

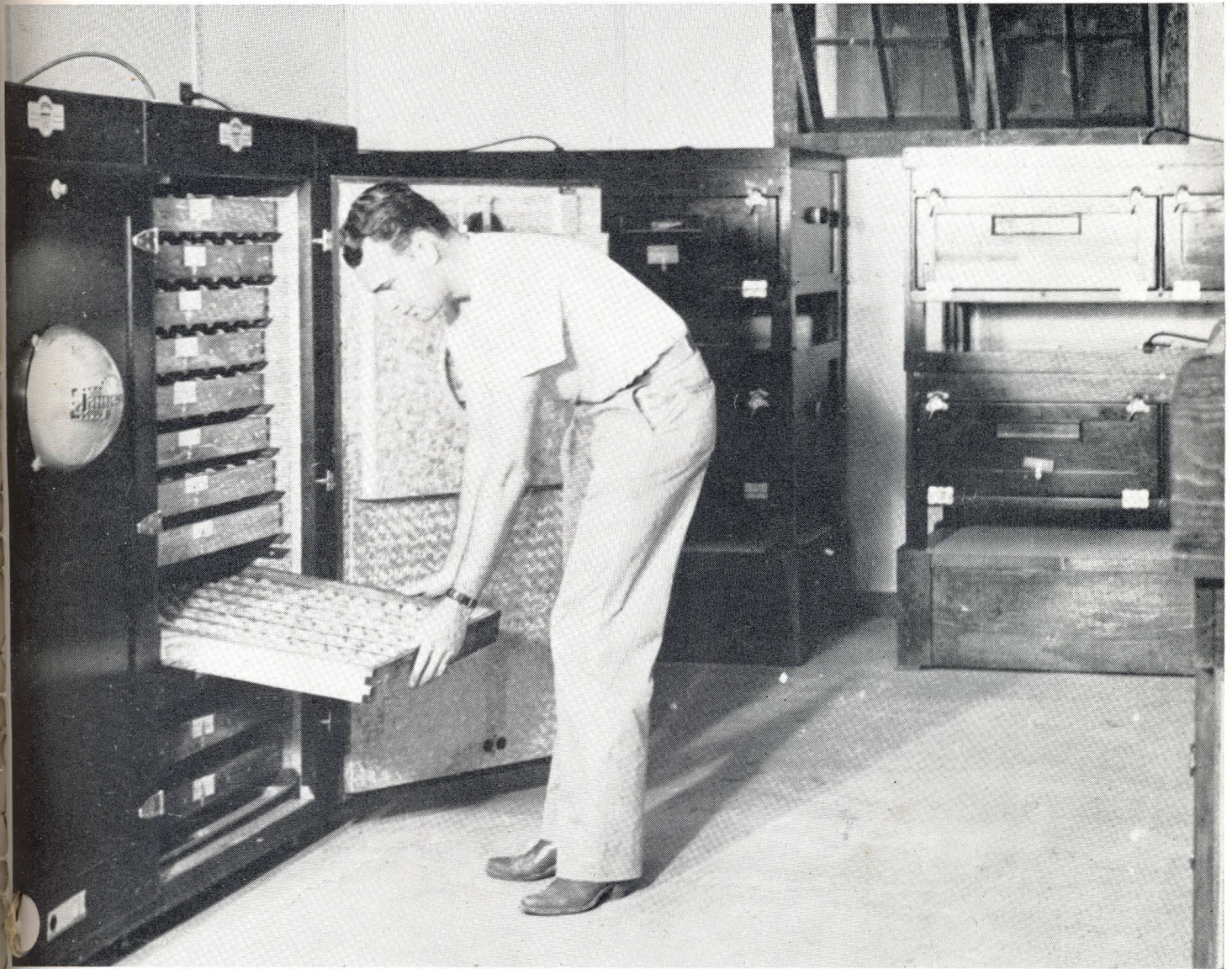
# KANSAS FISH AND GAME



VOL. IV

JULY, 1942

No. VII



*A Section of the Incubator Rooms at the Meade County Pheasant Farm and Superintendent Sutherland Caring for His Potential Flock.*

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# KANSAS FISH AND GAME

*Published Monthly By*

THE KANSAS FORESTRY, FISH AND GAME COMMISSION

Pratt, Kansas

GUY D. JOSSERAND, *Director*  
DAVE LEAHY, JR., *Asst. Director*

GARLAND ATKINS, *Secretary*

LEE LARRABEE, *Chairman*

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## Pond Management

During the last few months the fish crew has seined many lakes and ponds at the request of operating agencies and owners to determine why fishing in such water was reported as not being good.

In every instance we learned that the lakes were not short of fish, but in fact were overstocked. The state of Alabama conducted scientific investigations along similar lines and the results of those investigations are herewith reprinted for the benefit and guidance of those readers of KANSAS FISH AND GAME who are having trouble with their ponds and lakes.

"Best results cannot be obtained by stocking a new pond with a few brood fish. This usually results in overstocking the pond with certain species, while others may fail entirely to reproduce. Experimental ponds stocked in this manner have failed to produce satisfactory fishing during a 3-year period. The new pond should be stocked with hatchery fish.

The importance of properly stocking a new pond cannot be overemphasized. The manner in which a pond is originally stocked will affect the fishing for the next 5 to 10 years or longer. If properly stocked, a pond should furnish good fishing within 1 year or less; if improperly stocked it may require 5 to 10 years, or may never be satisfactory.

It is extremely important that ponds should not be stocked with too many fish. A pond will produce only a certain weight of fish, and consequently overstocking results in stunted fish which are unable to grow because of lack of food. It is apparent, therefore, that only the maximum number which can rapidly reach legal size should be added.

It is very important also that a pond be stocked with the correct combination of species. It is impossible at the present state of our knowledge to rear fish to legal size where only one species is present in a pond. For instance, if a pond is stocked only with the correct number of bluegills, the fish grow rapidly until spawning time. Each pair then produces several thousand young. Since the large bluegills will not eat any appreciable number of their own young, the pond is then so overstocked with fish that food is insufficient and growth ceases. The older fish soon begin to lose weight and a high mortality results. Ponds stocked in this manner have failed to produce legal-size fish during a 10-year period.

It is necessary, therefore, to add to ponds containing bluegills the correct number of carnivorous fish to eat most of the young fish produced. Those remaining will then have enough food. Largemouth black bass and white crappie were tested in experiments as the carnivorous fish. White crappie did not eat enough young bluegills or young crappie, with the result that the pond was overstocked with both the bluegills and crappie by the end of the year. Largemouth bass, however, reduced both young bluegills and young bass to approximately the correct number for rapid growth. Largemouth black bass, or some similar species, are apparently necessary in all ponds in which it is desired to produce good fishing. They have been used successfully in combination with bluegills in ponds as small as one-half acre.

Since it is necessary, for best results, to add the correct number of several species, it is apparent that new ponds can be stocked properly only with hatchery-produced fish. The number of fish which should be added depends upon the number of pounds which the pond can support. In Alabama, unfertilized ponds support, on the average, about 150 pounds of game and pan fish per acre of water, while fertilized ponds support from 500 to 600 pounds. Results of various tests have indicated that on an average approximately  $\frac{1}{3}$  the total weight in a pond will be composed of carnivorous fish and  $\frac{2}{3}$  of forage fish. In stocking, 1 bass is added for each 2 pounds of carnivorous fish which the pond can produce, and 4 bluegill for each pound of forage fish. Each acre of water, if not fertilized, should therefore be stocked with approximately 400 bluegills and 30 largemouth bass; if fertilized, it should be stocked with not more than 1,500 bluegills and 100 largemouth bass. If crappie are desired in the pond, approximately one-fourth the above number of bass may be replaced by an equal number of crappie. If catfish are wanted, approximately one-fourth the above number of bluegills may be replaced by bullheads, 25 bullheads being used for each 100 bluegills replaced.

Good fishing in the shortest time has been obtained by stocking in the fall or winter with bluegill and bass fingerling as near the same size as possible. When stocked in this manner, bluegills reach legal size by the middle of the following summer and the bass by early fall. Fishing in such ponds should be begun as soon as the bass have reached legal size in order to

reduce the number to be carried through the winter. When fingerling bass are used for stocking in the fall or winter, they reproduce successfully the following spring, and sufficient young bass are present in such ponds if most of the older bass are removed.

Where it is impossible to stock with fingerling bass and bream of approximately the same size, good results can be obtained by stocking with bream fingerlings in the fall or winter and bass fry the following spring. Under these conditions, growth of the bream is less rapid during the early summer as the bass fry are less effective than fingerlings in reducing the number of young bream. In addition, no young bass can be produced in the pond till the following spring, and fishing should be postponed till that time. In experimental ponds stocked in this way, bass fry added in June reached a weight of one pound by November of the same year. About 90 percent of the bass added as fry were recovered as legal-sized fish when the pond was drained in November. Stocking with bass fry is very satisfactory, but necessitates waiting a longer time before the pond is ready for fishing.

It is often recommended that bluegills be placed in a pond several years in advance of the bass. This should never be done as the pond is soon overcrowded with stunted fish, and bass are seldom able to reproduce successfully in a pond heavily overstocked with bluegills.

After a pond has once been properly stocked with fish, it should not need the addition of more hatchery fish. Studies of the age and weight of fish from a large number of ponds in various sections of Alabama have been made, and in all cases growth was so slow as to leave no doubt that sufficient numbers of fish were present to utilize all the food in each pond. The addition of more hatchery fish would have been entirely valueless, except as a means of furnishing a few rather expensive mouthfuls for the carnivorous fish already present. An additional check on the above results was obtained by draining a number of ponds ranging in age from 3 years to 25 years. In all cases, sufficient young fish were found to utilize more food than the pond could produce.

The usefulness of restocking old ponds was demonstrated also by fishing records on an old 30-acre pond. For 3 years this pond was restocked with bass and for 5 years with bluegill bream from a 1/2-acre brood pond constructed on the stream feeding the large pond. This heavy restocking failed to increase the catch of legal-sized fish in the pond; on the contrary, the catch actually decreased during the period. Restocking does not appear necessary as experiences at Auburn have shown that if one pair of bass, bream or crappie is present per acre of water, they can produce more small fish than the pond can support.

Poor fishing in most older ponds is not due to lack

of sufficient brood stock. It is caused usually by a lack of sufficient fertility to produce the necessary food, by the absence of carnivorous fish, or occasionally by the presence of a considerable number of very large fish which upset the balance of the pond. When carnivorous fish are absent, they must be introduced. Where forage and carnivorous fish are both present, good fishing can usually be produced by increasing the food supply for the fish through systematic application of fertilizer. If fertilization is begun in the early spring, fishing should improve by the middle of the summer, and should continue to improve throughout the rest of the year as fish are removed. When the cost of fertilization appears too great, fishing in old ponds can often be improved by draining the pond, removing the large or otherwise undesirable fish, and restocking with the correct number of small fish.

## Sportsmen Lucky to Shoot One Pheasant a Day, Records Show

From Ohio comes very encouraging news to those of you who have difficulty in getting on the beam during the pheasant season. The nimrods of that state, according to information gleaned from survey reports, are no better shots.

The Ohio Game Commission recently reported that survey cards revealed that the average Ohio hunter saw 4 1/3 pheasants during the hunting day and bagged one bird for every two days afield. On the opening day of the season, records show that 157 pheasant hunters had seen 1,834 birds and killed 157. The next day, 163 hunters saw only 1,022 birds and bagged 95. By the third day 95 hunters saw 366 pheasants and bagged 48 of them. Ohio had compiled the above information from the reports of 1,268 pheasant hunters.



This string of legal length bass was taken from the Woodson County State Lake by Carl Sprigg of Wichita

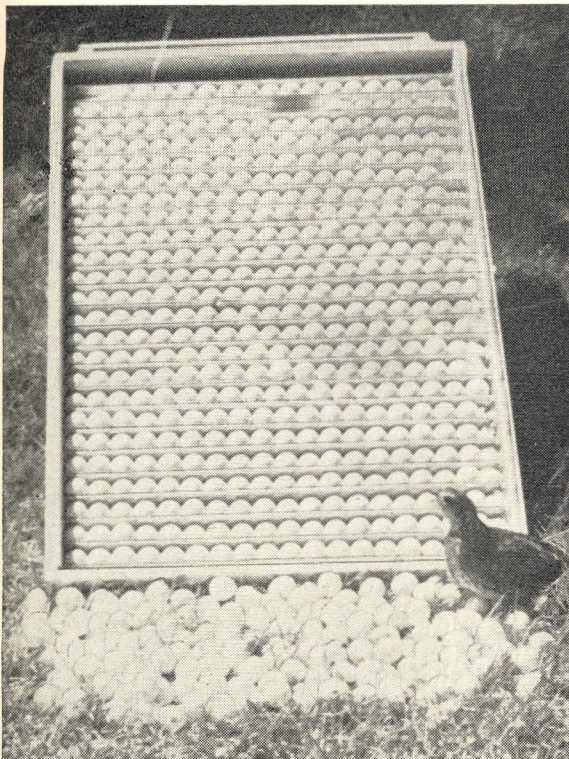
## Missouri Kids Are Active in Wildlife Work

An illustration of what the youngsters can do in the way of game protection, game management, game restoration—call it by whatever name you will, it still means wise use of our wildlife resources—is shown in the report from Missouri of that state's "Nature Knights" program.

According to a recent news release from the Missouri Conservation Commission, the quail hunter of Missouri owes a great deal to school children taking part in the "Nature Knights" program. The commission lists specifically the following services to bobwhite contributed by the children during the past two years:

1. Constructing 12,563 emergency feeding shelters and spending a total of 134,983 days servicing them.
2. Planting lespedeza for wildlife food and cover along 13,803 twenty-rod stripes of fence row, a total of 863 miles.
3. Planting rod-square food patches on 1,047 separate twenty-acre areas.
4. Setting out 23,839 trees.
5. Establishment of wildlife havens of at least one acre in area, fenced and developed with varied plantings, by 763 boys and girls working for "Nature Knights" awards.

Other supervised conservation activities included es-



This bob white hen from the Calista Quail Farm proudly surveys the result of five years effort—576 eggs

tablishment of 520 small bird havens in school yards by children working in groups; 7,266 bird houses erected for nesting birds; 2,503 natural museums started; 569 school exhibits; 5,727 farm surveys; 3,149 creek explorations, and 270 wildlife surveys made in company of conservation agents.

A total of 4,290 Missouri children have won "Nature Knights" awards since the program was started in 1939.

## Dave Ballantyne Heads Sportsmen

Members of the Herington Sportsmen Association re-elected Dave Ballantyne president of the association at their annual meeting and election held at the Legion clubhouse last Friday evening. C. W. Drawbaugh was elected vice-president; Roy La Rue, treasurer; T. J. Butler, secretary; C. W. Crawbaugh, chairman publicity committee.

Members of the executive committee are: D. D. Richardson, Wm. Lowe, Ed Murray, Bill Niles and Bert Mullin.

Jim Carlson and Ralph Hepperly of the State Fish and Game Department were present at the meeting and agreed to seine Lake Herington in the near future to determine whether the lake is understocked or overstocked with fish, and to make a survey of the species lacking or predominating.

The association voted and agreed to cooperate with the city commission to improve and build a boat landing and a gravel sand beach. This will make it possible to dock and enter boats without wading mud and will improve the beauty of the lake.

At the end of summer, a caribou buck has accumulated a maximum quantity of fat which lies on the back and is sometimes 2 or 3 inches thick.



A few of the 20,000 pheasants that will be released in Kansas this year

**TO KEEP THE RECORD STRAIGHT  
"OLE DAVE" JOTS IT DOWN**

In the June issue of this magazine it was announced that this very widely unread column was making its appearance for the purpose of answering questions that had been directed to us. The following items are answers to those questions.

Because many sportsmen are firm in their belief that the inbreeding habits of quail are detrimental to the stock we are reprinting the comments of a noted ornithologist, Professor Aldo Leopold, who has made an exhaustive study of that subject.

*"Alleged Inbreeding:* It is widely believed by sportsmen, throughout this region as well as elsewhere, that if quail are not dispersed annually by shooting, they inbreed and deteriorate in size, vigor and abundance.

"That shooting stimulates dispersal is probably a fact.

"That dispersal depends on shooting is not a fact in Georgia and probably not in this region. Stoddard proved by banding thousands of birds in hundreds of covies that shuffling of individual birds between covies begins as soon as the chicks are hatched, and continues throughout the closed as well as the open season. Covies with young of two or more sizes arise not from two successive broods from the same pair, as many sportsmen believe, but from this automatic shuffling between the broods of different pairs. The indications are that the natural dispersal is greater in the north central region than in Georgia.

"That quail would deteriorate, even if natural dispersal were absent, is improbable. Domestic species do not do so, except where similar genetic weaknesses exist in both parents. Wild species have not been tested, but the laws of inheritance as now understood would indicate less, rather than more, damage from inbreeding in wild species than in domestic, because they represent purer strains from which the tendency toward undesirable variations has been weeded out by competition.

"In short, there is not a shred of real evidence that quail inbreed if unshot, or that it would hurt them if they did. Isolated covies on the northern edge of the range might not have a chance to mix with others and thus inbreed, but these border birds (except where diluted with or supplanted by Mexican stock as in New England) are traditionally large and vigorous.

"The belief in damage from inbreeding is so widely entertained, however, and policies of management throughout the world are so often premised upon it, that its validity should be subjected to scientific test. This will require dividing a homogeneous sample into two halves, and inbreeding one while outbreeding the other in the same environment, for many generations.

Some well-to-do sportsman could build a lasting monument to himself by financing such a test in some competent university."

The age of a Kansas fish may be determined in about the same manner as we ascertain the age of a Kansas tree—by year ring counting.

Fish stop growing at the end of the summer and as body and scale growth is resumed in the spring a new circuli or year ring appears on the surface of the scales.

These scale markings are very minute and may be seen only by making use of a microscope or other optical aid.

Professor L. L. Dyché did not, as is commonly supposed, introduce the German Carp into the Kansas streams. The far-sighted professor did, however, cultivate that fish and give it its well merited place in the Kansas sun.

According to available records, it appears the German Carp was first introduced into United States during 1877 and into the streams of seventy Kansas counties as early as 1895.

The eels that are often taken from Kansas streams are commonly called river eels. Despite their snake-like appearance, the flesh of the eel is of a high food value and very much in demand by the knowing anglers.

River eels reach maturity at about five years of age, at which time it is thought they seek the deep faraway waters of the sea to spawn, fertilize their eggs and die.

The length of the male eel at maturity will seldom exceed twenty inches, whereas the female eel will measure as much as six feet at maturity.

Many Kansas newspapers recently informed their readers that the plover was again nesting on the Kansas prairies.

These articles have inspired many nimrods who obviously were not of an earlier generation to write asking for more detailed information concerning this once popular and intensively hunted game bird.

The plover that is receiving so much newspaper attention today is commonly referred to as the upland plover. This bird is migrant, coming to Kansas during the early spring and remaining on our prairies until about the last of September, at which time it resumes its seasonal movement southward.

Because of its flesh and as a destroyer of obnoxious insects it was popular with both the sportsmen and the farmers of an earlier day.

The nest of the plovers are usually found at the base of bunchgrass and contain four eggs pyriform in shape.

The plover differs externally from the snipe in that its body, neck and bill are much shorter and heavier than that of the snipe.

That these birds were recklessly wasted and shot is not denied. Market hunters and the plow were factors that seriously reduced their numbers. Because of that fact we do not anticipate that the Federal Government will grant a plover season for many years to come. They are now protected by strict Federal laws.

Bullfrogs spawn during May and June, then they produce a very large number of eggs. These eggs develop into tadpoles. The tadpoles develop into frogs when they are from one to two years of age.

Frogs ordinarily are large enough for table use within one year. At four years of age they are full size. The rate of their growth, however, depends largely upon the food supply.

As an Elk who is accustomed to eating everything and drinking anything I have no hesitancy in going on record as saying that the flesh of the bullfrog is the very best of eating.

Leonard Sutherland, superintendent of the Meade County Pheasant Farm, has advised KANSAS FISH AND GAME that the first of 20,000 ring-neck pheasants he expects to produce for release from his farm this year, have been planted in five southwestern Kansas counties.

At the present time, July 1, 4,600 young birds are in the rearing pens, 12,200 birds in brooder houses, and 10,000 eggs in the incubators. The 30,000 eggs that have been laid so far by 860 breeders have shown a very high rate of fertility and hatchability.

In an earlier issue of KANSAS FISH AND GAME we forewarned hunters that they were faced with a possible shell shortage.

The War Production Board now advises us that there will be no shortage of shells during the forthcoming duck season.

The Board, after a survey of actual conditions, found that the sporting goods dealers have sufficient ammunition on hand for immediate needs.

During the first ten weeks of the current breeding season, Henry Mitchell, superintendent of the Calista Quail Farm, conducted experiments to determine the egg laying records of birds raised on ground and in elevated pens.

The result of these experiments conclusively proves that cleanliness pays big dividends. The number of eggs produced weekly by thirty birds in ground pens was eighty-one, whereas the same number of birds in the elevated pens during the same period of time, produced 133 eggs per week.

An examination of records made at midseason causes

us to conclude that the number of quail to be produced this year will closely approximate the number raised and liberated a year ago.

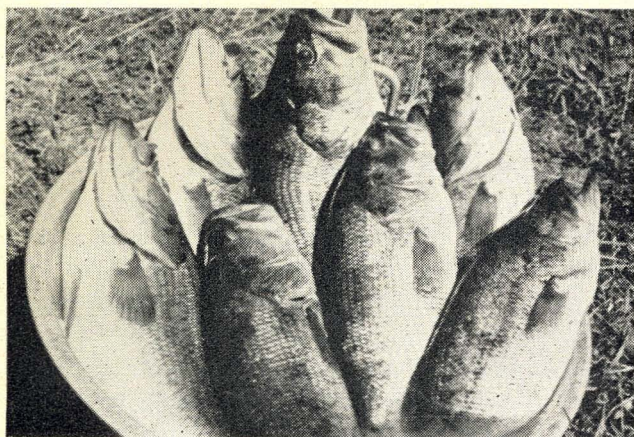
## Stink Bait Not Approved

Max Moxley, editor of the Delphos *Republican*, writes knowingly of the stink-bait addicts and of glorious days.

"Your correspondent comes from a long line of mosquito-bitten stink-bait fishermen, but can see no good reason for carrying on the family tradition. For a good many years we rode in a car that smelled like a cross between a rendering plant and a veterinarian's office. And fishermen claim they like the smell of the great outdoors! They *have* to get out-of-doors once in a while to get the smell blown off. It's hard to describe the aroma that emanated from Pa's car during the summer months, but you'll understand when we list the sources from whence the odors came. To start with, there was always a can full of chicken entrails, sometimes fresh, sometimes two weeks old. All the housewives in the block were very good about saving those innards for Pa. This can, in various stages of putrefaction, was usually carried in the trunk. There was always the current purchase of melt, and the package containing what remained of last Saturday's supply. One sniff was enough to tell you which was which.

"Then there was the minnow bucket and seine, only minor offenders, but always containing three or four dried 'minnies' and a crayfish from the previous week end. Serving to complicate the blend and confuse the nostrils was the huntingcoat, used in the summer as a fishing coat, but only a slight aroma of quail feathers and rabbit blood was there to remind one of the coat's wintertime purpose. In the coat pocket was a jar of patented catfish bait, probably the rankest mixture stirred up since the time of Macbeth's witches. (We hadn't thought about it before, but the brew Shakespeare's witches boiled in their cauldron would make pretty good Kansas catfish lure. It's a wonder Pa didn't borrow their formulae, part of which, to wit: 'Eye of newt, and toe of frog, wool of bat and tongue of dog.')

"Anyway, along with the store-bought bait was a bottle of citronella oil—not used for bait, but applied generously to the angler's exposed parts to keep off mosquitoes. Personally, we would rather tolerate the mosquitoes. But as we say, the items mentioned above combined to give our family car a distinctive odor. We never needed to ask Dad where he had parked to do the Saturday night trading—we could walk down the street and tell which block it was in, if the wind was right. A good Kansas fisherman must have a steady stomach, the constitution of a buzzard, and no nose at all."



A pan of pan fish from Woodson County State Lake

## Burt "Himself" Doze Writes of Channel Cat and Channel Cat Fishing

It was suggested that Outing Tales carry articles on how to angle for certain fish, and the spotted channel catfish was among the first suggested for treatment. Burt himself once published a bulletin on this fish, and in that bulletin used the term "the Barbed Trout of Kansas." Writing about this fish is a habit.

It is helpful to know the habits of a fish one is trying to catch. So let's talk about this fish from the habit angle first before getting down to brass tacks, hooks, lines, sinkers and poles.

"The spotted channel catfish, as the name implies, prefers channels rather than still water, although it thrives in some still waters, deep, spring-fed lakes in particular. It, however, is not as active in still water nor does it have its rainbow tinted silver sides when taken from other than running water, water running over sand and gravel especially.

"The spotted channel is on the negative side of the Sun ledger relating to fish. It prefers shade to sunlight. Because of its inclination to keep out of sunlight it hugs banks in wide streams where the sun's rays get a chance to shine on the water.

"When feeding the spotted channel goes to swift water, preferably riffles from six inches to a foot or more deep. It clings to the bottom and heads upstream. Most fish do that to keep from "breathing to death." A fish can be drowned, you know.

"During the daytime the channels hug banks, stay under drooping willows or grass or enter holes or washunders in banks. Because of this inclination to keep out of the bright sunlight channels are seldom found in a current in the middle of a stream unless there is a waterfall on rocks where they can lie low and be in the shade. If the water is deep the sunlight does not affect them so much, and so often in the daytime when the sun is shining brightly a spotted channel will be found in deep water under a fall.

"Because the big fish rule the 'roost' the little channels have to scurry away from the best hiding places, and that is one reason why many fishermen complain about being bothered with 'fiddlers,' the undersize channels. They have to keep away from the larger fish and sometimes must remain in sunlight.

"When feeding the channels will swim to the upper end of a deep current where it breaks over a sand bar or a ledge and lie close to the break. There may be no channels at all at the lower end of the pool.

"In some respect the spotted channel is like a trout. It hides around a stump, rock or tuft of grass and will dart out into sunlight to grab a choice morsel.

"Feeding habits of the spotted channel catfish of Kansas are not thoroughly understood even by fish culturists.

"It is known that the barbed trout is a voracious eater at times and is not selective in taste.

"In the stomachs of the spotted channel naturalists have found a wide variety of food.

"But in nearly all channels examined remnants of crayfish were found, proving that sometime nearly every day a channel catfish grabs a crayfish if it can. Other foods found in the digestive tract of the channel include mulberries, elm buds, maple buds, elderberries, grapes, shellfish such as clams, skeletons of other fish including minnows, and bits of meat, probably of birds that fell into the water, frogs, toads, snakes, small turtles, baby muskrats, rodents such as mice and wharf rats, snails, dragon and mayfly larvae, freshwater shrimp, and some vegetable matter.

"Fishermen who have spent years angling for the spotted channels hold generally that the best time to fish for the spotted channel is at night, although this doesn't always prove true. It is therefore argued that the channel is a night feeder. This feeding habit may be due to the fact that a channel catfish avoids sunlight if it can. During the dark of the moon many folks think the catfish bite the best.

"By nature the channel is a bottom feeder, but there are many exceptions. Channels have been known to strike surface bait. However, as they prefer to feed in channels where possible and the water isn't deep as a rule in the riffles, the channel catfish may cling to the bottom and rise to a surface or near-surface lure. It would not have to rise far.

"As the spotted channel's eyes are small it depends more upon its taste or scent to locate food than its eyes in some instances. A test of this was made at the Kansas fish hatchery with blood and clam meal. Tossing blood into a pond soon excited the fish. The scent of the blood spreads rapidly under water and the spotted channel picks it up through its feelers or barbels, so some culturists believe.

"One of the habits of the spotted channel which detracts from its popularity with some fishermen is its



proclivity to devour putrid flesh. It will tackle a rotting shrimp, rotting liver or other old meat with gusto, striking viciously and gulping when hungry.

"However, chickens and hogs will do the same and man looks upon the flesh of the fowl and porcine with relish, dismissing thought of the feeding habits of the fowl or animal.

"It has been the observation of Burt Himself that when a spotted channel catfish is hungry it will try anything that comes along. He has caught them on artificial bait, as many another fisherman has, too. Some have been known to take doughballs placed on hooks to snag carp.

"Catch a catfish hungry and you can catch a catfish.

"After a fisherman learns something of the habits of the spotted channel catfish, the favorite river fish of Kansas, the task of selecting bait and where to fish is not so much guesswork. However, the proper tackle to use deserves some consideration, and so here goes a discussion.

"Channel catfish can be taken on fly rods, casting rods, cane poles, set lines and trotlines. There is not much sport catching channels on trot or set lines. That is a fairly effective way of getting fish for the pan, though, so setting such lines will be given attention later.

"Some anglers use a bobber when fishing with a cane pole or casting rod. A bobber can be used with a fly rod but there is always the danger of breaking the tip.

"Burt Himself learned to catch the spotted channel catfish by using a cane pole, a line within two feet of being as long as the pole. A cork bobber was used, either a large one from a jug or perhaps an old-fashioned beer cork, now unobtainable, however. A fairly heavy lead weight was used and it was placed above the hook. The cork was set about two feet above the hook, owing to depth of stream. The fishing was generally done in the channels little more than knee deep and seldom more than waist deep. Burt Himself learned to fish in the Ninnescah in Kingman and Pratt counties, where the river bottom is of sand. Otherwise the hook would have been tied above the weight or sinker to prevent it snagging on the bottom. We fished while wading in the river, casting as close to the bank as possible. The best plan was to fish upstream, working carefully so as not to splash water and scare the fish.

"The pole permitted the fisherman to stand back about 20 feet from the bank. The cork would float downstream taking the baited hook with it. The idea was to let the hook drift along about six inches above the bottom to lure a channel, either hiding under the bank or hugging it close to the bottom, to take a bite at the bait—Burt Himself learned on minnows.

"When the fish first struck the cork would bounce, sometimes clear out of the water. Then when it settled

down and the fish started off, dragging it under, was the proper time to yank.

"If the channel was large the yank set the hook. If it was a small fish often the fish would shoot out of the water and sail right at the fisherman. When a big fish was hooked—to a fisherman a pounder is a three-pounder and a two-pounder a whale—the proper piscatorial procedure was to back up dragging the fish gently into shallowing water and keep on dragging until the fish was almost stranded. Then pincers were brought into play to clip off the barbs. That being done, the fish was ready for the gunny sack. It was always necessary to rebait or rehook the minnow, for when a channel hits a minnow it tears it to a shred as a rule.

"The cane pole used by Burt Himself was long but not stiff. To insure landing the big ones the line was wrapped about the pole clear down to the handhold so that if the pole parted the line would be in hand anyway.

"Having discussed cane pole and casting rod angling for channel catfish the fly rod logically comes next. It can be treated briefly. It is a sporty way to catch the speckled Kansas beauties and requires skill. If top fishing in a riffle one must get out at least twenty-five feet of line. The use of a bobber is out of place.

"Other than paying closer attention to the line and handling the hooked fish more carefully to lead it to a landing place there is but little difference to fishing with a fly rod for channels than with stiffer rods.

"Two other methods of fishing for the spotted channel have been mentioned. They are the trotline and set line.

"Most set lines are placed near banks and can be worked from the bank of the stream. The tackle should be tied to a twig or limb that will give, otherwise one is liable to lose most of the fish that get hooked. If the set line is tied to a stump there should be some way of providing for a spring to let the fish have a bit of rope in struggling to get away.

"Many anglers reject set line fishing as not sportive. There is but little thrill to taking fish off a set line under average conditions. When one works in a deep stream and uses a boat there is more to it. Tackle for a set line can be rigged as tackle for a cane pole or casting rod.

"There is some thrill to using a trot line, for the angler gets to feel the tug of the plunging hooked fish. Often several fish get on a trotline at the same time, and that provides quite a kick.

"In trotlining for channels Burt Himself places the trotline in a current. Some of the best fish he ever caught were taken on trotlines set in water not more than a foot deep. The current was swift-running between deep holes.

"It is best not to set the trotline directly across the stream. Angle it, leaving the legitimate number of hooks in fairly shallow but troubled water.

"But Burt Himself has seldom set a trotline for daytime fishing. It would be advisable to seek deeper water for daylight trotline fishing because the channels do not like sunlight.

"An ideal way to handle a trotline is to tie one end to a tree or stake in a bank and weight the other end down with some heavy iron object. Weights should be attached to the trotline about every ten feet and the hooks should be at least three feet apart; four is better.

"Then, in running the line, the best method is to lift the end attached to the bank to feel if there are fish on it.

"If wading to run the line keep above the line in the current. The hooks wash downstream. Getting tangled in a hook is hard on feet and legs. By lifting the line at each weight one can spot any fish caught, and the thing to do is to take off the fish right away, baiting afterwards.

"If running a trotline in a boat, get below for obvious reasons. A dip net comes in handy when using a boat. A sack is OK in wading after trotline catches.

"And remember to go to the biggest fish first, for it is the one that always gets away."

## Now—When to Fish

In an earlier issue of KANSAS FISH AND GAME we told you where to go fishing. Now comes Otto Grundeman, Director of the Kansas Fish and Development Association advising when to go. Mr. Grundeman's advice follows:

The time to go fishing is whenever you get the chance to do so. Some think that because their vacations must be taken in August that the fishing is sure to be poor. Not so. If you know where to fish and when to fish in the month of August, you can have some good fishing.

In cloudy weather just before a storm, if there is just a little ripple on the water, is a very good time for fishing. After a heavy rain fishing is likely to be poor.

Start out early in the morning. The sun is up before five o'clock in July and August and there is daylight before that. Fish looking up against the sky can see minnows and other things in water and if you are a bit late for a seven o'clock breakfast and then use up some time getting your tackle ready, packing a lunch, hunting up the cars, bailing out the boat, etc., by the time you get across the lake where you intend to go, Mr. Fish may have a full stomach and just make faces at your bait.

There is no set rule that will assure you a string

of fish. As a somewhat general rule, however, it is almost useless to use surface baits between ten in the morning and three in the afternoon if the sun is bright. On cloudy days the fishing may be good throughout the day.

Talk (not too loud) if you wish, but do not rattle the oars or bang your tackle box on a seat or the bottom of the boat, or make a noise with your feet. When you were a kid did you ever go swimming, take two stones in your hands, go below the surface of the water and pound the stones together? It is deafening. Manipulate the boat carefully and quietly.

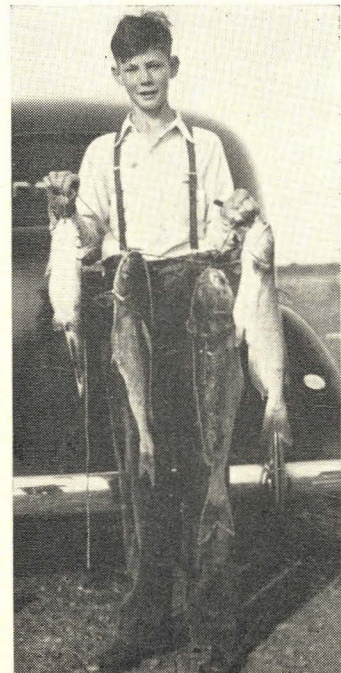
No more than three in a boat.

A Wichita angler wrote recently for an explanation why fish move upstream. We do not confess to be an authority on this subject. On the contrary, we readily admit our inability to discuss this matter intelligently.

When the writer is fishing the fish have a habit of moving away from the holes where we think they should be.

One or two of the states have experimented with tagged fish and in both instances the majority of the fish so tagged have displayed a tendency to go downstream rather than upstream.

Diamond-back terrapins do not occur on the Pacific coast and their introduction there, so far as known, has not been attempted.



This long, slender lad is young Hess, Cassoday, Kansas, with a few fish that he had taken from the Woodson County State Lake.

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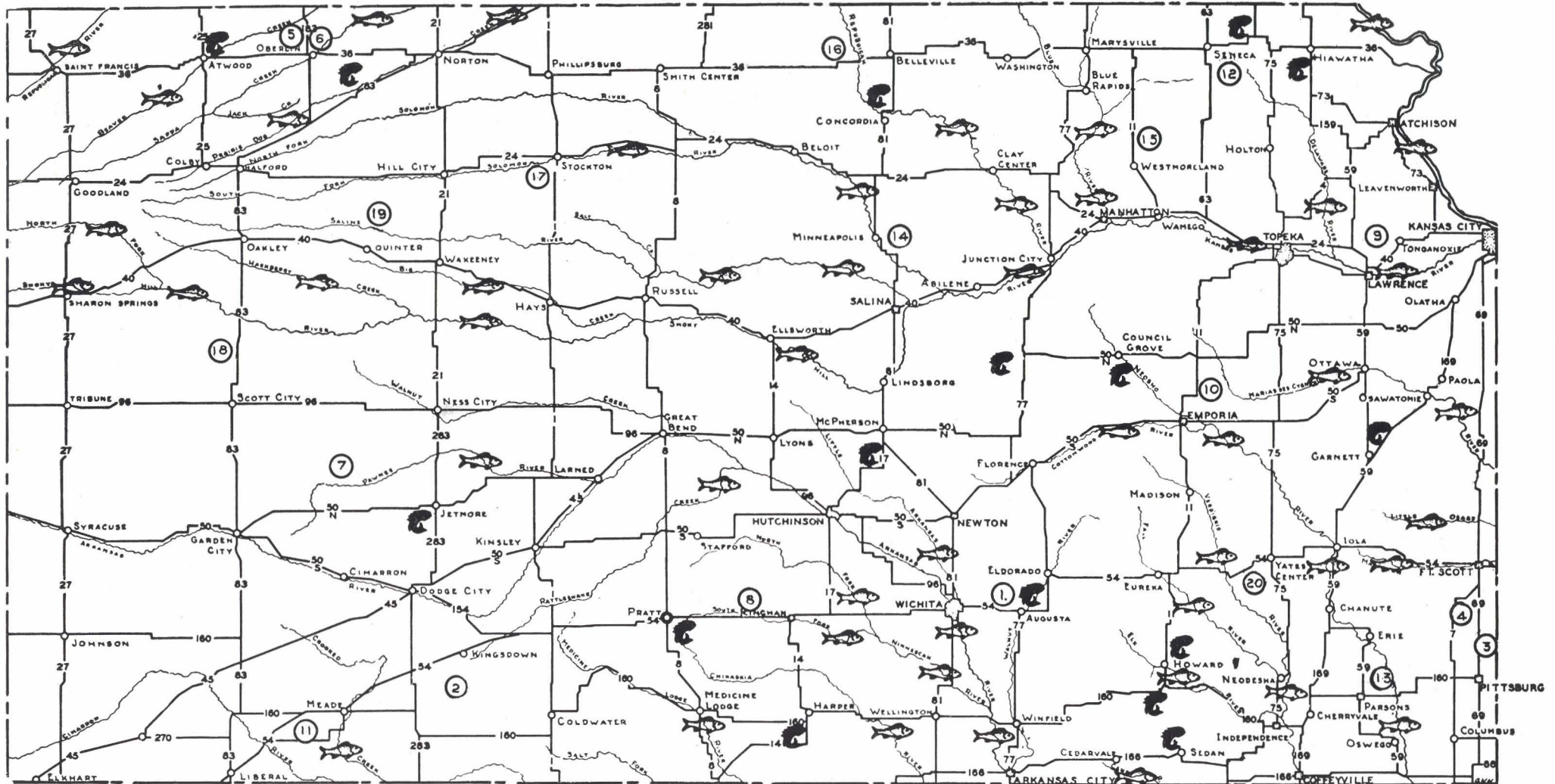
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# NOTICE

The 1943 licenses are now on sale at the office of the county clerks. You are urged to buy your fishing and hunting licenses and quail stamp now.



# KANSAS FISHING LAKES AND STREAMS



② State Lakes

🐟 City and County Lakes

🐟 River and Stream Fishing

1. Butler County State Park
2. Clark County State Park
3. Crawford County State Park No. 1
4. Crawford County State Park No. 2
5. Decatur County State Park No. 1
6. Decatur County State Park No. 2
7. Finney County State Park

8. Kingman County State Park
9. Leavenworth County State Park
10. Lyon County State Park
11. Meade County State Park
12. Nemaha County State Park
13. Neosho County State Park
14. Ottawa County State Park

15. Pottawatomie County State Park
16. Republic County State Park
17. Rooks County State Park
18. Scott County State Park
19. Sheridan County State Park
20. Woodson County State Park