

Ute Lady's Tresses (*Spiranthes diluvialis*)

Orchidaceae (Orchid family)

RANGE

- In North America from British Columbia south to Washington and east to Nebraska and Nevada (USA)
- In B.C., only known from two locations in the south Okanagan Valley

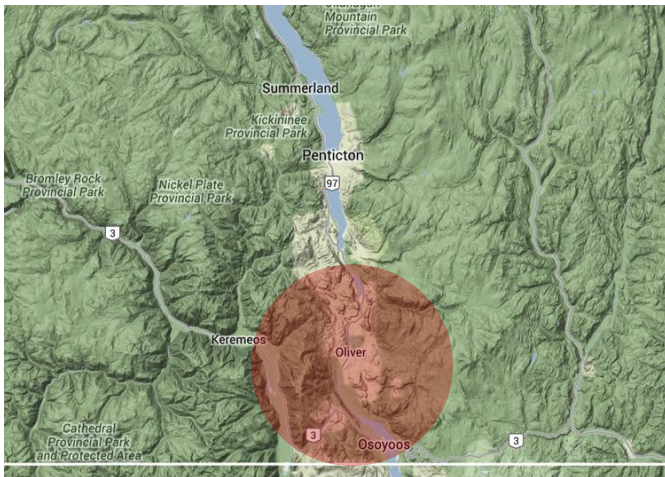


Figure 1 B.C. distribution of *Spiranthes diluvialis*; specific locations are kept confidential

HABITAT

- Strongly to moderately saline soil in open, spring-wet meadows along lakes in the Bunchgrass and Ponderosa Pine Biogeoclimatic Zones
- Sites may be annually or rarely flooded
- Associates include tufted white prairie aster (*Symphotrichum ericoides* var. *pansum*), green sedge (*Carex viridula*), American bulrush (*Schoenoplectus pungens*), alkali saltgrass (*Distichlis spicata*), rushes (*Juncus* spp.) and common witchgrass (*Panicum capillare*)



Figure 2 Saline wet meadow habitat in south Okanagan Valley, B.C.



Figure 3 Close-up of saline wet meadow habitat

LIFE HISTORY

- Perennial species that may expand its local population vegetatively via roots, but this is unconfirmed
- Colonization of open areas via seed can occur, but there is no documentation of this in B.C.
- Generally flowers from late June into August or September, although flowering is irregular throughout its range (probably depending on hydrology and local climate)



Figure 4 *Spiranthes diluvialis* with associates in wet meadow

Spiranthes diluvialis (continued)

DESCRIPTION

General

- Perennial orchid with erect stems that grow from thickened roots
- From 20 to 50 cm tall, sometimes taller

Leaves

- Narrow, lanceolate leaves largest at the base of the stem, up to 28 cm long, and usually flare outwards
- Stem leaves much shorter, more erect, clasping stem at their base

Flowers

- Flowers white or ivory, 7.5 to 15 mm long, and spirally arranged in an elongated terminal cluster (spike)
- Lateral petals (x2) narrow with sharp tips
- Lip (= lower) petal longer and broader, ovate or oblong, and narrowed at the middle with crispy-wavy margins and often yellow centrally (lip petal visible when viewed from the side)
- Sepals (x3) about same length as lip petal, separate or fused only at base, and often spreading at tips
- Much of spike, including flowers, is glandular-pubescent

Fruits

- Cylindric capsules containing numerous tiny seeds



Figure 5 Flowering stem of *Spiranthes diluvialis*

IDENTIFICATION TIPS

- Characterized by spirally arranged, bright white/ivory flowers in a tight spike and by its saline habitat
- Could only be confused with hooded ladies' tresses (*S. romanzoffiana*), the only other B.C. *Spiranthes* species, although their habitats never overlap
- *S. romanzoffiana* is mainly found in mesic montane and subalpine habitats, its lip petal (not visible from the side) is violin-shaped with a deep constriction below the apex, and its spike is mostly hairless



Figure 6 Close up of flowers showing distinct petals and sepals

GENERAL THREATS AND GUIDANCE

- **Avoid development in areas with known occurrences of *Spiranthes diluvialis* through project relocation or redesign**
- Protect open, spring-wet meadows with strongly to moderately saline soil that are found alongside lakes from disturbance and development, including exclusion of livestock and ATVs through fencing, and consider restoration (including invasive plant removal) following professional advice
- Maintain natural water level fluctuations with spring inundation and summer drawdown
- Do not collect or pick this 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. 2013. <http://a100.gov.bc.ca/pub/eswp/>
- Klinkenberg, Brian (Editor). 2013. E-Flora BC. http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Spiranthes_diluvialis&redblue=Both&lifeform=7
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