

Polycytenium williamsiae Rollins**WILLIAMS COMBLEAF**

FAMILY: *Brassicaceae*, the mustard family.

SYNONYMS: *Polycytenium fremontii* var. *confertum*

STATUS:

Heritage Program SENSITIVE LIST, ranks: G2Q S2

USFWS/ESA: species of concern, formerly CANDIDATE or PROPOSED. **STATE OF NEVADA:** FULLY PROTECTED. **BLM:** Special Status Species in Nevada. **USFS:** Inyo NF Sensitive Species.

NNNPS: THREATENED.

POPULATION CENSUS (NEVADA): 14 occurrences mapped at 1.0 km (0.6 mi) separation, OR 24 occurrences mapped at 0.16 km (0.1 mi) separation; total estimated individuals 11,000+, total estimated area 185+ ha (457+ ac). **TREND:** DECLINING.

IMPACTS AND MAJOR THREATS (NEVADA): Trampling by livestock and feral horses, water diversions and developments, off-road vehicle use.

INVENTORY EFFORT (NEVADA): Surveys are substantially complete in Nevada. Most recent entered survey 1999, average year of last survey 1997. **Years since last entered survey** (percent of mapped records at various survey ages): **0-5 yrs:** 66.7%; **6-10 yrs:** 33.3%.

LAND MANAGEMENT (NEVADA) in decreasing predominance: Humboldt-Toiyabe National Forest, U. S. Bureau of Land Management, private lands, Nevada state lands (?).

RANGE: Douglas, Lyon, Mineral, Nye, and Washoe counties, Nevada; also in CA and OR. Maximum Nevada **range dimension 322.6 km (200.5 mi)** excluding most disjunct record.

ELEVATIONS RECORDED (NEVADA): 5670-8930 feet (1728-2722 meters).

HABITAT (NEVADA): Relatively barren sandy to sandy-clay or mud margins and bottoms of non-alkaline seasonal lakes perched over volcanic bedrock in the sagebrush, pinyon-juniper, and mountain sagebrush zones, with *Carex douglasii*, *Muhlenbergia richardsonis*, *Camissonia tanacetifolia*, *Iva axillaris*, *Myosurus minimus*, *Potentilla newberryi*, *Psilocarphus brevissimus*, *Downingia* sp., *Eleocharis*, *Juncus balticus*, *Artemisia tridentata*, *A. cana*, etc. Aquatic or wetland-dependent in Nevada.

PHENOLOGY: flowering early-spring. Range of most frequent **survey months:** March-July.

LIFE-FORM AND HABIT: small short-lived perennial herb.

DESCRIPTION: A perennial herb, 4-10 cm tall, that produces a clusters of white to purplish flowers in mid-summer.

PHOTOGRAPHS: Nevada Natural Heritage Program slide collection (1986-present) and files.

ILLUSTRATIONS: Rollins (1993).

OTHER GENERAL REFERENCES (listed separately): Hickman (1993).

SPECIFIC REFERENCES:

- Holland, R. F. 1995. Current knowledge and conservation status of *Polycytenium williamsiae* Rollins, Williams' combleaf, and *P. fremontii* var. *confertum* Rollins, crowded combleaf (*Brassicaceae*) in Nevada. Carson City: Nevada Natural Heritage Program, status report prepared for the U. S. Fish and Wildlife Service, Reno.
- Holland, R. F. 1997. Current knowledge and conservation status of *Polycytenium williamsiae* Rollins and *Polycytenium fremontii* var. *confertum* Rollins (*Brassicaceae*), two combleafs, in Nevada. Carson City: Nevada Natural Heritage Program, DRAFT status report prepared for the U. S. Fish and Wildlife Service, Reno.
- Knight, T. A. 1990. Status report for *Polycytenium williamsiae* Rollins. Carson City: Nevada Natural Heritage Program, prepared for the U. S. Fish and Wildlife Service, Reno.
- Rollins, R. C. 1983. Studies in the Cruciferae of western North America. *Journal of the Arnold Arboretum* 64: 491-510.

OF FURTHER INTEREST: *Polycytenium fremontii* var. *confertum* has been merged with *P. williamsiae* as per Holland and Morefield, 97-11-24 (see Holland, 1997).
