time to inventory and determine what had been accomplished, what mistakes had been made and how successful the program had been in providing recreation for the people. This evaluation was brought to a standstill in late 1942 because personnel assigned to work on the project were released to jobs essential in the war effort. They were, however, able to discover some of the mistakes which will be listed, but due to lack of space not discussed.

Among errors in judgment was failure to protect the physical features of park areas before starting on the construction of permanent facilities; non-acquisition of sufficient land in the watershed to properly control erosion; proper emphasis was not given to streams flowing through the parks; some

areas were over-developed; in others close to larger cities, facilities have been inadequate; in many instances lack of coordination between agencies and other groups interested in the utilization of our natural resources. We are all interested in not making the same mistakes twice.

During the war acquisition and development was almost entirely curtailed. Some scattered tracts were secured, but their development must await funds and materials. Only necessary maintenance was carried on during the period 1942 to the present.

In January 1945 the Commission, through the Iowa Postwar Rehabilitation Commission, presented to the Fifty-first General Assembly a postwar program, a program of over \$28,000,000 of development and extension. For state parks, on existing areas, it calls for 200,000 man days and over \$200,000 for materials. In the extension plan is contemplated the development of 50 artificial lake areas at a cost of over \$5,000,000, purchase of and development of over 500,000 acres of marginal land for forest purposes at a cost of \$10,000,000 and 10 new state park areas at a cost of \$1,759,700.

This year the citizens of Iowa plan to present to the nation one of the most important Indian Mound groups in North America. Acquisition, in accordance with recommendations of the National Park Service, is being completed. Final surveys and deed are now in preparation and as soon as these can be completed and checked, formal tender will be made. It is expected that this area will become a National Monument when accepted by the Congress.

Thus in twenty-five years has Iowa built her state park system from one area of 1,250 acres in 1919 to over 36,000 acres in 1946. From \$50,000 to an annual appropriation of \$250,000 per year, this together with federal aid and special appropriations, has enabled the state to develop and maintain a system of which the people can well be proud.

Iowa will go forward in the recreation field recognizing that her citizens must be interested in every other phase of land use, be it agriculture, forestry, flood control or any other phase of the use of resources so that high living standards may be maintained and approved. Until such time as a comprehensive conservation plan correlating and dovetailing all phases of use our natural resources for each city, county, state and the nation as a whole, we cannot hope to attain the goal of complete conservation.

DATES SET FOR NATIONAL WILDLIFE WEEK

National Wildlife Restoration Week, first proclaimed by the late President Roosevelt in 1937 and sponsored by the National Wildlife Federation, will be observed this

LACEYISMS

Excerpts From Speeches of
Major John F. Lacey
Iowa Member of Congress
1889-1907

(Editor's Note: William T. Hornaday once described Major Lacey as the "first American Congressman to become an avowed champion of wildlife." Lacey was an Iowa Member of Congress from 1889 to 1907. Always an uncompromising champion of wild creatures when in need of defense, he was a fearless and able champion of all other conservation measures in Congress for sixteen years. He was father of the famous "Lacey Act" regulating interstate shipment of game. Iowa has produced a greater array of nationally recognized conservationists than any other state and we may be proud of the dynamic leadership in the conservation movement of such men as Darling, Hornaday, Gabrielson, Macbride and Leopold, but even on such a stellar conservation team Lacey's start would shine undimmed by the brilliance of the others. Major Lacey's conservation speeches just before and after the turn of the century contain so many illuminating and still applicable thoughts on the broad aspects of conservation that in this and succeeding issues of the "Iowa Conservationist" we will carry brief excerpts from them under the head of "Laceyisms".)

That the club women of America have taken up the great subject of forestry shows the progress and useful purpose of organization among women. When the women of America turn their attention to any subject or object and manifest an earnest desire for its accomplishment, success is assured.

Our ancestors were all killers. Prehistoric man with his club and his stone weapons no doubt exterminated the mammoth. If these cruel forefathers of ours had owned breech-loaders the progenitors of the horse, the cow, the sheep, and the ox would have disappeared from the earth long before domestication. The boy of today is as bloody-minded as his naked forefather and begins to slay the birds and beasts as soon as he can hold a stone in his chubby hands.

Relationship between the wise use of soil, water and plant life and our national security will be the theme of leaders in the conservation field throughout the nation who will, through the press, over the radio, in the schools and from the public platform, tell the story of the outdoors and the wild creatures in it.

Special emphasis will be placed on the need for greater protection and management of fish and game to meet the increased hunting and fishing pressure of the millions of returned service men and women. The wildlife poster stamps, produced by the federation each year, this year contain forty studies in full color of birds, mammals, fish, flowers and trees. Clubs, schools and individuals interested in securing further information about Wildlife Week activities should write to the National Wildlife Federation, 20 Spruce Street, Boston 8, Massachusetts.



We may expect severe periodic storm loss of pheasants throughout the pheasant territory in "clean-farmed" areas. Here a flock of pheasants find scant cover in a Clay County fence row. J. A. Patnaud photo, courtesy Spencer Reporter.

HEAVY STORM LOSS TO PHEASANTS

THE greatest storm toll to pheasants since the Armistice Day blizzard in 1940 has been reported by conservation officers. Storm loss as high as fifty per cent in some areas has been reported. Sub-zero temperatures with high winds driving fine snow that collected in ice balls on the birds' nostrils and in their throats causing suffocation has been responsible for the heavy loss.

Although serious bird destruction has not occurred in all parts of the pheasant territory, major losses have been reported as far west as Ida County, south to Tama, east to Dubuque, and north to the Minnesota line. Even within the area bounded by these counties, in many locations birds suffered little loss.

The most devastating storm loss occurred the night of February 4, with subsequent high winds and low temperatures taking additional toll.

In Emmet County officers counted six hundred birds dead in a three-hour check. In Sac County fifty-one dead birds were found in a two-mile fence row check. Additional large losses were reported in many other areas.

Drifting snow has covered many of the birds killed and accurate checks of over-all loss cannot be determined. It is feared that as much as a twenty-five per cent loss throughout the pheasant range may have occurred.

Although examination of the birds that have been storm killed shows that they were in good condition, continued heavy snows covering available food could weaken the remaining populations to the point that moderate later storms would further reduce the breeding supplies.

Feeding programs by farmers, sportsmen's groups and others in-

terested in wildlife are being carried on extensively and the Commission has made available to conservation officers large supplies of grain for bird feed.

Sportsman Speaks . . .

(Continued from page 115)

will buy will offset any increase in the cost of administering fish and game conservation."

Harmony: "I still have a couple dollars for a good cause."

Dawson: "I feel that the decrease in licenses sold would more than offset any gain in revenue from an increase in license fee."

Baldwin: "I would favor a tax on hunting and fishing equipment. The funds to be used as a state bounty paid on fox, cubs as well as old ones. They are one of the biggest menaces to small game, pheasants, rabbits, squirrels, as well as chickens."

Jewell: "I most certainly do not approve of charging more for a hunting or fishing license. I have lived within five miles of Little Wall Lake for 46 years and you can make a lake where there isn't anything to start with but we cannot get a thing to improve or stock our lake here. I even got ordered off for cutting weeds on the lake."

Mystic: "Use at least the increase in making hunting better before most of the money is spent for artificial lakes. You do not allow us to hunt ducks on them. Build a few for duck hunters. We need them in southern Iowa."

Hull: "I favor a four per cent tax on hunting and fishing equipment the same as the four per cent tax on gas. The gas used in cars on the road is by no means all used

for pleasure such as is hunting and fishing equipment."

Sutherland: "Work is usually a greater factor than money in accomplishing objectives."

Clinton: "I favor no license until we have a place to fish which we do not have now as the dams and sewage have taken care of that. Clean up our river and we will all be willing to pay plenty."

Grand Mound: "Perpetuate hunting and fishing for the coming generation at any cost within reason."

Storm Lake: "Am not in favor of any more fees for any purpose until prices adjust themselves. Prices will come down."

Ft. Dodge: "How about trying to increase our wild deer herd so we could get in a deer hunt every few years?"

Belle Plaine: "I think the trouble is too many high paid office jobs and too many holding them. If you would cut the white collared jobs about eighty per cent you would still have enough and be able to carry on more work, and then maybe you could put more men in the field where it would do more good."

Cushing: "If the Conservation Commission will spend the money they have and get toward stocking our lakes and streams with game fish and stop pollution of waters they won't need to increase license fees."

Joice: "What about trapping? It seems to me the high fur prices have over-encouraged trappers to destroy the abundance of furbearers and there are no restocking possibilities. How about a twenty-day season. Raise quite a squawk wouldn't it; but I trap too and I'd like to see more stock left for years to come."

MOBILE EDUCATION EXHIBIT AUTHORIZED

The State Executive Council has authorized the purchase of motor equipment to be used in construction of a Conservation Education Exhibit. The exhibit will be mounted on a thirty-foot trailer drawn by truck and will contain a collection of live birds, fish and animals, in addition to other material pertaining to outdoor recreation and study. Tentative plans call for the use of the mobile unit in schools throughout the state, as well as county fairs and celebrations during the summer months. It is expected that the special unit will be built and equipped in time for the 1947 fall school term.

Riding in a dogcart, one wire-haired terrier said to the other, "Heard from your beau lately?" "Yes, indeed," was the reply, "I had a litter from him Tuesday."

HUNTERS REACH NATIONAL ALL-TIME HIGH

More hunters took to the fields during the 1946 open season than ever before in American history, according to figures compiled by the U. S. Department of Interior. Almost ten million hunters paid approximately twenty million dollars in hunting license fees during a year when many of the most popular game species were described as "at low populations." Iowa hunters purchased 298,783 licenses, ranking the Hawkeye state twelfth nationally.

In the number of licenses sold Michigan topped the list with 827,000, followed by Pennsylvania with 678,000 and New York 676,000.

In hunting license revenue received South Dakota moved ahead of Pennsylvania and Michigan to lead all other states with \$1,950,000. Pennsylvania was second with \$1,580,000, followed by Michigan with \$1,300,000. Iowa received \$265,219.

Although Iowa ranked twelfth in the number of hunting licenses sold, the state dropped to twenty-eight in revenue received from their sale. The national license cost average was \$2.01; the cost of Iowa licenses was 89c (one-half of the \$1.50 combination hunting and fishing licenses credited to hunting) placing this state forty-seventh in average revenue received per license sold.

COOPERATIVE GAME BIRD PROGRAM TO CONTINUE IN 1947

Arrangements are being made at the State Game Farm at Boone to produce a maximum of 15,000 quail and 35,000 pheasants in preparation for the cooperative game bird distribution program for 1947. Under the program in cooperation with sportsmen's clubs the Conservation Commission ships two-weeks-old chicks to the groups to raise to a stocking age of eight to nine weeks. Declining pheasant populations have added impetus to next year's program and it is anticipated that more of Iowa's 22 sportsman's clubs will participate this year and that more birds will be released to the wild through the cooperative program than in the past. Although the Conservation Commission advocates stocking where seed stocks are necessary, game officials re-emphasize that the cooperative game bird stocking and rearing program is of greatest benefit because of its public relations and environment improvement phases.

Sportsman's groups wishing to participate in the 1947 game bird program may secure application blanks from local conservation officers or by writing to the State Conservation Commission, Tenth and Mulberry, Des Moines.

Lapidus and his partner went fishing. The partner was lucky and pulled in a beauty. "Lapidus," he cried, "I tink I got me a haddock." From the other end of the boat Lapidus called back, "Vy don't you take an aspirin?"



November 11, 1940. THE STORM came out of nowhere. Hundreds of thousands of pheasants perished in this blizzard opening day. Weather is a gamble.

WEATHER A GAMBLE

SENTIMENT appears to be growing with sportsmen of this section in favor of a later opening of Iowa pheasant season. Much depends on seasonal conditions, corn crop and general cover. However, the October opening during the last few seasons has not been favorable. High standing, unpicked corn, and dense cover, combined with "spotty" pheasant population, have made hunting a tough job. Everyone doesn't get the limit of birds, even in an ideal season, but more parties were short this year than usual on the opening days.

Comfort in hunting means something, as well as actual birds in the bag. It may be too warm for real hunting weather October 28, as it has been the last couple of seasons, and again it may be plenty cold if the opening is set over into November. Weather is always a gamble. However, the other bugbear of upland game hunters, jungle-like cover, can be avoided to some extent by a later opening and likewise the farmer angle, corn-picking, will be more advanced with a later opening. It is reasonable to suppose the primary aim of the State Conservation Commission is to satisfy the greatest number of both farmers and sportsmen, consistent with proper management of the game crop. It's our guess there will be a strong push following the current season for a statutory change to make Iowa pheasant opening about ten days or two weeks later.

—Davenport Times

SCHEDULE WATER SAFETY SCHOOL

Twenty conservation officers have been selected to attend a two-weeks safety school held jointly by the American Red Cross and the State Conservation Commission at Fort Dodge in March. The

purpose of the school is to qualify the officers as Red Cross instructors. Water classes will be held in the high school pool under the direction of Verne Petersen, State Pool Inspector, and representatives of the Chicago and New York offices of the Red Cross. Instruction will include courses in first aid, with special emphasis on water accidents, swimming instruction, lifesaving, boat handling, and will qualify the men to teach these courses to other officers and to the public. The school of instruction, described as "unique and a forward step toward preventing water accidents," is the first of its kind held in the middle-west. It is hoped by Red Cross and conservation officials that widespread use of the trainees for instructors in the major water-use vacation areas will cut down water accidents in the future.

NUMEROUS BOBCATS REPORTED

Widespread reports of wildcats being killed in the state during the past few weeks indicate that another wild animal is making a definite comeback in Iowa. The wildcat, bobcat or lynx was considered extinct for many years and the occasional animal killed during the last decade was a rarity. During the fox and rabbit hunting season in 1946 and again this year bobcats were killed in some numbers, particularly in the eastern part of the state.

The wildcat is a predatory animal and lives principally on small animals. Game biologists believe the Iowa cats are living primarily on cottontail rabbits. This animal is sometimes confused with housecats that have gone wild; however, the wildcat is a much larger animal than even the largest domestic cats, reaching a weight of from twenty to forty-five pounds.

REPORT OF CLUB'S ACTIVITIES DURING 1946

Buchanan Wild Life Association, Inc., Independence, Iowa

SEVERAL successful county-wide fox hunts were held with a total of 47 fox killed. Brandon, Rowley and Winthrop were well represented in these hunts. The proceeds from the bounties and pelts provided two yearling elk for a club and fox hunters' feed.

The annual Fish Fry was held at the county fairgrounds on May 9th; profits from this ran close to \$1,000.

During May a three day Conservation School was held at the Boy Scout camp at Waverly. Fifty-nine boys from all sections of the county attended this outstanding training school.

During May and June a number of raccoon were removed from near farm homes and placed in suitable areas in the county. A few young coon were raised and turned loose.

Eighty-eight adult pheasant from the State Game Farm were stocked in Buchanan County.

A suitable place for trap shooting was located at the Independence Airport, but only one trap shoot was held because of the club's inability to obtain ammunition.

Three thousand fingerling largemouth bass from federal hatcheries were stocked in the backwaters above Independence.

Two thousand largemouth bass from state hatcheries were stocked in the Wapsie.

Five hundred adult crappie were stocked at Fairbank.

Two thousand catfish were stocked in the Wapsie.

The state fish rescue crew with the help of the boys from Jesup returned an estimated 40,000 crappie, bass, bluegill, bullhead and pike to the river from land-locked ponds.

One hundred dollars was donated to "Ducks Unlimited" to apply on the building of Lake Iowa in northern Manitoba.

A "Ducks Unlimited" program was held at the Independence High School. Lt. Col. Russenholt, director of operations, "Ducks Unlimited" of Canada, was the speaker.

The Boy Scouts traveling trophy was given by our club.

The State Conservation Commission's traveling exhibit was obtained for the Buchanan County Fair.

The club's movie projector was used more than 80 times to show conservation films to schools and public gatherings.

We provided 12 big issues of the magazine, "Iowa Conservationist," to each of 450 members.

The Buchanan Wild Life Association was instrumental in the reorganizing of the "Northeast Iowa Conservation Council," and can be proud that the new president of the council is one of our members.

We have fallen far short of our goal even with the above listed accomplishments. Your cooperation and help is greatly needed in 1947.

Respectfully submitted,
Jack Gates, President
Lacey Gee, Secretary

TRAPS 159 FOX

Hugh Walker of Oskaloosa is the No. 1 fox trapper reported to the State Conservation Commission to date. Walker started trapping October 1, and in two and one-half months has trapped a total of 159 of the wily foxes in Mahaska and Keokuk counties. This "century" trapper has received \$3 bounty on each fox and the pelts averaged better than \$2. Walker trapped 123 foxes last season.



Several conservation clubs hold conservation short-schools during the summer months. Here Buchanan County boys are getting a lesson in aquatic biology.