



Alkali swainsonpea

Provincial Designation:
Prohibited Noxious

Sphaerophysa salsula (Pall.) DC.
(aka swainsonpea, Austrian peaweed, swainsona, red bladder-vetch)



PHOTO: Bugwood.org

Overview:

Alkali swainsonpea is a long-lived perennial legume of the Pea family. It is native to Asia and believed to be introduced as a contaminant of alfalfa seed³ or for soil stabilization.² This plant reproduces both by seed and vegetatively and flowers May through July. Seeds have a very hard coat and require scarification to germinate.² Mature plants can be herb-like or shrubby.¹

Swainsonpea develops an extensive root system with creeping lateral roots which can produce new shoots.² Being a legume the roots can associate with nitrogen fixing bacteria.²

The seeds are nearly identical in size, shape, and eight to alfalfa seeds making sorting and cleaning of alfalfa seed contaminants extremely difficult.²

Habitat:

Alkali swainsonpea needs well drained soils and tolerates alkali soils.

Identification:

Stems are erect to ascending, branching and grow 0.3-0.6 m tall, rarely to 1.3 m. Branches have a longitudinal rib and sparse to dense flattened hairs.¹

Leaves: The compound leaves are odd-pinnate with 11-21 leaflets and the main leaf axis 5-8.5 cm long. Leaflets are oval-oblong, 5-15(-25) x 3-6(-10) mm, and margins have short, white, flattened hairs. Stipules up to 0.5 cm are fused at the petiole base.²

Flowers: Stems are almost twice as long as the inflorescence,⁴ 6.5-13(-17) cm,¹ sparsely hairy, and borne in the leaf axils.² Flowers are pea-like in loose clusters near tip of stem and 6-16 flowered.¹ Flowers emerge brick red to pinkish-brown, drying to violet or purplish.⁴ Flowers are 12-13 x 12-16mm.¹ Stigmas are finely hairy. Seed pods are oval to spherical, grooved on top, 3.5 x 1.7 cm, and borne on a 10 mm stalk. The pod surface is sparsely hairy except densely hairy along the groove.¹ Seed pods are indehiscent.² Seeds are brown, nearly semi-circular and about 2.5 mm long.¹

Prevention:

Alfalfa is considered to be more competitive than Swainsonpea and invasions are more likely in thinning stands.² Maintaining vigorous, healthy, desirable plant cover can help prevent establishment.

Control:

Grazing: Cattle will graze this plant but is not a control option because of the plant's tendency to re-sprout. There is also the possibility that the hard-coated seeds may pass through the digestive system intact,² facilitating weed spread. Invasive plants should never be considered as forage.

Mechanical: Cultivation will result in sprouting from severed roots.² Hand pulling is ineffective as it is impossible to remove all of the root system. Mowing will prevent seed production.

Chemical: Currently no selective herbicides are registered for use on Alkali Swainsonpea. Always check product labels to ensure the herbicide is registered for use on the target

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plant in Canada by the Pesticide Management Regulatory Agency. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: None researched to date.



Mature Plant

PHOTO: Bugwood.org



Flowering Stem

PHOTO: Robert L. Carr



Seeds

PHOTO: Robert L. Carr

REFERENCES

- 1 Sphaerophysa salsula in Flora of China. www.efloras.org
- 2 Swainsonpea. California Department of Food and Agriculture. <https://www.cal-ipc.org/plants/risk/sphaerophysa-salsula-risk/>
- 3 Swainsonpea Pest Risk Assessment. Washington State Noxious weed Control Board. <https://www.nwcb.wa.gov/weeds/swainsonpea>
- 4 Hitchcock, L., Cronquist, A. Flora of the Pacific Northwest. 1973. University of Washington Press. Page 273.