

MONTANA ARCTIC GRAYLING: STATUS, CONCERNS, AND ANTIDOTES

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Arctic grayling (*Thymallus arcticus*) have a holarctic distribution in northern latitudes of North America and Asia. Montana Arctic grayling represent the most southerly distributed populations of the species. Species existing at the periphery of their range are often more susceptible to extinction due to habitat and environmental changes. Historic distribution and abundance of fluvial (permanently stream dwelling) Arctic grayling has decreased due to a variety of human caused and environmental factors that have imperiled the future existence of the species in Montana. The last remaining fluvial population exists in the Big Hole River representing ~ 4 percent of the native range in Montana. Population abundance and distribution of Arctic grayling in the Big Hole River has declined substantially. Assessing the factors that have contributed to the decline of grayling is essential to focus restoration efforts. This presentation will provide current population abundance, distribution, age structure, and genetic demographics of the Big Hole River grayling population. Habitat limitations, climatic fluctuations, and potential effects of non-native fishes will be evaluated with regards to grayling restoration efforts. This presentation also introduced a basin wide conservation strategy that is essential to ensure persistence of grayling in Montana.