

## Heritage Rank Status Factors

**Elcode** IMGASA4170  
**Gname** VESPERICOLA PRESSLEYI  
**Gcomname** BIG BAR HESPERIAN

### Number of Occurrences

B = 6 - 20

**Comments** This species has been reported from 6 locations, all in Trinity County, California, within the boundaries of the Shasta-Trinity National Forest (Burke et al., 1999).

### Number of Occurrences with Good Viability

D = Some (13-40) occurrences with good viability

**Comments** The Known Sites Database (version 2.0) has 19 records for this species, and all of those records seem to be valid. Thirteen of the records are for the type locality, which is 0.2 km (0.12 mile) east of Price Creek, on the south side of the Trinity River at Big Bar (the multiple records represent specimens at various museums or specimens collected on different dates). Of the remaining 6 records, 3 are for the mouth of Manzanita Creek, just east of Big Bar, and 1 is for the south side of the Trinity River, just south of Big Bar. One location not in the Known Sites Database is the south side of the Trinity River, opposite the mouth of Manzanita Creek. Together these 4 locations are all within 1 km (0.6 mile) of Big Bar. A fifth location is Treloar Creek, a stream that joins the Trinity River at Big Bar, but is about 5 km (3 miles) long. A spring on the east side of Barnum Ridge is the sixth location, which is about 10 km (6¼ miles) northwest of Big Bar (Burke et al., 1999).

### Population Size

B = 50-250 individuals

C = 250-1,000 individuals

**Comments** *Vespericola pressleyi* seems to exist in isolated colonies of small to moderate numbers (Burke et al., 1999).

### Range Extent

B = 100-250 km<sup>2</sup> (about 40-100 square miles)

**Comments** Trinity County, California, within the boundaries of the Shasta-Trinity National Forest, up to 915 meters elevation (Kelley et al., 1999). The Big Bar Hesperian, *Vespericola pressleyi*, is an apparently rare species that is only known from a small area in northern Trinity County, California (Burke et al., 1999).

### Area of Occupancy

B = 0.4-4 km<sup>2</sup> (about 100-1,000 acres)

LB = 4-40 km (about 2.5-25 miles)

**Comments** Four of the locations are within 1 km (0.6 mile) of Big Bar on the Trinity River, a fifth location is somewhere along Treloar Creek that joins the Trinity River at Big Bar, and a sixth location is a spring on the east side of Barnum Ridge and about 10 km (6¼ miles) northwest of Big Bar (Burke et al., 1999).

## Long-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

U = Unknown. Long-term trend in population, range, area occupied, or number or condition of occurrences unknown

Comments Unknown

## Short-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

U = Unknown. Short-term trend in population, range, area occupied, and number and condition of occurrences unknown.

Comments Unknown

## Threats

A = Substantial, imminent threat. Threat is moderate to severe and imminent for most (> 60%) of the population, occurrences, or area. Ecological community occurrences are directly impacted over a widespread area, either causing irreversible damage or requiring long term recovery

Scope High Severity Moderate Immediacy High

Comments Any degradation of habitat features and microclimate could be a threat to its survival. Domestic livestock can threaten the survival of this species in a number of ways, including (1) the trampling of snails that are within the leaf litter or soil, (2) the reducing of the supply of herbaceous plants on which this species may feed, (3) the consuming of tree seedlings that are needed to provide future canopy trees, (4) the degradation of the water quality and the aquatic ecosystem, and (5) the degrading of perennial subsurface dampness because removal of vegetation by domestic livestock is likely to result in faster runoff and more solar energy striking and heating the ground. Other threats to this species could come from the removal of trees that provide shade, leaf litter, woody debris, and a windbreak. This snail may be adversely affected by the removal of loose objects on the ground, such as rocks and woody debris, that snails may need for cover. These snails seem to depend on the availability of damp substrate, so any substantial change to the local hydrology that results in decreased flow or increased instability of streams could threaten the local population of this snail. Mechanical disturbance by motor vehicles and concentrated recreational activities could contribute to extirpation by crushing snails and degrading needed habitat structures. The direct impacts of fire on mollusks tend to be negative. Fire can temporarily reduce the availability of shading vegetation, herbaceous plants, leaf mold, and woody debris. On the other hand, if hazardous fuels are reduced by prescribed fires outside of inhabited locations, that should reduce the threat to this species from wildfire. Applied chemicals, including firefighting chemicals, fertilizers, herbicides and pesticides, may be directly toxic to this species. Invasions by nonnative plants and animals could directly or indirectly threaten the survival of this species (Burke et al., 1999).

## Number of Appropriately Protected and Managed Occurrences

A = None. No occurrences appropriately protected and managed

Comments There are no known protected occurrences. All known locations are within the administrative boundaries of the Big Bar Ranger District of Trinity National Forest (administered as Shasta-Trinity National Forests) (Burke et al., 1999).

## Intrinsic Vulnerability

B = Moderately Vulnerable. Species exhibits moderate age of maturity, frequency of reproduction, and/or fecundity such that populations generally tend to recover from decreases in abundance over a period of several years (on the order of 5-20 years or 2-5 generations); or species has moderate dispersal capability such that extirpated populations generally become reestablished through natural recolonization (unaided by humans).

Ecological community occurrences may be susceptible to changes in composition and structure but tend to recover through natural processes given reasonable time (10-100 years).

**Comments** Although the reproductive anatomy of *Vespericola pressleyi* was described by Roth (1985, 1996), the reproductive behavior of individuals and resilience of populations (how fast populations can recover) seem to be unknown. There seem to be no reports on generation time, seasonality of reproductive activity, the number and appearance of the eggs, or situations used for oviposition (Burke et al., 1999).

### Environmental Specificity

B = Narrow. Specialist or community with key requirements common.

C = Moderate. Generalist or community with some key requirements scarce.

**Comments** Inhabits forests of conifer and/or hardwood trees, in permanently damp areas within 200 meters of seeps, springs, and stable streams (Kelley et al., 1999).

### Other Considerations

NRANK: N1

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### Reasons

Range slightly restrictive, but sites scattered and abundance at all sites low.

### BCD Sources

### New Sources

Burke, T.E., J.S. Applegarth, and T.R. Weasma. 1999. Management recommendations of survey and manage terrestrial mollusks. Ver. 2.0. Report submitted to USDI Bureau of Land Management, Salem, Oregon, October 1999. Unpaginated.

Kelley, R., S. Dowlan, N. Duncan, and T. Burks. 1999. Field Guide to Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan. Bureau of Land Management, Oregon State Office, Portland, Oregon. 114 pp.