

IOWA CONSERVATIONIST

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Number 4

DO YOU KNOW WHEN?

FALCONRY

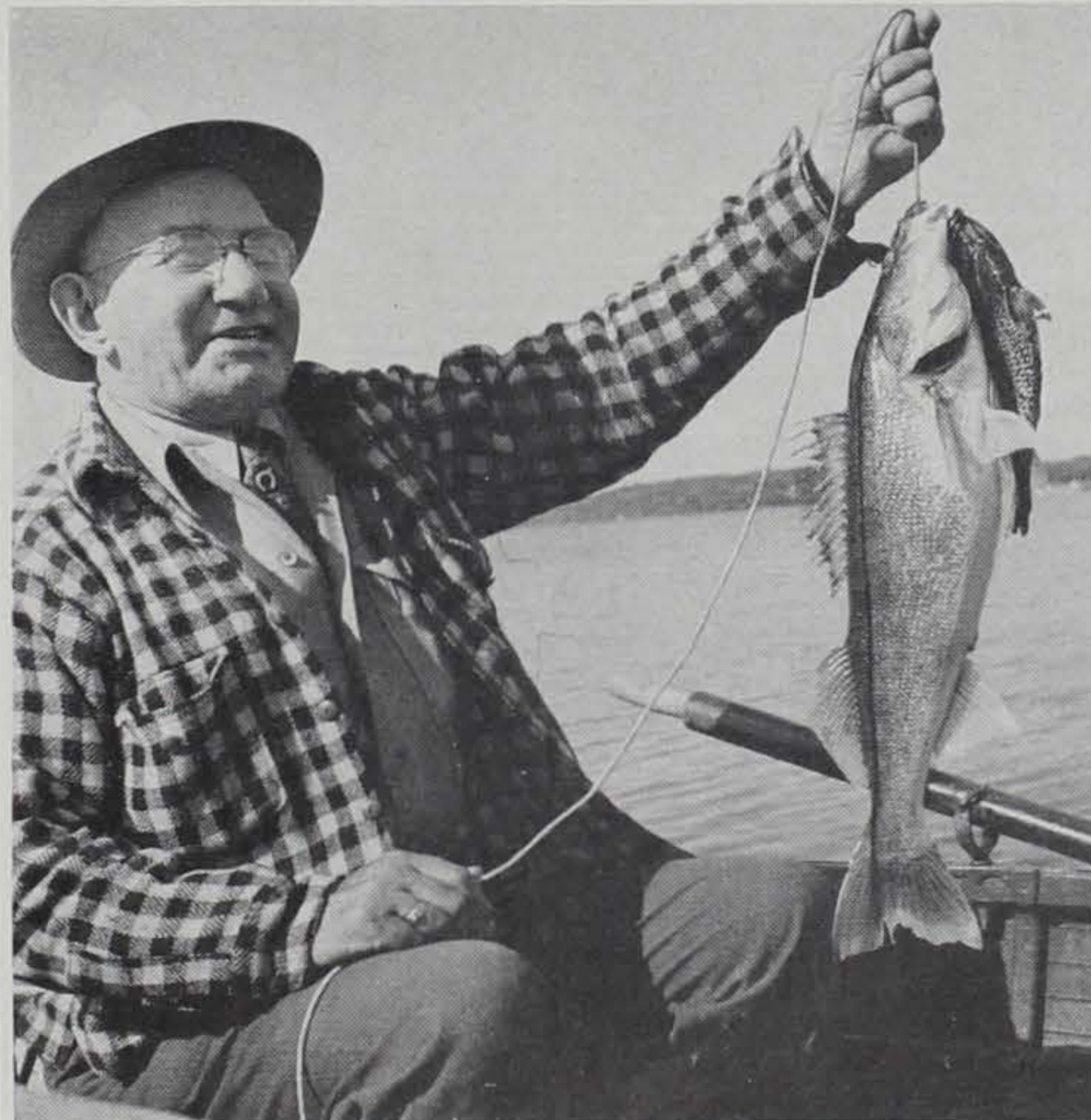
(Editor's Note: From a copy of a very rare "Cyclopedia and Encyclopedia, Complete, Modern, and Universal Dictionary of Arts and Sciences," printed in London in 1790, this dissertation on falconry more than 150 years ago was taken. Phraseology, sentence structure, and spelling are carried exactly as written in the original. Explanations in parenthesis have been inserted by the editor to clarify the archaic or little-known English term directly preceding.)

THIS is the art of taming, managing, and tutoring, birds of prey, particularly **falcons** and hawks; and employing them with advantage in the pursuit of game; called also **hawking**.

When a **falcon** is taken, she must be seeled (to close the eyes by drawing through the lids threads which were fastened over the head) in such a manner, that as the seeling slackens, she may see what provision lies before her: but care ought to be taken not to seel her too hard. A **falcon** or hawk newly taken, should have all new furniture, as new jesses (a short strap secured around the leg and usually provided with a ring) of good leather, marled leasters (meaning unknown) with buttons at the end, and new bewets (a strip of leather by which bells are fastened to a hawk's legs). There should also be provided a small round stick, to stroke the hawk: because the oftener this is done, the sooner and better will she be manned (accustomed to man). She must also have two good bells, that she may be found when she scattereth. Her hood should be well fashioned, raised, and embossed against her eyes, deep, and yet straight enough beneath, that it may fasten about her head without hurting her; and her beak and talons must be a little coped, but not so near as to make them bleed.

If it be a **soar falcon** (a peregrin falcon in the reddish plumage of the first year), which hath al-

(Continued on page 30)



Anglers caught 334,285 pounds of fish in 1947 from seven lakes on which catch records were kept. Jim Sherman Photo.

FISH SCALES TELL TALES

Kenneth D. Carlander
Iowa State College, Ames

MOST fishes carry their autobiographies with them. The year of birth, age, rate of growth, number of spawning seasons, injuries, and good and hard times are some of the details in the life of the fish which are recorded on their scales. It sounds fantastic, but all of this information, and sometimes even more, may be read from markings on the scales of fish.

Biologists of the Iowa Cooperative Fishery Research Unit are reading these records to learn how Iowa fish have fared and how fish-

ing can be improved. This Research Unit at Iowa State College, Ames, is jointly sponsored by the State Conservation Commission and the Industrial Science Research Institute of Iowa State College. The U. S. Fish and Wildlife Service also cooperates in certain phases of the program.

While each scale has an interesting story of its own to tell, the most valuable information is secured when scales from large numbers of fish have been studied so that average conditions may be determined.

(Continued on page 29)

Fish Census Study On Seven Iowa Lakes

By E. T. Rose
Fisheries Biologist

WHAT luck are you having, mister? This is a question that thousands of Iowa anglers have been asked on seven major northwest Iowa lakes during the past three years. It is one of many questions asked in a census study conducted by the State Conservation Commission to determine future management policies.

Some rather astonishing facts have been discovered in the census. For instance, the total weight of fish caught from these seven lakes by pole and line fishermen in 1947 was 334,285 pounds, or a little over 167 tons.

Included in the census were Spirit, East and West Okoboji, Center, Lost Island, Storm, and Blackhawk lakes. A total of 88,564 fishermen were contacted last year on these lakes. They caught 689,621 fish, for an average of 7 fish per trip, and an average of 1.7 fish were caught for each hour of effort.

Anglers caught from Center Lake 25,501 pounds of fish or 96.5 fish per acre. Can any natural lake in the United States beat this production? The catch from Lost Island was almost as large with 64.6 pounds of fish being recorded. Spirit, East and West Okoboji, and Blackhawk lakes followed in the pounds caught per acre. Storm Lake had an incomplete census and consequently is not compared in the above.

The creel census table includes summaries of the records from the above lakes; some for three, and others for one and two year periods.

The census has been made by cooperating boat liverymen who have obtained fish facts from their customers as they concluded their day's fishing, and by census clerks employed for this purpose. Now

(Continued on page 31)

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Catfish Tagging Aids Life History Study

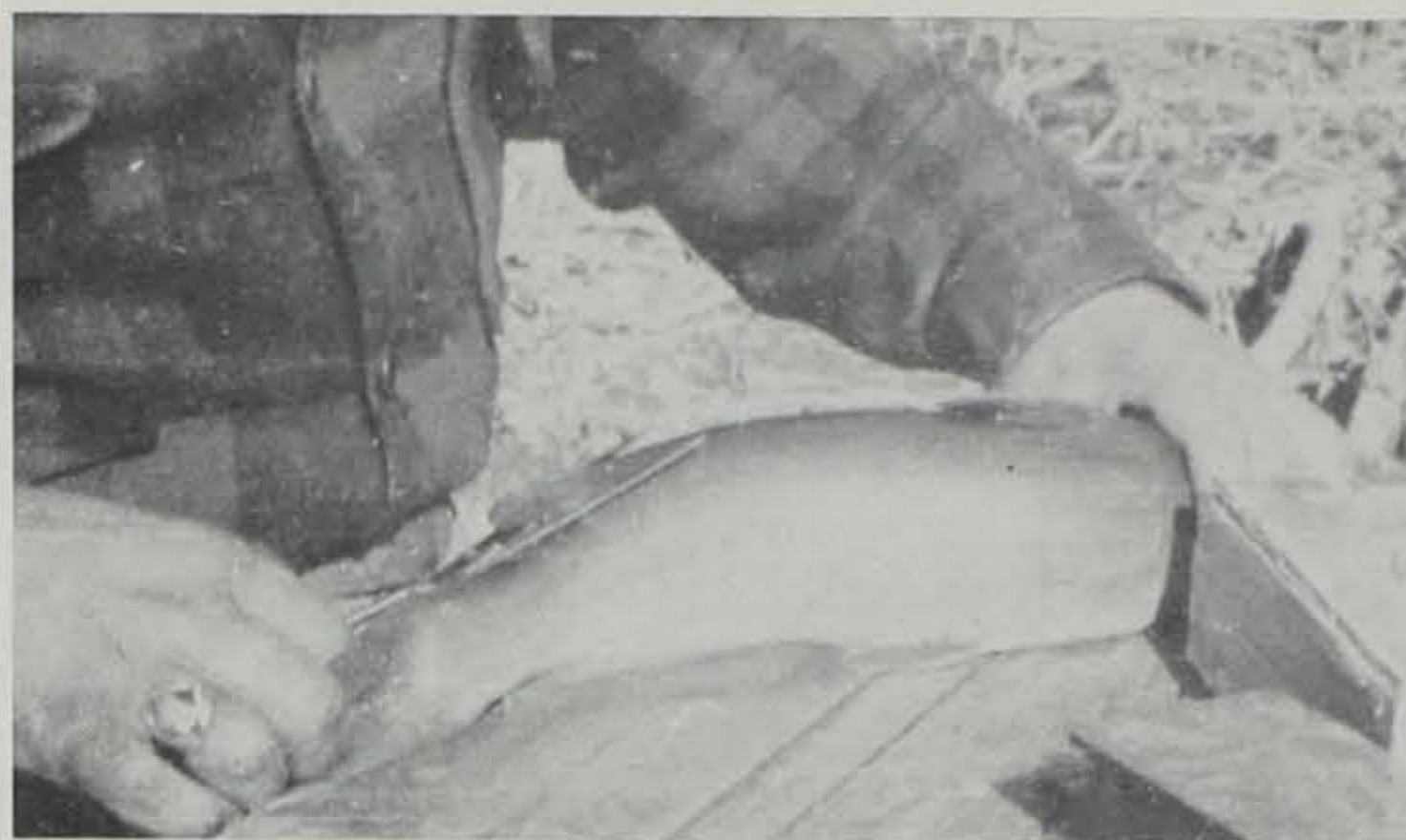
By Harry Harrison
Fisheries Biologist

THE time was when Iowa was a proverbial paradise for wildlife. The clear waters of her lakes and streams were abundantly furnished with a wide variety of fine fish. The bordering woods and upland prairies luxuriantly covered with tall grasses teemed with wildlife galore. Then came the white man, who cut down the trees, plowed the prairies straight up and down the hills, straightened the streams and ditched and tiled the lakes and ponds. Now, depending upon one's point of view, this has been called progress, culture, civilization, greed, and most certainly, killing the goose that laid the golden egg.

Despite the juggernaut of progress, a few wildlife species have not only managed to survive the pressure of civilization, but actually have managed to thrive on it. From among our native fishes, the



A biologist's work is not all done with a microscope while dressed in a white uniform. Here Harry Harrison is in field clothes and spattered liberally with slick river mud, commonly called gook.



After the trapped catfish have been weighed and measured, the adipose fin is clipped off with a pair of sharp scissors before the fish is returned to the water. Catfishermen finding a fish with this fin removed are urged to watch for tiny numbered tags while dressing out their catch. Harry Harrison Photo.

channel catfish is an outstanding example of an animal being able to cope with just about every means of destruction that old Homo sapiens has imposed upon him. Although it probably isn't conducive to his best mental and physical disposition, the catfish thrives under conditions of widely fluctuating water levels, pressure of commercial fishing, and in some instances he is known to have grown fat under certain kinds of pollution that have spelled the downfall of many other fish species.

Because the catfish has demonstrated his ability to live well under the conditions present now in our streams and for the undisputed place he has won for himself in the angler's heart as a game and food fish, the Iowa Conservation Commission has elected to make the most of its catfishing resources. In connection with this, very detailed studies are being made of the private life of the catfish. An important phase of the catfish's life habits has to do with his movement within the stream, together with his rate of growth and spacial requirements.

To get this information, approximately 3,000 channel catfish were tagged last summer and released at various points along the Des Moines, Raccoon and Boone rivers. Since our main interest was to have the fish carry on his life processes in as natural a way as possible, a special method of inserting a numbered tag into the intestinal cavity of the body has been used. By using this method of tagging, the marked fish lead an ordinary life and such things as movement, feeding habits and rate of growth will not be influenced by irritations caused by tags being affixed to the outside of the body.

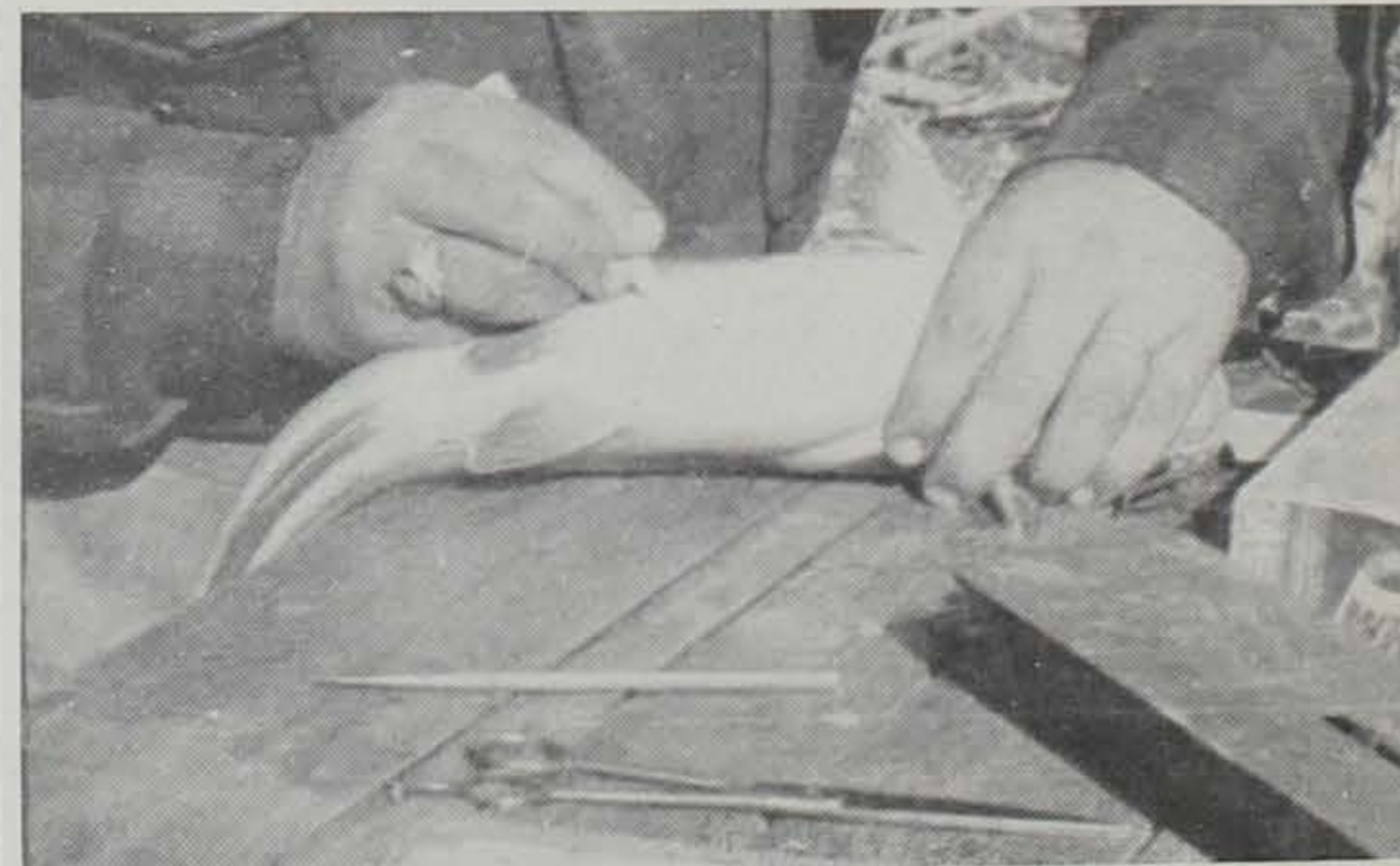
The procedure of tagging catfish in the Des Moines River system is as follows: Native catfish are taken from the river by means of traps. Length and weight of each individual is recorded. Then, using a decurved scalpel, a small incision is made in the belly wall just a little in front of the left pelvic

vic fin. The incision is less than a quarter of an inch in length, but extends clear through the belly wall into the body cavity.

After the opening is made, a little sterile numbered tag is inserted. Following this, the small fatty fin called the adipose fin, located on the catfish's back just ahead of the tail, is clipped off and the fish is returned to the river. Both wounds quickly heal. Then the date, tag number, place of release, fish's length and weight are recorded.

The adipose fin is removed in order that fish bearing internal tags can be recognized at the time of recapture. Removing this fin as a means of identifying tagged fish lend itself well to this type of tagging experiments. In the first place, the adipose is non-functional and, secondly, it is not so apt to regenerate or grow back as is the case with the functional fins.

When the foregoing is accomplished, we have this information on each tagged fish: the tag number, length, weight, locality and date of release. Now when the fish is retaken, his length, weight, date and place of recapture is again recorded and the numbered tag is retrieved. By referring to our files



A small incision is made in the belly wall of the catfish to be marked. After the opening is made a little sterile numbered tag is inserted through the stomach wall into the body cavity. Harry Harrison Photo.

and comparing data at the time of release with that at the time of recapture, we can determine how far he has moved since the time of release as well as what he has gained in weight and length. In addition, by knowing the total number of tagged fish in the stream and with determining the part of percentage of new catches that is composed of these marked fish it becomes possible to get some idea of the river's total population of catfish.

Up until this time we have not been too interested in retaking our tagged fish because we wanted enough time to elapse between the time of release and recapture to make sufficient growth in order that we might get significant figures. By the time that the fishing season opens this year, the marked fish will have had nearly a year to redistribute themselves in the river as well as to add considerable size, and now we are anxious to retrieve as many of the tags as possible.

Each and every sportsman who fishes the Des Moines River system can take part in this experiment and contribute valuable information by returning tags from fish that they catch.

Simply remember that tagged fish can be recognized by the fact that the small fatty (adipose) fin which ordinarily appears on the catfish's back between the tail and large spiny fin will be missing. The tag will be found somewhere within the intestinal cavity. The tags are small and sometimes difficult to find, but if the adipose fin is missing from the fish you can feel sure that the tag is there. Return the tag, together with the length, weight, date and place of capture, to your local conservation officer or directly to the Conservation Commission office in Des Moines.

We want EVERYONE to get into the act.

The largest North American fresh water fish is the sturgeon, found in the rivers of our northwest. Longest on record was 12 1/2 feet, weight 1,285 pounds.

Wardens Tales

Shop Talk From the Field

Dan Nichols, conservation officer at Muscatine, has pursued many fish and game law violators, but never has he had one pursue him, until just the other day.

While Dan was sitting in the kitchen a day or two ago, drying out some wet boots, there came a knock at the Nichols rear door. Dan rose to the summons, and was greeted by a fish peddler with a basket full of fish. "Want to buy some fish, mister?" said the chap. "Let's take a look at them," said Nichols.

Fortunately the fish were legal. But Dan's next question was the stickler. "Let me take a look at your license," requested the conservation officer. "Don't have a license," said the fish peddler.

The charge, selling fish without a license. The result, \$10.00 and costs. Moral—Never try to sell fish to a conservation officer.

Earl Scherf, conservation officer in charge of Buchanan and Deleware counties, writes:

"Frank Klumper, an old fox hunter and manager of the American Legion basketball team of Independence, is telling this fox story. Late in the winter, after an unusually good tracking snow, he had followed a peculiar fox track for some time and on two occasions sighted his quarry, but never in range. Suddenly he could find no more tracks, the trail ending at a line fence. He was completely baffled, but in the accepted fox hunter fashion, made a circle around the area where the tracks had disappeared. Still no tracks. Making even a larger circle some 200 yards down the fence line, he again found the same peculiar fox tracks. The trail crossed the field, and after going through a weed patch again disappeared near a fence. Another large circle, and the trail of the phantom fox was again found. This time the foot prints showed blood. Yet a third time the trail ended abruptly at a fence and the third time the hunter circled the area and picked up the now very bloody fox tracks. As the sun was lowering, Frank pressed hard along the trail, and finally, approximately 100 yards to his left, he saw the cutie fox running down the top strand of a barbed wire fence at good speed. A single shot dumped the smart fox in the snow."

Wendell Simonson, conservation officer in charge of Kossuth county, sends along this yarn:

"Last year a bird dog owned by Ralph Nichols of Whitemore was caught in a barbed wire fence one night, froze its feet, and injured badly the toes on the foot by which he was caught. Dr. Wood-

(Continued on page 32)

Boat Paint Time

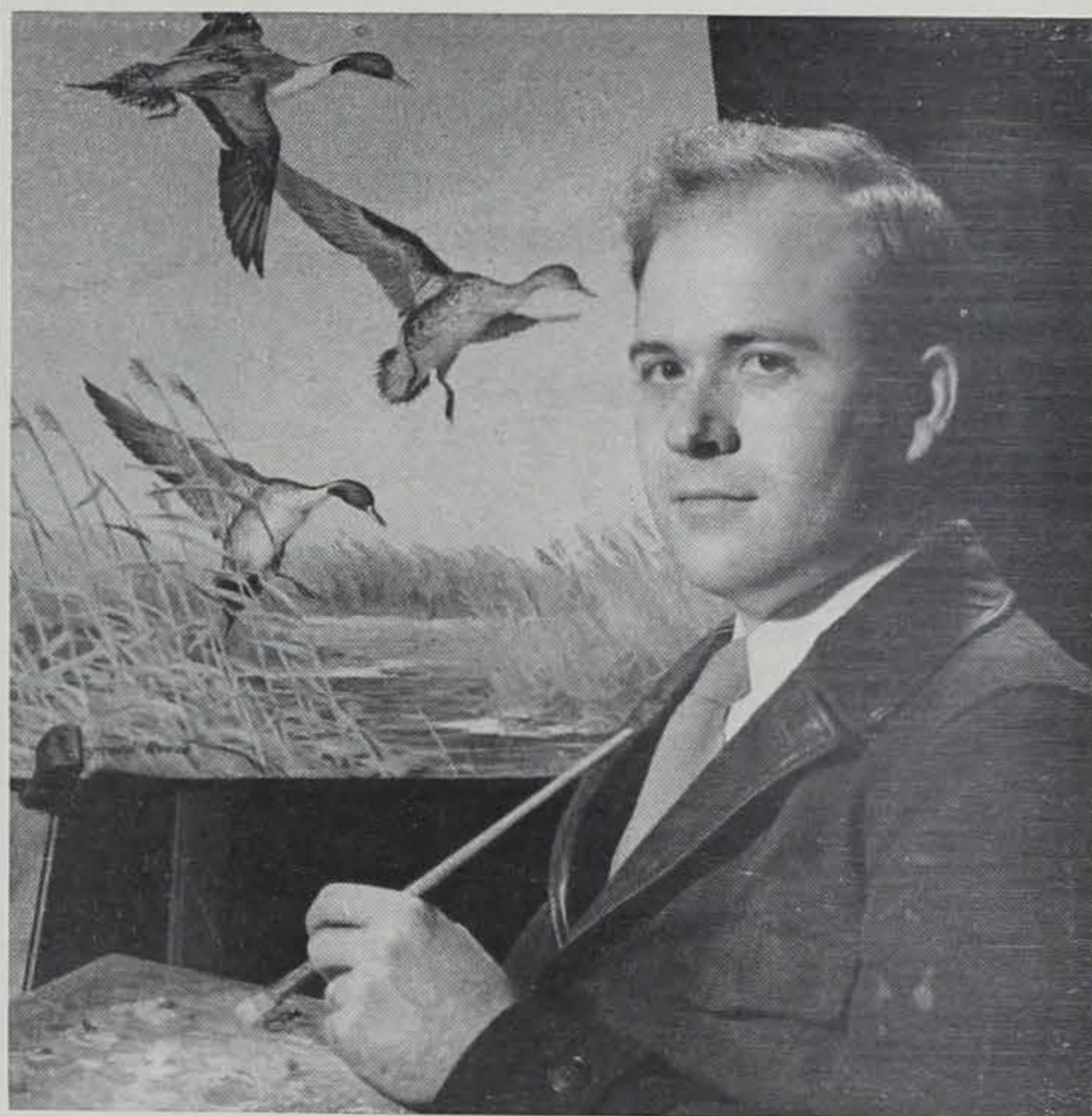
FRESH paint, varnish, brushes and sandpaper — these are sure signs of Spring to the small-boat owner looking forward to the fun of making his boat trim and ship-shape for the coming season. Spring conditioning is a good investment.

Conditioning a small craft is never an arduous task, since there is just enough work to keep enthusiasm high. Start the process by giving your boat a general washing with hot water and cleaning powder — both the inside and outside of the hull. Scrub off the accumulation of dirt and grime and flush the hull with clean water. Remove all the metal fittings and examine the hull to determine the amount of work necessary. The hardware should be tagged and set aside until you're ready to replace it.

Check the hull thoroughly for cracks or injured spots, since all repairs should be made now and not put off until the boat is refinished and the season has progressed. What is a minor repair at this date may develop into something more serious. If the paint or varnish has not checked, blistered or peeled badly, you will only have to sand the hull and apply new paint. However, if inspection shows that the condition of the old paint is bad, then it is best to remove all the finish and start over.

Assemble all the materials and tools that you will need to repair and refinish before beginning either task. Marine glue thinned with turpentine, and applied with an oil can will close minor cracks or seams. Nail or screw holes may be filled with marine putty and sanded over when dry. Varnish remover and a good flexible putty knife will take off the old paint — experts use a blow torch, but in any case don't use both. Steel wool is useful in removing the last bit of paint missed by the putty knife. Last, get the best marine paint available. The average outboard will only take three pints, so the cost is small compared with the beauty and protection that superior paint will provide.

Sand the boat carefully so that new paint will lay on smoothly. Dust the surface before starting and wipe it with a rag soaked in



Maynard Reece. Jim Sherman Photo.

turpentine. Don't put the paint on too heavily, but work it into the wood with your brush. Sand the first coat lightly with fine sandpaper or steel wool before applying the second. In the case of mahogany or similar finish — a soft wood filler matching the color of the wood should be applied. As soon as it begins to set, wipe across the grain with clean burlap, sand when dry and coat with spar varnish.

Metal boats will require no more than a good washing to get them ready for the season. If the hull is to be painted, be sure that it is clean. Paint will peel and blister if applied to a surface that has any grease or oil on it. To restore the metallic lustre to a boat that has oxidized or dulled with use, scrub the surface with a good cleaning powder. Don't use anything that will scratch the metal. A coat of clear spar varnish will preserve the shine.

—Outboard Boating Club of America.

"How much do these red and green things cost?"
"You mean the float?" the expert replied. "Oh, about a dime I guess."
"Well," said the novice, "I owe you a dime; mine has sunk."



Proper care of small craft pays a high dividend in pleasurable use.

Reece Draws New Duck Stamp Design

Buffle-head ducks will grace the new 1948 Migratory Bird Hunting Stamp, according to a recent announcement of the Department of the Interior. The new stamp, designed by Maynard Reece, staff artist of the Iowa State Department of History and Archives, Des Moines, and now in the hands of the engravers, shows two male and one female buffle-heads in flight.

The new stamp, which sells for \$1.00, is the 15th in the series issued annually to provide funds to help finance the Federal Government's wildlife refuge program. Ninety per cent of the funds realized from the sale of the stamps is used by the U. S. Fish and Wildlife Service to supplement other funds for the purchase and maintenance of waterfowl refuges throughout the country. The remaining 10 per cent is used for printing and distribution of the stamps, enforcement of the Migratory Bird Hunting Stamp Act, and other federal activities for migratory bird conservation.

During the 1946-47 season, 2,016,819 duck stamps were sold, the highest total of any year since the first stamp was issued in 1933. All migratory waterfowl hunters over 16 years of age are required to purchase and have in possession while engaged in hunting a stamp bearing their signature. The 1948 stamp will be available to hunters and philatelists at all first- and second-class post offices on July 1.

OURS TO ENJOY, NOT DESTROY

By P. L. Ricker, President

Wild Flower Preservation Society

WILD flowers, as well as all of our other natural resources, should be used wisely. In our more populous areas they are disappearing more rapidly than any other comparable resource. Even in many of the "wild areas" some of the most valuable and delicate forms face a grim struggle for survival.

Much of our wild flower destruction is due to advancing civilization, such as clearing for farm land, increased grazing, commercial developments, and to fires. Except to prevent unnecessary burning, there is little we can do to stop this loss.

There is one source of tremendous loss, however, that each and every one of us can help to minimize and that is the toll taken by our "nature lovers."

Raids as depicted by Mr. Darling are much more common than are generally believed. Anyone who has enjoyed, studied, and photographed wild flowers in wilderness areas has witnessed some destruction, and near large cities "wild flower raiders" are very common.

In the early days of road construction for the Shenandoah National Park many people were able

to secure permits to preview this wonderful area. Doubtless, few abused the confidence, but on one occasion two carloads of adults were actually found on the Crescent Rock area with spades, trowels, and forks and were making it a shambles for the benefit of their personal wild flower gardens; and in the fall another large party was found stripping the mountain ash trees of their large clusters of beautiful bright-red fruits.

Because of so many other raids the Crescent Rock area was largely denuded of its former extensive rock garden flora and has shown little recovery over a ten year period. Doubtless other national and state park areas throughout the country were similarly treated before a more strict supervision was provided.

It does not take much imagination to see what happens in wild areas less closely supervised.

Education and public sentiment is the sure-fire way to prevent this needless destruction. Public sentiment is particularly effective.

One example stands out in my mind. During World War I in the District of Columbia and vicinity, people were stripping the blossom-covered branches from the flowering dogwood trees in great quantities.



P. L. Ricker, President, Wildflower Preservation Society.

They were urged through a three-week newspaper campaign to observe the results of their vandalism. The result was public sentiment brought to such a peak that audible criticism of anyone seen with dogwood branches put a stop to the raids, and the effects of the campaign lasted for many years.

Most of our native plants were doubtless placed on this earth for us to enjoy in moderation. Collecting of the flowers of a few species does little more harm than cutting roses from a bush. Unfortunately, many are injured by extensive picking.

Your part in the conservation of our wild flower resources is twofold. Think carefully before you pick, cut or dig; and, add your voice to the growing multitude who condemn the "wild flower raiders."

HERMAN IS A TURNCOAT

Herman, a wild caught weasel, was sent to Clyde Updegraff, Superintendent of the State Game Farm, about the first of March to be held for the exhibit at the State Fair in August.

Herman was all rigged out in his pure white winter fur at the time and it was a good thing, for 16 inches of snow blanketed the game farm and made the white-coated animal almost perfectly camouflaged.

On the 16th of March, a little brown patch of fur appeared just above Herman's eyebrows and by the 19th, dime-sized patches of brown fur made the forward half of Herman's body look like a brown and white patchwork quilt.

The hatchery superintendent has a bet of a bottle of coke with one of the hatcherymen that Herman will be all brown by the first of April.

Ammunition manufacturers produced about 66 different center-fire cartridges, ranging from the 25-20 with 400 foot pounds of energy at the muzzle to the 375 H&H magnum with more than 4,400 foot pounds of energy.

Shades of the Pilgrims

Back in 1870, Iowa pioneers knew little of food rationing, of meatless Tuesdays and poultryless-Thursdays. In 1870, the frontier line still lingered in north-western Iowa — and buffalo steaks, saddle of venison, and broiled quail were as commonplace in many Iowa communities as were roast beef, chicken or turkey with all the fixins. Illustrative of those lush days is the follow Savery House menu in Des Moines.

SOUP—Oyster.

FISH—Mackinaw Trout, Herb Sauce.

BOILED—Tongue; Ham; Leg of Mutton; Corned Beef, Turkey, with Oyster Sauce; Chicken, with Marinara Sauce.

ROAST—Prairie Chicken, with Currant Jelly; Turkey with Giblet Sauce; Veal, with Dressing; Ribs of Beef; Sirloin of Beef; Mutton; Lamb; Saddle of Venison, with Cranberry Jelly; Sirloin of Buffalo; Goose, with Apple Sauce; Mallard Duck a la Creole.

COLD—Corned Beef; Tongue; Mutton; Chicken Salad, Lobster Salad.

ENTREE—Broiled Quail, with Toast; Buffalo Steak, a la Maitre d'Hotel; Braized Teal Duck, with Olives; Wild Goose, a la Regent; Pork and Beans, Baked Boston Style; Fillets of Chicken, a l'Ang-

(Continued on page 32)



Look Out, Here Come The Nature Lovers

Reprinted from "Our Great Out-of-Doors," published by Iowa Division, Izaak Walton League of America.



Eighty years ago, wild turkey was a common item on the menu of first class Iowa restaurants.



Fish scales overlap each other like shingles. They are very similar in composition to bone and are made up of several layers of minute fibers covered with a layer of lime. Each scale grows in a little pocket and is always covered by a very thin layer of skin.

Fish Scales . . .

(Continued from page 25)

One important consideration in fishery management is the length of time it takes for the average fish to reach catchable size. Recent studies by the Research Unit indicate that yellow pikeperch, or walleyes, in the lakes in northwestern Iowa usually reach the legal length of 12 inches near the end of their third year. Some individuals may reach this length when less than two years old and others not until they are almost four years of age. (The American Fisheries Society, in an attempt to give fish common names which will be used throughout United States and Canada, decided last fall that the fish which we in Iowa call the walleye pike shall be known as the yellow pikeperch. Therefore the latter name will be used for the walleye throughout this report.)

Comparison of the average growth of fishes in different lakes and streams may also indicate what type of environment provides for the most rapid growth of each kind of fish. Studies have indicated that lakes may contain so many fish that the competition for food is so severe that the fish are thin and grow very slowly.

Scale studies also indicate how long fish may live. The oldest yellow pikeperch found so far in these Iowa studies was 12 years old. Most of them live only seven or eight years.

The tales that the scales tell thus help us to see that the best management would be to catch the pikeperch when they are five to seven years old. At this time they are about as big as they will get. If left in the lake longer they may get a little bigger, but many of them will die of old age and not be caught. In lakes where the growth is fast, the fish should be caught earlier in their lives, since the research indicates that fish which grow more rapidly usually die younger than their slower growing brothers.

Much other valuable information for the improvement of fish can be secured from scale studies, but per-

haps we had better stop a moment and let you in on the secret of how the story on a fish scale is read.

A fish scale is very similar in composition to bone. It is made of several layers of minute fibers covered with a layer of lime. Each scale grows in a little pocket and is always covered with a very thin layer of skin.

The life story of the fish is read by examining the rings on the scale. These rings are circular ridges on the outside surface of the scale. They are known to the biologist as circuli. As the scales grow, new rings are formed on the edge encircling the earlier formed rings.

Scales overlap each other like shingles so that only the hind part of the scale is visible while the scales are still attached to the fish. Some fishes have small spines on this exposed portion. The yellow pikeperch, yellow perch, sunfish, bass, and other fish which have these spines on their scales feel rougher than trout, suckers, and northern pike.

A fish keeps the same scales throughout its life. A fish never grows out of its scales, since the scales continue to grow as the fish grows. When a fish grows very slowly, or stops growing, the scales also grow very slowly or stop growing.

The winter is usually the only time that fish stop growing. When the scale grows slowly, the circuli become crowded. The front part of the scale continues growing even after the back and sides of the scale stop growing. Thus several incomplete and crowded circuli are formed on the front part of the scale during the winter when the growth is slow. When growth is resumed a complete circulus forms which joins the ends of the incomplete circuli. In this way, each winter that a fish lives through is recorded on the scale. These winter marks are called annuli. They are marked in the picture of the scale from a yellow bass. By counting these annuli the age of the fish may be determined.

The size of the fish at the end of

each winter can also be estimated from the scales. Since the scales completely cover the fish's body, it follows that the growth of the scale is proportional to the growth of the fish. By measuring the distances between the annuli and comparing these distances to the size of the scale and to the size of the fish when the scale was taken, the growth during each growing season can be calculated.

Occasionally the growth of a fish may be stopped at some other time of the year than winter. Then a false annulus is formed. Often these false annuli indicate the spawning period and therefore give additional information about the fish's life. It is sometimes difficult to distinguish between the true and false annuli, but an experienced fisheries biologist can accurately determine the age of most fish.

Although it takes considerable experience to read the life story from the more difficult scales, most fishermen or biology students can age many of the simpler and younger fish, if they have a microscope or good hand lens. The scales are placed in a drop of water on a slide and examined under the microscope or lens. Care must be taken in distinguishing and counting the annuli.

The Fishery Research Unit at Iowa State College has a special micro-projector which throws an enlarged image of the scale on a ground glass screen where the scale features can be carefully studied and the necessary measurements made.

In the scale studies of the yellow pikeperch in Iowa lakes, mentioned above, it was found that the growth was particularly rapid in some of the shallow lakes, such as Diamond and Welch lakes in Dickinson County. Although these lakes may provide good fishing some years, the fish frequently "freeze-out" during severe winters. In years following freeze-outs, there are usually too few large fish to pro-

vide good fishing. Because of these freeze-outs, there are also few fish to eat the food that is available. Fish planted in these lakes will grow more rapidly than they will in other lakes which have established populations of fish.

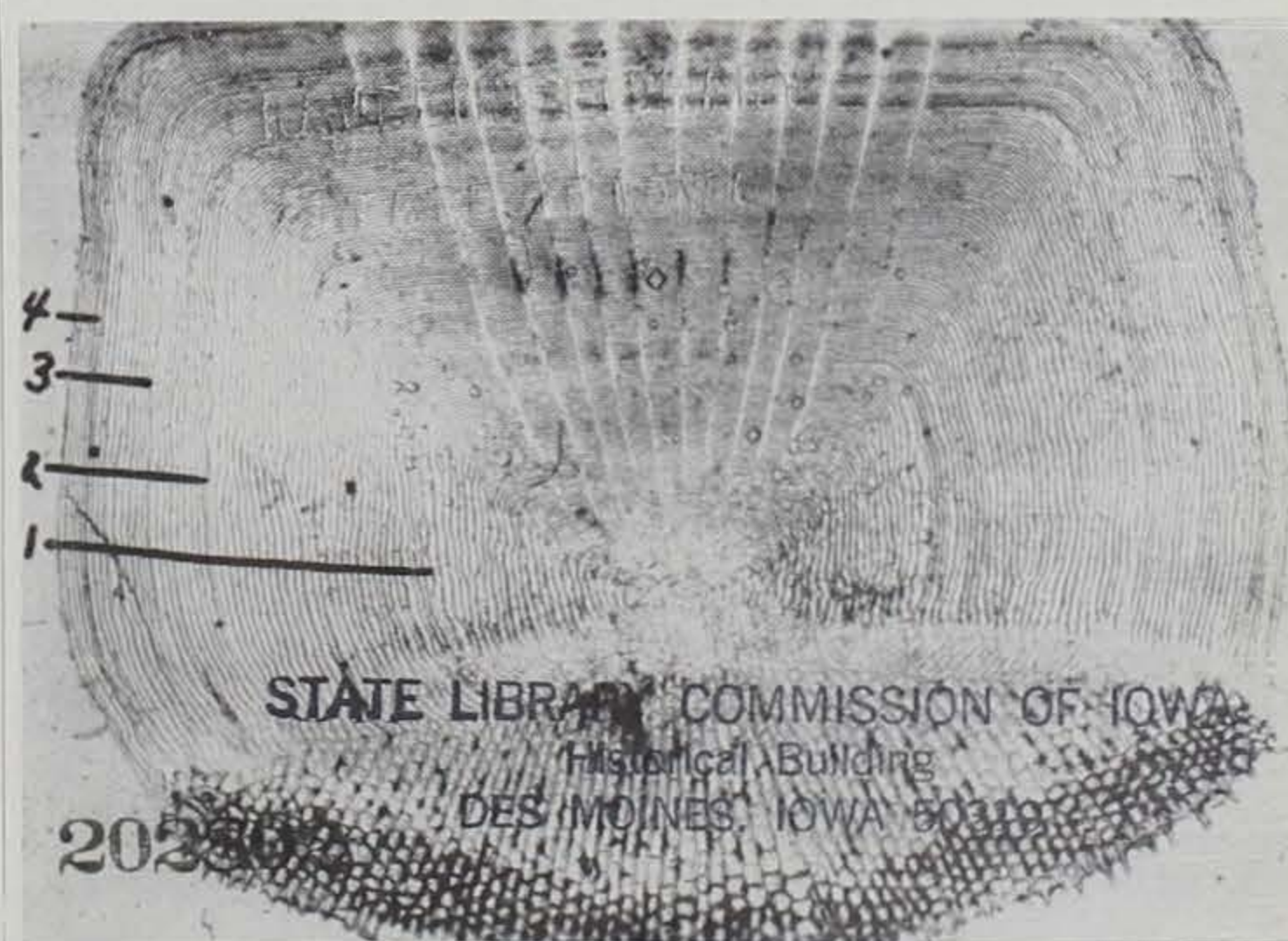
The Iowa State Conservation Commission has used some of these shallow lakes as large rearing ponds for yellow pikeperch, thus profiting by the rapid growth which these lakes provide. In the fall the fingerling pikeperch are seined out before there is a chance of freeze-out, and they are planted in lakes where they provide sport fishing a couple of years later. Mr. Everett Speaker, Superintendent of Fisheries, reports that yellow pikeperch have grown to 13½ inches in the first summer in some Iowa rearing ponds! In lakes with established fish populations, this length is not usually reached until the fourth year.

The Fishery Research Unit has examined the scales of several kinds of Iowa fishes, and it is planned to read the life stories of all the important species to secure information needed to improve Iowa fishing. Bullheads, catfish, and other fishes without scales, of course, pose a different problem. Recent work at the Unit, however, indicates that their life stories may be read from certain bones.

Ding Darling has graphically described the setback in conservation as the result of World War I. It is still applicable. "World War prices said 'plow'. The government said 'plow'. The farmers plowed. Food will win the war, the posters said. Woodlands were hacked away. Grass was plowed under. The hills washed. The water table fell. The springs went dry. The game went dry and died."

ADDRESS PLEASE!

A \$1.00 subscription to the "Conservationist" dated March 25, has been received from Thomas J. Griffiths, 5920 Hickman. No city was given. Anyone knowing Mr. Griffiths please advise him of this oversight or send in his address.



Scale from a four-year-old yellow bass taken in Clear Lake, showing many circuli and four annuli or winter rings. Carlander Photo.



The noisy little sparrow hawk is the most numerous representative of the falcon tribe in Iowa. It is a very beneficial hawk, feeding principally on insects and small rodents.

Falconry . . .

(Continued from page 25)

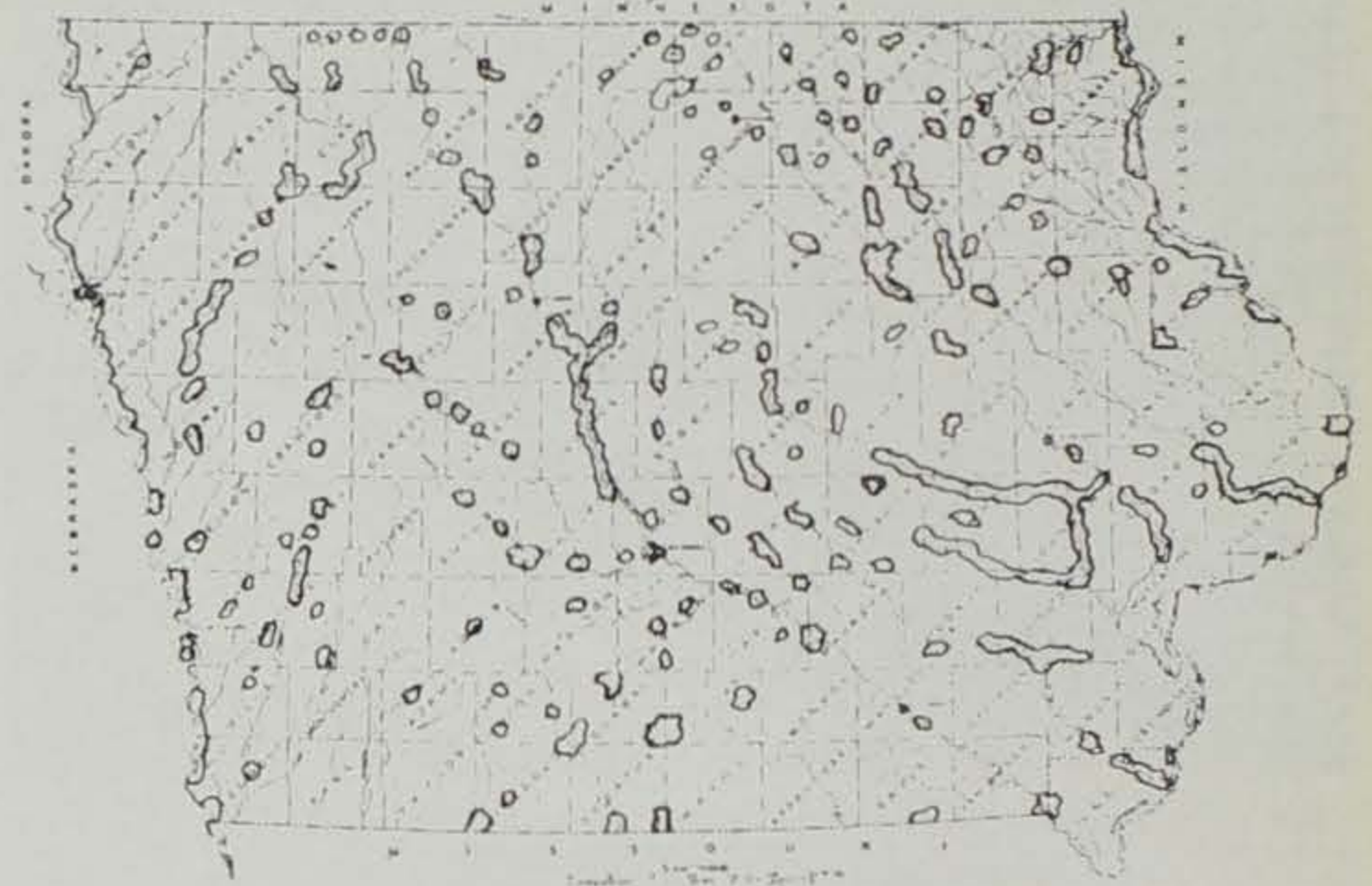
ready passed the seas, she will indeed be harder to reclaim, but will prove the best of falcons. Her food must be good and warm, and given her twice or thrice a day, till she be full gorged; the best for this purpose is pigeons, larks, or other live birds; because she must be broken off by degrees from her accustomed feeding. When she is fed, you must hoop (whoop) and lure, as you do when you call a hawk, that she may know when you intend to give her meat. On this occasion she must be unhooded gently, and, after giving her two or three bits, her hood must be put on again, when she is to get two or three bits more. Care must be taken that she be close seeled, and after three or four days, her diet may be lessened, the falconer setting her every night to perch by him, that he may awaken her often in the night. In this manner he must proceed, till he find her to grow tame and gentle; and when she begins to feed eagerly, he may give her a sheep's heart. He may now begin to unhood her in the day-time, but it must be far from company, first giving her a bit or two, then hooding her gently, and giving her as much more. When she is sharp set (very hungry), he may now unhood her, and give her some meat just against his face and eyes, which will make her less afraid of the countenances of others. She must be borne continually on the fist, till she is properly manned, causing her to feed in company, giving her in the morning, about sun-rise, the wing of a pullet; and in the evening, the foot of a hare or coney, cut off above the joint, flayed and laid in water, which be-

ing squeezed, is to be given her, with the pinion of a hen's wing. It is best to give the hawk washed meat, and, after this, plumage, according as she seems to be foul (torpid or sluggish) within. She is then to be hooded, and nothing more should be given her till she gleams (to disgorge filth) after casting (cast—the mass of undigested refuse consisting of feathers, bones, etc., thrown up from a hawk's stomach); but when she has gleamed and cast, she should then have some hot meat given her, toward evening, especially, and be made to eat it in company. When she is well reclaimed, manned, and sharp set, she may be fed on the lure.

But three things are to be considered before your lure be shewed her. 1. That she be bold and familiar in company, and not afraid of dogs and horses. 2. Sharp set and hungry, having regard to the hour of morning and evening, when you would lure her. 3. Clean within, and the lure well garnished with meat on both sides. When you intend to give her the length of a leash, you must abscond yourself; she must also be unhooded, and have a bit or two given her on the lure, as she sits on your fist. That done, take the lure from her, and so hide it that she may not see it; when she is unseeled, cast the lure so near her, that she may catch it within the length of her leash; and as soon as she has seized it, use your voice as falconers do, feeding her upon the lure on the ground.

After having lured your falcon, in the evening give her but little meat, and let this luring be so timely, that you may give her plumage, etc. next morning on your fist; when she has cast and gleamed, give her a little beaching (small feed, given only as a whet to the appetite) of warm meat about noon, tie a creance (a small, fine line) to her leash, go into the field, there give her a bit or two upon the lure, and unseel her. If you find she is sharp set and has eagerly seized on the lure, let a man hold her, to let her off to the lure; then unwind the creance, and draw it after you a good way, and let him who has the bird hold his right hand on the tassel of her hood ready to unhood her, as soon as you begin to lure; to which if she come well, stoop roundly upon it, and hastily seize it; let her cast two or three bits thereon; that done, take her off the lure, and deliver her again to the person that held her; and, going farther off the lure, feed her as before; and so daily farther and farther off the lure. Afterwards you may lure her in company, but do not fright her; and having used her to lure on the foot, do it also on horseback; which may be sooner accomplished, by causing horsemen to be about you, when you lure her on foot.

When she is grown familiar to this way, let somebody on foot hold



Approximate locations of known Iowa deer herds.

Deer Survey, 1948

By Lester F. Faber
Game Biologist

In February, all conservation officers were asked to mark on a county map the areas in which deer ranged during the winter and indicate the approximate number in each area. The areas over which deer are known to range are marked on the accompanying map.

No deer were reported in four counties, Audubon, Cass, Wright, and Grundy. In 1947, no deer were reported in eleven counties.

In 78 counties, one or more herds were reported. In 1947, herds were reported in 58 counties.

The average size of all herds reported was ten animals. Because of a few large herds the average size per herd is held up. Perhaps a better average would be five or



Deer herds have been reported by conservation officers in 78 of Iowa's 99 counties during the past winter, individual deer in all but four counties.

the hawk, and he on horseback must call and cast the lure about his head, the holder taking off the hood by the tassel; and if she seize eagerly on the lure, without fear of man or horse, then take off the creance, and lure her at a greater distance, and if you would have her love dogs as well as the lure, call dogs when you give her living or plumage.

Falconry, though the principal amusement of our ancestors, was unknown among the Greeks and Romans.

six animals per herd. This factor is almost the same as in 1947.

A herd, as here used, means two or more deer ranging together during the survey period.

In the 78 counties where herds were reported, 199 herds were recorded for a total population of 2,024 deer. This total number does not include deer reported as scattered individuals or occasional sight records. Estimates of numbers were admittedly low in many cases so that indications are that there were approximately 3,000 scattered throughout the state. In 1947, 155 herds were reported with a population of 1,650 deer. We have had an estimated 25 per cent increase in the deer population in 1948 over 1947.

Comparing the maps on which the deer ranges are drawn, there is some indication that the areas have increased in size and in numbers since the 1947 survey. It is evident from the map that deer, in the winter at least, are staying fairly close to the main watercourses of the state. Whether this is because of preference or because of timber in these locations is not known.

There seemed to be more deer along the Missouri than along the Mississippi. The Des Moines and Iowa Rivers are well populated with deer during the winter.

FISHERMEN START JOKE SEASON EARLY

Warm weather of the past few days turned fishermen into a joking mood, hereabouts.

Some of the fishing pals of A. E. Lauritzen, County Superintendent of Schools, were responsible for placing a sign, three by five feet in size, at one of the approaches to Algona Monday evening. The sign read: "Red Nite Crawlers—A. E. Lauritzen—Day or Night Service."

Then at 2:00 a. m. Tuesday morning they called him up, told him they had seen his nice, new sign, and wanted immediate delivery of some nice, red nite crawlers.

—Algona Upper Des Moines



Boat liverymen were almost universally cooperative in securing catch records from their customers as they came in from a day's fishing. Jim Sherman Photo.

Do You Know? . . .

(Continued from page 31)
south shore among the willows and around the island next June or July. You might be pleasantly surprised.

Storm Lake

This lake is rapidly becoming one of the best fishing lakes in Iowa. The census record as shown on the tables does not indicate the truth of this statement; however, the census was only a partial one. The really important features, the number of fish per man, and the number of fish per hour, indicates good fishing and comparable to the best in the state that has been checked so far. A population study being carried on at present indicates a high number of crappie, walleye, and catfish.

The best fishing in Storm Lake is early in the summer. Of the total number of crappies caught throughout the season, 88 per cent were taken during the periods from May 15 to July 1. This is due to excessive natural feed during the hot summer months.

Blackhawk Lake

This is Iowa's southern-most natural fishing lake. It is literally a crappie fisherman's paradise. My records show that over 60 per cent of all the fish caught last year were crappies. There were 25,626 fish of all kinds taken, by 12,348 anglers, for an average of 2.8 fish per trip and 0.72 fish per hour over the entire season. Blackhawk had a total harvest of 16,805 pounds of fish or 17.56 pounds per acre. The lake has, in addition to its fine game fish population, an infestation of the undesirable gizzard shad. The shad reproduces very heavily and fishing for crappies and

other species drops off as soon as the shad hatch becomes available as food for the game fish. So if you want to fish in this lake — it's the early bird that gets the fish — get there before June 15. There are lots of big largemouth black bass and channel catfish in this lake in addition to crappie.

Conclusion

We have a nice start in estimating the catch of fish from some of our lakes. The information will, we hope, prove of direct value to fishermen and will aid in maintaining good fishing in Iowa. Without information of this type we can only venture a guess at the productivity and annual catch in fishing waters. A farmer knows how many bushels of oats per acre he is producing and compares crops from year to year under different management practices. The fish manager must do the same for each body of water, studying age and growth rates, standing crops and harvestable surpluses of each species of fish, setting the regulations so that the harvest can be made at the proper time and quantity, thus providing the most fishing pleasure and at the same time bearing in mind the safety of standing crops for reproduction.

The weeds in the cornfield, the rats in the grain bin, the cornborer, rusts, smuts, and other factors which limit the farmer's production all have their parallel to the fish manager. He must control the carp and other obnoxious fish, guard against pollution, disease, soil erosion, over-crowding, winter-kill and a myriad of other factors which can and do limit the productivity of fishing waters.

It is planned to include in the

census next season other areas which have not been checked previously. The commendable work of the boat liverymen in getting this information for us has been of great importance, and it shows their desire to cooperate with the Commission in any program which will benefit conservation. What luck are you having, mister? That question will be asked of you again next season. Cooperation with the census taker and the boat liveryman will help you to better fishing in Iowa.

Wardens Tales . . .

(Continued from page 27)

ward designed shoes for the tender-footed dog, made of supple leather, but the hard-driving dog wore them completely out in a single day. On a later hunting trip into quail territory, in addition to his gun and shells, and other standard hunting equipment, Ralph carried along ten pairs of dog shoes, all beautifully stitched by a local harness maker. They worked fine."

Stubb Severson, in charge of Clay and Palo Alto counties, sends along this Gib Knudson yarn on a couple of Canada geese:

"The story begins with the lighting of a flock of Canadas in the Des Moines River a mile south of the John Dorweiler farm last fall. John saw them sit down and went after them but another hunter beat him to them, killing one as they got up. One of the frightened geese soon came slanting down with a crippled wing but it had two good legs. John thought he would keep it and if it lived, add it to his own domesticated flock of Canadas. The goose, unable to fly, was easily herded up into the farm buildings where it was caught and its wing feathers on one side clipped. In this sociable atmosphere, with companionship from the domesticated Canadians, and with \$2.50 corn scattered all about the barnyard, the injured honker probably thought it had gone to heaven. Everything was going fine, so far as Dorweiler could tell. Then one morning, to his surprise, a big Canadian goose, wild, whole and healthy, came honking over the farm, circled a couple of times, heard a greeting from the new goose on the ground, swooped in and settled down beside it. A burst of joyful cackling followed. It was undoubtedly the winged goose's mate and had returned after several days' searching for its companion. Dorweiler, like many others, believes that Canadian geese mate for life and that if death removes half of a pair, the survivor carries on alone to the end. The hale and hearty gander is still with its mate and the rest of the flock and, although it exercises its wings by an occasional flight, John does not believe it will ever leave its injured mate for long."



Allen Green Photo.

CONTENTED

By Allen Green

Of all the birds, I like the best
The little robins in their nest,
Their thoughts are not on rising
rent;
They sit there perfectly content.
Oh, that man could only be
Like peaceful robins in a tree.

Shades . . .

(Continued from page 28)

laise; Belle Fritters, Vanilla Flavor; Haricot of Venison.
VEGETABLES OF THE SEASON.

RELISHES — Pickled Beets; Worcestershire Sauce; Pepper Sauce; Chow Chow; French Mustard; Sliced Tomatoes; Tomato Catsup; Boston Pickles; Cheese; Walnut Catsup.

PASTRY—Mince Pie; Old Style Yankee Pumpkin Pie; Steamed Apple Pudding, Lemon Sauce.

DESSERT—Pound Cake; Sponge Cake; Swedish Pound Cake; French Cream Cake; Jelly Cake; Jumbles; Rum Jelly; Doughnuts; Blancmange; German Meranges; Kisses; English Walnuts; Filberts; Almonds; Raisins; Apples.

TEA AND COFFEE: WINES.
—Iowa History News Flashes.

OUTDOOR ODDITIES
BY
WALT HARVEY

WISE GUY!

THE COMMON CROW IS CONSIDERED BY MOST SCIENTISTS TO BE THE MOST INTELLIGENT OF BIRDS

