

Thin-leaved pea (*Lathyrus Holochlorus*)

ENDANGERED



Flowers (left), habit (center), and habitat (right) of thin-leaved pea. Photos by Tom Kaye (left; Courtesy of OregonFlora) and ODA staff (center and right). If downloading images from this website, please credit the photographer.

Family

Fabaceae

Plant description

Thin-leaved pea is a perennial forb that is sparsely hairy to practically glabrous. The stems are strongly angled or narrowly winged and 30-100 cm long and have a climbing habit. The leaves are 6-10 cm long, alternate, compound and stipulate. The stipules are large and ovate to ovate-lanceolate with the margins coarsely undulate and the bases semi-sagittate. Leaves have 8-12 leaflets that are unpaired and ovate to lanceolate. Leaflets are 2-5 cm long, 0.7-3 cm broad, green above and paler below, glabrous, with well-developed tendrils. Inflorescences are 5-15 cm long racemes with peduncles that are often shorter than the leaves and mostly arranged on one side (secund). The white to cream flowers are 12-14(17) mm long, aging to light brown or orange. The calyx is 9-12 mm long with narrowly triangular lateral lobes. The flower banner pale greenish-cream with purplish-rose lines. The keel is approximately equal to the wings, if not slightly longer. Fruits are 3-5 cm long and 2-7 mm broad.

Distinguishing characteristics

Lathyrus polyphyllus overlaps the entire range of *L. holochlorus*, however, the species are easily distinguishable when in flower, as *L. polyphyllus* has blue-purple corollas. When only vegetative, the species can be distinguished by the stipule shape and size. *Lathyrus polyphyllus* stipules are more ovate and large, often approaching the leaflets in size, while *L. holochlorus* stipules are more linear and much smaller than the leaflets. *Lathyrus sulphureus* and *Lathyrus vestitus* var. *ochropetalus* are two species that resemble thin-leaved pea and may co-occur with it. The distinguishing characteristics for *Lathyrus holochlorus* include white instead of yellow, tan, or orange-tinged flowers, stem branching mid-stem rather than only from the base, and lateral calyx lobes that are narrowly triangular instead of generally lanceolate with noticeable widening just above base.

When to survey

Surveys for thin-leaved pea should be completed from April to June when this species is in flower.

Habitat

Thin-leaved pea is often found in remnant habitat along roadsides and fencerows. This species can also still be found in its natural habitat of upland prairie, creek banks, forest edges, oak savannas, shrublands and grasslands of the Willamette Valley. The main associated species thin-leaved pea vine grows with include Oregon white oak (*Quercus garryana*), common snowberry (*Symphoricarpos albus*), poison oak (*Toxicodendron diversilobum*), and various species of rose (*Rosa spp.*).

Range

Thin-leaved pea ranges from Lewis County, Washington, south to Douglas County, Oregon in mostly small and fragmented occurrences. Only one population, located on private land, is known from the state of Washington. As part of a multi-phase project to prevent the federal listing of thin-leaved pea, the Institute for Applied Ecology (IAE) performed range-wide field surveys of historic occurrences from 2012 to 2014. The largest populations at the time were from Washington County, Benton County, and Lane County. IAE found that >40% of the populations surveyed were locally extirpated and 32% of the extant populations had fewer than 10 stems.

Oregon counties

Benton, Clackamas, Douglas, Lane, Linn, Marion, Polk, Washington, Yamhill

Federal status

Species of concern

Threats

Loss of the historic upland prairie and forest edge habitat to agriculture and development is the main threat to the thin-leaved pea. Many remnant populations are relegated to roadside ditches and fencerows where they are exposed to other harmful activities such as herbicide spraying, mowing, road repairs and other roadside maintenance, which can damage and eliminate plants. Exotic and native species invasion is another threat that can alter remaining habitat and outcompete thin-leaved pea. The small population sizes also pose a threat to the species as losses of genetic diversity can lead to decreased seed production and viability for a species believed to be self-incompatible.

Conservation planning

The Institute for Applied Ecology has been attempting to grow *L. holochlorus* since 2014, joined by the USDA NRCS Corvallis Plant Material Center in 202. While both organizations have been successful in germinating seeds, neither has been able to cultivate plants through flowering and seed production. Seed production efforts continue in 2023.

References

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