

TABOR COLLEGE LIBRARY
Hillsboro, Kansas 67063

Spring 1970

KANSAS FISH & GAME



1970 Fishing Forecast

Fish by the Numbers

Sunflower Stripers

FOR LESS THAN A PENNY A DAY

It really doesn't look like much!

A Kansas fishing license, in fact, appears to be nothing more than a piece of paper measuring $3\frac{1}{2}$ by $7\frac{1}{4}$ inches, with a little printing on it.

It varies in color from year to year, and depending on where you live, its cost may be \$1, \$3 or even \$5.

Most people familiar with a Kansas fishing license are in the \$3 bracket—the state resident who purchases an annual license.

To him, the license is something special, because every fisherman nowadays has a special spot where he likes to spend some leisure hours.

Even the man who spends a lot of time angling might not realize, however, that his fishing license is something extra special.

In reality, it's a passport to unlimited recreation—recreation which he has provided himself through purchase of licenses in the past and the buying of his fishing tackle.

A fishing license is not a tax. No one forces anyone to go fishing. Fish and fishing methods are strictly the choice of the individual, within the limits of generous laws. Laws and regulations, of course, have only one purpose—to provide a maximum and fair harvest for all fishermen, with a minimum of restrictions.

The price an angler pays for his license, and some of the tax he pays on his tackle, is spent wisely by the Kansas Fish and Game Commission. Part of it is used to net such fish as northern pike and walleye, to take their eggs and artificially hatch them to be stocked in various waters around Kansas. More is used to take channel catfish eggs from old barrels and cream cans in ponds at Pratt, again to be hatched and stocked in lakes, ponds and reservoirs.

Some is used to study fish for disease, to drop test nets in lakes to determine the growth and survival rates of various species, to research new species to determine if they might survive and grow in Kansas waters.

A fishing license is more, too. It is not a requirement, but the mark of a sportsman—an angler who is willing and ready to help pave the way to better fishing in Kansas. Possession of a license sets the holder apart from the crowd, as a man with an eye on the horizon, who is looking after this and future generations.

What does he get in return? A fishing license in Kansas gives the holder a deed to 20 large man-made reservoirs, all of which contain good populations of sports fish; 38 smaller state-owned and state-managed lakes, 60 city, county and township lakes, and more than 7000 acres of fish-filled strip pits.

In addition, there are many miles of streams open to the public, containing fish provided by the sportsman's dollars, and 80,000 farm ponds of many sizes, most of them stocked with fish by the Commission or the federal government. Most are available for fishing, too, if the angler will but take a moment or two to ask permission of the owner.

All in all, a fishing license is about the best buy you can find today.

Considering the benefits it provides, and the pace of the times in which we live, you can't beat it for less than a penny a day.—Thayne Smith.



Cover Photo

Landlocked Kansas has become a land of lakes—a paradise where anglers can pursue their favorite sport throughout the entire year.

While federal reservoirs add considerable status to Kansas' prestige as a fishing state, other smaller lakes, both private and public, are equally important in providing angling opportunities.

Since their birth in the late 1920's, state lakes under the jurisdiction of the Kansas Forestry, Fish and Game Commission have been visited by millions of anglers, campers, picnickers and others who participate in some form of outdoor recreation.

Scattered across the state, these 38 state lakes are "home" each year to more than one and one-half million people, the Commission estimates.

It seems only fitting, then, that Montgomery County State Lake is the scene for this issue's cover. Constructed in 1953, this 105-acre lake near Independence is a real beauty spot—an angler's dream come true as Lyman (Shorty) Dishman, Independence, can verify. (Photo by Leroy E. Lyon.)

Published Quarterly
by the
KANSAS FORESTRY,
FISH AND GAME
COMMISSION
Box 1028
Pratt, Kansas 67124

KANSAS FISH & GAME



COMMISSIONERS

R. W. (BILL) FOWLER, *Chairman* Weir
FRANK LOMBARD Abilene
ROBERT S. LEMON Shawnee Mission
CHARLES HULME Great Bend
FRED SEARS Colby

DIRECTOR

GEORGE MOORE Pratt
FRED WARDERS Assistant Director

DIVISION CHIEFS

ROY SCHOONOVER Fisheries
THAYNE SMITH Information-Education
OLIVER GASSWINT Game
ROBERT WARD Fiscal
WALTER HARRISON Field Services
FRED WARDERS Law Enforcement
NOEL MULLENDORE Legal

STAFF

THAYNE SMITH Editor
LEROY LYON Managing Editor
GEORGE VALYER Staff Writer
BEVERLY ALDRICH Editorial Assistant

Articles in Kansas Fish and Game magazine may be reprinted without permission, provided proper credit is given. Kansas Fish and Game is distributed free to Kansas residents.

Second Class Postage Paid at Pratt, Kansas

PRINTED BY
ROBERT R. (BOB) SANDERS, STATE PRINTER
TOPEKA, KANSAS
1970



33-2623

Spring, 1970

Vol. XXVII, No. 2

IN THIS ISSUE

FOR LESS THAN A PENNY A DAY	2
<i>An Editorial</i>	
FISH BY THE NUMBERS	4
<i>By Thayne Smith and Frank Schryer</i>	
1970 FISHING FORECAST	6
FISHING TACKLE TUNE-UP	10
<i>By George Valyer</i>	
SOME FEATHERED FRIENDS—DO YOU KNOW THEM?	12
<i>By Jim Norman</i>	
SUNFLOWER STRIPERS	14
<i>By Johnny Ray</i>	
1969: YEAR OF THE ANGLER	16
<i>By Leroy E. Lyon</i>	
HAWKS-NATURE'S AERIAL PATROL	20
<i>By Bruce Wolhuter</i>	
WILDLIFE WONDERS	23
<i>By Marvin Schwilling</i>	

Fish by the Numbers

By THAYNE SMITH and FRANK SCHRYER

A5022!

If you're a fisherman who also likes to kick around numbers, this is a good one to keep in mind.

What has A5022 got to do with fishing?

Plenty.

At least, it's a safe bet that just about any fisherman in Kansas, or even the nation, would like to catch a certain fish which is pretty well acquainted with this particular number.

It is a northern pike—a real dandy—now swimming somewhere in the depths of Kansas' pretty Norton Reservoir.

If you should happen to catch her, rest assured you'll know it, because this is no ordinary fish. A year ago, when trapped in nets of the Forestry, Fish and Game Commission during the annual northern pike egg-taking program, A5022 tipped the scales at a whopping 19.6 pounds.

Right now, that's a pound more than the current state northern pike record caught on rod and reel, and old A5022 should be even heavier at present.

A5022 is not the only big northern or tagged fish at Norton, either. It's just one of 1244 which have been tagged in the small reservoir during the last two years.

Fish tagging is nothing new, of course, but is relatively new in Kansas waters.

Two years ago, Commission fisheries division personnel started tagging northern pike at Norton during the egg-taking operation in a program designed to study their growth, habits and to obtain other important data about this prized, imported fish.

The egg-taking program, of course, is carried out each year to collect spawn which can be hatched then stocked in other waters around the state.

The fish are not harmed in any way during the process, and it is a relatively simple matter to attach a small, metal tag to each fish's gill cover.

The program, started in 1968, has already proven most beneficial, pro-

viding some previously unanswered questions about the northern pike at Norton.

It has proven so successful, in fact, that similar tagging programs were instituted in late 1969 on other species of fish in other Kansas waters. Included were 500 young bass at Barber County State Lake

near Medicine Lodge, and 1900 two-year-old channel catfish stocked in Scott County State Lake, north of Scott City.

During the 1968 operation at Norton, in late March and early April, a total of 431 northern pikes were tagged. To date 94 of the tags have been returned to the Commission by anglers who were successful in catching one of the marked fish.

In the 1968 operation, another 814 northern pikes were tagged, with a total of 114 of them caught and tags returned to the Commission by the end of the calendar year.



With a firm press of special pliers, a metal tag is attached to the gill cover of a large northern pike.

What are some of the results of the operation?

Most important, the Commission is getting a good idea on the growth rate of northern pike in Kansas. The results are remarkable, in fact.

For instance, one year-old female tagged during 1968 weighed 1.4 pounds. A year later, she tipped the scales at 10.4 pounds!

When caught in 1969, the female was heavy with eggs. This amount of gain, however, is the exception rather than the rule, biologists found. The average weight gain from 1968 to 1969 on 39 females was 4.4 pounds—still somewhat astounding.

Males, on the other hand, are slow growers. The average weight gain for male fish in the one-year period was only 1.8 pounds.

Tagging of the fish also showed movement characteristics during the spawning season.

Northerns caught in a particular trap, transported to the egg-taking area, tagged and then released were often recaptured again in the same trap two or three days later. The two sites, at times, were from a mile to 1½ miles apart.

Fisheries crews have not had enough time, or gathered sufficient data as yet, to make definite conclusions, but there is a strong hint that most northern pike return to the same general area year after year for the spawning process.

The main purpose of the entire tagging operation is to eventually arrive at a reasonable population estimate among various fish species in given waters. The success, of course, depends largely on the cooperation of Kansas fishermen in returning tags found on the fish they catch.

The tags can be handed to a game protector or other Fish and Game Commission employee, or returned to the Commission at Box 1028, Pratt, Kansas 67124. Tags will be returned to the lucky anglers, upon request, in case they want to keep them for souvenirs, after the number is traced. Along with the tag, the angler is requested to provide the date and place the fish was caught, and its length and weight.

From this information, the Com-



Tagging operations have been extended to other fish species. In late 1969, 500 young bass were tagged at Barber County State Lake near Medicine Lodge.

mission will be able, also, to determine the percentage of fish harvested, thus gaining more valuable information on whether restocking should be done.

For example, if 500 tagged fish were released in a reservoir, and anglers caught 100 of them the first year, it can be assumed that about 20 percent of that species in that particular lake was caught during the year.

Tags returned from northern pike at Norton during 1968 amounted to 22 percent, and it's a good bet that all tags found by anglers were not returned. So, perhaps 30 percent of the northern at Norton were caught during the year.

It's possible for natural reproduction to offset this harvest, but it actually depends on available spawning habitat of the fish present in late March and early April.

If there should be several years when spawning habitat is not good, collection of the tags might reveal that a re-stocking of northerns (or other fish) would be needed.

The two-year program at Norton has revealed, without doubt, that Norton northerns are doing quite well. During the 1969 operation, tagging included the following whoppers: 12 between 18 and 19.6 pounds, all of which exceeded the state record at that time; 32 from 16 to 18 pounds; 24 from 15 to 16 pounds and 62 from 13 to 15 pounds.

It's evident, of course, that there are many state records swimming in the depths of Norton along with A5022. Remarkable, too, is the fact that the first northern were stocked in Norton and Council Grove reservoirs just five years ago as newly-hatched fry.

Interesting, too, is the fact that during both the annual Norton egg-taking and tagging operations, fisheries crews found assorted bits and pieces of tackle hanging from the mouths of some of the fish.

In addition, the operation also provided the most unusual catch by a fisherman in Kansas last year.

Seems the man was trying his luck at Norton from a boat, casting a spoon into a shallow, weedy area when he had a resounding strike. He "set the hook" and started playing the fish. He fought the lunker for some time, before his line suddenly went limp.

Reeling in, he was astounded to find a small tag hanging from his lure. He took it to a game protector, to discover he'd caught one of the fish tagged earlier in the year by the Commission crew.

Even though he didn't catch the fish, he could brag on its size. Records provided information that it was a five-pounder, and was tagged and released about a mile from where he caught it.

He proved, too, that fishing by the numbers can be a lot of fun, and provide information which can lead to better fishing in the future.

1970 Fishing Forecast

From late Spring until early Fall, fisheries biologists and their aides are kept busy conducting periodic examinations of existing fish populations in public waters throughout Kansas.

While these surveys are an important tool in fisheries management, they serve another purpose—they can give fishermen an indication of future fishing prospects.

In Kansas, as most everywhere else, it is impossible to accurately predict

fishing success months in advance. Any fisherman knows that fishing success can vary greatly from day to day.

And to complicate matters, heavy rains and rapidly-melting snows resulting in high, turbid water are standard occurrences in spring months when spawning runs are underway and when many fish are on a feeding binge.

But fishery investigations do provide information which can be of

immense value to every angler. They show what species are present and in what numbers, reveal age classes and are important in confirming reproduction of many of our game fish species.

While space doesn't permit inclusion of all lakes in the Sunflower State, the following compilation does provide information on a majority of state lakes and federal reservoirs throughout the state.

Southwest Kansas

By JOHNNY RAY
Fisheries Biologist

CHENEY RESERVOIR—Test-netting studies at this lake indicates there is an excellent population of white bass ranging from one-half to one and one-half pounds. As a result, fishing for this species should be excellent during 1970—particularly in the Ninnescah River above the lake and in the upper end of the lake during the spring spawning runs.

Crappie are also abundant but their numbers appear to be decreasing, probably due to intense competition with white bass for living space. Even so, crappie fishing is expected to be good, particularly in the coves.

There is an abundant population of large walleye awaiting anglers—numerous ones ranging from three to five pounds and several exceeding five pounds. Some small walleye were also captured indicating for the first time that reproduction of this species has occurred in the lake.

Channel catfish, drum and buffalo are also abundant and many are large in size. Fishing for channels is usually best in shallow waters at the upper end or in the river.

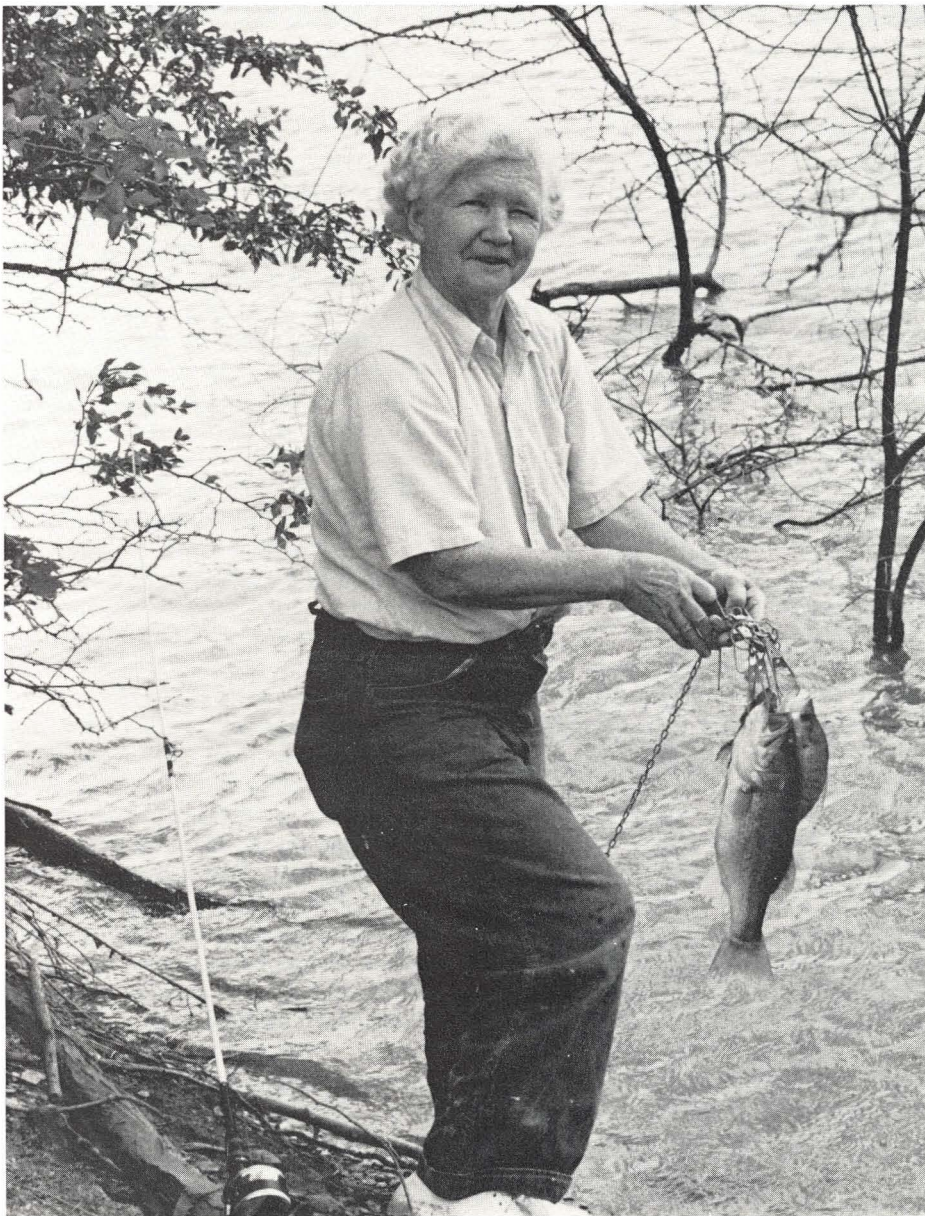
Although largemouth bass are present, the population of this species is believed to be low.

MEADE COUNTY STATE LAKE—Fishing prospects at this lake should be good for bluegill, bullheads and channel catfish. Largemouth black bass are small and growing slowly. Some northern pike are present and many should exceed four pounds in weight.

CLARK COUNTY STATE LAKE—Fishing for crappie should be excellent during spring and early summer months particularly in deep coves and in deep water. The lake also possesses a good population of both largemouth bass and channel catfish, many of which are large in size; some channels exceeding three pounds, bass up to six pounds. Bluegill and bullheads are also abundant and can be taken through most of the year.

KINGMAN COUNTY STATE LAKE—Prospects appear excellent for large bluegill and good for channel catfish, largemouth bass and bullheads. An occasional walleye may be taken by bass and bluegill anglers. The lake is heavily populated with small and intermediate-sized bass. Bluegill range from one-fourth to one-half pound. Many large carp are also present and some weighing from two to five pounds may be taken by anglers desiring them.

BARBER COUNTY STATE LAKE—The lake should provide excellent fishing for largemouth bass, channel catfish, bullheads and bluegill—although the bass are small in size, was opened to fishing March 7, following rehabilitation.



Ollie Boomis, Independence, finds good bass and crappie angling at Elk City Reservoir. Fishing at the lake, where impoundment began in 1966, is reaching its prime.

KEARNEY COUNTY STATE LAKE—Fishermen should concentrate their efforts on crappie, channel catfish and bullheads. Crappie range from one-half to one and one-fourth pounds and are abundant.

HAMILTON COUNTY STATE LAKE—This lake was rehabilitated during Sept. of 1969 and will not be open to fishing until fall of 1970 or spring of 1971.

FINNEY COUNTY STATE LAKE—Although there should be substantial numbers of largemouth bass and channel catfish, these fish are small.

Northwest Kansas

By **VERLYN EBERT**

Fisheries Biologist

NORTON RESERVOIR—Norton Reservoir, a real hotspot for crappie, bluegill, channel catfish and walleye fishing last summer, should continue to provide plenty of angling opportunity for these species. Crappie, both black and white species, are abundant—many weighing from one-third to one pound. Three distinct class sizes of walleye were found ranging from 13 to 22 inches in length. Although no natural reproduction was noted in the survey, numbers appear at a high level. Bluegill, ranging from five to eight and one-half inches are in prime shape.

Largemouth and smallmouth black bass are present in the reservoir—largemouths, many more than 12 inches long, being more numerous. Natural reproduction of smallmouths has been verified. Smallmouths from four to 11½ inches in length were taken during sampling studies.

All channels taken in the traps were heavy for their length, weighing from two to two and one-half pounds and ranging from 18.2 to 19.8 inches in length. Anglers caught numerous channels from two to eight pounds during September. Bullheads appear to be in nice shape, those caught weighed from three-fourths pound to one and one-half pounds.

Only one northern, a 10½ pound specimen, was taken during the test netting in September—a poor time for northern trapping. Even so, the lake still possesses one of the best northern populations in the state.

WEBSTER RESERVOIR—Good walleye fishing is expected at this reservoir although the water level remains extremely low. A substantial population of walleyes representing four year classes was found. It appears there should be some 24-inch, four-pound walleyes available this spring as well as good numbers of two-pounders.

A good population of channel catfish exists in the lake—most of those caught in the traps were more than 12 inches long and weighed from one-half pound to two pounds.

Bluegill and black crappie were also caught, but not numerous. Those present were in good condition.

KANOPOLIS RESERVOIR—A good white bass run up the Smoky Hill River can be expected during spawning season unless excessive run-off occurs. Quite a number of white bass, ranging from one-pound to slightly more than two pounds were caught. A few smaller white bass were also captured indicating natural reproduction is continuing.

At least three year classes of walleye were sampled—all in good condition.

Crappie ranged from one-half to three fourths pounds and were in fine shape although not many were taken.

Since the test netting was conducted in November when water temperatures were low, no channel catfish were trapped. However, it is expected that channel catfishing will remain about the same as a year ago.

WILSON RESERVOIR—Good fishing for crappie, bluegill, channel catfish, walleye and white bass is expected at Wilson Reservoir.

Black crappie are more numerous than the white species but all crappie captured in the traps were heavy and appear to be growing well. Excellent



White bass are the favorites of many anglers. Not only are they known for their fighting ability, but they are good table fare, reproduce rapidly, and can be caught about any time of the year.

numbers, ranging from one-third to one-pound, are in the lake.

Bluegill are also numerous and are of a size range, from four to eight and one-half inches in length, that should provide good fishing.

All channel catfish taken in the sample were fat and growing well. Sizes ranged from one-half to six and three-fourths pounds. Good numbers of this species appear present in the lake.

Walleyes, ranging from one to two pounds were found—all in good shape and in ample numbers.

A strong two-year old class of white bass is present which should provide good angling. Many are known to be in the lake due to angler reports although only a few were taken in the nets.

While not many largemouth bass were taken, all that were captured were in good condition—and some natural reproduction has been noted.

All bullheads taken were fat and good keepers. Although no northern pike or striped bass were

taken, these species are known to be present and have been taken by anglers.

KIRWIN RESERVOIR—At least four year-classes of walleye were netted during spawn-taking operations in early Spring. Walleye angling success is expected to remain about the same as last year.

White bass, several from three-fourths pound to one and one-half pounds, are also present.

As with walleye and white bass angling, channel catfish prospects remain comparable with last year.

CEDAR BLUFF RESERVOIR—Walleye fishing is expected to be good from mid-May through the first week of June providing there are no major changes in water level and temperatures. Walleyes range from 12 to 15 inches in length.

The reservoir also provides good angling opportunity for white bass and channel catfish. While numerous channels are present, their growth

rate is slow. White bass fishing is expected to be at its best in early May.

A sizable population of smallmouth bass is also present in the lake—the state record smallmouth was taken from Cedar Bluff in the fall of 1969.

SCOTT COUNTY STATE LAKE—Fishing prospects in this lake are expected to be good for crappie and channel catfish. Most crappie are over eight inches. Channel catfish fishing is expected to be an improvement over a year ago since 1,900 channels, 10 to 14 inches in length, were tagged and stocked in the lake in the fall of 1969.

SHERIDAN COUNTY STATE LAKE—Good populations of largemouth bass and channel catfish are present in the lake. Over half of the bass and 90 percent of the channels caught were of harvestable size. There appears to be a sizeable bullhead population and many intermediate-sized bluegill. All bullheads were over 10 inches and were in prime condition.

ROOKS COUNTY STATE LAKE—Good fishing is expected for largemouth bass and channel catfish. Many largemouths weighed more than three-fourths pound and several year classes of channel catfish are present. There are also good numbers of bullheads and bluegill.

LANE COUNTY STATE LAKE—Should provide good angling for bluegill, largemouth bass and channel catfish. A new lake, it was opened to fishing for the first time on March 7.

JEWELL COUNTY STATE LAKE—Four species of fish were captured in the test-netting at this lake: largemouth bass, channel catfish, bluegill and black bullhead. Following rehabilitation, it was opened to fishing on March 7.

Southeast Kansas

By **BOB HARTMANN**
Fisheries Biologist

MARION RESERVOIR—This new 6,160 surface acre reservoir began impounding in 1968 and was stocked with northern pike, walleye, largemouth bass, channel catfish and bluegill.

Northern pike have shown exceptional growth, some reaching 28 inches in length and weighing nearly five and one-half pounds in less than 15 months. Walleye, a slower growing species, now range from one and one-half to three pounds.

A sizeable rough fish population has developed but water conditions have been better than anticipated.

Largemouth bass, channel cat and crappie should provide excellent fishing during 1970.

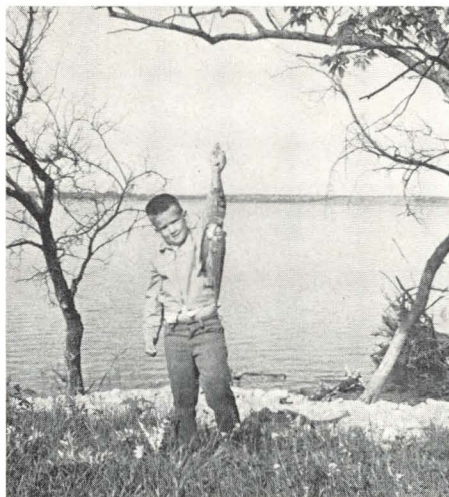
ELK CITY RESERVOIR—Sport fishing in this reservoir is approaching its prime; only four years have elapsed since impoundment began in 1966. Recent fishery investigations indicate the presence of good quantities of largemouth bass and white crappie. Most bass range from three-fourths pound to one and one-fourth pound while crappie are from nine to 11 inches in length.

Walleye from the initial stocking have attained a size of two to five pounds and northern pike now exceed eight pounds. However, water conditions are quite variable depending upon water level and prevailing winds, greatly influencing fishing success at any given time.

FALL RIVER RESERVOIR—No recent fisheries investigation has been conducted at Fall River Reservoir. Channel cats and flatheads provide the best fishing opportunity at this lake.

Spring spawning runs of white bass occur in Fall River and Otter Creek immediately above the impoundment. But this run is usually of short duration, one week or less, and as a result attracts mostly local fishermen. White bass are plentiful in the reservoir during summer months but few fishermen concentrate on them. On several occasions white bass have been observed feeding vigorously on mayflies. Thus dry fly fishermen may be missing a prime opportunity.

TORONTO RESERVOIR—Channel catfish and flatheads also provide the best fishing at this reservoir. Set lines appear to be preferred.



Milford Reservoir is expected to be the scene of good bass fishing during 1970. Last year, several "keeper-sized" largemouths were taken from the new lake by anglers of all ages as proved by Lyndon Lyon, 7, Pratt.

Spring spawning runs of white bass occur in the Verdigris River immediately above the reservoir during the first and second weeks of April and are usually of longer duration than those at Fall River.

JOHN REDMOND RESERVOIR—Channel catfish have proven to be this impoundment's greatest attraction and is the only species sought throughout the entire year. Many limits of channels have been taken from this lake during winter months.

Flatheads are also present in large quantities. Crappie and white bass appear to be numerous but due to turbid water conditions these are not frequently taken from the main reservoir basin. Occasional runs periodically develop at various points where wave action rolling is less severe.

The reservoir's stilling basin offers excellent fishing during extended periods of increased water discharge.

BOURBON COUNTY STATE LAKE—No detailed fishery investigation was carried out on this lake during 1969 but in the past has been a consistently good producer of bluegill, channel catfish, largemouth bass and crappie—in this order. Bluegill are numerous and large.

Each winter, for several years, brush-shelters have been added to the lake by T. E. Wester, lake superintendent. These underwater brush piles have



When white bass are running in early spring, a group soon forms as this crowd proves at Cheney Reservoir.

proven effective in attracting crappie and bluegill as well as bass and channel cats. Marked with buoys, these fish-tractors are a valuable aid to fishermen in locating some of the lake's best fishing.

BUTLER COUNTY STATE LAKE—This lake is presently drained to a low level and is undergoing intensive rehabilitation. Since the lake is known to contain a large number of desirable channel catfish, a new chemical fish toxicant which will not affect catfish will be used to remove all existing scale fishes from the lake. It is tentatively planned that the lake will be out of operation for only a short time. Largemouth bass and bluegill will be stocked in the lake following rehabilitation. During the next two years, only catfish fishing will be available.

CHASE COUNTY STATE LAKE—Test nettings made at this lake indicate fishermen may be overlooking a potentially good fishing lake. Channel catfish, largemouth bass, crappie and white bass are numerous and of good size. Flatheads are less abundant but are worthy of angler attention. Although a rough fish population has developed, it does not yet appear to be serious.

COWLEY COUNTY STATE LAKE—A longstanding reputation as a "bass lake" has been maintained by this state lake. It appears this reputation should continue during 1970. Annual stockings of intermediate-sized channel catfish have also provided good fishing for channels. More than 3,100 channels were again introduced in late 1969.

CRAWFORD COUNTY STATE LAKE NO. 2 (Farlington Lake)—Because of a downward trend in average size of the lake's bluegill and crappie, northern pike have been introduced to improve growth of these panfishes. Northern pike in excess of six pounds have since been taken. Preliminary investigations now indicate an improvement in the size of bluegill and crappie.

Largemouth bass are plentiful, most ranging from one-half pound to one and one-half pounds. Kentucky or spotted bass are also present but less numerous. This lake also contains two lesser known panfishes—a southern sunfish species—the redear or shell cracker—and brown bullhead. Both species grow well in the lake and are present in large numbers.

With the exception of a limited number of drum, no rough fish are known to inhabit this lake.

The lake receives periodic supplemental stockings of intermediate-sized channel catfish.

MIAMI COUNTY STATE LAKE—This lake is presently populated by a diverse assortment of rough fishes and slow-growing crappie. Carp should provide the best fishing at this lake in 1970.

MONTGOMERY COUNTY STATE LAKE—Fishing at this lake is expected to remain good for channel catfish, largemouth black bass, bluegill and some crappie. The waterlevel was lowered during the winter of 1968 and spring of 1969 to aid in

removing excessive aquatic vegetation and to allow predation on small bluegill and crappie to reduce panfish numbers.

This reduction in small panfishes helped increase largemouth bass production and should provide a marked increase in numbers of fast-growing yearling bass.

An estimated 2,500 channels, 10 to 12 inches in length, were stocked during the fall of 1969.

WILSON COUNTY STATE LAKE—This lake has developed a rapidly expanding rough fish population in conjunction with a slow growing "out-sized" crappie population. As a result, no annual stocking of channel catfish was made in 1969. Because of reduced fishermen use last year, a considerable number of previously stocked channels are believed present.

WOODSON COUNTY STATE LAKE (Lake Fegan)—A rough fish population, particularly gizzard shad, is developing at this lake but good fishing should still exist through 1970.

Fishing should be best for largemouth bass, crappie and channel catfish. Some white bass angling should also be available.

In 1969, 3,000 channels were stocked and a few blue catfish were also included. A test release of 30-50 striped bass was also made.

McPHERSON COUNTY STATE LAKE—As the result of an intensive fertilization program conducted each year since 1965, this lake now contains an unusually large population of panfish (particularly bluegill), bullheads and crappie. Six to seven-inch bluegill make up the largest percentage followed by 10 to 12-inch bullheads.

STRIP PITS—Additional strip-mined lands were acquired by the Commission during 1969 and access road development and signing has been completed. Moisture conditions the past year have maintained good water levels in the majority of pits—an essential for prime fishing conditions.

April and May provide the best angling success for largemouth bass while June and July are the best months for bluegill. Green sunfish, the scrappers of the pits, can be taken in quantity and size throughout the entire fishing season.

About 3,000 intermediate-sized channel catfish were stocked in state-owned pits during 1969.

Northeast Kansas

By **BILL COLE**

Fisheries Biologist

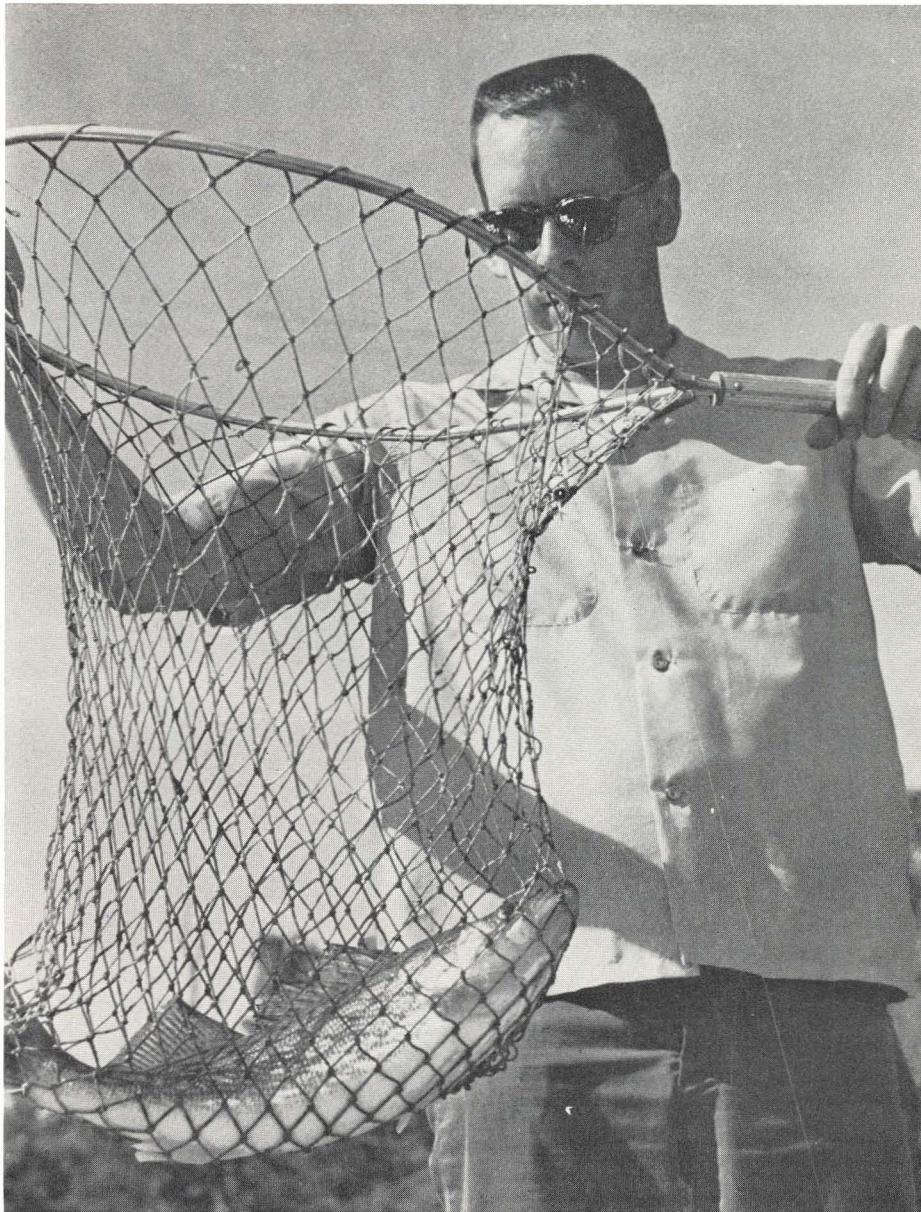
PERRY RESERVOIR—Although a new reservoir which began impounding water last year, fishing is expected to be excellent this year for catfish—channels and bullheads in particular. Other stocked fish such as largemouth black bass, walleye, crappie and northern pike, will not be large enough until fall to be considered keepers by a majority of fishermen. Northern pike will probably range from three to eight pounds by late summer.

POMONA RESERVOIR—While fishing will depend on water quality and runoff, angling should be good for walleye, bass and crappie. Most of the original walleyes are running from six to seven pounds; those in the 1968-year-class should average from two to two and one-half pounds each. Crappie are from eight and one-half to 10 inches in size. Some good channel catfish fishing is expected in the upper end.

TUTTLE CREEK—Fishing should be excellent for crappie, and white bass provided the reservoir doesn't get too turbid during spring runoff. There is an abundant population of white bass—last year's class—which should weigh about two pounds by fall if conditions remain good.

Fishing for largemouth bass and walleye should be improved since several year classes are of keeper size now. Walleyes should run from one and one-half pounds to three pounds.

Due to a gradual increase in the flathead population, flathead fishing is also expected to be improved.



WELCOME IMPORT—B. D. Ehler, Topeka, nets large walleye from Pomona Reservoir. Walleye were successfully stocked in Kansas lakes more than 10 years ago.

MILFORD RESERVOIR—Excellent fishing for crappie, white bass and walleye is predicted for this new lake. Walleyes are running from two and one-half pounds to five pounds while white bass range from one-half to three-fourths pounds.

Largemouth bass fishing should remain good for the next two years and for 1970 will range anywhere from one to six pounds.

Channel cat fishing is expected to be best at the upper end where the Republican River flows into the lake.

Fair northern pike fishing is also predicted at this impoundment.

COUNCIL GROVE RESERVOIR—Known in recent years for its northern pike fishing and record-sized northern, Council Grove Reservoir has had water quality problems, particularly turbid water, over the past two years. As a result, fishing success at the lake has been impaired. However, angling is expected to improve slightly if water quality improves enough to aid the growth rate of major fish species.

For the year, fishing is expected to be fair to poor for northern pike, walleye and crappie. Northern range from five to near 20 pounds in weight.

Two year classes of walleye are present running from three to six pounds in weight. Crappie are small but quite numerous.

STATE LAKES

All state lakes in the northeast section of the state are expected to provide excellent to good fishing for channel catfish, largemouth black bass and bluegill, with the exception of Washington and Ottawa County State Lakes. Washington County State Lake is extremely turbid while an excessive growth of aquatic vegetation at the Ottawa lake makes fishing difficult. However, a fairly good population of crappie, bass, channel catfish and bullheads is present at the Ottawa lake.

A good crappie run is expected at Leavenworth County State Lake, which has a large population of keeper-sized crappie.

Canvasback ducks have been known to attain speeds of 94 miles per hour.

Fishing Tackle Tune-Up

By GEORGE VALYER

Most fishermen, honest ones as well as truth-stretchers, have their favorite stories about "the big one that got away."

To add insult to injury, many of them are at fault—they failed to have their fishing tackle in proper working order.

Let me recount a personal experience.

As with most other fishermen, I put away my tackle for winter without cleaning it, thinking there would be some spare moments to spruce it up. But winter disappeared rapidly, and before I could find some extra minutes, Spring arrived.

One beautiful evening in early Spring, a friend came by with an invitation to go fishing—one of those spur-of-the-moment situations where it's a matter of grabbing tackle, loading it and heading for a lake.

To make a long, woeful story short, the chicken liver borrowed from my friend brought a long battle with "Mr. Big"—a channel catfish which I never landed. Dirt had clogged the drag on my spin-casting reel and when the lunker made a desperation run close to shore, the line snapped.

Before this happens to you, let's examine some precautions which should reduce the possibility of mechanical failure—and improve your chances of putting a lunker in the creel.

First, inspect the rod. Look closely to see if the guides are smooth. A burr or rough spot on a guide can cause excessive line wear and result in the loss of a fish—particularly the big one. If you find a rough guide or one which is excessively worn, obtain a replacement of the correct size from a sporting goods store.

To put on a new guide, some wrapping thread, a steady hand and a certain measure of patience is all that is needed. Remove the old guide by cutting through the windings with a sharp knife or razor



Cleaning a reel is a simple job requiring only a few tools and supplies.

blade. Then position the new guide properly and hold it in place temporarily with a piece of masking tape on one end of the guide base.

Start wrapping with thread on the other end, rotating the rod while the spool is held firmly. Experts use a special jig but such a device is not needed. The trick is to talk a member of the family into holding the spool while you rotate the rod, laying the thread smoothly. When close to the end of the wrapping, leave a few loose loops to tuck the end back through so you can cinch it tight with a little pull.

A coating of clear fingernail polish will complete the job and protect the thread against future damage. And while you're at it, give the other wrappings a coating, too.

If you have a jointed rod, check the ferrules for looseness. Loose ferrules can be resealed with ferrule cement available at most sporting goods stores. Most ferrule cement is thermal in nature and requires heat. A small flame provided by a cigarette

lighter or small torch will prove adequate for the task. If neither is available, try a candle.

Heat the stick of cement until it is tacky and rub a coating on the end of the rod section. Then heat the ferrule, holding it with a pair of pliers, and slide it on the cemented end of the rod. When both are cool the ferrule should be tight. To finish the job, wrap the joint with wrapping thread and give it a coat of clear nail polish.

If you would like to spruce up your rod a bit, try refinishing the cork handle. Begin by sanding it lightly with fine sandpaper to remove dirt and stains. Then apply a thin coating of cork grease and rub it in. Cork grease is made for joints in clarinets and other woodwind instruments and works fine in preserving cork on rod handles. It is available at any music store.

Cleanliness and proper lubrication are the keys to dependable operation of the reel—the mechanical heart of any fishing outfit. Dirt and grit are

major causes of reel failure and can seriously affect the casting and retrieving ability of the reel.

Only a few tools are required to properly clean a reel—a small screwdriver, a pair of pliers and a small paint brush. You will also need a cleaning agent, such as solvent or kerosene. Solvent is preferred since it is the safest of all cleaners. Above all, refrain from using gasoline—particularly in a building.

To clean a reel, completely disassemble it. An assembly diagram and parts list is included with most quality reels when they are purchased and can be helpful when cleaning the reel for the first time. Once you are familiar with the mechanism, disassembly and reassembly are easy.

When taking the reel apart, pay particular attention to the location and size of all screws and make a mental note of how the various parts fit together. If a printed assembly diagram is not available, draw a rough sketch to aid in reassembly.

Carefully clean all moving parts with the paint brush dipped in solvent. Smaller parts may be immersed in the solvent and rinsed to remove

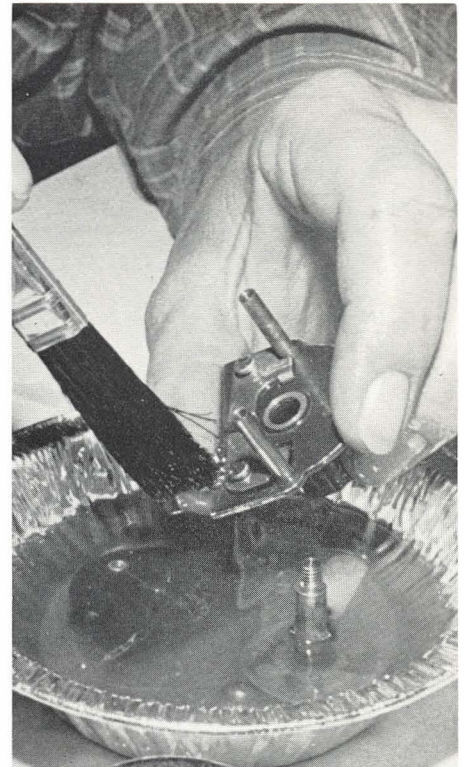
any remaining grit from bearing surfaces.

While cleaning, take time to check the line for worn spots. Strip off a few feet and examine it closely. Take a loop or two around each hand and give a strong yank. If the line breaks or appears frayed you can do one of three things—put on new line, cut off the worn part or reverse the line on the reel.

The time for lubrication is during the reassembly operation. As parts are put together, all bearings should be properly oiled or greased. Most household oils available at a service station are satisfactory. Also any oil suitable for sewing machines will work well on reel bearings.

Gears need a different type of lubricant. Light oils tend to run off a gear so a heavier lubricant is desired. Reel grease specifically manufactured for this purpose may be obtained from a sporting goods store or other greases may be used. It's important that they have enough body to cling to the gears and provide good lubrication when the time comes to apply the pressure on a large fish.

After everything has been put back together, take your tackle out-



After disassembling the reel, clean all moving parts with a paint brush and solvent.

side for a test. Tie on a practice plug and make a few casts in the yard or anywhere void of overhead obstructions. Make any needed adjustments.

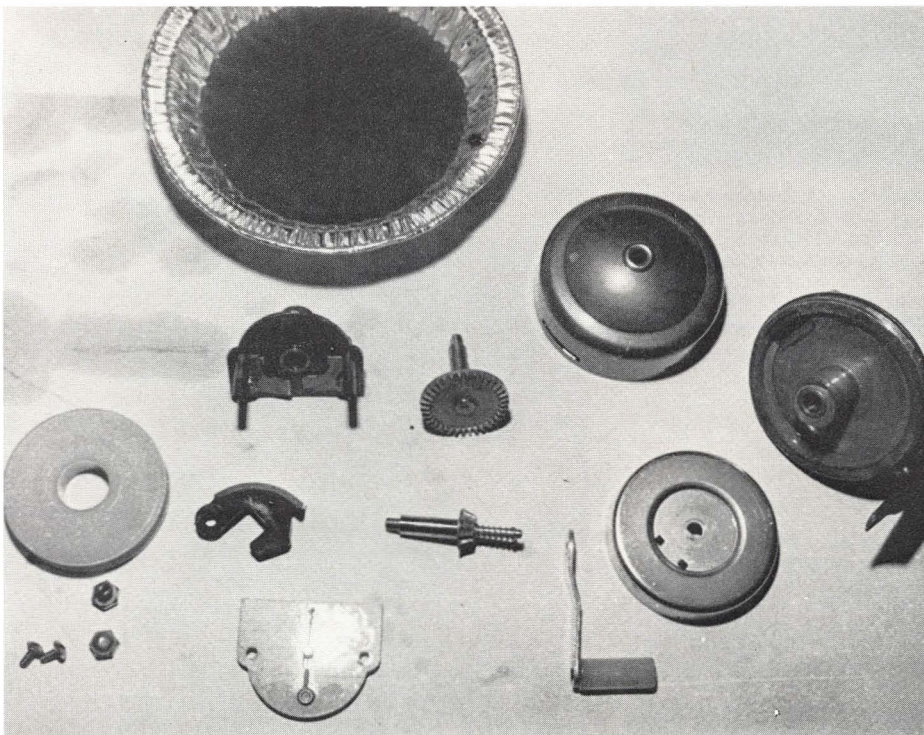
Once the rod, reel and line are in good shape, don't forget your lures. Now is a good time to clean out your tackle box and conduct an inventory. If you planned to obtain a replacement for that favorite plug you left on a snag the last trip out, make a note on your "want list."

If you use live bait, check your supply of weights, hooks and other terminal tackle. Add the missing items to your growing list—and buy them right away.

Don't forget to sharpen the hooks on all artificial lures. They can get dull banging around in a tackle box, but a few strokes with a hone will restore their original hooking power.

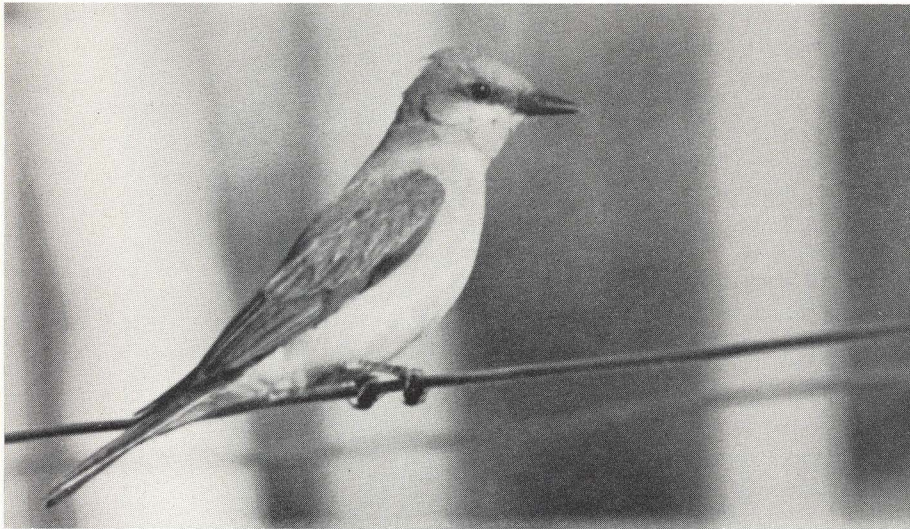
Once you've finished your tackle tune-up you'll be ready for the most important activity of Spring,—goin' fishin'.

And don't forget your stringer. "Mr. Big" may be waiting to give you a real ride—and another chance.



Freshly cleaned reel parts and dirty solvent provide proof that this reel was needing attention before another fishing season rolled around.

Some Feathered Friends .



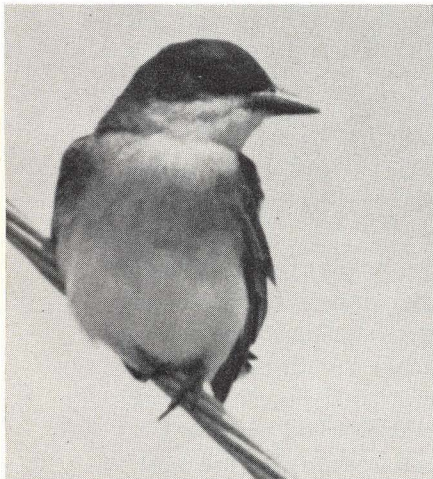
(2) 8-9½ inches long. A summer resident found mostly in western counties. Habitat: open country with scattering of trees. Nests may be found on tree branches, poles or building ledges. Eats little plant food; preferred foods are bees, wasps, grasshoppers, beetles, bugs and flies.



(11) 8-9 inches long. A summer resident, more commonly seen in eastern areas. Habitat: woodlands, river groves. Nests in tree cavity. Food: moths, "caterpillars," beetles, grasshoppers, crickets, katydids, wild bees, wasps and flies are preferred food items; sometimes fruits of virginia-creeper, wild cherry, pokeweed, mulberry and blackberry are eaten.



(5) 11-13 inches long. A common summer resident, seen occasionally during winter particularly in southeast. Habitat: farmlands, towns, open woods, grasslands and shelterbelts. Usually nests in trees or bushes, sometimes on the ground. Seeds of cereal grains and wild plants are important food items throughout the entire year.



(6) 8-9 inches long. A summer resident, most common in eastern areas. Habitat: woodlot edges, hedgerows, shelterbelts, roadsides, semi-open country. Nests may be found on tree branches or posts or in bushes. Food: more than 80 percent consists of honeybees, ants, grasshoppers, beetles, bugs and flies; less than 20 percent consists of seeds or fruits of wild cherry, pokeweed, blackberry, mulberry, elderberry and grape.



(7) 11-13½ inches long. A summer resident. Habitat: croplands, towns, streamsides. Nests in trees or bushes. Food: 50-55 percent consists of bees, grasshoppers, crickets, spiders and other insects; occasionally some toads, salamanders, mice and birds' eggs. Seeds or fruits of cereal grains, ragweed, blackberry, wild cherry, bristlegrass, mulberry and sunflower are also important food items.



(1) 9-11 inches long. A summer resident. Habitat: open grasslands, shallow ponds and shorelines. Nests on ground in bare patches. Main food items are: beetles, "caterpillars," grasshoppers, ants and true bugs. Seldom takes plant foods.

Do You Know Them?

Most outdoorsmen appear to have little trouble identifying game animals. Nor is it new to them that game animals need certain types and amounts of food and cover. Sportsmen realize that specific habitat requirements are needed and they know that if habitat is of poor quality or limited to a small area, the game resource will likewise be held to relatively low numbers.

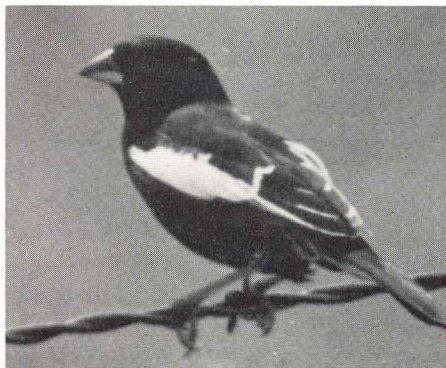
But quite often non-game birds and animals are forgotten even though these species make up the greater part of our wildlife resource. And habitat needs for these non-game individuals are just as specific as those of game animals.

Although we seldom acknowledge it, these non-game critters are a source of outdoor interest and enjoyment to more people for a greater part of each year than will ever be true for game animals.

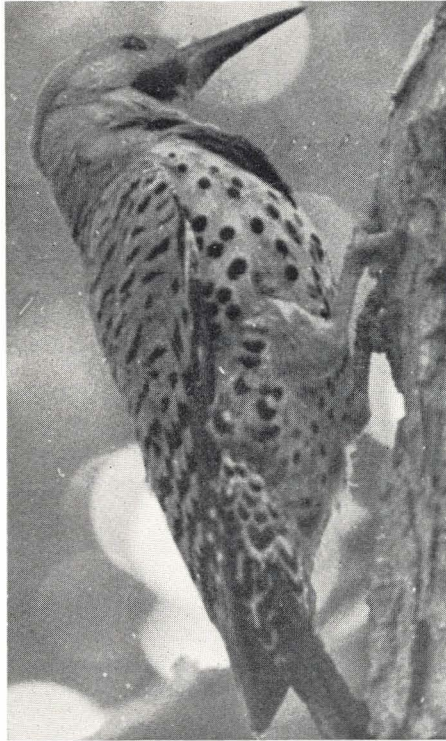
So, as a brief tribute, we present pictures of a few of our feathered friends. See if you can identify them. Each photo is numbered and accompanied by a few hints such as habitat preference and desired foods. One is a game bird.

Notice that these birds depend largely on insects or on seeds and fruits of native wild plants (weeds) for their food supply. It becomes obvious then that widespread use of pesticides can have a marked influence on the availability of food and cover—and on the abundance of our feathered friends.

Answers are given on page 19.



(4) 6-7½ inches long. A summer resident, more common in western areas. Habitat: open grasslands, plains and prairies. Nests on the ground. Food: 75 percent grasshoppers, beetles, stinkbugs, wild bees and ants; 25 percent consists of wild plants such as needlegrass, pigweed and vervain.



(8) 12-14 inches long. A summer resident. May be seen anytime of the year in eastern areas. Habitat: woodlots, open timber, towns. Nests in hole in tree, post or building. During spring and summer insects such as ground beetles, ants and crickets make up the bulk of the diet. In fall and winter, seeds and fruits of poison-ivy, virginia creeper, blackberry, sumac, corn and redcedar make up 55-65 percent of its diet.

Photos and Text by **JIM NORMAN**
Game Biologist



(10) 7-9½ inches long. A summer resident. Habitat: marshy spots, hayfields, brushy pond and creek banks. Nests are located off the ground in low brush or aquatic vegetation. 50-60 percent of its diet consists of seeds of wild plants and cereal grains; 40-50 percent consists of insects, snails, crustaceans.

(3) 7-8 inches long. May be seen throughout entire year. Habitat: plains, prairie, fields and sage flats. Nests on the ground. During spring and summer 70 percent of its food consists of seeds from wild plants such as bristlegrass, ragweed, smartweed and sunflowers and from cereal grains such as oats, corn and wheat. Beetles, beetle larvae, grasshoppers and "caterpillars" are also important summer foods. In winter, seeds from wild plants are major foods.



(9) 10½-12 inches long. A summer resident. Habitat: low growing patches of brush or a thicket. Nests off the ground in thicket. Food: 55-70 percent consists of insects—beetles, grasshoppers, crickets, etc.; 30-45 percent consists of seeds or fruit of blackberry, acorns, elderberry, corn, virginia creeper, sumac, grape, mulberry, gooseberry, redcedar, blackberry, greenbriar.



Sunflower Stripers

By JOHNNY RAY
Fisheries Biologist

Start talking about fishing in Kansas and inevitably someone will begin asking questions about the striped bass—a new fish in the Sunflower State and the object of much attention among Kansas' fishing fraternity.

The striped bass, *Roccus saxatilis*, originally was an anadromas fish—one which spends its life in the sea but returns to fresh water to spawn. However, a large population of stripers became landlocked in South Carolina's famous Santee-Cooper Reservoir several years ago. They continue to live, thrive and reproduce there, even though they never return to sea.

South Carolina fishery biologists have worked extensively with the landlocked fish. Through their efforts, a hatchery was established below the reservoir to successfully reproduce striped bass from eggs taken from captured adult females. From this source, Kansas and many other states have secured experimental supplies of fish.

Minute and delicate fry, striped bass obtained from South Carolina are shipped by air in oxygenated plastic bags to their new homes in Kansas.

Demands for the fry have increased steadily. Other states also are experimenting with this highly popular game fish. As a result, some difficulty is often experienced in obtaining them and they must be taken in quantities available.

Kansas received its first shipment of striped bass fry in April, 1965 when 100,000 were donated to the state for experimental purposes by the South Carolina Wildlife Resources Commission. Wilson Reservoir, a new impoundment in north-central Kansas, received 80,000 of the fry while the remaining 20,000 were retained for rearing purposes and stocked in ponds at the Commission's fish hatchery near Pratt and fish rearing station south of Meade.

Kansas, like many other states at this time, was relatively unprepared for the exotic fish and had little experience in striper culture. While a majority of the first fry were introduced directly into reservoirs, the practice has been discontinued due to low survival of the small fry. Efforts are now being made to stock small fry in rearing ponds and raise them to a more hardy fingerling size before introduction into Kansas impoundments.

The first experiment was not a total "bust," since 242 striper fingerlings were reared at the Pratt hatchery. Forty-five of these, now adults weighing from three to five pounds each, are being held for experimental spawning studies.

Striped bass culture is a difficult process consisting of much more than just acquiring fry and stocking them in a pond. The little stripers, as received from South Carolina, are comparable in size to a pin-head and are extremely delicate creatures requiring specialized culture. If these cultural

conditions are not met, some, if not all, will perish.

Crowded into a small bag, the small stripers are placed under considerable stress while making their long but fast trip to Kansas. During the journey they are watched closely to avoid overcrowding, rapid temperature changes, oxygen depletion and to guard against rupture of the bags or insulated containers.

After arriving in Kansas, fry are confined in aquariums to acclimate them to pond water. Conditions must be favorable to the fry or large losses can occur. Striped bass do not appear to be as hardy as some other fish and cannot stand minor changes in water conditions. Changes such as slight variations in water acidity, temperature, dissolved oxygen, carbon dioxide and metallic ions are important in determining survival of the delicate fry.

The fry are kept in aquariums until it appears they are swimming effectively both in balance and direction. Some have been observed



This pair of striped bass made angling history in the Sunflower State when they were taken from Cheney Reservoir last May. They were the first stripers caught in Kansas and officially viewed by Commission personnel. One was caught by Earl Miller, Jr., Wichita; the other by Delbert Krehbiel, Moundridge.

swimming satisfactorily when three days old while others may require four or five days to adjust. The fry do not begin feeding until most of the natural supply of food in the yoke sac is absorbed. This has been observed to occur at an age of seven to eight days.

Fry are stocked in rearing ponds when they have achieved sufficient maturity—in Kansas this usually ranges between the age of five and 12 days.

Once stocked, fry become subject to death from predaceous insects, disease, parasites, changes in water conditions and possible starvation. Food requirements of striper fry and fingerlings consist primarily of zooplankton (small microscopic organisms in the water), aquatic insects and small fish. And these foods are selected with a definite size and species preference.

The condition of the fry may be excellent at the time of stocking but, unless conditions are right, only a few, or perhaps none, will survive to become fingerlings. Other states experimenting with striper fry have reported survivals from zero to as high as 60 percent. But, usually, the overall average is less than 30 percent.

Handling of stripers is difficult and sometimes the results are discouraging. Such was the case during 1966 when about 500,000 fry were obtained. Nearly 40 percent were lost before they reached Kansas—probably due to overcrowding. Of those which survived, 10,000 were stocked in Elk City Reservoir, 170,000 were released in John Redmond Reservoir and 50,000 were placed in Wilson Reservoir. The remainder were retained at the Pratt hatchery for rearing purposes.

Rearing success experienced during 1966 can best be termed a dismal failure. When stocked, the condition of the fry was not good and prevailing weather conditions late in the year were not conducive to striped bass culture. As a result, only a small number of stripers were reared during 1966.

During 1967, an estimated 200,000 fry, all in good condition, were obtained from the South Carolina hatchery and returned to Kansas. Unlike

Following is a summary of striped bass stockings in Kansas waters:

Date of stocking	Location	Size	Number	Expected survival
April 30, 1965	Wilson Reservoir	Fry	100,000	Low
April 30, 1965	Wilson Reservoir	Fry	50,000	Low
April 30, 1966	Elk City Reservoir	Fry	10,000	Low
April 30, 1966	John Redmond Reservoir	Fry	170,000	Low
December 21, 1967	John Redmond Reservoir	Fingerlings*	600	Good
October 26, 1967	Cheney Reservoir	Fingerlings	550	Good
September 18, 1968	Glen Elder Reservoir	Fingerlings	2,440	Good
September 24, 1968	Wilson Reservoir	Fingerlings*	3,500	Fair
October 29, 1969	Cheney Reservoir	Fingerlings	2,400	Good
November 4, 1969	Wilson Reservoir	Fingerlings	4,400	Good
November 5, 1969	Fall River Reservoir	Fingerlings	500	Good
November 5, 1969	Woodson Co. State Lake	Fingerlings	50	Good

* Striped bass fingerlings received from the state of Arkansas.

the previous year, trip survival was excellent. But again disaster struck—this time in the holding aquariums. Disease and fungus infections, which developed among the fry within a few days, caused major losses. Realizing they would not survive in confinement, the fry were stocked by hatchery personnel in rearing ponds. As a result, 700 striped bass fingerlings were reared from this allotment.

Despite changes made in the holding aquariums and careful monitoring of pond water, large losses of fry again occurred in 1968. Out of 200,000 fry, about 2,500 were reared in the ponds and later stocked in Glen Elder Reservoir.

Survival of fry received in 1969 was good but many of the fry did not acclimate to pond water. From 600,000 fry, about 7,400 were reared to fingerling size. Ranging from three to six inches in length, they were stocked in Cheney, Wilson and Fall River reservoirs, and Woodson County State Lake. About 50 large fingerlings were retained at the Pratt hatchery to raise to adult size.

To date, several verified catches of striped bass have been made at Cheney and Wilson reservoirs and one has been reported caught below the Glen Elder dam.

Fish caught from Cheney are believed to be part of the 550 fingerlings stocked in the reservoir on October 26, 1967. Two of the anglers catching striped bass from Cheney were Earl Miller, Jr., Wichita, and Delbert Krehbiel, Moundridge.

The first confirmed striper catch

from Wilson Reservoir was made by Herb Remick, Salina, during late August, 1969. A check of the scales revealed it was approximately one and one-half years old and was probably one of 3,500 fingerlings stocked in the reservoir, September 24, 1968.

The current state record for striped bass in Kansas is held by Arthur Grill, Ellsworth. It measured 14½ inches in length and weighed one pound, five ounces. The age of this record fish was the same as the one caught by Remick.

Within the next few years, Kansas' striped bass record will undoubtedly be broken many times and could come from any of the impoundments in which they have been stocked.

Fisheries biologists are intensely interested in reported striped bass catches. Anyone who thinks he has creeled a striper is requested to report it to an employee of the Commission. Fishermen are also advised to freeze the fish and retain it until such time that an identification can be made.

Admittedly, there has been some difficulty in introducing striped bass in the state's lakes, but much has been learned about this exciting game fish and rearing success is rapidly improving.

While there are probably other failures ahead, Kansas seems headed toward success with its striper program. Through efforts of the Kansas Fish and Game Commission to create more and better fishing in Kansas, the day may come soon when Kansas anglers will catch many of these hard-fighting fish.

1969:

Year of the Angler

By LEROY E. LYON

For many Americans, 1969 will long be remembered as a record-setter—a historic time when man first stepped on the moon and a memorable time better known to baseball fans as the “Year of the amazing New York Mets.”

But to many Kansas fishermen, 1969 will be remembered as the year of the angler—a time when records were set by many of their own clan at lakes, ponds and streams throughout the state.

During the 12-month period, 11 anglers were cited for establishing new fish records. Although these records varied greatly in size, weight and fighting ability and even though some lasted only a few days, all were officially recognized by the Kansas Fish and Game Commission, official record-keeper for trophy-sized fish in the Sunflower State.

And to add more prestige to Kansas' fishing, an even 100 Master Angler Awards were presented by the Commission to anglers who caught fish which met or exceeded master angler requirements.

Clarence F. Nelson, Wilsey, began the record-shattering pace on March 4 when he landed a 17-pound, 15-ounce northern pike while fishing at Council Grove Reservoir. His feat, accomplished while using live minnows for bait, is even more unusual when one realizes that northern pike are a new fish in Kansas waters. The pike program, conducted by the Fish and Game Commission, was initiated in 1962, but now the toothy fighters are found in most new reservoirs and some smaller lakes.

Nelson's claim to fame lasted only through spring and summer until August 20 when a resident of the “Show-Me” State, Tobie S. Davison, Kearney, Mo., wrote an 18-pound, five-ounce northern in the record books. Like Nelson, Davison claimed his prize from the waters of Council Grove Reservoir. The lunker, caught on a Hellbender, was 42 inches long, 17 inches in girth and remained the

champion of its class through the remainder of the year.

While fish records in 17 categories remained unchanged during the calendar year, four rookies were written into the records, representing species enjoying their first year on the charts. They include the striped bass, goldeye, smallmouth bass and yellow perch.

The striped bass, an experimental species first introduced in certain reservoirs in 1965, for the first time was caught and officially registered with the Commission.

On May 18, Earl Miller, Jr., Wichita, had a temporary brush with fame. While fishing at Cheney Reservoir, he caught a fish which he believed to be a striped bass. Miller removed the entrails, froze the fish and donated it to the Commission. His first-of-a-kind weighed 15½ ounces with the viscera removed. But before he could apply for the record, he was pre-empted.

The following day, May 19, Delbert Krehbiel, Moundridge, fishing for walleye at Cheney, caught another striper near the northeast shore of the reservoir. He left it at a bait shop near the lake where it was frozen

whole then taken to Commission headquarters near Pratt where it was weighed at one pound, two ounces and measured 13.5 inches in length.

Krehbiel registered his fish as the first record for the state in the striped bass classification. The fish was caught on a Thin Fin.

Although other striped bass catches were reported from Cheney Reservoir, these two were the first to be viewed by Commission officials.

Krehbiel's record lasted until October 16 when Arthur Grill, Ellsworth, caught the present record on a yellow-green jig at Wilson Reservoir—a one-pound, five-ounce striper. The new record measured 14½ inches in length.

Another battle for recognition in a new class began in June when a state record was established on the goldeye, a species not often caught in Kansas waters. Tony Rago, Junction City, earned the distinction of being first to set the goldeye standard when he caught one weighing 10½ ounces while fishing with worms at Milford Reservoir, June 3.

His record lasted only 24 days.

On June 27, Frank Custenborder, a Topeka florist, caught a 12-ounce

Here are the minimum sizes of fish needed to qualify for Kansas Master Angler awards, including two new species added to the list for 1970:

Largemouth (Black) Bass	7 pounds	Walleye	6 pounds
Spotted (Kentucky) Bass	1 pound	Crappie	2 pounds
Channel Catfish	15 pounds	Bullhead	2 pounds
Flathead Catfish	50 pounds	White Bass	3 pounds
Northern Pike	15 pounds	Bluegill	1 pound
Warmouth Bass	1 pound	Smallmouth Bass	1 Pound

A close-up photograph of each fish submitted for an award should accompany an application, so that positive identification can be made. In case of doubt in regard to species, a local game protector or fisheries biologist should be contacted. Application blanks may be obtained from most marinas, sporting good dealers, license vendors, game protectors, or from the Information-Education Division, Fish and Game Commission, Box 1028, Pratt, Kansas 67124.

goldeye on an artificial lure while fishing for walleye and bass at Milford Reservoir. Custenborder promptly submitted his entry for a new record.

Rush Lang, Junction City, game protector for the Kansas Fish and Game Commission, said afterwards that "Custenborder's new record might not last." "Several goldeyes have been showing up in the lake and fishermen are just learning what they are," he added.

Lang proved a good prophet as Custenborder's record was broken nine days later. On July 6, Mrs. Dean M. Hinkle, Topeka, posted a new standard, hooking a goldeye which tipped the scales at 13 ounces and measured an even foot in length—proving once again the mastery of women anglers. Like the other two, Mrs. Hinkle's record came from Milford Reservoir.

The goldeye, a member of the herring family and important as a commercial fish in some states, is found in the larger watercourses and reservoirs in eastern Kansas with an occasional specimen showing up in north-central waters.

In September, the Kansas Fish and Game Commission recognized the first record on smallmouth bass in the state. Clyde Mong, Ogallah, became the first record holder, catching an 11¼-ounce smallmouth at Cedar Bluff Reservoir, Sept. 9, using a white Shyster for bait.

Although not a monster, it was the first fish of this species to be submitted for record consideration, even though the official register for lunker fish was established in 1957.

In October, when many anglers had turned thoughts from fishing to hunting, T. L. Wenke, Hays, proved good fishing can be found during Autumn months. While fishing at Cedar Bluff Reservoir with an artificial minnow, Wenke erased Mong's six-week record from the books. He landed a hefty two-pound, 3½-ounce smallmouth to claim the new standard.

Another new classification was set May 10 when Myron Schwinn, St. George, submitted a pint-sized yellow perch for recognition. Weighing only



John Takash, Topeka, is all smiles after hoisting this eight-pound, eight-ounce largemouth black bass from the waters of Pomona Reservoir. The bass was the second largest reported during the first year of Master Angler competition. (Topeka Capital-Journal photo.)

five and one-half ounces, the fish was taken on a spinner from Lake Elbo in Pottawatomie County. Unlike other new classes, this record has gone unchallenged.

In March, the Commission unveiled a new program to honor anglers who catch "bragging size" largemouth black bass, spotted (Kentucky) bass, channel catfish, flathead catfish, bullhead catfish, northern pike, walleye, crappie, white bass and bluegill.

While anglers were generally slow

to participate in the new program, applications began trickling into the Information-Education Division's office shortly after the announcement in mid-March. By the end of the year, 100 Master Angler Awards had been presented.

As might be expected, largemouth black bass were the most popular category with 35 certificates awarded. And 16 of these came from farm ponds.

Although not nearly as large as the largemouth state record of 11 pounds,

three ounces, R. L. Potter, Topeka, topped his class with a nine-pound, two ounce beauty which he hoisted from a farm pond on Aug. 3 with a jitterbug. Potter's lunker was the only one tipping the scales at more than nine pounds.

Of the other Master Angler largemouths, 29 weighed between seven and eight pounds while the remaining five tipped the scales at more than eight pounds apiece. A majority were taken on artificial lures—13 on spinners and four on plastic worms. Only four were caught with live minnows.

Nearly one-third of the awards—31 total—were presented to bullhead fishermen who caught fish weighing two or more pounds. The largest was a three-pound, two-ounce specimen caught Oct. 11 by James B. Davis, Wichita, while fishing at Midland Lake in Wichita. Like a majority of bullhead catfish prize-winners, Davis was using worms for bait. All other bullheads weighed between two and three pounds.

Farm ponds produced most of the large bullheads—14 to be exact—while Midland Lake was close behind with 11.

Channel catfish were also attention-getters during 1969. A total of 16 channels, all weighing more than the minimum requirement of 15 pounds, were caught by Master Angler fishermen.

Two anglers, Lee Moore, Kansas City, Ks., and Larry Atchison, Lyndon, tied for top honors in the channel catfish class, each catching a 23-pound, 12-ounce channel. Moore caught his first, on June 25, while fishing at Wyandotte County Lake. And to prove his prowess, his prized catch was landed on a spinning rod with six-pound test line after the lunker was lured to the hook by a prepared catfish bait.

Atchison took his channel cat from the Marais des Cygnes River, Aug. 16, using a grass frog for bait.

Nine northern pike—five from Council Grove Reservoir and four from Norton Reservoir—drew awards. All from Council Grove weighed between 15 and 16 pounds while two from Norton tipped the scales at more than 16 pounds.



Limit of channels from Cottonwood River is displayed by George Cooper and Ernest Dille, both of Emporia.



Ruth Filbert, Dighton, was one of three Kansas anglers to receive Master Angler Awards for catching trophy-sized bluegills. The one and one-half pound fish was taken from a farm pond in Ness County.

The largest was creeled by Martin Riphalin, Copeland, on June 2. Riphalin was using a minnow to entice the fish which measured slightly more than 41 inches in length and 17 inches in girth.

Only two walleye anglers submitted applications for recognition. The first and largest was taken April 2 at Rocky Ford by Virgil L. Dial, Manhattan. It weighed 10 pounds, five and one-half ounces—only three and one-half ounces shy of the state record. The other was landed at Kirwin Reservoir, June 14, by Henry Watkins, Great Bend. The fish, weighing eight pounds, 14 ounces, was caught on a Lazy Ike while Dial's trophy was snared with a yellow jig.

While numerous flatheads exceeding the minimum weight of 55 pounds were caught during the year, only two anglers qualified for the awards. One, a 58-pound heavy weight, was wrestled from the Smoky Hill River at the upper end of Kanopolis Reservoir, June 7, by Ray M. Davis, Lyons.

A limb line, baited with perch, provided the winning combination for Jim Culbertson, Hoisington, July 22. Fishing the Saline River, Culbertson caught a flathead which weighed 74 pounds, four ounces.

Of the tons of crappie caught in Kansas during the 12-month period, only two anglers took time to submit applications for a Master Angler Award. Helen V. Geren, Topeka, was the first to score with a three-pound, one-ounce crappie. Using nightcrawlers for bait, the woman angler took her prize from a farm pond southwest of Topeka.

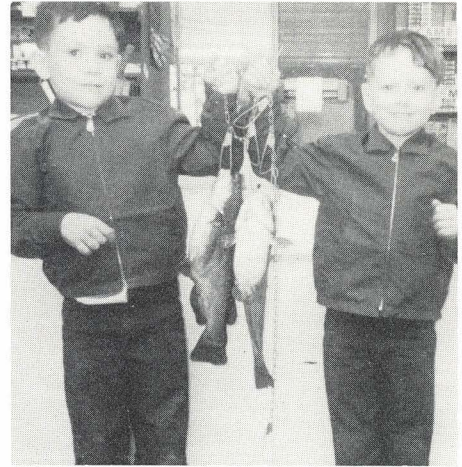
Lake Elbo in Pottawatomie County produced the other award-winning crappie for Harry E. Oppenlander, Manhattan. Caught April 27, the fish barely met the minimum weight requirement—three pounds even. A white beetle provided the winning touch.

Three bluegill, each barely meeting the two-pound minimum weight requirement, also made the headlines. The lucky anglers were Ruth Filbert, Dighton; Alan T. Pollom, Topeka and Elvin G. Hanson, Topeka. All were taken from local farm ponds.

No white bass or spotted (Kentucky) bass applications were received.

For 1970, some new categories will be open for anglers wishing to register "the lunker that didn't get away." With a little effort, this coming year can be as good, or even better than last.

In the meantime, our hats are tipped—to all Kansas fishermen who made 1969 the "Year Of The Angler."



An Independence youngster, Frank McCabe, 7, became one of the youngest anglers to qualify for a Master Angler Award when he caught a two-pound, four-ounce bullhead from a farm pond in Cherokee County last May. He also landed one which weighed one and three-fourths pounds, then persuaded his younger brother, Mike, to help hold the lunkers during the photo session.

FEATHERED FRIENDS

Quiz . . .

- (1) Killdeer, (2) Western Kingbird, (3) Horned Lark, (4) Lark Bunting, (5) Mourning Dove, (6) Eastern Kingbird, (7) Common Grackle, (8) Yellow-shafted Flicker, (9) Brown Thrasher, (10) Red-winged Blackbird, (11) Great Crested Flycatcher.

Landlocked Kansas has become an anglers paradise—thanks to the many lakes, ponds and streams filled with a large variety of fish.



HAWKS—



Nature's Aerial Patrol

By **BRUCE WOLHUTER**

Perhaps the least understood of Kansas birds are the raptorial species—the birds of prey. These birds—eagles, hawks and owls—are victims of ruthless hunting by both farmers and sportsmen who fail to realize their true value in the balance of Nature.

Researches have been carefully studying food habits of hawks since 1892 when 2,700 stomach contents of raptors were analysed by the U. S. Department of Agriculture.

To date, a rather impressive collection of data has been gathered showing all birds of prey are of benefit to man. The findings also show that even unprotected species deserve reconsideration since their beneficial qualities tend to outweigh their occasional taste for poultry and game.

Probably the best known and most common of Kansas raptors is the Red-tailed hawk. Labeled "Chicken Hawk" by many, nothing could be farther from the truth. Studies show that as much as 75 percent of the red-tail's prey consists of rodents and insects—pests which farmers are continually trying to eliminate.

Other prey includes rabbits, squirrels and snakes. Instances of red-tails attacking poultry are relatively rare and are the result of predation by a few individuals. It is certainly unfair to persecute the entire group of hawks for the bad habits of one or two misfits.

As indicated by its name, the outstanding characteristic of the red-tail is the rust-red colored tail which doesn't appear until after the first moult. This moult occurs in spring, a year after the bird is fledged. Generally, they are dark across the back and wings with a light-colored breast. There is much individual coloration among red-tails and color phases range from black (melanistic birds) to almost bleached-white (partially albinistic).

The red-tail is the largest of Kansas' hawks. Adult females may have a wingspread reaching 56 inches and may weigh four pounds.

Red-tail nests, constructed from sticks and located in tall trees, may be found 30 to 40 feet above the ground. Eggs are laid in mid-March, three to an average clutch. Young red-tails



Although only about three weeks old, these young Red-tails express resentment at intrusion of author and his camera. (Photos by Bruce Wolhuter.)

hatch in 28 to 30 days and are ready to leave the nest in late May or early June.

The Swainson's hawk tends to replace the red-tail in Western Kansas, preferring more open prairie habitat. Both species are similar and belong to a group known as the Buteos which are characterized by broad, short wings, relatively short tails and soaring, circling flights.

Other Buteos in Kansas are the Red-shouldered, Broad-winged and Rough-legged hawks. The Red-shouldered nests only in eastern Kansas and is one of the most beneficial hawks. It is believed to feed almost entirely on harmful rodents and insects.

The Broad-winged hawk, often claimed to be one of the tamest, also nests primarily in eastern Kan-

sas and is often seen in large flights of several hundred birds during fall and spring migrations.

The Rough-legged species is only a winter resident and is more common in western counties. It nests in Arctic regions.

The Marsh hawk, classified by zoologists as a harrier, is unique among local raptors and is the single representative of its group in Kansas. It is highly beneficial. Small rodents, frogs, snakes and insects are preferred food items.

About the size of a crow, it is easily recognized by a habit of flying near the ground. It rarely soars, and reminds an observer of a butterfly as it appears to float from side to side. A white rump patch at the base of the long, slender tail is also an easily-recognized identification mark.

The Marsh hawk has two plumages with the male being slate-blue in color and females and juveniles showing a streak-brown coloration. It is most commonly seen in winter, and rarely nests in Kansas. The nesting habits are unusual in that the nest is built on the ground in a tangle of weeds and grasses.

Although somewhat small in size, the misnamed Sparrow hawk, or Kestrel as it is more properly called, is a common resident throughout the state. Actually, it is not a hawk, but a true falcon and is more closely related to the larger and better known Peregrine Falcon or Duck Hawk.

About the size of a robin, this small raptor shows a definite size difference between sexes, with males being a third smaller than females which usually weigh about four ounces.

Males make up for their smaller size by having more colorful plumage. They have rufous-brown backs, slate-blue wings, a creme or beige-breast lightly speckled, and a rufous tail with a single, wide dark band at its base. Females lack the blue-colored wings.

The little falcon commonly sits on telephone wires or poles carefully scanning the ground for its prey. In summer the diet is almost entirely insects, particularly grasshoppers. Only after the first killing frost does the Kestrel begin preying on small rodents. This bird is highly beneficial and consumes a large volume of insects.

The Kestrel is the only Kansas "hawk" which will hover over one spot on rapidly-beating wings. It can often be seen following a farmer's tractor as he plows fields turning up insects and small rodents.

The usual nesting site for Sparrow hawks is in tree cavities or in man-made structures such as Purple Martin houses or eaves of buildings. Four to five eggs make up an average clutch, being laid in late March or early April. Incubation takes about 30 days and the young are usually out of the nest by early June.

A close relative, the Prairie Falcon, sometimes ranges into extreme western Kansas during winter but usually prefers to stay close to the

Colorado mountain ranges. It is larger than the Kestrel and is slightly smaller than a crow.

The accipiters, or "bird hawks", in Kansas are the most controversial group and are not presently protected by Kansas law. Their taste for occasional game birds or poultry cause hunters and farmers to overlook their role in game management.

The Cooper's, Goshawk, and Sharp-shinned hawks play an important part in weeding out crippled and diseased birds thus allowing healthy birds to breed and raise vigorous stock.

Being the fastest and most agile of woodland hunters, this group of birds has the ability to dart through timber and brush earning them the nickname of "blue darters." Their short wings and relatively long tails are special adaptations for this type of maneuverability.

Goshawks are not common in Kansas. They are rare and irregular winter visitors in eastern areas.

The most common and best representative of the accipiter group is the Cooper's Hawk. Not quite as large as a crow, it has wingspread of 30-36 inches and an elongated, streamlined body. The female is larger than her

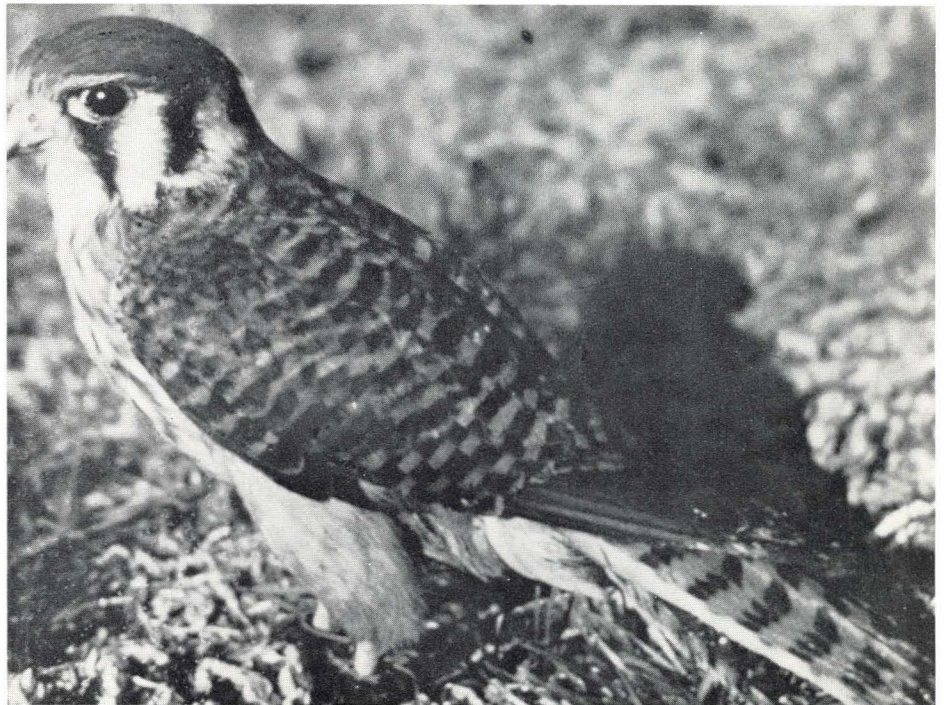
mate but both share the same coloration.

All members of this group are similar, with the smaller Sharp-shinned species resembling a miniature copy of its larger relative—the Cooper's hawk. Both hawks have slate-blue backs and wings with a rusty-colored breast streaked with white.

A nest, usually built high in a tree with an apparent preference for conifers, may be used for several years. A clutch of three to six bluish or greenish-colored eggs is laid in March or April. Cooper's hawk's nest only in the eastern portion of the state; Sharp-shins rarely nest in Kansas.

Because of their secretive nature, these birds are rarely seen. They prefer living in dense woods while Red-tails and other Buteos are inhabitants of more open spaces.

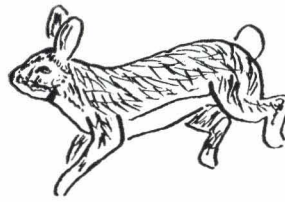
Perhaps a greater understanding and knowledge of our birds of prey will enable Kansans to avoid the needless destruction of these valuable allies. Only when these birds of prey are allowed to live unmolested will they be able to fulfill their role of pest control and game management in the balance of Nature.



The Kestrel is a farmer's true friend, consuming many grasshoppers and other insects. This robin-sized bird, better known as a "sparrow hawk," is not a hawk but a member of the falcon family.



By MARVIN SCHWILLING



Spring can be deceitful, even a fatal tease. Warm balmy days give the appearance that winter has permanently retreated for another year. Migrant species of wildlife may be suckered into moving north in their eager return to summer nesting grounds, only to be severely slapped by a disastrous storm as winter has its last fling.

This spring was no exception—only more deadly than usual. For nearly two weeks the weather was unseasonably balmy and warm. The snow was gone and only in sheltered areas could winter's ice be found.

Crocus were blooming on the south side of the house. Cheat grass had grown to form a green carpet on the south slopes of the dikes that separate the marsh pools at the Cheyenne Bottoms Waterfowl Management Area. Thousands of ducks moved in. Several hundred coot were with them. I watched the coot as they grazed, chicken like, on the lush grass carpet. Regular comics! They waddle around like a group of little "pickinees" with their hands in their pockets. A slammed car door or honked horn would send them running pell-mell back to the safety of the water—but for only a few minutes—then they return to continue feeding. A storm struck during the night with little warning—a raging spring blizzard that dumped seven inches of wet heavy snow. Strong winds piled deep drifts. Power lines came down and most country roads were closed to modern travel. The storm stopped late in the afternoon, but the temperature continued to drop and went to near zero the second night. The third day broke clear and calm, but beastly cold. After a slight moderation of the unseasonable cold, a second storm front struck. The new snow was dry, and added only another inch, but a raging north wind was stubbornly persistent, piling drifts

even higher and holding the temperatures too low for this time of year. It was seven days before the roads were passable, and I made it out to see what had happened to spring.

Ducks had retreated south—except a few probably crippled during hunting season or for some other reason were in weak condition. The coot for some reason, however, had attempted to ride out the storm. They kept two waterholes open several days—probably until hunger forced them to abandon the water in search of greens along the shoreline. However, they found only deep drifts covering the green grass carpets. Most of the coot (and a few ducks) were dead, frozen in the snow and ice. Those remaining were too weak to fly and hardly moved when approached. None survived to again graze on the cheat. Spring had been abnormally brutal. All species of wildlife had been put to one of nature's severe tests, and only the strong healthy individuals survived to perpetuate the populations.

The deep drifts were nearly gone, and I couldn't resist a hike up the creek to Walnut Point. There was only little mud underfoot.

A sprinkling of fresh wood chips on the black ground under an aging ash

tree revealed that a woodpecker was excavating a nesting cavity. From the size of the opening I guessed it to be a hairy woodpecker. Only a hairy or a flicker would cut their nests so early in western Kansas. Downies wouldn't follow for about two weeks and the redheads much later.

I stopped at Walnut Point to again admire the big tree. It was somehow missed when logging crews cut the creek many years ago. "Steve" Stephens scoured the state in 1965 in an effort to locate the largest of each species of our native trees. This elegant tree was the second largest walnut he recorded. It is now nine feet in circumference.

The largest is about three miles downstream and is four inches larger. The Walnut Point tree is on land owned by the Kansas Forestry, Fish & Game Commission, and will be permitted to grow to maximum size—perhaps some day it will be the largest of its species in Kansas.

Numerous smaller trees are scattered downstream from the "mother tree." She produced a large nut crop last fall. My son and I spent enjoyable hours quietly watching her wide-spreading limbs for squirrels.

Heading back, another heavy sprinkling of chips under the dead stub of an American elm divulged a flicker nest nearing completion.

Spring had finally broken winter's cruel hold. The warm and gracious lady, as often, was late.

NOTICE TO READERS

Kansas Fish and Game Magazine is distributed free to Kansas residents, upon written request. Complete name, address and zip code number should accompany any correspondence relative to the publication. Anyone moving to a new address must notify the Information-Education Division, Kansas Fish and Game Commission, Box 1028, Pratt, Kansas (67124) if they desire to continue receiving the magazine.

Kansas Fish Records

Largemouth Black Bass—11 pounds, 3 ounces. Charles Prewett, Pittsburg, Jan. 6, 1965 from private Bourbon County lake.

Spotted (Kentucky) Bass—3 pounds, 12½ ounces. John I. Waner, Newton, April 5, 1964, Marion County Lake.

Smallmouth Bass—2 pounds, 3½ ounces. T. L. Wenke, Hays, Oct. 21, 1969, Cedar Bluff Reservoir.

Northern Pike—18 pounds, 12 ounces. Glen Swanson, Council Grove, Kan., Feb. 10, 1970, Council Grove Reservoir.

Walleye—10 pounds, 9 ounces. Floyd Stone, Belleville, June 1, 1968, Lovewell Reservoir.

Channel Catfish—32 pounds. Edward S. Dailey, Gardner, Aug. 14, 1962, Gardner City Lake.

Flathead Catfish—86 pounds, 3 ounces. Ray Wiechert, Brazilton, Aug. 24, 1966, Neosho River near St. Paul.

Bullhead Catfish—4 pounds, 3½ ounces. Frank Miller, Eureka, June 18, 1961, Greenwood County farm pond.

White Bass—5 pounds, 4 ounces. Henry A. Baker, Wichita, May 4, 1966, spillway of Toronto Reservoir. (*Also the World Record.*)

Striped Bass—1 pound, 5½ ounces. Arthur Grill, Ellsworth, Oct. 16, 1969, Wilson Reservoir.

Black Crappie—4 pounds, 10 ounces. Hazel Fey, Toronto, Oct. 21, 1957, Woodson County State Lake.

White Crappie—4 pounds, ¼ ounce. Frank Miller, Eureka (also holds bullhead record), March 30, 1964, Greenwood County farm pond.

Bluegill—2 pounds, 5 ounces. Robert Jefferies, Modoc, May 26, 1962, Scott County farm pond.

Green Sunfish—2 pounds, 2 ounces. Louis Ferlo, Scammon, May 28, 1961, Cherokee County strip pit.

Yellow (Ring) Perch—5½ ounces. Myron Schwinn, St. George, May 10, 1969, Lake Elbo.

Goldeye—13 ounces. Mrs. Dean M. Hinkle, Topeka, July 6, 1969, Milford Reservoir.

Drum—27 pounds. Louis Hebb, Howard, June 27, 1953, Howard City Lake.

Carp—27 pounds, 8 ounces. Milford Whitney, Paola, May 18, 1968. Lake Miola.

Sturgeon—4 pounds. J. W. Keeton, Topeka, Nov. 17, 1962, Kaw River near Topeka.

Buffalo—29 pounds, 14 ounces. E. V. Harrelson, Ellinwood, Oct. 1, 1965, Kanopolis Reservoir.

Paddlefish—26 pounds. John C. Huston, Lawrence, Sept. 19, 1962, Kaw River near Lawrence.

Gar—28 pounds. Mike Carter, Chetopa, June 17, 1966, Neosho River near Chetopa.

S. L. Loewen
Tabor College
Hillsboro, Kansas 67063