

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

Plant Abstract

Element Code: PDAST3M2A0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Erigeron lemmonii* Gray

COMMON NAME: Lemmon's Fleabane

SYNONYMS:

FAMILY: Asteraceae

AUTHOR, PLACE OF PUBLICATION: A. Gray, Proc. Amer. Acad. Arts 19: 2. 1883.

TYPE LOCALITY: Huachuca, Arizona, USA.

TYPE SPECIMEN: Type: US-49942. J.G. Lemmon 2749, Aug 1882.

TAXONOMIC UNIQUENESS: A distinct species in a difficult genus of about 200 species; USDA, NRCS (2004) reports 171 species. Probably closely related to *E. divergens*; resembles *E. myriomaclis*.

DESCRIPTION: Herbaceous **perennial** with a slender taproot. Stems are decumbent-ascending to prostrate (greenish), sometimes giving rise to erect flowering branches; stem length 10-25(-60) cm (4-9.8[-23.6] in) long. Leaves are basal (not persistent) and cauline. The greenish proximal blades are oblanceolate to obovate, 5-12 x 1-3 mm, reduced distally, margins with 1-2 pairs of teeth or shallow lobes. The distal is entire, faces pilose-hirsute, densely minutely glandular. Flower heads are usually single at the ends, but may number 1-3. Involucres 2.5-4 x 5-10 mm. The phyllaries are in 2-3(-4) nearly equal rows or series (erect, apices, appressed), sparsely pilose-hirsute, minutely glandular; the outer green with brown mid-vein, the inner with dry, membranous margins. Ray florets 42-60, with white corollas, without abaxial midstripe, and 3-7 mm long; laminae not coiling or reflexing ("Flowers look like small delicate daisies, with white to light purple outer petals and yellow inner petals" [USFWS 2011]). Disc corollas 1.8-2.4 mm. The cypseiae 1-1.2 mm, 2-nerved, faces sparsely strigose; pappi: outer of setae and inner of 7-10 bristles.

AIDS TO IDENTIFICATION: *Erigeron lemmonii* is a perennial fleabane that occurs on vertical cliffs at high (6,300-7,300 ft) elevations. Dense, non-glandular hairs cover its stems, and its leaves are dissected below and entire above. The only other species having some of the same characteristics of *E. lemmonii* is *E. lobatus*. The latter species lacks entire leaves, is not restricted to cliffs, and has a more erect, robust appearance.

ILLUSTRATIONS:

Line drawing (USFWS).

Line drawing (Falk et al. 2001).

Color photo of plant and habitat (Warren *in* Falk et al. 2001).

TOTAL RANGE: Endemic to Southern Arizona. Confirmed only from Scheelite Canyon, Huachuca Mountains, in Cochise County.

Observations of the species from other sites in the Huachuca Mountains and the Santa Rita Mountains are questioned in Gori et al. (1990). They postulate other species of *Erigeron* were misidentified as *E. lemmonii*. The identity of the Santa Catalina Mountains specimen's remains in doubt until a taxonomist can review them.

RANGE WITHIN ARIZONA: See "Total Range."

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous perennial.

PHENOLOGY: Flowers from August through October (December).

BIOLOGY: Unknown

HABITAT: Plants grow in dense clumps up to about 1.2 m (4 feet) in diameter, in crevices and on ledges of vertical cliffs and rock faces in shady habitat. Total habitat reported is approximately 50 ha (124 ac).

ELEVATION: 1900-2200(-2700) m, (6,234-7,218[-8,858] ft).

EXPOSURE: West, south, and north.

SUBSTRATE: Vertical limestone cliffs.

PLANT COMMUNITY: Pine-oak woodland community. Associated cliff-dwelling species include: *Cheilanthes alabamensis* (Alabama lip fern), *C. arizonica* (Arizona lip fern), *Notholaena limitanea* (= *Argyrosma limitanea* ssp. *limitanea*, Southwestern false cloak fern), and *Petrophytum caespitosum* (rock spiraea).

POPULATION TRENDS: Unknown. The Nature Conservancy counted a total of 108 clumps in 1989 (Gori et al. 1990). All were flowering and producing fruit. In 2006, the total population was estimated to be 954 individuals (USDI, FWS 2012).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: SC (USDI, FWS 2012)
[C USDI, FWS 1996]
[C USDI, FWS 2002, 2004-2011]

[C USDI, FWS 1997, 1999]

[C1 USDI, FWS 1993]

[C2 USDI, FWS 1980, 1985, 1990]

[PTN-T USDI, FWS 1975]

STATE STATUS:

Highly Safeguarded (ARS, ANPL 1993)

[Highly Safeguarded ARS, ANPL 1999,
2008]

OTHER STATUS:

Not Forest Service Sensitive (USDA, FS
Region 3 1999, 2007)

[Forest Service Sensitive, USDA, FS Region
3 1990]

MANAGEMENT FACTORS: Single known population. Because this species occurs on a cliff face, the probability of human disturbance is low. A single event or combinations of localized events could result in drastic losses or extinction. Possible natural threats include extended drought and rock falls. When the FWS published their non-warranted finding and withdrew Lemmon fleabane from the candidate list in 2012, the major consideration was that there was a very small probability that Scheelite Canyon would sustain a catastrophic fire that would destroy or significantly adversely impact this unique population. This determination was made based on the aspect of the canyon and the prevailing fire patterns, its humid, shady and cool nature, and the presence of exposed rock outcrops throughout the canyon leading to a discontinuous fuel load. Essentially, while individual plants could be exposed to flame and heat, even a major fire event would be unlikely to affect the population.

CONSERVATION MEASURES TAKEN: The USDI FWS (2012) reported that several conservation measures have recently occurred or are being planned. In 2011, the Desert Botanical Garden collected hundreds of viable seeds for long-term storage. The U.S. Forest Service is currently working with Fort Huachuca to reduce fire potential at the landscape level. They are also drafting a conservation service agreement that will ensure the continued monitoring of this population and promote adaptive management, continue the restrictions on recreation activities (rappelling) in Lemmon fleabane habitat, and encourage further research on the species.

SUGGESTED PROJECTS: Regular censuses at only known locality should be continued, along with the setup of a standardized photo point and count method. Surveys needed for this plant in other likely locations (especially Bear Canyon), and to encourage further study of the genetics and evolution of this and other cliff-dwelling *Erigeron* at the molecular level.

LAND MANAGEMENT/OWNERSHIP: DOD - Fort Huachuca Military Reservation.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

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ADDITIONAL INFORMATION:

Cliffy areas in Tanner (= Garden) Canyon in the Huachuca Mountains were surveyed in 1989 (Gori et al. 1990). No *Erigeron lemmonii* was found. The authors suggest that because of the proximity of the two canyons, the type specimen may have actually been collected in Scheelite Canyon, a tributary of Garden Canyon and the locality of the extant population.

Revised: 1990-03-05 (SST)
 1991-10-20 (BKP)
 1991-12-04 (SR)
 1997-11-12 (SMS)
 1999-12-20 (DJG)
 2004-06-04 (AMS)
 2011-11-01 (SMS)
 2013-01-02 (BDT)

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