

**WRITTEN FINDINGS OF THE
WASHINGTON STATE NOXIOUS WEED CONTROL BOARD**

Scientific Name: *Carduus tenuiflorus* W. Curtis

Common Name: Slenderflower thistle

Family: Compositae

Legal Status: Class A

Description and Variation: Slenderflower thistle is a winter annual broadleaf weed that is similar in appearance to Italian thistle, *C. pycnocephalus*. Plants grow up to 100 cm tall with triangular stem wings that are up to 1 cm tall and are tipped with a spine. Leaves are oblanceolate to lanceolate with 6-8 pairs of spine-tipped lobes. The underside of leaves and stems are covered with cobwebby hairs. 5-15 pinkish, cylindrical flowers are born in terminal clusters. Flowers are up to 2 cm in length and bracts are not hairy as in *C. pycnocephalus*.

Economic Importance: Slenderflower thistle has no known beneficial economic value, but it has invaded range and pastures. On grazed lands, slenderflower thistle like other thistles can reduce productivity by physically interfering with grazing and by displacing desired grasses. Native vegetation is threatened by this aggressive weed that tends to form dense stands.

Geographical Distribution: Slenderflower thistle is reported to be scattered over about 100 acres (10 acres infested if consolidated) in southeastern Thurston county (T 16 N, R 2 E, sect. 19, 20, 29, and 30). It has been introduced to Oregon, California, Texas, Australia, New Zealand, and Argentina and its native range is western and southern Europe.

Habitat: Dry, open area such as pastures, range, and right-of-ways.

History: Thurston county discovered and had slenderflower thistle identified in 1991.

Growth and Development: Typically, it germinates in the fall, overwinters as a rosette and flowers in late spring. Seed has no after-ripening requirement and germinates over temperatures ranging from 2 to 30 C.

Reproduction: Seed only.

Response to Herbicides: MCPA is recommended for application during the seedling or rosette stage. Applications after rosettes are larger than 6 inches in diameter may be less effective. Other growth regulator type herbicides (2,4-D, dicamba, or picloram) and Roundup may be effective, but references are not available to substantiate.

Response to Cultural Methods: As an annual broadleaf, mechanical control such as tilling or digging will kill slenderflower thistle. Deferring autumn grazing of sheep has been effective in reducing stand density because the thistles grow etiolated and less spiny when competing with ungrazed grasses. Then sheep will graze the thistle along with the grass.

Biocontrol Potentials: Two fungi have been evaluated as agents on slenderflower thistle. An *Alternaria* sp., which killed *C. pycnocephalus* in the cotyledon stage, was also pathogenic to slenderflower thistle. A *Puccinia* sp., isolated and active on *C. pycnocephalus*, was not active on slenderflower thistle.

References:

*Andersen, G.L. and S.E. Lindow. 1985. Biological control of *Carduus pycnocephalus* with *Alternaria* sp. Proc. VI Int. Symp. Biol. Cont. Weeds. pp. 593-600.

*Bendall, G.M. 1973. the control of slender thistle, *Carduus pycnocephalus* L. and *C. tenuiflorus* Curt. (Compositae), in pasture by grazing management. Aust. J. Agric. Res. 24:327-332.

*Groves, R.H. and P.E. Kaye. 1989. Germination and phenology of seven introduced thistle species in southern Australia. Aust. J. Bot. 37:351-359.

*Olivieri, I. 1985. Comparative electrophoretic studies of *Carduus pycnocephalus* L., *C. tenuiflorus* Curt. (Asteraceae), and their hybrids. Amer. J. Bot. 72:715-718.

*Oliveri, I. 1984. Effect of *Puccinia cardui-pycnocephali* on slender thistles (*Carduus pycnocephalus* and *C. tenuiflorus*). Weed Sci. 32:508-510.

*Robbins. W.W., M.K. Bellue, and W.S. Ball. Weeds of California. pp. 433.

*Tutin, T.G., V.H. Heywood, N.A. Burges, D.M. Moore, D.H. Valentine, S.M. Walters, and D.A. Webb. 1976. Flora Europaea. Cambridge Univ. Press. Vol 4:231.

see also references under Italian thistle, *Carduus pycnocephalus*

*References available from the Washington State Noxious Weed Control Board office in Kent

Justification for Inclusion on the Washington State Noxious Weed List:

Slenderflower thistle is another aggressive exotic thistle that currently has an extremely limited distribution in Thurston County, Washington. This plant has been introduced into other countries and states, where it has established, shown its aggressive nature, and become a problem weed in pastures and rangeland. Targeting this weed for eradication will protect Washington's range and natural resources from infestation, damage and costly control.