

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

Plant Abstract

Element Code: PDAST3M560

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE



ME: *Erigeron saxatilis*
COMMON NAME: Rock Fleabane,
SYNONYMS: *Erigeron pringlei* in part
FAMILY: Asteraceae (=Compositae)

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

TYPE LOCALITY: Oak Creek Canyon, near Flagstaff, Coconino County, Arizona, USA. Alt. 5500 ft.

TYPE SPECIMEN: Holotype: NY 168544. H.D.D. 3109 Ripley & R.C. Barneby, 24 May 1940. IT: NY 168545.

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*. All are restricted to mountains within Arizona. Each species is morphologically as well as geographically distinct. *E. saxatilis*, the northernmost species is found above the Mogollon Rim. "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. saxatilis* is 1 of 171 species in the genus *Erigeron*.

DESCRIPTION: Herbaceous perennial from a thick taproot, with stems 3-5 cm (1.2-2.0 in.) long, erect to ascending, unbranched. Basal leaves tufted, erect and entire, narrowly linear-oblong to slightly spatulate, 1-3 cm (0.4-1.2 in.) long and 0.5-2.0 (-3.0) mm wide at widest point, the petiole when distinct, about as long as the blade. Phyllaries elliptic-oblong to spatulate, glabrous or very sparsely strigose, usually purplish. The midvein of the phyllaries are greenish-yellow, not at all swollen. Ray flowers 20-29 in a single series, the ligules 1.0-1.5 mm wide, the corollas 5.5-7.0 mm long, white. Disc corollas 2.1-3.0 mm long, narrowly funnelform, and without prominent orange resinous veins. Achenes are sparsely strigose; the pappus consists of 9-13 (-15) persistent bristles. (Nesom 1990, Phillips 1991).

AIDS TO IDENTIFICATION: Very small pretty white fleabane with fairly large rays and simple leaves in its preferred habitat of shaded cliff-faces and boulders in streambeds of shady

canyons. Glabrous phyllaries distinguish this species from other closely related species. When compared to *Erigeron anchana*, *E. saxatilis* tends to flower earlier, have shorter stems and leaves, 20-29 ray flowers compared with 24-36, greenish-yellow phyllarie midveins instead of orange resinous, and disc corollas without prominent orange resinous veins. (Nesom 1990). *Erigeron saxatilis* differs from *E. heliographis* in its apically broadened leaf blades, shorter disc corollas, and fewer and shorter pappus bristles (Nesom 1990).

ILLUSTRATIONS: Line drawing of plant in flower (USFWS).

Color photos of Holotype and Isotype collections (Ripley & Barneby, in NYBG http://scisun.nybg.org:8890/searchdb/owa/wwwcatalogrenz.detail_list)

TOTAL RANGE: Canyons above Mogollon Rim, Coconino and Yavapai counties, Arizona.

RANGE WITHIN ARIZONA: Coconino County: Barbershop Canyon, East Clear Creek, Little Elden Mtn., Oak Creek Canyon, Tule Canyon, Walnut Canyon, and West Fork of Oak Creek Canyon. Yavapai County: Sycamore Canyon and vicinity.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous perennial forb.

PHENOLOGY: Dicot flowering plant that flowers April - October, especially May – July.

BIOLOGY: Plants of all size classes from seedling to adult (with many flowers and fruit evident) are present in populations varying in number from a few plants to over 300.

HABITAT: Sheer canyon walls, moist north-facing slopes, steep solid rock and bedrock outcrops.

ELEVATION: 4,400 to 8,350 ft (1342 - 2547 m). Based on records in the Heritage Data Management System (HDMS), elevation ranges from 5,000 to 8,350 ft (1525-2547 m) (AGFD, unpublished data accessed 2001).

EXPOSURE: Various.

SUBSTRATE: Phillips (1993) states that Coconino sandstone seems to be preferred. Dacite on Mt. Elden. In the Grand Canyon Section of the Colorado Plateau Province.

PLANT COMMUNITY: Rocky Mountain Riparian Deciduous Forest, and other vegetation communities. In the West Fork of Oak Creek Canyon, associated species include: *Arctostaphylos pungens* (pointleaf manzanita), *Pseudotsuga menziesii* (Douglas-fir), *Pinus ponderosa* (ponderosa pine), *Quercus gambelii* (gambel oak), *Q. turbinella* (shrub live oak), *Cheilanthes covillei* (Coville's lipfern), *Asplenium trichomanes* (maidenhair spleenwort),

Selaginella underwoodii (Underwood's spike-moss), *Cystopteris fragilis* (weak bladderfern), *Polypodium hesperium* (western polypody), *Aletes macdougali* (Macdougall's Aletes), *Heuchera novomexicana* (alumroot), *Penstemon barbatus* (beardlip beard tongue), *Thalictrum fendleri* (meadowrue), *Adiantum pedatum* (Northern maidenhair-fern), *Marchantia* sp., *Salix* sp. (willow), *Taraxicum officinale* (dandelion), *Aconitum columbianum* (Columbia monkshood), *Erigeron modestus* (plains fleabane), and *Campanula parryi* (Parry bellflower) (Phillips 1991). In Tule Canyon, *E. saxatilis* was found associated with *Acer negundo* (boxelder), *Apocynum* (Indian-hemp), *Aquilegia chrysantha* (golden columbine), *Carex vulpinoidea* (fox sedge), *Dryopteris filix-mas* (male fern), *Fraxinus velutina* (velvetskirt ash), *Holodiscus dumosus* (ocean spray), *Ivesia multifoliolata* (many-leaf ivesia) *Melilotus officinalis* (yellow sweetclover), *Monarda fistulose* (beebalm), *Perityle ciliata* (ciliate rockdaisy), *Petrophytum cespitosum* (tufted rockmat), *Quercus gambelii*, *Salix*, *Sedum cockerellii* (Cockerell's stonecrop), *Spergularia lanuginose*, *Thalictrum fendleri*, *Viola Canadensis* (Canada violet), and *Yucca baccata* (datil yucca) (Baker and Wright 1993).

POPULATION TRENDS: Stable.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)
 [Forest Service Sensitive USDA FS Region 3, 1990 (under *E. pringlei*)]

MANAGEMENT FACTORS: Fairly abundant, most populations occurring on inaccessible cliffs. Exception is Oak Creek where the populations are adjacent to highway, making them vulnerable to rock climbing and highway improvements. Flash flooding might occur infrequently and destroy the lower population in Oak Creek Canyon.

CONSERVATION MEASURES TAKEN: Populations in West Fork of Oak Creek occur in the Red Rock - Secret Mountain Wilderness Area; Sycamore Canyon is in the Sycamore Canyon Wilderness Area. Plants also occur in Walnut Canyon National Monument.

SUGGESTED PROJECTS: Surveys to locate new populations and assess potential impacts.

LAND MANAGEMENT/OWNERSHIP: NPS - Walnut Canyon National Monument; USFS – Apache-Sitgreaves, Coconino, Kaibab and Prescott National Forests; State Land Department; Private.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

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- USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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- Dr. Barbara Phillips - Zone Botanist, Coconino National Forest, Flagstaff, AZ.
- Reggie Fletcher - Regional Office, U.S. Forest Service, Albuquerque, NM.

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 Anchas, Pine, Mazatzal and Mescal mountains, and Pine Canyon (Tonto Bridge).

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