

Cup Clover (*Trifolium cyathiferum*)

Fabaceae (Pea Family)

Status: Blue / Not Assessed ■
 Best Survey Time: May to July ■
 General Habitat: wet meadows ■

RANGE

- Found in North America from western United States north into British Columbia
- In B.C., known from scattered sites in the southern half of the province from Vancouver Island to the Okanagan Valley and further east into the Kootenays

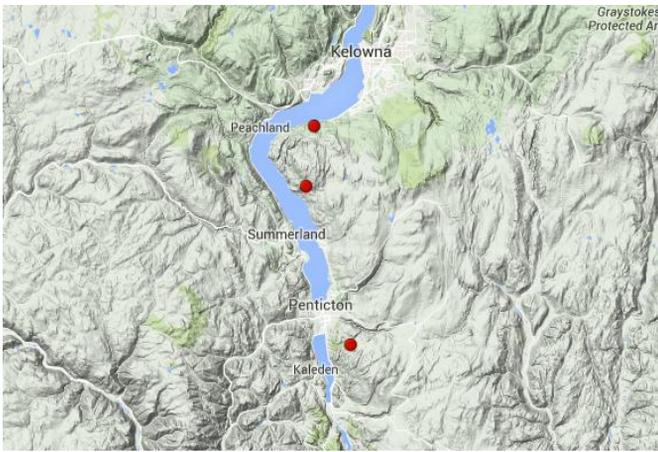


Figure 1 Thompson Okanagan Region distribution of *Trifolium cyathiferum* (BC CDC 2014)

HABITAT

- Intermittent creeks, vernal pool margins and other spring-wet/summer-dry habitats
- In the Thompson Okanagan Region, known from three sites in Ponderosa Pine and Interior Douglas Fir Biogeoclimatic Zones
- Associates include false-mermaid (*Floerkea proserpinacoides*), small-flowered blue-eyed Mary (*Collinsia parviflora*), fragile fern (*Cystopteris fragilis*) and narrow-leaved montia (*Montia linearis*)



Figure 2 Tall plants growing intermixed with grasses



Figure 3 Dense fringe of cup clover surrounding a vernal pool in northern Washington, USA

LIFE HISTORY

- Annual herbs flowering in late spring into summer, until drought-killed
- Seeds germinate in the early spring when their habitat is flooded or saturated
- Like many annual species occurring in seasonally wet sites, populations numbers can fluctuate greatly based on the amount of moisture available during germination and early growth

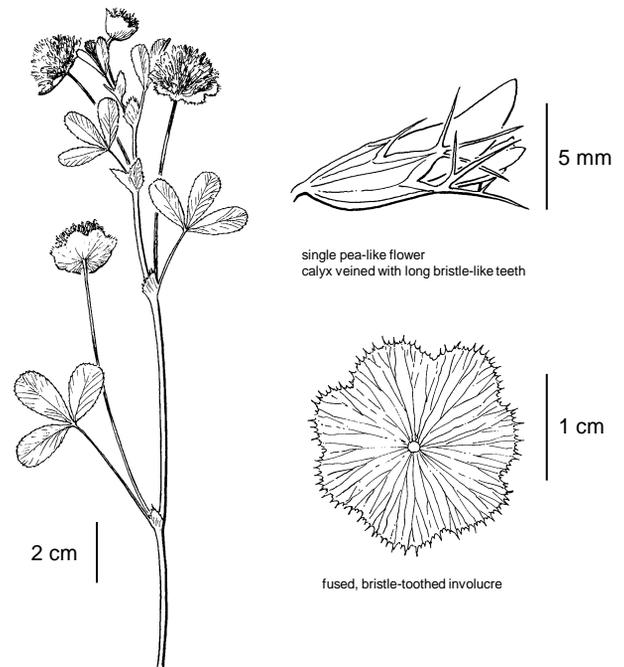


Figure 4 Illustration of *Trifolium cyathiferum* by Jeanne R. Janish (Hitchcock et al. 1969)

Trifolium cyathiferum (continued)

DESCRIPTION

General

- Annual herb with ascending to erect, branched, hairless stems, 10 to 45 cm tall

Leaves

- Leaves alternate, palmately compound with 3 more or less elliptical leaflets up to 2.5 cm long, finely toothed along the margins
- Stipules (papery bracts at leaf bases) lanceolate and just under 1 cm long

Flowers

- Inflorescence a hemispheric, axillary head of 5 to 30 white or greenish pea-like flowers
- Corolla (petals) white to pink, 5 to 11 mm long
- Calyx (sepals) veined and membranous with long, bristle-like teeth
- Flowers contained in a fused, bowl-shaped, bristle-toothed involucre (set of bracts beneath flower head)

Fruits

- Oblong glabrous pods on short stalks with 1 or 2 seeds



Figure 5 Close-up of (a) hemispheric flower head showing (b) fused, bristle-toothed involucre beneath flower head

IDENTIFICATION TIPS

- Characterized by its cup-shaped involucre
- Thimble clover (*Trifolium microdon*) is perhaps the species that most closely resembles cup clover, but it is restricted in B.C. to the South Coast; it has even smaller white flowers and a boxy involucre (flat across the bottom, abruptly upturned to the margins)
- Small-headed clover (*Trifolium microcephalum*) is found in the Okanagan and may be confused with cup clover; it differs in having blunt to notched leaf tips, densely hairy stems, leaves and involucres, smaller and pale pink flowers, and a smaller involucre



Figure 6 Comparison of (a) *Trifolium cyathiferum* and (b) *Trifolium microcephalum*, which is hairier with smaller involucres

GENERAL THREATS AND GUIDANCE

- Avoid development in areas with known occurrences of *Trifolium cyathiferum* through project relocation or redesign**
- Protect ephemeral wetland habitats from disturbance and development, including excessive grazing by cattle
- Monitor the impact of invasive species
- Follow provincial methods for when and how to conduct plant species at risk surveys
- Follow provincial policy and guidance on how to avoid, minimize, restore and offset impacts to plant species at risk and their habitats
- Report any sightings to the B.C. Conservation Data Centre (cdccdata@gov.bc.ca) and FLNR Ecosystems Section (josie.symonds@gov.bc.ca)

REFERENCES

- B.C. Conservation Data Centre. 2014. <http://a100.gov.bc.ca/pub/eswp/>
- Douglas et al. (editors). 1999. *Illustrated Flora of British Columbia*. Vol. 3. B.C. Min. Environ., Lands and Parks, and Min. For., Victoria, B.C.
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- Klinkenberg, Brian (editor). 2014 E-Flora BC <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Trifolium%20cyathiferum>

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