

Name ..... Class ..... Date .....

## Investigation

**Use of a Classification Key****14**

**I. WHAT YOU WILL DO.** Identify native fish by means of a scientific classification key.

**II. WHAT YOU NEED.** No apparatus or materials are required in this Investigation.

**III. HOW YOU PROCEED.** Study the terms defined below, all of which refer to structures of a fish. Certain of these terms are used in the Classification Key. Then, examine closely one of the drawings of a fish shown on the next page. Read both statements listed under 1 in the Classification Key. One of these statements should fit the fish you have chosen. The other should not. Refer to the number after the statement which fits your fish and go directly to this number in the key. Again, select the statement which fits the fish you selected. Continue through the key until you come to a name after one statement. This should be the name of the fish you selected. Practice using the key to identify several of the fish shown.

Suppose you want to find the name of the fish shown in drawing number 2 in Fig. 14-1. Look at the Classification Key To Certain Fish. Note that each numbered item on the left side of the Key presents two possibilities. Reading item 1 of the Key, we see that our fish has no scales, or at least we cannot see any in the picture. So we go down the page to number 12 on the left hand side of the Key. Our fish is not elongated or snake-like, so we go to number 13 of the Key. The fish we are classifying has barbels growing from its lips and the top of its head, so we go to number 14 of the Key. Since our fish has a caudal fin that is rounded, and a blunt head, we know that it is the *Bull-head catfish*.

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TERMS REFERRING TO THE STRUCTURE OF FISH

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*Barbel* — a fleshy projection from the lips or head.

**Fins**

*Adipose* — a small fin on the top mid-line of the body near the tail fin.

*Anal* — a fin along the lower mid-line of the body near the tail fin.

*Caudal* — tail fin.

*Dorsal* — the fin or fins along the top mid-line of the body; may be either spiny, with hard rays ending in sharp spines or soft and lacking spines.

*Pectoral* — the paired fins nearest the head, corresponding to front legs or arms.

*Pelvic* — the paired fins nearest the tail, corresponding to hind legs.

*Scales* — transparent, overlapping outgrowths of the skin.

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## CLASSIFICATION KEY TO CERTAIN FISH

1. Body more or less covered with scales ..... 2  
Scales lacking or too small to be seen ..... 12
2. Dorsal fin single ..... 3  
Dorsal fins two or more, joined or separated ..... 6
3. Body more than four times as long as broad (top to bottom); front edge of dorsal fin far back on body; mouth large, hinge back of eye ..... 4  
Body less than four times as long as broad; front edge of dorsal fin about midway between head and tail; mouth not large, hinge in front of eye ..... 5
4. Dark lines forming netted design on body; fins not spotted ..... *Pickereel*  
Body covered with yellow spots; fins spotted ..... *Northern pike*
5. Mouth turned downward; barbels absent; dorsal fin not elongated ..... *White sucker*  
Mouth not turned downward; barbels present; dorsal fin elongated ..... *Carp*
6. Two dorsal fins separated, the anterior spiny and the posterior soft ..... 7  
Two dorsal fins united, forming an anterior spiny portion and a posterior soft portion ..... 8
7. Top of head concave, forming a hump in front of dorsal fin; dark vertical bars on body ..... *Yellow perch*  
Top of head not concave, body sloping to dorsal fin and not forming a hump; dark blotches on body ..... *Wall-eyed pike*
8. Body more than three times as long as broad ..... 9  
Body less than three times as long as broad ..... 10
9. Hinge of jaws behind the eye; notch between spiny and soft dorsal fin deep and nearly separating into two fins ..... *Large-mouth black bass*  
Hinge of jaws below the eye; notch between spiny and soft dorsal fin not nearly separating into two fins ..... *Small-mouth black bass*
10. Mouth large, hinge below or behind eye ..... 11  
Mouth small, hinge in front of eye ..... *Bluegill*
11. Five to seven spines in dorsal fin; dark spots forming broad vertical bars on sides ..... *White crappie*  
Ten or more spines in dorsal fin; sides flecked with dark spots ..... *Rock bass (Redeye)*
12. Body much elongated and snakelike; dorsal, caudal, and anal fins continuous ..... *Eel*  
Body not elongated and snakelike; dorsal, caudal, and anal fins separate; adipose fin present ..... 13
13. Barbels growing from lips and top of head; head large and broad ..... 14  
Barbels lacking; head not large and broad ..... 16
14. Caudal fin deeply forked; head tapering ..... 15  
Caudal fin rounded or slightly indented but not forked; head blunt ..... *Bullhead catfish*
15. Dorsal fin rounded at top; body silvery, speckled with black markings ..... *Channel catfish*  
Dorsal fin long and pointed at top; body bluish-gray without speckles ..... *Blue catfish*
16. Caudal fin deeply forked; back not mottled and with few spots ..... *Atlantic salmon*  
Caudal fin square or slightly indented; back mottled or spotted ..... 17
17. Back and caudal fin spotted; broad horizontal band along sides ..... *Rainbow trout*  
Back mottled with dark lines; caudal fin not spotted; fins edged with white ..... *Brook trout*

**IV. REVIEWING PRINCIPLES.** Using the same type of classification key you used in identifying fish, make a key to identify ten members of your class. Use such characteristics as sex, height, hair color, eye color, etc. Remember to give two choices concerning the same characteristic in each pair of statements and to start with broad distinctions and work toward more and more specific differences. Use a separate sheet of paper for your key.



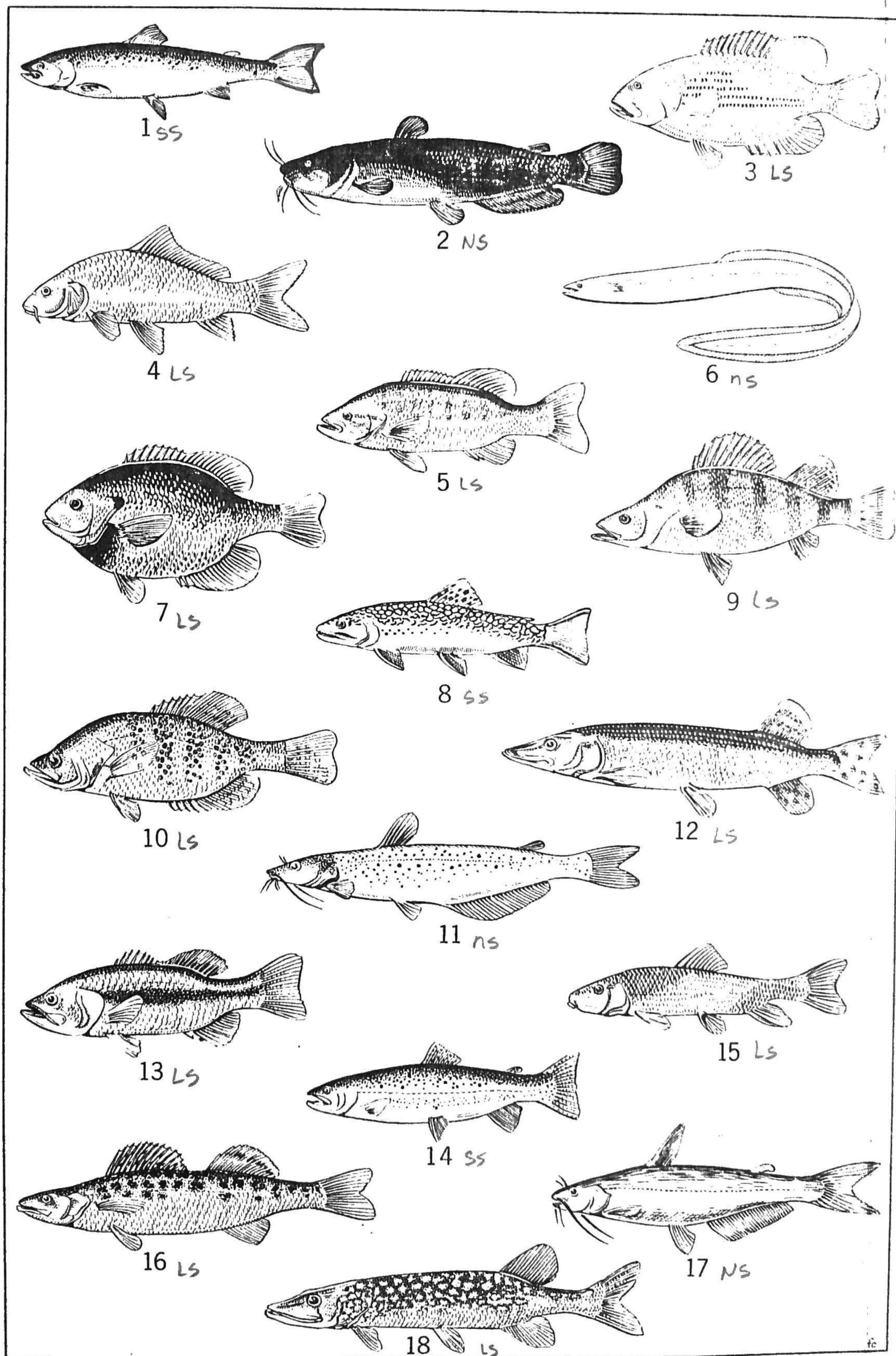


Fig. 14-1. Native fish.