

Eatonella nivea (D.C. Eat.) Gray

white eatonella

Asteraceae (Aster Family)

Status: State Threatened

Rank: G4G5S1

General Description: Depressed white-woolly annual, branching from the base and often forming small tufts; receptacle flattish, naked; leaves basal (or alternate), numerous, linear-oblongate to spatulate, up to 5/8 inch long; heads sessile or on slender axillary peduncles up to 1 1/2 inches long; involucre bell-shaped, about 3/16 inch high; rays scarcely exceeding the disk, yellow or purplish; achenes flattened and glabrous except for the long-villous-ciliate margins; pappus of 2 irregular margined, shortly awn-tipped scales.

Identification Tips: Not likely to be confused with any other taxon, at least within the Washington portion of its range. There is only one species of *Eatonella* in North America.

Phenology: Flowers between May and July. In WA, the taxon is typically senescent by early June. Details regarding the phenology of the species have not been investigated.

Range: The species is known from the Great Basin, southeast Oregon, western Nevada and Washington. In WA, the species occurs within the Columbia Basin physiographic province. Known occurrences are in Grant and Kittitas counties.

Habitat: The species occurs in the shrub-steppe vegetation type of Franklin and Dyrness (1973). Occurs on poorly developed soils in dry, sandy or volcanic desert areas. Known Washington occurrences are located in fine, pea-sized gravel that is derived from basalt and is deep red in color. Sites that support the taxon are rather sparsely vegetated, usually with no apparent cryptogram layer. Shrubs are often present, with cover values of 5-20%. Species that have been listed as associates of *E. nivea* in WA include big sagebrush (*Artemisia tridentata*), antelope bitterbrush (*Purshia tridentata*), grayball sage (*Salvia dorii*), matted cryptantha (*Cryptantha circumscissa*), threadleaf scorpionweed (*Phacelia linearis*), blazingstar (*Mentzelia laevicaulis*), snow buckwheat (*Eriogonum niveum*), and cheat grass (*Bromus tectorum*).

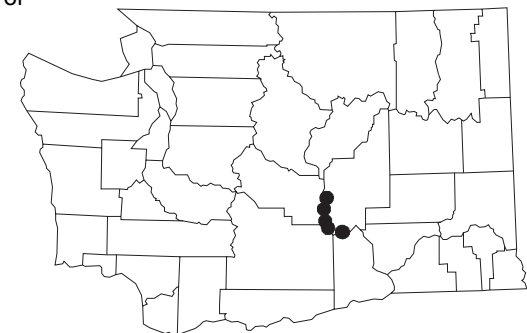
Eatonella nivea

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Known distribution of
Eatonella nivea
in Washington



- Current (1980+)
- Historic (older than 1980)

Eatonella nivea

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John Gamon



Jim Barrett



Jim Barrett

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Ecology: *E. nivea* is an ephemeral annual that presumably flowers in response to warming temperatures and moisture in the spring. The number of individuals that successfully flower and the number of flowers that are produced from year to year fluctuates widely, presumably in response to annual weather patterns. Its apparent restriction to sparsely vegetated microsites may suggest that it is a poor competitor with other vegetation. It is conceivable that it is restricted to a specific soil or parent material type, but if so, that has yet to be identified.

State Status Comments: The limited number of known populations in WA, their restriction to a very small geographical area, and the fact that the species is monotypic are all factors that contribute to its status.

Inventory Needs: The presence of this species can be easily overlooked both because of its size and short-lived nature; it probably does not even appear in some years. More inventory should be conducted in the central portion of Washington's Columbia Basin along the Columbia River, Saddle Mountains, and to the north of the Saddle Mountains (particularly along the eastern margin).

Threats and Management Concerns: Threats include trampling and disturbance to the substrate by domestic livestock, gravel extraction, disturbance from recreationalists (rock climbers, bicyclers and ORVs), disturbance from activities associated with military training, and invasion of the habitat by exotic species.

References:

Hitchcock, C. L., A. Cronquist, M. Ownbey, and J.W. Thompson. 1955. *Vascular Plants of the Pacific Northwest, Part 5: Compositae*. University of Washington Press, Seattle. 343 pp.