

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDAST3M3N0

Data Sensitivity: Yes

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Erigeron rhizomatus*

COMMON NAME: Rhizome Fleabane, Zuni Fleabane

SYNONYMS:

FAMILY: Asteraceae

AUTHOR, PLACE OF PUBLICATION: Cronquist, Brittonia 6(2): 274-275. 1947.

TYPE LOCALITY: McKinley County, New Mexico, United States of America.

TYPE SPECIMEN: HT: NY-168534. H.D.D. Ripley 5272 and R.C. Barneby, 16 May 1943.
IT: Herb. Barneby.

TAXONOMIC UNIQUENESS: The species *rhizomatus* is one of 171 in the genus *Erigeron* in North America.

DESCRIPTION: Herbaceous perennial arising from ascending or upright subterranean stems, with creeping rhizomes. Stems erect, numerous (in clumps), strigose, sparsely branching from near the base, about 3 dm (12 in) in diameter and 2.5-4.5 dm (10-18 in) tall. Flowering stems sparsely leafy, while sterile stems are densely leafy. Leaves alternate, typically less than 1 cm long, oblong and glabrous except for occasional ciliate hairs on the margins and midvein. Flower heads are solitary terminating the branches (blooming at tops of stems), 13-16 mm wide, with involucre bracts in several series. Ray flowers 25-45; white or tinged with pale blue-violet; 6-7 mm long and 1.3-1.5 mm wide; disk flowers are yellow. Achenes 5-6 nerved, nearly glabrous, pappus 25-35 fragile bristles with a few short outer setae. (Falk et al., 2001; nmrareplants.unm.edu).

AIDS TO IDENTIFICATION: Distinct from other *Erigerons* by its rhizomatus habit, nearly hairless achenes, with 5-6 nerves, and very few hairs on the stems and leaves.

ILLUSTRATIONS: Line drawing (Falk et al., 2001)
Color photos of plant and habitat (Falk et al., 2001)
Color photo (R. Spellenberg, *in*
<http://nmrareplants.unm.edu/photoimages/collage/erirhi.htm>)
Color photo of habitat (R. Sivinski, *in*
<http://nmrareplants.unm.edu/photoimages/collage/erirhi.htm>)
Line drawing (Spellenberg, *in*

<http://nmrareplants.unm.edu/drawings/erirhi.htm>)

Color photos (W.L. Wagner, USDA NRCS, in <http://plants.usda.gov>)

Color photo of Holotype (Ripley and Barneby, NY-168534, in <http://207.156.243.8/emu/vh/specimen.php?irn=377228>)

TOTAL RANGE: Western New Mexico (McKinley and Catron counties) and northeastern Arizona. Previously thought to be endemic to western New Mexico, but found in northeastern Arizona in 1999.

RANGE WITHIN ARIZONA: Eastside of the Chuska Mountains in Apache County, northeastern Arizona. Disjunct from main range in New Mexico.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial herb.

PHENOLOGY: Flowers May and June, with fruit noticeable between mid-June and August.

BIOLOGY: There is ample evidence that this species reproduces by seed as well as through rhizomes. However, there is no documentation to clearly show that it is not apomictic. The seeds (achenes) are capped with a pronounced bristly pappus which is well suited for wind dispersion. It is also possible that these bristles could adhere to animal fur or bird feathers and provide a mechanism for dispersion. This species is visited by a variety of insects and would be considered a generalist.

(<http://fwie.fw.vt.edu/WWW/esis/lists/e702035.htm>, accessed 2002).

HABITAT: In Arizona, *E. rhizomatus* is associated with the Church Rock and Owl Rock member of the Chinle Formation, inhabiting exposed slopes of detrital clay hillsides, with little other vegetation. For their range, they are found in Pinyon-juniper woodlands on steep easily eroded sandstone slopes and clay banks, usually in close association with the Chinle and Baca Formations (often seleniferous), at 2190-2400 m. (NatureServe 2005; nmrareplants.unm.edu).

ELEVATION: In Arizona, found in communities around 7,600-7,700 ft (2318-2349 m). For their range, they are found from 7,185-7,874 ft (2190-2400 m).

EXPOSURE: It prefers slopes of up to 40 degrees, most often on north or east-facing slopes.

SUBSTRATE: Usually in close association with the Chinle and Baca Formations. It should be noted that it invariably thrives near uranium deposits, where such soils are known to be high in Selenium.

PLANT COMMUNITY: Pinyon-juniper woodlands. It is often associated with *Atriplex canescens* (four-wing saltbush), *Cercocarpus montanus* (Colorado birch-leaved mountain-mahogany), *Chrysothamnus nauseosus* (= *Ericameria nauseosa* var. *nauseosa*, rubber rabbitbrush), *Juniperus monosperma* (oneseed juniper), *Pinus edulis* (pinyon pine), and *Quercus gambellii* (Gambel oak).

POPULATION HISTORY AND TRENDS: Found in northeastern Arizona in June 1999. There are 37 known sites in New Mexico, where it was previously thought to be endemic. The plants are restricted to specific substrates that are potentially minable. (NatureServe 2005). In general, most of the known populations are composed of mature plants with few juveniles. However, when wet years occur, significant reproduction has been observed.

“The distribution of *Erigeron rhizomatus* is associated with the distribution of uranium deposits in west-central New Mexico. Many of the sites for this plant occur at historical or current mining claims that are uneconomical at present uranium prices. This could change with a greater demand for uranium.” (nmrareplants.unm.edu).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: LT (USDI, FWS 1985)
[PT, USDI, FWS 1984]

STATE STATUS: None

OTHER STATUS: Group 2 (NNDFW, NESL 2000, 2005)

MANAGEMENT FACTORS: Threats include: habitat disturbance, potential uranium mines, road construction and resulting erosion, and cattle grazing (trampling, not grazing). (NatureServe 2005). The largest limiting factor for this species is the presence or absence of its preferred microhabitat. It needs the proper substrate (e.g. Chinle or Baca formation), at the right elevation, on a gentle slope with the right exposure. The chief cause of mortality for this species is surface disturbance. Recovery involves preventing such disturbance. (<http://fwie.fw.vt.edu/WWW/esis/lists/e702035.htm>, accessed 2002).

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BIA – Navajo Nation.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

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MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

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