

PRELIMINARY BIOGEOGRAPHIC ASSESSMENT OF THE SINKS DRAINAGES BASED ON AQUATIC INVERTEBRATES

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The Sinks Drainages do not form a natural zoogeographic unit. The smallest area that includes the Sinks Drainages that has a unique invertebrate fauna also includes the Boise headwaters, the Wood rivers, the Salmon headwaters, the Henrys Fork and the Missouri headwaters. This larger area formed the northwest limits of the upper Snake paleoriver. This river was not connected to the Columbia River, but flowed east and then later across the southwest states to various outlets before its capture by the Columbia. Volcanic eruptions and uplift from the Yellowstone hotspot disrupted this drainage and eliminated much of the original fauna. Some extinction-resistant taxa survived in the Big Lost, Little Lost, and Birch drainages, but no endemic taxa are yet known in Medicine Lodge or Beaver-Camas. Miocene relict taxa of the Northern Rocky Mountain Refugium have not been found in the Sinks Drainages or Henrys Fork but these do occur immediately to the north. Late-arriving species from the Great Basin into the upper Snake do not occur north of the Snake River, except in the lower Henrys Fork. The absence of the mussel *Margaritifera* in the Sinks Drainages suggests that no ancestral salmonids lived or survived there; existing salmonids arrived later by more limited transfers, natural or anthropogenic. Other fish species may have survived the original drainage breakup in the Big and Little Lost Rivers. These were most likely derived from upper Snake River, except in the Little Lost, where transfer from the Salmon drainage to the north is indicated.