

**WRITTEN FINDINGS OF THE
WASHINGTON STATE NOXIOUS WEED CONTROL BOARD
(November 1998)**

Scientific Name: *Thymelaea passerina* (L.) Coss. & Germ.

Common Name: Okanogan county spurge flax

Family: Thymelaeaceae

Legal Status: Class A

Description and Variation: Herbaceous annual with a fibrous taproot. The overall plant size ranges from 2 ½ inches to 2 feet tall. Slender, wiry and erect, spurge flax grows as one main stem, or more commonly, branches from the upper plant. The leaf arrangement is alternate. The small and narrow (8-14 mm long) linear shaped, leathery leaves taper to a point, and are progressively smaller upward along the stems. The leaves are sessile, jointed at a yellow cartilaginous base. The flowers are greenish and tubular, 2-3 mm long, perfect and incomplete: 4 sepals, no petals and 8 stamens, the stamens are in two whorls of four. Below each flower, two very small bracts arise from a tuft of tiny white hairs. The fruit is a shiny black achene. The round seeds are brown to black, 2-3 mm long. The plant turns red in the fall.

This species is very tough to identify. *Thymelaea passerina* closely resembles *Polygonum* species - however there is no ocrea (papery sheath at the nodes). *T. passerina* is the only species in this genus, and it is the only herbaceous annual found in the Thymelaeaceae family. It is absent from many taxonomic keys, since only shrubby species were known in North America (Harriman 1979; Vincent and Thieret 1987).

Economic Importance:

Detrimental: Mentioned as a common weed in central Europe and western Asia, where it shows up in grain crops. In Okanogan County, WA, spurge flax covered 600 acres of native range land before it was noticed and identified. Animals will not graze this plant.

Beneficial: None known

Habitat: In Okanogan County, the only known Washington location, it is reported from steep, horse range land, growing near an alkaline lake in strong lime soil. Associated species include diffuse knapweed (*Centaurea diffusa*), common silverweed (*Potentilla anserina*) and sagebrush (*Artemisia tridentata*). In the midwest, spurge flax is described as a weed of disturbed places, found in dry pastures, bluffs, railroad embankments and flood plains. In its native Eurasia, it is considered a common weed.

Geographic Distribution: Native to Eurasia. Considered a common weed of dry soils and grain fields of south and central Europe and western Asia (Pohl 1955). Also found in central Russia, Australia and North America (Vincent and Thieret 1987). Found in midwestern states of Ohio, Illinois, Iowa, Kansas, Mississippi, Nebraska, Wisconsin. Identified in Washington in 1996.

History: Spurge flax seeds were probably introduced to North America as a feed seed contaminant (Vincent and Thieret 1987). WSU does have an herbarium specimen, dated 1954, from Iowa. The Okanogan County Noxious Weed Control Board responded to a landowner request for identification in the fall of 1996, when he noticed this species growing in native horse range. The estimated infestation site covered about 600 acres, with a condensed infestation size estimate of 6 acres. An aggressive control program was initiated.

Growth and Development: An annual. The literature mentions flowering times beginning as early as April, with fruit production until frost.

Reproduction: By seeds. Non apomictic. Pollinators unknown (Vincent and Thierat 1987). Birds may be a vector.

Response to Herbicide: Difficult to control due to the lack of surface area of the small, leathery leaves. Okanogan County does have control plots in place, and will provide information as it becomes available.

Response to Cultural Methods: None known.

Response to Mechanical Methods: None known.

Biocontrol Potentials: None known.

References:

- George, V. and A. K. Rishi. 1982. Constituents of *Thymelaea passerina*. Fitoterapia. 1982. Vol. 53 (5/6). Pp. 191-2.
- *Gleason, H.A. and A. Cronquist. 1991. Manual of Vascular Plants of Northeastern United States and Adjacent Canada. The New York Botanical Garden. Bronx, NY. P. 312.
- *Harriman, N.A. 1979. Four Additions to the Wisconsin Flora. The Michigan Botanist. Vol. 18 (4). Pp. 143-145.
- *McGregor, R.L. and T.M. Barkley, R. E. Brooks, E.K. Schofield. 1986. Flora of the Great Plains. University Press of Kansas. P. 498.
- *Pohl, R. W. 1955. *Thymelaea passerina*, a new weed in the United States. Iowa Academy of Sciences, Vol. 62. Dec. 15, 1955.
- Tan, K. 1980. Studies in the Thymelaeaceae II: A revision of the genus *Thymelaea*. Notes Royal Bot. Gard. Edinburgh 38: 189-246.
- *Vincent, M.A. and J. W. Thieret. 1987. *Thymelaea passerina* (Thymelaeaceae) in Ohio. SIDA: Contributions to Botany. Vol. 12 (1). Pp. 75-78.
- *Wofford, B.E. and H.R. De Selm. 1988. Distribution of and first report of *Thymelaea passerina* from the southeastern United States. Castanea. Dec 1988. Vol. 53 (4). Pp. 305-6.
- * **References available from the Washington State Noxious Weed Control Board Office in Kent.**

Rationale for Listing:

Thymelaea passerina, or spurge flax, is aggressive, it is very difficult to control, livestock will not graze this plant, and at this time the distribution is limited to Okanogan County. This weedy Eurasian species was not previously known to Washington state, nor any other Pacific Northwest site, prior to the fall of 1996. Spurge flax has an estimated infestation size of about 600 acres of native range land, with a condensed infestation size estimate of 6 acres. An aggressive control program makes control, and possibly eradication, feasible at this time. The Okanogan County Noxious Weed Control Board requested that spurge flax be listed as a noxious weed.