Catch and Release Fishing

National Park Service
U.S. Department of the Interior

Natural Resource Program Center
Water Resources Division

Help Promote Native Species through Catch and Release Fishing

Native to California, the Pacific Northwest and Alaska, rainbow trout have historically been stocked in many parks. Photo by Eric Engbretson, USFWS.

Why Catch and Release?

The National Park Service strives to maintain park resources in a natural, unaltered condition. Native fish contribute to nutrient recycling and help maintain natural ecosystem processes when they live out their entire lifecycle, from spawning to death, in the aquatic system. Catch and release fishing improves native fish populations by allowing more fish to remain and reproduce in the ecosystem. This practice provides an opportunity for increasing numbers of anglers to enjoy fishing and to successfully catch fish. Releasing all native fish caught while in a national park will ensure that enjoyment of this recreation opportunity will last for generations to come.

What is a Native Fish?

Any species that has occurred within that water body or may occur as a result of natural processes and was not introduced by humans or circumstances that are a result of human activity.

What is a Non-native Fish?

Any species that did not historically occur within that water body and was introduced by humans or circumstances that resulted from human activity. Both native and non-native fish may reproduce naturally within a water body and have self-sustaining populations.

Native versus Non-native Fish

The early history of national park fishery management involved frequent stocking of non-native fish, such as rainbow trout in the east and brook trout in the west, to increase fish numbers and diversity, and to enhance recreational fishing. High alpine lakes and other locations, where fish had not occurred historically, also became habitat for non-native fish.

As scientific knowledge and understanding of natural ecosystems evolved, managers of protected natural areas realized that the introduction of non-native fish often results in alteration of the natural aquatic ecosystem. Introduced fish frequently out-compete native fish for food and habitat, reducing or eliminating the distribution and abundance of native fish.

The National Park Service no longer stocks for recreational fishing in natural areas. Instead, the National Park Service relies on natural reproduction and careful management of fishing activities to sustain populations and fishing opportunities. However, early stocking practices have left their legacy in many park waters. Non-native fish inhabit many aquatic ecosystems, disrupting natural processes.

As a fisherman, you can help. Please keep all non-native fish allowed by the applicable state's fishing regulations while releasing native species. This will help restore fish abundance in favor of native species. Ask at the visitor center for a listing of native and non-native fish species within the park.

Why protect native species?

The National Park Service provides fishing opportunities for wild native species in their natural environment. Congress established the National Park Service to protect and preserve outstanding examples of our nation's natural and cultural resources. That mission requires that the NPS manage those areas to conserve native species and natural ecosystem processes unimpaired for present and future generations. Opportunities abound outside national parks to fish for non-native fish or even abundant, artificially stocked native fish.

Won't Keeping Non-Natives Reduce My Opportunity to Catch Fish?

Not usually. Keeping non-native fish may reduce your chances of catching that non-native species within that lake or stream in the future, but it will potentially enhance your opportunity to catch a native fish there. Non-native fish are typically stocked into or invade native fish habitat. Stocking of non-natives was often done under the misconception that non-native fish could co-exist with native species and that there would be twice as many fish available to recreational anglers. This is seldom the case. Non-native species typically displace native species or greatly reduce their numbers. Removal of non-native fish can help native fish regain a finhold in their own habitat and enhance angling opportunities for native species. When protected from competition with non-native species, native species are often abundant.

Fishing in Willow Creek, Alaska. Photo by Ronald Laubenstein, USFWS.

Important Elements of Successful Catch & Release Fishing

Not all fish survive when caught and released. However, proper catch and release methods can result in a very high survival rate. For anglers choosing to catch and release, the following tackle, landing, handling, and quick release methods are recommended.

Tackle
Gear type is perhaps the most important factor affecting whether a fish will survive being caught and released.

Use artificial lures or flies—Use of bait often results in a deeply ingested hook and mortality upon removal.

Use rod, reel, and line of sufficient strength to quickly land the fish—Long struggles may significantly increase mortality rate.

Use properly sized single circle or barbless hooks—Single hooks are typically more easily removed than treble hooks and usually result in less handling time and reduced injury to both anglers and fish.

Landing the Fish
Avoid playing fish to exhaustion—Lactic acid buildup in muscle tissues will reduce fish survival. More lactic acid accumulates the longer a fish is played.

Use a landing net—This reduces handling time, avoids injury potential and reduces stress to the fish. Landing nets with small, soft or knotless mesh are best.

Avoid injury—Keep your fish in deep water until it is netted or released. Fish landed in shallow water can injure themselves by thrashing around. This causes loss of mucus or skin damage, which can affect survival.

Handling your Catch
Avoid removal from water—Removing fish from the water can result in suffocation and/or internal injury depending on fish size, removal duration, and handling technique. Avoid allowing a fish to thrash around on shore or in the boat.

Use wet hands or wet gloves—Wet hands or gloves will help reduce loss of a fish's protective mucus. Mucus helps the fish fight fungal growth and other skin diseases.

Keep fish properly supported—Avoid removing large fish from the support of the surrounding water any more than necessary. When lifting, cradle the fish gently with one hand under the belly and the other hand near its tail.

Avoid squeezing—Squeezing can easily cause damage to internal organs and muscle tissue. This can best be avoided by not removing the fish from the net until you are ready to let it go.

Avoid touching the gills—Gills are a particularly sensitive and fragile organ that can be easily damaged. Any fish bleeding from the gills has a poor chance of survival and should probably be retained.

Hook removal
Keep fish wet and calm—Remove the hook quickly while allowing the fish to remain as calm as possible in the water. Keeping your fish contained in the net during hook removal can reduce the need for squeezing and additional injury.

Use the right tool—Needle-nosed pliers or hemostats are an essential tool for quick and efficient hook removal. Various hook removers are also commercially available.

If necessary, leave the hook!—If the fish is hooked deeply or the hook cannot be easily removed just leave it embedded. Cut your line as close to the hook as possible. Forged steel hooks deteriorate within months and often will not interfere with feeding.

Reviving your Catch
Avoid early release. Hold until revived—Revive your fish by holding it upright underwater. Support the fish gently from underneath. Ensure it is ventilating and has regained its equilibrium before release. Hold the fish until it swims forcefully away on its own.

Orient into the current but avoid too fast or turbulent areas—Facing the fish into the current allows water to pass over the gills allowing the fish to "catch it's breath." Consider the need to move the fish to calmer water where it can swim easily away on its own without being swept away or injured by fast moving or turbulent water. In lakes or other still water bodies, move fish gently back and forth to force water over the gills if the fish does not appear to be ventilating.

Guidance for Photographing Your Catch

If you are releasing your fish, a photo will be the only record of your catch. Following these procedures will not only improve your photographs but will also help ensure survival of your catch. Photographing your catch should be preplanned and accomplished quickly to prevent the injury or death of the fish. Keep your fish wet and calm until you are ready for the photograph. Crouch down near the water surface to avoid lifting the fish far from the water. Have the photographer pre-position and focus the camera before lifting your fish. When all is ready, hold your fish firmly by the tail while placing the other hand under its belly (avoid touching the gill area). Wait for the fish to become accustomed to your touch. When the fish has calmed, lift it briefly out (or better yet partly out) of the water and quickly capture the image. If multiple images are planned, calm the fish in the water before lifting it again.

Demonstrated method for catch photo-documentation with introduced brown trout.

These recommendations were compiled from a variety of informational sources and materials available through:
The U.S. Fish and Wildlife Service, Trout Unlimited, the Alaska Department of Fish and Game, The David Suzuki Foundation, and numerous other web sites.