

Astragalus arrectus Gray

Palouse milk-vetch

Fabaceae (Pea Family)

Status: StateThreatened

Rank: G2G4S2

General Description: Erect perennial with a woody taproot and shortly forking caudex; stems numerous, in clumps, 8-16 in. long; herbage green or gray-green; leaves pea-like, glabrous above, 3½ to 9 inches long; stipules 3/16 to 5/16 inch long; leaflets mostly 21-31, linear-oblong, lanceolate, 5/16 to ¼ inch long; peduncles straight, 4-10 inches long; racemes 15 to 35 flowered; flowers erect, yellowish-white, drying yellowish, about ½ inch long; calyx ¼ inch long, the tube ⅛ inch long, the teeth about 1/16 inch long; petals irregularly graduated, the wings about ⅛ inch longer than the abruptly recurved banner, the keel ½ inch long; the pod erect, stipitate, ⅔ to 1 inch long, ⅛ to ¼ inch thick.

Identification Tips: Most easily recognized by its irregularly proportioned flowers which ascend from the raceme-axis at an angle of about 45 degrees and are followed by erect, stipitate, dorsally grooved pods of thick texture, pubescent with black or gray-brown, rarely white hairs. The species could be confused with *A. leibergii* in parts of its range. The flower of *A. leibergii* is white while the flower of *A. arrectus* is yellowish white, drying yellow. Also the leaflets of *A. arrectus* are glabrous above while *A. leibergii* leaflets are equally pubescent on both sides.

Phenology: Flowers from late April to early July.

Range: Regional endemic; found along the Lower Snake, Clearwater, and Palouse Rivers in Idaho, and scattered throughout WA. Found in the Columbia Basin and Eastern Cascades physiographic provinces in Chelan, Klickitat, Lincoln, and Whitman counties, WA. The species has also been historically found in Kittitas and Grant counties.

Habitat: Found on grassy hillsides, sagebrush flats, river bluffs, and open ponderosa pine/Douglas fir forests in grassy or shrub dominated openings growing on all aspects in soil ranging from rocky and dry to moist and rich. Associated species include oceanspray (*Holodiscus discolor*), snowberry (*Symphoricarpos albus*), bitterbrush (*Purshia tridentata*), Douglas's brodiaea

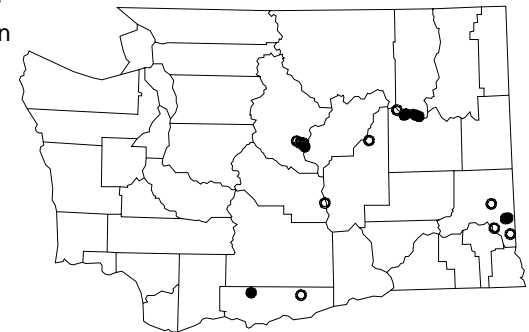
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Known distribution of
Astragalus arrectus in
Washington



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

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Habitat (continued): (*Brodiaea douglasii*), balsamroot (*Balsamorhiza sagittata*), and lupine (*Lupinus* spp.). Elevation: 1000 to 4000 feet.

Ecology: The species has a wider ecological amplitude than many other members of the genus, although population size is generally very small. Fire may play a role in population dynamics. This is a nitrogen-fixing species which occurs on substrates suspected of being low in nitrogen.

State Status Comments: The taxon has a wide distribution in the state but most occurrences are small in size. Overall abundance is probably only several thousand plants.

Inventory Needs: More inventory work is needed throughout its range to properly assess its rarity and population trends. Historical occurrences need to be verified.

Threats and Management Concerns: Apparently most of the habitat has already been destroyed in the Palouse. The conversion of habitat to agricultural land is probably the most serious threat to the existence of this species, but grazing by sheep and cattle may also pose a threat to remaining populations.

References:

Hitchcock, C. L., A. Cronquist, M. Ownbey, and J.W. Thompson. 1961. *Vascular Plants of the Pacific Northwest, Part 3: Saxifragaceae to Ericaceae*. University of Washington Press, Seattle. 614 pp.

