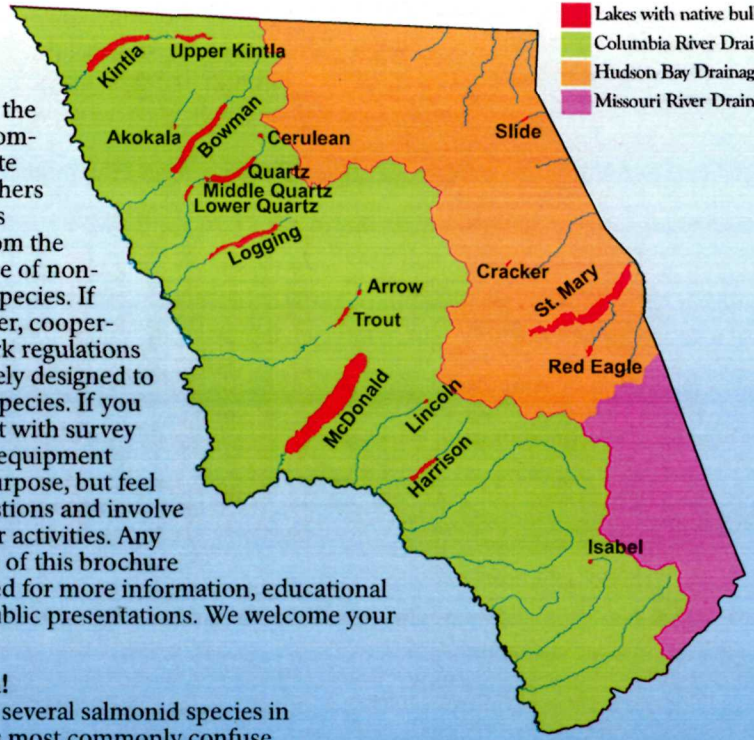
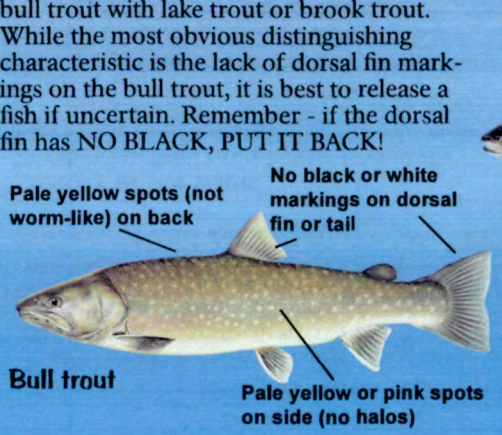
How Can You Help?

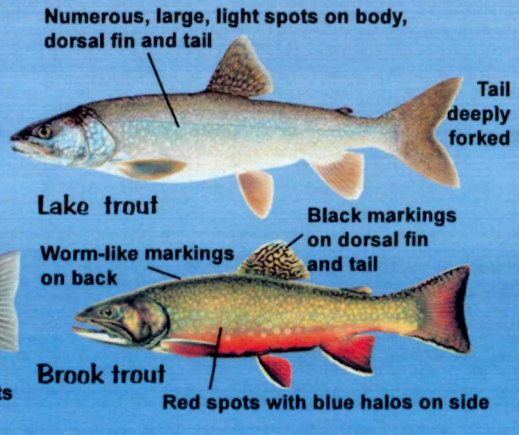
Help us spread the word in your community! Educate yourself and others about the issues and impacts from the growing menace of non-native aquatic species. If you are an angler, cooperate with the park regulations as they are largely designed to protect native species. If you come in contact with survey crews, nets, or equipment respect their purpose, but feel free to ask questions and involve yourself in their activities. Any of the sponsors of this brochure can be contacted for more information, educational materials, or public presentations. We welcome your support!



Know the fish!

While there are several salmonid species in Glacier, anglers most commonly confuse bull trout with lake trout or brook trout. While the most obvious distinguishing characteristic is the lack of dorsal fin markings on the bull trout, it is best to release a fish if uncertain. Remember - if the dorsal fin has NO BLACK, PUT IT BACK!





The Fish Species of Glacier National Park

Federally listed as threatened

Montana species of special concern

		Columbia River Drainage	Hudson Bay Drainage	Missouri River Drainage
Native				
SALMONIDS				
Westslope cutthroat trout	*Oncorhynchus clarki lewisi*			
Bull trout	*Salvelinus confluentus*			
Lake trout	*Salvelinus namaycush* *			
Mountain whitefish	*Prosopium williamsoni*			
Pygmy whitefish	*Prosopium coulteri*			
Lake whitefish	*Coregonus clupeaformis* *			
MINNOWS				
Redside shiner	*Richardsonius balteatus*			
Peamouth	*Mylocheilus caurinus*			
Northern pikeminnow	*Ptychocheilus oregonensis*			
Fathead minnow	*Pimephales promelas*			
Longnose dace	*Rhinichthys cataractae*			
SUCKERS				
Longnose sucker	*Catostomus catostomus*			
White sucker	*Catostomus commersoni*			
Largescale sucker	*Catostomus marcrocheilus*			
SCULPINS				
Slimy sculpin	*Cottus cognatus*			
Shorthead sculpin	*Cottus confusus*			
Spoonhead sculpin	*Cottus ricei*			
Mottled Sculpin	*Cottus bairdi*			
OTHERS				
Burbot	*Lota lota*			
Northern pike	*Esox lucius*			
Trout-perch	*Percopsis omiscomaycus*			
Non-Native				
SALMONIDS				
Rainbow trout	*Oncorhynchus mykiss*			
Brook trout	*Salvelinus fontinalis*			
Kokanee	*Oncorhynchus nerka*			
Yellowstone cutthroat trout	*Oncorhynchus clarki bouvieri*			
Arctic grayling	*Thymallus arcticus*			

*Native in the Hudson Bay Drainage, introduced in the Columbia River Drainage.

As a direct result of the last ice age, Glacier National Park today harbors very distinct native fish communities in each of its three major watersheds (see map). Despite widespread introductions of non-native trout species early in the 20th century, some of which established and prospered, maintaining and restoring the integrity of remaining native aquatic communities remains a very important goal.

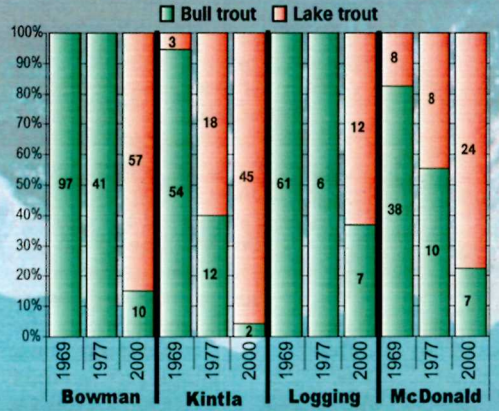
Preserving Glacier's Native Bull Trout

A cooperative effort by Glacier National Park, the National Parks Conservation Association, the U.S. Fish and Wildlife Service and the University of Montana/National Park Service Rocky Mountain Cooperative Ecosystems Study Unit

Glacier National Park is one of America's last strongholds of native fish and wildlife, but that distinction is at risk today. After 10,000 years of dominance, Glacier's greatest aquatic predator is vanishing from beneath the surface of the lakes on the western slopes of the Continental Divide. In just 30 years, Glacier's native bull trout populations have plummeted to the point that their survival is in jeopardy. The decline of bull trout in the Park's westside lakes is directly related to the invasion and establishment of non-native lake trout. Scientists, managers, and concerned citizens are working together to understand how best to re-establish the bull trout and restore the native biological integrity to Glacier's aquatic systems.

History of the issue:

Problems for bull trout began around the turn of the twentieth century. Introduction of non-native fish by federal and state agencies was undertaken to satisfy the growing population of sport and commercial fishermen. After 10,000 years of adaptation without competition, native bull trout were forced to compete with a growing population of non-native lake trout for the top slot on the aquatic food chain. In this competition, the bull trout have several disadvantages. Lake trout produce more offspring and typically spawn every year in the relatively safe lake environment. Bull trout, on the other hand, often spawn only every other year and may migrate as far as 150 miles upstream from lakes to spawn. The young spend up to three years in their birth stream before migrating back to the lake. Bull trout require cold water and a broader range of habitat over which to spawn and grow than lake trout. Due to population declines throughout its range, the U.S. Fish and Wildlife Service listed the bull trout as threatened under the Endangered Species Act in 1998.



A decrease in bull trout (green) and an increase in lake trout (orange) can be seen in this graph. Bars show the combined percent species composition of gillnet sampling on Kintla, Bowman, Quartz, Logging and McDonald Lakes, by year. Numbers within the bars represent the actual numbers of each species collected during sampling.

Bull trout populations decline in Glacier National Park:

By 1992, the number of spawning redds for bull trout in eight streams in the North and Middle Forks of the Flathead River drainages declined dramatically, suggesting that there were fewer bull trout migrating up from Flathead Lake to traditional spawning grounds in or near Glacier National Park. In 1969, 1977 and 2000, the Park and Fish and Wildlife Service conducted gill net surveys in five of Glacier's lakes (Kintla, Bowman, Quartz, Logging and McDonald). With the exception of Quartz Lake (where lake trout have not yet been found) the expansion of lake trout and corresponding decrease in bull trout has been dramatic since 1969 (see chart at left).

What next?

The significance of the declining presence of native bull trout has repercussions that reverberate through the aquatic environment and the human community. The following steps provide a framework for maintaining, restoring and preserving bull trout populations inside Glacier National Park. Developing financial and political support for this framework is critical to our success.

Issue 1. Documenting the bull trout legacy: The memories of the bull trout's reign begin to fade with the passing of each member of the Flathead Valley's older generation. Archives of anecdotal data, historical artifacts, photographs and interviews with retired employees and anglers are used to document the history of bull trout, preserving a valuable part of our natural history and cultural heritage. Outreach materials for use by rangers and interpretive staff are being produced with details on the park's native fishery and the challenges facing the bull trout.

Issue 2. Habitat and life history research in Glacier Park: Research on lakes in the Park help provide a baseline on bull trout habitat and ecological interactions, particularly with lake trout. Results will guide a long-term management strategy for the recovery of bull trout and other native fish species, such as westslope cutthroat trout.

Issue 3. Reducing the lake trout threat: With the body of research already accumulated and the ongoing studies being conducted in Glacier Park, the push to address the lake trout threat is gaining momentum. Management actions in the future should focus on safeguarding existing bull trout strongholds while controlling lake trout population in lakes where bull trout are in decline. Glacier National Park must coordinate efforts and priorities with other state, federal, and tribal agencies to manage the Flathead system as an interconnected unit, not a set of unrelated parts.

It is the policy of Glacier National Park to allow fishing where bull trout occur in association with westslope cutthroat or other non-native trout species. Any bull trout inadvertently hooked must be played and handled as gently as possible and rapidly returned to the water.