

Phacelia tetramera J. T. Howell
dwarf phacelia
Hydrophyllaceae (Waterleaf Family)

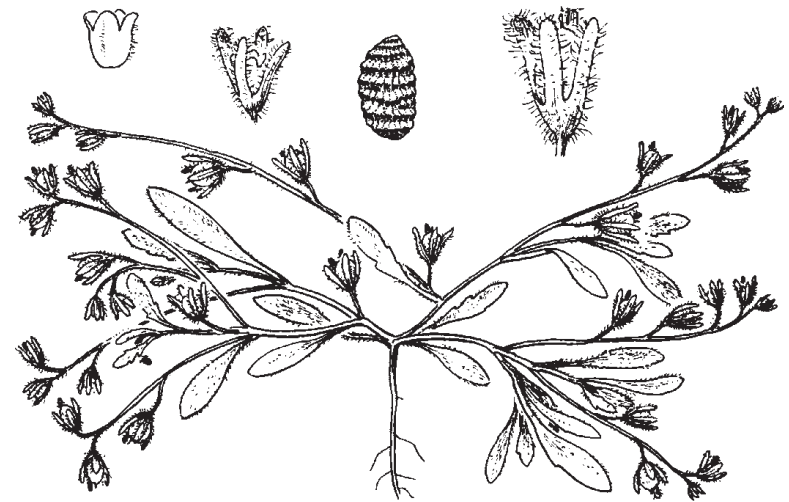
Status: State Sensitive
Rank: G4S1

General Description: Adapted from Cronquist, et al. (1984): This tiny slender annual freely branches from the base, and lies flat on the ground forming shortly spreading mats. The entire plant is hairy. The oblanceolate leaves are borne on leaf stalks and tend to be sub-opposite; they are entire or with a few coarse teeth or shallow lobes and the blade is up to $\frac{3}{4}$ in. (2 cm) long and $\frac{1}{2}$ in. (1 cm) wide. There are numerous small inflorescences located in the forks of the branches, or at the very end of the branches. The small inconspicuous flowers are 4-merous or occasionally 5-merous, and borne either on short stalks, or they can be virtually stalkless. The white (or pale yellow) corolla, is persistent, surrounds the fruit, and is about $\frac{1}{32}$ to $\frac{1}{16}$ in. (1-1.5 mm) long, and up to $\frac{1}{16}$ in. (2 mm) long when in fruit; the calyx is nearly or fully twice as long. Occasionally the stalks of the stamens slightly surpass the gaps between the corolla lobes. There are about 20 ovules, and 6-10 seeds. The seeds are commonly .7-1 mm long, dark brown to black; the surface is pitted-netted and more or less evidently cross-wrinkled (wrinkled or corrugated in approximately parallel horizontal rings).

Identification Tips: *Phacelia tetramera* is unique in appearance among *Phacelia* species within its range in Washington, and can be easily distinguished from its close relative *P. sericea*. *P. tetramera* grows flat on the ground and forms mats up to $\frac{1}{2}$ in. (3 cm) tall, whereas *P. sericea* grows erect and reaches heights up to 4 to 16 in. (10-40 cm) tall. The leaves of *P. tetramera* are entire or with a few coarse teeth or shallow lobes, versus the leaves of *P. sericea* that are very deeply lobed. The fruits of *P. tetramera* produce 6-10 dark brown to black seeds that are pitted-netted and cross-wrinkled while the fruits of *P. sericea* produce 20-40 black pitted-netted seeds.

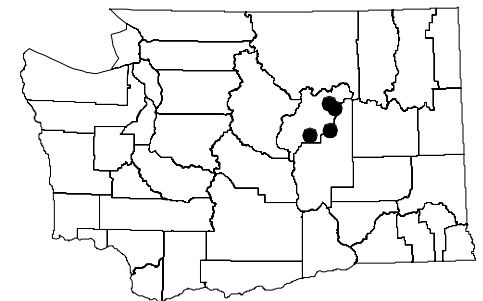
Phenology: The taxon begins to bloom in April and is fully senescent by June. Plants are extremely small and not readily visible.

Phacelia tetramera
dwarf phacelia



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Illustration by Jeanne R. Janish

Known distribution
of *Phacelia tetramera*
in Washington



● Current (1980+)
○ Historic (older than 1980)

Phacelia tetramera

dwarf phacelia



Julie Sanderson / Bureau of Land Management



Julie Sanderson / Bureau of Land Management

Phacelia tetramera

dwarf phacelia

Range: This species is found in Douglas and Grant counties of Washington, and ranges south to California and east to Nevada, and Wyoming.

Habitat: The taxon can be found in alkaline soils and vernal pools from 1200 to 2210 feet (366-674 meters) elevation. It occurs in tall sagebrush/Sandberg bluegrass (*Artemisia tridentata*/*Poa secunda*) and scabland sagebrush/Sandberg bluegrass (*Artemisia rigida*/*Poa secunda*) plant communities. Associated species at one or more sites include greasewood (*Sarcobatus vermiculatus*), clasping pepperweed (*Lepidium perfoliatum*), inland saltgrass (*Distichlis spicata*), yarrow (*Achillea millefolium*), soft brome (*Bromus mollis*), cheatgrass (*Bromus tectorum*), basin wildrye (*Elymus cinereus*), spring draba (*Draba verna*), and valley rush (*Juncus basalticus*).

Ecology: The taxon has been observed growing in salt encrusted soil, alkaline clay, and cracked bare alkaline silt in vernal moist wetlands and shrub-steppe areas. It is occasionally found directly beneath greasewood (*Sarcobatus vermiculatus*).

State Status Comments: There are less than five known occurrences of the taxa in Washington.

Inventory Needs: Known occurrence sites should be revisited and their status assessed. Appropriate habitats in Douglas and Grant counties should be systematically surveyed for additional populations.

Threats and Management Concerns: Threats to the taxon include grazing and trampling by cattle.

References:

Cronquist, A. et. al. 1984. *Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume Four*. New York Botanical Garden Press. Bronx, NY. 573 pp.