Wood River Sculpin

Cottus leiopomus

Actinopterygii — Scorpaeniformes — ,Cottidae

CONSERVATION STATUS / CLASSIFICATION

Rangewide: Imperiled (G2)
Statewide: Imperiled (S2)
ESA: No status
USFS: Region 1: No status; Region 4: Sensitive
BLM: Rangewide/Globally imperiled (Type 2)
IDFG: Protected nongame

BASIS FOR INCLUSION

Limited distribution and habitat threats; endemic to Big Wood River drainage in Idaho.

TAXONOMY

The Wood River sculpin was first collected in the Little Wood River in 1893 and described by Gilbert and Evermann in 1894 (Simpson and Wallace 1982, Nelson et al. 2004).

DISTRIBUTION AND ABUNDANCE

The Wood River sculpin occurs only in the Wood River drainage in south–central Idaho. The current distribution is limited primarily to drainages in the higher–elevations above Magic and Little Wood River dams, including parts of Camas Creek, Big Wood, and Little Wood rivers. In 2003, an estimated 1,700,000 individuals (± 960,171 90% CI) comprised the population. Within subdrainages, the estimate was 800,000 Wood River sculpin in the Big Wood River, 400,000 in the Little Wood River, and 300,000 in the Camas Creek (K. Meyer, IDFG, pers. comm.). These estimates do not include populations in portions of the Big and Little Wood rivers where estimates could not be made. Preliminary genetic analysis indicates some genetic differences exist among populations in these subdrainages.

POPULATION TREND

Current population trends are unknown. The first basin–wide survey examining population status occurred during 2003. No individual is currently known to exist in the lower portions of the Wood River drainage (below the dams), although the historic range likely extended into these areas.

HABITAT AND ECOLOGY

The Wood River sculpin occurs mainly in small– to medium–sized streams with cool, clear waters and a swift current. Individuals are most commonly found in riffles and runs with a gravel or cobble substrate. Little is known about reproductive patterns or habitat requirement for spawning. These traits are assumed to be similar to those of shorthead sculpin (Merkley and Griffith 1993). The shorthead sculpin spawns during the early spring and lays eggs on the undersides of cobbles or boulders. Wood River

sculpin feed primarily on benthic insect larvae and exhibit seasonal variation in diet and feeding intensity.

ISSUES

The development of irrigation projects, floodplain encroachment, and stream channelization from residential development, as well as migration barriers at road crossings have resulted in a loss of habitat and connectivity among populations. Loss of riparian habitat and reduced flows in streams can increase water temperature, reducing habitat suitability. Water quality degradation from pesticides and herbicides affects this sculpin and aquatic insects prey. Dams, diversion structures, culverts, and dewatered stream channels can fragment populations resulting in loss of gene flow. Introduced fish can increase predation and competition.

RECOMMENDED ACTIONS

Basic information is needed with regard to habitat requirements. Additional information is also needed pertaining to movement patterns, gene flow, and interactions with native and introduced fishes. Protection and restoration of riparian habitat and instream flows is needed. Culverts, bridge structures, and other barriers should be removed or restructured. Programs to support the proper use of pesticides and herbicides need to be developed and implemented. Non–native fish populations should be managed with consideration of effects on native species.

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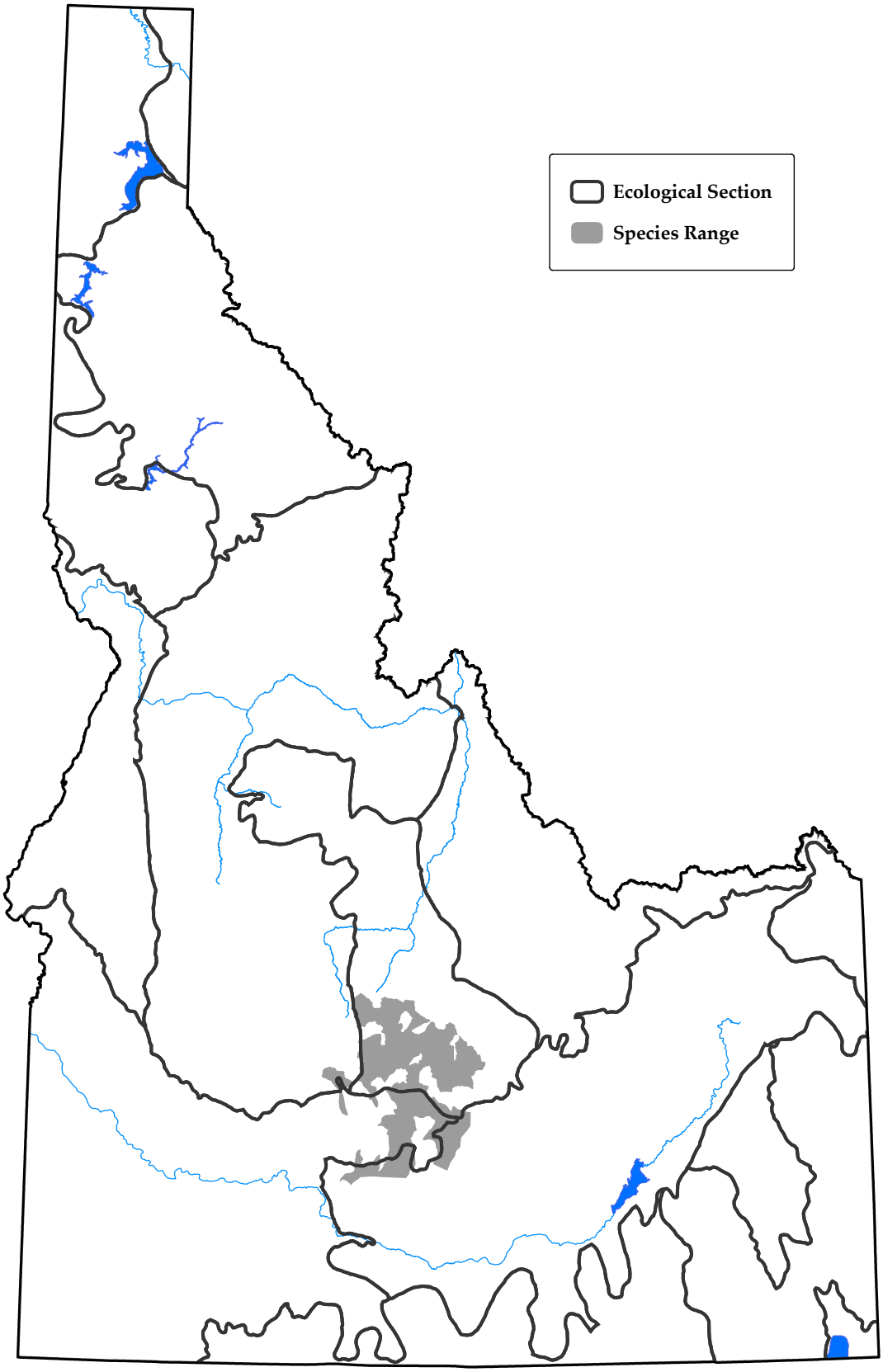

10 August 2005
Fish information is from Idaho Fish and Wildlife Information System, Idaho Deptartment of Fish and Game and displayed at the 6th code hydrologic unit.

0 20 40 80 Kilometers

0 20 40 80 Miles