

Red-rooted Cyperus

Cyperus erythrorhizos

Cyperaceae (Sedge Family)

- Status: Red / Not Assessed
- Best Survey Time: August to October
- General Habitat: Foreshore

RANGE

- Widespread in North America
- In British Columbia, known from Swan Lake, Ellison Lake and Osoyoos Lake
- Some of these populations have not been observed recently and may have been lost

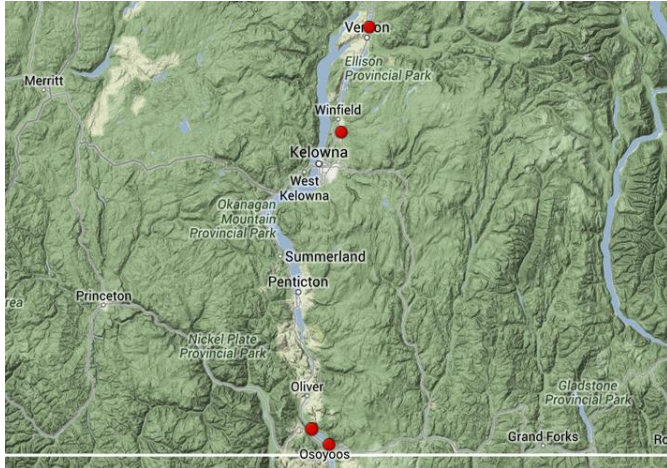


Figure 1 B.C. distribution of *Cyperus erythrorhizos* (BC CDC 2013)

HABITAT

- Open sandy or silty soil alongside lakeshores in the Ponderosa Pine and Bunchgrass Biogeoclimatic Zones
- Associates include hard-stemmed bulrush (*Schoenoplectus acutus*), red goosefoot (*Chenopodium rubrum* var. *rubrum*), awned cyperus (*Cyperus squarrosus*), slender rush (*Juncus tenuis*) and spike-rushes (*Eleocharis* spp.)



Figure 2 Sandy open habitat along Okanagan River oxbow, B.C.



Figure 3 Close up of habitat along Okanagan River oxbow, B.C.

LIFE HISTORY

- Annual species that grows each year from seed, germinating in late spring following water drawdown or when temperatures warm
- Flowers in summer and achenes mature from late summer into October
- Seeds are released as achenes fall from plant
- Does not reproduce vegetatively, so population survival depends on seeds and seed bank
- Seed dispersal by water, waterfowl or small mammals

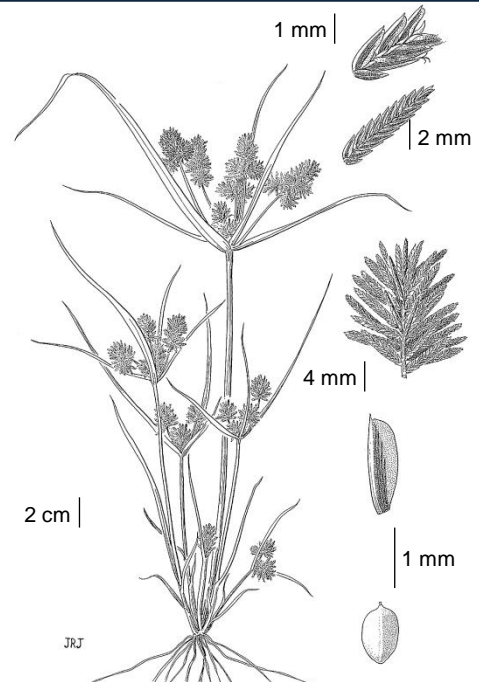


Figure 4 Illustration of *Cyperus erythrorhizos* by Jeanne R. Janish (Hitchcock et al. 1969)

Cyperus erythrorhizos (continued)

DESCRIPTION

General

- Tufted annual from fibrous roots, 3-40 cm tall

Leaves

- Leaves mostly basal, grass-like, mostly channeled, 1-2.5(-7.5) mm wide

Flowers

- Flowers found at tops of stems in dense, elongate, head-like clusters composed of one to numerous, 1 to 4 cm long spikes, each spike composed of numerous, spirally-arranged spikelets, spikelets 6 to many-flowered and 3 to 12 mm long
- Terminal flower clusters unstalked, others on stalks up to 7 cm long, extending away from top of stem
- Inflorescences subtended and greatly surpassed by long, unequal, leaf-like bracts.
- Scales brown with a central green stripe, with 3 central nerves, oblong or egg-shaped, apex obtuse, with a short terminal tooth

Fruits

- Fruits are achenes, unequally 3-angled, pale, shiny, and 0.7 to 1 mm long



Figure 5 Typical plant with flower clusters and grass-like leaves

IDENTIFICATION TIPS

- Easily distinguished from most other plants in habitat by clusters of spikes and spikelets at tops of stems
- Awned cyperus (*Cyperus squarrosus*) overlaps in distribution with *C. erythrorhizos* but rarely grows more than 10 cm in height, its flower scales are recurved not straight, and its inflorescences are much more clustered
- Yellow nut-grass (*C. esculentus* var. *leptostachyus*) is a perennial coastal species



Figure 6 Close up of terminal flower cluster

GENERAL THREATS AND GUIDANCE

- **Avoid development in areas with known occurrences of *Cyperus erythrorhizos* through project relocation or redesign**
- Protect open sandy and silty lakeshore habitats from disturbance and development, including exclusion of livestock and ATVs through fencing and/or signage, and consider restoration including invasive plant removal following professional advice
- Provincial methods for when and how to conduct rare plant surveys, as well as guidance on mitigation measures for this species can be found in *Guidance for Plant Species at Risk in the Okanagan: Foreshore, Riparian & Wetland Developments*
- Report any sightings to the BC Conservation Data Centre (cdccdata@gov.bc.ca) and MFLNRO Ecosystems Section (josie.symonds@gov.bc.ca)

REFERENCES

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ACKNOWLEDGEMENTS

Cyperus erythrorhizos Plant Species at Risk Fact Sheet developed by Josie Symonds based on content produced under contract by Terry McIntosh and review comments from Brenda Costanzo, Orville Dyer and Curtis Bjork