
Shoshone Sculpin

Cottus greenei

Actinopterygii — Scorpaeniformes — Cottidae

CONSERVATION STATUS / CLASSIFICATION

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

BASIS FOR INCLUSION

Limited distribution and habitat threats; endemic to Snake River in Idaho.

TAXONOMY

The Shoshone sculpin was described by Gilbert and Culver in 1898 (Nelson et al. 2004).

DISTRIBUTION AND ABUNDANCE

The Shoshone sculpin occurs near springs and spring creeks along a 38-km (24-mile) section of the Snake River in the Hagerman Valley of south-central Idaho. These waters, which enter the river from the north, are usually <0.5 km (<0.15 mi) in length. Most of the smaller springs contain populations of a few dozen to a few hundred fish. Four springs and adjacent streams support populations in the thousands (Griffith 1984). A population was introduced into an area 14 km (9 mi) upriver from their historic range during 1983 (Griffith 1984).

POPULATION TREND

Shoshone sculpin distributional surveys were conducted 1979–81 and 1991–92. The 1991–92 survey found populations in 32 of 40 spring systems sampled (Kuda 1995). No Individual was not observed in 8 springs where they had previously been reported. Populations were found in 10 additional springs, which included 3 springs previously surveyed, 2 springs at or near the 1983 transplant site, and 5 springs not surveyed during 1979–81 (Kuda 1995).

HABITAT AND ECOLOGY

This species inhabits clear and nearly constant temperature (14 C [59 F]) springs and associated outlet streams. Substrates are primarily rock, sand, silt and aquatic vegetation. Individuals use spring pool and stream habitats.

Individuals live about 3 years and reach a size of 7–10 cm (3–4 in) (Connolly 1983). Fish mature after their first year. In Sand Springs, gravid females were found in most months of the year; while in Bickel Springs, they only occurred in the early spring. Primary food items include benthic aquatic insects and small crustaceans.

ISSUES

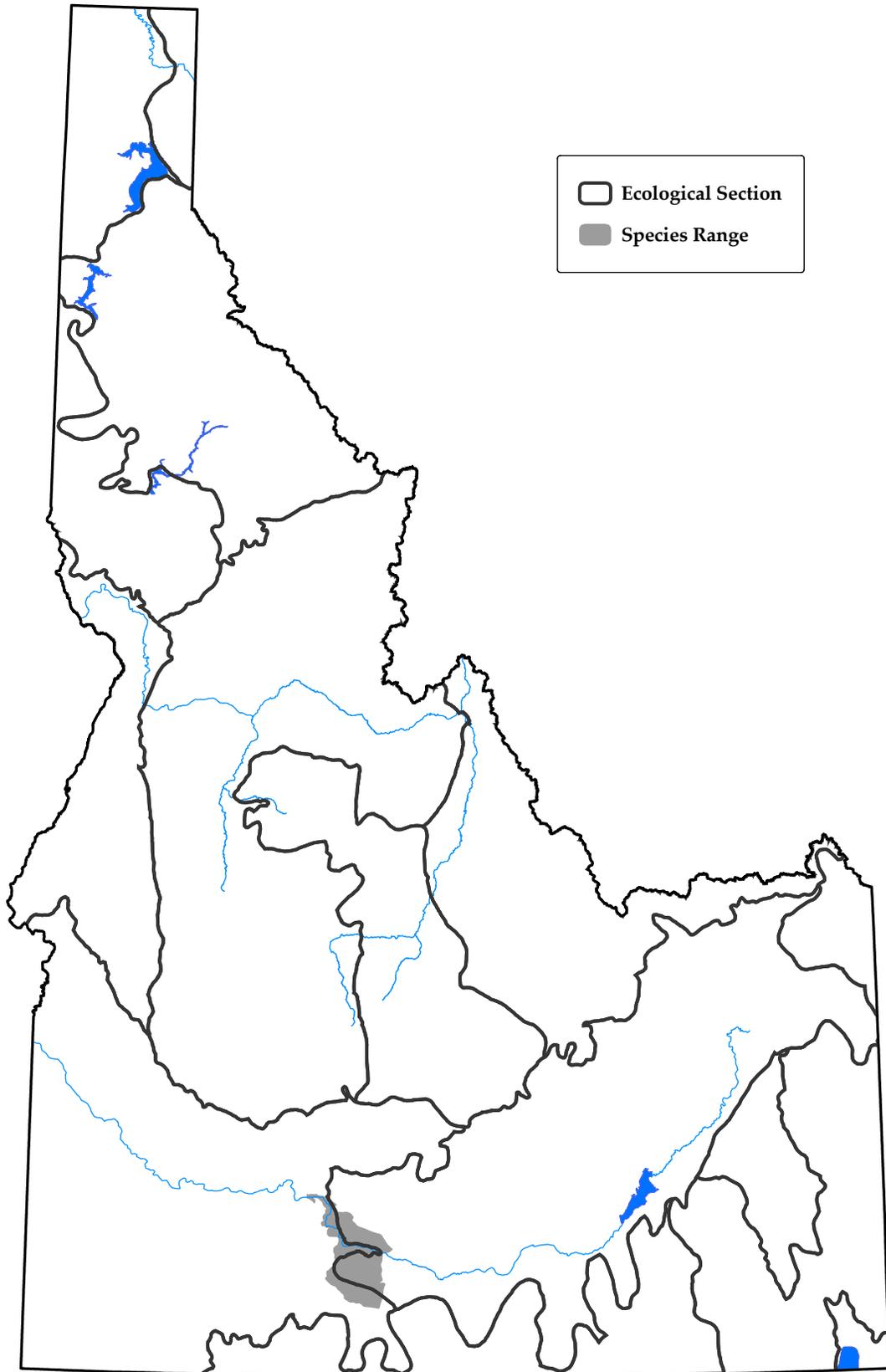
Habitat has been lost and fragmented in spring systems as a result of water diversion for aquaculture facilities, agricultural irrigation, and residential water supplies. In addition, the lowered aquifer level caused by increased water use has depleted spring flows. Introduced, non–native fishes are an unknown threat.

RECOMMENDED ACTIONS

A monitoring program needs to be implemented to determine population size, distribution, and trends. Agreements with land and water managers are needed to protect remaining habitat, recover degraded habitat, and to reconnect fragmented populations. Molecular studies may be needed to determine the genetic implications of population fragmentation.

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

