# Drymaria-Like Western Flax

*(Hesperolinon drymarioides)*

© John Game

**Legal Status**
*Federal:* None
*State:* None

*Global and State Conservation Status:* G1S1.2: Global Rank, G1 = Critically Imperiled: At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors; State Rank, S1 = Same as global rank, but only for the range of the taxa in California; State ranks in California often also contain a threat designation attached to the S-rank, S1.2 = threatened.

*CNPS List:* 1B.2; 1B: Rare, threatened, or endangered in California and elsewhere. 0.2: Fairly endangered in California.

*Recovery Plan:* None.

**Species Description and Life History**

Drymaria-like western flax (*Hesperolinon drymarioides*) is an annual herb, 5 to 50 cm tall and is a member of the flax family (Linaceae). The species is distinguished by its lanceolate to ovate clasping leaves and white to pink flowers (Hickman 1993). The leaves are whorled below and alternate higher on the stem, and the margins have stalked glands (Hickman 1993).

**Habitat Requirements and Ecology**

Drymaria-like western flax occurs on serpentine soils, primarily in chaparral habitat, but also on non-serpentine soils in closed-cone coniferous forest and cismontane woodland habitats, (CNPS 2001, CDFG 2007) and on grassland inclusions within those habitat types. This species has been found at elevations between 100 to 1,130 m (328 to 3,707 ft) and blooms from May to August (CNPS 2001).

Rodríguez-Rojo *et al.* (2001) completed a community analysis of California serpentine annual grasslands using numerical analysis of classification and ordination on relevant data. The results of the study grouped drymaria-like western flax into a *Hesperolinon drymarioides* community type dominated by drymaria-like western flax and sparse cover of grasses. The community predominantly occurred on shallow, open soils on ultramafic outcrops between common chamise (*Adenostoma fasciculatum*) in chaparral habitat (Rodríguez--Rojo *et al.* 2001). There are no associate species listed for the Yolo County

drymaria-like western flax populations, but some of the associate species listed for populations in nearby counties include leather oak (*Quercus durata*), Sargent's cypress (*Cupressus sargentii*), Jepson ceanothus (*Ceanothus jepsonii*), foothill pine (*Pinus sabiniana*), toyon (*Heteromeles arbutifolia*), and whiteleaf manzanita (*Arctostaphylos viscida*) (CDFG 2007).

**Species Distribution and Population Trends**

*Distribution*

Drymaria-like western flax is endemic to California and its distribution, as defined by Calflora 2007, is based on 37 observations. The two historic occurrences in Yolo County are located in the Little Blue Ridge (CDFG 2007). The range of drymaria-like western flax extends from Napa, Solano, and Sacramento counties in the north, to Contra Costa, Alameda, and San Joaquin counties in the south (Calflora 2007).

*Population Trends*

Population trends of drymaria-like western flax have not been documented and it is unclear whether this species is in decline. According to the CNPS (2001), occurrences of drymaria-like western flax in California are limited and the species is at risk throughout its range.

**Threats to the Species and Other Conservation Issues**

The primary threat to drymaria-like western flax is the loss of serpentine habitat within the range of the species and vegetation management activities such as brush clearing and grading (CNPS 2001). Most reported occurrences of drymaria-like western flax are on infertile soils in a landscape where wild fire and soil erosion are disturbance agents. Roadside vegetation control may impact this species where populations occur adjacent to roads. Research should address the role of disturbance regimes and competition, dispersal vectors and the role of dispersal in maintaining the populations, seed bank dynamics and the possibility of fire acting as a germination cue, and plant breeding system and pollinator requirements.

**Contributors to this species account:**

Cathy Little, HT Harvey & Associates
John Gerlach, TAIC

**References**

Photo Credit: Copyright © 1998 John Game

Calflora: Information on California plants for education, research and conservation. (web application). 2007. Berkeley, California: The Calflora Database (a non-profit organization). Available: http://www.calflora.org/.

California Department of Fish and Game (CDFG). 2005. Knoxville Wildlife Area Management Plan. Approved by the California Department of Fish and Game, Central Coast Region.

California Department of Fish and Game (CDFG). 2007. Rarefind. California Natural Diversity Data Base (CNDDB). Electronic Database.

California Native Plant Society (CNPS). 2001. Inventory of Rare and Endangered Plants of California (6th edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, California.

Hickman, J.C. (ed.). 1993. The Jepson Manual: Higher Plants of California. University of California Press, Berkeley, CA.

Rodríguez-Rojo, M.P., D. Sánchez-Mata, R.G. Gavilán, S. Rivas-Martínez, and M. G. Barbour. 2001. Typology and ecology of Californian serpentine annual grasslands. Journal of Vegetation Science 12:687-698.