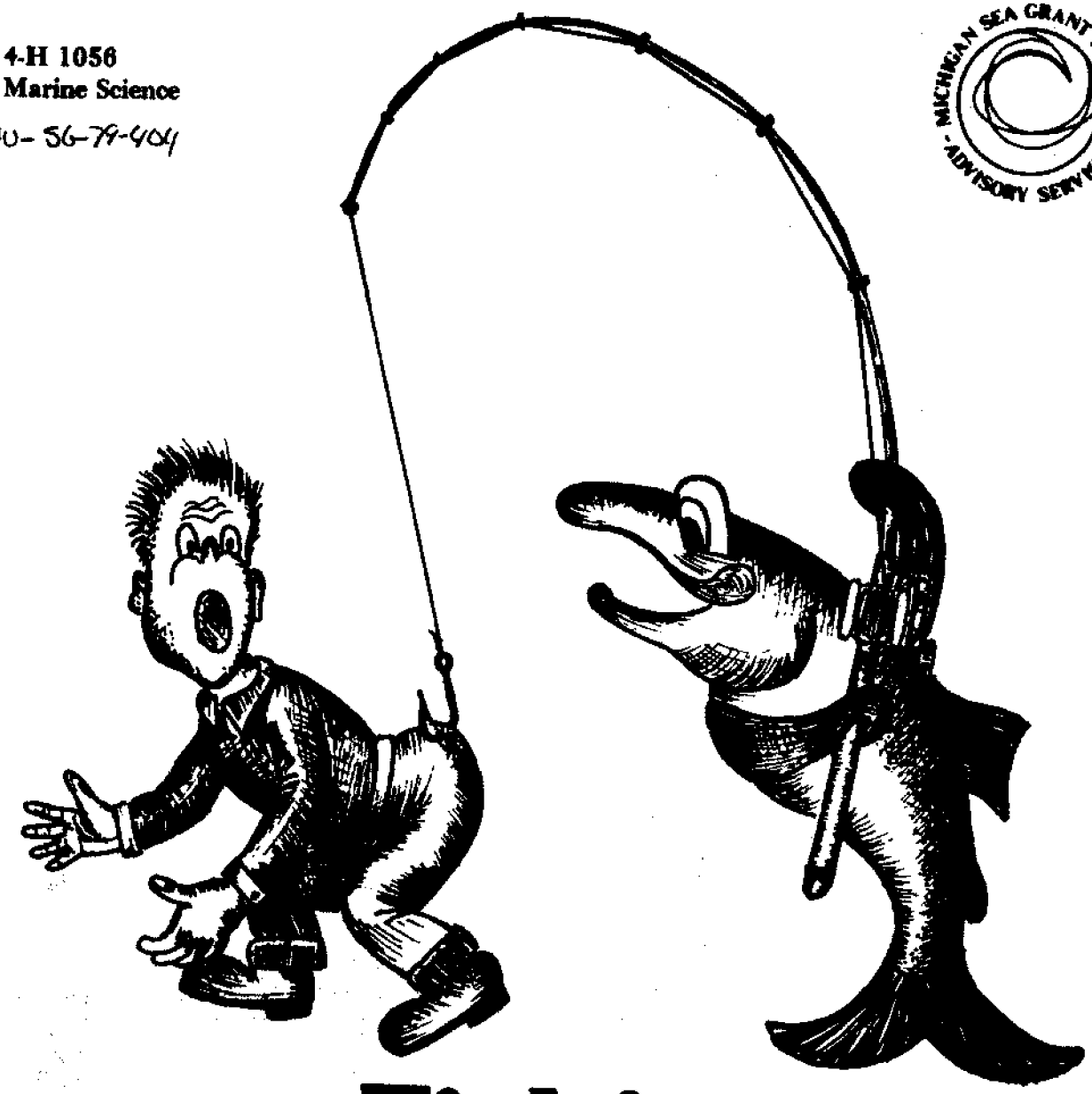
4-H 1056
Marine Science

MICHU-SG-79-404



Fishing For Fun

4-H — Youth Programs
Cooperative Extension Service
Michigan State University

Fishing For Fun

by
Ned E. Fogle
Fisheries Biologist

CONTENTS

ACKNOWLEDGMENTS

The author wishes to recognize certain individuals who have contributed their time and expertise to make this publication possible: Dr. Robert George, Wildlife and Fisheries Department, Michigan State University, for his timely and learned suggestions on material organization; Mrs. Bonnie Menovske for her typing and arranging the material; and various staff members of the Fisheries Division of the Michigan Department of Natural Resources for their helpful suggestions and critique of the manuscript.

This publication was made possible by funds provided by the MSU Cooperative Extension Service and the Michigan Sea Grant-Marine Advisory Services. Edited and reviewed for Extension Marine Science and Aquatic Education by the Extension Project Leader, Fisheries and Wildlife Department, Michigan State University.

SECTION I

FISHING IS FUN

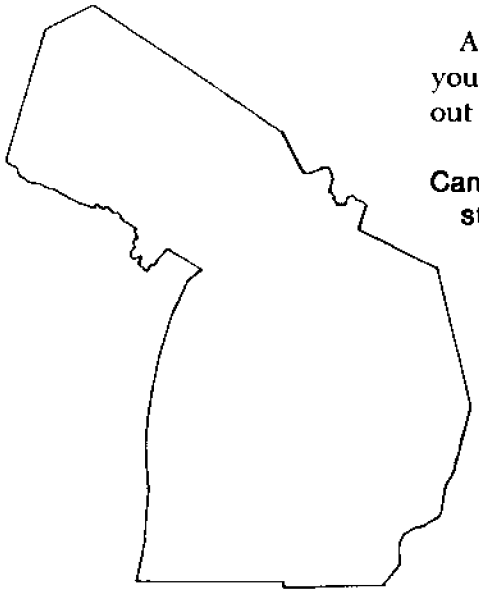
Fishing can be fun without one having to know much about it. However, it can be loads of fun if you know what you are fishing for, where to fish, and how to catch fish.

Michigan is an ideal place to learn to fish because there are many fishing opportunities of which one can take advantage. The chances are there is a place you can fish that is within 10 miles of your home.

Locating a body of water where you can fish may or may not be difficult, depending on where you live. If it is difficult, you should ask your parents, talk to your teacher, or call your conservation officer or local nature resources office.

Always check out the access to determine whether the fishing site is public or private. If it is private, ask permission before you enter. Never litter whether fishing private or public waters.

A good rule is to leave the site cleaner than you found it. This means you carry your litter out with you or deposit it in a litter barrel.



Can you name this state?

Hint: What are its land boundaries?

Can you draw them in?

ANSWER: The state is Michigan with its water boundary.

DISCUSSION:

1. If you were the owner of a pond and someone left their litter after fishing, would you be willing to let them fish again?
2. How do you feel about litter in a public place?
3. Why would someone leave their litter behind?
4. Do you know what it costs the state (your tax dollars) to clean up the mess?

SECTION II

KINDS OF FISHING

Fishing in Michigan can be listed as several types: Great Lakes, inland lakes, inland streams, and artificially created fishing ponds.

In each of these situations, fishing normally can be done from shore, while wading, from a boat, or from some type of man-built fishing structure such as a fishing pier. Since the choice is wide, one's options are many, providing you know what you want to catch and how to catch it.

The Great Lakes, for example, have a lot to offer the fisherman. Michigan has 3200 miles of the U.S.'s 5200 miles of shoreline. Along this shoreline, there are over 260 sites where the fisherman has public access to fish.

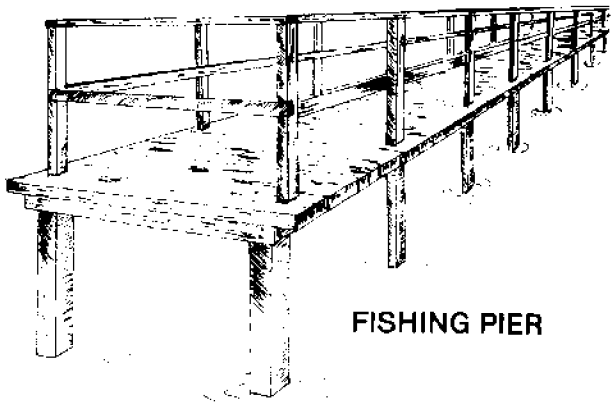
Some of these 260 plus sites provide only beach fishing. Others, however, are breakwater piers or bulkheads or piers built for fishing. In addition, there are numerous DNR waterways access sites where boats can be launched.

Fishing in the inland areas of the state is much more diversified than on the Great Lakes. This is because of the addition of stream fishing to lake and pond fishing. It has been computed that there are approximately 28,500 miles of streams in Michigan. In addition, we could have as many as 7700 lakes.

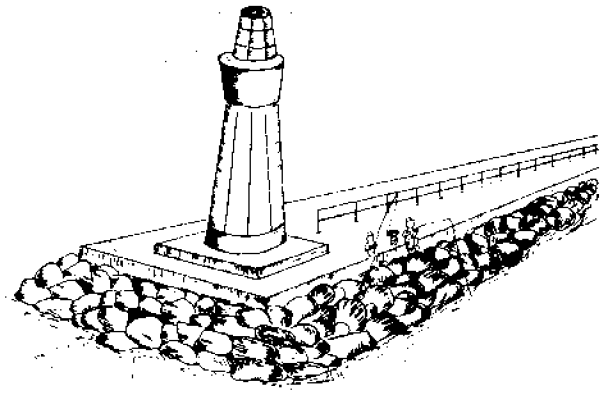
We have now learned that there are different kinds of waters and that one can fish from a shore, from a boat, while wading, or from a structure. When we add the kinds of fishing, (i.e., still fishing, casting, spinning, trolling, fly fishing, spear fishing, bow and arrow fishing, scuba fishing and dip netting, there is almost an unlimited variety of combinations one can do when fishing.

DISCUSSION:

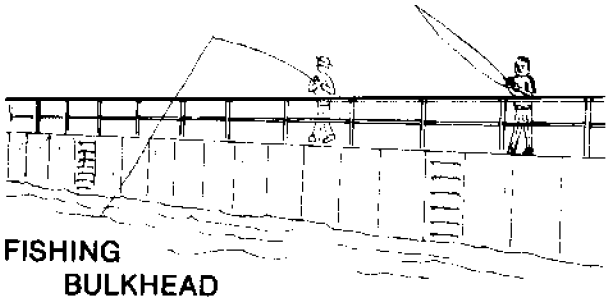
1. How many kinds of fishing are available in your area? List them.
2. What combinations are available?



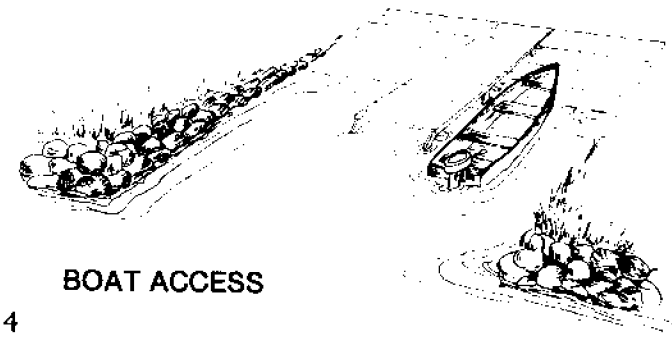
FISHING PIER



BREAKWATER PIER



FISHING BULKHEAD



BOAT ACCESS

SECTION III

WHAT IS A FISH?

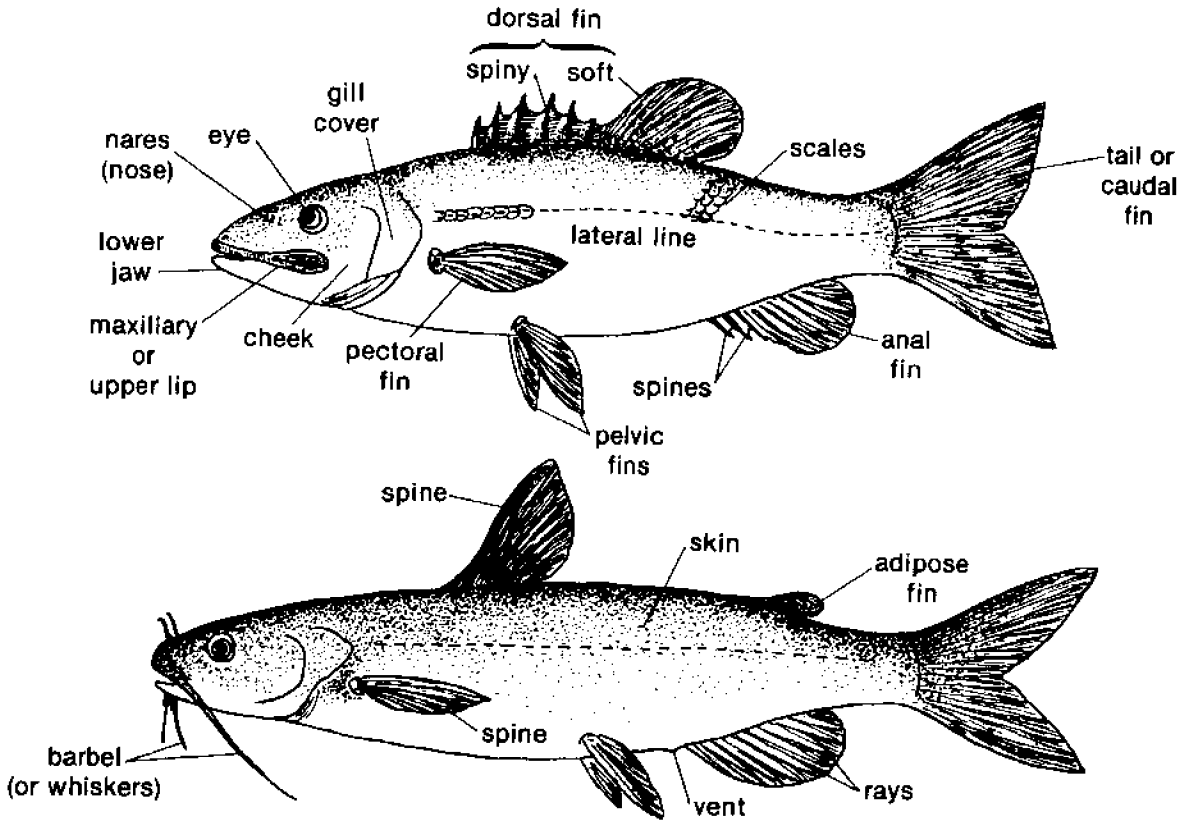
A fish is an animal that is adapted to live in the medium of water rather than on land and air as we do. There are about 21,000 kinds of fish on the earth living almost everywhere—from the polar to the tropical regions, from crystal clean water to almost solid mud, and from fresh to salt water.

Fish come in many sizes—from the very, very small least darter, which is common to our Great Lakes; to the pigmy gobies of the Phillipines which are less than an inch long; to the 200-300 pound Great Lakes sturgeon; to the giant, 15-ton whale shark of the oceans.

Fish also come in a variety of shapes and colors like the dish-shaped bluegill of our waters to the *Mola mola*, the ocean sunfish. Or, they can be slim and long like a pike or gar or barracuda.

Some fish have long, fancy fins and bright colors. Others are as drab-colored as mud. Some fish have spines, poison barbs, electric organs, or special teeth for cracking shells.

PARTS OF A FISH



OPTIONAL PROJECTS:

1. Select a fish species and read about it. Discuss how it is different from other fish.
2. If you had a chance to be a fish, which one would you want to be and why? Discuss it carefully.

SECTION IV

HOW ABOUT A FISH?

How do Fish Breathe? In place of lungs, most fish have gills which function to take oxygen from the water just as our lungs do from the air we breathe.

How Does a Fish Move About? Instead of legs and arms, fish have fins which give it locomotion in water. The tail does most of the propelling while the other fins serve as stabilizers for balance and steering.

How Does a Fish Keep Warm? Fish have another characteristic which is considerably different from humans—they are cold-blooded. This means their body temperature fluctuates according to the temperature of the surrounding water. Humans, on the other hand, are warm-blooded. This means that we have a constant, normal body temperature which fluctuates only slightly.

How do Fish Keep From Sinking? Most fish have a balloon-like sac (known as a swim bladder) in their bodies. The gases in the bladder keep them from sinking. Some fish such as sharks, do not have a swim bladder and must swim constantly or sink.

How do Fish Sleep? Some fish sleep, but others just rest. But sleeping or resting, the eyes of a fish are always open because they don't have eyelids.

How Old do Michigan Fish Get? Some, such as certain minnow-like species, live only a couple of years. Carp and channel catfish may live 20 to 40 years, while the Great Lakes sturgeon may exceed a hundred years! Common fish, such as the sunfish and bass live an average of six to eight years.

How do Baby Fish Look? Most larval (baby) fish just out of the egg do not look at all like their parents. Sometimes it is weeks before they begin to resemble their parents. Although most fish lay eggs from which the young are hatched, some fish bear live young.

DISCUSSION PROJECTS:

1. Name some cold-blooded animals other than fish.
2. Name some warm-blooded mammals other than man.
3. Look up the following terms and discuss:

Opercles	Air Bladder	Larva Fish
Barbels	Fin Ray	Spawn
Annulus	Fingerling	Viviparous

SECTION V

IDENTIFYING FISH

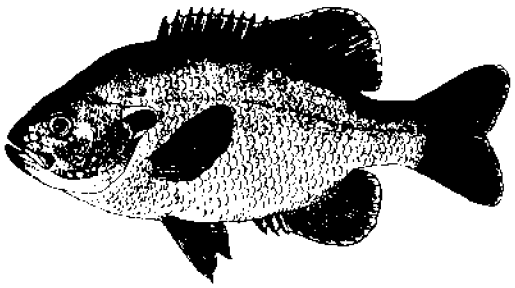
Fishes, because of their cold-blooded characteristic, have become acclimatized to specific habitats: that of warm water or cold water.

Since fish are dependent upon these habitats to which they are adapted, this means that they are limited to specific water types and that any old water will not do.

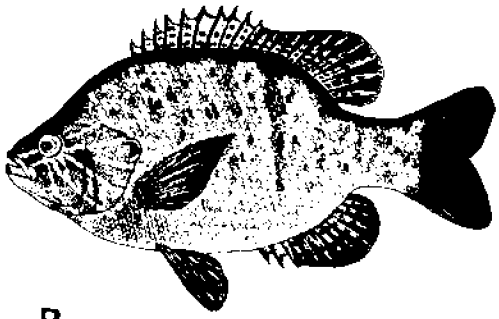
HOW MANY OF THESE COMMON FISH CAN YOU NAME?

Warm Water: Many familiar Michigan fishes belong to the grouping classified as warm water fish. These fish prefer temperatures around the mid to upper 70's for their optimal reproduction and growing. Fish of this group include the sunfishes, minnows, catfishes, some of the suckers, as well as a few others, such as the gar and the freshwater drum.

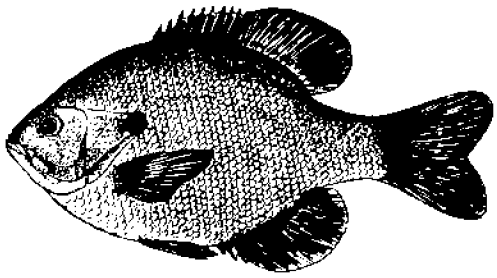
Sunfish Family



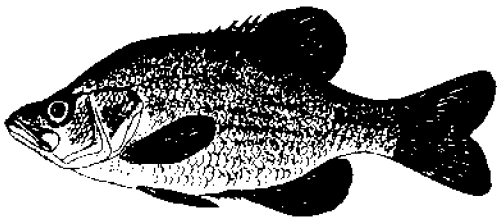
A. _____



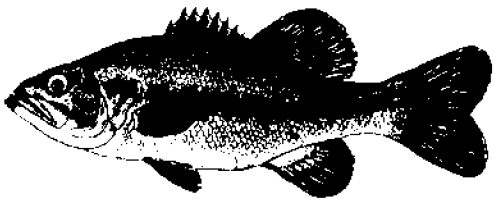
B. _____



C. _____

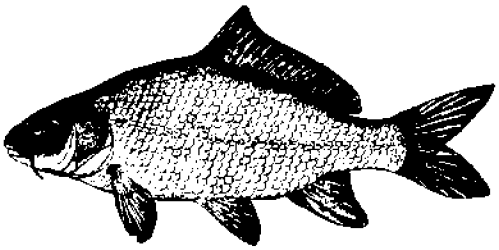


D. _____



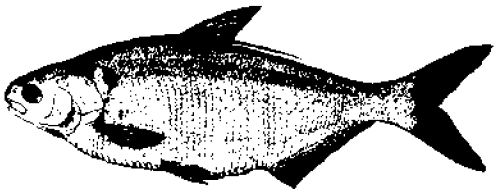
E. _____

Minnow Family



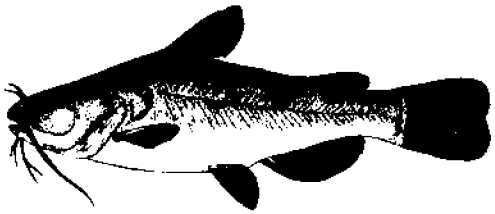
F. _____

Herring Family



G. _____

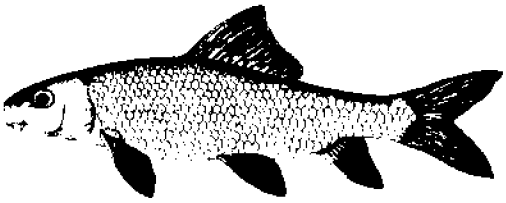
Catfish Family



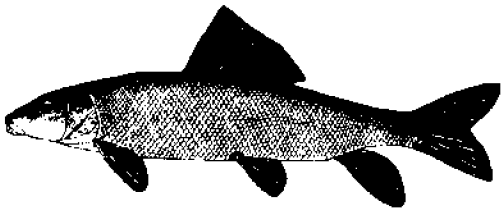
H. _____

I. _____

Sucker Family



J. _____

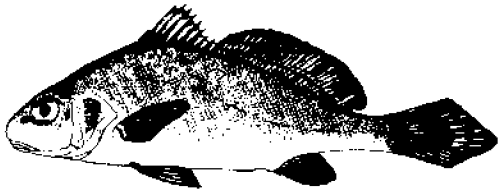


K. _____

Gar Family

L. _____

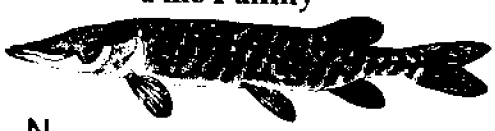
Drum Family



M. _____

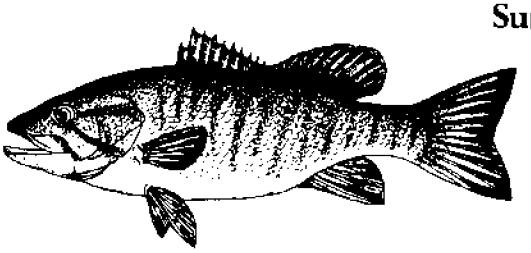
Cool Water Fish: Some fish like water that is slightly cooler than preferred by warm water fish. Preferred temperatures for this cool water group are in the upper 60's and very low 70's. Common species in this group include the yellow perch, walleye, northern pike, smallmouth bass and rock bass.

Pike Family

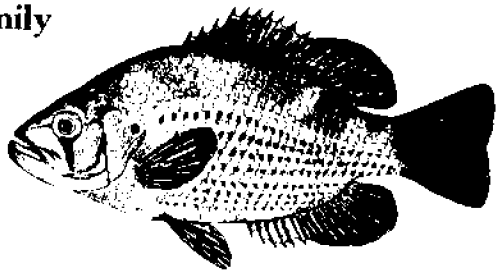


N. _____

Sunfish Family

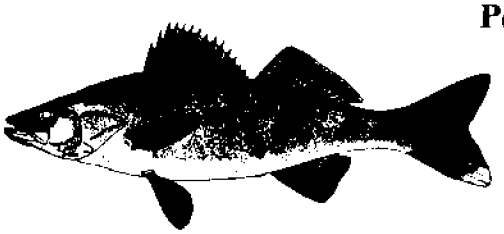


O. _____

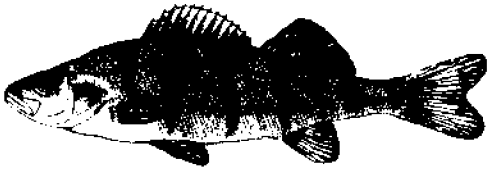


P. _____

Perch Family



Q. _____



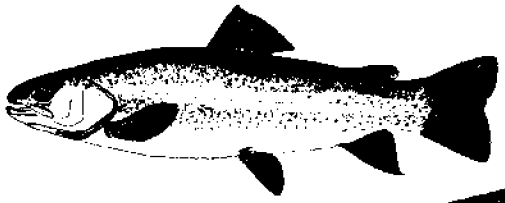
R. _____

Cold Water Fish: The third group of fish common to the state prefer cold water for best living. These are the trout, salmon and whitefishes. Their preferred temperature ranges from the low 50's to the low 60's. Of all the trout and salmon in Michigan, only the lake trout and brook trout are native to the state. All others were brought into the state by man.

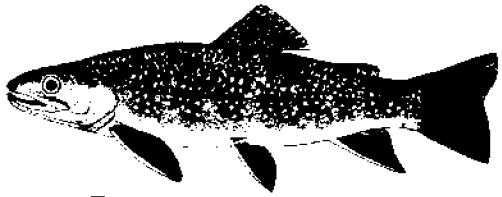
Salmon and Trout Family

S. _____

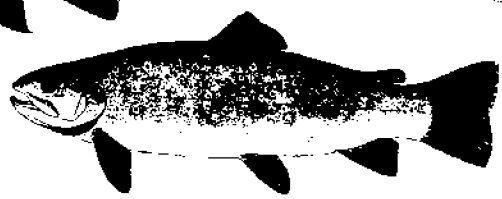
T. _____



U. _____



V. _____



W. _____

Answers to fish identification on last page.

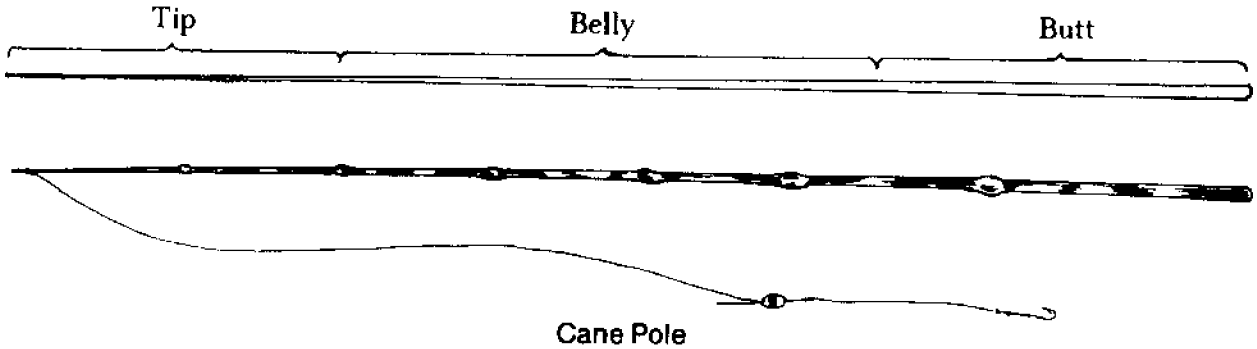
SECTION VI

TYPES OF FISHING TACKLE

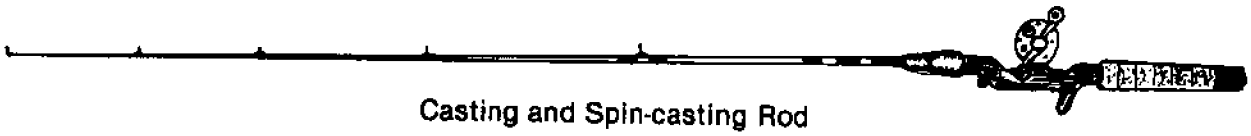
The most familiar fishing gear is the **fishing pole.**

Fishing poles come in a variety of shapes and sizes, from the common cane pole to various types of casting, spinning, trolling and fly rods.

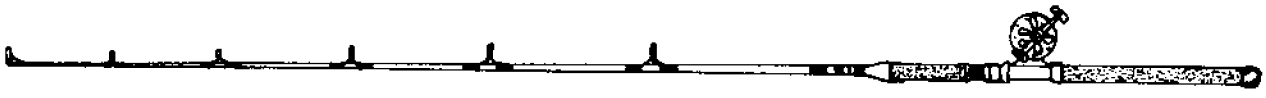
All rods have three basic parts: the butt, belly and tip.



Cane Pole



Casting and Spin-casting Rod



Trolling Rod

Spinning Rod

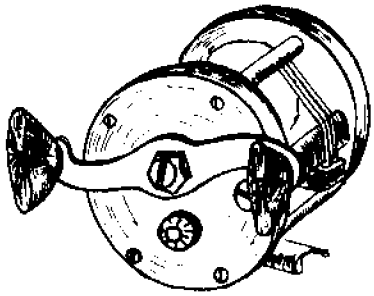
Fly Rod

Rods can be made of bamboo, metal, glass or graphite.

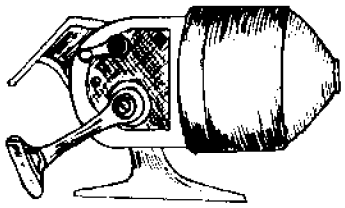
They can be one piece or be multisectional such as some of the new pack rods, or they may be telescopic just as an antenna on a portable radio.

Reels are almost as diversified as the rods and are necessary if one is going to fish by any method other than still fishing. Reels are designed to fit a particular rod and to perform a particular function.

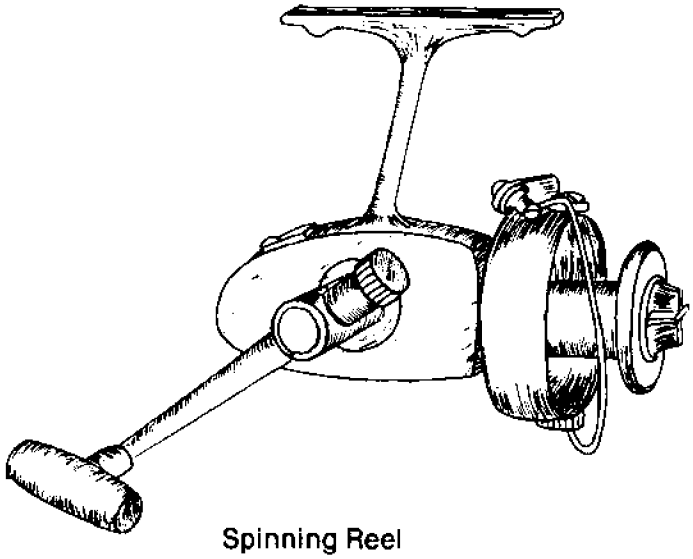
Basic reel structures are the casting, spinning, and fly reels. When choosing a reel, whether expensive or inexpensive, pick a reel to fit the pole.



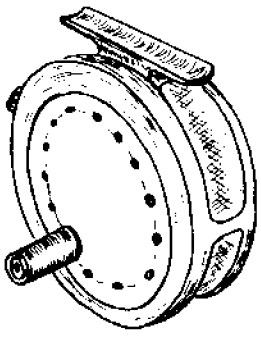
Casting Reel



Spin-casting Reel

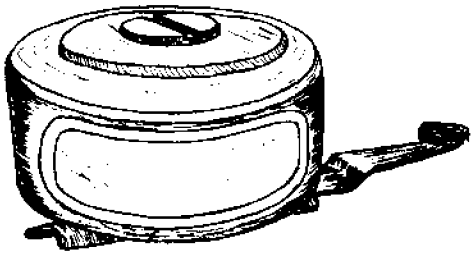


Spinning Reel



Manual

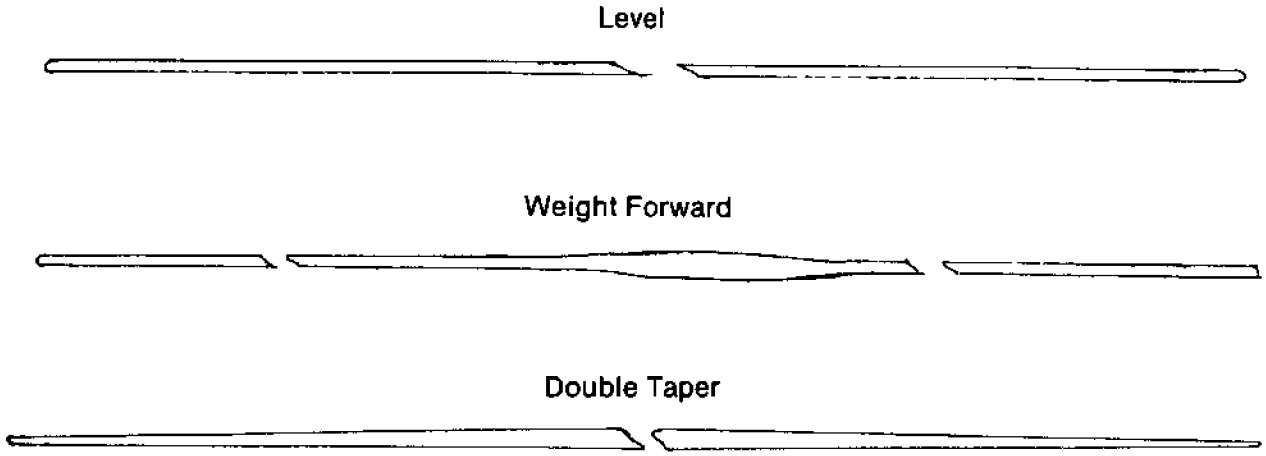
Fly Reels



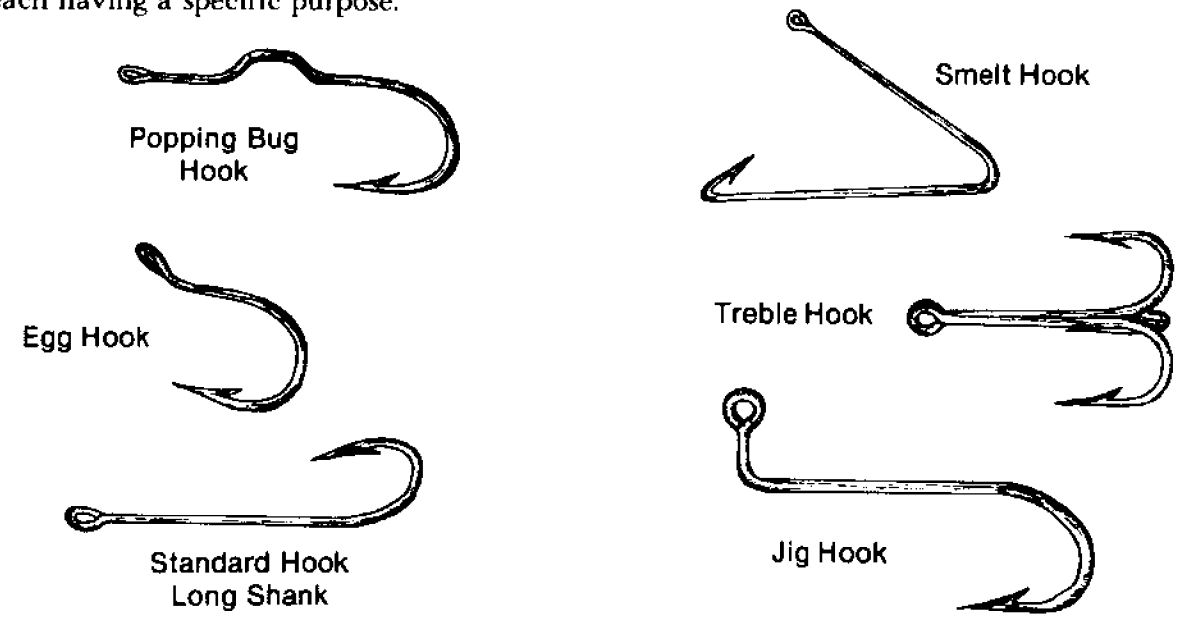
Automatic

Lines are constructed differently for different types of rods and reels. For trolling, one may wish to use steel or dacron lines—types that do not have much stretch. For spinning or spin-casting, monofilament is a must to make successful casts. For casting and still fishing, the line may vary from dacron to monofilament. Fly fishing takes specially constructed lines that come in varying weights to fit the rod.

Three Basic Fly Lines

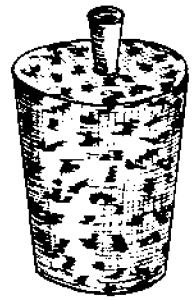


Hooks, sinkers, and **bobbers** round out the fishing outfit. To the casual observer, fishing hooks are either big or small. However, to the fisherman in the know, there are many types of hooks, each having a specific purpose.

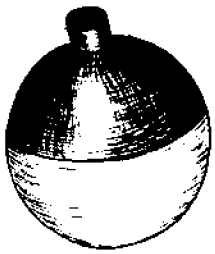


Hooks are coded according to size. The larger the number, the smaller the hook. A number 12 is very small, while a number 2 is much larger. For very large hooks, the code is reversed but a "0" is added behind the number. So a No. 2-0 is larger than a No. 2 and a No. 4-0 is larger than a 2-0.

Bobber sizes depend on the size of fish one wants to catch. Several different sizes and types of bobbers will satisfy most fishing.



Cork

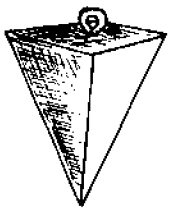


Plastic

Quill

Wood or
Plastic

A fisherman wishing to improve his luck will have a variety of sinkers in his tackle box to accommodate different situations.



Pyramid

Bellswivel

Splitshot

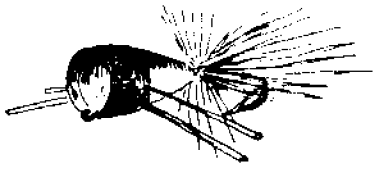
Clinch-on

DISCUSSION:

1. Do you have a fishing rod? If so, what type reel and line do you have on it? Does the line match the outfit?
2. What kind of tackle would best suit the fishing situation nearest your home?

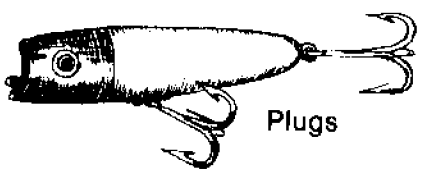
SECTION VII

HOW TO FISH



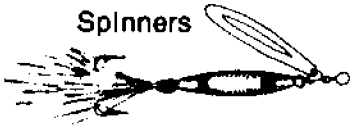
Popping Bug

The proper baits can be important if one is to consistently catch fish. There are many baits to choose from and the kind of fishing may determine the type of bait. Artificial baits are too numerous to count, but there are several basic types with which one should be familiar.

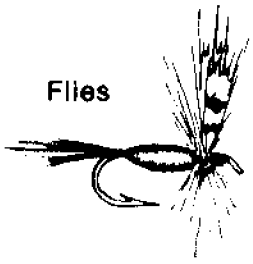


Plugs

Spoons



Spinners



Flies

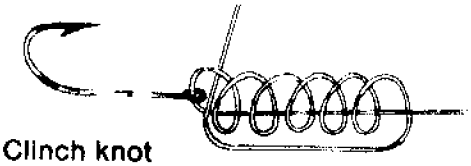
Jigs

Live Bait Types

Earthworms	Grubs
Crayfish	Commercial Baits
Minnows	Fish Eggs
Wigglers	Leeches
Frogs	Insects

FISHING TECHNIQUES

Important Knots

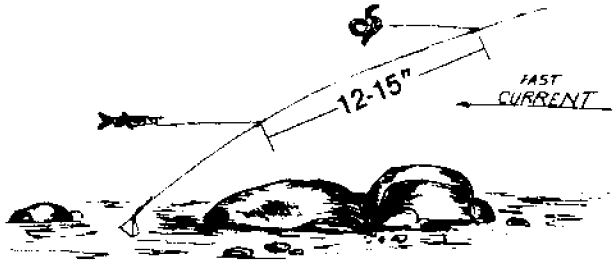


Clinch knot
(For attaching monofilament to hook or leader)

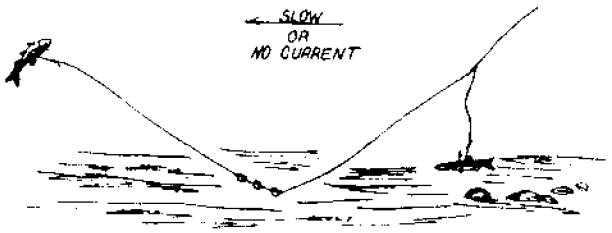
Blood knot—(For joining monofilament lines)

Double Surgeon knot
(For attaching monofilament to regular line)

Still Fishing Without a Bobber

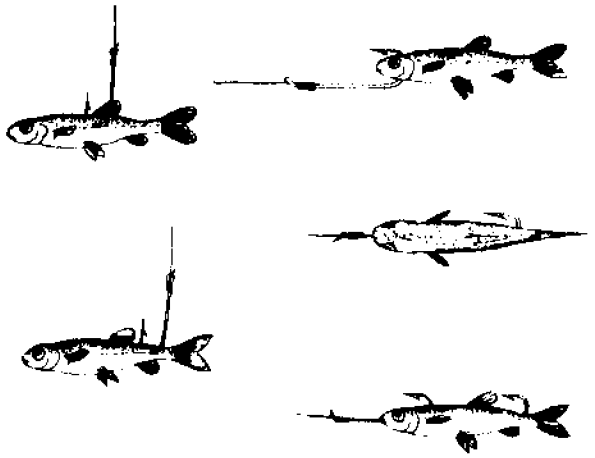


With Current

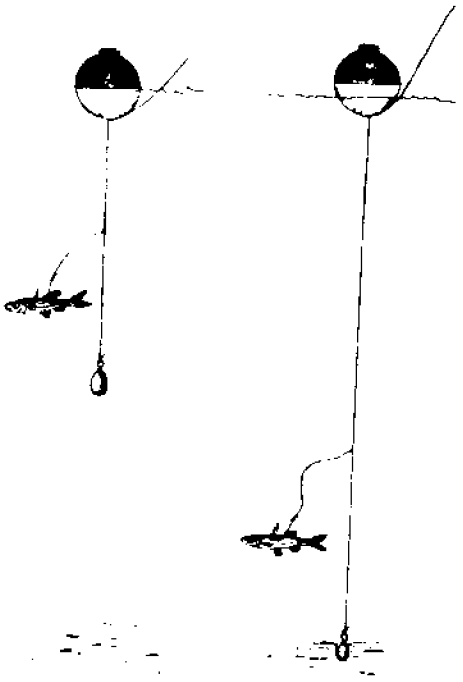


Without or Slow Current

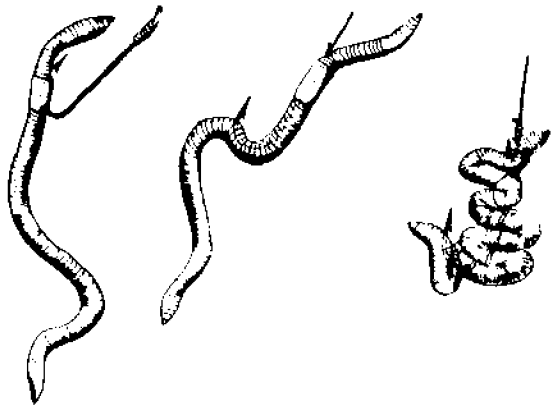
Minnow Hookups

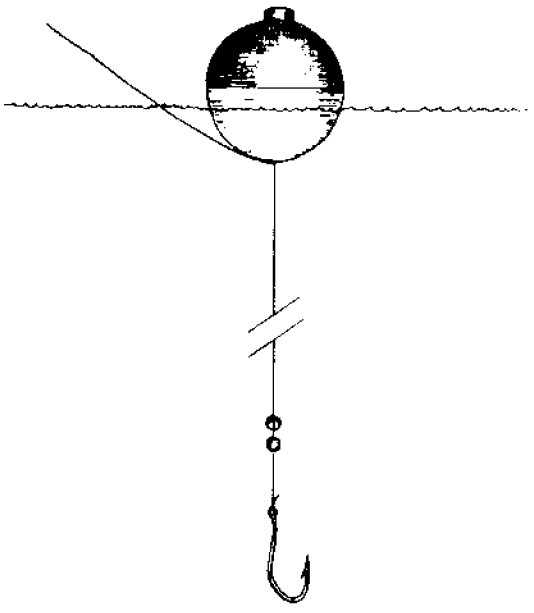


Bobber Rigs

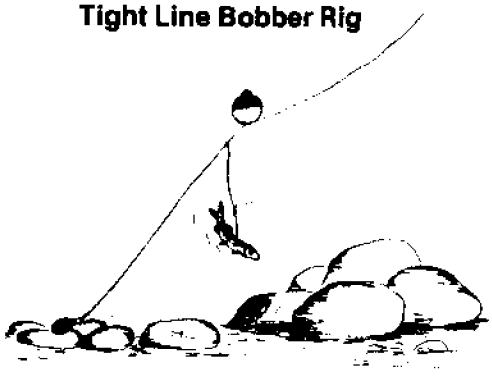


Worms





Tight Line Bobber Rig

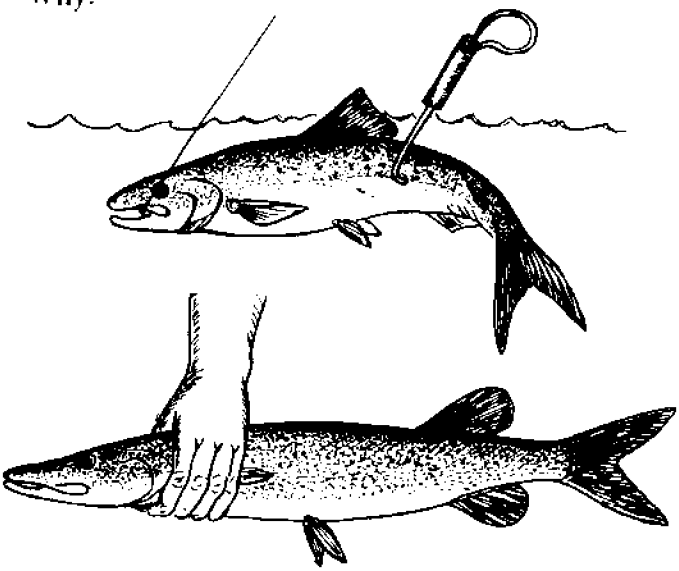


Landing the Fish

When landing a fish, play it out completely. A tuckered-out fish is good insurance against sudden, unexpected lunges or thrashing which may result in a dislodged hook or snapped line.

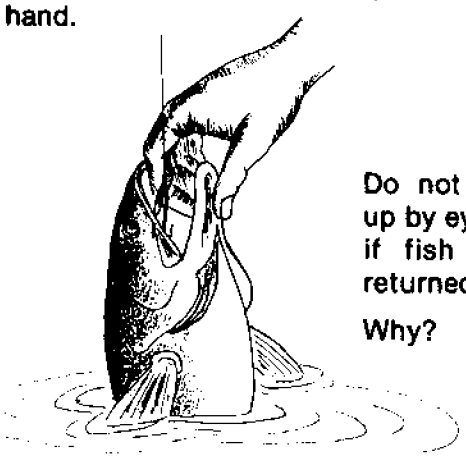
Nets—A fish should be led head first into the net. Large fish netted tail first can jump out.

Gaffing—A good way to land large fish. Why?



Pike, Catfish, Panfish

Quite often, it is necessary to land a fish by hand.



Do not pick fish up by eye sockets if fish is to be returned to water.

Why?

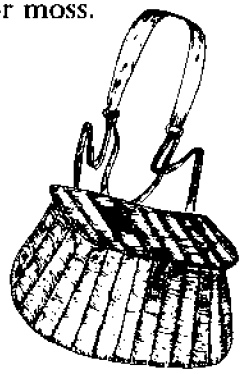
Keeping a Fish

It is important to keep fish alive if you cannot dress it immediately to have good tasting fish.

Stringer—On larger fish, the stringer should go through both upper and lower jaws so the fish can breathe.

Fish Bag or Pail—Good for keeping panfish. If kept in a bucket, be sure to change the water frequently. Why is the fish bag best?

Creel—Creels are used to keep fish fresh while the fisherman is stream fishing for trout. The fish are gutted and placed in the creel in damp leaves or moss.



Ice Chest—Very good in a boat. When trolling, fish can be placed on ice in the chest and kept very fresh.

Releasing the Fish

Undersized or protected fish must be released as soon as they are caught. If the fish must be handled, the hands should be wet. Dry hands will remove part of the mucous which protects a fish's body from infection by fungus and bacteria.

If the hook is in deep, it is best to cut the line as near the hook as possible. If the hook can be removed, remove it carefully so as to not tear the mouth. Hold the fish under water and move it slowly back and forth to flow water over the gills. This will help it recover.

DISCUSSION:

Gaffs, with their large strong hook, hold a fish securely. Gaffs also are small and will fit into a tackle box where a large landing net will not.

Handling a fish by the eye sockets can result in damage to the eyes.

Fish bags are better than pails because the fish has a constant supply of oxygen. In a pail, if the water is not changed frequently, the fish can suffocate from lack of oxygen.

SECTION VIII

WHERE AND WHEN TO FISH

Kind	Where	When
1. Bluegills, sunfish crappies	Among lily pads and around weed beds, under docks. Shallow water and calm side of lake.	Winter through ice. Spring in shallow water. Summer around docks and weeds.
2. Largemouth bass.	Lily pads, around logs and submerged stumps and weed beds.	Early morning and late evening in summer months.
3. Smallmouth bass	Rocky shoreland in lakes. In deep pools of streams.	Early morning and late evening in spring and summer.
4. Pike Family	Weed beds, around logs and submerged trees below rapids and waterfalls.	Spring and summer during daylight hours.
5. Catfish Family	Around logs and driftwood piles, along undercurrent banks.	Summer months after dark.
6. Perch Family	Around submerged weed beds, near rocky reefs and along rocky shorelines.	Spring and fall best.
7. Trout and salmon	In streams—in holes. In lakes—in water depths at preferred temperatures.	Spring and fall best.
8. Carp	Mud flats, holes in streams.	Warm summer months. Best in morning and evening.

Pond Fishing: Communities around the state and country are developing fish-out ponds near and within population centers. Heavy stocking of carp, catfish species and other select species are providing excellent fishing. Generally, still fishing with live or prepared baits is the best for these species. Fishing probably is best early and late in the day. However, fish usually can be caught throughout the day around the shoreline of such ponds.

Fish as Food

Fishing is fun for everyone. In addition, fish as a food is an excellent source of protein and should not be wasted. There are many good recipes available for cooking and preserving fish. Several bulletins on fish preparation and cooking are available through the MSU Cooperative Extension Service.

Some of these publications are listed below:

"Great Lakes Fish Preparation", Extension Bulletin E-1179
"Great Lakes Fish Cookery", Extension Bulletin E-932
"Fresh Water Fish Preservation", Extension Bulletin E-1180

These may be obtained through your county Cooperative Extension Service office or from the MSU Bulletin Office, P. O. Box 231, East Lansing, Michigan 48824.

Sportsmanship and Safety Guide

1. **Never** fish alone. Take a friend with you.

2. **Tell** your parents or guardian where you are going.

3. It is a good idea to **have a life preserver *on*** when fishing from a boat, fishing structure or when wading in the water.

4. **Be careful** of fish hooks and the teeth and spines of fish. Serious infection can start easily from such wounds.

5. **Do not trespass** on private property. Always ask permission before you enter.

6. **Do not litter** or cause destruction of public or private property.

7. **Respect the rights** of others. Do not disturb others by crowding in or near where they are fishing.

8. **Do not waste fish.** Utilize what you catch. If you do not wish to eat fish, carefully return what you catch alive to the water.

9. **Always obey the state fishing regulations** and help in the state's management of the fish.

ANSWERS TO FISH SPECIES

A. Green Sunfish
B. Pumpkinseed
C. Bluegill
D. Crappie
E. Largemouth Bass
F. Carp
G. Gizzard Shad
H. Bullhead
I. Channel Catfish
J. Sucker (Redhorse)
K. Sucker (White)
L. Gar
M. Freshwater Drum
N. Northern Pike
O. Smallmouth Bass
P. Rock Pike
Q. Walleye
R. Yellow Perch
S. Chinook Salmon
T. Coho Salmon
U. Rainbow Trout
V. Brown Trout
W. Brook Trout

MICHIGAN STATE UNIVERSITY

COOPERATIVE EXTENSION SERVICE

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Gordon E. Guyer, Director, Cooperative Extension Service, Michigan State University, East Lansing, MI 48824.

2P-3M-6:81-JP, Price 55¢