

## EVOLUTION AND HISTORICAL DISTRIBUTION OF FISHES IN WESTERN NORTH AMERICA IN RELATION TO THE SINKS DRAINAGES

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The native fishes of the Sinks Drainages are derived from former connections to contiguous drainages: upper Snake, Wood (middle Snake), Salmon (Columbia), and Beaverhead (upper Missouri). The shorthead sculpin (*Cottus confusus*) is the only fish native to all five Sinks Drainages. The shorthead ancestor could have come only from the Salmon River. Its dispersal to the other drainages probably occurred via Lake Terreton, which connected them until about 10,000 years ago. This suggests that the ancestors of all other native species arrived after Lake Terreton's desiccation. The mountain whitefish (*Prosopium williamsoni*), native only to the Big Lost drainage, illustrates unresolved problems concerning native fishes of the Sinks Drainages. Cutthroat (*Oncorhynchus clarkii*) and bull (*Salvelinus confluentus*) trout are typical inhabitants of first and second order streams in the region. Sculpins (*Cottus*), speckled dace (*Rhinichthys osculus*), and mountain sucker (*Catostomus platyrhynchus*) would be likely to occur in second and third order streams. The mountain whitefish is typically found in third and fourth order streams. Thus, it would be expected that transfer of whitefish into the Big Lost drainage should have

included all associated species that also occur in lower order streams. Of these, only the Paiute sculpin (*C. beldingi*) appears to be native to the Big Lost. The distribution of other fishes assumed to be native to the Sinks Drainages is similarly problematic. Introductions of fish by humans over the past 120 years add to the difficulty of making a definitive determination of the native fish fauna of the Sinks Drainages.