

IOWA CONSERVATIONIST

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POLLUTION--THE PERENNIAL PROBLEM

THE CHANNEL CAT NOT A GADABOUT

By Harry M. Harrison
Fisheries Biologist

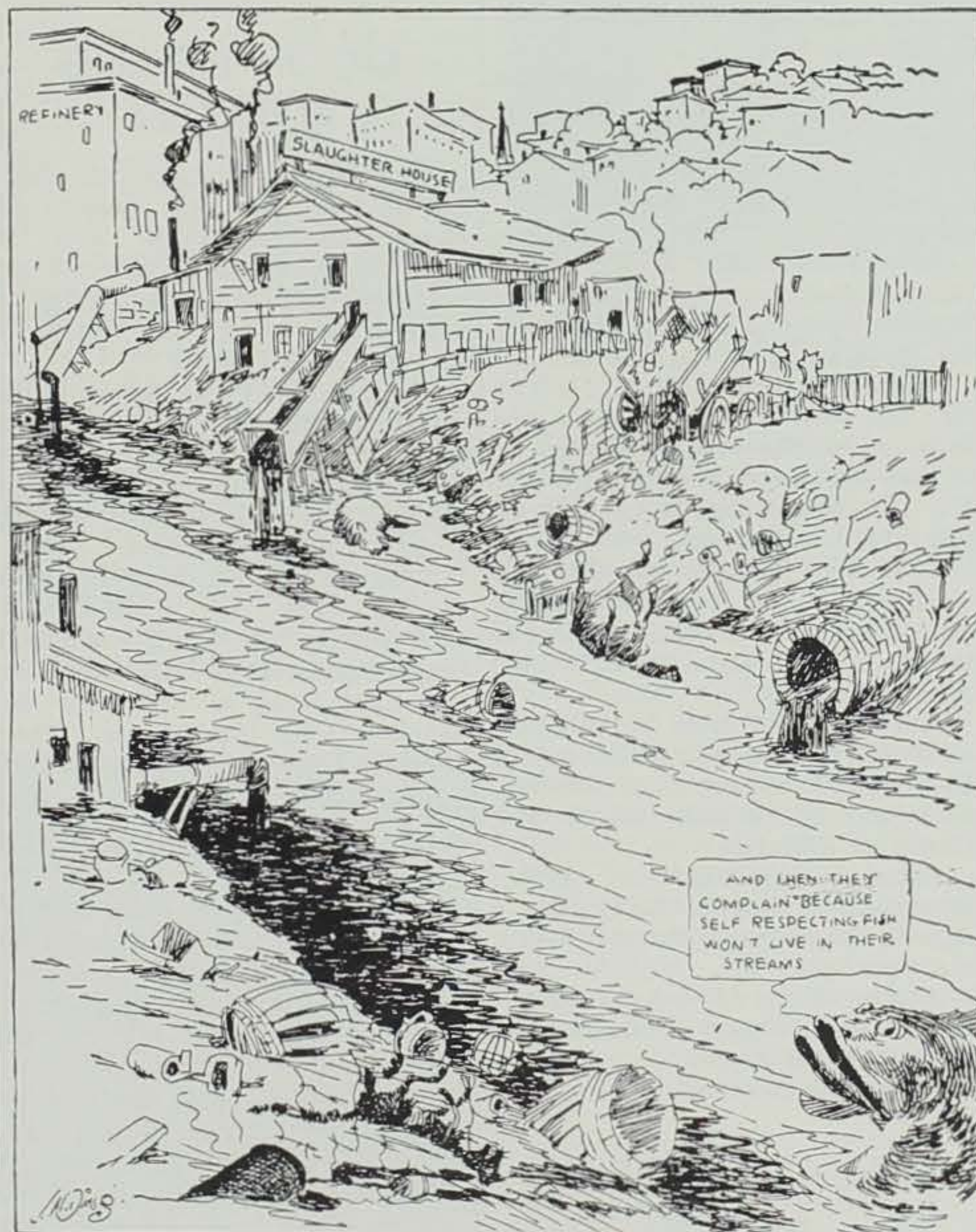
Unlike the individual that called home any place he hung his hat, home to a catfish is apparently something quite dear and anything but just a place to flaunt a fin. Be it ever so humble as a pile of driftwood, a submerged log or stump, beneath a large boulder or under an overhanging bank, it's home to a catfish. With a minimum of disturbance he is apt to stay within a rather limited territory and occupy the same castle, a monarch of all he surveys, for a long period of time.

Returns of tagged catfish in the Des Moines River System reveal that for the most part fish retaken as much as a year after the date of tagging have been caught within a few hundred yards of the point that they were released. One catfish taken from beneath a snag in the West Fork of the Des Moines River near Bradgate in the summer of 1946 was recaptured under the same snag a year later. Five other of our returned tags came from fish marked within a hundred yards of the point of capture and 90 per cent of our recaptures have been taken within ten miles of the point of restocking.

A notable exception to the stay close to home nature of the catfish was brought to light by one individual that had moved upstream a distance of more than sixty miles. This movement took place in 34 days and occurred at a time of high water.

In the case of all fish taken a distance of more than two miles from the point of release, all were caught during flood conditions. This probably means that catfish simply broaden the limits of their territories during floods. To sub-

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*What Man Does To One Of The Most Beautiful Gifts
Of Nature — The River*

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

FISH AND HIGH WATER

By Kenneth D. Carlander
Iowa State College

Floods and high water are extremely important in controlling the abundance of fish in Iowa streams, according to a study re-

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By Kenneth A. Reid

Executive Director Izaak Walton
League of America

No subject in the whole conservation field has received so much talk and so little action as water pollution. If there is any subject under the sun that has been investigated to death, it is water pollution—and yet, according to the latest version of Congressional action on so-called "pollution control bills," Congress would spend another \$126,500,000 over a five year period "to support and aid technical research to devise and perfect methods of treatment of industrial wastes which are not susceptible to known effective methods of treatment."

Here is a brief history. Twenty-six years ago the Izaak Walton League of America recognized water pollution as the No. 1 conservation problem needing attention. Twelve years ago, after much good work at the local and state level, we came to the realization that the sum total of water pollution had increased during that period. Then we initiated the present movement for Federal control with the introduction of the Lonergan bill in January, 1936.

At that time all of the industrial polluters lined up in solid opposition. They were aided and abetted by narrow, pussy-footing health authorities who seemed more study-minded than action conscious, who contended that state control was adequate and given a reasonable period, indicated as ten years, the states would solve the pollution problem.

Again another twelve years has elapsed and, again, under state control, we have a great increase of pollution throughout these United States.

It is idle to contend that state control is adequate when existing pollution is the result of state control or lack of it. We must be realists, and when we are we will

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Iowa Conservationist

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THE IOWA STATE CONSERVATION COMMISSION

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AUGUST COMMISSION ACTION

A meeting of the State Conservation Commission was held at the Clear Lake State Park Lodge, August 5 and 6.

Members present were: E. G. Trost, E. B. Gaunitz, A. C. Gingerich, F. W. Mattes, Mrs. Addison Parker, F. J. Poyneer, and J. D. Reynolds.

The commission:

Instructed the Director to notify the Secretary of Interior that Iowa desires to participate in Pittman-Robertson program for the fiscal year, 1948-49.

Approved contract presented by Director for employment of G. L. Ziemer's engineering services, beginning August 16.

Approved conveyance of deed to town of Coggan on 6.25 acre dam site on Buffalo Creek.

Granted permission to City of Decorah to remove the Bernatz Dam in the Upper Iowa River in Decorah.

Accepted the resignations of O. B. McCartney, License Clerk, effective August 15; and Grace Light, Audit Clerk, effective July 31.

Approved transfer of \$3,000 from the carry-over fund for the 1947-48 fiscal year to carry on the oak wilt eradication project in the McGregor Areas.

Referred to the Attorney General the matter of removal of the Smoky Hollow School House in the National Monument Tract.

Denied request of Concrete Materials and Construction Company of Cedar Rapids to return sand to the Raccoon River at their West Des Moines plant.

Denied application of Donald Hotchkiss to construct a commercial dock in the Bayside area at Clear Lake.

Authorized attendance of Superintendent of Forestry and Superintendent of the State Forest Nursery at a nurserymen's meeting to be held at Wisconsin Rapids, Wisconsin, September 6-15, subject to Executive Council approval.

Granted permit to Clayton Arnold for construction of a power line through Trappers Bay Reserve in Dickinson County.

Approved request of town of Lake View for permission to install a drain outlet at Black Hawk Lake in Sac County.

Authorized purchase of a pickup for development work on Lee-Van Buren Forest Area.

Granted permission as requested by the city of Council Bluffs for construction of a levee on the west side of Lake Manawa Area in Pottawattamie County.

Transferred Harold Morgan from position of conservation officer at Maquoketa Caves to Ft. Defiance Recreation Area and placed Jim Barnd in charge of Maquoketa Caves.

Approved transfer of \$8,000 from the carry-over 1947-48 fiscal year funds to Lake of Three Fires funds for spillway repairs.

Adopted administrative order No. 114 establishing the open seasons on rabbits and squirrels.

Adopted administrative order No. 115 establishing the season on migratory waterfowl.

Approved transfer of sufficient funds from the Fish and Game Contingency Fund for the repair of bridge in Rush Lake Park in Palo Alto County.

Authorized Director to issue permission to Izaak Walton League of Bellevue to construct a lowhead rock and brush dam across Mill Creek at Bellevue.

Granted permission to John Hardman of Panora to remove a dam in the Raccoon River in Guthrie County.

Approved revised budget of Lands and Waters Division for 1948-49 fiscal year.

Meeting adjourned.

JULY COMMISSION ACTION

A meeting of the State Conservation Commission was held at the Gull Point State Park Lodge on Lake Okoboji, July 11, 12, and 13, 1948.

Members present were E. B. Gaunitz, F. W. Mattes, F. J. Poyneer, J. D. Reynolds, A. C. Gingerich, and E. G. Trost.

The Commission:

Elected E. G. Trost to serve as Commission Chairman for the 1948-49 fiscal year.

Elected Mrs. Addison Parker to serve as Vice Chairman of the Commission for 1948-49 fiscal year.

Approved proposed recommen-



It is a treat to watch the thrill of anticipation and buck fever that grips so many of the fish day youngsters when they have their first bite. Jim Sherman Photo.

GOOD FISHING FOR KIDS

Kids hear their dads talk about fishing from the time they're old enough to understand. But too often those kids aren't taken along on those fishing trips, and grow up without knowing the thrill of catching a nice string.

The community of Avoca is doing something about that situation today—today is "Fish Day" there, and every boy and girl under 16 years of age in the vicinity will get a chance to catch a fish.

Through the efforts of the community club, the Conservation Commission has seined 5,000 bullheads from nearby Diamond Lake, and held them at the state fish hatchery until the big day. These 5,000 bullheads are being dumped

in a pond near Avoca this morning, ravenously hungry after their trip.

The conservation officer of that community estimates that half of those fish will be caught by the kids in four hours of fishing—from 1:00 p.m. to 5:00 p.m.

Parents are being urged to accompany their children, and may bait their hooks for them. But the kids must do the fishing.

It would be a treat to watch those proceedings this afternoon—the thrill of anticipation, the buck fever that will grip so many of them at the first bite, the concentration written into so many small faces as they wait, the pride of the fathers when the youngster hooks a good one.

The sport and plain good fellowship among men and children happens so seldom in these fast moving times—Rockwell City Advocate

dations to U. S. Fish and Wildlife Service for 1948 waterfowl season.

Adopted policy on river dam repair as recommended by Assistant Director.

Granted permit to City of Storm Lake to construct a well on state property near Storm Lake.

Granted permission to Red Cross Chapter of Cerro Gordo County to set aside an area on Clear Lake in which to hold swimming classes.

Designated three area headquarters as follows: District No. 1, Emmetsburg; District No. 2, Cedar Rapids; District No. 3, Osceola.

Authorized attendance of Superintendent of Public Relations at meeting of National Association of Conservation Education and Publicity at Leesville Lake, Ohio, September 13-19, subject to Executive Council approval.

Accepted the resignation of E. M. Wogen, District Supervisor of Officers, effective July 15.

Made appointments to vacant positions as follows: District Supervisors of Conservation Officers, K. M. Madden and Ward Garrett; District Supervisors of Game Man-

agement, Glen Yates and Earl Scherf.

Approved and executed with Pittman-Robertson funds the following options in Rice Lake bed in Worth and Winnebago counties: Ryan option, 6½ acres; Medlong option, 1 acre; Severson option, 1 acre; Daleiden option, 3.05 acres.

Authorized request to Department of Health to furnish sufficient inspectors to cooperate with the town of Orleans in the matter of pollution on Spirit Lake.

Entered into agreement with J. Stuart Bauch of Gladbrook for lease on the quarry at north end of Union Grove Lake in Tama County; revenue from royalty to be earmarked for lake improvement.

Authorized Commissioner Gaunitz and Chief of Division of Lands and Waters to inspect proposed electric line at Silver Lake in Dickinson County.

Approved and executed Sheets option for 3.08 acres in the Brown's Lake Area in Woodbury County.

Approved and executed Arnold option for 6.784 acres for access to

(Continued on page 69)

THE BROWN TROUT

Heddon Fish Flashes

The brown trout is a moody and rugged customer, feeding whenever the mood strikes him. However, its spectacular tactics and powerful surges make it worth whatever patience is required for its capture.

The brown trout grows to sizeable proportions because of its instinctive ability to elude anglers and it is this characteristic, plus the ability to adapt itself to many different types of water, that enables the brown trout to hold its own in heavily fished streams.

Where the rainbow and brook trout cannot exist, these same waters will prove entirely satisfactory to the hardy brown trout and because of this versatility it has become widely transplanted and extremely popular with both live and artificial bait users.

The color of the brown trout varies greatly with locality. Dark brown on upper part of body blending into a lighter brown on the sides. Heavily marked on the back with black spots, and red and black spots on the sides. Has larger scales than brook trout. In older male fish the under jaw has a tendency to become extended and overshoots the upper jaw, giving it the salmon characteristic of a hooked jaw.

Brown trout can live in warmer waters than most trout and even when the temperature of the water reaches 80 degrees they apparently suffer no major ill effects. The caution of the brown trout is developed to a greater degree than it is with most trouts and it is a habitual nocturnal feeder.

The brown trout is not one of America's native trout, but was introduced in 1883 from Europe, where it had been a favorite for many years. The original shipment of eggs was from a Von Behr of the German Fisheries Society, and for some time this trout was known as the Von Behr Trout or the German Trout. Later, shipments from Scotland of a sub species of brown trout known as Loch Leven Trout were transplanted in the West.

These have interbred with those of the first transplanting, thereby confusing the issue of the true brown trout. Due to the ease with which brown trout can be transplanted, their distribution is now practically world-wide. In this country they are now found in every state except the southernmost, and also in Canada.

The brown trout prefers larger waters than the brook trout, such as streams, rivers and lakes, and waters where there are submerged obstructions and overhanging banks. Browns frequent the lower ends of pools and like to lie beside or just ahead of rocks that protrude from the current.

The world's record brown trout, caught on rod and reel, was taken by W. Muri at Loch Awe, Scotland, in the year 1866. It weighed 39½ pounds. As with most species, the rule of, "the larger the water, the larger the fish" applies, for in small streams the average size will be one-half to one pound, while in larger streams and rivers it will reach one to four pounds, and seven to eight pounders are not rare.

When taken from cleaner, faster waters and properly prepared the

brown trout is excellent eating. The over-all average from all waters can be termed "fair."

Brown trout prefer flies and insects to a greater extent than most trout, but as they grow in size this diet is augmented with snails, crawfish, worms and minnows.

Wet and dry flies, streamer flies, spinner and fly combinations, float-

ing bass bugs and spinning lures are best lures. Larger brown trout will also strike the smaller midget-size bait-casting lures.

Although both wet and dry flies are favorites of fly fishermen, the brown trout is undoubtedly taken in greater numbers by live bait fishermen using casting rods, fly rods and cane poles.

"SAMMY," THE SKUNK, GETS TRIP BACK TO WILDWOOD



After being released in a timber area the wood pussy came out from under the anaesthetic. He had a hangover and a definite odor not his own. Jack Kennedy Photo.

Sammy, the vagabond skunk, couldn't pay for two nights lodging at the waterworks building.

He didn't have a "scent" with him when he departed for the wild woods Thursday afternoon escorted by two minions of wildlife law, Ward Garrett and Dave Steinberg.

Both officers promised that Sammy "would stay out of town."

Sometime Tuesday night while wandering around downtown Council Bluffs, Sammy fell into the basement areaway of the waterworks building.

Neighboring apartment dwellers reported something in the air that was definitely not Channel No. 5, and Wednesday morning found Sammy still snoozing in the bottom of the areaway.

Building Custodian John Hussen,

an unwilling host, placed a plank runway down into the areaway hoping that Sammy would take a hint and go, but Sammy failed to take the hint.

So Thursday afternoon Garrett and Steinberg threw caution to the winds and tackled the eviction job.

While a large group of brave spectators watched, mostly from behind closed windows, Garrett got Sammy groggy with chloroform.

Then while Sammy's reflexes were a little slow he was popped into a box.

"He'll have a hangover for a couple of days," commented Garrett just before he whisked the unwelcome little black and white visitor off to the hinterlands in an official car.—Council Bluffs Nonpareil.



When pussy fell in the well, Conservation Officer Ward Garrett was called to chloroform the little stinker. Jack Kennedy Photo.



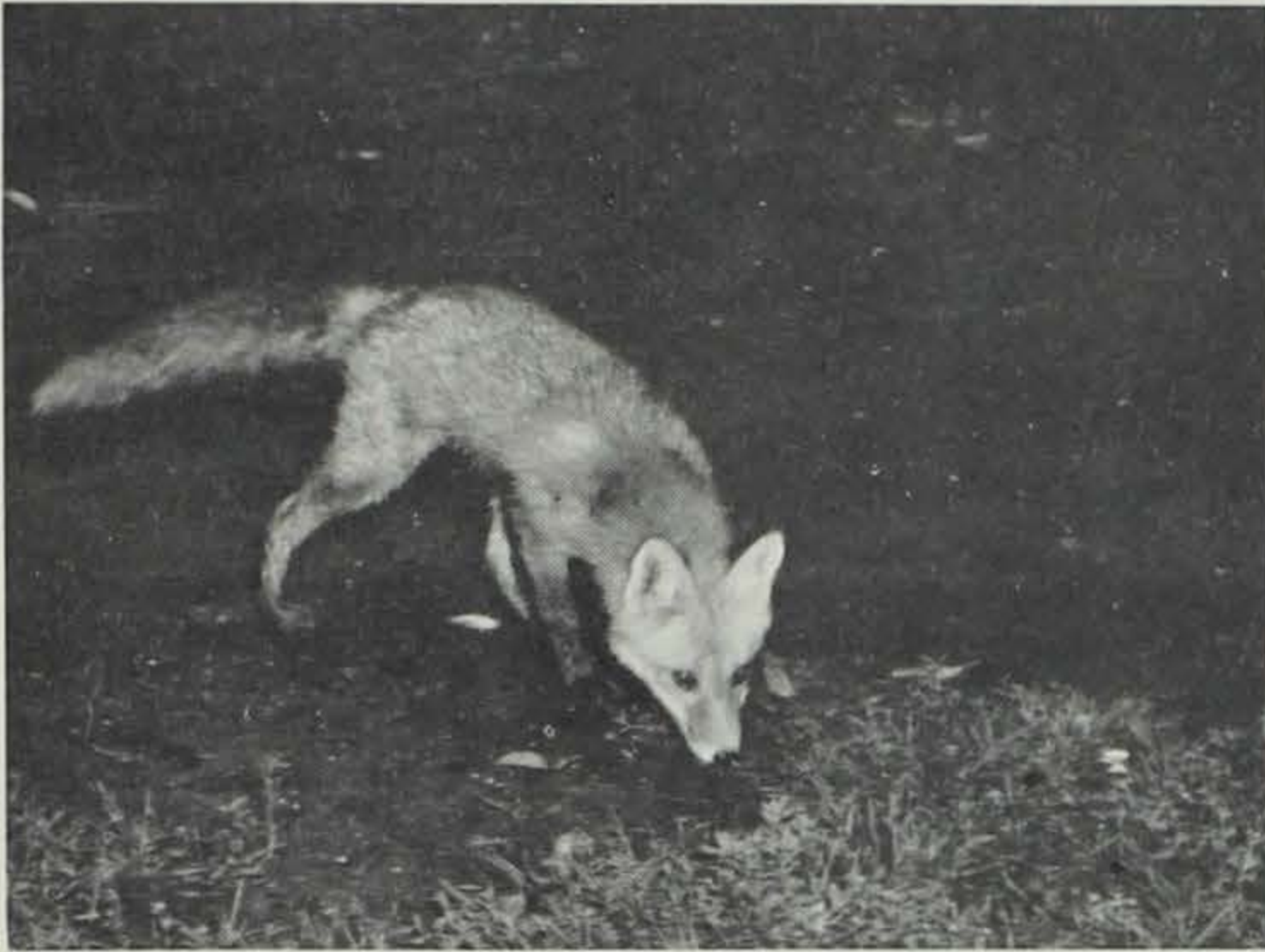
The brown trout is a moody customer, feeding whenever he feels the urge. This introduced fish can live in warmer waters than most trout and even when the temperature of the water reaches 80 degrees they apparently suffer no permanent injury. Jim Sherman Photo.

The first saw mill in Iowa was built on the Yellow River about three miles above the mouth in 1831 by troops from Fort Crawford. The mill was operated by First Lieutenant Jefferson Davis, who later became President of the Confederate States of America.

Nature has denied fish the pleasure of having a little shuteye. They sleep with their eyes open contrary to the method of porpoises and other mammals.

The alligator gar is the second largest fresh water fish in North America. The record size for this gar is 9 feet 8½ inches, weight 302 pounds.

In Europe conservation has been practiced on the farms and forests for many generations. There is a feeling in the European farmer that a man who lets his land erode is not only dishonoring his ancestors but also depriving his children of their proper heritage.



Before the advent of man small rodents were kept in balance by their natural enemies. One of the best of all the rodent hunters is the red fox.

RAT CONTROL AND WILDLIFE

By Everett B. Speaker
Superintendent of Biology

Beginning September 15th the deadly finger of seven state agencies is pointing at the world's most destructive mammal, the Norway rat, signaling the most intensive rat control program in history.

Throughout Hawkeye Land local governments, civic organizations, and countless individuals have taken up the cry, "Death to the rat." This war cry will be heard by hungry people the world around. A bumper harvest is assured this year and the surplus that does not go into the evil mouth of this hated animal will find its way into the shrunken bellies of starving humans in all quarters of the globe.

When we speak of rat control we naturally think of red squill rat poison, rat-proofing buildings and grain elevators, cleaning up rubbish piles and other mechanical methods of control.

Most of us give little thought to our native wildlife which is alerted to the problem of rodent control 365 days every year. Snakes, skunks, weasels, foxes, owls, and hawks scout the fields and woods by day and by night in the search of food. The number of rats, mice, ground squirrels and other rodents consumed annually by these predators is very important to our economy.

Before the advent of man, small rodents were kept in balance by their natural enemies. Since the Norway rat made its appearance on this continent and man's bulging granaries, old buildings, lumber piles and city trash heaps have fed and sheltered it, the rodent-eating wildlife creatures are losing ground in the "battle of the rats." They are still vastly important,

however, and without them our fight would be much more difficult.

Our allies in the rat battle are a motley crew and include many of the larger, more conspicuous snakes of Iowa. The fox snake, bullsnake, black and milk snakes take great delight in gliding into the rat nurseries where they consume large numbers of young. Even adult rats are not immune.

Some mammals, too, are effective weapons in this important campaign. Notable among these are the weasel, spotted skunk and red fox. The little spotted skunk or

WHAT IS RESEARCH?

"Research" is a high-hat word that scares a lot of people. It need not. It is rather simple. Essentially, it is nothing but a state of mind—a friendly, welcoming attitude toward change. Going out to look for a change instead of waiting for it to come. Research, for practical men, is an effort to do things better and not to be caught asleep at the switch. A research state of mind can apply to anything: Personal affairs or any kind of business, big or little. It is the problem-solving mind as contrasted with the let-well-enough alone mind. It is the composer mind instead of the fiddler mind. It is the "tomorrow" mind instead of the "yesterday" mind.

civit cat goes for rats like a kid does for candy. In winter months as much as 30 per cent of his diet is made up of rats.

The hawks and owls kill large numbers of rats each year, and when rats are abundant some of these birds of prey feed almost entirely upon them. The great horned owl and barn owl are especially good ratters and many times have shown their ability to catch rats even when they were comparatively scarce.

We cannot depend entirely upon wildlife creatures to control rat populations, but it is certain that they do play an important role in rat control, and in the current "Death to the rat" campaign they will be a silent but very valuable ally.

Wardens Tales

Shop Talk From the Field

Dan Nichols, conservation officer in charge of Muscatine and Louisa counties, writes:

"I had a rather amusing incident happen early this spring before the opening of the catfish season.

"One of my best fishermen stopped in to buy his new fishing license. He asked if I had seen him from the air when I was flying the Cedar River on duck patrol. He said he had a few bank lines out for carp and buffalo and was running them when he saw us fly over him. He went on to tell that he had released 42 catfish that had got on his lines.

"Later on in the conversation he said, 'You know what? There wasn't a darn one of those catfish had any eggs in them.' You should have heard him trying to get his foot out of his mouth."

Dave Fisher, in charge of Des Moines and Henry counties, relays this story of chicken-chasing rabbits:

"'Timid as a rabbit' may do for a simile, but rabbits are like people—when enough of them get together, they get rambunctious. If you don't think so, ask Delbert Keever.

"Delbert, who lives in Middletown, heard a commotion in his yard. Upon investigation, he found a white Leghorn rooster had escaped the chicken yard and was being chased all over the lawn by four wild rabbits. Delbert's appearance upset the balance of power, however, the rabbits reverting to type, were last seen picking them up and laying them down in the opposite direction."

L. F. Tellier, conservation officer in Dubuque County, writes:

"There can never be too much educational information put out on the why and wherefore of fish and game laws. Last Sunday I was accompanied by Harley Lawrence, a federal ranger, on regular fishing patrol work. We came upon a group of about ten boys. One of them was carrying a .22 rifle in one hand and a very dead American bittern in the other. I asked him what kind of a bird it was and he said he didn't know. Ranger Lawrence informed him that it was an American bittern and was protected by federal law.

"The boy became very excited and said, 'I didn't intend to violate any laws. I was just up the creek shooting fish and saw the bird and shot it.'

"I asked the boy if he had a hunting license. He replied, 'You don't have to have a license to shoot fish, do you?' I replied, 'No, I guess you're right because I don't know where you could get one, because shooting fish is also illegal.'"



Hawks and owls kill large numbers of rats each year. The great-horned owl is an especially good ratter and works 365 days each year. Jim Sherman Photo.



Of all the mortals that inhabit this strife torn old earth, there's nothing quite like a fisherman. Only his understanding wife and kids have the real lowdown on his fishing ability.

AH, THE FISHERMAN!

Of all the mortals that inhabit this strife-torn old earth of ours there's nothing quite like the fisherman. An ordinary individual under normal conditions, he can be a ball of fire or the worst bore at a gathering—it depends on how the fish are biting. He is alternately gentle as a spring lamb, or the most dangerous animal not in captivity—according to whether that "strike" was really a bass or a dagnabbed sunken log.

Wives and children, who know him as a peace-loving, lovable cuss around the home, cringe and quiver in fear when, returning from an unproductive trip, he roars in the negative when asked the stock question, "How was the fishing today?" They know he's lying, when, between snorts, he vows he's going to break up his gear or give it away. They know it will still be in the closet a day, a week or a month from now—awaiting his next fishing trip.

Big shot or little shot, he's endowed with the same fever when somebody mentions the fish are biting. The most important business conferences can be changed into "that's the best" or "that's the worst" fishing spot in creation simply by the injection of the word "fishing" into the discussion. Street sweeper and financial genius become one and the same personality—the fisherman—on the curbstone as the previous day's catch or the next day's prospects become the most important topic in the world.

Everybody knows he's a liar. There isn't a class of people in existence—not even a general—who hates to admit defeat like the guy with the fancy reel or swamp-cut cane pole. There's never been an ordinary-sized fish that didn't gain one ounce to five pounds when he described it. Only his understanding wife and kids have the real lowdown on his lousy fishing ability.

With all his faults, he's a pretty good sport. He's riding high now that the tarpon, king mackerel, cobia and other battlers are striking in Alabama's coastal waters and the bass and bream are hitting fairly well in the streams and lakes. He'll not be around the job for the next few days. Ah, the fisherman! God bless him! We need more like him in these torturous days.—**Tom Ford, Alabama Conservation.**

Windbreaks have long been advocated as protection against snow and cold winds. Conservationists are now urging their use as protection against wind erosion.

The first regular game wardens in America were the deer wardens of Massachusetts in 1739. New Hampshire had deer wardens two years later.

The beaver may appear quite harmless, but when aroused it can become one of the deadliest of fighters. A beaver can easily kill a dog, if the dog tries to battle him in the water.

You see the flash or smoke of a discharged rifle before you hear its report because light travels at 186,000 miles per second and sound, under average conditions, travels only 1,100 feet per second.

MULTIFLORA ROSE

The story of the Multiflora rose project has recently been carried in newspapers and magazines throughout the nation. The characteristics of the plant, and its usefulness both to game and to the farmer, have been related in previous articles carried by the Missouri Conservationist. Requests for plants and seed have been received in Missouri from all regions of the United States and from several foreign countries. Its appeal to farmers is due to the fact that the Multiflora rose is superior to any plant heretofore used for fencing. This type fence can be put in at a very low material and labor cost; it requires neither replacement nor maintenance, and it has none of the objectionable features of other plant fences. As for its attractiveness to wild game and songbirds—well, go out and examine this living fence, look in and around it—wildlife started using it soon after it was introduced.

Even this early in the program, considerable demand has been built up for Multiflora rose. In view of this, the Conservation Commission has decided to produce and sell planting stock at cost in order to hasten its widespread use. It has taken time to get into production. Seed that was scarce had to be secured and processed. We had to expand nursery facilities and grow the seedlings. In spite of this, 60,000 plants were produced this year. These plants are not for general distribution; they must be used for additional tests and demonstrations and to supply more seed. However, plants will soon be available in quantity.

In the spring of 1949, and during succeeding years, production and distribution is expected to exceed over 10,000,000 plants per year. Seedlings will be furnished to landowners at approximately \$4.00 per thousand. A thousand plants means a thousand feet of fence. That is economical fencing! As the demand for Multiflora rose increases, the facilities of the Commission's nursery will be expanded to meet it.

To illustrate the figures: 10,-



The Missouri Conservation Commission expects to produce 10 million multiflora rose plants per year at \$4.00 per thousand. Ten million plants mean almost 2,000 miles of fence rows.

COMMISSION...

(Continued from page 65)

Silver Lake in Dickinson County.

Authorized petition to Commerce Commission to request the Rock Island Railroad to increase the clearance of the railroad bridge over Five Island Lake in Palo Alto County.

Authorized recommendation to Executive Council to return Lepley Wayside Park in Hardin County to donors.

Ordered removal of a shack built by Charles Saner on Lucas-Monroe Forest Area.

Authorized building in Waubesa State Park be offered for sale to the highest bidder.

Authorized sale of house on Sunken Grove Area in Pocahontas County to highest bidder.

Authorized repairs be made to spillway at Lake Ahquabi in Warren County.

Authorized employment of outside engineers on a per diem basis.

Authorized sale of old residence in Wild Cat Den State Park to highest bidder.

Authorized attendance of Superintendent of Parks at annual convention of American Institute of Park Executives in Boston, September 29 to October 10, subject to Executive Council approval.

Authorized closing work area in Brown's Lake in Woodbury County to public.

Granted permit to H. H. Nelson for commercial dock at Arnolds Park Pier on West Okoboji.

Approved entering into negotiations for an easement for a roadway into Paint Creek Experimental Forest Area in Allamakee County for fire protection.

Meeting adjourned.

Raccoon gets its name from the fact that it washes its food before eating it. The name raccoon is a derivation of the Indian name "arathcone" meaning "the washer."

10,000,000 plants mean approximately 1,894 miles of cover and emergency food that quail and other wildlife otherwise would not have had.—The Missouri Conservationist.

POLLUTION . . .

(Continued from page 65)

realize that the inequalities of state laws and their unequal measure of enforcement will never get the job done. The old argument of industry that to enact or enforce a state law on pollution would penalize industry, put it at a competitive disadvantage with the industries of other states and drive it out of the state, has been effective both against the enactment of adequate state laws, and even after their enactment has largely prevented their enforcement.



Kenneth A. Reid, Executive Director, Izaak Walton League of America.

Chief Justice Holmes once said: "The only thing that makes taxes bearable is their uniformity," and in the same manner, the only thing that will make pollution control effective will be the uniformity of its application, and the only way we can bring about that uniformity is through some sort of Federal control, at least in the background.

Interstate compacts have also been strongly advocated by those desiring to avoid Federal control. In theory they are fine, but in practice they don't work. In spite of all the fanfare on interstate compacts, and particularly the Ohio Valley compact which has been many years in the making, if you will examine the wording you will find that they contain the veto power which nullifies all their other fine mandatory declarations against pollution. They are, in effect, another means or method of stalling off the Federal control that will inevitably be necessary to get the job on pollution done.

The present Congress had five pollution control bills to consider. At the hearings all responsible agencies having any interest in correcting water pollution agreed on two basic principles that should be included in any legislation adopted, and so testified at the hearings. These were:

1. A ban on the spread of pollution from new outlets, so that the line could be held while corrective

measures provided in the bill were applied to existing pollution.

2. While recognizing the primary responsibility and authority of the states to correct their own pollution, there must be in the background adequate Federal authority to be invoked if, and when, the states demonstrate either their inability or unwillingness to do their own job.

Only the Mundt bills, H. R. 123 and H. R. 3990, contained the first of these essentials. The Barkley bill, S. 418, which was the one that received action by Congress, was lacking in the ban on pollution from new outlets. When it was reported out of the Senate Public Works Committee, it carried an amendment hamstringing the Federal authority by requiring the consent of the affected state before the Federal authority could come in. This was bad enough, but after it had reposed for several months in a subcommittee of the House Public Works Committee, headed by Congressman Auchincloss of New Jersey, it emerged with other amendments that made it a liability instead of an asset for the correction of water pollution.

The objectionable House amendment declared it to be the policy of Congress "to support and aid technical research to devise and perfect methods of treatment of industrial wastes which are not susceptible to known effective methods of treatment." It is hard to believe that the House Committee members who framed this amendment were so naive as to believe that this amendment was needed to effect the purposes of the bill. The effect of this amendment is two-fold. 1. It admits that for the great majority of industrial wastes there are no known effective methods of treatment. It encourages industry to make this claim, even though it may, and in most cases does, know how to treat its own wastes. 2. It transfers from industry, where the responsibility belongs, to the government, where the responsibility does not belong, the job for discovery and development of industrial waste treatment methods.

The net effect is to give industry a legal alibi to sit back and do nothing, while the government at a total cost to the taxpayers over a five year period of \$126,500,000, attempts to duplicate the job of research in industrial waste treatment methods which in most cases has already been done by industry. This vicious amendment makes of the measure an industrial polluter's protective measure and grants them a moratorium for continuing present polluting practices for at least another five years. Congressmen and Senators who prated about economy and still approved such a measure should hang their heads in shame.

The bill, as passed by the Senate, was weak and inadequate, but it was a very small step forward. Conservationists were willing to

accept it as a start with the full knowledge that it would need to be strengthened in future Congresses to make it really work. But, the House amendment put a totally different complexion on the whole bill. Instead of a small step forward, it was a big step backward, postponing for at least five years any real corrective action.

We have had studies and investigation on water pollution for fifty years. Tons of unused documents are gathering dust in hidden archives. Only a few years ago Congress spent \$648,000 of the taxpayers' money to make a comprehensive water pollution survey of the Ohio River—yet the proposed bill, instead of taking action on that survey would authorize another survey and a laboratory at an expense of four million dollars.

The time for stalling is ended. The remedy for the problem is simple. Congress should face the issue squarely and enact a simple law, embodying the two agreed principles mentioned above. Then it would find that the many so-called "unsolved problems" would be

quickly solved, and that no one would be hurt, for all the inequalities existing today by reason of unequal state laws, or their unequal enforcement, would evaporate into thin air. All industries in interstate competition would be on a level competitive basis. Their costs of treatment would be entered as a legitimate cost in the manufacture of the product and the public would pay the bill in the cost of the finished product.

As a matter of fact, the public would gladly pay that bill and it would not cost the American public a thin dime in the final analysis because we are already paying more in national losses by reason of having polluted waters than it would cost to correct them. The public pays the bill anyway, and by treating pollution at the source, or at the outfall of a sewer, rather than at the intake of a water treatment plant, the public would get as a clear dividend thousands of miles of clean and usable streams, instead of merely bacteriologically safe fluid at the water faucet, as under the present system.



Only one in a thousand duck hunters returned their waterfowl scorecard report to the U. S. Fish and Wildlife Service after the close of the 1947 season. Jim Sherman Photo.

Waterfowl Scorecard Results Disheartening

Only one duck hunter in a thousand returned a waterfowl scorecard report to the U. S. Fish and Wildlife Service after the 1947 season, the Wildlife Management Institute stated today. This sportsmen's response is disheartening, Director Albert M. Day stated recently, especially when statistical data are needed vitally. Only 1,962 hunters filed cards in spite of the widespread publicity campaign by the sporting and conservation magazines, which often contributed space at the expense of paid advertising. The response was so poor and the percentage of returns so small that the figures obtained have little value.

Fish continue to grow as long as they live and they can never be considered as "full grown." With sufficient food a fish will grow until he dies although growth is much more rapid when he is young.

SQUIRREL AND RABBIT SEASONS SET

The Conservation Commission announces the opening of the squirrel and rabbit hunting seasons for September 15, with the open season on rabbits to continue through January 31, and squirrels being legal game through November 15. The dates, recommended by Commission biologists, were set by the Commission under provisions of the law, passed by the Fifty-second General Assembly, which authorizes setting open season dates for any period between September 1 and March 1.

The daily bag limit on squirrels was set at six with possession limit of twelve. The daily bag limit on rabbits is set at ten with no possession limit. The squirrel season was shortened 30 days, the rabbit season shortened 44 days by the Commission action.

The common American pocket gopher has fur-lined pockets in his cheeks.



Clipped adipose fins indicate tagged catfish. Small numbered metal tags may be found in the abdominal cavity when cleaning the fish. Their return to the Conservation Commission provides valuable information on catfish habits. Jim Sherman Photo.

CHANNEL CAT . . .

(Continued from page 65)

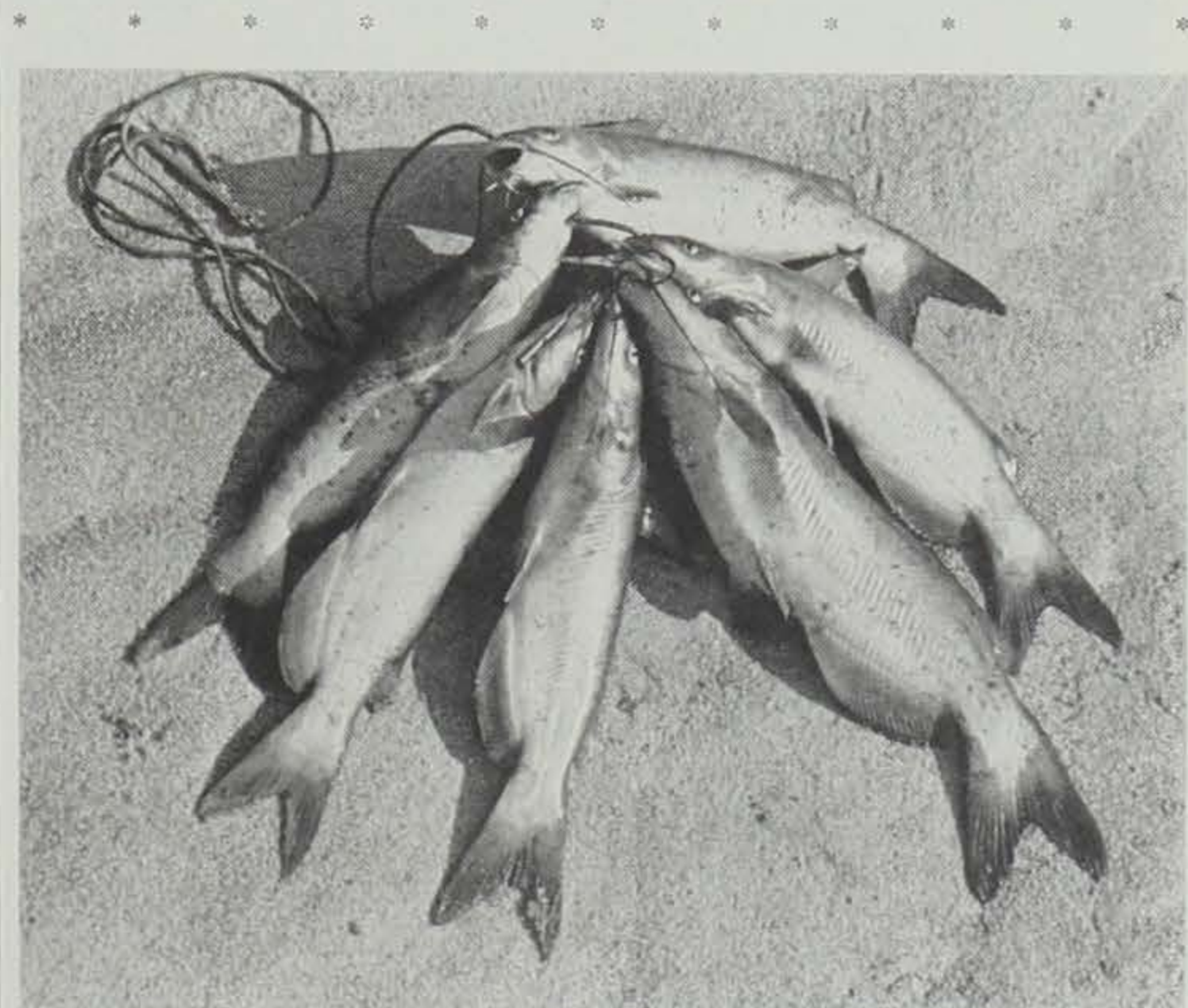
stantiate this belief, we have taken large catfish several miles up tributary streams that are normally dry except during protracted heavy rains, and indicates, at least, that catfish are not adverse to invading new grounds under the protective cover offered by turbid flood waters.

Of the tagged fish retaken, only five had moved far enough from the point of stocking to indicate anything of a migration. Three fish had moved upstream and the other two downstream. Except for the individual mentioned above that had moved upstream approximately sixty miles, the other four catfish were recaptured a distance of about ten miles from the point of release. These movements all took place during spring and early summer months.

Early in our grades we are taught of the phenomenal homing instincts of the salmon, and those of us who have chosen to go deeper into the study of fishes know of the powerful homing instincts of the eel which are immeasurably stronger than those of the salmon, but what of the homing instinct of the channel catfish? Much more time will be required to get at the crux of this problem. However, we have done some work along this

line, and work carried on in the state of West Virginia gives some indications of what home may mean in terms of catfish thinking.

In the Des Moines River work, we have moved catfish downstream about five miles below the point of capture. Some of these same



Contrary to popular opinion, recent research by biologist Harry Harrison indicates that channel catfish, as a rule, do not migrate but may generally be found for at least a year within a few hundred yards of their original capture location. Jim Sherman Photo.

fish were recaptured fifteen hours later back at the place of initial capture.

In the West Virginia studies, adult catfish were taken from Port Clinton, Ohio, on Lake Erie, tagged and released in two tributary streams of the Ohio River. In all, 99 fish were retaken. Ten catfish had moved upstream and the remaining 89 downstream. The longest upstream migration was 44 miles while the greatest downstream movement was 235 miles. Here we have an instance where catfish have been moved to entirely different body of water with an attendant increase in the amount of movement. With the data at hand, we can't possibly know what caused these extreme movements. We wonder if perhaps these fish were not a little frustrated and trying to return to their native waters.

Readers of the "Iowa Conservationist" will remember that we ran an article last spring concerning our catfish tagging work. We would like to remind all catfishermen who fish the Des Moines, Raccoon and Boone rivers to be on the lookout for tagged catfish. Internal tags have been used, and you will be able to recognize tagged fish by the fact that the small fatty (adipose) fin which is found on the catfish's back between the tail and large spiny fin will be missing. The tags are of metal, small and numbered, and if the adipose is gone from the catfish these tags will be found in among the intestine.

Return these tags together with the length, width, date and place of capture to your local conservation officer or directly to the Conservation Commission office in Des Moines. Return of these tags provides us with valuable information and with this information the Conservation Commission will be bet-

IMPORTANT NEW BOOK

If the number of new conservation books of outstanding merit is any indication, complacent Americans are beginning to realize the importance and significance of conservation.

Edward H. Graham's "The Land and Wildlife," Fairfield Osborn's "Our Plundered Planet," now William Vogt's "Road to Survival" are professional conservationists' answer to the average man's question, "What's this conservation business all about anyway?"

"Road to Survival" by William Vogt, with an introduction by Bernard M. Baruch, published by William Sloan Associates, New York, at \$4.00 is raw red beef. The author points out with disturbing clarity the world's sky-rocketing birthrate and the world-wide destruction of natural resources. He stresses the fact that even if its birthrate were stabilized and all remaining resources were used wisely, the earth would not produce enough food to still the cries of all the hungry.

Vogt's "Road" is not a primrose path and one wonders if the genus homo is physically, mentally, and emotionally equipped to follow his marked highway to survival.

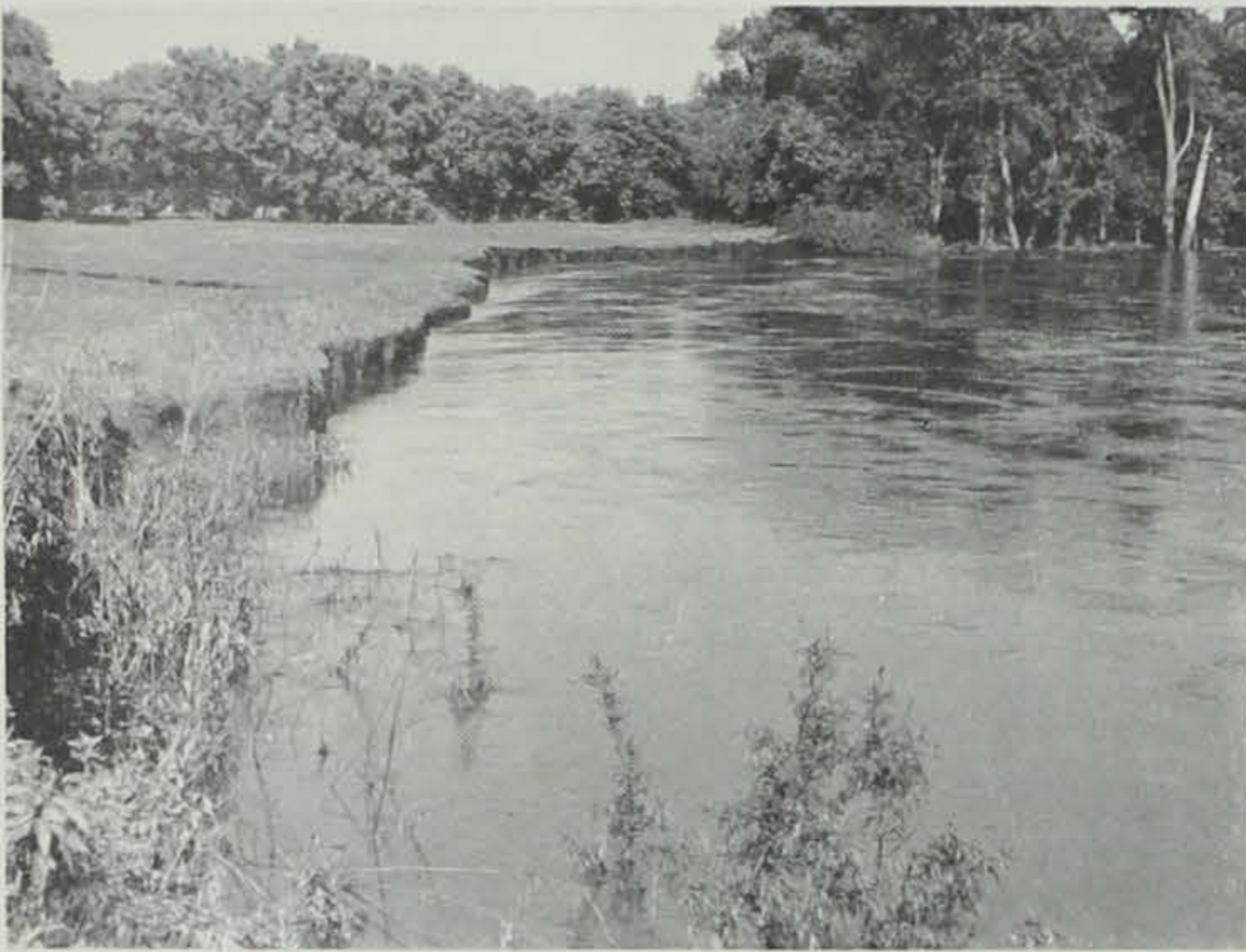
"Road to Survival" is another must for the library of every serious minded citizen.

ter able to manage Iowa's catfish resources.

PRIVILEGE, PROMISE AND RESPONSIBILITY

When you buy a hunting or a fishing license, or a duck stamp, you purchase a privilege, a promise and a responsibility. Wildlife is public property to be cultured, maintained, and used in the best public interest: wildlife belongs to no one of us, yet to us all. Your license entitles you to hunt or fish in reasonable times under proper regulation. **This is the privilege.** Your license money is used to perpetuate wildlife and enhance your opportunity to leave in trust for the next generation the same free hunting and fishing privileges you now enjoy. **This is the promise.** Your license requires that you obey the law, that you commit no crime against society by hunting or fishing contrary to regulation or at unseasonable times, and that you strive constructively for proper development and wise use of this nation's wildlife. **This is the responsibility.**

Both the privilege and the promise depend upon the responsibility. Are you doing your share?—Leonard Foote, Field Representative Wildlife Management Institute.



Most of our game fishes spawn in the spring and early summer, and June floods are probably important factors in limiting abundance of walleyes channel cats, smallmouth bass, and other fishes. Jim Sherman Photo.

HIGH WATER . . .

(Continued from page 65)

For over two years, Dr. Starrett collected minnows from the Des Moines River near Fraser and the Ledges State Park. He seined the rivers at all hours of day and night, since he found that some species could be readily collected only at certain times of the day. Most of the time the minnows were identified, carefully measured, and returned to the river unharmed. From the thousands of measurements it was possible to determine the ages of the fish, with considerable accuracy.

It soon became obvious that the fish population in the river changed from year to year. In some years certain minnows were abundant, and in other years, these same species were scarce. It was found that the most abundant minnows were those that spawn in July and August. The water is usually low in the Des Moines River during these months, and spawning is successful for these species. In 1945, however, there was a flood in late July and August, and very few young fishes of these late spawning species survived.

Most Iowa floods are in June and for this reason the early spawning fishes are usually not very successful in the rivers. Most of our game fishes spawn in the spring and early summer and the June floods are probably important factors limiting the abundance of walleyes or pikeperch, channel catfish, smallmouth bass and other fishes.

A year such as this, with no spring floods, may produce large numbers of fish which will maintain the fish population for several years. Reports from around the state indicate that there are large numbers of young bass and channel catfish in many of the rivers. Barring accidents fishing for these species should be particularly good in a couple of years.

The study by Dr. Starrett also showed that the Des Moines River has comparatively few microcrustacea in the spring. These small relatives of the crayfish and crabs form an important item of food for young pikeperch in most lakes and ponds. Their scarcity in the river may further limit the numbers of pikeperch or walleyes which survive.

Several species of minnows

which spawn early in the summer migrate up tributary streams to escape the floods. The tributary streams are probably also very important in maintaining the smallmouth bass, channel catfish, and suckers in the river. As the season progresses, these young fish come down into the rivers. Certain species of minnows are found in large numbers in the river only during the late summer, fall, and winter.

The effect of floods upon minnow populations is modified by the average length of life of the minnows. Some species of minnows are short-lived and seldom get over two years old. If floods come during the spawning season, for two years in a row, the species may be almost completely "wiped out." Other minnows which live longer are not so vulnerable and are capable of surviving if they have a successful spawning season every second or third year.

Dr. Starrett found that several species of minnows have a special adaptation for life in rivers which permits them to survive even though floods are fairly common. These species are "intermittent" spawners; that is, they spawn at irregular intervals throughout the summer. Then, some of the eggs and young survive even if floods do

destroy the spawn once or twice during a summer.

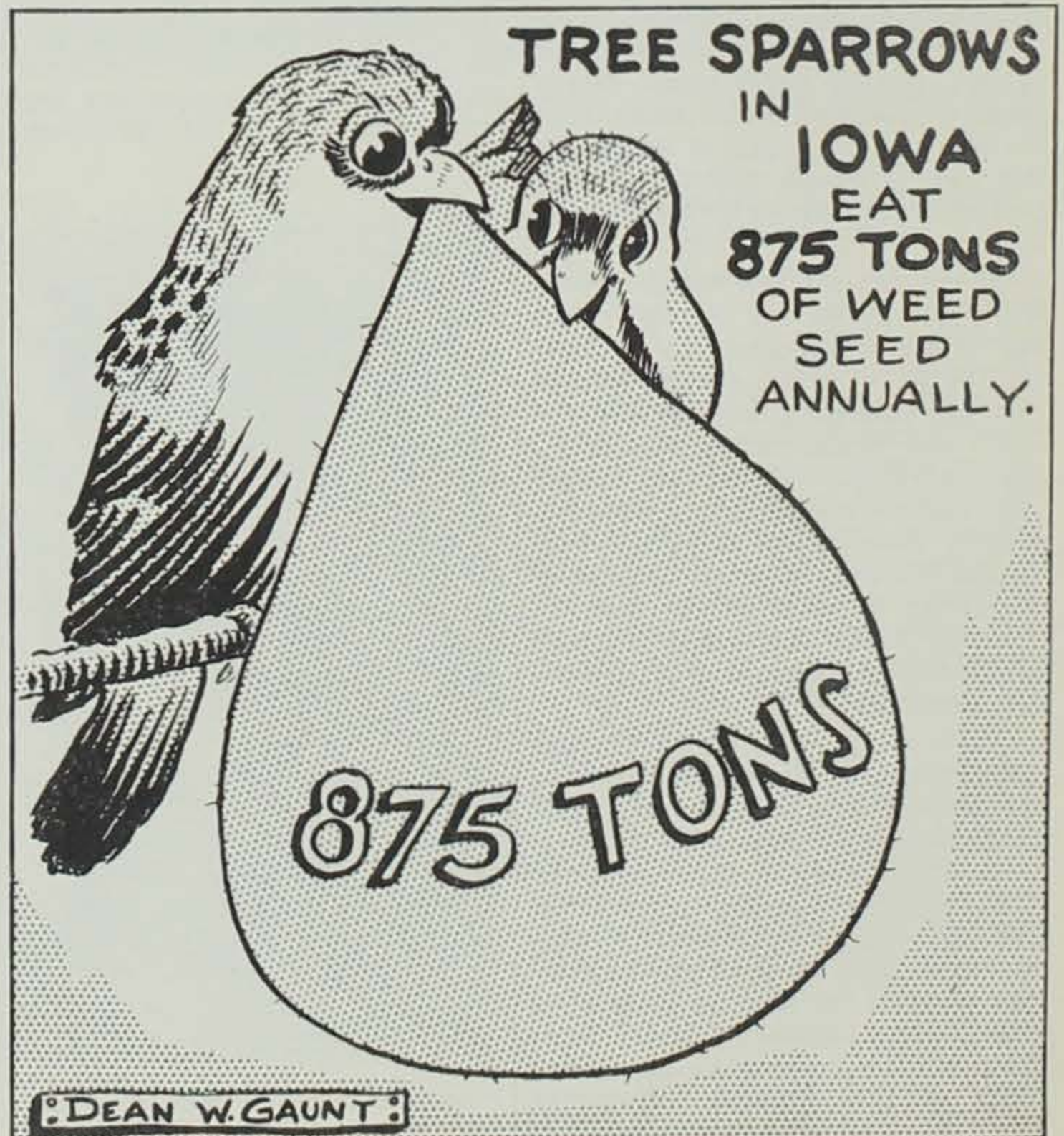
This fall the minnow and small fish population in many rivers throughout the state will be studied by biologists from the Iowa Cooperative Fishery Research Unit. It is planned to investigate these rivers each fall for a number of years to determine how the floods and other factors affect the production of fish. This year's data should be particularly interesting since the water level was unusually stable throughout the spring and summer.

CORRECTION

In the July issue of the "Conservationist" the price for Fairfield Osborne's new book, "Our Plundered Planet," was given as \$3.50. The correct price for this publication is \$2.50. It may be purchased from Little, Brown Company, Boston.

The whitetail is the American deer of the past, and the American deer of the future. I have no doubt that, whatever other species drop out of the hard fight, the whitetail will flourish in all the region of the plough, as long as there are sentiments and laws to give it a time of respite each year during its breeding season.—Earnest Thompson Seton.

OUTDOOR ODDITIES BY WALT HARVEY



Minnows that spawn in July and August when water is usually low in the inland streams generally have the best chance to build up high populations.