



Massachusetts Division of Fisheries & Wildlife

An Agency of the Massachusetts Department of Fish & Game



FISHING
GUIDE

FISHING AND OUR AQUATIC RESOURCES



With a land area of roughly 7,840 square miles or 5 million acres Massachusetts has a wealth of freshwater resources that its human population of approximately 6.646 million people (yr. 2012) can enjoy. We have roughly 10,000 miles of flowing-water systems, ranging from the smallest trickling coldwater streams to large, interstate rivers like the Connecticut and Merrimack. Along with these flowing-water systems, Massachusetts has approximately 2,800 standing-water systems. These include hundreds of fertile warmwater ponds; deep, two-story lakes; the crystalline kettle ponds of Cape Cod; and an abundance of man-made waterbodies like our

magnificent Quabbin and Wachusett Reservoirs. Massachusetts is also home to a diverse group of wetland habitat types - including swamps, bogs, wet meadows, and vernal pools - that are critical components of our landscape.

Many different species of fish swim within the freshwaters of our state. There are populations of northern pike, pickerel, Brook, Brown, Rainbow, and Lake Trout, and Landlocked Salmon, as well as Yellow Perch, Small - and Largemouth Bass, and many other species of sunfish. **The Division of Fisheries & Wildlife (*MassWildlife*)** maintains a modern fish culture program that annually stocks approximately 500,000 Brook, Brown, Rainbow, and Tiger Trout. We also have diadromous fish species (fish which migrate between salt and fresh water to spawn) that use the two major river systems (Connecticut and Merrimack). Examples of these include American shad, American eel, blueback herring, and striped bass to name just a few. An estimated 2,000 miles of coastline and its associated saltwater fisheries are managed by the Division of Marine Fisheries [<http://www.mass.gov/dfwele/dmf/index.html>]. Aside from the popular freshwater game fish species, our state's aquatic ecosystems are home to many important and interesting forms of life. From the majestic Bald Eagle to the American Beaver (supreme habitat manipulator) to the smallest aquatic invertebrates, Massachusetts possesses a wealth of diversity that is ***MassWildlife's*** charge to conserve and protect.

Fishing is a great way to connect with all of this. It's been called a "gateway activity" for the potential it has to open people's eyes to our natural world. For some, the simple act of fishing might just be a life-changing experience. At the very least, fishing is a fun, relaxing pastime that allows us time away from the stresses of everyday life.

"Many go fishing all their lives without knowing that it is not fish they are after."

Henry David Thoreau

FREQUENTLY ASKED FISHING QUESTIONS

Fishing or "Angling" is defined under the Massachusetts General Laws as trying to catch fish with a hand line or rod, using a hook baited with natural or artificial bait.

Q. Do I need a fishing license to go fishing?

A. Yes if you are 15 years of age or older. For residents 15-17 years of age, and those 70 and over however there is no fee for that license (other than any associated convenience fees while purchasing). For all other license questions including resident and non-resident requirements and fees please consult a current copy of the Massachusetts Fish and Wildlife Guide to hunting, freshwater fishing, and trapping, which can be found at www.mass.gov/eea/agencies/dfg/laws-regulations/.

Q. Do I need a license to take my child (under 15) fishing?

A. Taking into consideration the definition of fishing under the MA general laws (see above) you would only need a license if you are in control of a baited hook on a line in the water. So if you are helping your child bait their hook, or you are removing a fish from a hook, or untangling their line you would not need a license. The minute you cast the line for him or her, or reel in the line, you are now fishing, and would need a license.

Q. Where can I purchase a fishing license?

A. A Massachusetts fresh-water or salt-water fishing license may be purchased online @ MassFishHunt, at any *MassWildlife* office, and at select vendors throughout the state. Note: if you are purchasing your license online it is helpful to have a printer available.

Q. Are there any free fishing days (days when no fishing license is required) in Massachusetts?

A. Yes there is a free fishing weekend every year in June (typically the first full weekend in June). This allows people of any age, resident or non-resident, to fish any public waterbody without a fishing license from 12am on Saturday to 11:59pm on Sunday. Also check out programs offered by *MassWildlife's* Angler Education Program, as there is no license required for participants at any of these "learn to fish programs".

Q. Where can I learn how to fish?

A. You can learn by attending one of *MassWildlife's* Angler Education Program events. For a list of these programs go to www.mass.gov/masswildlife and look for them under the **Education and Events** tab. In addition there are thousands of books and other written materials on fishing, many of which can be found in your local library. Use the internet to search "learning to fish" - and look for videos, images and other information. And finally one of the very best ways to learn is by partnering up with someone who has been fishing before. Even if that person is not an accomplished angler, so much can be learned and experienced from fishing with a buddy.

Q. What do I need for fishing equipment to get started?

A. Aside from your fishing license (if you're 15 years of age or older) you'll need nothing more than a simple live bait setup consisting of a spin casting (push button), or spinning rod and reel, a few hooks and bobbers, and your bait - typically garden worms or night crawlers. As with any hobby or pastime you're just starting out here, so no need to break the bank on equipment until you know this is something you truly want to pursue.

Q. Do I have to use live bait?

A. Absolutely not. If you dislike putting the hook into something alive, there are many other alternatives, likely things you have around the house right now. Check in your refrigerator or freezer for cheese, chicken, hotdogs, or bread as these are popular favorites as live bait replacements. Small dense pieces of

these food items and many more can work really well. Nothing really beats live bait for its smell, movement, and texture, but certainly it shouldn't be an impediment to anyone interested in fishing. There is also bait you can buy in small jars that come in pellet, paste, or live bait forms and smells that can work well. Then there are fishing lures. Some work very well, while others seem designed to catch anglers more than fish. It's recommended that you stay away from lures initially as these are not only expensive, but confusing to the beginner - just so many designs, colors, and sizes. Let's see if you like fishing first before you spend your life savings on lures.

Q. Where can I go fishing?

A. Here in Massachusetts there are literally thousands of fishable waters and lot's of them overlooked, like that small pond or stream you pass by everyday on your way to work or school. To find out more about fishing opportunities, go to www.mass.gov/eea/agencies/dfg/dfw/hunting-fishing-wildlife-watching/fishing/fishing-opportunities.html.

Q. What kind of fish should I go fishing for?

A. Anything that bites, literally. When you're just beginning a simple bait set up, as described above, can bring surprising results. You can catch anything from the smallest sunfish to larger fish like bass, pickerel and trout. It really depends on the waterbody you select, the location on that waterbody, and the time of year. A couple of simple tips here - always look for structure wherever you fish - a downed tree, large rocks or boulders, overhanging bushes or trees, undercut stream or river banks, or a weed bed. This structure gives the fish some cover and shade, and so is a more likely area to find them. Also go fishing during the warmer months at first if you can, when the water temps are at least in the upper 60's. For the beginner those warm-water fish (mostly species of sunfish) are much easier to catch, so try fishing in the late spring, summer and early fall for quick action.

Q. Can I eat the fish I catch?

A. An often asked question, with no simple answer. It really depends on whether your pregnant, intend to be, and your age. The Massachusetts Department of Public Health (DPH) keeps and maintains a list of waters and advisories for those waters, however there is a statewide advisory for pregnant women, women intending to be pregnant, nursing mothers, and children under the age of 12 to **NOT** eat any fresh water fish from lakes, ponds, rivers, or streams, other than those stocked by MassWildlife. So that's pretty much all fish except stocked trout if you fit into that demographic. The major contaminants for this advisory are Mercury and PCB's. Please consult the MA Department of Public Health @ www.mass.gov/eohhs/gov/departments/dph/ for much more information concerning this topic. While this does sound ominous please remember that just because they don't recommend you eat these fish, you can still go fishing, and it's absolutely fine to handle the fish. The contaminants are locked up in the tissues so touching them will not harm you. Most people today fish for fun and not for food anyway.

Q. Are there laws pertaining to the size and amount of fish I can keep?

A. Yes, however only if you intend to keep those fish. As stated above most people today fish for fun and not for food so any creel (how many fish you can keep), and size limits are mute if you don't intend to keep any fish. Please consult a current copy of the Massachusetts Fish and Wildlife Guide to hunting, freshwater fishing, and trapping @ www.mass.gov/masswildlife for more information on fishing rules and regulations.

Q. Can I keep a fish alive and bring it home to put in my fish tank, or private pond?

A. Absolutely NOT. There are only two legal reasons allowing one to keep fish; to eat, or to have it mounted (professionally preserved by a taxidermist) if you think it's a trophy. The two things both of these have in common are that the fish must be dead upon leaving the water you're fishing. It is illegal to move fish from one water body to the next, including small baitfish. These transport laws were put into place to protect our waters from the spread of nuisance species and to prevent the spread of disease.

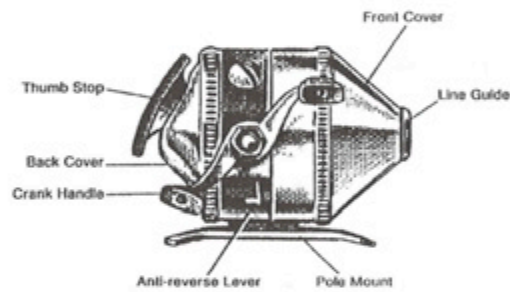
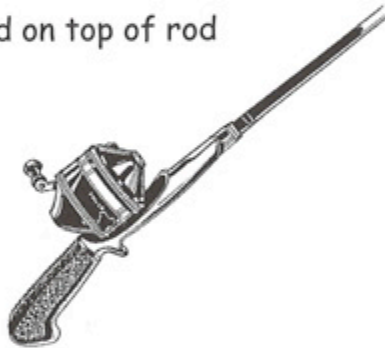
RODS AND REELS



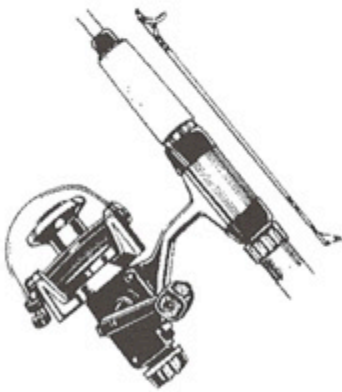
The four standard rod and reel combinations are the spincast, spinning, baitcast (not shown), and fly (also not shown). The spincast, or pushbutton rod and reel is the combo of choice for the beginner, while the spinning rod and reel is what many graduate to. Both the bait-casting and the fly combos are more specialized and typically used by seasoned anglers.

SPIN-CAST OR PUSH BUTTON ROD AND REEL

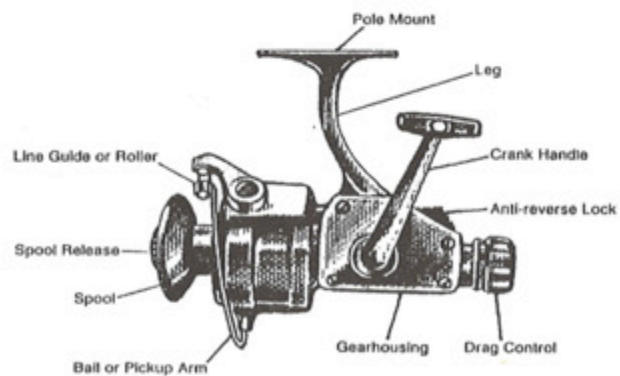
Reel mounted on top of rod



SPINNING or OPEN FACE ROD AND REEL



Reel mounted underneath rod



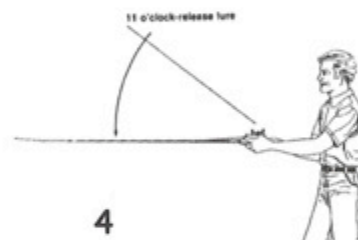
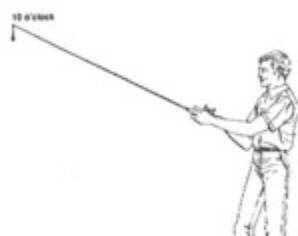
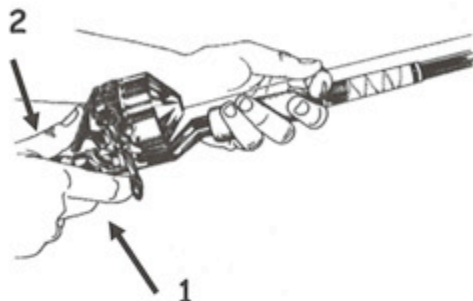
LEARNING TO CAST

CLOSED FACE SPIN-CASTING (or PUSH-BUTTON) ROD AND REEL

This type of rod and reel is very easy to master. It is the basic starter combination. The technology simplifies the method down to a simple push of a button. The only tricky part is learning when to let go of the button. This will come with just a little practice.

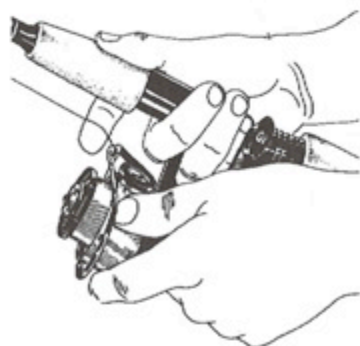
Steps:

1. Face the reel up and grip the rod so that your forefinger is wrapped around the rod's trigger handle.
2. Using your thumb, push the button on the back of the reel all the way down firmly, and hold.



3. While holding the button down with your thumb and using a basic overhand casting motion, bring the rod up and back over your shoulder or to your side just slightly (to about 1 o'clock)
4. Start bringing the rod forward, still holding down the button with your thumb. When the rod tip is just beyond your shoulder (about 11 o'clock), aim to a distance point and let go of the button on the reel. Your casting plug/lure/bait will then strip line off the reel, landing straight out in the water in front of you. It's important not to "muscle" this motion. The best casters use a nice, easy, fluid motion. After all, we're not trying to hit something with a bat, or throw something a long distance.

OPEN FACE SPINNING ROD AND REEL



The open face spinning rod and reel combination is the fishing rod and reel most folks graduate to after mastering the push-button combination. To cast, start by holding the rod and reel so that the reel is beneath the rod. Using your forefinger, hold the line and flip the bail mechanism to one side. While holding the line with the bail mechanism still open, lift the rod up and back (as with a push-button combo), then forward, releasing the line from your fingertip on the forward cast. Once your bait hits the desired location you can then manually close (flip it back) the bail mechanism, or turn the reel handle forward, which will close the bail mechanism.

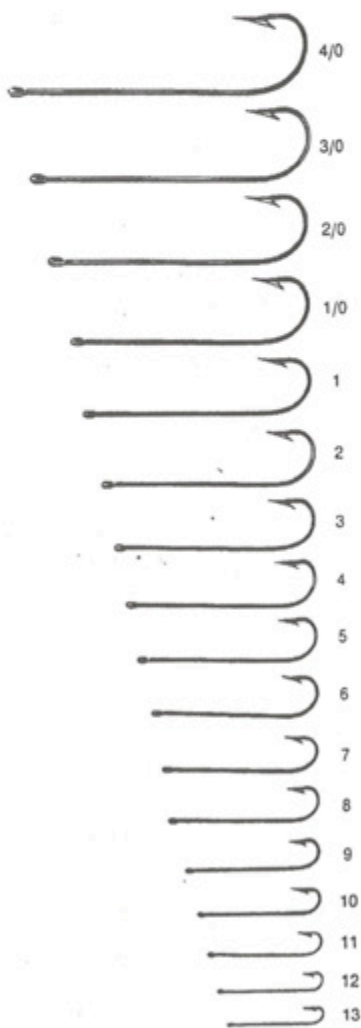
"RETRIEVING," OR REELING IN YOUR LINE

The good news here is that "retrieving" your line is as simple as it sounds: You turn the reel handle to bring your line back onto the reel spool and pull your bait or lure of choice back towards you. This is also referred to as "reeling in your line."

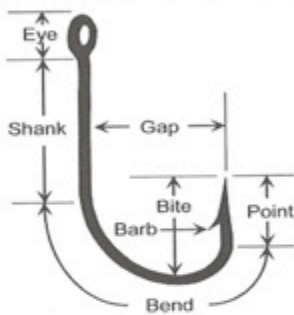
The bad news, however, is that, like everything in fishing, things can quickly get a lot more complicated because this seemingly simple task can be performed in different ways and at different speeds. So how do you know which retrieve works best in any given situation? For the most part, experience will dictate this, but to keep things simple, you can't go wrong with a slow or almost no retrieve while live-bait fishing, and, with lures, start with a slow to medium retrieve, and then if that doesn't work try changing speeds until something happens. Nothing beats experience.

TERMINAL TACKLE

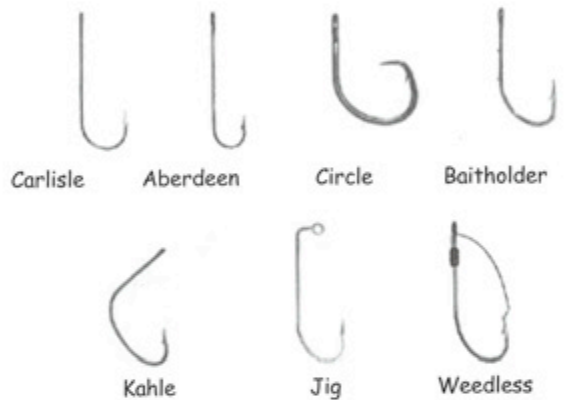
HOOK SIZES (Carlisle hooks)



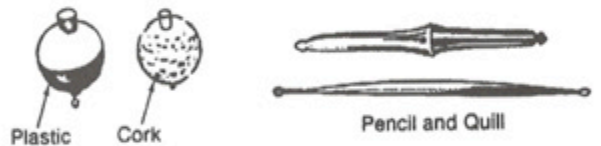
Anatomy of a Fishhook



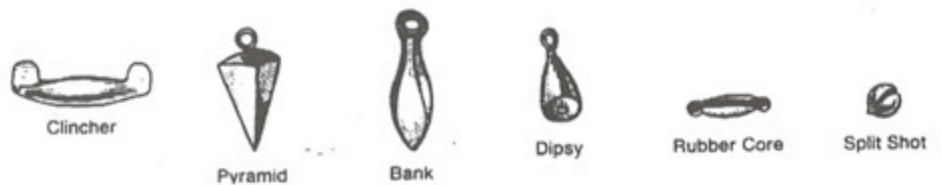
COMMON HOOK STYLES



FLOATS & BOBBERS



WEIGHTS AND SINKERS



SWIVELS



KNOTS

Are considered by some the most important part of your fishing outfit, and if tied improperly can mean the difference between catching and not catching fish. Before getting started a little knot terminology will help in learning to tie. The end of the line that passes through the eye of the hook is called the "tag end," and the line that leads back to the reel is the "standing end or standing line."

TERMINAL KNOTS



A **CLINCH KNOT** is an excellent choice for tying a hook or lure onto the line, and is probably the most popular, easy to tie fishing knot. Start by passing your line through the eye of the hook. Bring the tag end back and hold it against the standing line between your thumb and forefinger. Now take the

hook in your other hand and make four or five turns with it to form loops in the line. Thread the tag end through the first loop above the eye of the hook, hold the tag end against the hook shank, moisten the loops (by putting the unseated knot in your mouth), and pull on the standing line to form a tight connection.

For the **IMPROVED CLINCH KNOT**, thread the tag end through first loop near eye as above - then through the big loop as shown here. Moisten and pull steadily on both ends. Clip the tag end to leave approximately 1/8 of an inch.



The **PALOMAR KNOT** is another excellent choice for a terminal knot. Explained below, the trickiest part of this knot is when you take the loop and pass it around your hook or lure. Depending on what you're wrapping it around this can be a bit tough. Just make sure you give yourself ample doubled line behind the loop to get the job done. Then, when securing the knot, you hold the hook in one hand and the tag end in the other hand. Wet the line and pull only on the tag end. It's best not to pull on both the tag end and standing line as this can twist and weaken the line.



1. Double about 4 inches of line and pass loop through eye.



2. Let hook hang loose and tie overhand knot in doubled line.



3. Pull loop of line far enough to pass over hook, swivel or lure.

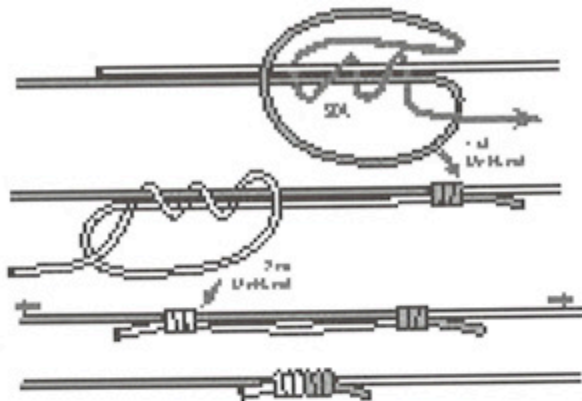


4. Pull tag end and standing line to tighten. Moisten before fully tightening. Clip tag end.

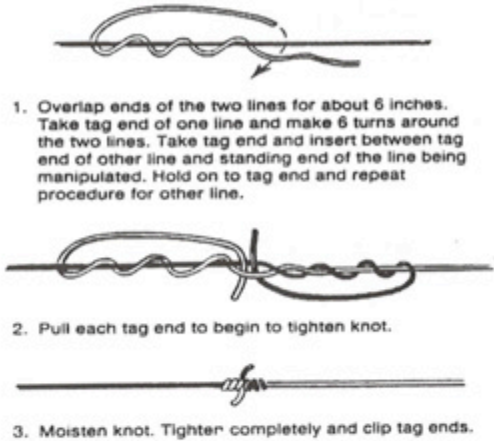
LINE - TO - LINE KNOTS

These knots are excellent choices for joining two lines together.

DOUBLE UNI-KNOT



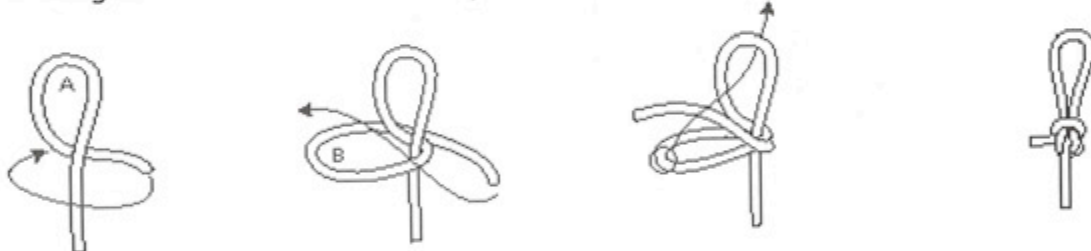
BLOOD KNOT



LEADER-TO-LINE KNOT

The *PERFECTION LOOP* is a great knot to use for joining lines of different sizes, such as fly line to leader material, or monofilament leaders on your ice fishing spools to the braided backing. You will tie the perfection loop into both lines then join the two loops together.

Form loop A at the end of your line by passing the tag end behind the standing line. Take another turn around the standing line and form a second loop, B.



Hold your two loops in place and make a third by wrapping the tag end around the standing line, this time placing the tag end between the first and second loop, crossing on top of loop B. Hold the tag end in place and pass loop B through loop A. Adjust and pull loop B up until the knot jams tight. Trim the tag end to $\frac{1}{8}$ inch. **NOTE: If the tag end doesn't stand away from the finished knot at a right angle, it isn't tied correctly.**

Now tie the second loop.

To join the two perfection loops together (where loop 1 is the leader, and loop 2 is the backing), pass loop 1 through loop 2, then take the loop 1 tag end and pass it through loop 1. Now pull both tag ends to tighten: The two loops will come together to form a tight connection.

*The knots shown here are time-tested, however there are others that work just as well. Look online for instructions on these and others both in written and video format.

USING LIVE BAIT

KEEPING AND STORING WORMS

If it's only for a few days, you can keep worms in the refrigerator, but if it's longer you should try keeping them in a larger container filled with dry leaves, or even store-bought worm bedding. Moisten the leaves or bedding a bit every week, just enough to keep it lightly matted without soaking. This type of setup will support many dozens of worms, which eat the leaves and enrich the bed with their excretions. A note of caution: Remove any dead worms from the container periodically and discard. Store the container in a cool place.

SHINERS

Shiners (a variety of fish in the minnow family) are another sure-fire bait choice. You can catch your own with a minnow trap baited with bread, or you can buy a bunch at most bait and tackle shops. Keeping them alive for extended periods of time can be tricky though as they need to be kept in well-oxygenated water. A good tip is to keep the shiners in a 5-gallon bucket with an aerator running.

NOTE: Salmon eggs, crickets, grasshoppers, meal worms or grubs, and stink baits, as well as store-bought baits like Power Bait® and other similar brands, are also good choices.

AFFIXING A BOBBER AND WEIGHT FOR LIVE BAIT FISHING

To affix a basic round **BOBBER** on your line, press down the post on top, which releases a hook on the bottom. Now wrap the line under the hook and release the top post, allowing the hook to slip back up into its hole. You then hold your thumb on the bottom of the bobber and push the top post down once again, but this time push on the side of the post. This will expose the top hook. Run the line under the top hook and release the post so that the line is caught on top. If done correctly you should have the line caught on both the bottom and top hooks of the bobber, and this will keep it from sliding.



To affix a **SPLIT-SHOT SINKER** to your line, run the line into the groove in sinker and pinch the sinker with your fingertips or a pair of pliers. To remove, simply press on the "ears" of the split shot with your fingers or a pair of pliers; this will open the front of the sinker and release your line. The proper position for the sinker is just under the

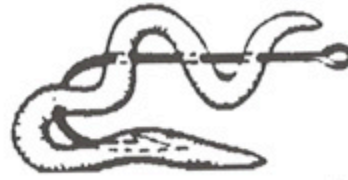
bobber. That way, the fish don't see it, and you still get the desired effect of added weight to your outfit for a longer cast. When using only a weight and no bobber (bottom-fishing), put the weight up at least a foot from the baited hook.

HOOKING LIVE BAITS

WORMS



HOOKED ALIVE ONCE THROUGH THE COLLAR



HOOKED ALIVE SEVERAL TIMES THROUGH THE BODY

MEALWORMS OR GRUBS

HOOKED ALIVE THROUGH THE BELLY, OR BACK



SEVERAL MEALWORKS ON ONE HOOK

Mealworm Illustrations by Deb Silva

MINNOWS (SHINERS)

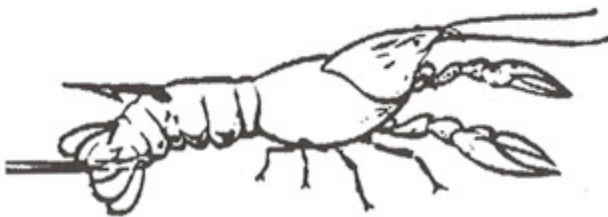


HOOKED ALIVE THROUGH THE LIPS

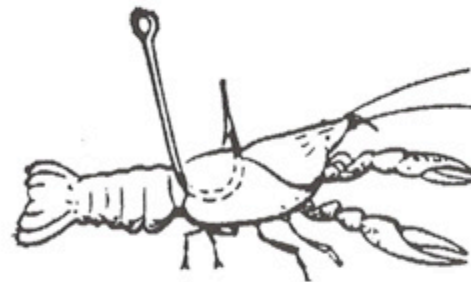


HOOKED ALIVE BELOW DORSAL FIN

CRAYFISH



HOOKED ALIVE THROUGH THE TAIL



HOOKED ALIVE THROUGH THE BACK

The trick with any live or natural bait is to hook it so that it still has the ability to move about in the water. It is this movement that attracts the fish.

USING ARTIFICIAL BAIT (LURES)

The purpose of lures is to get fish to strike. Of course, no one can really know what a fish thinks, but it holds true that if fish aren't interested in your first lure (whatever that may be), often they can be fooled by another lure of a different type, color, or size. Although most game fish do have color vision, a lure's color and pattern often mean less to fish than its brightness and action. This probably explains why red-and-white spoons, yellow pork rind, and chartreuse worms catch fish, even though these colors are more or less unnatural to fish. Sometimes just the sound or motion of a lure intrigues fish enough to strike. Below are some of the more common lure varieties.

PLUGS



Plugs vary greatly in weight and size and are specially designed for a wide variety of fish; most range between 3/16-3/4 ounce. Sizes run from <1 inch to about 8 inches. Almost all plugs come in a variety of artistic colors and scale-like finishes. Most finishes today are embedded in the plastic body, but many wooden plugs are still hand-painted. Plugs were originally designed for bass, but the vast number of styles, sizes, and finishes available today makes them ideal for any freshwater fish that will hit moving bait. Plugs can resemble minnows, crayfish, mice, frogs, or other fish food. Top-water plugs float, and almost always make a splash or create a disturbance on the surface to attract fish. Surface disturbances are created by the shape of the plug, the design of the plug head, and various plates, lips, or other attachments. Some come in jointed styles, with the joint adding action to the lure.

In addition to surface plugs, there are also deep-diving plugs known as "**CRANKBAITS**." When the lure is retrieved it plummets downwards. Small floating/deep-diving plugs will usually run shallower than large plugs. Sinking plugs allow the angler to fish almost any depth within reason. Some deep-running plugs have a sunfish shape and have built-in rattles to create a noise like a swimming minnow.



STICK BAIT (or "JERK BAIT")

These are long stick-like baits, often made in the shape of a fish. The angler gives the lure the action by jerking it, or by retrieving it slowly or quickly. Jerk baits are typically for shallow-water fishing.



SPOONS (or "METALS")



The first spoons were really made of spoons! Now, most have a slender shape and, like other lures, they come in a variety of sizes, colors, finishes, and hook arrangements. The typical fishing spoon is a long, tapered "blank" of heavy, shiny metal attached to a treble hook with a ring. Some spoons have weed guards over the treble hooks for fishing weedy places. Sizes vary: 1-8 inches in length and $\frac{1}{4}$ -1 ounce, while some trolling spoons are up to 12 inches long. While trout and salmon favor them, virtually all species will hit spoons. Spoons can be fished bottom to mid-water to surface, but are usually mid-water tools.

SPINNERS (or "BLADES")

Spinners are lures in which a blade is attached to a central shaft, often a skirt or bucktail is attached. Spinners range from tiny 1-inch-long, 1/16-ounce lures to large, heavy lures over 1 ounce in weight. (The small sizes are ideal for smallmouth bass, panfish, and trout.) They are best for mid- and top-waters. Notorious for attracting pike and pickerel, they are also good for bass and other fish. A medium retrieve works well for spinners.



SPINNER BAIT



Spinner baits look like spinners only they have an angled "arm" that gives them a different motion from spinners, and they possess a single hook. Usually fished in shallow waters, they come in dozens of colors and head-skirt color combinations. Spinner baits are often specifically designed for bass, but they will take other freshwater fish. Spinner baits vary in size and weight, just like other lures. A medium-slow retrieve is good for spinner baits, but in weedy cover a fast retrieve works best, skimming the lure just above the vegetation to draw out bass, pickerel, or pike.

JIGS

Jigs are for fishing the water column vertically, from the bottom up. They are typically single hook lures in which a shiny, metal body is molded on a special jig hook and to which feathers, fur, or imitation fur is tied on as a skirt or tail. The lead head of the jig is painted - often the same color as the skirt or tail material - or plated with a jewelry-like reflective finish. Since jigs (unlike spinners, spoons, and plugs) have no action of their own when retrieved, they must be worked by the angler, who uses the rod and speed of retrieve to create motion. Usually jigging involves dropping a jig to the bottom and working it up and down. Jigs can be "sweetened" with pork rinds or plastic trailers.



SOFT PLASTICS



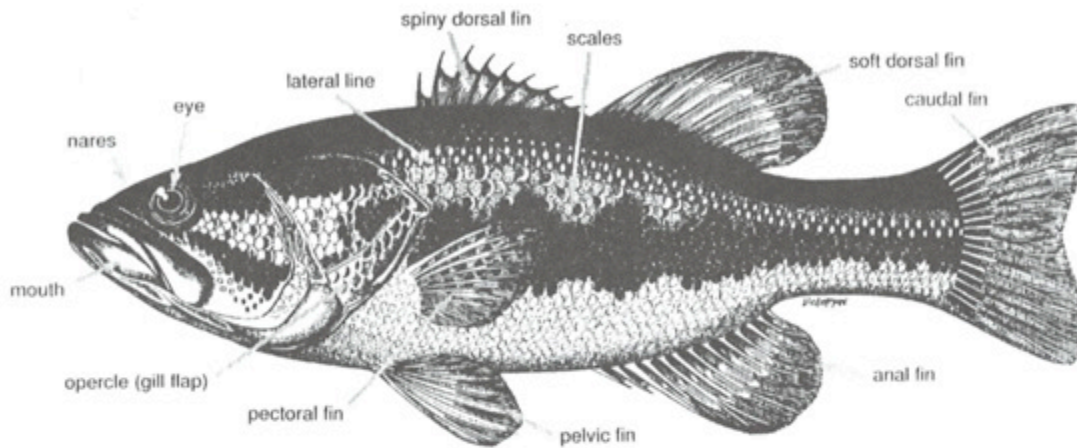
Plastic worms and other soft plastic lures have been popular since the late 1940s for a number of game fish and for largemouth bass, especially. While plastic worms in all sizes, shapes, and colors remain the most popular lures, soft plastic crayfish, frogs, minnows, salamanders, grub-tails, spinner bait tails, and the popular curly-tailed lures also have their followers. Soft plastic lures are molded from liquid plastic with the degree of softness and floatation controlled in the manufacturing process. Scents can also be molded into these lures. Plastic worms come in tiny inchworm sizes on up through large 15-inch worms. The most common sizes are 6-9 inches long.

They say lures are made to catch anglers. Fishing equipment is a billion-dollar industry. A modern-day angler can accumulate enough gear to fill a truck - and some do. The real question is: Does owning a lot of stuff mean you will catch a lot of fish? The answer, of course, is **No**. Experiment with your new equipment, but don't think you have to rush out and buy every new item that comes along. The best way to learn is by fishing.

FISH ANATOMY

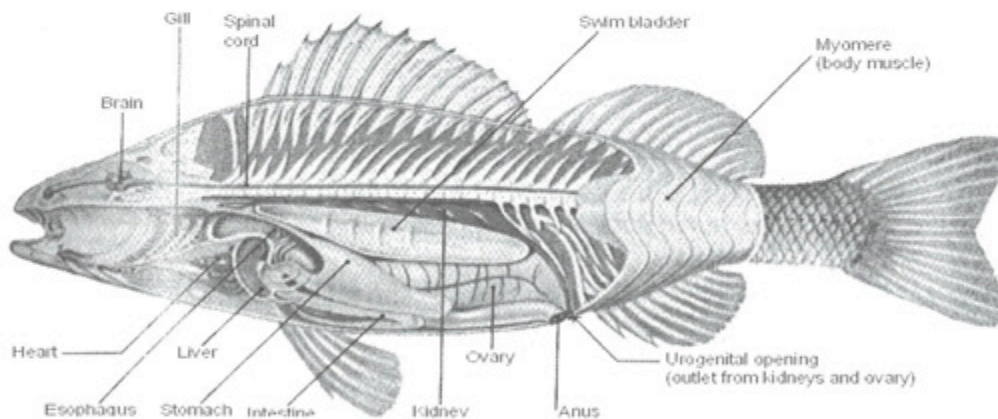
EXTERNAL ANATOMY

The way to begin to identify a fish is to take a good look at its size, shape, color pattern, and external anatomy. Take a moment to look at the illustration below. A fish's exterior is one of nature's most streamlined creations.



Fish swim by undulating the body from side to side. Dorsal (top), ventral (bottom), and pectoral (side) fins help in maneuvering, as do the caudal, or tail, fins. Most fish are covered in scales, with a slippery mucus coating on top. This mucus coating allows a fish to move through its environment more efficiently (water is heavier, "stickier," and more resistant to movement than air), and it also protects the fish from disease and infection. Some fish, such as catfish and eels, have this mucus coating but have no scales.

INTERNAL ANATOMY



A fish's interior has many of the same organs people have, including a skeleton, a brain, a heart, a nervous system, a liver (high in vitamin D), two kidneys, and a stomach. Fish do not have lungs. Instead, they depend on gills to take up the oxygen that is diffused in solution within the water as dissolved oxygen. (Humans extract oxygen with their lungs from other gases found in the air). Fish also have a swim bladder, a complex organ that involuntarily inflates and deflates with gas as the fish swims to different depths. The swim bladder's main function is to keep the fish "neutrally buoyant," that is, neither heavier nor lighter than the surrounding water.

FISH SENSES

A FISH: a cold-blooded, vertebrate animal adapted to living in water.

LATERAL LINE: The lateral line is a row of pores along the midline of either side of a fish's body, extending from just beneath the gill to the tail. The nerve endings in these pores pick up vibrations in the water and act as a kind of sixth sense, helping fish to determine the shape, speed, action, and direction of nearby objects. Small fish, such as perch and bluegills, use the sense to escape predators. Pike, walleyes, bass, large trout, and other predators rely on the lateral line to pursue baitfish. The lateral line also helps fish to swim smoothly in compact schools. The lateral line may be as important to a fish's survival as its eyes.

SIGHT: Like humans, fish see brightness and color, and they possess both rod and cone cells in their retinas. Cone cells are used for day vision and distinguishing between differing colors, while the rods are for night vision. Not surprisingly, day feeders tend to have more cone cells and night feeders tend to have more rod cells. Water filters out color, so fish in deep water cannot see the spectrum of colors visible at the surface. Because they see little or no color in the depths, fish respond instead to flashes of light reflected off predators or prey, or your lure.

The distance fish can see under water depends on water clarity. Some fish can see 100 feet or more in very clear water, though a more likely range for lake-dwelling fish is 10-20 feet. Be aware that fish can see you on the shore. Also don't forget that fish have no eyelids for bright light protection. Their eyes are laterally positioned, which helps them out in direct sun, but still, when it's very bright out you'll do well to fish in the shade.

HEARING: Fish have a keen sense of hearing, aided by the fact that water conducts sound better than the air. They lack external ears, but pick up sound directly through the bones of the head, particularly their inner ear bone, or otolith. Fish response to sound varies from species to species, but make no mistake: They can definitely hear you.

TASTE: Most fish can detect taste to some degree, though few species rely primarily on taste to find or identify food. Notable exceptions are the catfish family: their skin and especially their barbels have taste-sensitive cells that enable them to test food before eating it.

SMELL: Fish detect smell with great sensitivity through a nasal sac inside the snout. Salmon, hundreds of miles at sea, return to spawn by tracking the odor of the water from home streams. Smell also alerts fish to the presence of predators or prey. When attacked by a predator, a baitfish emits a chemical from its skin that warns other baitfish to flee. Predators such as pike, muskellunge, and walleye can distinguish smells of live or dead baitfish. Anglers can use this sense of smell to their advantage by applying certain scents to their lures.

TOUCH: Most species have a well-developed sense of touch. Some fish such as bass will mouth a soft plastic jig longer than a bucktail or feather jig, giving the angler more time to set the hook. Evidently, the soft plastic feels like real food.

THE FUN PART

SETTING THE HOOK



Setting the hook calls for a sharp rearward movement of the rod after all the slack line has been retrieved. If you're fishing with live bait, the hook is often concealed inside the offering. The purpose of that rearward tug is to cut through the bait and lodge the hook somewhere in the fish's mouth. Leaving a bit of the hook tip exposed is always a good idea. Also, knowing when to set the hook is as important as knowing how. This varies with the bait or lure you're using and will only come with experience.

When it comes to setting the hook, patience is always a virtue. You don't want to be too quick on the draw or you'll simply pull the bait

out of the fish's mouth. The biggest mistake many novice anglers make is to go into full hook-set mode after seeing just the slightest twitch from the bobber. Instead, wait until you see the bobber get pulled completely under the water: Then it's time to go for the hook set. By that time the fish has tasted the offering and is now convinced it's a meal. Of course one can also wait too long, to the point where the fish swallows the meal and the hook. But usually this is due to a complete lack of attention to your bobber or line.

Always pay attention to your line. You don't want any slack line leading to your bait: The slack prevents the action of the rod from being transmitted to the hook. So reel up your slack first, then give that sharp rearward tug to set the hook.

PLAYING THE FISH

Playing the fish is what the sport is all about. Once you have a fish hooked, keep the rod held high and all slack out of the line. A natural movement for a surface-feeding fish once hooked is to leap in the air and attempt to shake its head to dislodge the lure or hook. An angler must keep a tight line at all times to avoid losing the fish while leaping. Fish will also run with the line, sometimes right at you. Other times fish will hug the bottom. In order to land a bottom-hugging fish you'll need to pump the rod up and down to slowly bring fish up. For really big fish, reel in line while bowing forward, then lift up your body and rod together without reeling. (If you reel on the uplift you will spin your line and weaken it.) Bow, reel, and lift; bow, reel, and lift until the fish is tired. Don't jerk or panic. Play it cool.

Knowing your environment is a key to playing a fish. Brush, rocks, piers, docks, moss, etc., must be taken into consideration when playing a fish. Keep the line taut to keep a fish's head up, which will prevent the fish from gaining slack or getting into brush or rocks.

A REEL'S DRAG

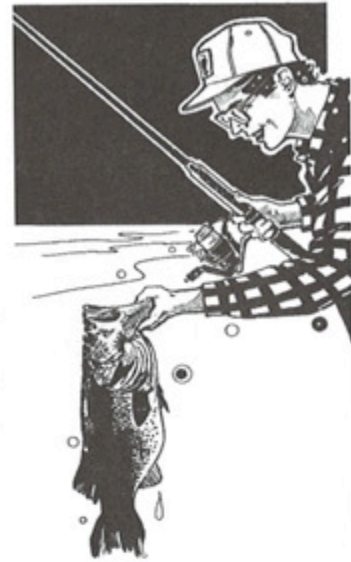
The drag on a reel is an important tool to the angler playing a fish. Most quality reels have a drag system built into them. The drag is an adjustable tension control that prevents the line from being pulled off the reel too quickly. On the other hand, if the drag is set too tightly, a strong fish could break the line or the rod when the fish pulls and tries to run. The drag should be set according to the weight of the line being used and the size of fish you intend to catch. The more "drag" you have, the more tension is on your line and the easier it is for a larger fish to snap the line. You'll find many explanations of drag in more

advanced manuals and online. Be aware of and experiment with it and you'll quickly learn to use it effectively.

LANDING THE FISH

Many a fish story has been told of how the big one got away and many times this will occur in the process of landing the fish. Several things determine the method or equipment you will use to land a fish, including the species of fish, the size of the fish, and whether you plan to keep or release the fish.

When landing a large fish, especially one with teeth, a gaff or a landing net is strongly recommended. If you plan to release the fish, use a net, as the gaff will often damage the gills. Always be ready for a last-minute surge by the fish. The sight of the boat or of you may spook a tired fish. And it's not a good idea to raise a fish into the boat or onto the bank by lifting it with the rod. This is a good way to lose a fish and damage your rod. Keep the fish in the water until the last minute. Use a landing net if you are fishing from a boat, particularly if the fish is large. Remember that fish are lighter in water than they are in the air.



HANDLING THE FISH

One thing to always remember while fishing is to **handle fish with care**, not only for your own safety but for the fish as well, particularly if you plan to release it. Many fish have developed spines and gill plates for self-protection, so you need to take great care when handling them. Also, it's a good idea to **wet your hands prior to handling fish to preserve the mucus coating that protects them from disease and allows them to move easily through the water column. Wet hands will remove less of this protective coating.**

Anglers use many methods to remove hooks. They have developed tools, such as fishing pliers and hook removers, to help with the job, but the hands are still what comes in contact with the fish, so knowing what and where to grab is very important.

Here are some handling hints for some of the different species you may catch:

PICKEREL/PIKE/TIGER MUSKELLUNGE: With their sharp teeth, these fish can cut you, so never place your fingers or hands in their mouths. Instead, slide your hand up under the gill cover, being careful not to touch the gills. This will get the fish to open its mouth and allow you to get your pliers or hook removers in there to remove the hook.



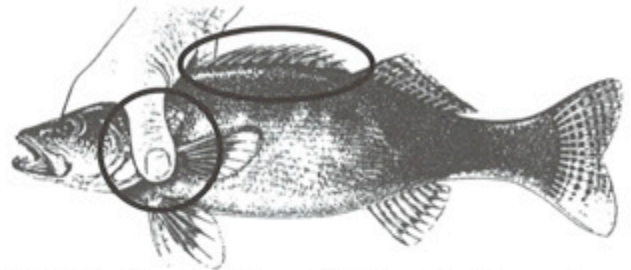
CATFISH FAMILY (Channel and White Catfish, Brown and Yellow Bullhead): These fish have three large spines - one on the dorsal fin and one in each pectoral fin - that can easily cause painful puncture wounds. Avoid this by placing the thumb and forefinger of your hand over the fish's head in a V-shape, making sure the pectoral spines are straight out. Now, with the dorsal spine between

your fingers and the fish's head in the palm of your hand, you can safely remove the hook.



SUNFISH: The main thing to be concerned with in handling these fish is the dorsal spines. Using the palm of your hand, start at the head and push the dorsal fin back and flat under your hand, at the same time grabbing the fish near the head. Remove your hook by hand or with pliers. **CALICO BASS (or CRAPPIE)** are also sunfish, but they can be larger, which allows them to be held by the lower lip/jaw as you would a bass. Remove the hook carefully for the fish's sake: They have very soft mouths.

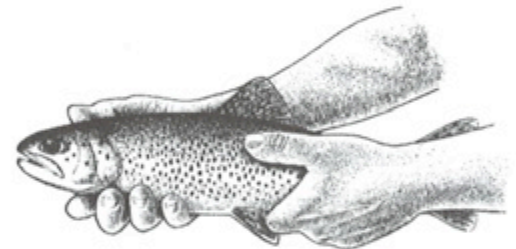
YELLOW PERCH AND WALLEYE: Watch out for very sharp gill plates as well as dorsal spines on these fish. Just as with sunfish, push the fins back with the edge or palm of your hand and, using the thumb and fingers, grab the fish at, but NOT in, the gills, avoiding the back edge of these plates. Remove the hook with pliers.



LARGEMOUTH AND SMALLMOUTH BASS: Handle these fish by the lower jaw. Bass do not like this feeling, however, and will put up a brief fight when they first feel your thumb inside their mouths, so be very careful not to get hooked by your own lure. Once you have a firm grip, simply remove the hook with your other hand or one of the many hook-removing tools. Remember, bass are members of the sunfish family and possess the same spiny dorsal fin that sunfish are so noted for.



TROUT: Trout do not have any fin spines (soft rayed) to worry about, but they do not fare well out of the water. Wet your hands and grip the fish around the body and fins and remove the hook by hand or with a tool. These fish survive best with minimal handling so return them to the water quickly.



WHAT TO DO ABOUT DEEP HOOKED OR GILL HOOKED FISH?

If you fish at all, even just a little, it's only a matter of time before you encounter this dilemma - "the fish swallowed the hook", or "the hook is stuck in the fish's gills". When possible it's always best to remove the hook in these situations - recent studies prove this to be true. The age old adage "just leave the hook in and it will rust out" is apparently erroneous, even in salt water. At the very least you should have a pair of needle nosed pliers or hemostats for this job, but even better there are a number of very good hook removing tools on the market that work far better than those basic tools (seek out the internet for videos on hook removal). And while you're at it use either **circle hooks** or long shank hooks like **aberdeen hooks** while fishing. The circle hooks are designed to catch fish in the lips better than any other hook, and while not always full proof they work better than most. And the long shank hooks give you more hook to grab with those tools in case of a deep hook or gill hook. And for all hooks it wouldn't hurt to "go barbless" meaning file off or crimp the barb off - this will allow for much easier hook removal. If you happen to be without any tools and or you just can't remove that hook cut the line. Better to do that than to keep prying and poking at the fish.

RELEASING THE FISH



Remember there are only two reasons to keep a fish: to eat it or to have it mounted by a taxidermist. If neither of these two options is for you, get the fish back into the water as quickly and with the least amount of handling as possible. The best way to release a fish is to do so without removing it from the water at all. Remember, fish have a slimy mucus coating (see "Handling the Fish," above), so, when you have to handle them, remember to wet your hands first.

Never pick up a fish by the gills. This can damage the gills, and, if you plan to release the fish, gill damage eventually kills. Also, you can cut your hand on the gill plates. Again, when you release a fish, do so quickly and with care. Don't let the fish flop around in the boat or on the bank. A properly-released fish can live to grow, thrive and potentially be caught again.

DO FISH FEEL PAIN?

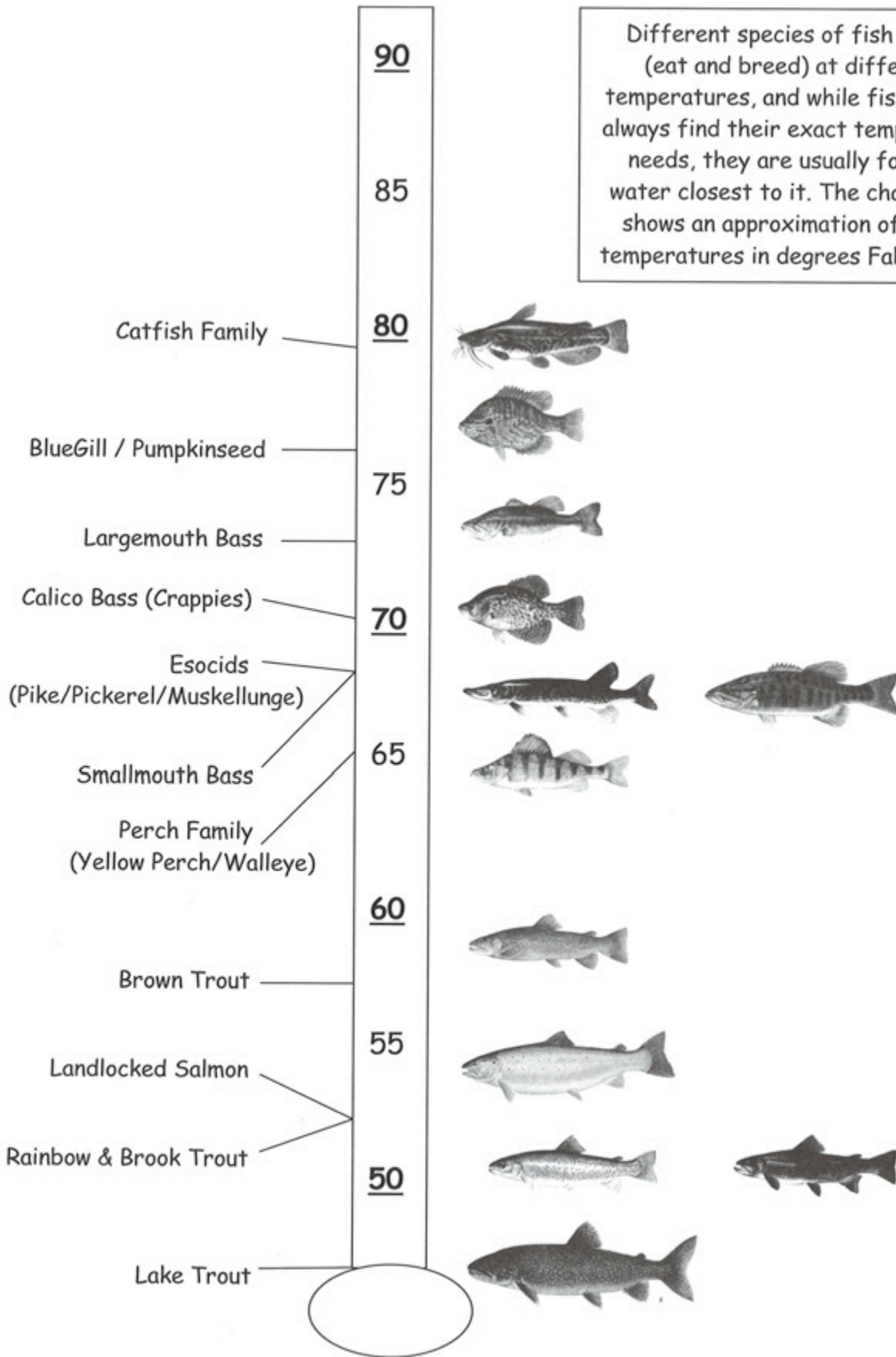
An often-asked question and one each of us has to deal with when partaking in any predator-prey relationship such as hunting or fishing. The best that modern science can tell us is that it's unlikely that fish can feel much, if any, pain.

The brains of vertebrate animals vary greatly, and those of cold-blooded animals like fish, frogs, snakes, and lizards are simpler than warm-blooded vertebrate animals like birds and mammals. In fact, fish have the simplest brains of all vertebrates. So the question really comes down to brain development. The human brain is highly developed (the most complex of all vertebrates) and has specialized regions within the cerebral hemispheres for pain activation (a conscious awareness for the generation of the pain experience), whereas a fish's brain is primitive by comparison, and has no specialized regions for pain. Basically, a fish is a brainstem-dominated organism, while the existence of humans and other more complex animals is dominated by the cerebral hemispheres - highly developed areas of the brain where pain is processed.

Observing a fish's behavior upon being hooked, one could conclude that the fish is experiencing pain. However, the fish is actually demonstrating a flight response, no differently from if it were trying to evade a predator. This is a protective reaction, and can occur from a range of stimuli associated with predators or other threats to which a fish automatically and quickly responds. So while the fish isn't likely to be experiencing pain or fear when it is hooked, this doesn't mean that it will not become stressed from the experience; we know that stress hormones are released during such times. Too much of this stress could harm the fish either initially or shortly thereafter. So, if it is your desire to practice "catch-and-release," it's a good idea not to play a fish out completely, to handle it as little as possible, and to return it to the water in short order.

TEMPERATURE PREFERENCES OF FISH

Different species of fish thrive (eat and breed) at different temperatures, and while fish cannot always find their exact temperature needs, they are usually found in water closest to it. The chart here shows an approximation of those temperatures in degrees Fahrenheit.



LIMITS IMPOSED

The Division of Fisheries & Wildlife has set minimum length and daily creel (the number of fish of a given species an angler can keep per day) limits on the following species. Consult a current copy of the *Massachusetts Fish and Wildlife Guide to Hunting, Fresh Water Fishing, and Trapping* to review these limits.



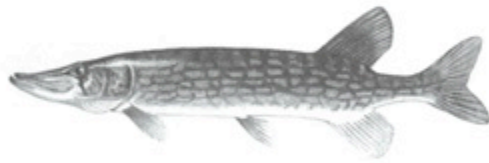
LARGEMOUTH BASS



SMALLMOUTH BASS



NORTHERN PIKE



CHAIN PICKEREL



TIGER MUSKELLUNGE



WALLEYE



LAKE TROUT



SALMON (LANDLOCKED & BROODSTOCK)



BROWN TROUT



RAINBOW TROUT



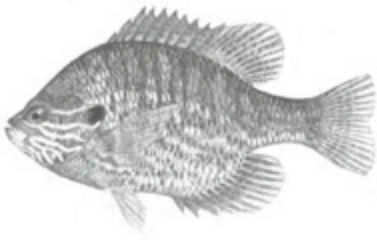
BROOK TROUT



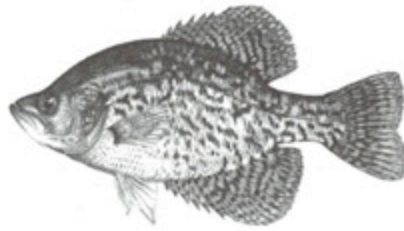
AMERICAN SHAD

NO LIMITS IMPOSED

Currently, there are no size or possession limits for the following species of fish in Massachusetts.*



PUMPKINSEED



BLACK CRAPPIE



BLUEGILL



YELLOW PERCH



WHITE PERCH



COMMON CARP



WHITE SUCKER



YELLOW BULLHEAD



BROWN BULLHEAD



WHITE CATFISH



CHANNEL CATFISH



AMERICAN EEL

*There are several other species without limits, including Rock Bass and Banded and Redbreast sunfish, as well as the smallest of the pickerel/pike family, the Redfin Pickerel. These few species are the smaller members of their larger families and less sought-after than those shown above.

ANGLER ETHICS

Ethics are not laws or regulations, but are a code of proper conduct. It means knowing the difference between right and wrong. It's how we define ourselves and the people we choose as friends. If you are an ethical person, you conform to certain standards of conduct. You know you want to be treated fairly and respectfully, and, in turn, you know how to treat others with fairness and respect.

In terms of fishing, ethics are how you act while enjoying your time on the water. Children who learn good angler ethics will be more likely to obey fish and game laws. They will respect wildlife and the outdoors and will be all-around better citizens.

ETHICAL ANGLERS:

1. **respect the outdoors. THEY DO NOT LITTER.** This includes not dropping gum or candy wrappers, food remains, bait containers, drink containers or, most especially, **fishing line**, in their fishing areas. Discarded fishing line is a huge problem: It looks ugly; wild animals get tangled in it; birds use it for nesting material, which later can kill nesting chicks; and people can get tripped up in it. Take away and discard any tangled line, and please remove any litter you happen to see. Your fishing areas will be so much better for it!
2. **respect other people's privacy and space.** They fish quietly so they do not frighten fish or disturb other people. They do not crowd someone else out of a fishing spot. And, conversely, they give up a good spot if they've already caught enough fish.
3. **always practice safe fishing.** They are careful when casting and always pick up discarded fishing hooks and lures.
4. **possess a fishing license if they are 15 years of age or older.** Fishing license fees are a vital source of revenue for the Division of Fisheries & Wildlife. Our many programs and much of our fisheries research is underwritten by the anglers who buy their license and enjoy their sport each year in Massachusetts, and we salute them.
5. **know and understand the fishing regulations.** This means they can identify what they catch, and know the size and number of fish it's legal to keep, as well as all other regulations pertaining to fishing. These laws provide for a sustainable fishery and more and better chances for more people to catch fish.
6. **release fish immediately if they do not intend to eat it or have it mounted by a taxidermist.**
7. **do not release any unused bait when they are done fishing.** The release of unused live bait into a pond or stream is potentially disastrous. You can introduce alien species with no natural enemies that compete with native fish and other animals, or you can undo the scientific guidance that fisheries managers provide to improve fishing for all.
8. **report law breakers.** If you see someone breaking a fish and wildlife law, **do not confront them.** Get as much information as you can, then call the Massachusetts Environmental Police at (800) 632-8075 to report the problem.

CLEANING OR FILLETING YOUR CATCH

Knowing how to properly clean, store and cook your fish is as important as knowing how to catch the fish. There are several different ways to clean and prepare fish. The method or technique used will depend on the species of fish, method of cooking, and personal preference. Learning to clean fish by trial and error can waste a lot of fish so you should learn some basic techniques (check some out online) and then perfect and modify them through practice to meet your needs. Below are two of the more standard methods.

CLEANING

Make a slice along the bottom from the vent near the tail to just under the gills, and remove the entrails, heart and organs. Cut off the head from behind the gills. Cut off the tail fin. Split open the fish and clean it with water. This method is used if one is going to cook the fish whole. Good for smaller tasty fish such as the brook trout.



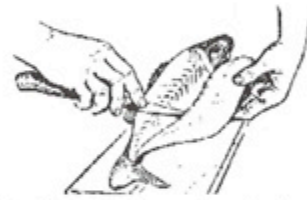
FILLETING



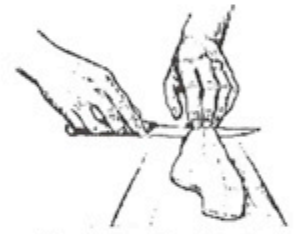
Make initial cut behind pectoral fin from backbone to stomach. Be careful not to puncture internal organs or sever the backbone.



Cut all along backbone down to ribcage



Continue cutting down and over the ribcage until entire fillet is free of fish



Take fillet and place skin side down. Insert knife between flesh and skin. Holding knife at an angle and using a sawing motion remove flesh from skin.

Filleting is a fast method of cleaning fish that, when done properly, provides a maximum amount of meat and a minimum amount of bones. A fillet knife, which has a long, slender, flexible blade, is needed for this procedure. On each side, cut from behind the gills, on an angle, slipping the knife under the meat along the backbone, and down through the stomach to the tail. Now cut alongside the backbone through the whole slab on either side, slicing the rib section away. At the tail put the blade between the skin and the meat and pull the skin off using the knife as a pressure point. Rinse the fillet in clean water then turn the fish over and repeat the process on the other side.

FISH CLEANING TOOLS

To clean fish, and get them ready for the skillet, a few basic tools are needed. There are two types of fish cleaning knives: fillet knives and skinning knives. **Fillet knives** are used for filleting fish. They have long, thin, flexible blades that bend to follow the contours of a fish. A **skinning knife** is any knife that has a sharp, strong blade. It is used for removing the head, tail, fins, and entrails. (Always use a sharp knife!) A few other tools will make the fish cleaning job that much easier - A **scaler** is a tool used for removing a fish's scales. If you plan to skin your fish, especially catfish, be sure to have a pair of fish **skinning pliers**. They have a specially designed jaw for gripping the slippery skin. **Skimming boards**, while not really necessary, can make the job of cleaning fish much easier because they hold the fish by the tail fin while you clean it.

BASIC FISHING GLOSSARY

- Adipose Fin** - a small, fleshy structure with no rays or spines, situated on the midline of the back, behind the dorsal fin and in front of the caudal fin on certain fish; best seen on trout, salmon, and catfish
- Anadromous** - term describing fish that live most of their adult lives in salt water, then migrate into freshwater rivers to spawn, e.g., Atlantic salmon
- Anal Fin** - the single fin situated behind the anus on the ventral (bottom) side of a fish
- Angler** - a person that fishes with a hook and line
- Anti-reverse Lever** - a lever that prevents a reel handle from turning backward as a fish tries to take line
- Backing** - a soft, strong fishing line, (braided Dacron) that is wound onto a reel (fly or ice reel) before the line
- Backlash** - fishing line tangled on a casting reel, caused by the line spool continuing to turn after the line has stopped coming off the reel
- Bail** - a wire loop-shaped device affixed to an open-faced reel that guides or spools the line back onto the reel
- Bait** - term given to anything that can be attached to a hook to fool a fish into biting (worms, frogs, shiners)
- Barb** - the opposite-facing second point (or spur) located after the main point on most fishing hooks
- Barbel** - a fleshy, flap-like or whisker-like appendage on fish (very small and hard to see on some minnows) found near the mouth; used as a sensory organ (a good example is seen on catfish)
- Bobber** - also called a float; attaches to the line above the hook and floats on the surface, allowing one to set the bait at a specific depth, and also acts as a strike or bite indicator
- Brackish** - water that is partly salty
- Casting** - the act of propelling the bait or lure into the water by using a fishing rod and reel
- Catadromous** - term describing fish that live most of their adult lives in freshwater, then migrate to the ocean to spawn, e.g., American eel
- Catch and Release** - fishing without keeping fish; to catch a fish, then to release it unharmed
- Caudal Peduncle** - the part of the body between the base of the anal fin and the base of the tail fin
- Caudal Fin** - tail fin of a fish
- Cold-Blooded** - a body temperature that is not internally regulated, but changes relative to a change in external temperature, such as in amphibians, reptiles, fish, or insects
- Dissolved Oxygen** - oxygen dissolved in the water; critical for fish survival, and measured in parts per million
- Dorsal Fin** - fin(s) situated on the midline of the back, having spines or rays, sometimes both.
- Drag** - tension system in fishing reels that prevents a fish from taking line off a reel too quickly
- Fillet** - boneless edible parts of a fish, typically the larger, lateral muscles
- Fillet Knife** - a knife with a long, thin, sharp blade, designed to take the meat off or "fillet a fish"
- Fin Ray** - a slender, rod-shaped structure that supports the membranes of the fins
- Fingerling** - a term used to describe a young fish that is roughly the size of an adult person's finger
- Gaff** - a large "j"-shaped, hook-like instrument with a long handle, used as an assist to landing larger fish
- Gill** - breathing organ located under a fish's operculum
- Gill Cover (or Operculum)** - the large, flat bone on the side of the head, covering the gills
- Guide** - circular rings attached to the shaft of a rod that the fishing line travels through
- Habitat** - the area or location where a plant or animal normally lives; "its habitat"
- Hip Boots** - Very tall boots that cover an angler from the feet to the upper thigh or hip area
- Jigging** - fishing a lure vertically while imparting an up-and-down motion with the rod
- Landing a Fish** - attempting to pull a fish from the water onto the land or into a boat; the final step in catching
- Lateral Line** - a series of sensory tubes and pores extending horizontally from head to tail along the side of a fish's body that contain nerve endings and detect pressure changes and vibration within the water column
- Leader** - a length of material (steel, monofilament, fluorocarbon) between the main fishing line and the lure or hook; often used to prevent toothy fish from breaking off the lure or bait
- Livewell** - a water-holding container built into a boat; designed to hold fish and keep them alive

Lure - any artificial bait tied to the fishing line; used to catch fish

Monofilament Line - a single, strong synthetic strand material used for fishing line

Natural Baits - any bait that is found in nature, such as worms, insects, fish, and certain amphibians

Open Face - a spinning reel that has the spool exposed

Operculum - the scientific name for the gill cover on a fish

Paired Fins - the pectoral and pelvic fins of a fish

Panfish - smaller fish, such as pumpkinseed or crappie, that fit in a pan and are good eating

Pectoral fins - the farthest forward or uppermost of the paired fins of a fish

Pelvic Fins - the paired fin located beneath or behind the pectoral fins of a fish

PFD - an abbreviation for Personal Flotation Device; also commonly called a life vest or life jacket

Playing a fish - the actual moments when the angler is "hooked up" and fighting a fish; the thrill of fishing

Practice Plug - a small, weighted object without hooks tied to the end of a line for practice casting

Pumping - a method of fighting a fish that involves raising the rod up to pull the fish, then quickly lowering the rod and reeling fast to take in the slack line

Push-Button Spinning Reel - referring to the large button on the top back end of a closed-face spinning reel that, when pushed, holds the line in place until enough pressure is exerted on the forward cast to let it go, allowing the line to spool out and the lure or bait to propel forward

Redd - a nest dug out of the bottom of the water column by certain spawning fish (salmon, black bass) for the purposes of egg-laying

Retrieve - turning the reel's handle to bring fishing line onto the reel's spool and draw back the lure or bait.

Rigging - the process of setting up a fishing rod and attaching the bait or lure

Scales - the many small plates that cover the body of most fish

School - a grouping in the water of fish of the same species

Setting the Hook - the act of embedding a hook in a fish's mouth; typically done by pulling the rod tip back

Shank - the longest part of a hook, between the eye and the bend

Shiners - in fishing terminology, shiners are a generic term given to a variety of small fish of the minnow (cyprinid) family that are used as bait

Sinkers - (or weights) are metal objects (preferably non-lead) with various designs that attach to the line near the hook to give more distance in the cast and to allow the bait to fall deeper in the water column

Snag - a structure within the water column (rock, log, plants) that hangs up or tangles the lure or hook

Snap Swivel - clasp-like device that turns (swivels), and is tied to the end of the line for attaching the terminal tackle; designed to prevent the line from twisting

Snelled Hook - a hook with a short length of leader attached with a loop in the end used to attach to a swivel

Spawn - the process of releasing eggs by a female fish and fertilizing with milt (or sperm) by a male fish

Spool - the part of the reel that holds the line

Strike - the moment a fish takes the bait or lure

Swim Bladder - (also referred to as air or gas bladder) internal gas-filled sac located below the vertebrae of most fish, allowing a fish to be neutrally buoyant

Tackle - fishing gear or equipment

Terminal Tackle - hooks, weights, bobbers, snap swivels, and lures attached on or near the end of the line

Test - fishing-line strength, or breaking strength as stated on the line manufacturer's label

Total Length - (of a fish) the straight-line distance from the most forward tip of the snout to the end of the tail fin, when the mouth is closed and the lobes of the tail fin are squeezed together

Treble Hook - a three-pointed hook used on many lures and, at times, for bait fishing

Trolling - a method of fishing where lures or bait affixed to the end of the fishing line are dragged behind or to the side of a moving boat at various depths, allowing the fisherman to cover a large area of water

Waders - waterproof clothing that covers an angler from the feet to the chest; for walking in water

Warm-Blooded - an internally-regulated (constant) body temperature, as in birds and mammals

Weedless - a hook or lure designed to allow it to pass through structure without snagging

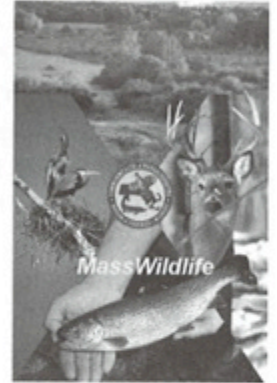


OTHER FISHING RESOURCES



Beyond these pages there are literally thousands of other resources for fishing information, starting first and foremost with the World Wide Web. No matter what the fishing topic or technique, you can find information about it on your electronic device of choice in both written and video format.

A great place to start your search is with **The Division of Fisheries & Wildlife** (*MassWildlife*), your state's inland fish and wildlife agency. Go to <http://www.mass.gov/eea/agencies/dfg/dfw/> click on "Hunting, Fishing, and Wildlife Watching" and you'll find information about where to go fishing; what, where, and when we stock; pond maps of public lakes and ponds; fish fact sheets; upcoming fishing-related programs; current fishing laws; and so much more. A subscription to our quarterly magazine, *Massachusetts Wildlife*, will provide useful and interesting articles on new fishing techniques, fisheries research, fishing people, and local fishing opportunities. It can be purchased inexpensively at the website above.



If you're just a beginner, check out the other events of the *MassWildlife Angler Education Program*. Our staff and dedicated cadre of volunteer instructors offer fishing programs for people of all ages. Information about this program can also be found on our website, just go to the "Education and Events" tab. The coordinator, Jim Lagacy, can be reached at (508) 389-6309, or by email at jim.lagacy@state.ma.us.

Don't discount a wonderful resource available to all of us: our local **LIBRARIES**. There you'll find "volumes" on the topic of fishing: in books and in magazines or periodicals, as well as on the World Wide Web through public access computer terminals.

And of course, the very best way to learn is by fishing!

There is absolutely no substitute for experience. Some of the very best times you can have in life are while fishing, and fishing with a friend or relative is even better, so share the experience, and pass it on. **FISHING IS ALWAYS TIME WELL SPENT!**



"No angler merely watches nature in a passive way. He enters into its very existence."

- John Bailey