

IOWA CONSERVATIONIST

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A BUSINESS VIEW OF WILDLIFE CONSERVATION

PHEASANT SHOOTING IN SOUTHERN IOWA

By Lester F. Faber
Game Biologist

How about a pheasant season in southern Iowa? Ah, that is the question.

Reputedly Benjamin Franklin arrived at a decision by placing all the pros on one side of a ledger and the cons on the other side. Then he studied which out-weighed the other.

A group intensely interested in having pheasant hunting in south Iowa believes that pheasants kill off the quail in an area. They charge them with eating quail eggs, with killing young quail, and many other dastardly acts detrimental to quail.

This is not so. A minute's consideration will disprove their arguments.

Countless observations have been made where pheasants and quail have nested successfully within a few feet of each other and where they have lived in harmony. Each bird uses a slightly different type of cover for nesting, so the competition for nesting cover is not great. In southern Iowa nesting cover is sufficient for many, many more birds, both quail and pheasants, than are now present.

In several counties in east-central Iowa, the territory is now supporting excellent populations of both pheasant and quail. The area has been supporting good populations for several seasons past.

Occasionally the pheasants and quail do have conflicting interests. This is when they become competitive for food under extreme winter weather conditions, and, in such case, no doubt the larger, stronger pheasant would win the contest. But very few times in the past ten years have conditions been so severe in southern Iowa as to bring about this conflict.

(Continued on page 56)



Picnicking is number one in Iowa's 87 state-owned recreational areas. It is believed that more than 2,000,000 Iowans and non-residents will enjoy these facilities in 1948. Jim Sherman Photo.

STATE PARKS PROVIDE FUN FOR ALL

By Enid Brown
Associate Editor

What is so rare as a day in June? or July? or August? or even September? when that day is spent in one of Iowa's 87 state-owned recreational areas. And this year more and more Iowans are finding fun and relaxation in the state parks.

Sundays are, of course, the most popular days; but even on week days the state park system plays host to thousands of picnickers, bathers, fishermen, and just plain loafers. Picnicking holds the number one spot in the popularity poll and picnicking facilities are provided in all areas.

Fishing, fast becoming a family sport, is available in more than half the parks, with 46 areas being located on or adjacent to lakes or

streams. No fee is charged for fishing except the proper license required by law. Bait may be purchased at numerous parks.

Eighteen of the parks have supervised bathing beaches operated by contract concessionaires. The following maximum fees are charged: admission only, 21 cents; admission, suit, and towel, 55 cents; towel only, 10 cents.

Boating is another popular sport and boats may be rented at 13 areas at a maximum fee of 25 cents per hour.

Three types of camping are permitted in state recreation areas, tent and trailer, cabin, and organized group camping. For tent or trailer camping a fee of 50 cents per night or \$2.50 per week is charged. Organized groups, such

(Continued on page 56)

By James Ford Bell

"Minnesota Conservation Volunteer"

There are definite limitations to the application of business management principles to a problem as saturated with controversy and public interest as game and fish conservation. On the other hand, the objectives are clearly identical. The natural resources of game and fish, like business, must be managed in the interests of all the people.

Sportsmen tend to forget that hunting and fishing as we know them are not vested privileges, but rather an endowed heritage peculiar to America. In the old world these pleasures originally were reserved for the nobility and landed gentry, and ownership of game centered in the crown or individual estate. In general this policy continues there today. In America, thanks to the bounty of resources and guarantees written into our basic law, game and fish are controlled by the state in its sovereign capacity and managed for all its citizens.

The point to be emphasized is that this common ownership implies a special obligation as well as a privilege. Too often Americans shirk their individual responsibility for maintaining our game and fish supply. This responsibility is best discharged by providing money adequate to support efficient management.

To operate a business efficiently, certain standard procedures must be followed, among them:

1. Accounting and inventory control.
2. Establishment of production (or sales) quotas.
3. Capitalization, or procurement of finances.
4. Agreement on long-term operating policy.

Admittedly these are only a few of the many considerations that must enter into the management of a business. But they are fundamental. Let us consider, briefly, their application to the manage-

(Continued on page 50)

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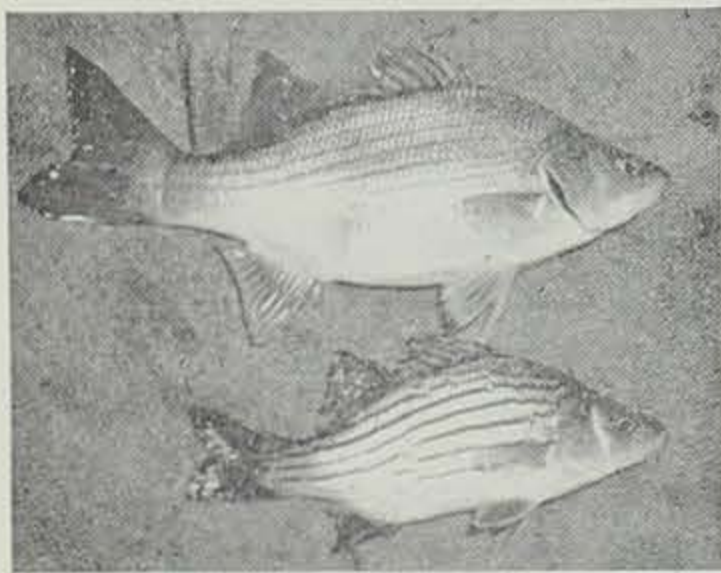
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THE CLEAN-CUT SILVER BASS

One of the least widely known members of the popular panfish family is the white bass or, as it is called in Iowa, silver bass. It is the largest of these "little fishes." It also claims the distinction of being the only true bass we have in fresh waters.

Probably the main reason for its comparative obscurity is its restricted distribution, but wherever the white bass is found, there you will find fishermen who sing its praises as a gamefish worthy of respect.

It will strike a lure with heavy impact and put up a thrilling fight on light tackle. And when one of



The white or silver bass, top, and its cousin, the yellow bass, lower, fit the description, "clean-cut fish."

the larger two or three pounders climbs on—it's a double-handful of fishing fun.

The white bass musters all the qualifications necessary to be called a beautiful fish. Not as gaudily colored as some, nevertheless, the contrasting markings

(Continued on page 52)

CONSERVATION DIRECTOR RESIGNS

Bruce F. Stiles Takes Over Director Post

G. L. Ziemer, Director of the State Conservation Commission since October 1, 1946, has resigned to enter private engineering practice. The Commission has accepted the resignation, effective August 15, and appointed Assistant Director Bruce F. Stiles of Des Moines to the position of Director on that date.



Bruce F. Stiles.

Ziemer, first employed by the department in 1940, has been Assistant Chief Engineer, Acting Chief of Lands and Waters Division, Assistant Director, and Director. The retiring Director, 39, is a graduate engineer of Iowa State College, is married and has three children.

Bruce F. Stiles, Des Moines, the new director, was first employed by the commission in 1938 as a conservation officer in charge of Mills and Pottawattamie counties, was appointed Chief of Fish and Game in 1942, Assistant Director in 1946. Stiles is widely known in conservation circles throughout the United States. Stiles served as chairman of one of the technical sessions of the 1948 North American Wildlife Conference, is currently President of the Midwest Association of Fish and Game Law Enforcement Officers, and is a member of the Executive Committee of the Iowa Academy of Science.

James R. Harlan, Superintendent of Public Relations for the State Conservation Commission and Editor of the "Iowa Conservationist," has been appointed Assistant Director to succeed Stiles. Harlan was first employed by the Commission in 1937 as a conservation officer at Storm Lake and Spirit Lake territories, appointed Superintendent of Public Relations in 1941. Harlan, President of the National Association of Conservation Education and Publicity, will continue in his editorial capacity in addition to new duties.

Raymond W. Beckman, Cedar Rapids, has been appointed to the vacant position of Chief of Fish and Game. Beckman was first appointed conservation officer in the Lands and Waters Division in 1937, was transferred to the Fish and Game Division in 1938 where he

served as conservation officer in charge of the Grinnell and Cedar Rapids territories until 1945 when he was advanced to Supervisor of Conservation Officers for the east half of the state.

E. B. Speaker of Des Moines, Superintendent of Fisheries for the Conservation Commission, has been advanced to the head of the Biology Section. Speaker, employed by the Commission for 18 years, is widely known in American fisheries circles and has served in almost every capacity in the Fisheries Section. He was appointed to the position of Superintendent of Fisheries in 1936.

Robert B. Cooper, Spirit Lake, Area Fisheries Manager, has been appointed Superintendent of Fisheries to succeed Speaker. Cooper, first employed by the department in 1926, has been Superintendent of the Backbone Hatchery, Fisheries Supervisor, District Fish Culturist, and was appointed Area Fisheries Manager in April of this year.

Lester F. Faber, Game Biologist, Des Moines, has been advanced to Pittman - Robertson Coordinator. The funds for this cooperative state and federal program are derived through a ten per cent excise tax on sporting arms and ammunition. Faber, who has been perfecting new Iowa pheasant techniques, will continue his present studies and surveys.



G. L. Ziemer.

All new appointments except those of the new Director and Assistant Director become effective June 15.

THINGS THAT YOU MAY NOT KNOW

Falcons strike their prey with closed talons, catching the dead or stunned victim in mid-air as it plummets earthward. Iowa's most spectacular member of the falcon tribe is the rare duck hawk found nesting in very limited numbers along the high bluffs of the Mississippi River in Clayton and Allamakee counties.

A Business View . . .

(Continued from page 49)

ment of a complex natural resource such as our game and fish supply.

Accounting and Inventory Control: Before game and fish can be managed, we must know what we have. Whatever the cost of obtaining this information, it must be secured accurately and at timely intervals. Upon it must be based such decisions as the dates and volume of harvest and the countless other regulations looking to wise usage. Our accounting must be standardized on a pattern that will win the ready acceptance and confidence of all citizens.

Establishment of Production Quotas: What do we lack, and how much of it? This can be determined from the inventory. Deficiencies must be underlined and widely publicized. Action must follow promptly to build up inventories. This production should be budgeted so that management will know what it will have to work with in the future.

Capitalization or Finances: Whatever it costs to maintain our resources on a level to meet all needs comes under this heading. First of all, we must see to it that hunting and fishing license revenues, upon which game and fish depend for support in this state, are not diverted to other uses. If the present fees are inadequate, we must dig down into our pockets and produce enough money to do the job. It may cost you \$25 for an auto license in a given year, yet you can fish twelve months on a fee of \$1.50. The expense of game and fish is the obligation we must assume for enjoying it. There is no alternative.

Long-Term Operating Policy: This really combines the first three principles. It is to our advantage that our long-range policy of management be written for all to see, and that it be revised from time to time according to the dictates of necessity. In this way we can better "sell" the plan and the finances needed to carry it. If all the goals are not attained immediately, they will be projected in orderly fashion.

There is no broad and smooth highway to a land teeming with game and fish. To manage a resource that is annually tapped by some one million Minnesotans and visitors is a gigantic task, particularly when, as is now true, we have less than one dollar to spend for each year in management for each hunter and fisherman who stands to benefit!

One important task of our publicity and information should be to point up the necessity for dedicating more money to the task before us. The needs of education, particularly in the adult field, should not be overlooked. The people must be kept informed through constant repetition of the program as it unfolds. But more important, we must meet the immediate needs of

(Continued on page 53)

FOREST FIRES CAN BE PREVENTED

By Lyle F. Watts

Chief, U. S. Forest Service

Last year forest fires wiped out several communities and made thousands homeless in the state of Maine. Damaging fires occurred in Texas. Forest fires in California cost several lives.

In 1946—the latest year for which complete reports are available—it was estimated that more than 172,000 fires occurred in the forests of the United States. Altogether, they burned over more than 20 million acres (an area more than six times that of the whole state of Connecticut).

Letting forests burn is like burning up dollar bills, because forests are part of the basic wealth of this country—the real wealth that our dollar bills stand for. When forests burn, valuable timber may be destroyed, timber that could have been converted into lumber for homes, or paper products, or hundreds of other useful products. Many trees not killed outright may be scarred and damaged by fire, so that heart rot enters the wood and spoils their value.

Fire is most damaging to the young trees—the little saplings

and seedlings that would make the saw-timber trees of the future. If a forest is to yield a continuing supply of wood, a growing stock of younger trees must always be kept coming along. But fires, together with destructive and wasteful methods of logging, have converted millions of acres of formerly good timber-growing land in this country into virtually non-productive wasteland.

Fire often kills many birds and animals and may destroy the food plants and shelter that game and wildlife need. Range fires destroy much valuable livestock forage. Fire destroys scenic values, and may hurt the tourist and vacation business which is a principal economic support of many communities. People are not apt to pick a fire-blackened waste as a vacation spot.

Undoubtedly fire's worst damage in many sections is to the watersheds. When fire destroys the protective mantle of trees and shrubs and grasses and the leaf litter on the forest floor, bare soil is exposed, rain water and melting snow run off more rapidly, erosion increases, mud is washed down into the streams. Flood danger increases. With the spongy leaf litter and humus burned away, the soil absorbs less water for underground storage. Springs and wells

may run dry. City and community water supplies may be affected. Streamflow may become less regular and dependable, varying from a raging torrent in wet weather to a mere trickle or no flow at all during dry spells.

And another thing—it costs money to fight forest fires. And the cost comes back on us in our tax bills.

How do forest fires start? Some are started by lightning; and we can't do much about that. Until someone comes up with a way to control lightning storms, we shall have to rely on prompt detection and maintenance of well-organized, well-equipped, fast moving fire fighting forces to control lightning-caused forest fires. Lightning-caused fires occur most frequently in the mountainous sections of the western states, where summer thunder storms often come with little or no rain. In the eastern states, where thunder storms are usually accompanied by heavy downpours, fewer lightning-caused fires occur.

But country-wide, only about 10 per cent of the forest fires are caused by lightning. The other 90 per cent are man-caused, and, therefore, are preventable.

Some are started deliberately, perhaps because of a grudge against a neighbor. Some people start fires in the woods in the hope that it will make the woods more open and grassy for grazing their cattle, or with the idea that they can get rid of ticks and other pests. In some sections of the south, woodsburning is still an annual custom, dating back to the days when the settler's chief concern was clearing land for crops or pasture.

But most of the fires are the result of plain carelessness on the part of everyday citizens. They are caused by smokers who thoughtlessly flip cigarettes or matches out of car windows as they ride along the highways. They are caused by people who try to burn trash or weeds or brush to clean up a field or garden patch, and who let the fire get away into the woods. They are caused by campers and picnickers who neglect to drown out their camp fires when they break camp or start home from a picnic.

There are laws against all these things. Rangers and forest wardens have authority to arrest a person who starts a forest fire, even if he does it only through carelessness or thoughtlessness. But they much prefer to have people cooperate with them in preventing fires, so that arrests will not be necessary.

Fire is not the only menace to the forests. Destructive insects and diseases cause an even greater loss of saw-timber than does fire. Windstorms and ice storms cause much damage in the forests. Overgrazing in the forests and on mountain ranges can seriously

damage vegetative growth and watershed values. Destructive and wasteful methods of logging have depleted timber growing stock over vast areas.

Logging takes a much greater amount of saw-timber from our forests than fire destroys. But if you count in all the billions of young trees and little seedlings—the saw-timber trees of the future—that are wiped out by fires every year, undoubtedly fires destroy many more trees than the saw-mills. And when a tree is cut in logging, it ends up in lumber, furniture, newsprint, railroad ties, or other needed and useful commodities. But when fire destroys timber it is pure waste. "Burned timber builds no homes."

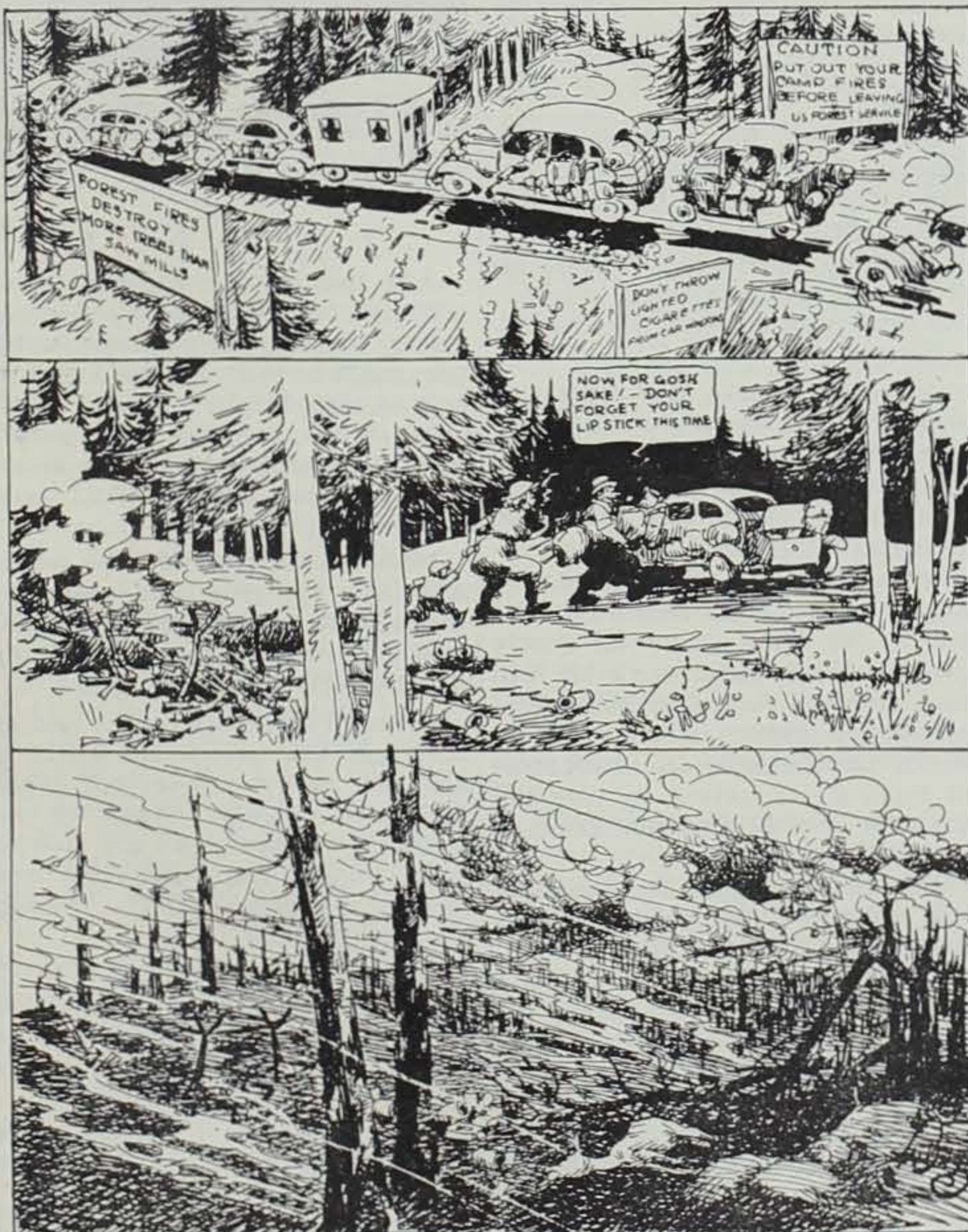
Moreover, it is possible to cut timber in such a way that the younger trees are safeguarded and the forest will keep on growing more timber. Many progressive forest owners are using good cutting practices, and our public forests are generally managed for continuous production of timber, or what foresters call "sustained yield." However, we still have a long way to go to bring about good timber management on all forestlands. On more than 50 per cent of all our commercial forest lands, cutting practices are still poor or destructive.

Although it will take more than fire prevention alone to build up and maintain our forests for maximum returns in products and benefits, prevention of fire losses is one of the first essentials. And forest fire prevention is something that every one can help on. Anyone of us who ever goes into or passes through wooded areas could be the cause of a forest fire if we happened to be careless. And everyone of us can help cut down the huge and costly loss from forest fires by remembering at all times to be careful with our matches, smokes, and fire of any kind in the woods.

That must be a poor country indeed that does not support a hare.—
Thoreau.

IMPORTANT NEW BOOK

"Our Plundered Planet" by Fairfield Osborn, President of the New York Zoological Society (Little, Brown & Company, Boston, \$3.50), is possibly the most important book on conservation of living resources to date. It points out with disturbing clarity why conservationists the world over believe we are more likely to destroy ourselves by our world-wide conflict with Nature than with any weapon of war yet devised. This book is an absolute must for every editor, minister, teacher, law-maker, and conservationist.



Look Out! Here Comes The Summer Tourists

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

Even for Cardinals There's No Place Like Home

By Allen Green

Sparrows took over our martin house, so we built a mesh wire trap to get rid of a few. The trap was a success in every way but one—it didn't catch the sparrows. The spring was too slow. We gave it up as a poor job and decided to let the sparrows and martins settle their own differences. They did; the martins took over.

* * * * *



A battered old sparrow trap that provided a nesting site for seven generations of cardinals. Allen Green Photo.

* * * * *

The trap was hung in an old barn nearby. To our great surprise, in a few weeks we found a cardinal's nest in the corner of the cage. The mother was sitting on the eggs, and later observations disclosed the fact that the young had been successfully reared. Imagine that! A timid bird like a cardinal choosing a sparrow trap for a home.

The wire cage was left hanging in the same old building for eight years and every year this pair of cardinals (it must have been the same pair) has nested in the sparrow trap. Of course, the trap door was always left open and the spring disconnected.

This year we carried the cage outside (with the young birds still

* * * * *



This young cardinal, one of the sparrow trap "jail birds," posed disconsolately for its picture. Allen Green Photo.

Bass . . .

(Continued from page 50) make it outstanding, and the usual remark of an angler seeing it for the first time is, "There is a clean-cut looking fish."

The coloration of the white bass varies little and the aforementioned "clean-cut look" is the general earmark.

The back is iridescent green, gradually shading into a bright silver on the sides and then into a silvery white on the belly. The older and larger the specimen, the deeper these shadings become.

The large, brightly contrasting eyes add much to this fish's appearance and the touch of gold therein probably gave this fish the last part of its Latin Lepibema name, **chrysops**, which means golden. Generally, five or six distinct dusky stripes line the sides of each fish and these are responsible for the nickname of striped bass.

The body shape might be termed a happy medium between that of a largemouth and a crappie, while the mouth is distinctly bass-like with a pronounced protusion of the lower jaw.

Many authorities believe the white bass to be a descendent of

in the nest and the parent birds watching us) so that we might take photographs. One of the youngsters obligingly hopped on the cage door and posed for us, and while we were replacing the trap in the shed, this ambitious young bird flew away to a nearby bush. However, when we inspected the trap on the following morning we found that the parent birds had coaxed this fledging back into the trap nest.

Strange what unusual places birds will sometimes select for their nest. Wrens often build in the pocket of an old coat or apron left hanging on a line, but when it comes to a pair of cardinals choosing a bird trap for a home—well, that is something.

* * * * *

the saltwater striped bass which has a very similar appearance. The logical line of reasoning is that during the annual pilgrimage of saltwater striped bass to fresh water, some became landlocked through overflowage and thus degenerated over a period of many years to the freshwater white bass.

The range of the white bass also lends support to this relationship theory because it is found most abundantly in the Great Lakes region, particularly Lake Erie, and tributaries. However, now that this species is more widely recognized due to many authoritative articles, the range is found to be steadily increasing. In Iowa it is found in the Mississippi River and its tributaries. It is most important to anglers in Spirit and Storm Lakes, with its half brother, the yellow bass, being a popular Clear Lake fish.

Definitely, the white bass is found from Alabama west to Texas, then north through Oklahoma and into the southern waters of Minnesota and Wisconsin. Although primarily a lake fish, the white bass makes impressive annual pilgrimages in many streams and is a favorite with spring fishermen. The Mississippi River and its tributaries yield an annual toll of white bass. Very few white bass are found in Canada.

Although no recognized record is available, reliable sources have reported white bass in the four to five pound range. The average, however, is from one to two pounds.

Because of its preference for cleaner, deeper waters and its active nature, the white bass is a fish of firm flesh and delicious flavor.

Minnows, small fish, worms, insects, larvae, mollusks, crayfish and crustacea are food for this silver scrapper.

Although nearly any type of small plug or fly lure will produce when one hits a school of striped bass on the feed, there are certain types which are better on average occasions.

These are lures which closely resemble the white bass's favorite food—the shad—and in nearly every veteran fisherman's kit will be found the following stand-bys: a pearl wobbler, midget river runts, punkinseeds, an assortment of small silver spoons, spinner and bucktail or pork rind combinations like the ace.

Fly casting, light bait casting, still fishing, trolling, spat fishing and spinning are the favored mediums. Spinning, in particular, is a very effective method because the lighter 1/4-ounce lures can be cast greater distances than by any of the other methods.

Lake fishing simmers down, in the main, to watching for the silvery horde to rise for slaughtering the small minnows on which they mainly feed. When this occurs, the water fairly boils and the "chop, chop" of their feeding is discern-

KILLING FLOWERS WHOLESALE

(Open Letter to Iowa State College)

Are our wild roses along the roadsides to become extinct? Will no longer our state flower burst forth its delicate pink flowers each June for motorists to see? Is this the last June we can enjoy them?

* * * * *



Iowa's state flower, the wild rose, growing in a fence row. The wild rose was adopted as our official flower by the Iowa General Assembly May 7, 1897. Jim Sherman Photo.

* * * * *

Are the blood root, the sweet williams, the blue bells of early spring to be seen no more along our roads? Will the wild yellow daisies, the bright orange Indian paint brush and the wild purple asters of the fall be only a memory? We've always liked wild flowers.

Now we understand that workmen are spraying our roadsides throughout the state with 2,4-D to kill the weeds and that nothing will be left except the grass.

Grass is lovely and we'd just as soon use this wonderful 2,4-D to kill the pesky weeds, but what about our flowers? When we use 2,4-D on our lawns we are told to keep it away from shrubbery and flowers or it will kill them. Doesn't

(Continued on page 53)

ible for some distance. Careful trolling around, or casting into the school will produce a fish every cast until the school sounds.

Where white bass abound, there can be found fishermen who know the thrills of "production fishing" when the stringer fills fast and furiously. It's an experience worthy of space in any fishing diary.—Heddon Fish Flashes.



In determining the population of fish in a pond, part of the fish are seined and fin-clipped, then released. After several days the pond is seined again and, by counting the fish with clipped fins and those without, a close approximation of the total fish population can be made. Perry Chief Photo by Floyd Lutz, Jr.

HOW MANY FISH IN A POND?

By Kenneth D. Carlander
Iowa State College

Do you have a "system" for guessing the number of beans in a glass jar? At one time or another almost everyone has tried to make such a guess. How would you try to guess the number of fish in a pond? You usually cannot see the fish nor tell how far apart they are.

The Iowa Cooperative Fishery Research Unit at Iowa State College, Ames, is trying to count the fish in many small lakes and ponds. The "system" being used is a rather simple one, but it gives quite accurate results.

A 50 to 75 foot seine with $\frac{3}{8}$ inch mesh, which is small enough to prevent the escape of all except the smallest fish, is used in seining in the pond to be "guessed." Even with a great deal of seining, however, it is impossible to catch all of the fish in a pond, and, therefore, just seining will not show how many fish are present.

At first all of the fish that are caught are marked so that they can be recognized when they are caught later. To mark the fish a particular fin is cut off. Any fin may be cut but we usually use one of the paired fins. It does not appear to hurt the fish to clip off a fin and if it is not cut off too far down, the fin will grow back within a few weeks. Fish with one or two fins removed usually can swim as well as those with all their fins intact.

The marked fish are then returned to the pond. Seining is continued until several hundred fish are marked. Usually two or three seine hauls provide enough fish for marking.

The marked fish are left in the pond for a day or two so that they can become well distributed and mixed in with the other fishes.

After this delay, three or four

(Continued on page 56)

A Business View . . .

(Continued from page 50)
the problem, and in full. For years, it appears, we have been "winking" at several pressing conditions, such as the control of carp in our southern lakes, the compensation of farmers for damage by game or for hunting privileges, and the encouragement of good upland game management practices among land owners where birds can be raised most efficiently in the field. These are only a few. To solve any or all of them will cost money. We must be prepared to pay the price or stand the consequences of a game and fish supply facing slow exhaustion before ever-increasing hunting and fishing pressure.

Our good friend Izaak Walton was endowed with unusual vision. Three hundred years ago he no doubt had in mind the thousands of self-appointed "experts" on all things game and fish when he wrote, "That which is everybody's business is nobody's business." Game and fish threatens to wither away to "nobody's business" or to no business at all if we fail to agree on a production program supported by a long-range plan with adequate finances. The sooner this basic thinking is accepted, the better.

Whether a sportsman is a conservationist depends on his state of mind. If he decides to be one—and it goes without saying that every sportsman should be—he can carry out his desires by obeying the laws, by encouraging compliance from others, and by cooperating with his conservation department at all times. These rules constitute a minimum personal conservation creed.

Some snakes have been known to live from one to two years without food by absorbing the fat of their own bodies.

BENTON COUNTY MAKES ABANDONED SCHOOLYARDS WILDLIFE AREAS

"When memory keeps me company and moves through smiles and tears,

A weather-beaten object looms through the mist of years."

The passing of the rural schools in Benton County to make way for educational progress cannot help but bring a feeling of regret to the thousands upon thousands of Iowans who were first introduced to the mysteries of readin', 'ritin', and 'rithmetic in them.

Progress in education is also making for progress in the Benton County wildlife situation, for the Benton County Fish and Game Club and Conservation Officer Harry Rector were on their toes and have inaugurated a program to convert the abandoned schoolyards into wildlife habitat areas.

But let Officer Rector tell the story:

"Benton County went all out last year in consolidating. Practically every town in the county took over some of the rural schools. Just prior to this consolidation we had 86 rural schools and we now have seven left.

"In many cases the land was originally donated by the adjacent land owner and thus reverted back to the farm when the school was abandoned. In other cases the land had been sold to the school district and in such cases the schoolyard was appraised and sold, the adjacent landowner being given first chance to purchase it.

"In some cases he didn't want the schoolyard back, so our Benton County Fish and Game Club purchased it from the school district. We also were able to purchase some schoolyards back from the farmers after they learned why

we wanted to acquire title to the ground.

"The yards averaged about \$100 each and we were able to purchase eight this year by getting voluntary contributions and by using some of the Benton County Club's surplus money.

"These areas are being developed as fast as possible and each is to be fenced with Multiflora rose. In one case we held a reunion of former students which attracted a number of old timers. Following the basket dinner we all pitched in with planting and in a short while the old schoolground was converted into a permanent wildlife area.

"With the thought in mind that the club conceivably in the future might disband as clubs sometimes do, we were fortunate in getting the Benton County board of supervisors to accept title to these finished game areas where game birds and animals will be provided with food and shelter for 'ever and ever.'"

Killing Flowers . . .

(Continued from page 52)
the same hold true for wild flowers?

For years, the state has tried to preserve its native flowers. We have told picnickers over and over again not to ruthlessly gather great quantities of flowers and above all not to dig up the plants and destroy the roots. The Conservation Commission limits hunting and fishing days to save our pheasant, duck and fish populations from being depleted.

Now is the state going to go out with squirt guns and on a wholesale basis rid our roadsides of their flowers?—Spencer Times.



Former pupils, teachers and patrons, with the assistance of Conservation Officer Harry Rector, planted trees and shrubs, converting Big Grove No. 7 school yard into a game refuge. Belle Plaine Union Photo.



Kids' Fish Days are becoming increasingly popular throughout the state. At Gilbert's Lake in Council Bluffs, 3,200 boys and girls packed 2,200 feet of shoreline. Five thousand hungry bullheads stocked by the State Conservation Commission provided the incentive. Council Bluffs Nonpareil Photo by Jack Kennedy.

KIDS DAY A SUCCESS

Fish day at Gilbert's Lake Saturday was a whopping success!

When the starting whistle blew at 1:30 p.m. there was a glorious scramble. Kids were jammed so tightly around the lake not all of them could get their lines into the water at once. They were still going strong when the contest ended at 4:00 p.m.

The lake is approximately 2,200 feet in circumference. An estimated 3,200 zealous young fishers were after the 5,000 hungry bullheads dumped in the lake by conservation officials Friday evening.

It was ideal fishing weather. Prizes ranged from cash money, fishing tackle, radios, sports equipment and games.

Only one casualty was reported, Layland Struble, six, who was hooked in the left eyebrow by a swishing fish hook. He was treated on the spot and he "felt fine."

OUTDOOR ODDITIES BY WALT HARVEY



GOOD HOUSEKEEPER!
THE FLICKER CLEANS
HOUSE AFTER EACH MEAL.
THESE POPULAR BIRDS
ARE KNOWN BY 120
DIFFERENT NAMES IN
THE U.S.A.

DEAN W. GAUNT

The shortest fish was an illegal catch. Therefore, no prize could be awarded. Raynold Raus was standing just off the bank in the water. He felt something at his feet and squeezed his toes. Up came a two-inch bullhead.

Other odd catches included a turtle, a frog and an old lantern that looked as if it might have been a Diogenes original.

Some kids used rods and reels. Others used cane poles. Some had tree limbs and long sticks that looked like overgrown twigs. Bait was also varied. The good ol' standby—worms—seemed to be predominant.

Conservation officials and the Retail Merchants association officials, who conducted the contest and awarded the prizes, said they were "very well satisfied" with the contest.

Conservation Officer Ward Garrett said at 3:00 p.m. "about half of the 5,000 bullheads have been caught." After that he lost track. —Council Bluffs Nonpareil.

THINGS YOU MAY NOT KNOW

After the large feathers have been picked from waterfowl or game birds, soak the bird in well salted water for a short time and the pin feathers will come out easily.

Ducks see entirely different objects with each eye. Their binocular vision is limited to a narrow band ahead, upward and backward.

Snakes cannot blink their eyes. They have no eyelids. Their eyes can absorb bright sunlight, but are blinded by twilight.

Crayfish eyes are dark at night and light in the daytime.

Wardens Tales

Shop Talk From the Field

Ken Madden, Conservation officer in charge of Cedar and Clinton counties, writes:

"I heard a good wardens tale the other day although it may be an old one. I will introduce you to the story the way it came to me.

"I was assigned to work in Earl Scherf's territory in Buchanan and Delaware to help out at the opening of the trout season. Along late in the afternoon we unlimbered our fly rods to do a little fishing on Elk Creek which was quite crowded.

"Earl took a short cut and fished the lower part of the run and I the upper part. I met a chap with a red shirt fishing at a deep pool and asked him how fishing was. He said that he had caught his limit in the morning but this afternoon he had caught no fish. I mosied on down the stream and tipped off Earl who worked back up to the red-shirted fisherman.

"He popped the question, 'Well, how's fishing?' The shirt replied, 'Fishin' was sure swell this morning. I got my limit in 30 minutes.' Earl reached in his pocket and displayed his shield and said, 'I think you've bragged enough about your early morning fishing. Don't you think it's about time you quit?' Scherf had no evidence of violation other than the fisherman's brag of how many he caught and that's rather undependable, but the red shirt did take off like a startled deer.

"A fisherman standing nearby who overheard the conversation told Earl, 'That makes me think of a story that happened out west. A chap had bragged to a stranger about illegally killing two deer. The stranger asked, 'Do you know who I am?' The poacher said,

"No." The reply was, "I am the game warden." The poacher then said, "Do you know who I am?" The warden replied, "No." The poacher bragged again, "I am the biggest liar in the county!"

Conservation Officer James A. Becker, in charge of Davis and Wapello counties, relays this story from the Ottumwa Courier:

"Eyes of anglers grouped along the hydro plant wall popped the other evening when a well-dressed man, accompanied by a Negro lad who was carrying an elaborate tackle box and rod case, took his place at the railing. The lad unsheathed the rod, adjusted the reel, hooked on the bait, then hung a heavy sinker on the line. He then handed the outfit to the well-dressed man. The natty angler cut loose with a stupendous cast, and with the lead sinker headed in the general direction of boats anchored off the Market Street Bridge, his 'fisherman's caddy' let loose with an ear-splitting 'Fore!'"

VACATION—LAST DAY

10:00 a.m. Oh, Boy. It's good to be home from vacation and one day early. One day with nothing to do. So help me, I'll really relax.

1:00 p.m. Wope, there's the mail for two weeks. Oh, oh. 2600 pheasant chicks due in 36 hours. I'd better call the clubs to final check arrangements, etc.—Long

3:00 p.m. distance, please. No, I'd better go see about that myself. That darned phone again!

6:00 p.m. No, ladies do not need a license unless fishing in state-owned lakes.

9:00 p.m. Just a few more letters and I'll hit the sack.

10:30 p.m. Let's have coffee and to bed.

11:00 p.m. "Brrrrring." Now what? "Are you the game warden?" "Yes."

(Continued on page 56)

FIRST CARP RECALLED BY OSKALOOSAN

Joe Fifer of the Herald stereotyping room comes up with a story of when the first carp was found in the rivers around Oskaloosa. W. A. Taylor of Oskaloosa, Route 5, is accredited with the report. The 70-year-old fisherman says he was 18 years old when the first carp

caught in these parts was taken from the Skunk River near Rose Hill.

Taylor recalls that the fish were then known as German carp, were large, and had very few scales. Prior to that buffalo were common in local rivers. They are believed to be becoming scarce now. —Oskaloosa Herald.



The so-called leather-back carp apparently is less common than during the first few decades after the carp's introduction. It is not a distinct species of carp but a mutation or freak. Jim Sherman Photo.

Pollution Study of the Upper Des Moines River

By Harry Harrison
Fisheries Biologist

(Editor's note: This report to the Conservation Commission contains information collected by Mr. Harrison on pollution of the upper reaches of the Des Moines River for the winter 1947-48.)

On January 18, 1948, fish of various species, including channel catfish, walleyed pike, northern pike, carp, quillback, and suckers, were observed congregating in seepage areas at the mouth of some of the small tributary streams of the west fork of the Des Moines River.



The 1948 pollution kill on the Upper Des Moines River destroyed thousands of game fish, including walleyed pike, northern pike, bass, and catfish, as well as uncounted rough and forage fish.

The first concentrations appeared at Graettinger, the Osgood Bridge, and at the mouth of Jack Creek. Within the following ten days other concentrations were found to be building up at all other seepage areas and at the mouths of all tributary streams between Estherville and Bradgate on the west fork and at a seepage area in section 36 of Iverington Township in Kossuth County on the east fork.

Due to the special behavior of the fish, low concentrations of dissolved oxygen (referred to hereafter as D.O.) was suspected immediately as the reason for the fish congregating in fresh water areas. Using the Winkler system for determining the D.O. content of the water, weekly tests were made at twenty stations along both forks of the river. The results of these tests are presented in Table I.

An examination of the table reveals three points of consequence affecting the aquatic life of the two rivers. First the limits of low D.O. under ice coverage extended from Estherville to Bradgate on the west fork and from Algona to Highway 169 bridge five miles south of that city on the east river. Second, the duration of low D.O. was from mid-January to February 18. On this date thawing caused the ice to break up and run off water highly charged with dissolved oxygen diluted the stagnant water sufficiently to bring the oxygen content well above the

amount required by aquatic life. And, third, the source of pollution is clearly delimited as originating in Estherville and Algona.

The actual amount of harm to aquatic life resulting from winter kill under river ice coverage is difficult to ascertain with any degree of accuracy. Some of the difficulty encountered in such evaluations are as follows: The first fish to die may be carried along the bottom for many miles before washing ashore where they may be counted. Others may become buried in the river bottom or entangled in brush piles beneath the water surface and never become exposed for counting, and those fish which are washed ashore or deposited by overflow waters are scattered so widely that actual counts are almost impossible.

Yet, in spite of the discrepancies known to be involved, counts on dead fish were made on ten separate half mile stretches on the west

river and on two half mile stretches of the east river. In addition, control counts were made above the sources of pollution at Estherville and Algona.

No dead fish were observed above the points of pollution or along the east fork. However, on the west fork a total of 4,910 carp, 220 channel catfish, 35 bullheads, 21 quillback, 16 walleyes, 11 northern pike, and 9 buffalo were counted dead along the five miles of stream bank studied.

On the basis of these figures and considering that roughly 100 miles of river bank lie within the zone of pollution it is reasonable to assume that approximately 60,000 carp, 5,000 channel catfish, 600 bullheads, 420 quillback, 300 walleyes, 200 northern pike, and 200 buffalo could have been counted along the river banks between Estherville and Bradgate.

Figures of this magnitude indicate that the fish kill was very severe. Illinois and Michigan workers state that when large numbers of carp or bullheads are

found dead as the result of winter kills, it means that desirable game fish have suffered proportionately more. The reason for our low counts on dead game fish can probably be explained that they were the first to succumb to low D.O. and were destroyed before the ice broke up and were not washed ashore. In the case of channel catfish counted in this study all were in advanced stages of decay while carp, on the other hand, were yet remarkably well preserved.

To determine the effect of winter pollution on the forage fish population, seining a total of 4,000 square yards of river bottom resulted in a take of 411 minnows and darters or an average of one individual to 10 square yards of bottom. Collections made the summer before in some of the same areas yielded averages of two to three minnows per square yard. This means that at the present time one forage fish occupies the same space that was occupied by 20 to 30 individuals the previous summer and fall.

It is not known what part natural mortality played in this reduction, but in view of the numbers of fish counted along the river banks, it is reasonable to assume that low D.O. as a result of domestic and industrial pollution played an important part in the reduction of the forage fish too.

In view of the data presented, it is apparent that pollution originating at Estherville is a most important factor limiting fish in the upper Des Moines River. It is recommended that fish stocking be discontinued in this area until the City of Estherville installs an adequate sewage disposal unit. It is further recommended that fish stocking for the west fork cease above Rutland until such time as the pollution is remedied.

PROPAGATION OF MINNOWS

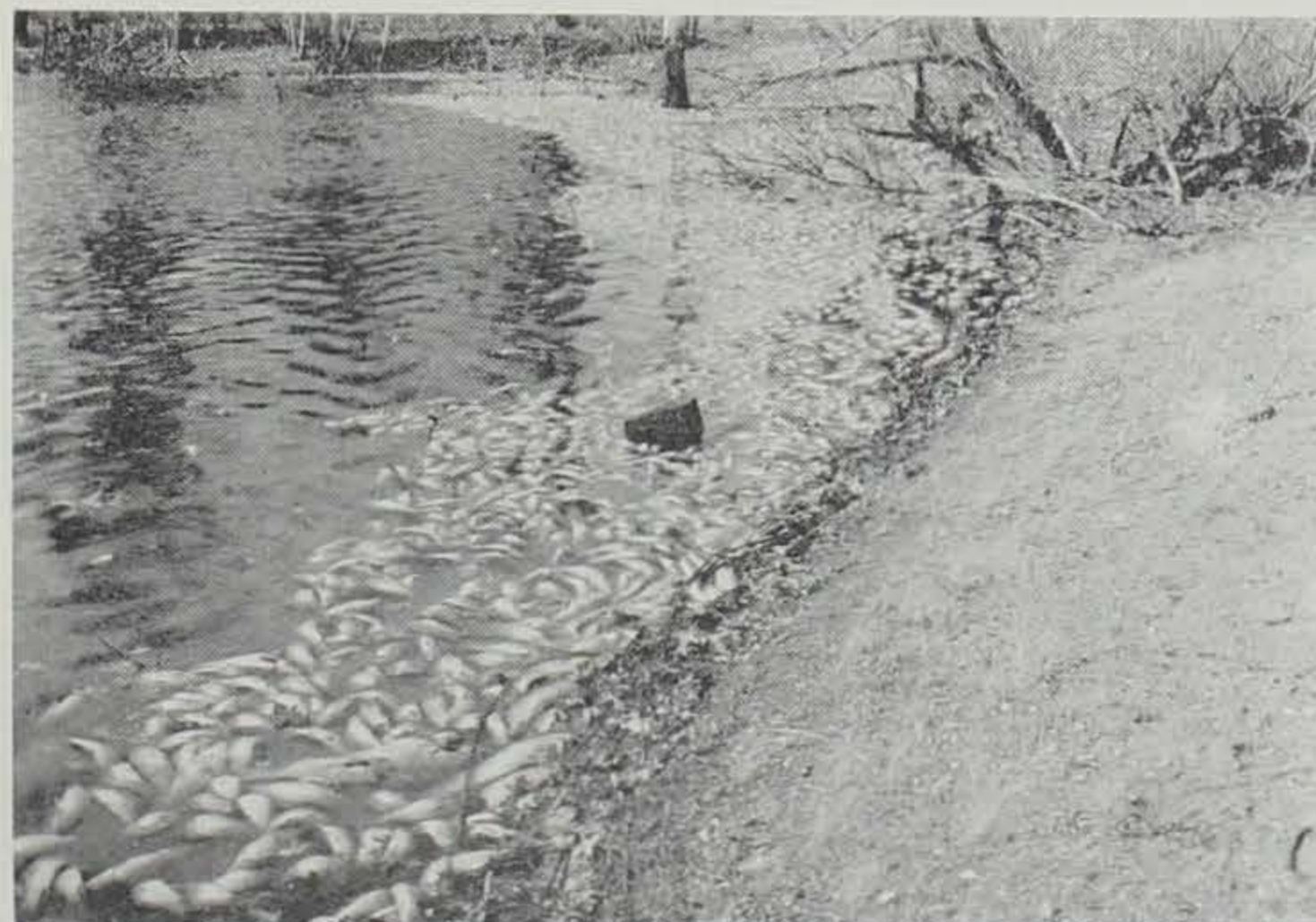
A new 115-page handbook, "Propagation of Minnows and Other Bait Species," published by the U. S. Fish and Wildlife Service, may be obtained for 35 cents by writing to Superintendent of Documents, Washington, D. C., asking for Fish and Wildlife Service Circular No. 12.

The new handbook will be invaluable to bait dealers and others interested in raising or distributing live bait. The booklet contains major sections on propagation of bait species, handling of minnows, and operation of holding tanks. Dope contained on raising earth worms, crayfish, crickets, leeches, and insect larvae will be surprising to many. The booklet also contains brief life histories of the important bait minnows.

To perform a work equal to that of a mole, a man would have to dig a tunnel, wide enough to permit the passage of his body, thirty-seven miles long in a single night.

TABLE I

	Dissolved Oxygen Parts Per Million				
	Jan. 21	Jan. 26	Feb. 2	Feb. 10	Feb. 18
WEST FORK STATIONS					
Emmet Co. Bridge north Estherville.....	7.8	8.4	7.6	7.4	9.2
City Park, Estherville	7.8	8.2	7.6	7.4	9.2
Graettinger4	trace	trace	trace	9.2
Osgood Bridge6	trace	trace	trace	9.4
Bridge Highway 18, west Emmetsburg.....	1.6	.2	trace	trace	9.0
Bridge Highway 17, south Emmetsburg....	1.0	.2	trace	trace	9.0
Bridge Co. Rd. E, west West Bend.....	1.0	.4	trace	trace	9.2
Bridge McKnight's Point.....	1.2	.4	trace	trace	9.2
Bridge Co. Rd. T, west Rolfe.....	1.4	.6	trace	trace	9.4
Bridge Co. Rd. Y, south Bradgate.....	1.6	1.4	1.4	1.4	9.4
Dam Rutland	6.2	5.8	7.2	7.4	9.4
Dam Humboldt	8.6	8.2	7.4	7.8	9.2
Forks of Des Moines.....	8.0	8.2	7.4	7.4	9.2
EAST FORK STATIONS					
Bridge Highway 18, north Algona.....	6.0	7.8	7.4	7.4	9.4
Bridge A.A. Call State Park, Algona.....	2.6	1.0	trace	trace	9.2
Rendering Works, Algona	2.6	.8	trace	trace	9.2
Bridge Highway 169, 5 miles south Algona...	3.4	2.8	2.6	3.2	9.0
Foster Bridge East Arnold	8.0	6.0	4.0	4.4	9.2
Bridge Highway 169 north St. Joseph.....	5.2	3.6	3.8	3.4	9.2
Dam Dakota City.....	8.0	7.0	7.0	5.4	9.2



Winter kills from pollution are disastrous in both lakes and streams, but more spectacular in lakes where the tons of dead fish are not carried away or dispersed by the current.



Sundays are the most popular days in the park areas. Sure cure for the "hot foot" can be found for young and old alike in the clear cold waters of Pease Creek at Ledges State Park.

State Parks . . .

(Continued from page 49)
 as Boy Scouts, Campfire Girls, 4-H Clubs, may camp for 50 cents per unit or 10 cents per person, whichever figures the lower charge for the group.

Three parks, Lake Ahquabi, Dolliver Memorial, and Springbrook, have cabin facilities for organized groups. Cabins, cots, mattresses, mess hall, sanitary facilities, hot and cold water, stoves, and ice boxes are furnished. The renters must furnish their own dishes, cooking utensils, as well as cooks and kitchen help. The charge for use of buildings and equipment is 25 cents per day per person, with any additional service or facility at actual cost to the state.

At Lake Keomah and Mini-Wakan mess halls are provided for the use of groups furnishing their own tents.

Overnight cabins are available in 10 areas. At Ledges, Pine Lake, Lake Ahquabi, and Dolliver Memorial the following charges are made: Monday to Friday, \$2.50 per day per cabin; Saturday, \$3.00; Sunday, \$3.00; Saturday and Sunday (2 days), \$5.50; weekly rate, \$12.50. In Backbone, Lake Wapello, Springbrook, Lake of Three Fires, and Lacey-Keosauqua the rates are: Monday to Friday, \$2.75 per day per cabin; Saturday, \$3.50; Sunday, \$3.50; Saturday and Sunday (2 days), \$6.50; weekly rate, \$14.25. Each cabin has sleeping accommodations for four persons with extra cots being furnished for a small charge.

Cabins are available at Palisades-Kepler Park at special rates: stone cabins (accommodate 8), \$5.00 per day, \$20.00 per week; club house (accommodates 18), \$7.50 per day, \$30.00 per week; fox cabin (accommodates 6), \$3.50 per day, \$15.00 per week.

All reservations for group camps or overnight cabins are to be made through the area custodian. Two

mimeographed leaflets, "Camping in State Areas" and "Where To Go in Iowa Recreation Areas," may be secured cost free by writing the State Conservation Commission, 914 Grand, Des Moines.

Following is a list of custodians with whom cabin and group camp reservations should be made:

- Lake Ahquabi.....W. E. Myers, Indianola
- Dolliver Memorial.....J. A. Babcock, Lehigh
- Springbrook.....W. K. Garrard, Guthrie Center
- Mini-Wakan.....O. L. Fulton, Milford
- Lake Keomah.....W. F. Partridge, Oskaloosa
- Ledges.....M. L. Jones, Boone
- Pine Lake.....D. V. Hicks, Eldora
- Lake of Three Fires.....H. J. Ripperger, Bedford
- Lake Wapello.....J. W. Brill, Drakesville
- Backbone.....L. J. Schmidt, Strawberry Point
- Lacey-Keosauqua.....Howard Coon, Keosauqua
- Palisades-Kepler.....C. F. Meyer, Mt. Vernon

How Many Fish . . .

(Continued from page 53)
 seine hauls are made to catch more fish. The total number of fish in the pond can then be estimated from the proportion of the marked and unmarked fish caught.

For example, the number of marked fish placed in the pond is known, and if one-third of the marked fish are caught in this later seining, it can be assumed that about one-third of all the fish in the pond were caught. Then the total population could be estimated at three times the total number of fish caught in the later seining.

Studies on small ponds indicate that this estimate will not be off more than about ten per cent, if three seine hauls are made in making the final estimate. On larger ponds and lakes, of course, it is difficult to get as accurate an estimate, without much more work.

The Iowa State Conservation Commission has used this same estimating technique at Storm Lake, and similar studies have been made in several other areas.

In these Iowa studies it was found necessary to do some of the seining at night because the bullheads sometimes avoided the net during the daytime by hiding in the mud.

Pheasant Shooting . . .

(Continued from page 49)
 Some opponents of a season say that pheasant concentrations are spotted in southern Iowa. This is true. But they go on to say that where there are limited concentrations an open season will completely clean out the area. This is not a fact.

Pheasants exist in good numbers in parts of many southern counties but are scarce in other parts. It has been proved many times that the amount of hunting done in any area depends on how many birds there are and how easy they are to find and shoot. Very few hunters go out when their chances of finding birds are practically nil. Almost every hunter will hunt only where he knows he has a fair chance of bagging game.

It has also been proved that as populations decline hunting pressure drops off and that hunting usually stops entirely when the population has been reduced to a certain level.

Several states that have fewer birds than we have in many parts of south Iowa, and where hunting seasons are open, have found that hunting stops before too many cock birds are shot. It has proved to be almost impossible to overshoot pheasant populations when only the cocks are taken.

Because of scattered pheasant populations in most of south Iowa and the difficulty of strangers in locating good pheasant hunting territory, most of south Iowa hunting would be done by local people. If an open season in southern Iowa were allowed it is believed that most pheasant hunting would be done incidental to quail or rabbit hunting.

People who are interested in building up pheasant numbers say, "Don't have a season. Let the birds build up in greater numbers first." But it is believed that pheasant populations have reached their peak numbers in some occupied territories and that cock bird shooting would not prevent increases even if in some areas more

than present stocks could be harbored.

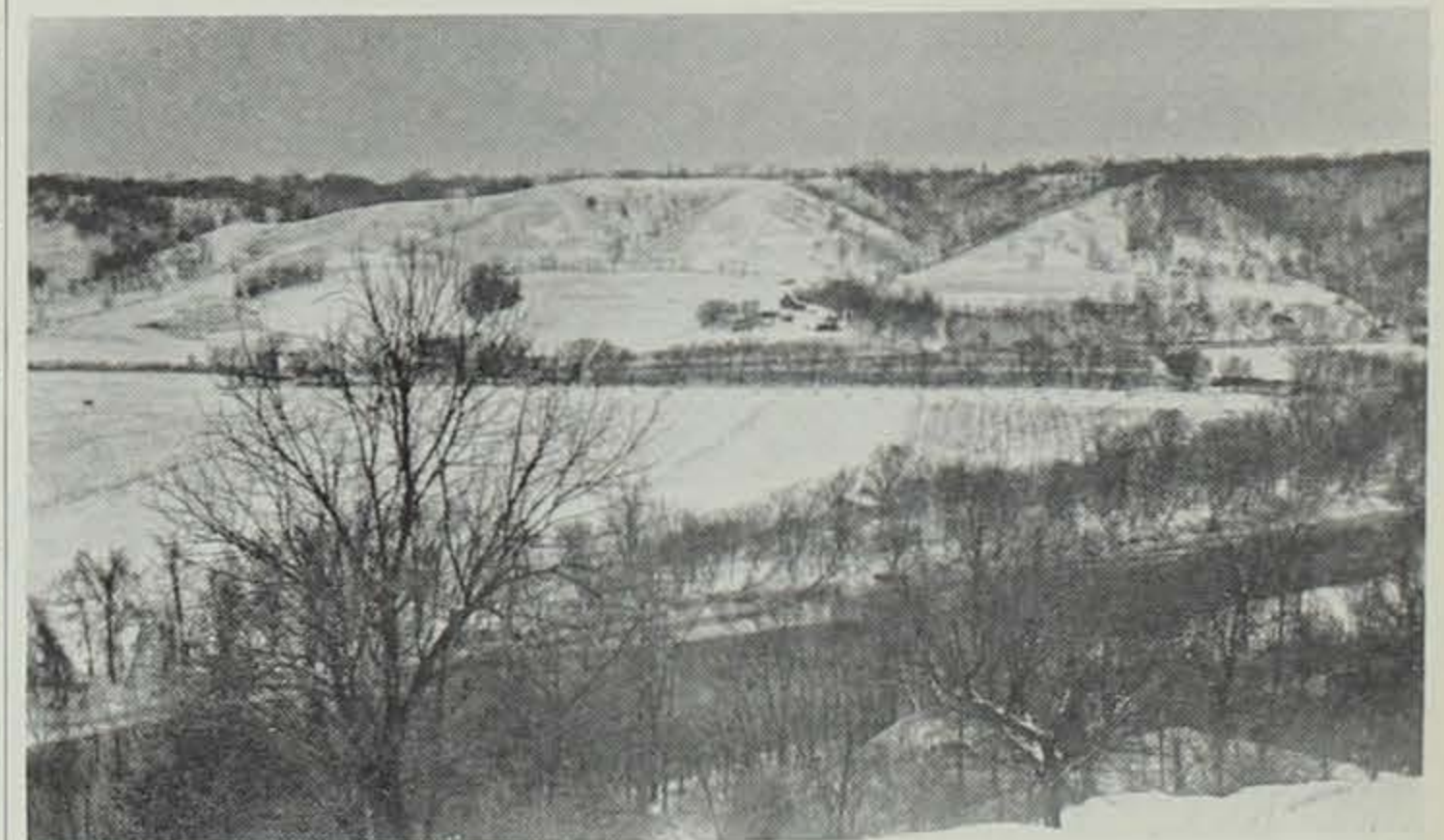
It has been proved that one cock pheasant to every five to ten hens is sufficient to maintain high fertility and good reproduction, but if cock birds are not shot there is a tendency for pheasant populations to be made up of about 55 cocks to 45 hens in each 100 birds. Therefore, under these conditions, with no open season, there is always a surplus of cock birds that can be harvested. If they are not harvested they are being wasted.

Experience in counties open to shooting in Iowa has shown that in areas where hunting pressure is heaviest the cock populations have never been reduced to anywhere near the danger point. Because of topography and cover conditions in southern Iowa, birds will be harder to find and the chances of overshooting are far below that in the flat northern counties.

The pheasant situation in southern Iowa can be likened to that in Allamakee, Clayton, and Dubuque counties where pheasants exist only in certain parts of the county and are practically non-existent in others. These counties have been open to shooting along with the other north Iowa counties. Pheasant hunting in them has been directly proportional to pheasant populations. Hunting here is done mostly by local people and the pheasant populations have always gone up and down along with the populations in the more favored counties that have a larger number of birds and sustained heavy hunting pressure.

Wardens Tales—Cont. from p. 54

"I have three coon on my front door—what will I do?"
 (It must be the coffee.)
 "Where?"
 "On my front door!"
 "I'll be right over."
 12:00 m. I'm back. Vacation is over. I have three coon in the cage which the dog "treed" on the screen door. Didn't get bit. Gosh I'm tired. Good night.
 —Ken Madden



The rugged terrain of southern Iowa would make pheasant hunting much more difficult for the hunter and make escape for the birds much easier. Jim Sherman Photo.