

---

## A Mayfly

### *Caurinella idahoensis*

---

Insecta — Ephemeroptera — Ephemerellidae

#### CONSERVATION STATUS / CLASSIFICATION

Rangewide: Critically imperiled/Vulnerable (G1G3)  
Statewide: Imperiled (S2)  
ESA: No status  
USFS: Region 1: No status; Region 4: No status  
BLM: No status  
IDFG: Not classified

#### BASIS FOR INCLUSION

Isolated populations and no trend data.

#### TAXONOMY

The genus *Caurinella* was described in 1984, the type species being *Caurinella idahoensis*. The species was described on the basis of a female nymph from Idaho County (Allen 1984). Edmunds and Murvosh (1995) examined the holotype and concurred that it represented a distinct, valid genus. They also examined additional Idaho specimens of *C. idahoensis*, all of which were female nymphs.

#### DISTRIBUTION AND ABUNDANCE

The distribution of this mayfly comprises localities in Montana and Idaho. In Idaho the species occurs at scattered localities in the central part of the state. This species has been encountered in macroinvertebrate samples at 7 sites by the Idaho Department of Environmental Quality. Fewer than 10 individuals were recorded per site, suggesting that the species may be relatively uncommon in occupied reaches.

#### POPULATION TREND

Population trend is unknown.

#### HABITAT AND ECOLOGY

Nymphs are primary collector-gatherers and the species is believed to be sensitive to pollution, being found only in minimally disturbed streams of high water quality. Some specimens collected in Idaho County (Jacobus and McCafferty 2004) were found in a perennial stream where the depth ranged from 15-50 cm and the width was 4-5 m. The substrate was composed mostly of pale, rough cobble and rocks that were 8-30 cm in diameter, but some bedrock was present, as well. The tree canopy was not closed over the stream reach. Nymphs were found at the bases of small, ear-like macrocolonies of a blue green alga (*Nostoc parmelioides*), which occurred on cobble and rock surfaces exposed to the stream current. Only 1 specimen was collected that was not associated with *N. parmelioides*, and the authors speculated that it might have been displaced due to their activity in the stream. The morphology of the mouthparts suggests that *C. idahoensis* is well-suited for scraping and biting or shredding. Fragments of a

chironomid midge larva were found in the gut contents of a *C. idahoensis* nymph, and from that find, Jacobus and McCafferty (2004) presumed that this species is an opportunistic predator.

## **ISSUES**

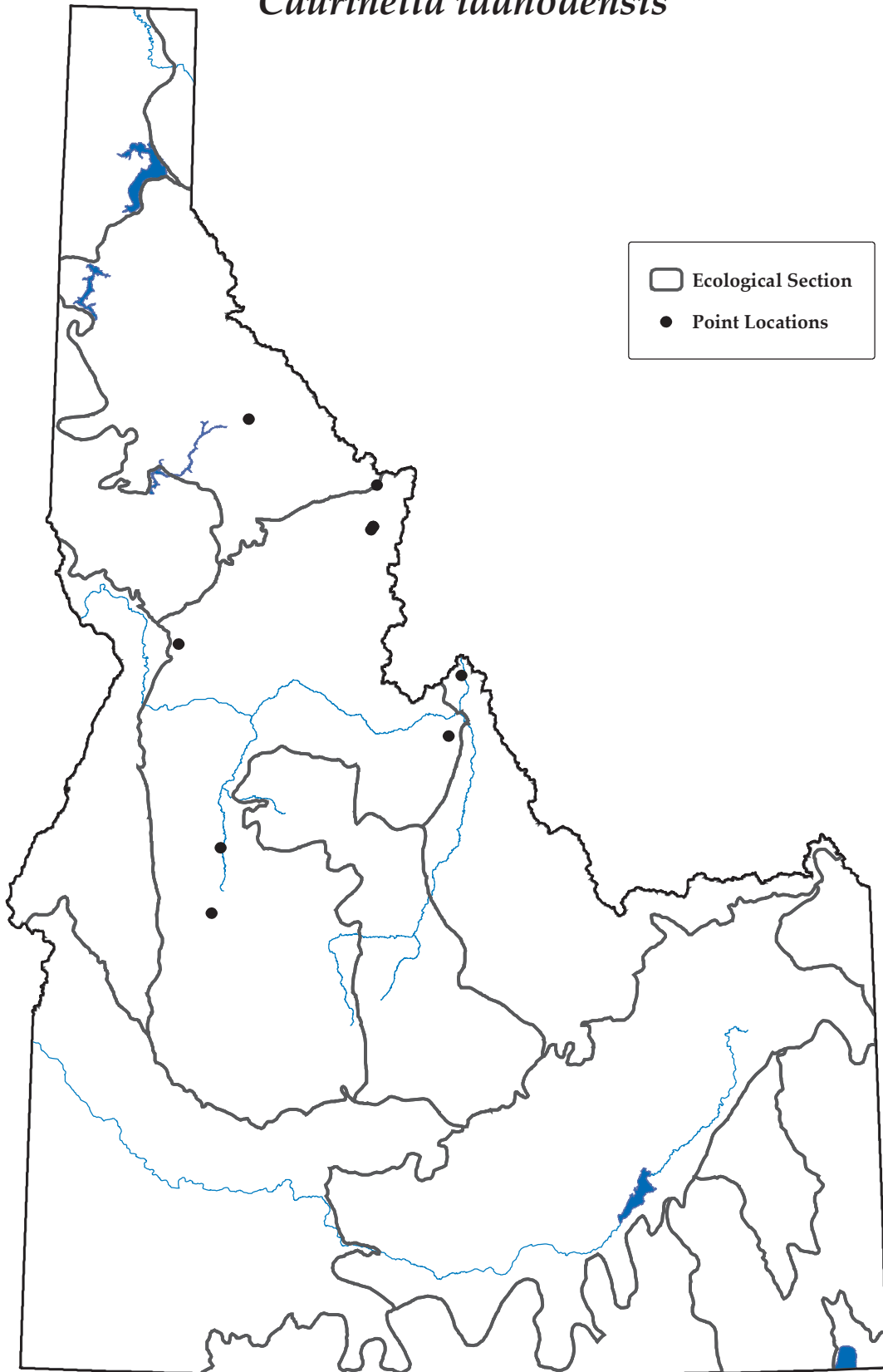
Specific threats to Idaho populations have not been identified. In general, mayfly populations are affected by changes to aquatic habitat, such as alteration of flow patterns, streambed substrate, thermal characteristics, and water quality. Alteration and degradation of aquatic habitat is the primary concern for Idaho populations.

## **RECOMMENDED ACTIONS**

Field surveys are needed to determine distribution, status, and habitat needs.

# A Mayfly

*Caurinella idahodensis*



2 August 2005  
Point data are from Idaho Conservation Data Center,  
Idaho Department of Fish and Game.

