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Tips For Better Catch and Release Fishing

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Artificial Lures (swimming plugs, surface poppers, jigs, etc.) are often rigged with multiple treble hooks. One disadvantage of these lures is that a fish struggling to escape capture will often hook itself with the remaining treble hooks, leading to additional injury. Anglers should try to use lures with a single hook if possible, or replace treble hooks with steel hooks (not stainless), or reduce the number of treble hooks on the lure.

Bait Fishing is a popular technique. However, the baited hook is often swallowed by the fish so that the hook is deeply imbedded in the stomach ("gut"). To reduce "gut hooking" a fish, anglers should set the hook immediately before the bait can be completely swallowed, or by using a single steel treble hook. When a fish is "gut hooked" the best solution is to cut the line as close to the hook eye as possible. This helps to prevent severe damage to the fish's internal organs, which can occur while trying to remove a hook. If the hook is not stainless steel, it will eventually corrode due to the fish's stomach acids.

Fishing tools used in hook removal can be extremely useful. Tools including needle nose pliers, hemostats, hook degorgers, and wire cutting pliers can be very helpful in reducing hook removal time.

Handling Methods depend on fishing technique used, how the fish is hooked, and size of the fish. Ideally, the fish should not be removed from the water. If fishing from a boat, try to prevent the fish from banging against the side or thrashing around the deck. Improper handling can cause internal injuries, skin abrasions, scale loss, or removal of the protective slime layer that prevents infection. When handling a fish make sure that your hands are wet to reduce slime loss.

To Release the Fish, grasp the tail firmly and place the fish back in the water and slowly move the fish back and forth. This motion will cause water to flow over the gills, restoring oxygen to the blood stream. Recovery time will vary according to size and health of the fish. As a general rule, the longer the fish fights and the higher the water and air temperature, the longer it will take the fish to recover.



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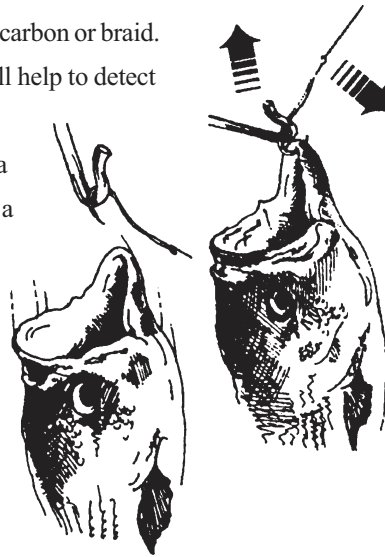
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Handling and Releasing Fish

Catch-and-release can be an effective way to conserve fish if certain precautions are observed. Whether fishermen choose to release fish or are required to do so by law, care should be taken as to maximize the fish's chance of survival.

- ◆ **Exhaustion** – Long fights can decrease survival due to the build-up of lactic acid in muscular tissues. When practicing catch-and-release fishing, it is prudent to use equipment matched for the size of the fish targeted to minimize these effects. Once landed, the time the fish spends out of water should be minimized and anglers should avoid touching the fish's gills. Unresponsive fish can often be “revived” by forcing water across the gills. This can be accomplished by moving the fish gently back and forth in the water.
- ◆ **Slime Loss** – Fish have a slime coating, which seals out infection. Rough handling can damage this protective coating. Shallow landing nets, preferably rubber or knotless nylon, can greatly reduce excessive slime loss. Anglers should always handle fish with a wet towel or hand, or rubber gloves. Care should be taken to prevent the fish from flopping around and causing further wounds or loss of slime.
- ◆ **Wounds** – Anglers can do a lot to minimize the damage of hook wounds both before and after the fish is hooked. Tools such as de-hookers and needle-nose pliers can help to ensure a quick release. Treble hooks should be avoided when practical. Use fishing lines made of fluorocarbon or braid. The increased sensitivity of these lines will help to detect bites sooner and minimize the chances of hooking fish deep (stomach or gullet). If a fish should swallow the hook, cut the line a short distance above the hook eye. Studies have shown that some fish are able to pass hooks when a short piece of leader is attached. Barbless and circle hooks have both been proven to minimize wounds and time out of water.





Sport Fish Program



Circle Hooks Save Fish

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David M. Peters, *Commissioner*
Executive Office of Environmental Affairs
Robert W. Gollodge, Jr., *Secretary*

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Marine Fisheries Station (508) 693-4372

Reducing Catch and Release Mortality



Photo by Terry Tessein

As part of our role in the active management of marine fisheries resources, and the desire to reduce unnecessary waste of those resources, the Massachusetts Division of Marine Fisheries is actively encouraging the use of circle hooks. We promote their use in fisheries that use baited hooks for the capture of striped bass, tunas, and other species where they can effectively reduce the mortality of released fish. This advice is based upon findings of research done by our own biologists and other researchers.

An example of a fishery where circle hooks can have a big impact is our local striped bass fishery. Massachusetts' anglers annually catch and release millions of striped bass. An estimated 8%

of those fish are lost to the population by mortality associated with that practice.

Two recent DMF research projects focused on the use of circle hooks when using bait for striped bass and tunas. In those experiments circle hooks showed a reduction in the rate of potential lethal wounding, and subsequent mortality. Estimates of lethal wounding were approximately 1.6 % for circle hooks and 27.5 % for j-hooks. Obviously, a considerable difference with circle hooks. Other researchers have had similar results.

Researchers have also estimated the effectiveness of circle hooks to hook fish that took natural baits. Results indicate that circle hooks catch slightly more fish than j-hooks. Even untended rods caught fish.

Because of the clear advantages of the use of circle hooks we strongly encourage their use by anglers. We also recommend that anglers learn more about how these hooks can benefit all fisheries resources.



J-hook Circle Hook

Questions and Answers about Circle Hooks

Q. What makes circle hooks different from J-hooks?

A. On a true circle hook the point is turned inward to a much greater degree than j-hooks (see figure). Because of this feature they must catch on an exposed “edge” to hook the fish. The vast majority of fish caught with circle hooks are caught on a jaw corner. J-hook points are more exposed and are able to lodge in a greater variety of sites, like the stomach, gills or esophagus.

Q. Are circle hooks more difficult to use?

A. While it is not as easy to get the bait onto a circle hook, by slowly rotating the hook point into the bait you should have fewer problems. When removing the hook from a fish the reverse action is needed. The hook needs to be rotated to back it out of the fish. Since most of the fish are jaw hooked the overall time spent removing hooks each day should be about the same or less than if you used j-hooks. Also, you should lose fewer hooks to swallowing of the bait or cutoffs from the occasional bluefish.

Q. Do I need to modify my angling technique to make circle hooks work effectively?

A. Since circle hooks are designed to penetrate the fishes jaw as the fish turns

away from the angler, we found that it is best to let the fish run with the bait and then stop the line to set the hook. If you want to use the rod to set the hook at this point you can do so, but it is not necessary. An untended rod hooked fish as effectively as our skilled anglers.

Q. Where can I get more information on circle hooks?

A. The popular press has produced several articles on their use and more are forthcoming. We also printed articles about our work with striped bass in our DMF Newsletter, Volume 19. Contact Paul Caruso (508) 990-2860 x 107 or Brad Chase (617) 727-1306 x 111 for additional information.

Q. Where can I purchase circle hooks?

A. Most tackle outlets along the coast now offer a variety of sizes and styles of circle hooks. We recommend you purchase them with a bend size that is comparable to the j-hook you now use, since manufacturers size circle hooks differently than j-hooks and different manufactures use different measuring standards. We also recommend the purchase of circle hooks without an offset-point since, like j-hooks, they catch fish in a wider variety of anatomical sites.



Massachusetts Division of Marine Fisheries

Responsible Angler Practices

Sustaining Our Fishery Resources



All recreational anglers should act as responsible stewards of the marine environment. We value our fisheries resources and by minimizing our impacts on fish populations we help preserve, protect, and enhance these resources for future years. While we often only consider the impact of our harvest (what we bring home), the improper catching, handling, and releasing of fish cause many unintentional deaths. For example, while only about 300,000 striped bass are harvested by Massachusetts anglers each year, about 500,000 released striped bass die as a result of handling stress and injuries. The **Responsible Angler** uses fishing techniques that reduce these unintended injuries and deaths. A little forethought and common sense can go a long way to lessening our impacts. Below are several simple steps that anglers can take to help conserve our fishery resources. Please keep these in mind during all your fishing trips.



Practice Proper Release Handling

Many unintended fish deaths and injuries can be prevented by following these simple handling rules for fish you intend to release:

- Be attentive and set the hook immediately to prevent the fish from swallowing the hook (setting the hook is not necessary with circle hooks).
- If the hook is swallowed, do not forcefully remove it. Cut the line off as close to the mouth as possible and then release the fish.
- Leave the fish in the water while removing the hook. If you need to remove the fish from the water, wet your hands or use a wet rag in order to preserve the protective mucous layer on the outside of the fish.
- Don't use the gills or eyes as a handhold. On larger fish, remember to support under the belly.
- Return the fish to the water head first. Revive a fatigued fish by supporting it in a swimming position in the water and gently move it back and forth until it can swim off.
- Use knotless landing nets. They're less damaging to the fish and tangle hooks less. Only use gaffs on fish you intend to keep.



Use Circle Hooks, Wide Gap Hooks, and Barbless Hooks

The use of circle, wide gap and barbless hooks greatly reduces the chance of lethal wounding for released fish. We highly recommend their use for bait fishing and for inattentive/inexperienced anglers to reduce post release mortality levels. Also, consider using single hooks in lieu of trebles or doubles – easier on the fish as well as the angler. If fishing with artificials, flatten the hook barb with a pair of pliers or file down the barb.



Use Tackle That Minimizes Unintended Harm to Fish

The use of larger hooks or baits can be used to avoid capture of small fish.

DO NOT USE Yo-Yo Rigs (natural bait rigs where the bait is weighted with embedded lead and other hardware and tackle is not attached directly to the line). Tie all tackle to the main line to prevent loss. Lost bait rigs will inevitably be consumed by other fish, birds or marine mammals, oftentimes with deadly results.



An angler properly supporting a large striped bass.



The "J" hook on the left is far more likely to gut-hook or gill-hook a fish than the circle hook on the right.



An assortment of lead weights and hardware found in the stomach of a large striped bass, resulting from the use of yo-yo rigs.

Responsible Angler Practices



No Wanton Waste

Carefully release all fish that are unwanted, or prohibited by regulation. Even so called “nuisance species” play a valuable role in the marine ecosystem. Don’t throw them into the dunes, break their backs, etc. It’s wasteful and gives the sport a bad name! For trophy size fish consider a picture for the wall or a release mount vs. killing a large fish for a skin mount. Bottom line: if you kill it, eat it!



Minimize Fight Time

Reduce the fight time. The longer the fish fights, the higher the stress level for the fish, which reduces the chances for recovery. Studies have shown that a fish that is played long and hard can die from the metabolic changes that take place in its body. Those that survive can take several days to return to their normal condition. Billfishes and tunas are particularly sensitive to fight time. Increased fight time is usually associated with tackle that is too small for the job. By using appropriately sized tackle, fight times can be reduced, diminishing stress induced mortality.



Don't Hurt the Habitat

There’s an old saying in fisheries science: Fish Need Habitat! Damage to fish habitat causes damage to fish populations. Physical disturbances (for example propeller dredging of mudflats, anchoring in eelgrass meadows, wading into active spawning beds) can cause short or long term damage to fish resources and/or their critical habitats. Think before you act – can my activity damage my favorite species habitat or the habitat of the other species upon which it depends? A little care goes a long way in sensitive habitats. Remember – you’re just one of many people using that habitat time and time again.



Properly Dispose of Trash and Unwanted Tackle

Marine debris such as synthetic fishing lines, plastic bait bags or containers, and six pack holders can all have undesirable effects on marine life. Fish, birds, marine mammals and sea turtles can swallow and die from ingesting these inedible materials or can become entangled in this debris, leading to wounding, starvation or immediate death. Properly dispose of all trash onshore. Remember—it ends up somewhere!



Limit Your Bag vs. Bag Your Limit

Most fish species have daily bag limits set by regulation (For example, 2 fish per day for striped bass; 10 fish per day for bluefish). But consider taking only what is needed for consumption in the near term rather than trying to catch the bag limit every trip. Do you really need to take 10 bluefish home? Better fresh fish for the table tonight than freezer burned fish tossed in the trash in 6 months.



Eelgrass meadows are important habitat for a host of fish species and their prey.



An example of propeller dredging through a mudflat



Certain species of sea turtles can be injured when they feed on discarded plastic bags, mistaking them for jellyfish.



Massachusetts Division of Marine Fisheries

Paul J. Diodati—Director

Deval L. Patrick— Governor

Ian A. Bowles, Secretary, EOEEA

Mary B. Griffin, Commissioner, Department of Fish and Game

www.mass.gov/marinefisheries



BEFORE YOU FISH

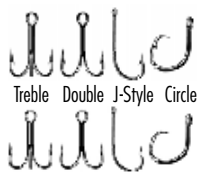
Heavier tackle (rod, reel and line) reduces fighting time and minimizes fish exhaustion.

Single hooks, in lieu of double or treble hooks, can greatly reduce dehooking time and fish injury.

Know your environment. Higher air and water temperatures and resulting lower dissolved oxygen levels contribute to physiological stress on fish.

Artificial lures are less prone to being swallowed by fish than baited hooks.

Go Barbless. Regardless of the wide array of hook styles available, barbless hooks reduce injury to fish. When using artificials, or even baited hooks, an easy no cost option is to convert conventional hooks to barbless hooks by pinching or filing the barbs. Some anglers then use rubber bands to help keep bait on the hook.



Have catch-and-release gear ready. This includes more than just dehooking devices. Keeping your camera handy reduces time out of the water for the fish.

TOOLS TO HAVE ON HAND

Master the art of the quick release.

The variety of dehooking devices available to today's angler is much greater than it once was. In the hands of an experienced fisherman, dehooking can be done in less than a second without removing the fish from the water.



Use clamp type (Boga™ style) grips instead of nets.

Clamp type fish handlers reduce the amount of contact with the protective slime coating on the fish's body. They can be especially helpful in controlling toothy fish when dehooking in the water. All nets cause abrasions. If you must use a net to control the fish, then **opt for rubber or knotless nets** which appear to cause fewer injuries.



Thanks to:

Florida Sea Grant
www.flseagrant.org

Aquatic Release Conservation
www.dehooker4arc.com

Wright and McGill, Co.
and Eagle Claw Hooks.

For more information on catch-and-release practices,
visit: catchandrelease.org



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All pictures/illustrations included herein are open access.



Catch-and-Release A Step-by-Step Guide

Release mortality is a term that applies to fish that do not survive after having been caught and released. In the summer flounder fishery, it is estimated that 10% of releases don't survive.

Many conservation organizations, regulators and concerned individuals are committed to reducing bycatch mortality in the recreational and commercial fishing sectors.

The information in this brochure is provided to help anglers do all they can to ensure the survival of the fish they release.

**Remember, the fish released today could
be the trophy caught tomorrow...**

CIRCLE HOOKS

What they are — how they work: Circle hooks have been used by commercial fishermen for decades due to their ability to efficiently catch fish. The principle behind the hook is simple. After the hook has been swallowed the fisherman applies pressure to the line, pulling the hook out of the stomach. The unique hook shape causes the hook to slide towards the point of resistance and embed itself in the jaw or in the corner of the fish's mouth. The actual curved shape of the hook keeps the hook from catching in the gut cavity or throat.

A circle hook is constructed so that the point of the hook is perpendicular to the shank of the hook. The design is not new, but is becoming increasingly popular among conservation-minded anglers. Among circle hook designs, **non-offset (in-line) circle hooks** have been shown to be more effective at reducing mortality than offset circle hooks.



When to use them: Circle hooks can be used on any species of fish caught on hook and line. Current research is being done on billfish while commercial (grouper/snapper/swordfish) fishermen have been successfully using the hooks for years.

How to use them:

Basic Rule: Do not put the hook in the bony portions of the bait.



Bottom Fishing: For bottom fishing simply replace your standard hook with a circle hook. When a fish eats the bait allow time for the fish to completely swallow the hook before steadily reeling in the line. **DO NOT** attempt to set the hook by sharply jerking the rod as this will pull the hook out of the fish's mouth.

Trolling: For trolling it is best to attach the hook to the bait with a rubber band or waxed string. This allows the hook to hang freely above the bait.



Live Baiting: For live bait simply hook the bait through a fleshy part of the fish. This allows the bait to tear loose when the fish strikes.

Hooking Techniques: There is only one technique. **DO NOT SET THE HOOK.** Steadily and slowly reel in the slack in the line until the hook sets itself in the fish. This requires some patience and restraint. Patience to make sure the fish has had time to swallow the bait and restraint in the initial urge to set the hook. The hook sets itself when you reel in the line. This is great for inexperienced anglers and for deep water fishing. One great place to start with circle hooks is on a rod that you leave in the rod holder.

The above information was taken from Fact Sheet SGEF-108 published by the Florida Sea Grant College Program with support from the National Oceanic and Atmospheric Administration, Office of Sea Grant, U.S. Department of Commerce. Published December 1999, revised March 2002. For more information, contact Florida Sea Grant at P.O. Box 110400, Gainesville, FL 32611-0400, 352-392-5870.

HANDLING YOUR CATCH

When releasing your catch, handling the fish should be kept to a minimum. Injury does not always mean bleeding and bruising. Simply touching a fish removes some of its protective slime layer and makes it more vulnerable to infection and disease.

- **Minimize fight time.** Longer fight times lead to fish exhaustion, especially in warm water or low oxygen conditions.
- **Minimize air exposure (time out of water).** Air exposure is a well documented factor in release mortality
- **Support the fish horizontally.** If you have to remove the fish from the water, say, for a picture, remember that fish live in a weightless environment and are not designed to be hung vertically from the jaw. This is especially important for large fish. Hold the fish with rubber gloves or wet hands.



- **Never touch a fish's gills or eyes.**

Dehooking. For most of the modern (T-handle) tools, hold the leader in one hand, run the dehooker down the line until it engages the crook of the hook, then lift the dehooker while pulling the leader down and away from the hook. Give it a little shake and the fish should drop right off the hook.



Cut the line. If a fish is deep hooked (swallowed the bait), you're likely to fatally injure the fish by trying to get the hook out of its gut. Instead, just cut the line as close to the hook as possible, and release it. Typically, the hook (unless it's stainless steel) will eventually work its way out or corrode and pass through the fish's system. For this reason please avoid stainless steel hooks.

DEEP THOUGHTS



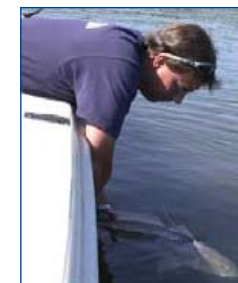
Bloated fish. Fish brought up from deep water often exhibit bulging eyes and a disgorged stomach (**not the swim bladder**), a result of the expansion of swim bladder gases as atmospheric pressure at the surface is much less than that at the depth where the fish was hooked. If the fish cannot swim back down on its own, at least two options are available.

1) Rapid return to the bottom with a weighted device. This method consists of using a rig such as the Shelton Fish Descender

(SFD™). This rig is essentially an inverted barbless hook with a heavy weight that is hooked through the thin membrane in the fish's lower jaw. Once it is set, the rig is free-spooled pulling the fish quickly back to the bottom. While there is no scientific consensus on which technique is better, venting (see below) appears to be associated with a greater risk of infection and the risk of puncturing vital organs.

2) Venting the expanded swim bladder

gases. This is done by inserting a hollow needle at a specific point on the side of the fish. Puncture the body wall at the tip of the pectoral fin until you hear the escape of trapped air. To improve the ease of insertion, the angle should be about 60-75 degrees toward the tail. If resistance is encountered, stop and try in a slightly different location or angle. Leave the needle in place until you are sure that most of the swelling or distension has been relieved. Never puncture the stomach or try to force the stomach back into the body. Clean the needle regularly and store it in a clean sandwich bag.



Reviving exhausted fish. If a fish is non-responsive or lethargic when it is about to be released, move the fish back and forth in the water in order to force oxygenated water over its gills. Once the fish struggles to swim away, that is the time to release it. Observe the condition of the released fish as a final step.



DEPARTMENT INFORMATION

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Tips for Catching and Releasing Fish

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By carefully following these simple instructions, you can release your fish unharmed.

1. **Time is of the essence.** Play and release the fish as quickly and carefully as possible. An exhausted fish may be too weak to recover.
2. **IMPORTANT: Keep the fish in the water as much as you can.** A fish out of water is suffocating, and may injure itself on rocks, etc. Try to keep the fish out of water no more than 15 seconds.
3. **Be gentle.** Wet your hands before handling any live fish. Keep your fingers away from the gills. Don't squeeze the fish. Small fish may be held gently around the middle; let them swim away once they've recovered. Larger fish may be held securely by the tail and bottom jaw. If a net is used, make sure it is fine-meshed to avoid injuries to the gills or eyes.
4. **Remove the hook with small pliers or a similar type tool.** If the hook is deeply embedded or in a sensitive area such as the gills or stomach, cut the leader close to the snout. Make an effort to use regular steel (bronzed) hooks to promote early disintegration. Do not use stainless or gold-plated hooks.
5. **To revive a fish once it is back in the water,** hold it in a swimming position in the water and move it gently back and forth until it is able to swim away.
6. **Lake trout (togue) often have expanded air bladders after being pulled up rapidly from deep water.** If the belly appears expanded, release the fish from the hook first, then gently press your thumb along the stomach near the paired belly fins and move it forward a few times to remove air from the bladder. Finally, proceed to revive and free the fish.

One good way to aid you in releasing your fish quickly is to use barbless hooks in the first place - or bend the barbs over - or simply file them off!

"If you enjoyed catching your fish, so will the next angler!"



Practicing Catch and Release (Striped Bass)

Being a Careful Angler

Fishing Reports

Conscientious outdoors people enjoy the complete sporting adventure beginning with preparation for success.

Prudent anglers spend valuable time before going fishing getting ready for the possibilities. It is part of the fun, and it helps ensure enjoyment on an outing. Few elements of an angler's life beg for more responsible preparation than when a fish must be returned unharmed into the water. Fishermen have a responsibility to the fish and to other anglers to be knowledgeable, prepared, and careful when playing, reviving, and releasing a fish. A dead discarded fish is a tragedy.

Plan Ahead

Most fish species are managed by seasons, size limits, and creel limits. Study the rules and keep them handy for quick reference when you are out fishing. Keep a measuring stick, tape, or ruler nearby with size limits clearly marked for quick size determination. Go out knowing that you might have to return under-sized or over-the-limit fish.

Be Prepared

Make sure your gear is strong enough for the challenge of the fish you will target. Fighting or playing a fish on tackle that is too light may result in an exhausted fish that is unable to recover and live to fight another day. When a fish is played to exhaustion, lactic acid builds up in its muscles. The same thing happens to humans when we exercise. It's the lactic acid buildup that makes us tired from heavy activity. In fish these increased levels of lactic acid can lead to acidosis, a condition that may reach a point of no return, and the fish will die. Warm water will exacerbate the condition. Low salinity levels in marine and estuarine waters, and low oxygen levels in warm waters complicate the survival challenges for fish. Tired and exhausted fish need plenty of dissolved oxygen to balance the pH of their blood. Cool, salty water is helpful to the health and revival of marine and estuarine fish, especially if they are large.

Mortality studies of striped bass by Maryland DNR Fisheries Service scientists show that fish larger than 24 inches are at the considerable risk when caught and released in warm, low-salinity waters. They may swim away when released, but the research shows that many do not recover and die hours later out of sight.

Catch and release mortality in mature striped bass increases depending on the temperature and salinity of the water. Stripers thrive best in cold, salty water. Additionally, DNR studies show that large differences between water and air temperature, which is a common condition in the dog days of summer, can be a significant risk factor in striped bass release mortality. Any capture event is stressful to a fish, so, please be careful and quick in returning and reviving your fish, particularly on hot summer days.

A fish needs oxygen quickly after being fought on a hook and line. The only way that will happen is with water flowing across the fish's gills. Lifting the fish from the water is much like your trying to hold your breath for a minute after running a 200 meter dash. It's very important to quickly unhook the fish while keeping it in the water as much as possible.

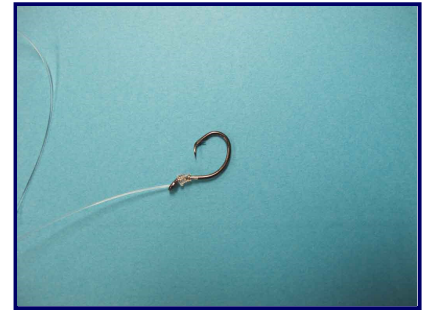
Let's look at some options that will speed this process.

- [Overview \(/fisheries/fishingreport/index.asp\)](/fisheries/fishingreport/index.asp)
- [Angler's Log \(/fisheries/fishingreport/log.asp\)](/fisheries/fishingreport/log.asp)
- [Archives \(http://www.dnr.state.md.us/fisheries/fishingreport/frarchives.asp\)](http://www.dnr.state.md.us/fisheries/fishingreport/frarchives.asp)
- [Hot Spot Map \(/fisheries/fishingreport/hot_spots.asp\)](/fisheries/fishingreport/hot_spots.asp)
- [2010 Fishing Guide \(/fisheries/fishing_guide/2010 MD Fishing Guide Final LowRes.pdf\) \(.pdf\)](/fisheries/fishing_guide/2010_MD_Fishing_Guide_Final_LowRes.pdf)

Terminal Tackle

Barbless hooks are easier to remove from fish: squash down the barbs on your hooks. If plugs have three sets of treble hooks, consider removing the front two hooks and replacing the tail treble with a single hook. When you are bait fishing, use circle hooks as they have proved to be lifesavers for hooked fish. While fishing with a circle hook, allow the fish to pick up the bait and swim off. As the line begins to gently tighten, the baited hook will settle in the corner of the fish's mouth, and there will be no need to aggressively set the hook. The hook sets itself.

When fishing with a J-style hook, set the hook quickly in order to minimize the potential of the fish swallowing the hook. A deeply hooked fish may suffer internal damage, which could result in death. Studies show that about 68 percent of deeply-hooked fish die from the damage to internal organs.



[\(ch.jpg\)](#) Circle hook. Click to enlarge.

Removing Hooks

Be prepared! Have the tools you need before you go fishing and keep them handy. There are many types of de-hooking tools on the market, and you can make a very functional J-style de-hooker using a bicycle spoke and a five-inch section of a broom stick. Simply drill a hole in the end of the broom stick and glue a section of the spoke into it. Use some pliers or a vice to bend the tip into a shallow J shape and use it to reverse the hook from the mouth of a fish. DNR field tests on striped bass have shown that a pig-tail styled de-hooker such as the ARC De-hooker ([dehooker4arc.com](#)) is best for retrieving deep hooks with a minimum amount of harm to the fish.

Make every effort to gently remove hooks from fish. A functional de-hooker is your best tool for the job. If you can't put your hands on your de-hooker or some long-nosed pliers, and the fish is very deeply hooked, your last option is to cut the line near the hook eye, revive and release the fish, and hope for the best; but know that the prospects of survival for that fish are not good. Circle hooks are the best option for minimizing stress and physical damage.



[\(De-Hooking.JPG\)](#) L-R two ARC dehookers, the X-Tool J-dehooker, and long-nosed fishing pliers. Click to enlarge.

Long-nosed pliers can also do the job while minimizing your fish handling and possibilities of injury to your hands and the fish. This is particularly helpful when releasing toothy fish such as bluefish and sharks. Freshwater trout and pan fish anglers often use surgical hemostats to remove hooks from their fish because the tool is easy to keep in a pocket and it does an excellent job of clamping and controlling the hook.

Landing a Fish

If you must net a fish to control it before reviving and releasing it, use a soft net of small mesh nylon. Avoid using the large mesh polypropylene landing nets that were once popular. The rough mesh tends to scuff off the protective coating of the fish. Scraping away this protective slime opens the fish up to infection and disease. Striped bass in the Chesapeake Bay with damaged slime layers have developed infections that show up as reddened spots or discolored areas. If you need to handle a fish before letting it go, use wet protective rubber gloves or a wet towel to minimize damage to the fish's slime coating. Placing a wet towel over the fish's eyes and holding the fish down with wet gloves can calm the fish. Letting a fish flop around on the deck of a boat or on the shore is obviously a bad thing to do to a fish you intend to release.

A lip-gripping device such as the BogaGrip ([eastabogataackle.com](#)) can be helpful in controlling a large fish while you perform a hook removal. However, large heavy fish can suffer internal and jaw damage from being supported vertically by the mouth. Fish grow and live in a relatively weightless environment supported by the surrounding water. They are not used to the strains associated with being out of the water. Use the lipping tool to control the fish, not for lifting.

Never hold fish you intend to release by putting your hand in the gills. Just like lungs, gills are tender organs that can hemorrhage easily

If you must have a photo of the fish, cradle and support it with both hands. Have the camera ready and make sure the photographer understands how to use the camera before the fish is brought to the boat or shore. Speed is the name of the game for the fish's sake. As a guide to mark the limit of time you can keep a fish out of the water, try holding your own breath while you handle the fish.

When returned to the water, most exhausted fish can be held back by the tail and moved forward to get water moving through the gills. In the case of ram breathers such as tuna and marlin hold the fish towards the forward movement of a slow moving boat to allow water to flow through the mouth and over the gills.



[\(0401sbassGM.jpg\)](#) Be sure to carefully support your fish while posing for that glamor shot. Click to enlarge.

A lip-gripping device such as the BogaGrip (eastabogataackle.com) can be helpful in controlling a large fish while you perform a hook removal. However, these same heavy fish can suffer internal and jaw damage from being supported vertically by the mouth. Fish grow and live in a relatively weightless environment supported by the surrounding water. They are not used to the strains associated with being out of the water. Use the lipping tool to control the fish, not for lifting. Never hold fish you intend to release by putting your hand in the gills. Just lungs, gills are tender organs that can hemorrhage easily. If you must have a photo of the fish, cradle and support it with both hands. Have the camera ready and make sure the photographer understands how to use the camera before the fish is brought to the boat or shore. Speed is the name of the game for the fish's sake. As a guide to mark the limit of time you can keep a fish out of the water, try holding your own breath while you handle the fish. When returned to the water, most exhausted fish can be held back by the tail and moved forward to get water moving through the gills. In the case of ram breathers such as tuna and marlin hold the fish towards the forward movement of a slow moving boat to allow water to

flow through the mouth and over the gills.

Review:

Plan Ahead

Know fishing regulations, minimum sizes and limits.

Use heavy tackle and bring fish in quickly.

Have dehookers, pliers, gloves, net, gripping devices, and camera ready.

If fishing from shore be prepared to wade into the water to meet the fish and avoid dragging it up onto dry sand.

Flatten barbs on hooks and use circle hooks when you fish with natural bait.

Avoid catch and release of medium and large striped bass in freshwater warmer than 65-70-Degrees.

Handling Your Catch

Keep your fish in water if possible.

Use rubber or soft mesh landing nets.

If you must handle fish:

- Use wet protective gloves.
- Do not lift fish vertically by jaw or gills.
- Do not allow fish flop on boat deck or ground.
- Hold fish horizontal with support.
- Return fish to water quickly.

Removing the Hook

- Remove hook whenever possible.
- Have proper tools handy and know how to use them.
- Be quick and careful.

Releasing the Fish

- Return fish quickly and gently.
- Move exhausted fish slowly through water to force water through the gills.



[\(0520sbassRWS.jpg\)](#) Don't keep the fish out of the water any longer than you can hold your own breath. Click to enlarge.



Use needle-nose pliers or a dehooking device to grip the hook securely.

- Use a pair of needle-nose pliers or a dehooking device to grip the hook and gently back the hook out. Do not twist the hook.
- If the hook has been swallowed, cut the fishing line; the hook may dissolve in the fish's digestive system.
- Gently slide the fish back into the water head first, allowing water to pass over its gills.



Protect the Environment

- Never leave or throw trash overboard. Take it ashore and properly dispose of it. This includes old fishing line, six-pack drink yokes, leaders and hooks, bottles, cans, plastic shopping bags or anything that could harm fish or wildlife.
- Avoid spilling or dumping pollutants such as oil and gasoline into the water or on land.
- Report any pollution or environmental damage to the appropriate authorities.
- Never harm marine mammals, birds or sea turtles, even if they are trying to steal your bait or catch.



Use a soft, wet towel to hold the fish. This protects the fish and protects your hand from the sharp dorsal fin

Be Nice

- Learn and obey fishing and boating laws and treat other anglers and boaters with courtesy.
- Call the N.C. Marine Patrol at 800-682-2632 if you witness fishing violations or are uncertain of any laws. Do not try to handle the situation yourself.



When you're fishing, be nice to others.



N.C. Division of Marine Fisheries
3441 Arendell St.
Morehead City NC 28557



A total of 500 of these brochures were printed at the cost of \$1.26 per copy.

Ethical Angling

A Guide to Responsible Fishing



People of all ages enjoy fishing for many reasons. It's been that way since time began.

Parents teach their children how to fish and those children teach their children how to fish in a never-ending cycle.

However, habitat destruction, degraded water quality and poor fishing habits can greatly impact fish populations. So it is your responsibility to do your part to help ensure sustainable fisheries for the future by becoming an ethical angler.

Ethical angling means more than just obeying regulations; it means fishing in a way that minimizes harm to the fish and their environment.

If each new generation of fishermen learns to be an ethical angler and change old, wasteful habits into new conservative ones, they will be helping to continue the cycle of parents teaching children to fish for generations to come.

Here are some tips for ethical angling:

Prepare for Your Trip

- Make sure you have a valid Coastal Recreational Fishing License or are covered under an exemption.
- Check the latest size and bag limits on the N.C. Division of Marine Fisheries website at www.ncdmf.net. These regulations can change frequently.
- Become familiar with the fish species commonly caught in North Carolina waters so that size and bag limits can be properly applied.

- Stock your tackle box with a pair of needle-nose pliers or a dehooking device, a tape measure, glove or towel.

While You Fish

- Use circle hooks to help prevent the fish from swallowing the hook. Pinch the barb down on all hooks.
- Do not fight a fish into exhaustion; instead tighten the drag and land it as quickly as possible.
- Practice Catch and Release. Do not take your entire bag limit if you are not going to consume them. Most released fish survive to be caught another day.
- Do not discard a previously caught legal fish for a larger legal fish to remain within the bag limit. This is called high-grading and is an unnecessary waste of fish.

Releasing Your Catch

- Handle the fish as little as possible and keep it out of the water as little as possible. Leave the fish in the water to release it if conditions are feasible.
- When handling the fish, use a wet towel or wet glove to gently but firmly grip the fish below the gills. This will keep the fish from thrashing around. The wet towel or glove will preserve the protective slime on the fish.



Example of a circle hook rig



Tackle box essentials: tape measure, dehooking tool, glove or towel

New York Guidelines for Releasing Fish

<http://www.dec.ny.gov/outdoor/9223.html>

Catching and Releasing Fish

While a fresh fish dinner represents the ideal conclusion to a fishing trip for many people, an increasing number of anglers prefer to return their catch to the water. Anglers do this so as to minimize depletion of a favorite fishery. Releasing larger game and panfish back to the water helps ensure that these mature, healthy fish can spawn again, and helps to perpetuate a fit population of quality size fish for future angling enjoyment.

When practicing catch and release, anglers can take a few simple steps to aid in the survival of released fish.

- Quickly play and land fish-- do not fight fish to exhaustion.
- Handle fish as little as possible and release them quickly-- unhook fish in water if possible.
- Handle fish carefully to avoid injury-- be sure to avoid contact with the gills, and do not squeeze fish or remove protective slime. Pike and walleyes shouldn't be gripped by the eye sockets.
- Consider using only artificial lures-- their use is mandatory on some waters.
- Use barbless hooks if you plan to release most of the fish you catch. When a fish is deeply hooked, do not try to remove the hook-- clip the leader instead.
- Trout and salmon caught from water depths greater than 30 feet often develop distended air bladders due to the sudden pressure reduction. Learn to release these fish by requesting the pamphlet "Fish for the Future" from DEC Regional Offices.

For those anglers who enjoy a good, fresh fish meal, remember to keep only those fish you will use, preferably a few medium-sized ones.

Circle Hooks

REDUCE
CATCH AND RELEASE
MORTALITY



**New Hampshire
Fish and Game Department**
www.wildlife.state.nh.us

COMPOSITE IMAGE © ETHAN GORDON PHOTO 2001

CIRCLE HOOKS REDUCE MORTALITY

To help conserve fisheries along the Atlantic coast, many sport anglers now release the fish they catch. Numbers of anglers also have switched from using standard j-hooks to circle hooks – and the benefits to our fisheries show great promise.

Studies Show They Save Fish

Recent studies conducted by marine officials in Massachusetts and Maryland compared the post-release death rates of striped bass caught with circle hooks to those caught with the standard j-hooks used by most anglers fishing with bait. When circle hooks were used, only 3% of the fish in the Massachusetts study and 0.8% in the Maryland study later died. By comparison, when j-hooks were used, 15.5% of the fish in the Massachusetts study and 9.1% in the Maryland study died after being released.

Based on these studies, the impact of bait fishermen switching to the use of circle hooks could be substantial. For example, in 1999 it was estimated that recreational anglers released over 12 million striped bass, with roughly one million

of those fish succumbing to hook and release mortality from bait, lure, and fly fishermen combined. If the use of circle hooks resulted in even a 50% reduction in overall hook and release mortality, roughly 500,000 fish would have been saved.

The Design is the Key

Experienced striped bass anglers have found that when fishing with baited circle hooks, the fish they catch almost always are hooked in the lip or jaw. This is due to the design of circle hooks. On a circle hook, the point is turned inward to a much greater degree than on a j-hook. Because of this feature, circle hooks must catch on an exposed edge of a fish's mouth, such as a corner of the jaw. Points on j-hooks, in contrast, are more exposed and are able to lodge in a greater number of places, including the gills, throat and stomach. Injuries to these internal organs often can be fatal.

Because of their design, you don't need to "set" a circle hook as you would a j-hook; you simply need to let the fish "take" the bait and then start reeling in the line to get a

hook-up. Many longtime anglers believe they actually catch more fish with circle hooks than j-hooks, once they've trained themselves to use them properly.

Many Styles and Sizes

Most tackle shops along New Hampshire's seacoast now offer circle hooks in various styles and sizes. Anglers experienced in the use of circle hooks recommend that you buy circle hooks with a bend size that is comparable to the j-hooks you now use. Also, fisheries managers recommend that you buy hooks without offset points, because such points hook fish in a wider variety of anatomical sites. Although originally developed for use with bait, several new salt-water lures and flies now feature circle hooks. If your favorite tackle shop doesn't offer these products, please ask them to start carrying them.

Part of Fish and Game's charge in managing marine fisheries is to reduce the unnecessary waste of our valued sport fish resources. Using circle hooks is one way anglers can help.

To learn more about circle hooks and their effectiveness, visit the World Wide Web at www.dnr.state.md.us/fisheries/recreational/crsb.html.

COMMON QUESTIONS... AND SOME ANSWERS:

Q. What makes circle hooks different from j-hooks?

A. On a circle hook the point is turned inward to a much greater degree than on a j-hook (see figure). The vast majority of fish caught with circle hooks are caught on a corner of the jaw. J-hook points are more exposed and are able to lodge in a greater variety of sites, like the stomach, gills or esophagus. This results in internal bleeding and, most commonly, death of the fish.



Q. Are circle hooks more difficult to use?

A. While circle hooks are slightly more difficult to bait, by slowly rotating the hook point into the bait you should have few problems. When removing the hook from a fish, the reverse action is needed. The hook needs to be rotated to back it out of the fish. Also, you should lose fewer hooks due to swallowing of the bait or cutoffs from other species, such as bluefish.

Q. Do I need to modify my angling technique to make circle hooks work effectively?

A. As a result of the way a circle hook works, you have to break one of the most basic angling habits – jerking the rod tip to set the hook. If you jerk the rod tip, you'll simply pull a circle hook out of the fish's mouth with little or no chance of a hook up. *Anglers experienced in using circle hooks say that you need to let the fish "take" the bait and then simply start reeling in the line to get a hook-up.*

Q. What kind of circle hooks should I buy?

A. We recommend you purchase them with a bend size comparable to the j-hooks you now use, since manufacturers size circle hooks differently than j-hooks and different manufacturers use different measuring standards. We also recommend the purchase of circle hooks without an offset-point since points on these hooks, like those on j-hooks, catch fish in a wider variety of anatomical sites.

Q. Where can I get more information on circle hooks?

A. Contact New Hampshire Fish and Game's Marine Fisheries Division at (603) 868-1095.



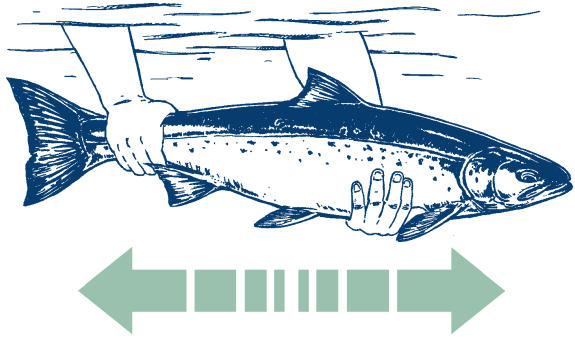
A primary goal with all the state's fisheries is to limit the number of released fish that die. Using circle hooks is one way anglers can help.



**New Hampshire
Fish and Game Department
Marine Fisheries Division**
225 Main Street, Durham, NH 03824
(603) 868-1095

Artificial Resuscitation

If the fish is too exhausted to swim away, hold the fish upright in the water. Gently move the fish forward and backward so that the water runs through the gills. This is artificial resuscitation and may take a few minutes, especially in lakes. When the fish revives, begins to struggle and can swim normally, then release it.



Catch Release

Catch and Release is an angling ethic developed over a period of years by anglers. Catch and release waters are those managed and regulated so the primary emphasis is high quality sport fishing, not for food.

FISHING for the FUTURE

BEGINS TODAY!



This program receives Federal financial assistance from the U.S. Fish and Wildlife Service. Under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972. The U.S. Department of the Interior and its bureaus prohibit discrimination on the basis of race, color, national origin, age, disability, age or sex (in educational programs). If you believe that you have been discriminated against in any program, activity, or facility, or if you desire additional information, please write to:

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4040 N. Fairfax Drive, Suite 130
Arlington, VA 22203



New Hampshire Fish and Game Department

2 Hazen Drive
Concord, NH 03301
(603) 271-3211
www.wildlife.state.nh.us

TIPS FOR RELEASING FISH



New Hampshire
Fish & Game Department

Why Practice Catch and Release

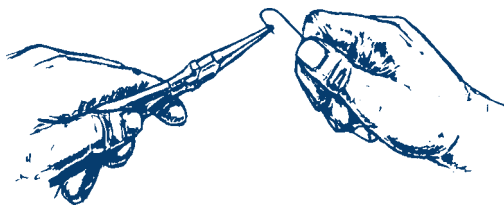
Survival of properly released fish is high.

Released fish are available for other anglers to enjoy.

An enjoyable fishing trip does not require keeping every fish that is caught.

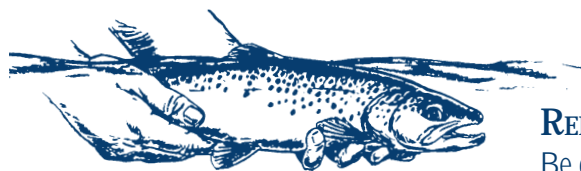
By following a few simple rules you can help released fish survive to be caught again. Remember, a fish that is properly handled will have the best chance for survival when released.

How to Properly Catch and Release Fish



IF YOU DON'T INTEND TO KEEP THE FISH, use a barbless hook or pinch down the hook barb with pliers. This facilitates quicker release and less stress to the fish.

PLAY THE FISH QUICKLY. A long fight stresses the fish and reduces the chance for survival. Avoid using nets and excessive handling.



RELEASE FISH without removing them from the water. Be gentle; keep fingers out of the gills.

TO REMOVE A HOOK, grasp the fly or lure by the shank and gently back the hook out of the fish's mouth. A small pair of pliers or a hook disgorger should help.





NEVER remove a deeply swallowed hook from the fish's throat or stomach. If the hook is not easily removed, cut the leader and leave the hook in the fish. It will eventually work free or rust. Don't use stainless steel or gold plated hooks.



Saltwater Fishing: TIPS FOR REDUCING INJURY TO FISH WHEN FISHING

Modern sport fishing causes injury to fish through the acts of hooking, landing and unhooking the catch. While this is generally not a problem for fish that will be kept for eating, serious injury to fish that are released back into the water can result in the death of that fish. Many fish are released each year, both because of management restrictions and due to the increasing popularity of catch-and-release-fishing. The responsible angler needs to employ practices that reduce unintentional injury to his or her quarry.

- Fish slime protects their skin. A dry rag or dry skin removes this protective coating. Always wet hands before handling fish. Better still, use a de-hooker to release the fish at boat-side without touching it. If you use a landing net, use a “knotless” one; the knots remove slime and scales and scratch fish skin.
- Never land a large fish that is thrashing wildly about (still “green”). Putting such a fish in your boat or on the beach creates a chance that the fish will injure itself with its movements.
- On the other hand, never fight a fish to exhaustion. Land it as quickly as possible without bringing in a “green” fish. Avoid the use of ultra-light tackle, unless making a serious attempt to set a record. Instead, use the heaviest tackle necessary to beat the fish while still allowing you to enjoy the experience.
- Always hold a fish firmly when handling to reduce the chance that you will drop it.
- Never “throw” a fish back into the water. Instead, lay it gently into the water and let it swim away. If necessary, move the fish back and forth to move water over its gills until it recovers and can swim off on its own.
- Fish that are to be released should be put back into the water at once. Snapshots should be taken quickly while the fish is out of the water for unhooking. Do not leave the fish out of water while looking for the camera!
- Avoid the use of treble hooks. Many lures used in saltwater are available with single hooks, or can be modified by removing the trebles and replacing them with singles. If replacing trebles is impractical, as with many swimming plugs, consider cutting off one or more of the hook points. Substitute single-hook lures in place of swimming plugs with multiple treble hooks. For example, some soft plastic lures have similar shapes and characteristics, but employ a single hook. 
- Use barb-less hooks when practical, but especially when catch-and-release fishing. Hooks with barbs can be modified by crushing the barbs down with heavy pliers or filing them off.
- Use non-offset circle hooks when bait fishing for many species. These hooks generally will set in the corner of the fish’s mouth and not in the gut or throat area. When fishing with these hooks, do not “set the hook.” Instead, let the line come tight and simply start reeling. 
- Do not gaff a fish unless it is your intention to kill and keep it.

For more information, contact:

NYSDEC Marine Resources
205 N Belle Mead Rd, Ste 1
E Setauket, NY 11733-3400
(631)444-0439
www.dec.state.ny.us





Catch-and-Release Fishing

By Erik Williams and Malia Schwartz
P1364



Every recreational angler in every part of the country must at one time or another release fish. Minimum size regulations require many anglers to release sub-legal-sized fish or "shorts." Rivers, lakes, and reservoirs are areas where catch and release are particularly important. The increasing popularity of recreational fishing has led to the problem of too many people, too few fish. In some areas, only catch-and-release fishing is allowed. The increase in recreational anglers is not just limited to inland fisheries. Marine recreational angling is having a great impact on certain fish stocks as well. One of the primary means of allowing all these anglers to continue fishing and maintain healthy fish stocks is catch and release. Catch and release, whether it is voluntary or required, must be done properly if it is to succeed in having the fish survive. This fact sheet should help anglers to release fish properly to increase the likelihood that the released fish will survive.

Why Catch and Release?

With the cost of a typical fishing trip, the uncertainties of success, and the appeal of a fish dinner, why should anglers want to adopt the practice of catch and release? Aside from certain regulations, such as bag limits or size limits, there are a number of good reasons for releasing a portion of the catch alive.

First, catch and release offers a sensible way to extend the fishing trip after a reasonable or legal catch limit has been reached. If the trip involves a guide or charter service, catch and release can prolong an enjoyable recreational opportunity, giving anglers more value for their money.

Second, several recent studies have suggested that as anglers gain expertise in a particular fishery or fishing technique, they often develop an interest in "limiting their kill instead of killing their limit."

Why Do Hooked Fish Die?

Fish that are caught and released may die for several reasons, but the

two primary causes are stress and wounding. Stress results from the fish fighting after being hooked. Internally, the physical exertion causes an oxygen deficit in the tissues, forcing the muscles to function anaerobically (without oxygen). This causes lactic acid to build up in the muscle tissue, and then to diffuse into the blood. Lactic acid acts as an acid in the blood, causing the pH of the blood to drop. Even slight changes in pH can cause major disruptions of the metabolic processes, ultimately killing the fish. If the fish is quickly released, its blood pH usually returns to normal and the fish will be unaffected. Some fish, after a long tow, may appear to live once released, but the imbalance in the blood chemistry may kill them as late as three days after being caught. In most cases, the means of preventing this type of mortality is to not keep the fish in action for a long period of time, unless the intent is to keep it.

The other primary cause of mortality is wounding by the hook. Injuries caused by hooks can range from very minor to lethal. The degree of injury is dependent on the location of the hook wound. Higher mortalities will occur in fish that are hooked in the gill or stomach areas, while lower mortalities occur in fish that are hooked in the lip, jaw, or cheek areas. Baited hooks are more likely to result in a gill or stomach hooking than artificial lures. Treble hooks, for obvious reasons, will result in more puncture wounds and subsequently higher mortalities. Barbless hooks facilitate release and decrease "out-of-water" time, but for reasons yet unclear, may not significantly reduce mortality, especially when used with bait.

There are other kinds of physiological stress that can lead to higher mortalities in released fish. Fish may not be able to adjust to changes in pressure or to higher surface water temperatures. Also, when a fish is handled or comes in contact with dry surfaces, such as landing nets or dry hands, its mucous layers – commonly called slime layers – may be partially removed, presenting an opportunity for bacteria or pathogens to invade the skin.

Burping and Puncturing

When certain fish are brought up from depths greater than 40 feet too quickly, their swim bladders, which normally control buoyancy, can overinflate from rapid depressurization. Burping is a technique used on a fish with an overinflated swim bladder. The fish is massaged in the belly region in an attempt to release the excess air in the swim bladder. Puncturing involves using a needle or ice pick to poke a hole in the fish's exposed swim bladder. Both of these techniques are currently being advocated in other parts of the country. However, if the procedure is not carried out correctly, more damage than good may be done to the fish.

The success of burping depends on the species of fish. Some fish, such as largemouth bass, perch, striped bass, cod, hake, and black sea bass, do not have a connection from their gut to their swim bladder. If a fish's gut is not connected to its swim bladder, then burping is impossible. Puncturing is a very controversial technique. To date, there is no

evidence that puncturing will increase a fish's chance of survival.

The best advice for releasing fish with overinflated swim bladders is to let them go as quickly as possible.

NEVER ATTEMPT TO BURP OR PUNCTURE A FISH WITHOUT KNOWING WHAT TO DO!

Catch-and-Release Guidelines

These guidelines provide basic information on the most beneficial catch-and-release methods for most small- to medium-sized freshwater and marine fish:

1. If you plan to fish with artificial lures, such as plugs and spoons, consider replacing treble hooks with single hooks. Single hooks are quicker and easier to remove, especially when dealing with such predatory fish as bluefish and northern pike. Consider pinching the barb on your hooks, since this will make releasing the fish much easier.
2. Plan your release strategy. Decide whether to keep or release any fish prior to angling or at least before removing the fish from the water. Familiarize yourself with any regulations in effect for the species targeted, and gather any items that will facilitate handling and releasing the fish.
3. When a fish is hooked, use a steady, deliberate retrieval technique. This can reduce the amount of stress a hooked fish undergoes when pulled up from the depths too quickly, or when physically exhausted from an overly slow retrieve.
4. Once you have decided on releasing the fish, avoid netting or even removing it from the water if possible. Use needle-nosed pliers to pry the hook from the fish while it is still in the water. Fish that can be lifted by the leader – the short length of line used to attach the end of the fishing line to the lure or hook – can easily be released over the rail using a "dehooker." These devices, whether homemade or purchased, are gaining in popularity in the bluefish industry – to avoid the fish's nasty teeth – and are useful for releasing a number of other species. A dehooker may simply be a metal rod with a handle at one end and a small upturned hook at the other end. If live bait or a lure is deeply embedded in the fish's gullet, cut the leader close to the fish's mouth and let the fish keep the hook. Studies have shown that fish can get rid of the hook up to 120 days later.
5. When landing the fish, it is important to minimize out-of-water time and any fish contact with surrounding surfaces or objects.
 - Avoid using landing nets if possible. If a landing net must be used, one with a neoprene bag rather than natural twine should be used. Neoprene removes less of the fish's mucous coat.
 - Do not use a gaff!

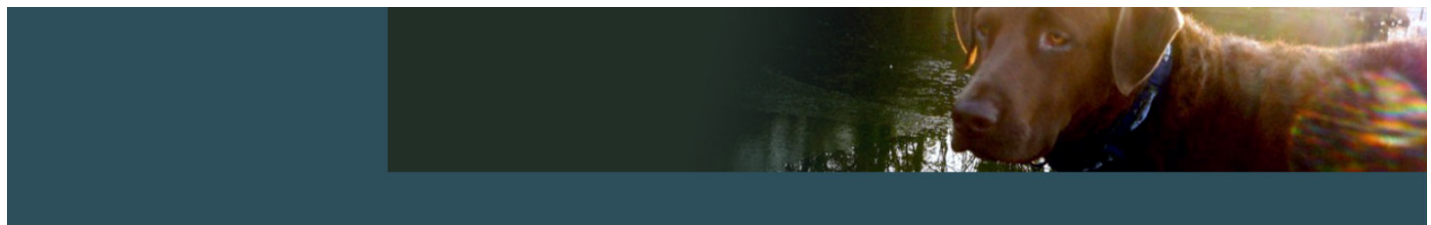
- Keep hands moistened. This helps prevent removal of the fish's natural protective mucous layer, and reduces the chance of subsequent infections in the fish's skin.
 - Minimize handling, particularly of the gills and soft underbelly. Gently prevent the fish from battering itself on surrounding hard surfaces. Place the fish on an old piece of foam cushion and place a wet rag or gloved hand over the fish's eye. These two actions can do much to subdue even unruly tuna and bluefish.
1. Return the fish to the water headfirst. In most cases, it is best to point the fish's head straight down and allow the fish to plunge down into the water.

Sources:

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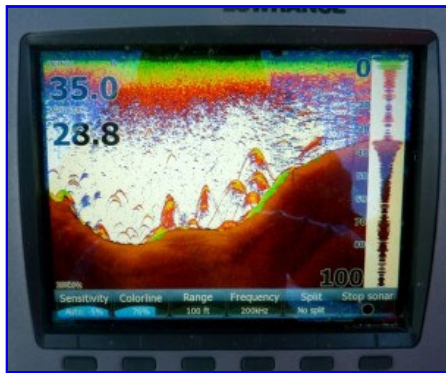
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[Sloe Perch Fizz?](#)

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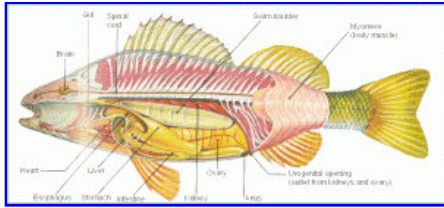


To fizz or not to fizz, that is the question a lot of yellow perch fishermen have been asking lately. As you can see by this sonar shot, yellow perch can hold in a wide range of depths this time of year in the Chesapeake Bay. At issue is that a few of the fish we catch from the deepest water come up with distended swim bladders. Since we inevitably land a few that are under the legal size limit, they have to be released. Because of all the air in their bodies, they can't always swim back down. This leaves them floating on top of the water where they are vulnerable to birds and other predators. The practice of puncturing a fishes swim bladder with a hypodermic needle or other sharp object to relieve pressure is called *fizzing*. It works for some species, but for others it isn't such a good idea. What about yellow perch? This week, I put the question to the experts. I spoke with several fisheries biologists I know, including some at the Maryland Department of Natural Resources. Here's what I learned.



The swim bladder in freshwater fish like yellow perch allows them to control their buoyancy by regulating the amount of gas in their bodies. Some fish have ducts in their air bladder that allow them to change depths quickly, but yellow perch do not. When they change depths the air has to be expelled through tiny capillaries. That's a very slow process. When fish are holding in deep water they have to use a lot more pressure to stay down. When they're brought up quickly by a net or hook and line, they don't have time to blow off the pressure, so the swim bladder becomes over-inflated. This can result in bulging eyes, protrusion of internal organs such as their stomachs through the mouth, damage to internal organs, hemorrhaging, and other problems.

When I heard that, my first thought was that I should probably reel the fish in slower. I was wrong. According to the scientists I talked to it would take hours or even days for the fish to adjust to such a dramatic change in pressure.



The problem with fizzing yellow perch is that their internal organs are arranged somewhat differently than other fish. Like their cousins the walleye, the vital organs in perch are highly compacted and very close together. There is a very high likelihood of puncturing other vital organs when fishermen attempt to fizz yellow perch. (Click on the diagram to the left to see a close-up of their internal organs.) There are research studies that show fish in the perch family are much more likely to die after fizzing. There may be some fishermen who are experienced and knowledgeable enough to fizz a perch properly, but even after 45 years of fish-handling experience, I'm not willing to take the risk.



So, what's a fisherman to do? Yellow perch are fun and easy to catch and absolutely delicious to eat. People all across the United States fish for perch through the cold-weather months. You might even call it a national winter pastime. Still, most of us don't really want to kill fish except the ones we plan to eat. Fortunately, according to the experts, there are some practices we can use to insure more fish stay alive.

First off, if we see that most of the fish we are catching out of deep water are undersized, there's really no reason to keep fishing there. If you're like me, you're usually out to catch the biggest fish you can find. In the winter months prior to the spawn, Chesapeake Bay perch can be found in depths from 20 to 65 feet. A fish caught from 20-30 feet is a lot more likely to survive than one caught deeper.

If we catch a fish with an over-extended swim bladder that we don't want to keep, it's better to just let it go quickly so it can swim back down.



Research shows that tissue around the swim bladder is often capable of withstanding a pronounced increase in size for a few minutes. Most fish can re-submerge if released within a few seconds.

When releasing yellow perch, we also need to employ the same careful catch techniques we would with other species. These include as little handling of the fish as possible, keeping the fish wet when removing the hook, not touching sensitive areas like the eyes and gills, and cutting the line on deeply hooked fish. More information about catch and release techniques can be found on [Maryland's Careful Catch](#) website. You might also want to check out the [Careful Catch Facebook page](#) to read up on happenings around the country.

I only fished once this past week, getting out for a few minutes with my friend Rich up near Owens Landing. Despite very cold weather and strong winds, we found nice perch in water that was 20-25 feet deep. Although we were slipping and sliding around on snow and ice on the deck of the boat, and constantly fighting ice build-up in our line guides, we managed to land a nice limit of yellow perch in relatively short order. This week's cold weather has iced over most of the upper Bay ramps, so fishing from boats is going to be tough for a while. Fortunately, there are plenty of docks and accessible shoreline in the upper bay area where we can still catch fish. Most have access to varying depths, so we can adjust our casts to look for the keepers and pull off the little guys in deep water. Be careful and good luck if you get out there!

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- [Gold Rush!](#)

Posted Friday, January 14th, 2011 at 1:53 pm

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Responses to “Sloe Perch Fizz?”

[Walleye Pete](#)

[January 14th, 2011 at 2:48 pm](#)

great article Shawn.....definetly a topic needed to be touched on. Great job!!!

Roger T

[January 14th, 2011 at 6:22 pm](#)

Shawn,Great job in getting this info out,no need in killing fish if we don't have have to.
Thanks for clarifying .

[Shawn](#)

[January 14th, 2011 at 6:22 pm](#)

Passing this along from DNR Bio-Fisheries Biologist Martin L. Gary with permission: Shawn – Excellent job articulating the best possible message to anglers. You hit the key points by telling anglers to not fizz/vent yellow perch because of the possibility of inadvertent damage to other organs, and instructing them to get the fish back in the water with minimal handling as quickly as possible. Because barotrauma occurs at depths of 30 feet or more (one atmosphere), my only other comment would be for anglers to employ common sense ethics and change their location (shallower) if they are frequently encountering perch with barotrauma. Apart from that, major kudos for another great article! V/R – Marty
3 hours ago ·

Bill M

[January 14th, 2011 at 6:46 pm](#)

Great information. Thanks for researching. I am a smarter man today!

[Shawn](#)

[January 14th, 2011 at 8:31 pm](#)

Appreciate the comments. Yes, there's always so much to learn. — Marty, I was doing my best to remember everything you said, along with some suggestions I got from another wildlife/fisheries guy down south. Everyone has said the same things almost word for word. Good info and thanks for the guidance.

Dan

[January 15th, 2011 at 12:21 am](#)

Shawn,

Thanks for the interesting read as always. I grew up in the Upper Peninsula of Michigan and have spent lots of time fishing for yellow perch, often through the ice. The biggest perch that I can remember catching came from deep water in a bay on Lake Michigan and like all perch taken from deep water they often came up with distended stomachs. Of course with a creel limit of 50 and no size limit we never worried much about releasing fish. I do have other experience dealing with barotrauma however, fishing for grouper off the West coast of Florida. As I am sure you are aware venting is a common practice in that fishery and venting tools are required gear when fishing for reef species. In reading about the best venting practices I came across some sources that advocate release weights in place of venting. Although I have never tried it, and I am not sure how well it would work on small fish like perch it could be worth the experiment. There are commercially available devices (<http://git-r-down.com/>) but you could certainly make your own with a 3-4 oz. bank sinker and a simple downward facing hook. You just need something that will keep the fish with the weight as it is being lowered and then release it with a jerk on the line.

Good luck with the perch fishing, and thanks for spreading the word as always on sensible fishing practices. Hopefully I will be able to make a trip to the head of the bay myself within the next few weeks, but this weekend is being dedicated to some local bluegills through the ice. Hopefully they are hungry, I am pretty sure they haven't seen a jig in at least 2 months.

Gerald Eldreth

[January 15th, 2011 at 7:22 am](#)

Shawn,

Thanks for all your research on this subject and helping to keep us on the right road. We put the word out at our monthly CCA meeting on the proper release methods and have made changes to keep this fishery alive and truly world class. Again thanks for all you do man! Your one in a million.

Bugsy

[January 16th, 2011 at 7:41 pm](#)

Take it easy on Rich will ya? He looks frozen!

Dave Sikorski

[January 17th, 2011 at 7:35 pm](#)

Great articles on Yellow Perch Shawn.

I'm headed up on Wednesday to see Mike and do a little perchin.

I tried today on an eastern shore river after duck hunting, and got a hit on a soft plastic drop shot rig. I never hooked anything, and finally decided a nap in the warm truck was a better idea than fishing.

Thanks for teaching me something today and getting the word out to MD's anglers.

-Dave Sikorski

Leave a Reply

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Virginia Marine Resources Commission

Handling and Releasing Fish

1. Plan ahead. Minimize stress and exhaustion by using tackle strong enough to land fish quickly. Set hooks quickly to minimize the opportunity for fish to swallow hooks and avoid the use of treble hooks. When practical, bend down the barbs on hooks or use barbless hooks. When using bait consider the use of circle hooks, which minimize the possibility of "deep-hooking" fish.
2. Minimize the handling of fish, and do not touch the eyes or gills. Large fish are best released by leaving them in the water and removing the hooks. Small fish should be brought on board and handled with a damp towel or damp cotton gloves, which will minimize damage to the fish's skin and protective slime coating. Control the fish, gently but firmly, so it cannot "flop" around and cause itself any further injury. Do not use a gaff to boat large fish; consider using a large net.
3. Use the right tools to remove the hooks. Needlenose pliers work well for fish hooked in the mouth, while a deep-throat dehooker or disgorger should be used for fish hooked deeply in the throat. Cut the leader close to the fish's mouth for fish hooked deeply in soft tissue areas (stomach, eg.) or if hook removal is not possible. Never pull or jerk on the leader to remove a hook.
4. Release fish gently, and if the fish is stressed or exhausted, revive it by gently moving it forward through the water until it is able to swim off.

***In the interest of good sportsmanship
and good conservation ... keep only
what you need ... release the rest.***



Virginia Department of Game and Inland Fisheries

Game/Sport Fish Regulations

Virginia Game Fish

"Game fish" as defined by the Code of Virginia means and includes trout, all of the sunfish family (including largemouth bass, smallmouth bass and spotted bass, rock bass, bream, bluegill and crappie), walleye, white bass, chain pickerel, muskellunge, northern pike and striped bass.

Seasons

There is a continuous, year-round season for all freshwater game and nongame fish, with the following exceptions:

1. Special times and limited closures for trout ([designated stocked trout waters](#), [Trout Heritage Waters](#), [Urban Program Waters](#), [Blue Ridge Parkway](#), and [Fee Fishing Areas](#)) and
2. Certain seasons for special methods to take [nongame fish](#).

Regulations for anadromous (coastal) striped bass, alewife and blueback herring above and below the fall line, in tidal rivers of the Chesapeake Bay; and anadromous (coastal) American shad and hickory shad, and all other saltwater fish below the fall line, in tidal rivers of the Chesapeake Bay, are set by the [Virginia Marine Resources Commission](#). For more information call 1-800-541-4646.

Fall Line

The Fall Line is defined as the following landmarks:

- Rappahannock River: Rt. 1 Bridge
- Mattaponi River: Rt. 360 Bridge
- Pamunkey River: Rt. 360 Bridge
- Chickahominy River: Walkers Dam
- James River: 14th Street Bridge
- Occoquan River: I-95 Bridge.

Catch-And-Release Fishing

It is often necessary to release a fish because it is too small, illegal to keep, or you just don't want to take it home to eat. In some cases, releasing fish unharmed is a conservation measure that will assist in helping to maintain and build population abundance and size. The Department of Game and Inland Fisheries encourages anglers who practice catch and release fishing to use a few simple precautions when doing so. Using the tips below will help to assure that the fish you release will survive to bite again another day.





- When catching a fish, play it quickly and keep the fish in the water as much as possible while handling. Avoid the use of a net in landing the fish and release it quickly to avoid exhaustion.
- Handle the fish gently and as little as possible. Do not put your fingers in its eyes or gills. Avoid wiping

the slime or scales off the fish; this reduces their survival by making them more susceptible to disease or infection.

- Remove hook promptly using needlenose pliers or a "hook out" device. If the hook is too deep or hooked in the stomach or throat, cut the line and leave the hook in. The hook will dissolve without harming the fish.
- Carefully revive the fish if it appears exhausted by holding it upright and moving it gently forward so water runs over the gills. Release the fish when it begins to struggle and is able to swim.
- Do not hold fish in a live well and later decide to release it. If you are going to release a fish, do so right away.
- With a little care and by following the guidelines set above, you can give released fish a better chance of survival.
- See the ["Qualifying a Trophy Fish by Length and Photo"](#) option for Trophy Fish Awards.

Creel and Length Limits

The table of [Creel and Length Limits](#) (PDF) give statewide creel and length limits for major sport fish, and exceptions for major rivers and lakes. Regulations for many smaller lakes and boat access areas are posted on site, and posted regulations are in effect (see "D" under [Department Owned or Controlled Lakes, Ponds, Streams or Boat Access Sites](#)).

- [Table of Creel and Length Limits](#) (PDF)
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