

**ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM**

**Plant Abstract**

**Element Code:** PDAST3M500

**Data Sensitivity:** No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Erigeron heliographis*

**COMMON NAME:** Pinaleno fleabane, Pinalenos fleabane, Heliograph Peak fleabane

**SYNONYMS:**

**FAMILY:** Asteraceae

**AUTHOR, PLACE OF PUBLICATION:** G. Nesom, Phytologia 69(3): 227-235. 1990.

**TYPE LOCALITY:** Heliograph Peak, Pinaleño Mountain, Arizona.

**TYPE SPECIMEN:** HT: ARIZ 250998. T.R. & R. Van Devender, 84-292, 10 June 1984. IT: TEX.

**TAXONOMIC UNIQUENESS:** A 1990 revision of *E. pringlei* by Guy Nesom at the University of Texas at Austin split the species into four taxa: *E. pringlei*, *E. heliographis*, *E. saxatilis*, and *E. anchana*. These closely related members of the *Erigeron pringlei* group, are all restricted to mountains within Arizona. Each species is morphologically as well as geographically distinct. "The four species of the *E. pringlei* group might be treated as geographic entities within a single species, where they would be given formal status as varieties. The differences among them however, are consistent with the degree of difference found among other groups of similar, closely related species of North American *Erigeron* traditionally recognized as distinct" (Nesom 1990). *E. heliographis* is 1 of 171 species in the genus *Erigeron*.

**DESCRIPTION:** A low growing, caespitose perennial herb less than 10 cm (4 inches) tall, with old leaf bases persisting on the branches. Stems usually 1.5-4.5 cm (0.6-1.8 in) long. Basal leaves are tufted, erect and entire, and linear (0.5-0.9 mm wide). Small flower heads with 20-23 white (rose- or purple-tinged) ray flowers, in a single series. Pappus is composed of 16-21 bristles, which are 2.9-3.1 mm long.

**AIDS TO IDENTIFICATION:** This is the only low clumpy *Erigeron* with entire, narrow leaves on rock cliffs and outcrops in its range. *E. heliographis* is closely related to *E. pringlei* but geographically separated. It differs from *E. pringlei* by the diminutive form and the high elevation (above 8,250 ft) where it is found in the Pinaleño Mountains.

**ILLUSTRATIONS:** Color photos of plant and habitat (Barb Phillips, in Falk, Jenkins et al. 2001)

**TOTAL RANGE:** Pinaleño Mountain, Graham County, Arizona. Heliograph and Plain View peaks, Mt. Graham, and the vicinity of Moonshine Creek, Post Canyon, and Riggs Lake.

**RANGE WITHIN ARIZONA:** See "Total Range."

## **SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** Herbaceous perennial forb.

**PHENOLOGY:** Dicot flowering plant, flowering May through July.

**BIOLOGY:** Plants flower profusely in season. No pollinators have been observed (Phillips 1991).

**HABITAT:** Granite rock cliffs and outcrops, usually somewhat mesic, in mixed conifer forests above 2600 m elevation.

**ELEVATION:** Above 8,500 feet up to 10,400 feet (2593 - 3172 m). Phillips (1991) reports elevation as low as 8,250 ft (2516 m).

**EXPOSURE:** Various. Usually in shaded cliffs faces and outcrops.

**SUBSTRATE:** Granite. Bedrock to small gravels and associated dirt, the Mexican Highlands Section of the Basin and Range Province.

**PLANT COMMUNITY:** Mixed conifer forest. In Moonshine Creek vicinity, with *Heuchera versicolor* (painted alumroot), *Draba aurea* (golden draba), *Veratrum* (hellebore), and *Alnus* (alder). Plain View Peak vicinity, with *Heuchera sanguinea* (coralbell), *Draba* sp. (whitlowwort), *Holodiscus dumosus* (ocean spray); adjacent slope: *Picea engelmannii* (Engelmann spruce), *Abies lasiocarpa* (subalpine fir), and *Pinus strobiformis* (southwest white pine). (Phillips 1991). Post Canyon vicinity, with *Petrophytum* sp. (rock-mat), *Erigeron* sp. (fleabane), *Echinocereus triglochidiatus* (mound hedgehog-cactus); adjacent slope: *Quercus gambelii* (gambel oak), *Picea engelmannii*, *Pseudotsuga menziesii* (Douglas-fir). (Phillips 1991).

**POPULATION TRENDS:** Unknown.

## **SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None (USDI, FWS 1996)  
[Category 2 USDI, FWS 1993]

**STATE STATUS:** None

**OTHER STATUS:** None

**MANAGEMENT FACTORS:** Populations are relatively small; but occupy relatively inaccessible habitats with low vulnerability. It is unknown if recent construction of telescopes on Pinaleno Mountain, have had any effect on existing populations. Managers should continue to consider this species during their operations until such time as re-assessment is completed (Phillips 1991).

**CONSERVATION MEASURES TAKEN:**

**SUGGESTED PROJECTS:** Monitor known populations to determine trends.

**LAND MANAGEMENT/OWNERSHIP:** All populations on Coronado National Forest, Safford Ranger District.

**SOURCES OF FURTHER INFORMATION**

**REFERENCES:**

- Falk, M., P. Jenkins, et al; Arizona Rare Plant Committee. 2001 Arizona Rare Plant Guide. Published by a collaboration of agencies and organizations. Pages unnumbered. Integrated Taxonomic Information System (ITIS). Retrieved 10/8/2003 from ITIS, <http://www.itis.usda.gov>.
- NatureServe. 2003. NatureServe Explorer: An online encyclopedia of life [web application]. Version 1.8. Arlington, Virginia. Available: <http://www.natureserve.org/explorer>. (Accessed: October 8, 2003).
- Nesom, G. 1990. Taxonomy of the *Erigeron pringlei* group (Asteraceae). *Phytologia* 69(3):227-235.
- Phillips, B.G. 1991. Status report on *Erigeron pringlei* Gray, *Erigeron heliographis* Nesom, *Erigeron anchana* Nesom, *Erigeron saxatilis* Nesom. Prepared for U.S. Fish and Wildlife Service. Phoenix, Arizona.
- USDA, NRCS. 2002. The PLANTS Database, Version 3.5 (<http://plants.usda.gov>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.
- USDI, Fish and Wildlife Service. 1993. Plant Taxa for Listing as Endangered or Threatened Species; Notice of Review. *Federal Register* 58(188): 51163.
- USDI, Fish and Wildlife Service. 1996. Endangered and Threatened Wildlife and Plants: Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species; Notice of Review. Proposed Rule. *Federal Register* 61(40): 7595-7613.

**MAJOR KNOWLEDGEABLE INDIVIDUALS:**

- Guy Nesom - University of Texas, Austin, TX.  
Jim Malusa – The Nature Conservancy, Tucson, AZ.  
Steve McLaughlin - University of Arizona, Office of Arid Lands Studies, Tucson, AZ.  
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**ADDITIONAL INFORMATION:**

*E. heliographis*: above 8,250 feet on rocks within mixed conifer forest.

*E. anchana*: cliffs and rocks from about 3,500 to 7,000 feet in various vegetation types.

*E. saxatilis*: About 4,400 to 7,000 feet in canyons along the Mogollon Rim.

*E. pringlei*: cliffs and rocks from about 5,500 to 9,200 feet.

*E. pringlei* would include the type specimen and other plants from the Santa Rita Mountains and mountains of central Arizona. *E. heliographis* is a diminutive form found at high elevations in the Pinaleno Mountains. *E. saxatilis* is a rare form collected from Oak Creek Canyon and Little Eden Mountain near Flagstaff. Most other sub-Mogollon Rim populations would be called *E. anchana*. The latter includes populations from Sierra Ancha, Pine, Mazatzal and Mescal mountains, and Pine Canyon (Tonto Bridge).

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| <b>Revised:</b> | 1991-11-05(PLW)  |
|                 | 1995-06-15 (DBI) |
|                 | 1998-01-06 (SSS) |
|                 | 2003-10-30 (SMS) |

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