

# Andean Evening-primrose (*Neoholmgrenia andina*)

## Onagraceae (Willow-herb Family)

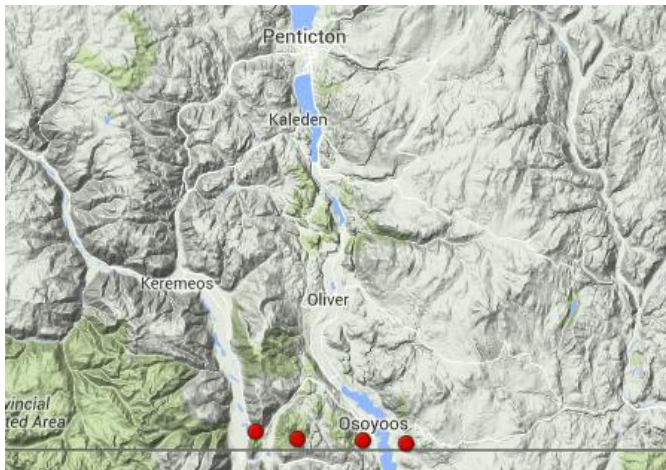
 Status: Red / Not listed ■

 Best Survey Time: May to Jun ■

 General Habitat: Upland ■

### RANGE

- In North America, found from British Columbia east to Saskatchewan, and south to Wyoming through to California (USA)
- In B.C., reported from four locations in the south Okanagan Valley, near Osoyoos and the Nighthawk border crossing



**Figure 1** B.C. distribution of *Neoholmgrenia andina* (BC CDC 2014)

### HABITAT

- Found on clay or silt-rich soils in seasonally moist habitats near depressions in shrub-steppe and grasslands in the Bunchgrass and Ponderosa Pine Biogeoclimatic Zones
- Associates include big sagebrush (*Artemisia tridentata*), six-weeks grass (*Vulpia octoflora*), bluebunch wheatgrass (*Pseudoroegneria spicata*), woolly plantain (*Plantago patagonica*), and arrowleaf balsamroot (*Balsamorhiza sagittata*)



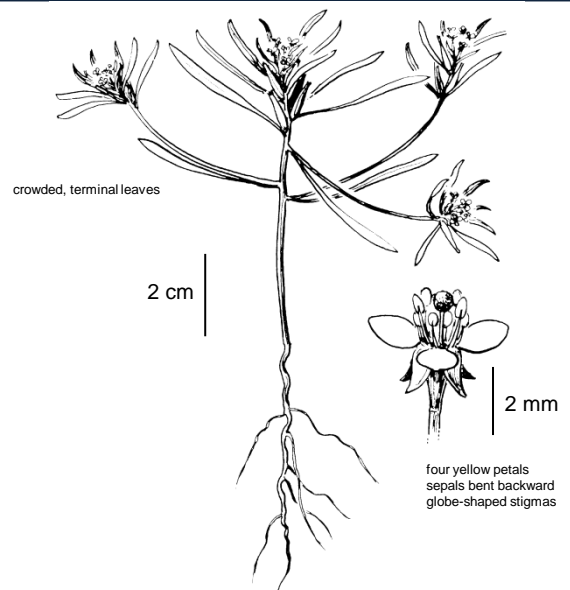
**Figure 2** Shrub-steppe habitat near the Similkameen Valley, B.C.



**Figure 3** *Neoholmgrenia andina* growing in seasonally moist habitat

### LIFE HISTORY

- Annual species that grows each year from seed, germinating in spring before water evaporates from the soil, and flowering from May into June
- Mortality, normally in June, may be delayed by summer rainfall, triggering renewed vegetative growth with flowering and fruiting into late August
- Fruiting occurs through summer with seeds released from dried capsules
- Does not reproduce vegetatively, so population survival depends on seeds and the seed bank
- Seed dispersal probably by water or small mammals
- May be subject to annual population fluctuations due to varying environmental conditions



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

# Neoholmgrenia andina (continued)

## DESCRIPTION

### General

- Often multi-branched, minutely hairy, annual plant
- Grows close to the ground, commonly up to 15 cm, sometimes taller

### Leaves

- Leaves arranged alternately, narrowly lance-shaped, from 10 to 30 mm long, and crowded at the tops of the stems
- Lower parts of stem usually leafless

### Flowers

- Numerous short stalked or unstalked flowers clustered within a crowded spike within leaves
- Each flower has four yellow petals, 0.8 to 2.3 mm long, turning red with age
- Sepals (4) reddish, 0.8 to 2 mm long, and usually bent backwards
- Stigmas (top of pistil) globe-shaped

### Fruits

- Capsules 4-chambered, 5 to 10 mm long, 1.0 to 1.3 mm wide and fine grey-hairy
- Each capsule contains numerous smooth, glossy seeds, 0.7 to 1.3 mm long



Figure 5 *Neoholmgrenia andina* in flower, showing 4-petaled, yellow flowers, globular stigmas and alternate, lance-shaped leaves

## IDENTIFICATION TIPS

- Not easily confused with other plants in its dryland habitat
- Characterized by its small stature, crowded, terminal leaves, and 4-petaled, yellow flowers with globular stigmas
- Distinct from other members of the evening primrose family and small, yellow-flowered, 4-petaled species of mustard family (Brassicaceae)



Figure 6 Close-up of aging flower, with capsules beginning to form

## GENERAL THREATS AND GUIDANCE

- **Avoid development in areas with known occurrences of *Neoholmgrenia andina* through project relocation or redesign**
- Protect shrub-steppe and grassland habitat from disturbance and development (including grazing and ATV exclusion through fencing) and consider restoration (including invasive plant removal) following professional advice
- 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](mailto:cdccdata@gov.bc.ca)) and FLNR Ecosystems Section ([josie.symonds@gov.bc.ca](mailto: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.
- Hitchcock et al. 1969. *Vascular Plants of the Pacific Northwest*. Univ. Washington Press, Seattle, WA
- Klinkenberg, Brian (editor). 2013. E-Flora BC. <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Neoholmgrenia%20andina>
- NatureServe. 2012. <http://www.NatureServe.org/explorer>

## ACKNOWLEDGEMENTS

*Neoholmgrenia andina* Plant Species at Risk Fact Sheet developed by Josie Symonds and Wendy Pope. based on content produced under contract by Terry McIntosh and review comments by Brenda Costanzo