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Fishes

Illustrated Guide to Fishes in Kansas



An Identification Manual

by

Frank B. Cross - Joseph T. Collins - Jeanne Lenahan Robertson

The University of Kansas Museum of Natural History and State Biological Survey

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Cover design by Jeanne Robertson

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FISHES

UNIVERSITY OF KANSAS
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Illustrated Guide to Fishes in Kansas

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Preface

In Kansas most people go fishing, or plan to do a little fishing sometime. One of the interesting things about fishing is that there is no certainty what will be caught. Nearly every angler (especially if he is a bait fisherman) sometime catches a fish he doesn't recognize, and must have a name for it. Thus, some kinds of fish get many different names; the largemouth bass is known in various places by more than 40 other names. Several common fish are known by at least three or four names in Kansas, and some of the same names are used for different kinds of fish. That situation is confusing. No one confuses Dwight Eisenhower with Harry Truman, or John Brown with Jesse James; it is no more proper to confuse bluegill with green sunfish, longear sunfish, and warmouth, or to call them variously bream, perch, pumpkinseed, and goggleye. This booklet associates the more common kinds of fish in Kansas with their proper names, for the benefit of fishermen, young and old, who don't already know all these fish and their names. We've tried to make the association as easy as possible, and we hope the process adds to your enjoyment of catching fish. The booklet is a companion to "Fishes in Kansas" (Public Education Series, No. 3, Museum of Natural History, University of Kansas, Lawrence, Kansas 66045). The style is based on a system developed by Daryl Karns and used in the "Illustrated Guide to Amphibians and Reptiles in Kansas" (Public Education Series No. 2). For help in preparing this guide to fishes we are grateful to Philip Humphrey, Ray Ashton, Linda Trueb, and especially to Brad Williamson, several elementary teachers and Lawrence High School students who tested the "key" in the course of its development.

*Frank B. Cross
Joseph T. Collins
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Lawrence, Kansas
January, 1976*

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Fishes

WHAT IS A FISH?

Fishes are vertebrate animals that differ from mammals, birds, reptiles and most amphibians (frogs, toads and salamanders) by having gills throughout their adult life. With the exception of two kinds of salamanders found in Kansas, fishes are the only adult Kansas vertebrates that live beneath the water and breathe by removing oxygen from water or from the water surface. Very simply, if you catch a vertebrate animal on a hook and line in the water, it is most likely a fish.

Most fish have one or two dorsal (upper) fins on the back, a tail fin, and a single anal (lower) fin beneath the body near the tail fin. In addition, most fish have two sets of *paired* fins—the pectoral fins (like arms) behind the head, and the pelvic fins (like legs) behind or below the pectoral fins. Each fin on a fish can be spread or folded by means of thin rods, called *rays* if they bend easily, and called *spines* if they are stiff with tips sharp enough to prick your finger. Most Kansas fish have scales, but some do not, and others have scales so small they may not be no-

ted. Some fish have limp “whiskers,” called *barbels*, around the mouth. These are used in finding food. Differences in the position and shape of fins, and presence or absence of barbels and scales, are important in identifying the fishes in this illustrated guide. Differences in color also help to identify fish, but fish can *change colors*, so color is not always a safe way to learn to recognize fish.

Only a few aquatic animals, both vertebrate and invertebrate, are confused with fish. These are:

1. Crayfish—these are the common “crawdads” nearly everyone has observed or caught. They are invertebrates and have jointed legs. Like fish, they are sometimes caught on hook and line.

2. Tadpoles—these are the larvae (pre-adult free-swimming life stage) of frogs and toads. Unlike most fish they have soft, round scaleless bodies. In addition, they have no pectoral or pelvic fins. They cannot be caught by hook and line.

3. Frogs—bullfrogs and leopard frogs live along the edges of lakes and streams and are

sometimes caught on hook and line, but they have arms and legs, and lack a tail. All fish have tail fins and do not have legs.

4. Salamanders—these are amphibians, like frogs and toads. The hellbender, mudpuppy (or waterdog) and larvae of tiger salamanders are found in water. They sometimes are caught on hook and line. These amphibians all have legs, so they are easily distinguished from fishes.

5. Aquatic turtles—these are reptiles that hunt their food in water. They are sometimes caught on hook and line, but can be distinguished from fish by their legs and shells.

6. Lamprey—this is a fish, but a very unusual one. You will not catch it on hook and line. Lampreys do not have pectoral or pelvic fins. They are long and snake-like, and lack jaws. Refer to the illustrated guide to see if you have found this rare Kansas fish.

A note of caution. Different but closely related fish sometimes breed and produce hybrids. This is particularly common among sunfishes. If you have difficulty in identifying a sunfish while using this illustrated guide, you may have a hy-

brid. If you catch a fish you cannot identify, take it to the nearest office of the Kansas Forestry, Fish and Game Commission or to the biology department of the nearest college or university. They will assist you in identifying your catch. If you seine or net small fish such as minnows and darters, you can identify the Kansas species by using the "Handbook of fishes of Kansas" (Cross, 1967) or "Fishes in Kansas" (Cross and Collins, 1975).





There are 123 kinds (species) of fish in Kansas, only 51 of which are considered in this guide. These 51 kinds are primarily those caught by fishermen, although some small fish such as madtoms and topminnows also are included. The 123 kinds of fishes found in Kansas are listed on page 13.

Many native fish, like tropical fish, are interesting aquarium pets. Most of the minnows, madtoms and topminnows readily accept the same dry fish food sold commercially for goldfish and tropical fish. Other native fish, especially the colorful darters and sunfish, may not thrive on dry fish food, but can be kept healthy on frozen

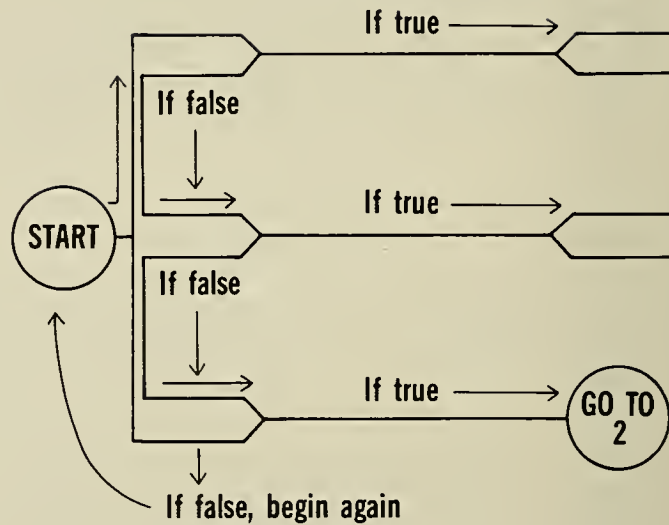
brine shrimp sold in pet stores. Native fish tolerate a wider range of temperature than do most tropical fish, but some of the most colorful Kansas fish (darters and certain minnows) will retain their bright colors only at temperatures below 70° F. Some native species are aggressive and should not be kept in the same aquaria with ex-

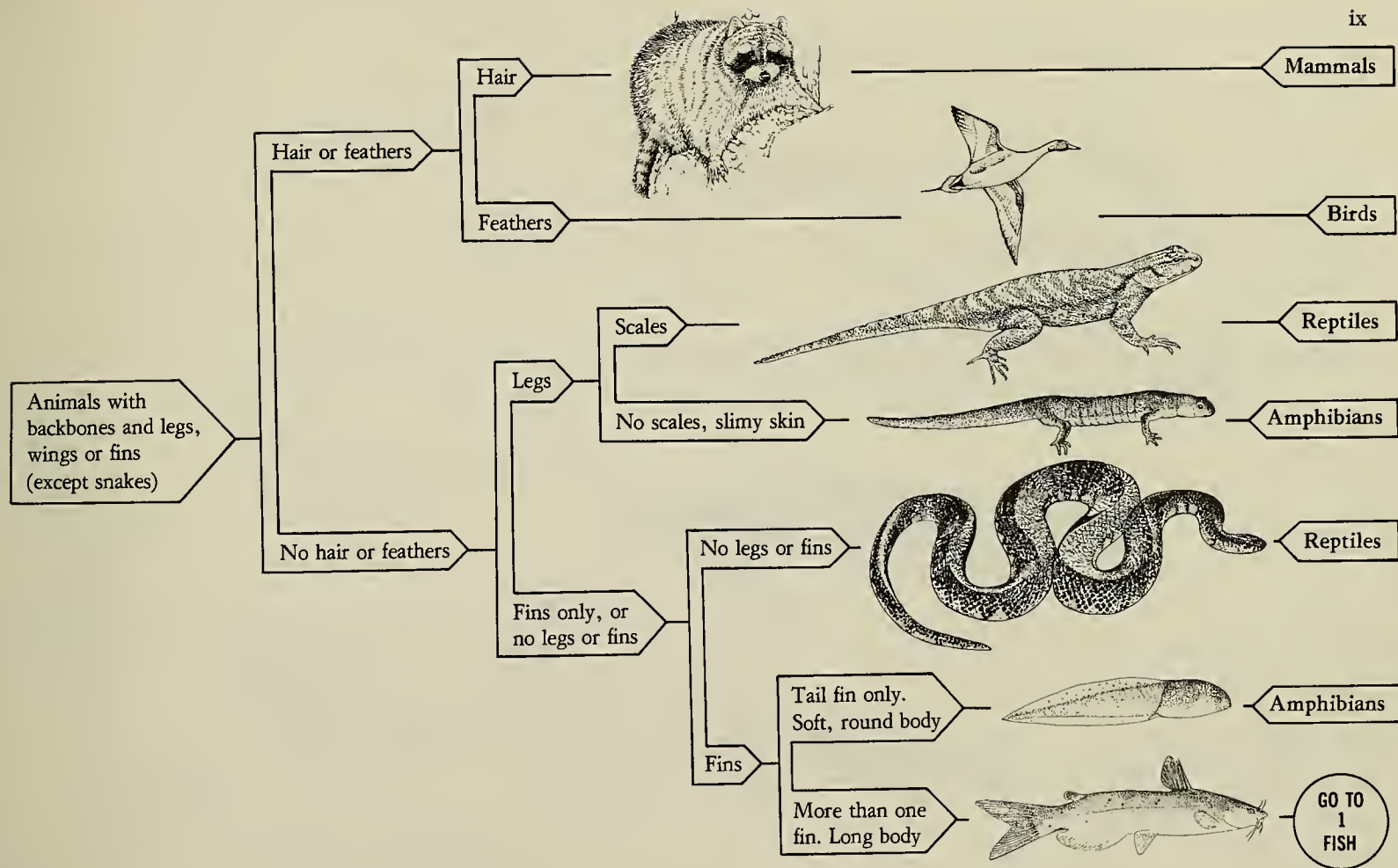
pensive tropicals. Basically the rules of aquarium management for tropical fishes apply to native species, including those of water conditioning, sanitation, and disease treatment. Several useful guides on these subjects are available in aquarium shops.

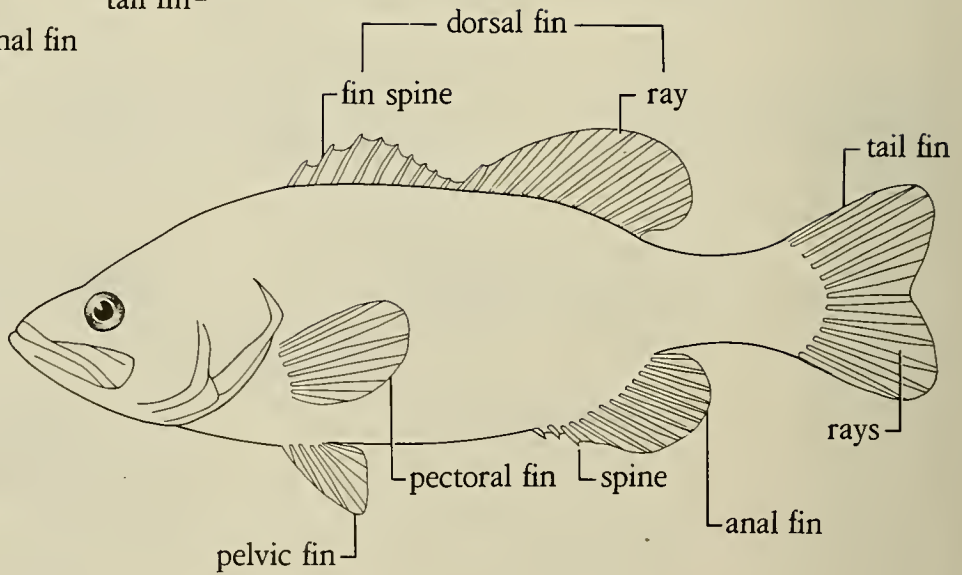
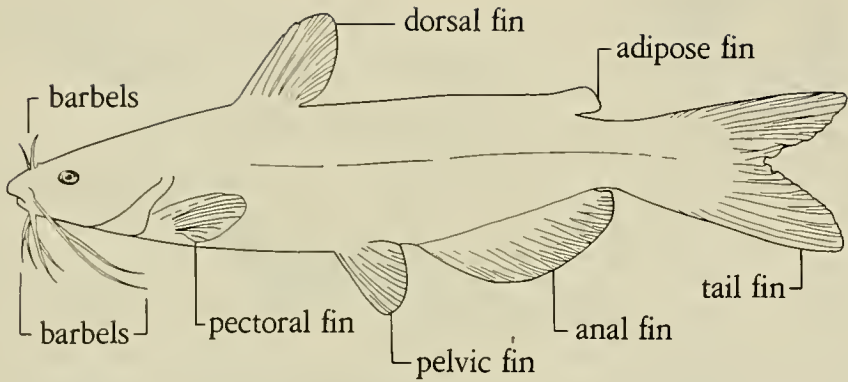
How to Use the Charts

Begin at left side of page  then go to the top of the page to the first fact  box. If this fact is *true* (it describes the animal), move across the page. If the fact *does not* describe your animal, *move down* the line to the next fact box until you come to the one that best describes the animal. If the statement is true, continue across the page. A box  pointing to the left is the end of the line and should identify the animal for you. If you reach a  circle, it will tell you which page to turn to. The drawings will show what the animal should look like, and on some an arrow points out the most important identification fact. If you think you have made a mistake, go back to the first key and begin again.

Sample Diagram







START
1

Scales not visible

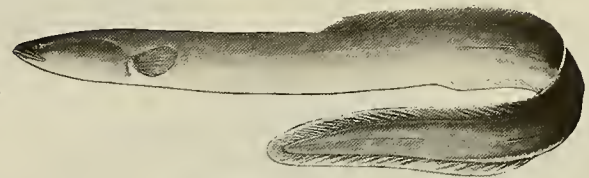
Snake-like

Round mouth.
7 pits behind head



Chestnut Lamprey

Mouth with jaws. Small fin behind head



American Eel

Paddle-snout



Paddlefish

One barbel on chin



Burbot

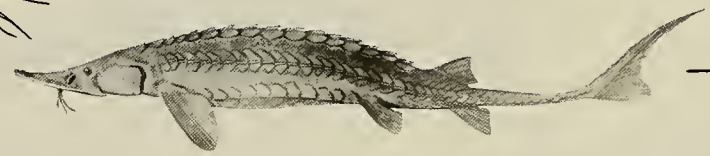
Eight barbels on head



GO TO
6

Scales easily seen

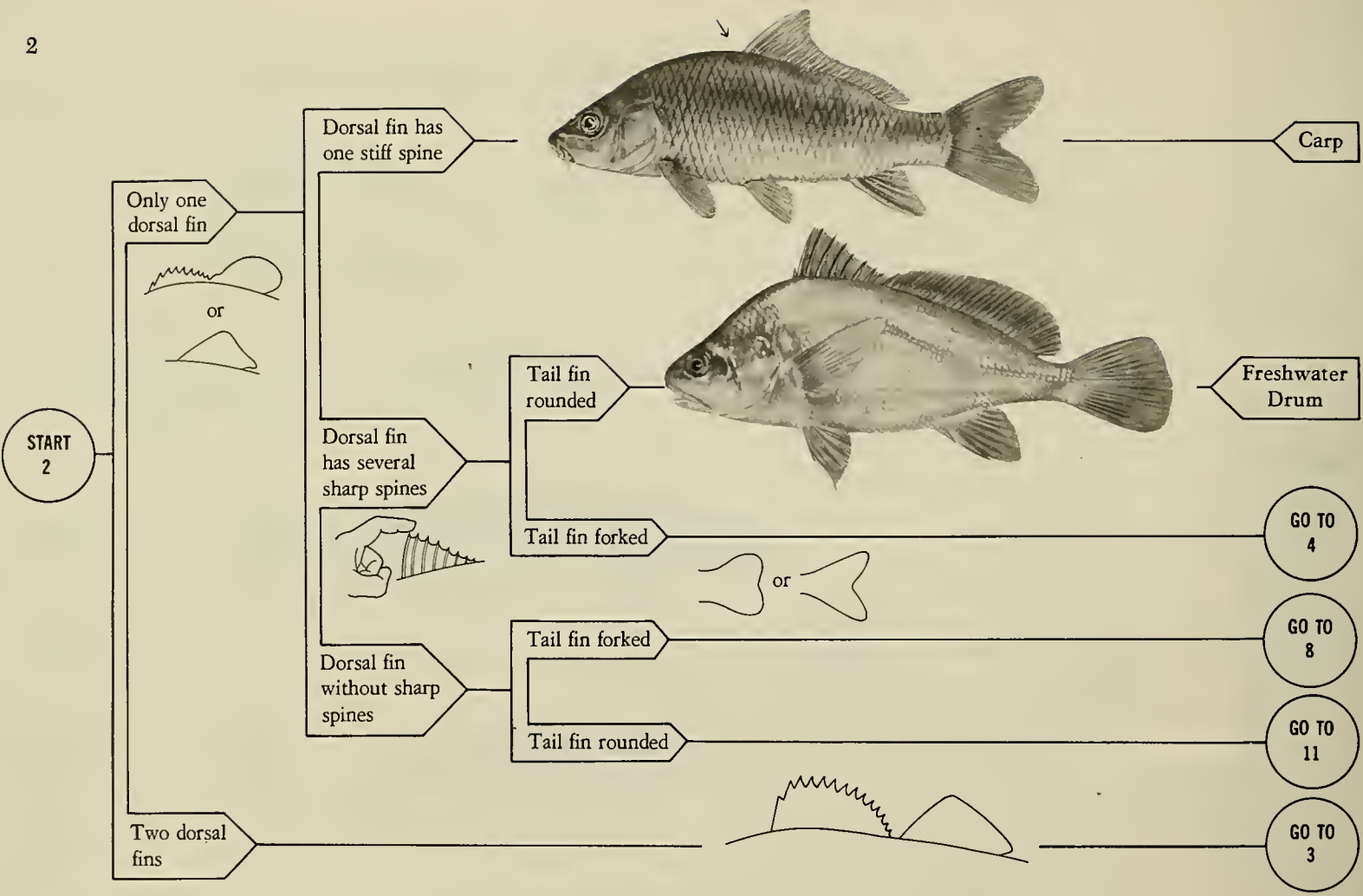
Thorny scales in five rows



Shovelnose Sturgeon

Flat scales cover body

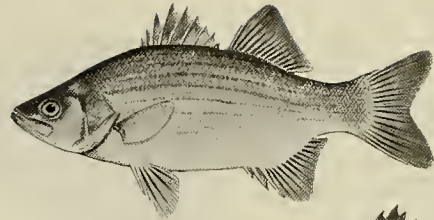
GO TO
2



START
3

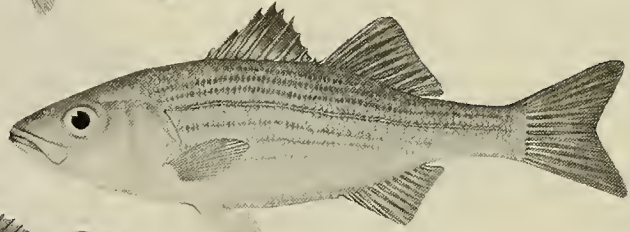
Flat body,
silvery with
lengthwise
stripes

Tongue with
one rough
tooth patch



White Bass

Tongue with
two parallel
tooth patches



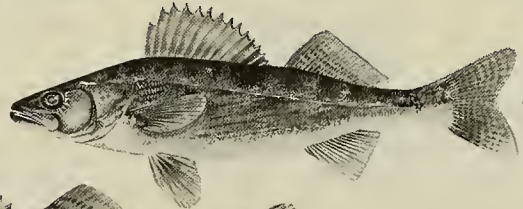
Striped
Bass

Rings
around body



Yellow Perch

First dorsal fin
dusky overall



Walleye

Torpedo-shaped
body, brownish
or yellow

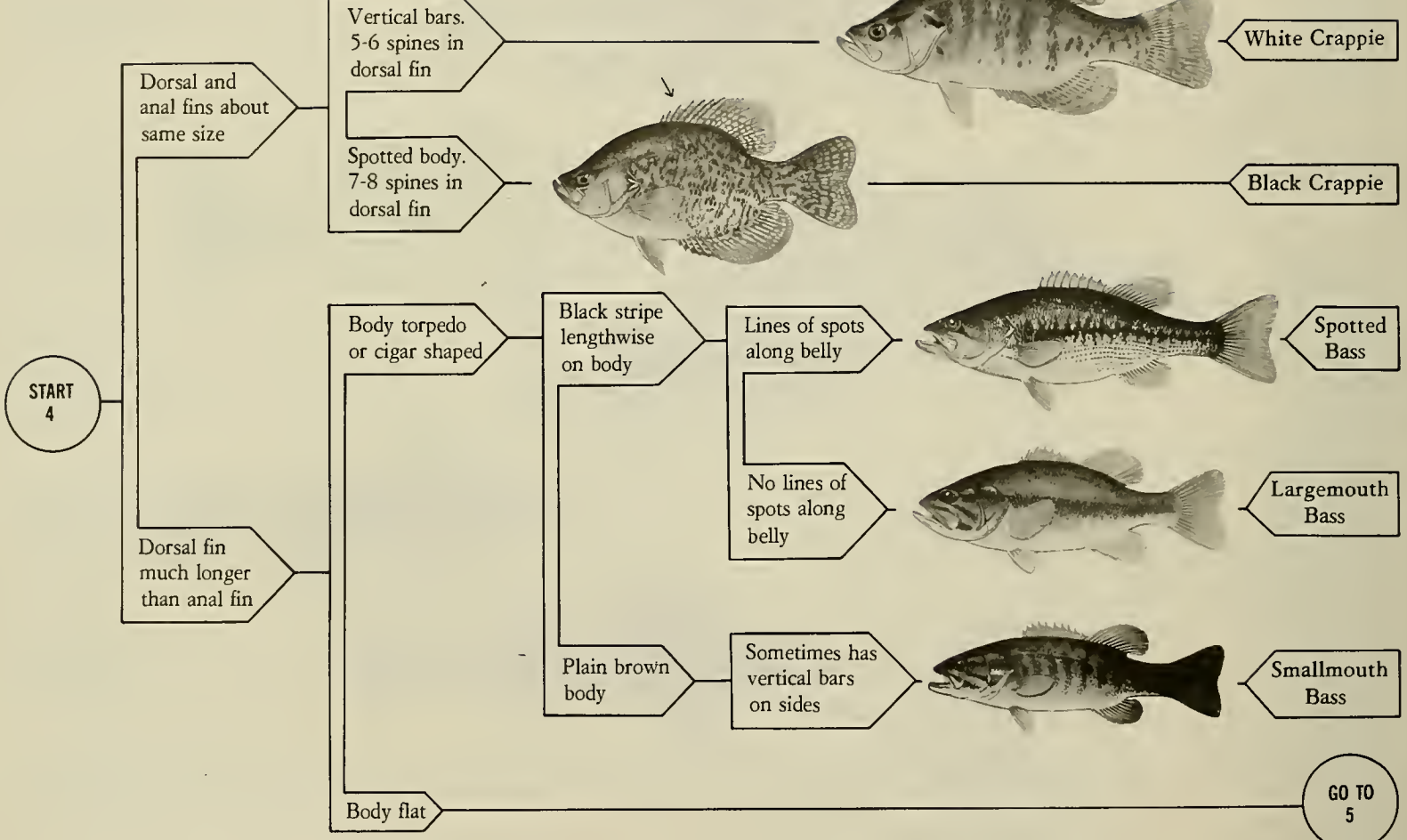
First dorsal
fin with many
dark spots



Sauger

Brightly colored.
Less than 6
inches long

GO TO
12A



Dorsal and anal fins about same size

Vertical bars. 5-6 spines in dorsal fin



White Crappie

Spotted body. 7-8 spines in dorsal fin



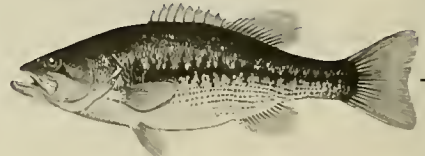
Black Crappie

Dorsal fin much longer than anal fin

Body torpedo or cigar shaped

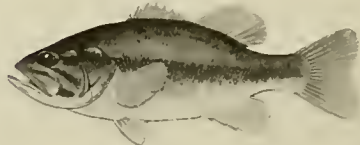
Black stripe lengthwise on body

Lines of spots along belly



Spotted Bass

No lines of spots along belly



Largemouth Bass

Plain brown body

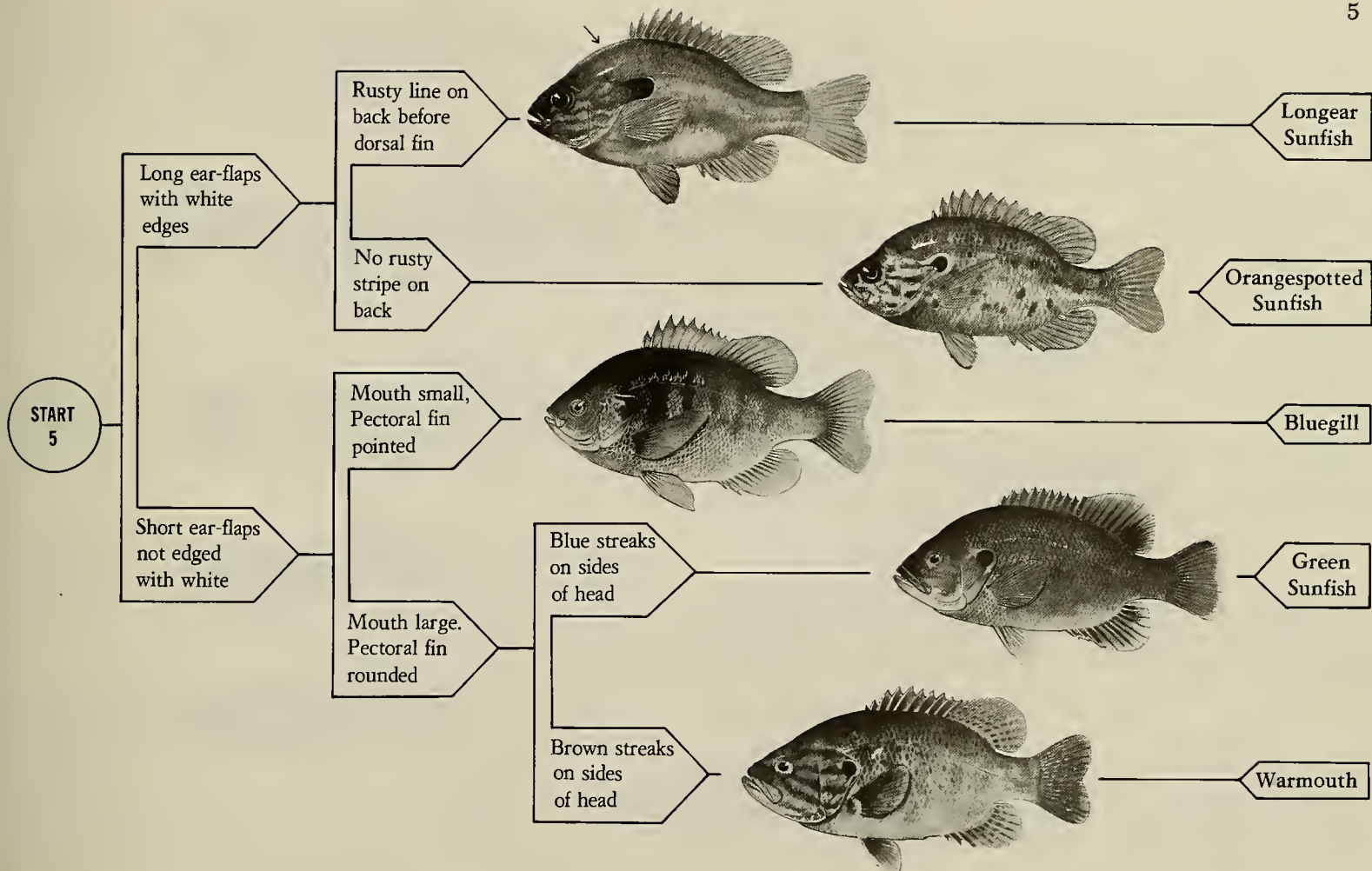
Sometimes has vertical bars on sides



Smallmouth Bass

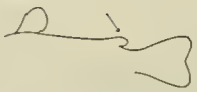
Body flat

GO TO 5



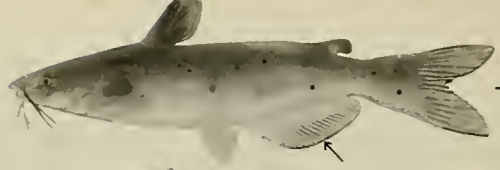
START
6

Small fleshy flap (adipose fin) between dorsal and tail fin



Tail fin deeply forked

Edge of anal fin rounded. No hump on back



Channel Catfish

Edge of anal fin straight. Back has hump



Blue Catfish

Tail fin not deeply forked

Lower jaw longer than upper—it juts out. Large size



Flathead Catfish

Lower jaw does not jut out. Usually less than 12 inches long

Dark chin barbels



Black Bullhead

White chin barbels



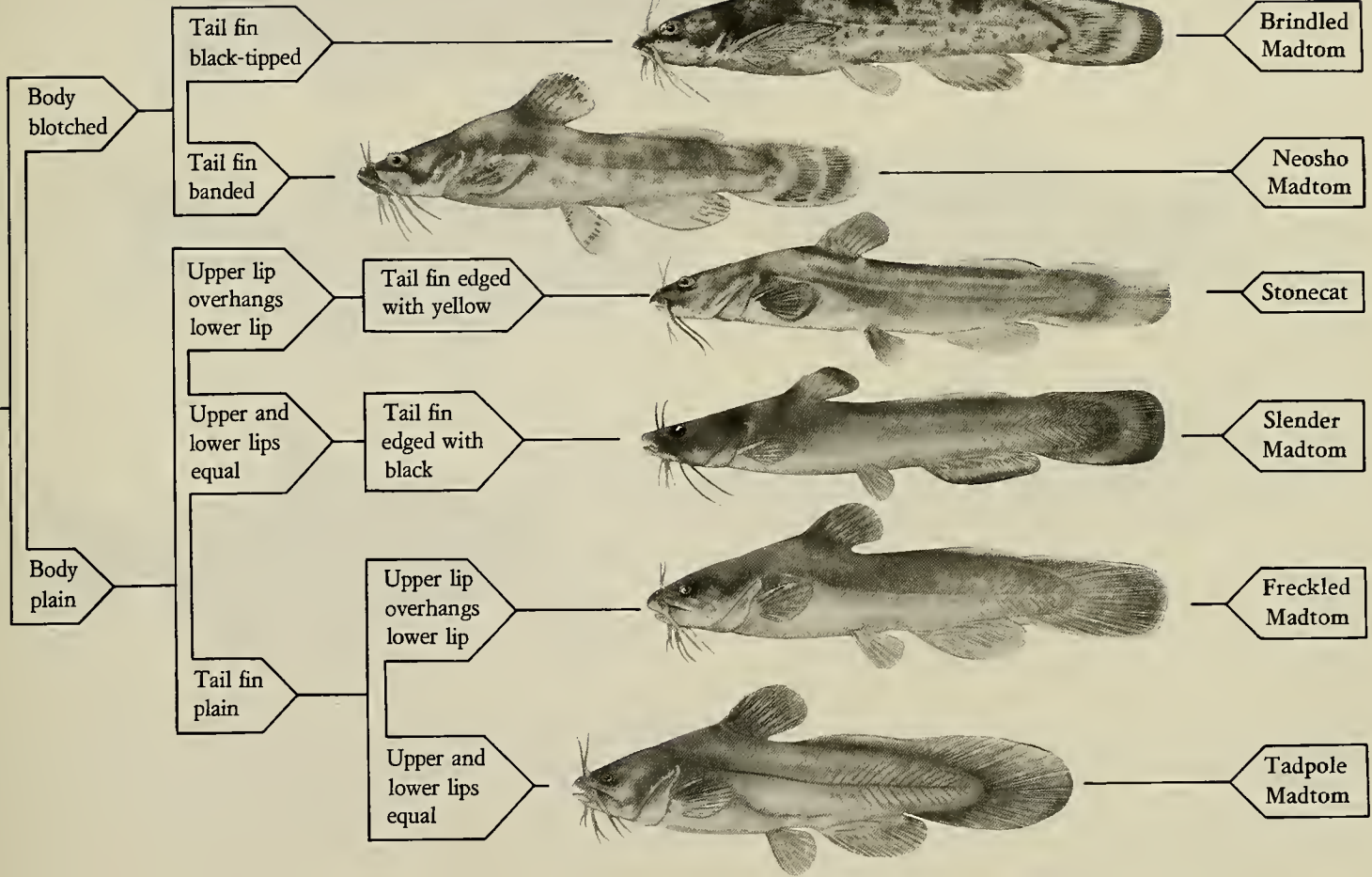
Yellow Bullhead

Thin ridge (adipose fin) before tail fin

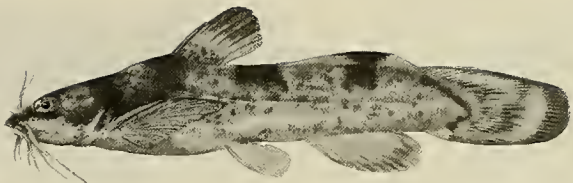
8 inches or less in length

GO TO
7

START
7



Tail fin
black-tipped



Brindled
Madtom

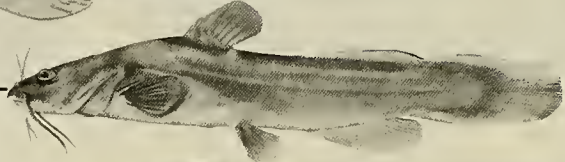
Tail fin
banded



Neosho
Madtom

Upper lip
overhangs
lower lip

Tail fin edged
with yellow



Stonecat

Upper and
lower lips
equal

Tail fin
edged with
black



Slender
Madtom

Body
plain

Upper lip
overhangs
lower lip



Freckled
Madtom

Tail fin
plain

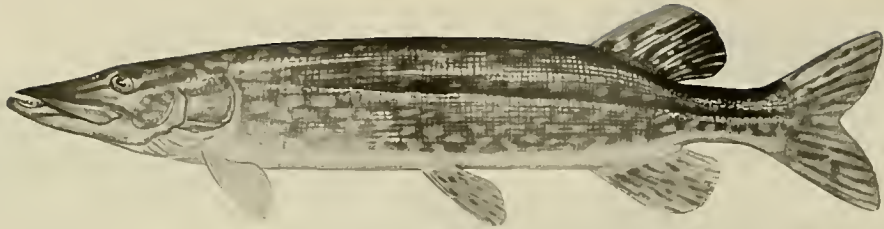
Upper and
lower lips
equal



Tadpole
Madtom

START
8

Duck-billed
snout with
sharp teeth



Northern
Pike

Snout short,
not duck-billed

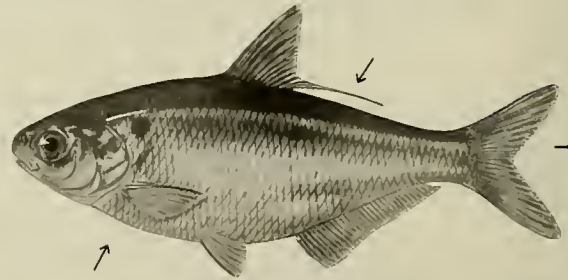
Teeth on jaws
and tongue



Goldeye

No teeth on
jaws and tongue

Razor keel on
belly. Thin
filament on
dorsal fin



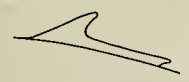
Gizzard
Shad

Belly not sharply
keeled. No filament
on dorsal fin

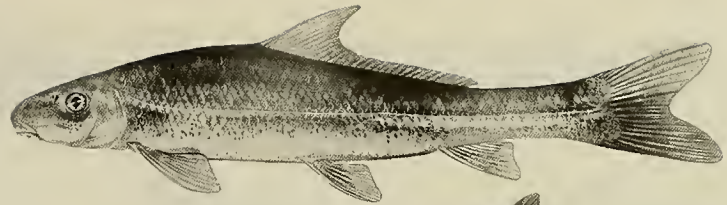
GO TO
9

START
9

Dorsal fin long and sickle-shaped



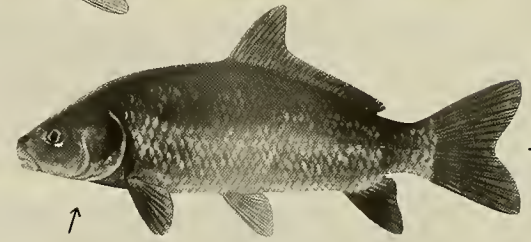
Body slender.
Eye on back half of head



Blue Sucker

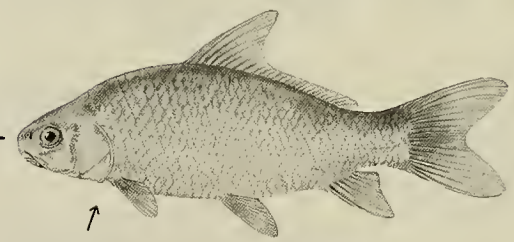
Body thick, sides flattened. Eye on front half of head

Lower fins dark.
Gill cover rounded along lower edge



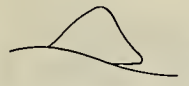
Buffalo

Lower fins pale.
Gill cover straight along lower edge



Carpsucker

Dorsal fin short, rounded or triangular



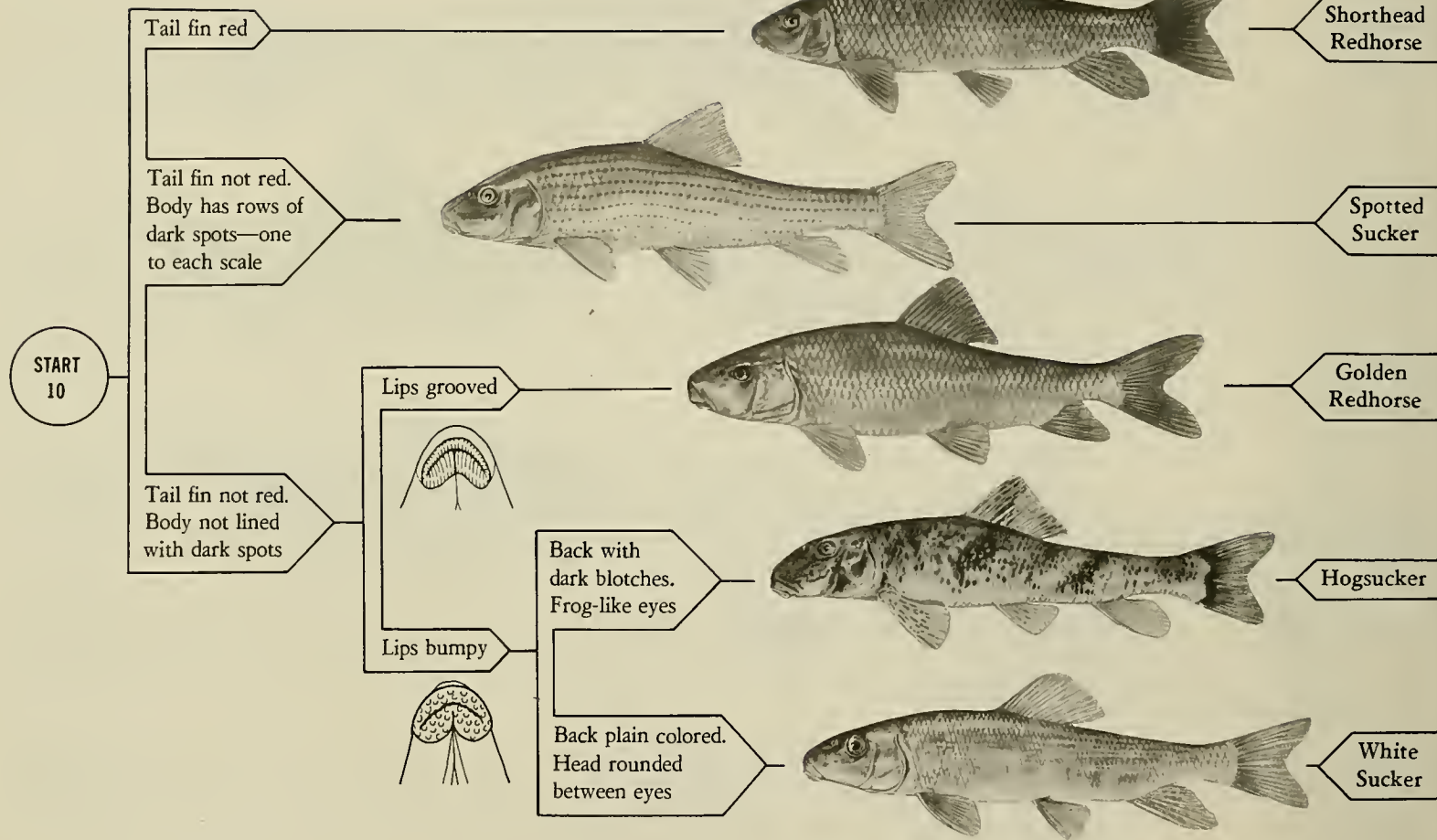
10 or more rays in dorsal fin.
Large fish with thick, fleshy lips



GO TO
10

9 or fewer rays in dorsal fin. Lips thin and smooth. Less than 6 inches long

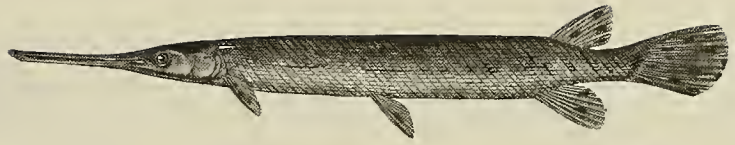
GO TO
12B



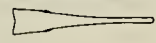
START
11

Long jaws with many teeth. Large fish, up to 60 inches in length

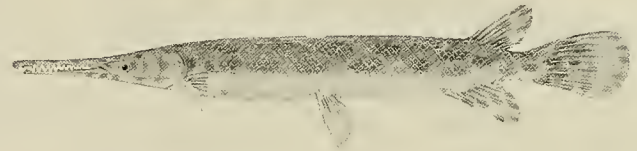
Jaws very long and narrow



Longnose Gar



Head spotted



Spotted Gar

Jaws broad and short

Head plain



Shortnose Gar



Short jaws. Fish less than 5 inches long

Black stripe on body



Blackstripe Topminnow

Vertical bars on body



Plains Killifish

Plain color, no markings



Male



Female

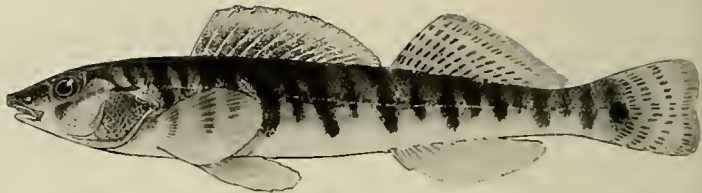
Mosquitofish

12A

Darters

You have a darter. There are 17 different kinds of darters in Kansas. To the right are some examples of darters showing their variable shapes and patterns

Logperch



Johnny Darter

Orangethroat
Darter

Creek Chub



Red Shiner



Topeka Shiner



12B

Minnows

You have a minnow. There are 39 different kinds of minnows native to Kansas. To the right are some examples of minnows showing their variable shapes and patterns

A CHECKLIST OF FISHES IN KANSAS

This is a list of the common names of the 123 kinds of fishes that occur in Kansas. The Illustrated Guide will identify 51 of the fishes found in Kansas; the remaining 72 kinds are not included in the Illustrated Guide, but are listed

below followed by an asterisk (*). These 72 kinds are omitted from the Illustrated Guide because they are too difficult to identify in a flow-chart format, or because they are rare and are found only in very limited areas in Kansas.

LAMPREYS

— Chestnut Lamprey

STURGEONS

— Shovelnose Sturgeon
— Pallid Sturgeon (*)

PADDLEFISHES

— Paddlefish

GARS

— Shortnose Gar
— Spotted Gar
— Longnose Gar

BOWFIN

— Bowfin (*)

FRESHWATER EELS

— American Eel

HERRINGS

— Skipjack Herring (*)
— Gizzard Shad

MOONEYES

— Goldeye

TROUTS

— Rainbow Trout (*)

PIKES

— Northern Pike

MINNOWS

— Carp
— Goldfish (*)
— Golden Shiner (*)
— Creek Chub (*)
— Southern Redbelly Dace (*)
— Hornyhead Chub (*)
— Redspot Chub (*)
— Flathead Chub (*)
— Gravel Chub (*)
— Silver Chub (*)
— Sicklefın Chub (*)
— Speckled Chub (*)

— Sturgeon Chub (*)

— Suckermouth

Minnow (*)

— Emerald Shiner (*)

— Rosyface Shiner (*)

— Silverband Shiner (*)

— Redfin Shiner (*)

— Duskystripe Shiner (*)

— Common Shiner (*)

— Striped Shiner (*)

— River Shiner (*)

— Bigeye Shiner (*)

— Bluntnose Shiner (*)

— Spotfin Shiner (*)

— Red Shiner (*)

— Topeka Shiner (*)

— Bigmouth Shiner (*)

— Sand Shiner (*)

— Arkansas River

Shiner (*)

— Mimic Shiner (*)

— Ghost Shiner (*)

— Ozark Minnow (*)

— Brassy Minnow (*)

— Plains Minnow (*)

— Western Silvery

Minnow (*)

— Fathead Minnow (*)

— Bullhead Minnow (*)

— Slim Minnow (*)

— Bluntnose Minnow (*)

— Stoneroller (*)

SUCKERS

— Blue Sucker

— Bigmouth Buffalo (*)

— Black Buffalo

— Smallmouth Buffalo (*)

— Quillback (*)

— River Carpsucker

— Highfin Carpsucker (*)

— Spotted Sucker

— Black Redhorse (*)

— Golden Redhorse

- River Redhorse (°)
- Shorthead Redhorse
- Hogsucker
- White Sucker

CATFISHES

- Black Bullhead
- Yellow Bullhead
- Channel Catfish
- Blue Catfish
- Flathead Catfish
- Tadpole Madtom
- Freckled Madtom
- Slender Madtom
- Stonecat
- Neosho Madtom
- Brindled Madtom

CODFISHES

- Burbot

TOPMINNOWS, KILLIFISH
and MOSQUITOFISH

- Northern Studfish (°)
- Plains Topminnow (°)
- Blackstripe Topminnow
- Plains Killifish
- Mosquitofish

SILVERSIDES

- Brook Silverside (°)

SCULPINS

- Banded Sculpin (°)

TEMPERATE BASSES

- Striped Bass
- White Bass

SUNFISHES

- Smallmouth Bass

- Spotted Bass
- Largemouth Bass
- Warmouth
- Green Sunfish
- Redear (°)
- Bluegill
- Orangespotted Sunfish
- Longear Sunfish
- Rock Bass (°)
- White Crappie
- Black Crappie

PERCHES

- Walleye
- Sauger
- Yellow Perch
- Blackside Darter (°)
- Slenderhead Darter (°)

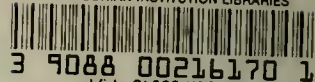
- Logperch (°)
- River Darter (°)
- Channel Darter (°)
- Johnny Darter (°)
- Bluntnose Darter (°)
- Speckled Darter (°)
- Banded Darter (°)
- Greenside Darter (°)
- Redfin Darter (°)
- Stippled Darter (°)
- Arkansas Darter (°)
- Orangethroat
Darter (°)
- Fantail Darter (°)
- Slough Darter (°)
- Least Darter (°)

DRUMS

- Freshwater Drum

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