IOWA CONSERVATIONIST

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Some Comments On:

THE MOURNING DOVE PROPOSAL

Angling Success On The Des Moines

Jim Schmulbach
Iowa Cooperative Fisheries Research Unit, Iowa State College

Since there are few large lakes or reservoirs in central Iowa, the creeks and rivers of this section of the state provide a lot of fishing. One of the more important rivers, from the standpoint of angling, is the Des Moines.

To get an estimate of the amount of fishing, the Iowa Cooperative Fisheries Research Unit at Iowa State College last year initiated an intensive creel census survey on a seven-mile section of the Des Moines River in Boone County, lying between the lowhead dam at Fraser and the waterworks dam at Boone. The summer creel census lasted seven weeks, from July 7 to August 24, 1957. This seven-mile section of the river is believed to be typical Des Moines River habitat for central Iowa.

Fishermen along this section of the river were counted according to a planned schedule devised by a statistical sampling scheme. Counts of the fishermen were made on every day of the week and during scheduled hours. During each count, the fishermen were asked

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George Tovey Photo.

The really well-equipped hunter in Iowa will want to include a copy of "Iowa's Public Hunting Areas" with the rest of his essential equipment. The folder lists locations of all public hunting areas and describes each, including the kinds available. Copies are free from the State Conservation Commission.

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New Hunting Regulations Are Set

Hunting and trapping regulations for 1958-59 have been set by the State Conservation Commission with several significant changes for the Iowa nimrod.

Most important of the new regulations are:

. . . A new 10:00 a.m. daily shooting hour for pheasants and Hungarian partridge.

. . . An increase to six and 12 to the possession limits of pheasants and quail, respectively.

. . . The addition of one-half hour, or until 5:30 p.m. daily, to the daily hunting time for bow and arrow deer hunters.

. . . An extension of 15 days to the 1958 squirrel season.

. . . The addition of Woodbury County to the short zone quail list.

The 1958-59 regulations in detail:

DEER

As in former years, the 1958 Iowa deer season is for Iowa residents only. Deer of any age or sex may be taken with shotgun only over the entire state from December 13, 1958, to December 14, 1958, both dates inclusive; and by bow and arrow only throughout Iowa from November 1, 1958, to November 30, 1958, both dates inclusive. The daily bag limit is one (1) deer, possession limit, one (1) deer; and season limit one (1) deer.

Shooting hours each open day for gun hunters will be from 8:00 a.m. to 4:00 p.m.; for bow hunters, 6:30 a.m. to 5:30 p.m.

Deer may be taken with 10, 12, 16 and 20-gauge shotguns with rifled slugs only, and by bows of 40 pound pull or more with broad head arrows only. Crossbows or any mechanically operated bow is prohibited. The use of dogs, domestic animals, cars, aircraft, or any mechanical conveyance, or the use of salt or bait, also is prohibited.

A metal locking seal bearing

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Bruce F. Stiles
Director

Twenty-nine of our 48 states have an open season on mourning doves. As a migratory bird the dove comes under the general control of the Bureau of Sport Fisheries and Wildlife the same as migratory waterfowl. The Bureau makes certain open seasons available to the states. The states may reject or shorten, but may not lengthen these seasons. Bag limits are uniform over the entire open area and are set as ten per day. States may limit this, but may not increase it. Latest available figures show that over 19 million mourning doves are taken annually by hunters in the 29 states allowing dove hunting.

National studies reveal that only four to ten per cent of the total adult dove mortality is caused by hunting, yet dove hunters pay 13 per cent of the total amount of Pittman-Robertson funds that are used for wildlife research, habitat development and restoration work.

There are those who object to an open season on mourning doves, but there are also those who object to an open season on quail, pheasants, rabbits and squirrels. The State Conservation Commission considers an objection based upon pure sentiment a valid objection. Everyone is entitled to his opinion, and an objection based upon sentimentality is certainly more valid than a pseudo-scientific objection that is based on misinformation or attempts to mislead others.

Doves are sometimes represented as insect-eating birds. Nothing could be further from the truth. Doves are 95 to 100 per cent granivorous, but do not constitute an effective control on any known weed species. Statements have been made indicating that the dove is a "holy bird." This is more than misleading, for the dove referred to in the Bible was actually the European Rock Pigeon, an ancestor of today's barn pigeon.

Differences of opinion between people of like interests are most often caused by arriving at con-

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HERSCHEL C. LOVELESS, Governor
BRUCE STILES, Director
KEITH SUTHERLAND, Editor
EVELYN BOUCHER, Associate Editor

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NEW COMMISSION STUDIES RECREATION

President Eisenhower has signed into law a bill creating the Outdoor Recreation Resources Review Commission (ORRR).

Before delivery of the proposal to the President's desk for signature, it has passed both houses of Congress without a dissenting vote. The new bill establishes a commission composed of four Senators and four Congressmen appointed on a bi-partisan basis, and seven citizen commissioners, including the chairman, appointed by the President.

It also provides for an advisory council liaison officers from each of the federal bureaus concerned with public recreation programs, plus 25 citizens representing various interests and agencies across the country equally concerned with outdoor recreation.

As soon as appointments are made and appropriations voted, the commission will begin a study of the nation's present recreation resources. In 1961 the commission will make recommendations to the President and Congress what programs should be undertaken by federal, state and private agencies to meet future recreational needs.

"The program is primarily a study to learn the facts," J. W. Penfold, Izaak Walton League of America conservation director, said. The Izaak Walton League is the originator of the ORRR proposal.

"We need a full inventory and evaluation of existing outdoor recreation resources. We need to have a much clearer picture of what we will need in the future to meet the requirements of an estimated 227 million Americans by 1975 and 300 million by the year 2000. If we know what we have now, and what we will need in the future, we can then do a better job at federal, state, local and private levels of planning to meet needs," Penfold said.

In a speech supporting the ORRR proposal made June 16 before Congress, Congressman Wayne N. Aspinall (D-Colo.) cited the following statistics regarding the growth in public recreation use:

"For example, recreation use of the national forests increased from 6 million visits in 1926 to 53 million visits in 1956.

The Park Service recorded 22 million visitors in 1946 and in excess of 59 million in 1957.

In the State Park systems we find the same trend—an increase from 92 million visits in 1946 to over 215 million in 1957. Recreation visits to the TVA lakes jumped over 10 million to 40 million annually in the past 10 years. The story is no different at our western reclamation reservoirs.

A hunting and fishing survey made by the Fish and Wildlife Service in 1955 showed that of 118 million individuals aged 12 or over in the United States, 25 million hunt, fish, or engage in both sports. The survey found also that they spent $3 billion annually in pursuit of hunting and fishing recreation. It is estimated the annual total man-days spent hunting and fishing will double in the next 12 years.

The National Association of Engine and Boat Manufacturers tell us that pleasure boats have increased from 2½ million in 1947 to nearly 6 million in 1956, with more than 28 million persons having participated in recreational boating in 1957 and spending 1¼ billion dollars in the process.

It is reported that 66 million people now seek outdoor recreation in bird watching, wildlife photography, and other forms of nature study.

Wildlife refuge, far too inadequate in number, size and location, are hosts to over 7 million visitors per year with the increase gauge at 7½ per cent per year. Incidentally, there has yet been made no substantial program for handling the vast crowds of interested citizens visiting our Federal refuges for recreational purposes. The increase is ever upward and in every phase of outdoor recreation.

In studying this problem the committee noted that the expanding population and economy will continue to deplete the Nation's outdoor recreation resources and opportunities unless measures are taken to preserve and improve those which remain and, where practical, to salvage, rehabilitate, and thereafter protect such land and water areas as may provide the additional outdoor recreation required for the future. It is imperative that the outdoor recreation resources of the United States be accorded the same recognition and consideration as all other resources which are essential to the economic and social welfare of the nation. Outdoor recreation resource use and development must be evaluated and carefully planned on a long-range basis. We can no longer afford the extravagance of the piecemeal planning and indifference which has prevailed in the past. A nation-wide inventory and evaluation of the Nation's outdoor recreation resources and opportunities is a prerequisite to the sound planning of long-range programs. The legislation now before this body will create the facility and the means for making, on a nation-wide, region-by-region, State-by-State basis such an inventory and evaluation of our remaining outdoor recreation resources. It will provide the means for full study of the trends in order that reliable forecasts may be made as to what our future requirements will be."

Editorially Speaking

Lester F. Faber
Assistant Director

QUALITATIVE BANKRUPTCY

"Barring love and war, few enterprises are undertaken with such abandon, or by such diverse individuals, or with so paradoxical a mixture of appetite and altruism, as that group of avocations known as outdoor recreation." Such were the views of Aldo Leopold in the book "The Sand County Almanac" of some 10 years ago.

Outdoor recreation is not a passing fancy. The basic urge to partake in the wonders of nature is born within most of us. Millions of people on this continent are searching for *something* that was once common in the back pasture. People, by their actions, indicate there is *something* to be found in the outdoors and this *something* must be found.

To him who seeks in the woods and hills only those results obtainable from travel or golf the present situation is fairly acceptable. To him who seeks something more, to him who is following some inherent force, to him who seeks to understand nature, outdoor recreation has become a process of seeking relief from the frustrations of our present form of society.

The needs of this army of recreation seekers have not and are not being met. Laws have been passed attempting to evenly divide fish and game crops, recreation lands are being purchased and developed. Education and research are being used as tools to help cope with the insatiable need for healthful physical and mental well being.

Public agencies and private persons alike have been trying to produce the facilities needed by present human populations. The main limiting factors in their efforts are the people whom they are trying to serve.

The pressure of modern society is producing an ever-growing number of people in whom the capacity for isolation in nature, the ability to understand nature and the desire to "take part" is underdeveloped or, perhaps, lost. These are the people who consume, but never create, outdoor recreation.

We are a long way from the Daniel Boone, who understood the laws of nature by necessity. We are a long way from the time when most men worked closely with the soil. We have very little wilderness left and the pressure of modern society produces an ever-growing number of people who search for satisfaction available only in the out-of-doors, but use the "change from office routine" as their reason for their effort.

It is the major growth of populations without a corresponding understanding of nature that threatens qualitative bankruptcy of true outdoor recreation.

STATE TREE VOTING AT IOWA FAIR

Ballot boxes will be available at two locations on the Iowa State fairgrounds during fair week, August 22-August 31, so that fair visitors may indicate their preference for a State Tree of Iowa.

One of the ballot boxes will be located at the State Horticulture Society's exhibit in the Agricultural Building. The other will be located at the State Conservation Commission's Exhibit Building just inside the Grand Avenue entrance. Ballots will be provided at each polling place for the use of voters.

Iowans have indicated preference for eight tree species. The State Fair balloting will help decide which of the eight is the most popular. The eight species include Black Walnut, White Oak, Black Maple, Red Oak, Basswood, Hackberry, Green Ash and Bur Oak.

The Horticulture Society and Conservation Commission are conducting the balloting as an aid to the Plant Iowa Committee. The Committee will use results of the State Fair balloting as a basis for recommendations they will present to the next legislature regarding adoption of an official State Tree.

All Photos by George Tovey.

Fisheries biologist Tom Moen makes injection of pituitary in female catfish, being held by Fish Culturist Ernie Thune. The injections make for quality young because reproduction from select catfish adults is better controlled.

* * * * * * * * * * *

Better Catfish By:

IMPROVING ON NATURE

Tom Moen
Fisheries Biologist
and
Ernie Thune
Fish Culturist

The management of warm water fishes has undergone considerable change in the last two decades. The value and use of hatchery-reared fish have been under close scrutiny as well as other management practices such as adjusting catch and season limits.

The present Iowa fish management policy is to stock hatchery-reared fish only in new water and only predacious species in lakes or streams currently producing moderate to good fishing.

In Iowa, the channel catfish has not been a conventional hatchery reared species. In fact, the State Fish Hatchery at Humboldt is the only station operated by the Conservation Commission where hatchery work on this species is conducted. Hatchery investigations on channel catfish culture were started at the Humboldt Hatchery in 1947 with the primary intention of developing techniques, ascertain costs and feasibility, not as a full-scale operation to produce numbers alone.

Methods have been changed and improved each year with some rather revolutionary changes taking place in 1957 and 1958. But before we discuss the new ideas one should, perhaps, become acquainted with the more normal or routine methods.

First of all, the fish culturist must secure his adult or "brood" fish. This he accomplishes by trapping the adults from one of the larger rivers a few weeks prior to their normal spawning time in late June and July. From the trap catches he places 20 to 25 pair in each hatchery pond of one-fourth to one-half acre. Knowing the habits of these fish he has specially prepared the pond to the fishes' liking.

A catfish likes to build a nest and bring off the young in the seclusion of an old sunken barrel, keg, tile or hollow log. So the fish culturist places a number of nail kegs along the edge of the pond at a depth of about two feet, the open end facing the center of the pond. He also places about two quarts of gravel in each keg. The catfish are then allowed to select their own nests.

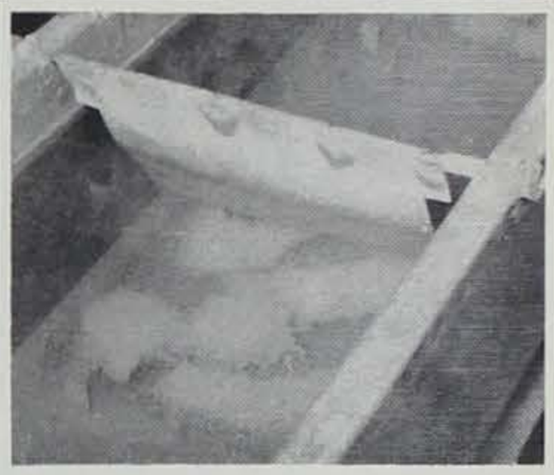
As in the members of the sunfish family the male catfish has all the housekeeping chores to do. He prepares the nest by a thorough housecleaning of the keg, leaving just the right amount of gravel and no silt in the keg. The male then hunts up his choice of females and lets her know he has an excellent nest site available. But when the eggs are deposited and fertilized the female is again free to lead a life of leisure. The male hovers over the eggs like the typical old setting hen, providing aeration with his fins and protecting the eggs from possible enemies.

By making frequent visits to each nail keg the eggs are usually found shortly after they have been deposited. Once the eggs are located, the date and number of the keg are recorded, thus the hatchery operator can return on just the right day and remove the fry, usually seven days later, depending, of course, on water temperature. These fry are placed in feeding troughs and hand fed specially prepared foods until they are ready for their trip by truck to suitable natural waters.

The above paragraphs present a condensed version of the normal pond culture in Iowa, but very few procedures are as simple as they sound and catfish rearing has its share of problems. One of the primary problems concerns the fact that only 20 to 60 per cent of the pairs placed in the pond lay eggs and of these nests only 60 to 80 per cent will have fry present at the appointed time. These percentages were improved considerably by building individual screen pens into which selected pairs are placed. But could we do better? Apparently a couple of biologists from Oklahoma thought they could and through considerable experimentation they pointed the way for improvements. These biologists found that a pair of catfish would spawn in an aquarium if the female were given a series of injections of carp pituitary material. The experimental use of pituitary injections was started at the Humboldt Hatchery during the 1957 season. The work was continued and expanded during 1958.

The pituitary gland is a small, ductless gland found near the base of the brain. This gland secretes material called hormones that control, among other things, the spawning period of fish. By removing these glands from carp, drying and mixing with distilled water, an injection was prepared that hastened and insured the spawning time of the female catfish held in an aquarium with a male catfish. And, following the trend in this modern age of atom bombs and antibiotics, a small amount of penicillin was mixed with each injection as preventive medicine.

The use of aquariums allows the fish culturist almost complete control of the spawning procedure. The female is removed from the aquarium as soon as the spawning is completed, and the male remains to carry on his normal duties. During the 1958 season one additional step was added. Some of the eggs were removed from the aquariums as soon as the egg mass was completed and placed in an artificial hatching trough or battery. This artificial male fish has metal fins that gently aerate the eggs through a fanning action set up mechanically by an electric motor.



A constant search for improvement in reproductive methods has resulted in this mechanical aerator put in operation this year.

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The combination of pituitary injections, the use of aquariums, and the addition of the artificial male fish, provides the modern catfish culturist with a wide range of possibilities in the husbandry of this species. He can, of course, select the very best for brood stock; rejecting those that do not show evidence of spawning. Particularly good males can be paired again with another female. He can follow each group of eggs and fry from each specific pair through to the time that they are stocked. Thus, if fry from a pair of fish with certain qualities, or from a specific stream or even a special stretch of river, show a marked tendency to grow faster, he can try to develop this characteristic.

It offers a good opportunity to study the biology of catfish. And who knows, perhaps, we can develop a super race of hard-hitting, fast-growing catfish for future stocking purposes.

* * * * * * * * * * *

Co-authors Thune (left) and Moen (right) observe select catfish pairs in fish pens at the Humboldt hatchery. The team now moves catfish to aquariums inside the hatchery where pituitary injections stimulate the natural urge to reproduce.

George Tovey Photo.

The new State Conservation Commission exhibit trailer is van-type in design. This construction makes it possible to place the fish aquaria and animal cages at eye-level height for easier "looking."

* * * * * * * * * * *

New Wildlife Exhibit Begins Service

The State Conservation Commission has placed a new traveling wildlife exhibit in operation, retiring from service one that had been in operation since 1948 and had logged some 100,000 miles visiting schools, fairs and sport shows around the state.

The new trailer is van-type and represents the latest in modern design and viewing convenience. Its low construction and use of space between the trailer wheels has meant installation of aquaria and animal cages at a more convenient height.

The overall length of the new exhibit is 49½ feet. The trailer tractor has been in service six years, but has been painted green and white, the color scheme of the new traveling exhibit.

Seven aquaria, 16 animal and bird cages and a snake enclosure are installed in the trailer. Each cage has been designed and built with a particular animal in mind and with consideration for the animal's size and comfort. All cages are mounted on rollers so that they can be raised for quicker, more efficient cleaning.

The pumping system for the trailer's aquaria is self-contained and is circulated through tubes to the individual aquarium. Activated charcoal minerals are used to maintain the proper oxygen content in the aquaria.

A 400-gallon reserve supply of water is maintained at all times for cleaning purposes and to add to the aquaria supply when needed.

The trailer is completely insulated and air within the trailer is kept fresh with small ducts over each cage and two large exhaust fans. All air inside the trailer is replenished every 30 seconds.

Large drop doors cover cages in travel and provide shade for animals when in the raised position.

When placed in operation, tape recordings will provide information about each fish, animal or bird as they are viewed.

An information booth is provided at the end of the trailer. From this station, exhibit personnel and conservation officers will provide information about Iowa fish, game, and parks and distribute State Conservation Commission publications.

The traveling wildlife exhibit is viewed each year by some 350,000 persons.

Seasons . . .

(Continued from page 57)

license number of the license holder and year of issuance must be affixed to the carcass of each deer, between the tendon and bone of hind leg before carcass can be transported.

Owners or tenants of land and their children may hunt, kill and have in their possession one deer, provided it is not removed from the land unless the deer is tagged with a metal locking seal.

Licenses will be stamped "for shotgun only" or "for bow and arrow only." The license may be used for the season designated on the license only. Bow hunters will not be allowed to hunt during the gun season with their "bow and arrow only" licenses. Gun hunters may not hunt during the bow and arrow season with their "shotgun only" licenses.

An unlimited number of bow and arrow licenses will be issued. Applications for the shotgun season must be made not later than October 14, 1958. Applications are also required for bow and arrow licenses, but there is no deadline for such applications. Hunters who wish to obtain both a bow and arrow license and a shotgun license must make separate applications.

A total of 6,000 "shotgun only" licenses will be issued for the 1958 season. The first 5,000 applications received will be issued licenses on a first-come, first-serve basis. All applications received after the first 5,000 will be held until the October 14, 1958, deadline. If these applications total more than 1,000 a drawing will be held to determine which applicants shall receive the remaining licenses.

All applicants who must participate in the drawing will be notified. License fees will be refunded immediately to those not successful in the drawing.

Application forms for the 1958 deer season are now being distributed to license depositories, conservation officers and county recorders. The State Conservation Commission office at East 7th and Court Avenue in Des Moines, also will have a supply of these application forms. Application for either shotgun or bow and arrow licenses **MUST** be made on the official application form. **ANY APPLICATION NOT MADE ON AN OFFICIAL FORM WILL NOT BE HONORED.** The $10 shotgun license fee or $10 bow and arrow license fee must accompany the official application form. Remit by check or money order only. Please do not send cash.

Residents of Iowa who have an out-of-state mailing address must furnish certification of residence in Iowa. The certification must also accompany the application form.

License and tag applications will be issued starting September 15, to the first 5,000 applicants. All additional applications will be held until the October 14, 1958, deadline.

PHEASANTS

Open season, long zone from November 8, 1958, to December 1 1958, both dates inclusive. Shooting hours from 10:00 a.m. to 4:30 p.m. each open day. Bag limit three (3) cock birds; possession limit, six (6) cock birds.

Counties in the long zone include:

Adair, Adams, Allamakee, Audubon, Benton, Black Hawk, Boone, Bremer, Buchanan, Buena Vista, Butler, Calhoun, Carroll, Cass, Cedar, Cerro Gordo, Cherokee, Chickasaw, Clay, Clayton, Clinton, Crawford, Delaware, Dickinson, Dubuque, Emmet, Fayette, Floyd, Franklin, Greene, Grundy, Guthrie, Hamilton, Hancock, Hardin, Howard, Humboldt, Ida, Iowa, Jackson, Jasper, Johnson, Jones, Kossuth, Linn, Lyon, Marshall, Mitchell, Monona, Muscatine, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Poweshiek, Sac, Scott, Shelby, Sioux, Story, Tama, Taylor, Union, Webster, Winnebago, Winneshiek, Woodbury, Worth, Wright.

Open season in the short zone counties will be from November 8, 1958, to November 23, 1958, both dates inclusive. Shooting hours from 10:00 a.m. to 4:30 p.m. each open day. Bag limit three (3) cock birds; possession limit, six (6) cock birds.

Short zone counties include:

Appanoose, Clarke, Dallas, Decatur, Fremont, Harrison, Keokuk, Louisa, Lucas, Madison, Mahaska, Marion, Mills, Monroe, Montgomery, Page, Polk, Pottawattamie, Ringgold, Warren, Washington, Wayne.

HUNGARIAN PARTRIDGE

Open season from November 8, 1958, to November 17, 1958, both dates inclusive. Shooting hours from 10:00 a.m. to 4:30 p.m. each open day, with bag and possession limit of two (2) birds. Open counties:

Clay, Dickinson, Emmet, Hancock, Kossuth, Lyon, O'Brien, Osceola, Palo Alto, Sioux, Winnebago.

QUAIL

Open season in long zone counties from November 1, 1958, to December 15, 1958, both dates inclusive. Hunting hours will be from 8:30 a.m. to 4:30 p.m. each day. Daily bag limit six (6) birds; possession limit twelve (12).

Counties in the long zone include:

Adair, Adams, Appanoose, Benton, Buchanan, Cass, Cedar, Clarke, Clinton, Dallas, Davis, Decatur, Delaware, Des Moines, Dubuque, Fremont, Guthrie, Harrison, Henry, Iowa, Jackson, Jasper, Jefferson, Johnson, Jones, Keokuk, Lee, Linn, Louisa, Lucas, Madison, Mahaska, Marion, Mills, Monona, Monroe, Montgomery, Muscatine, Page, Polk, Pottawattamie, Poweshiek, Ringgold, Scott, Tama, Taylor, Union, Van Buren, Wapello, Warren, Washington, Wayne.

Quail hunting in short zone counties will be from November 1, 1958, to November 24, 1958, both dates inclusive. Hunting hours will be from 8:30 a.m. to 4:30 p.m. each open day. Bag limit, six (6); possession limit, twelve (12).

Short zone quail counties include:

Allamakee, Black Hawk, Bremer, Chickasaw, Clayton, Fayette, Howard, Marshall, Story, Winneshiek, Woodbury.

SQUIRRELS

Open season for gray and fox squirrels will be throughout the entire state from September 13, 1958, to November 30, 1958, both dates inclusive. Bag limit is six (6) each day; possession limit, twelve (12).

RABBITS

Open season for cottontail and Jack rabbits throughout Iowa from September 13, 1958, to January 31, 1959, both dates inclusive. Shooting hours from 6:00 a.m. to 6:00 p.m. each open day. Bag limit ten (10) each day. No possession limit.

RACCOON

Open throughout Iowa for **hunting only** from 12 o'clock noon October 25, 1958, to midnight February 10, 1959. No daily bag or possession limit. (See trapping regulations for information regarding the trapping of raccoon).

TRAPPING REGULATIONS

MINK-MUSKRAT—Open season for the trapping of mink and muskrat on the Mississippi River east of the Chicago, Milwaukee and St. Paul Railroad tracks from the Minnesota state line to the south city limits of the city of Davenport, Iowa, from 12 o'clock noon, November 20 to midnight, December 31, 1958. Remainder of the state is open for trapping of mink or muskrat from 12 o'clock noon, November 20, 1958, to midnight, December 15, 1958.

BEAVER—Open entire state from 12 o'clock noon, November 20, 1958, to midnight, March 1, 1959.

BADGER, SKUNK, OPOSSUM, CIVET CAT—Open entire state from 12 o'clock noon, November 10, 1958, to midnight, January 10, 1959.

RACCOON — Open season throughout Iowa from 12 o'clock noon, November 10, 1958, to midnight, February 10, 1959. Water sets permitted only during the open season for mink and muskrat.

WEASEL, RED FOX, GRAY FOX, GROUND HOG, WOLF-COYOTE — Continuous open season, entire state.

OTTER—Continuous closed season, entire state.

The 1958 Iowa waterfowl season remain to be set, pending recommendations of the U. S. Fish and Wildlife Service. The federal agency ordinarily announces their recommendations about August 15.

Squirrel Fit For A King!

If there is pleasure to equal a successful squirrel hunt, it would probably be sitting down to a platter heaped high with these delicately - flavored little gamesters, fried to a golden-brown turn. Complimented by biscuits and rich gravy made from the crunchy fryins' and you have eating fit for a king!

Squirrel as good as it can be on the platter is no accident, but is planned that way in the field. Any meat to be good must be taken care of in the right way soon after killing. Squirrel hunters who like to eat them as much as they like to hunt them see to it their game gets home in prime shape—fresh, clean and ready for the pan. This means dressing out game while still in the open and taking a precaution or two to keep it fresh and clean for the rest of the hunt and the trip home.

The essentials for the job of squirrel cleaning can be counted on the fingers of one hand. A sharp knife, several plastic bags and a clean rag or two is all you'll need for the job. Drop the knife, rags and spare plastic bags into a sack (or one of the plastic bags), and you have everything in one, easy-to-carry parcel. The plastic bags are to keep your game fresh and clean until you get home. The clean rags are to dry the body cavity of your quarry after cleaning and to dry your hands.

Some hunters also carry a damp rag in a separate bag for washing their hands after cleaning br'er squirrel. It's not essential—water is usually close at hand for the squirrel hunter—but a good "just in case" idea.

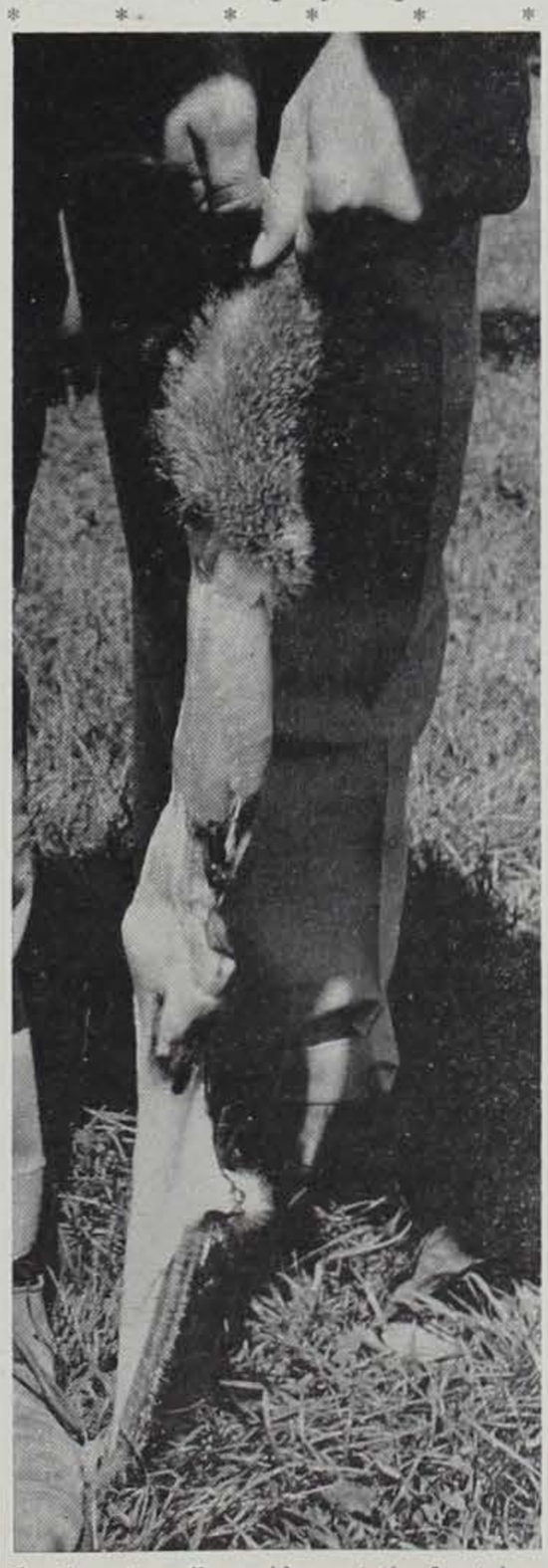
Now for the actual cleaning. Any method of cleaning that is clumsy to begin with usually gives that kind of results. I've seen a good many fuss and fumble with the job of squirrel cleaning and the game showed the results of the bruising, wasteful tussle when they called it quits. A goodly amount of meat remained on the hide, there were gouges here and there in what was left, and hair flecked the meat. In many cases, the hunter's physical appearance and patience were in no better shape!

Squirrel hunting from start to finish is for loafin' and cleaning should be in accord with this scheme. The step-by-step method we have outlined below is simple, quick and easy. With a little practice, squirrel cleaning by this method can be done as quickly as it takes to tell it. The result will be fresh, clean meat with minimum waste and mess. Best of all, there will be little or no hair to remove one by one when you get home.

All Photos by George Tovey.

Make a cut at the base of the tail and through the tail bone. Cut along the back under the hide for an inch or so to make the skinning start properly.

Step close to the cut and pull on hind legs with a firm, even pull.



Continue to pull, working out the front legs with your fingers.

STEP ONE—With a sharp knife, make a cut at the base of the squirrel's tail. Cut through the bone and under the hide for an inch or so. Be careful not to sever the tail—it stays attached to the hide for the entire cleaning operation.

STEP TWO—Place the squirrel on its back and place your foot next to the cut that has been made at the base of the tail. Don't stand in the middle or on the end of the tail or you'll succeed only in pulling the tail off. Take a hind leg in each hand and pull upward. Don't jerk, but make a firm, even pull. Pull the hide the length of the squirrel's body, working out the front legs with your fingers. The hide may now be pulled farther to free the shoulders and neck.

The result is fresh, clean meat with practically no hair.

STEP THREE—Keeping the squirrel held as you have it at the end of the second step, grasp the remaining V-shaped hide on the underside of the belly and pull up over the hind legs. The hide may now be cut free from the hind legs, catching each leg as it comes free.

STEP FOUR—Holding the hind legs apart, open the squirrel with your knife the length of the body and through the rib cage. You can now work the innards free with your thumb and fingers.

STEP FIVE—Sever the head at the base of the neck, cut the front legs free from the hide and the cleaning job is done. Wipe the body cavity of excess blood, but don't wash the meat while you are in the field. Place the squirrel in a plastic bag to keep it clean.

Some squirrel hunters prefer to clean their game as they add to their bag. It's a good idea from a couple of standpoints. The job is much easier while game is still warm and pliable. You also don't have the worry of cleaning a number of squirrels at the end of the hunt.

There are several variations to the method we've outlined, and you may find an easier way or develop short-cuts as you hunt. Whichever is easiest and fastest should appeal to squirrel hunters—they seem to have a faculty for finding the "loafingest" way to do things. This figures — who would deny that "loafing" is one of the best things about squirrel hunting?

Nature's Notebook

OUTDOOR EVENTS IN SEPTEMBER

. . . . Autumn color begins to appear.
. . . . Migratory period for early ducks—bluewinged teal and wood ducks begin leisurely migration.
. . . . First of the large ducks—mallards and pintails—begin their fall migration.
. . . . First flights of geese will be observed during September.
. . . . Fall mushrooms begin to come. Puffballs, fairy rings, sulphur, elm, inkycaps, shaggy mane, field and honey mushrooms are varieties that will appear during September.
. . . . Heavy population of large butterflies and moths.
. . . . Fall movement of hawks begins. Cooper's, sharp shined and broad tail are among the species that will be moving during September.
. . . . Large flocks of swallows will appear in September.
. . . . Migratory movement of songbirds—bluebirds, robins, etc., begins this month.
. . . . Night migration of such birds as rails, coots, and upland plovers takes place during September.
. . . . Flights of dragonflies may be observed in September.
. . . . Chipmunks and small mammals begin the storage of food for winter.
. . . . Birds will be decked out in fall and juvenile plumage.
. . . . Fall flowers in bloom during September.
. . . . Broods of young pheasants and quail may be observed in September.
. . . . Some squirrels may be bringing off late young.
. . . . Hibernation of some reptiles and amphibians begins.
. . . . Migration of pelicans and cormorants takes place in September.
. . . . Movements of woolly bear caterpillars may be observed this month.
. . . . Migrations of bats takes place in September.

Doves . . .

(Continued from page 57)

clusions based upon different sets of facts. Certain information is available to one person and logically he comes to a conclusion based upon that information. Another person will arrive at a different conclusion because the information available to him is different. Part or all of the information available to either may have been true, false, or composed of some part truth and some part error.

The State Conservation Commission is most concerned about the welfare of the mourning dove. Our personnel has been professionally trained in the field of wildlife conservation and we have capable ornithologists and game management technicians in the organization. We have men quite familiar with the history of wildlife conservation and the fundamentals upon which the perpetuation of species is based. The basic principle of preserving our wildlife is the preservation of its habitat and the retention or provision of factors that make existence or increase possible for the various life forms.

We read stories of the wanton slaughter of the passenger pigeon, but would the passenger pigeon have been saved if it had never been hunted? Bear in mind that countless thousands of life forms became extinct before man appeared on the scene. Everyone is familiar with the wanton slaughter of the bison, but I am sure we will all agree that we could not now, under present agricultural and industrial conditions, support buffalo in the wild in the countless numbers in which they existed in early pioneer times. None of us could feature vast herds of buffalo wandering over our good Iowa farms and it is quite likely that they are now preserved in as large numbers as the people can afford to or are willing to support. Although our prairie chicken in Iowa is gone—and it was shot extensively by hunters—we now shoot annually more pheasants, and are still able to perpetuate them, than the greatest number of prairie chickens that were ever shot in Iowa. The prairie chicken was utterly dependent for its existence on open, unplowed prairies, and, when we lost our native prairie sod, the prairie chicken went with it.

There is not now any danger of losing our mourning dove or materially reducing its numbers, even though the season were opened on mourning dove in Iowa, as long as the habitat remains suitable. The principles employed in harvesting game are the same as those employed in harvesting farm crops. We annually market the surplus of our hogs and cattle, and yet preserve and perpetuate these species in vast numbers.

Before scientific studies had been completed to adequately develop a management program for our migratory waterfowl, the continental population by 1933 had dropped to about 30 million. Under managed shooting and other regulatory practices since that time the population of ducks has increased until our continental population now exceeds 100 million. For 16 years—from 1917 until 1933—Iowa had a closed season statewide on bobwhite quail. At the end of the 16-year period we had fewer quail than there are in Iowa today after 25 years of managed shooting.

I am sure that it is the responsibility of any agency of government dealing with our natural resources to so manage the resource as to provide the greatest possible measure of value to the people, being consistent with the resource utilization while protecting it from serious over-harvest.

I want to quote here from the great Dr. T. Gilbert Pearson, author of "Birds of America" and for many years one of the outstanding authorities on bird life on the North American Continent: "I am one of those inconsistent ornithologists who thrills with aesthetic joy at the whistle of a bobwhite in the morning; could eagerly hunt him with dog and gun in the afternoon; and with great gastronomic rapture enjoy him on toast when the evening shadows fall. If I did not hold these views, I would be insensible to the avian music which kind nature provides for everyone; would show unusual stupidity in not recognizing the value of wild game in providing opportunities for healthful field sports; and by implication, would confess that I did not appreciate exquisite food when good fortune brings it my way."

With the dove established as a game species its future is more secure than as a non-game species. The management of any species requires detailed knowledge of the life history of the animal involved so that proper inventory and management techniques may be developed for the species concerned.

As long as the mourning dove is a non-game species any state game department is handicapped in providing funds to conduct investigations on the life history, ecology and management of this species. Certainly it is not easy to justify the expenditures of either Pittman-Robertson or State Game Department funds for a non-game species.

No other source, that I know of, is able or willing to provide funds, in the amounts necessary to procure land or for habitat development and research in sufficient amounts to be effective on a national scale, than the sportsmen and the interests involved with that activity.

In the light of our present knowledge the most important management tool we have discovered is that of providing and improving habitat. The primary use of these funds at the present is to provide suitable habitat for game species. For the most recent year (1955) that the figures are available to us some 17 million dollars of Pittman-Robertson money alone was spent as follows: land acquisition, 16 per cent; habitat development, 51 per cent; research, 22 per cent.

The biological management of any species such as the mourning dove requires detailed knowledge of the following:

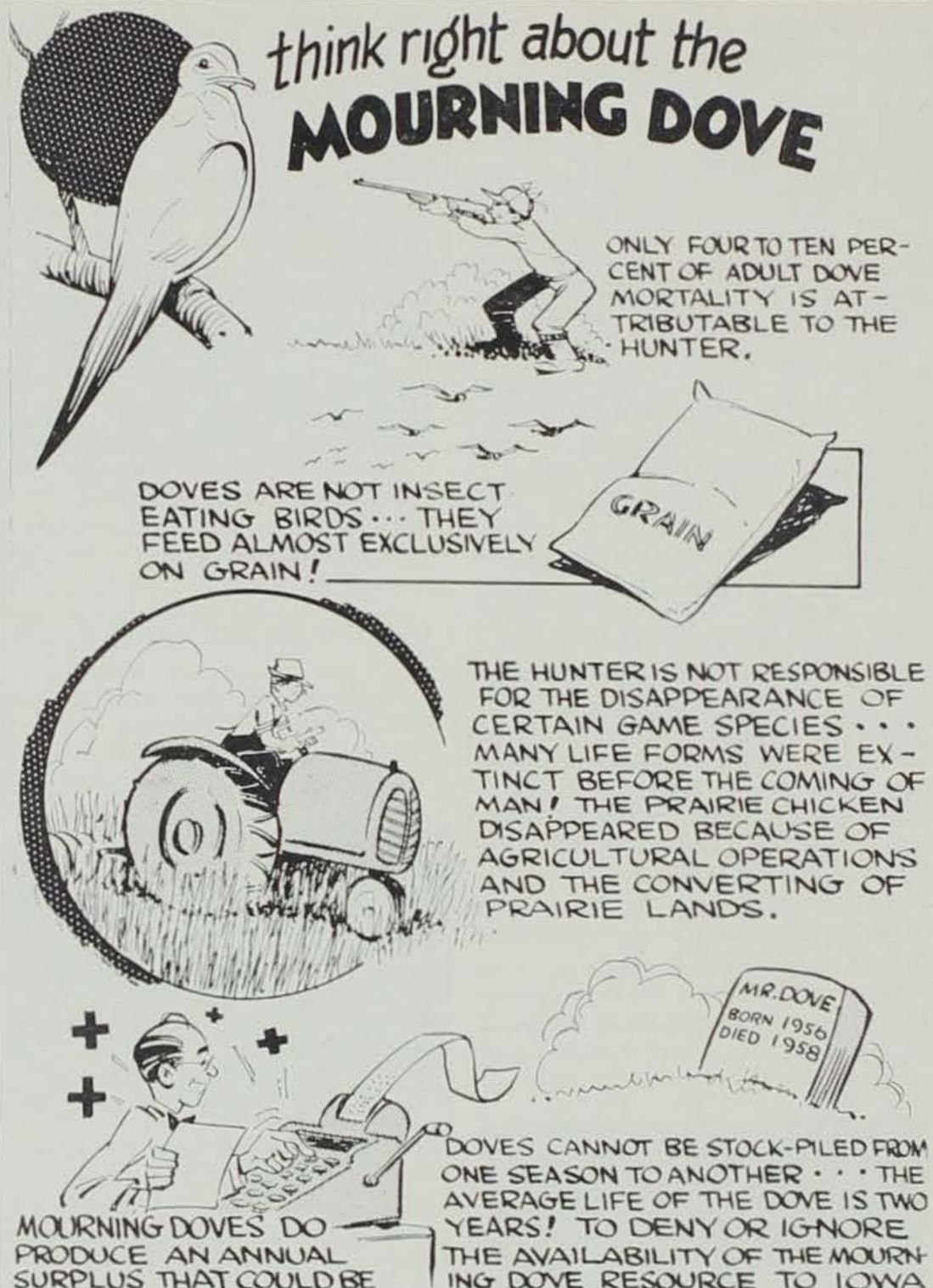
1. Distribution of the species.
2. Inventory of breeding populations.
3. Breeding success.
4. Movements and migrations.
5. Migrational differences of sex and age groups.
6. Relationship between breeding and wintering groups.
7. Mortality.
   (a) Nesting losses.
   (b) Climatic conditions.
   (c) Diseases.
   (d) Predation.

The best example of this type of management is found in the Southeast where the cooperative mourning dove study was initiated by seven states for the purpose of developing information on inventory, distribution, movements and migrations, as well as harvest and mortality. This cooperative study in the Southeast was initiated by the fact that the dove is an important game species in that region. Iowa and other states in the North Central region will not be able to make a similar contribution to the knowledge of mourning doves until it is accepted as a game species here.

The limited information that we do have—studies conducted by the Iowa Wildlife Research Unit and the Conservation Commission—indicates that the dove is produced in great abundance within the state of Iowa and the annual biological surplus warrants an open season. At the present time there is a national call count survey of the mourning dove in which the Conservation Commission has been able to participate to a limited extent. This call count survey provides an index to the mourning dove population on a national basis. If the mourning dove were on the game species list we would be able to expand the call count routes to a more reliable sample size.

Some of the most pressing problems on mourning dove management within the state of Iowa and other states in the North Central region are worthy of elaboration. At the present time all indications are that the majority of doves in Iowa do not migrate east of the Mississippi River. This fact should be substantiated. If this hypothesis is correct, the management of the mourning dove should be segregated to an Eastern and Western population with the Mississippi River as a dividing point.

The recent increase in urbaniza-



ion gives every indication of adding to our mourning dove habitat, especially after shade trees have had an opportunity to develop. This statement needs verification. The importance of *trichomoniasis*, a protozoan disease in the mourning dove, has never been evaluated in the state of Iowa. Work done in other states has indicated that it becomes prevalent primarily under conditions of dense populations. It might well be that this disease is a limiting factor in controlling the population levels. Funds are needed to investigate this possibilty.

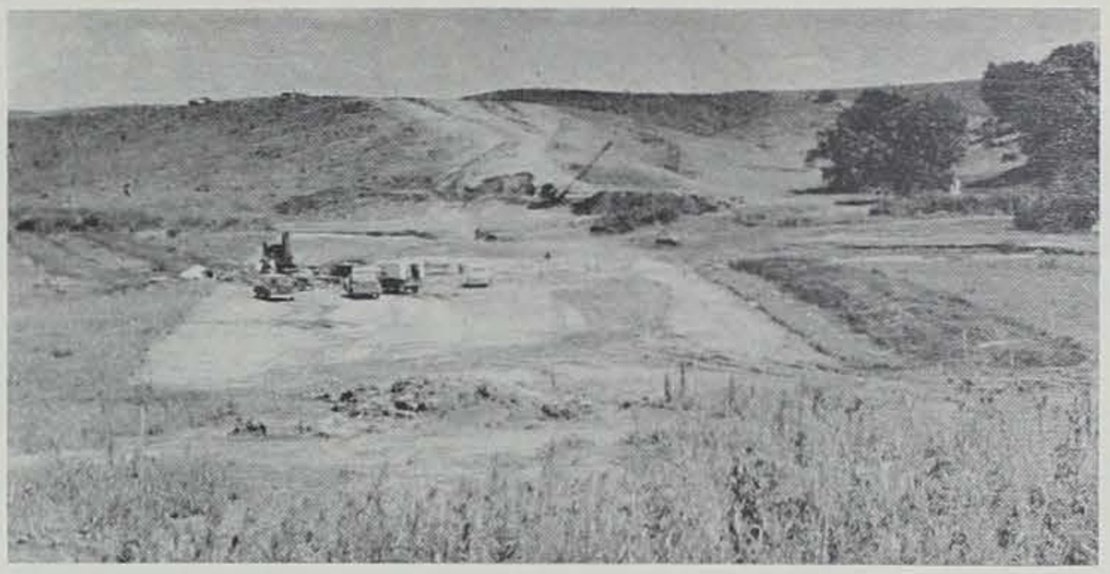
Conservation of our natural resources implies wise use. We all know that it is not possible to stockpile annual mourning dove production. If a surplus of doves is available, which would be shown by our annual inventory, we would be in a position to make this surplus available to the citizens of Iowa for recreational purposes. *To deny or ignore the availability of this resource to the sportsmen of Iowa is not good management.*

It may not be a pleasant thought, but it certainly is logical that we kill ducks, geese, pheasants, quail, rabbits and squirrels for food as well as recreation; and we also butcher calves, lambs and pigs for food as well as profit. This is the way of life.

Things in the wild are short-lived at best. We cannot save them up from year to year and add to their numbers as you would to a bank account. We are dependent each year upon that year's production which depends upon environmental conditions, and each year there is a surplus and its loss is an inexorable law of nature. We carry over only what the environmental conditions will support, and the rest are lost to one cause or another. To harvest this surplus is the logical and reasonable approach. Nature is cruel and hard. There are many ways that a dove can die, but none of them is pleasant. It may starve to death or be torn apart, literally alive, by a Cooper's hawk or a great horned owl. The average life of a dove is less than two seasons and each year's supply depends upon the production of that particular year and they may not be saved from year to year, no matter how much we might wish it.

It is part of our present plan of existence that we utilize the things around us to provide the greatest measure of good to the greatest number of people. John Ruskin has said, "God has given us the earth for our life—it is a great entail—it belongs as much to those who follow us as it does to us, and we have no right, by anything we do or neglect to do, to involve them in unnecessary penalties or to deprive them of benefits which are theirs by right."

Certainly we have a responsibility to ourselves and to future generations to preserve for posterity this heritage of wildlife resources that has been left us in trust, but at the same time we should utilize—not waste it!



This view of Bays Branch construction shows progress on the dam and roadway that will eventually cross it. A service building is already up on the area and a residence for the Unit Manager is nearing completion.

Bays Branch Work Is Shaping Up

Construction is underway at Bays Branch, two miles north and two miles east of Panora in Guthrie County, to develop the area for multipurpose recreation, but with particular significance for the waterfowler.

With the right breaks from the weatherman, the area could see some hunting activity this fall, although the 286-acre marsh may not be full by that time. June 1, 1959 has been set as the completion date of the project.

Construction work involved in the $108,000 project calls for installation of a dam, dikes, levees and roads. Since Bays Branch is headquarters for the Bays Branch Game Management Unit, a residence for Unit Manager Lester Fleming is being constructed and a service building for unit equipment is up and in use.

The State Conservation Commission has purchased all land affected in the development of Bays Branch. Some of the agricultural lands within the unit will be leased to fit in the overall management plan for the new area.

While management of the area will be aimed at providing fishing as well as hunting, main emphasis will be on waterfowl. The area is essentially a waterfowl area and has been a popular natural marsh for many years. It is located in the same flyway as Lakin Slough east of Yale in Guthrie County and on toward the natural lakes of northwest Iowa.

When the water area reaches the anticipated level, Bays Branch will include about 200 acres of marsh and a 70-acre lake with a depth of 15 feet near the dam and control structure.

Fish species to be stocked will be determined by fisheries personnel after studies of water and types of fish habitat have been completed.

All costs of the project have been borne by Pittman-Robertson funds with the Federal government providing 75 per cent from taxes on the sale of arms and ammunition and the state providing 25 per cent of the cost.

Des Moines . . .

(Continued from page 57)

questions about how far they traveled, type of fishing gear, bait, etc.

Fishing pressure was considerably higher on weekends than during weekdays (Table 1). Family groups, which were primarily responsible for swelling weekend fisherman counts, failed to add appreciably to the catch of fish, however. The average number of fisherman hours expended on each Saturday and Sunday was 672 and 967 hours, respectively. A fisherman hour may be defined as one fisherman fishing continually for one hour, regardless of the number of hooks employed. Weekday angling pressure started rather modestly on Monday with an average of 398 fisherman hours, built up to a peak on Wednesday with an average of 552 fisherman hours, and then gradually declined to 405 fisherman hours on Friday.

Throughout any fishing day angling pressure was heaviest between the hours of 6 to 8 p.m. (Table 2). This heavy fishing pressure can be attributed to a fisherman who fished for a few hours after work. Since most of the river in the study area is easily accessible, it was a simple matter to drive to the river for an evening of fishing. Fishing success, especially for channel catfish and walleyes, was somewhat better in the late evening just before dark. Also, many anglers who fish after dark commonly reach the river an hour or two before sundown in order to get settled at their favorite fishing "holes."

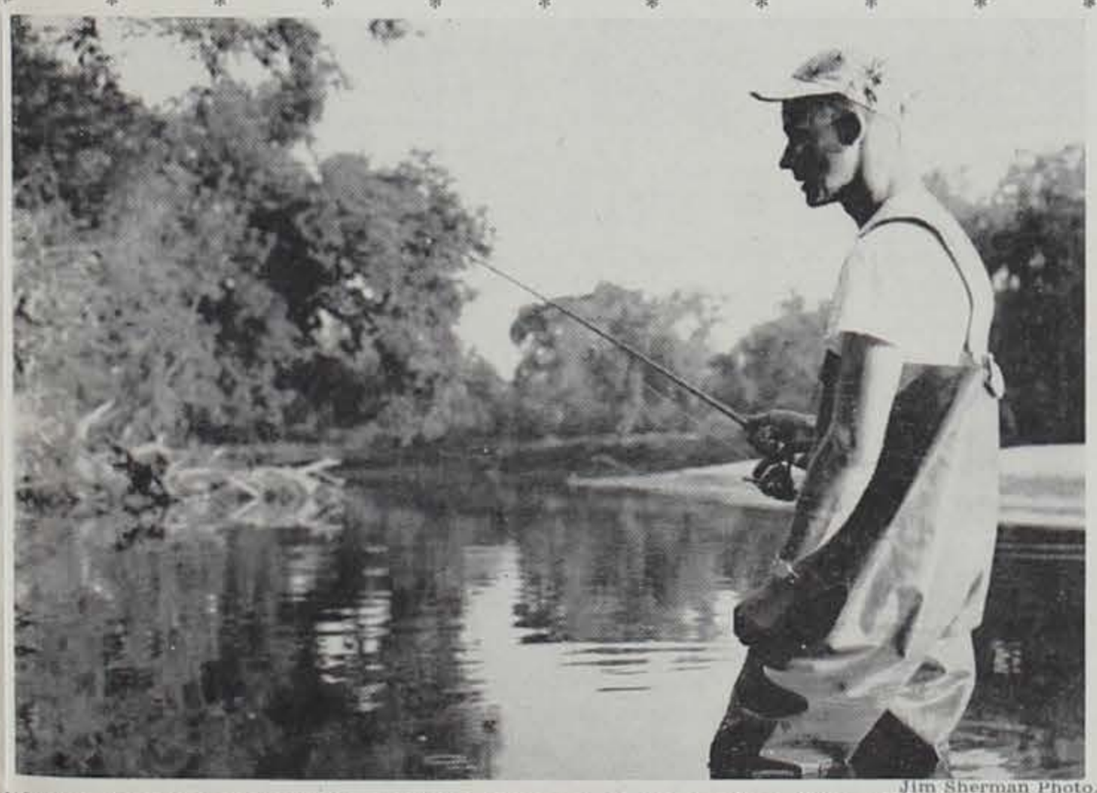
In general, there was a progressive build-up of fishing pressure starting with an average of 48 fisherman hours between 6 and 8 a.m. and culminating in the late evening period, 6 to 8 p.m., with an average of 106 fisherman hours. However, during the hours of 4 to 6 p.m., many fishermen returned home for supper or to do chores, resulting in a lower average fishing pressure, 81 fisherman hours, than the preceding two-hour period.

Although the early morning period, 6 to 8 a.m., had fewer anglers than any other period, more of these fishermen were competent and experienced anglers. Even though angling success was poor during the warmest portion of the day, these hours absorbed a considerable amount of angling pressure. However, many of these fishermen were either carp fishermen or family groups who were really just on an outing.

It was estimated that there were 21,412 fisherman hours expended on the seven miles of river during the seven-week period. This estimate of the total fishing pressure does not include night fishermen. During certain periods of the night, especially between the hours of 8 and 12 o'clock midnight, there is a considerable amount of fishing pressure for channel and flathead catfish. Fishermen seeking flatheads frequently remain at the river all night.

The mean rate of catch per hour for all types of fishermen was 0.44 fish per hour (Table 3). Boat

(Continued on page 64)



Jim Sherman Photo.

Wading fishermen comprised about 12 per cent of the anglers along the section of the Des Moines studied by the author. Some of the waders fished exclusively for walleyes and smallmouth bass.

Jim Sherman Photo.

Author Jim Schmulbach points out that scenic beauty of the Des Moines—particularly in fall—is well worth the beholdin'. At any time of year, anglers are likely to encounter a good tussle from catfish, walleyes or smallmouths.

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Des Moines . . .

(Continued from page 63)

fishermen were most successful, with a mean catch of 0.52 fish per hour. This higher rate of catch probably is due to the boat fisherman's ability to fish successfully in deep water and around brush piles. Also, most boat anglers were experienced river anglers. The poorest rate of catch, 0.35 fish per hour, was reported by waders. However, the majority of the waders were good fishermen who angled only for large channels, flatheads, walleyes and smallmouth bass. Shore anglers averaged 0.44 fish per hour. Included in the shore fishermen were many novice and inexperienced anglers. Small channel catfish and carp comprised much of their catch.

The channel catfish which comprised 47 per cent of the total catch absorbed the bulk of the fishing pressure. Boat fishermen and waders concentrated their efforts on channel catfish. In fact, many of the carp caught by boat anglers were kept only because their entrails and flesh were used as bait for channel catfish. Carp made up about 42.5 per cent of the total catch and together with the channel catfish constituted nearly the entire summer harvest of fish. During August, shore fishermen relied heavily upon carp ranging from 8 to 10 inches in total length to fill their creel. Game fish such as walleyes, smallmouth bass, and crappies were ardently pursued but constituted only 6 per cent of the total catch. Some of the waders fished exclusively for walleyes and smallmouths. Flathead catfish are a popular trophy with certain river anglers. Angling for the wary flathead requires a great deal of patience, considerable experience, and heavy tackle.

Some interesting statistics were gathered from the interviews with fishermen. Men constituted approximately 72 per cent of the total number of anglers. Women made up about 14 per cent; boys under 16 years of age, 12 per cent; and girls, 2 per cent. Nearly 80 per cent of all fishermen fished from shore. Waders made up approximately 12 per cent and boat anglers 8 per cent of all fishermen.

Bait casting rods were the most popular type of gear and made up 73 per cent of the total number of rods. Another popular rod, the so-called "river rod," comprised 10.5 per cent of all rods. The "river rod" is usually a long surf rod or a short trolling rod fitted with a fresh water reel and a heavy test line. This type of equipment was especially popular with flathead fishermen. Spinning and fly rods were used extensively by waders and comprised 7.5 and 5 per cent of the total number of rods, respectively. The old standby, the cane pole, made up slightly over 4 per cent of all the rods. Boys and girls were the principal users of cane poles.

Minnows, including large creek chubs, were the most popular overall bait, being used by 21 per cent of the anglers. Doughballs, which were used by 16 per cent of all anglers, were second in overall popularity. Following the two most popular baits and listed in the order of their preference by anglers were shrimp, worms, prepared cat-fish bait, liver, crayfish, chicken entrails, river mussels, artificial lures, blood, and fish entrails. Some rather exotic baits such as lobster tail, beef steak, and sardines were also offered as tempting baits for channel catfish. Doughballs and sweet corn were intended principally for carp. Most walleyes were caught on minnows or artificial lures. Experienced flathead fishermen preferred large creek chubs, small sunfish, or a huge ball of night crawlers.

The subject of the most successful bait has been debated since anglers first gathered together to talk of their angling success. The type of bait used depends largely upon the species sought, the availability of the bait, the season of the year, the preference of the fisherman, and, in some cases, the price of the bait. Fishermen seeking channel catfish use a wide variety of baits, some of which are very odoriferous. Almost every fisherman swears by his own particular bait and his own manner of presenting the bait. Some of the more successful channel catfish anglers used river mussels, fish entrails, chicken entrails, crayfish, minnows, and, in some cases, prepared catfish bait.

Local fishermen supply the bulk of the fishing pressure in the study area. Over 72 per cent of all fishermen interviewed lived within a ten-mile radius of the fishing site at which they were contacted. In fact, 31 per cent of all anglers lived within a five-mile radius. Most of these anglers were from the nearby city of Boone. About 86 per cent of all anglers contacted lived within a 20-mile radius. Only three per cent of all the anglers lived farther than 75 miles from the river and in most cases these anglers were visiting relatives in the immediate area. Approximately three per cent of the anglers rode bicycles or walked; the others came by car.

A fall creel census, lasting from August 25 to November 12, was also conducted. In most respects, fall angling statistics were similar to those of the summer. However, certain changes in the Des Moines River fishery were evident. Summer fishing was never greatly affected by uncomfortable weather conditions but the severe fall weather did affect angling pressure. The heaviest fall fishing pressure coincided with the warmest part of the day. The late evening period which was so popular with summer anglers was fished very lightly. Late in the season, only the hardy walleye fishermen tried their luck during even the warmest part of the day.

The creeling success of the fall fishermen averaged 0.28 fish per hour, a noticeable drop from the success of the summer angler. This drop was caused principally by the small number of channel catfish in the total fall catch. Channels accounted for only 35 per cent of the total catch and most of these fish were caught in the first month of the census. As water temperatures dropped, fewer channel catfish were landed. Walleyes, which in the summer constituted only 4 per cent of the catch, increased to 16.5 per cent of the total fall harvest. This increase was most welcome since the walleye is always eagerly sought. From a recreational standpoint, the walleye is of much greater value than its abundance in the catch indicates. Most walleye anglers consider their trips successful even if only one walleye is creeled.

River angling can be enjoyable and profitable. There are plenty of channel catfish available for the patient angler. The fall scenery along the Des Moines River is some of the best in central Iowa and there's always a possibility that one might enjoy some fine action from walleyes and smallmouth bass.

TABLE 1

Average Number of Fisherman Hours Each Day of Week

	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Average No. of fisherman hours	967	398	458	552	477	405	672

TABLE 2

Average Number of Fisherman Hours Each Two-Hour Period of the Day

	6-8 am	8-10 am	10-12 am	12-2 pm	2-4 pm	4-6 pm	6-8 pm
Average No. of fisherman hours	48	76	75	79	98	81	106

TABLE 3

Catch Per Unit Effort and Percentage Composition of Catches

	Boat Anglers	Shore Anglers	Waders	Total
No. anglers contacted	71	943	137	1151
Fisherman hours	313.0	2195.0	386.75	2894.75
No. fish caught	162	966	135	1263
Catch per fisherman hour	0.52	0.44	0.35	0.44
Per cent				
Channel catfish	69.1	40.8	68.1	47.3
Flathead	—	0.9	2.2	1.0
Bullhead	—	1.4	8.9	2.1
Carp	30.9	49.4	7.4	42.5
Walleye	—	4.0	6.7	3.8
Smallmouth Bass	—	1.6	4.5	1.7
Crappie	—	0.5	—	0.4
*Other	—	1.4	2.2	1.3

*Includes several species of suckers, rock bass, and stonecats.