

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

**Plant Abstract**

**Element Code:** PDAST3M240

**Data Sensitivity:** No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Erigeron kuschei* Eastw.

**COMMON NAME:** Chiricahua Fleabane, Winn Falls Fleabane

**SYNONYMS:**

**FAMILY:** Asteraceae

**AUTHOR, PLACE OF PUBLICATION:** Eastwood, A. 1931. Proc. California Acad. Sci., Ser. 4, 20:158.

**TYPE LOCALITY:** Arizona: Cochise county: Chiricahua Mountains: Cave Creek Canyon.

**TYPE SPECIMEN:** CAS 147118. J. A. Kusche s. n. July 1927.

**TAXONOMIC UNIQUENESS:** The genus *Erigeron* contains approximately 375 species and is distributed worldwide (Hickman 1993). Arizona contains about 34 species of *Erigeron* (Lehr 1978, Lehr and Pinkava 1980, Lehr and Pinkava 1982).

**DESCRIPTION:** Non-technical: A small perennial composite with white flowers and glabrous leaves, ranging from 2.0 - 5.5 inches tall. The leaves taper into a long petiole and have scattered hairs along their margins. The bracts of the involucre are in two equal series and are red or purple. The flowering heads are subtended by long peduncles and the achenes are sparsely hairy (Phillips et al. 1980).

Technical: Perennial herb with a slender somewhat branched caudex; stem 5 - 15 cm high, erect, sparsely hirsute-strigose with appressed or ascending hairs below, spreading-hirsute under the head. Leaves glabrous or sparsely appressed-hirsute on the surfaces, sparsely and irregularly hirsute-ciliate on the margins, the basal ones oblanceolate to spatulate, all but the earliest ones with the petiole much exceeding the short blade, which is about 5 - 25 mm long, 3 - 10 mm wide, and broadly obtuse, rounded, or slightly emarginate at the apex; cauline leaves, several (5 - 8), lanceolate or oblong, up to at least 25 mm long and 8 mm wide. Head solitary, the disk 6 - 9 mm wide; involucre about 5 mm high, the subequal, broad, green phyllaries villous-hirsute on the darker and slightly thickened midrib, and finely glandular-viscid; ligules about 25 - 50, white, 6 - 10 mm long, about 1 mm wide or a little more; disk-corollas about 2.8 - 3.5 mm long, the tube 0.8 - 1.1 mm, the lobes about 0.6 mm; style appendages deltoid or a little narrower, acute or acutish, 0.15 - 0.2 mm long; pappus of about

15 slender white bristles, occasionally with a few short and inconspicuous outer setae. Achenes sparsely hirsute-strigose, 2 nerved (Cronquist 1947, Eastwood 1931).

**AIDS TO IDENTIFICATION:** The young plants of *Erigeron kuschei* and *Draba standleyi* are very similar in appearance. These two species have the same habit and occur in the same type of habitat. The reproductive adults are easily distinguished, as they have different flowers. The leaves on the young plants of *E. kuschei* are glabrous except for the ciliate hairs on the margin, whereas the leaves on *D. standleyi* are uniformly pubescent on the top surface (Phillips et al. 1980). Another fleabane with white flowers, *E. eximius* (*E. superbus* in Kearney and Peebles), occurs in the Chiricahua Mountains as well but is found in different habitats. The stem leaves of *E. eximius* are not ciliate and the peduncles are densely and finely glandular-puberulent above, with few or no long hairs. The stem leaves of *E. kuschei* are ciliate and the peduncles are spreading-pilose, without glandular hairs (Kearney and Peebles 1960). Although the range of *E. hessii* and *E. kuschei* do not overlap, the two species have several characters in common and are probably closely related. *E. hessii* is only known from the Mogollon Mountains of southwestern New Mexico (Nesom 1978).

**ILLUSTRATIONS:** Nesom 1978, drawing.  
USFWS Line drawing.

**TOTAL RANGE:** Southern Arizona.

**RANGE WITHIN ARIZONA:** Cochise County: Chiricahua Mountains.

## **SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** Herbaceous perennial.

**PHENOLOGY:** Flowers July - August and sets seed in late August and early September.

**BIOLOGY:** Phillips et al. (1980) monitored the population near Rustler Park in August of 1979. There were 59 plants present, with a density of 13.11 plants per 100 square meters. All three classes (adult, juvenile, and seedling) were present in this population. Approximately 71% of the plants were flowering, with 29% being non-reproducing.

**HABITAT:** Within pine and mixed-conifer forest on shaded, north-facing cliffs and rock ledges carpeted with moss. The moss carpet serves as a moisture-conserving area and collects soil that washes down the cliff (Phillips et al. 1980).

**ELEVATION:** Approximately 6,875 - 9,360 feet (2,096 - 2,854 m).

**EXPOSURE:** North, northwest, and northeast.

**SUBSTRATE:** Granite or rhyolite cliffs and rock outcrops.

**PLANT COMMUNITY:** Madrean montane conifer forest communities, as defined by Brown (1994), with pine and mixed-conifer. Associated species include *Polytrichum juniperum* (haircap moss), *Draba standleyi*, *Heuchera* sp., *Thalictrum fendleri*, *Physocarpus monogynus*, *Erigeron scopulinus*, *Galium* sp., *Brickellia* sp., *Sedum* sp., *Cystopteris* sp., *Aquilegia* sp., *Adiantum* sp., *Cheilanthes* sp., and *Oxalis* sp. At one site, *Polemonium pauciflorum* ssp. *hinckleyi* occurs at the base of the cliff.

**POPULATION TRENDS:** Unknown.

### **SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None (USDI, FWS 1996).  
[Category 2 USDI, FWS 1992]  
[Category 1 USDI, FWS 1990]

**STATE STATUS:** Salvage Restricted (Arizona Native Plant Law, 1993)

**OTHER STATUS:** Forest Service Sensitive (USDA FS Region 3, 1999)  
[Forest Service Sensitive USDA FS Region 3, 1990]

**MANAGEMENT FACTORS:** There are few populations known of this species and it is very habitat specific. Since this species is found on mossy cliffs and rock outcrops, it is naturally protected from disturbance to some degree. Removal of canopy or otherwise altering the shade or moisture regime could be a threat, but most populations are contained within the Chiricahua Wilderness area, which limits timber harvesting. Probably the greatest threat to any of the individual populations would be a naturally occurring rockslide. The "Rattlesnake Fire" of 1994 possibly struck areas with populations of this species. The population at the type locality is possibly no longer extant (Phillips et al. 1980).

**CONSERVATION MEASURES TAKEN:** This species is listed as Forest Service Sensitive and is therefore considered in the management plans of the Coronado National Forest.

**SUGGESTED PROJECTS:** Existing populations should be monitored and suitable habitat should be searched for new populations.

**LAND MANAGEMENT/OWNERSHIP:** United States Forest Service - Coronado National Forest (Douglas Ranger District).

**SOURCES OF FURTHER INFORMATION****REFERENCES:**

- Cronquist, A. 1947. Revision of the North American species of *Erigeron*, north of Mexico. *Brittonia* 6:121-302.
- Eastwood, A. 1931. Proceedings of the California Academy of Sciences. Series 4. 20:158.
- Fletcher, R. 1978. Status Report for *Erigeron kuschei*. U.S. Forest Service Report, Region 3, Albuquerque, New Mexico.
- Kearney, T. H. and R. H. Peebles. 1960. Arizona Flora, with supplement by E. McClintock and J. T. Howell. University of California Press. Berkeley. p. 874-875.
- Nesom, G. L. 1978. *Erigeron hessii* sp. nov. and *Erigeron kuschei* Eastwood (Compositae), two closely related narrow endemics from the southwestern United States. *Brittonia* 30(4):440-446.
- Phillips, A.M., B.G. Phillips, L.T. Green, J. Mazzoni, and E.M. Peterson. 1980. Status Report for *Erigeron kuschei*. Prepared for U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- USDA, Forest Service Region 3. 1990. Regional Forester's Sensitive Species List.
- USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.
- USDI, Fish and Wildlife Service. 1990. Endangered and Threatened Wildlife and Plants: Review of Plant Taxa for Listing as Endangered or Threatened Species; Notice of Review. Federal Register 55(35):6186.
- 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.

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**ADDITIONAL INFORMATION:**

**Revised:** 1990-12-14 (SR)  
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