



RELEASING YOUR CATCH

(Revised, October 2000)

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Recreational anglers are increasingly releasing part or all of their catch. As more fish species are managed by minimum and even maximum size limits, regulatory releases are more common. Growing numbers of anglers are also voluntarily releasing some of their catch that may have been legally kept. Some voluntary releases are made to prolong a fishing trip. Other anglers keep only "trophy" fish or enough fish for one meal. Their intention is to leave more fish in the water to grow to larger, more desirable sizes.

Neither regulatory nor voluntary releases work if the fish released die. At worst, release mortalities can result in overharvest, even though the fish aren't kept. At best, the result is waste of a valuable resource. Released fish may not die until days after their release. Fish that are captured and released may die for three reasons: angling stress, wounding or handling.

Angling stress occurs during the fish's fight after hooking. The vigorous physical exertion causes lactic acid wastes to build up in the fish's muscles. This in turn leads to blood acidification which can disrupt the metabolism of the fish. If a fish isn't able to get its blood chemistry balanced back to prestress levels, it may die, perhaps as long as 72 hours after the catch.

The longer a fish is played, the more lactic acid is built up in the fish. Many fishermen like to use a light tackle to "give the fish a fighting chance." This doesn't fit together with catch and release fishing. **If the catch is expected to be released, anglers should use heavy enough tackle to bring the fish in quickly.** It is also important to remember that larger fish produce more lactic acid and often have lower survival after release than smaller fish.

Wounds are most often caused by hooks. Highest mortalities come from gill and stomach hookings, followed by intermediate rates in the lower jaw and eye areas. Lowest mortality occurs with hooking in the upper lip or jaw or the corner of the mouth. **One of the most effective methods of directing where fish are hooked is with the use of circle hooks.** These hooks, which are most effective with natural bait, usually result in hooking in the corner of the mouth. While removal of circle hooks is a little tricky, it can quickly be done with a dehooker as shown on the front side of this fact sheet or a set of pliers.

Generally speaking, fish taken with live or natural bait are hooked deeper than those on artificial bait. **If an angler plans to release his catch, he should avoid letting the fish run with the bait and swallow it before setting the hook.**

Surprisingly, treble hooks usually cause less damage to fish than single hooks because fish are usually not hooked as deep. This has been verified for speckled trout and redfish by biologists with the Louisiana Department of Wildlife and Fisheries. Finally barbless hooks produce the least damage, both because the wound is smaller and less handling is required to unhook the fish.

Fish are very capable of rejecting hooks, even those in the stomach or gullet. Interestingly, while stainless steel hooks won't rust out as quickly as hooks such as tin/cadmium, mortality is lower with stainless, probably because of less galvanic action.

Many fish, especially snappers and groupers caught from waters more than 70 feet deep experience depressurization. As water pressure decreases during retrieval, expanding gases in the fishes' air bladders forces their stomachs out of their mouths. When released, these fish float helplessly on the surface. Eventually, compensation occurs and the fish is able to dive, if it isn't attacked by a predator first.

Anglers are often tempted to puncture what they think is the air bladder protruding from the mouth. **This is the stomach and it should not be punctured, as doing so will kill the fish.** The air bladder can be punctured and vented through the side of the fish with a hollow needle, if the angler has developed the skills needed to locate the bladder. Incorrect puncturing will kill the fish.

Handling damage should always be minimized. Cut leaders for deep hooked fish as close to the mouth as possible. Fish small enough to be picked up by the leader should be unhooked with a dehooking device. Use wet hands to handle the fish if the fish has to be handled and never let the fish come into contact with dry surfaces. Dry hands and surfaces remove the mucus layers of the fish, allowing bacteria to invade the skin.

Don't use a gaff on fish to be released, and if a landing net must be used, neoprene or knotless twines are best. Minimize the time out of the water. If the fish are to be tagged, have all tagging materials at hand.

Return fish to the water gently and if possible, headfirst. If the fish fails to revive and swim away, the angler should recover it. Then, with one hand under the bottom of the fish behind the gill area and the other holding the fish ahead of its tail, the fish should be deliberately moved backward and forward to force water over its gills. This should be repeated until the fish shows signs of recovery. Large fish, such as tunas or sharks, can be gently towed beside the boat for tagging. This will force water flow over their gills, helping to revive the fish.