

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

Plant Abstract

Element Code: PDAST3P080

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Eupatorium bigelovii* A. Gray
COMMON NAME: Bigelow's thoroughwart, Bigelow thoroughwart
SYNONYMS: *Chromolaena bigelovii* (Gray) King & H.E. Robins.
FAMILY: Asteraceae

AUTHOR, PLACE OF PUBLICATION: A. Gray, Rep. U.S. Mex. Bound., Bot. 75. 1859.

TYPE LOCALITY: Arizona: Gila River.

TYPE SPECIMEN: HT: HUH-7053. J.M. Bigelow #12.

TAXONOMIC UNIQUENESS: The genus *Eupatorium* contains approximately 50 species in North America (Venning 1984). Nine species of *Eupatorium* are recognized by Lehr (1978) as occurring in Arizona. Kartesz (1999) treated this species in *Chromolaena*; is often treated in *Eupatorium*, as by Kartesz (1994). (NatureServe 2003). From Marc Baker's 1999 report, he concludes that "From review of the literature and a brief study of herbarium and field material, it is doubtful that *Eupatorium bigelovii* occurs within CNF. In fact, there is a good possibility that *E. bigelovii* and *Brickellia fendleri* represent the same taxon. A review of the types is necessary."

DESCRIPTION: Herbaceous perennial that produces flower heads of disk flowers (no rays). Leaves opposite, acute or acuminate, sharply serrate, not palmately cleft. Heads 10 to 30 flowered, 8-15 mm high, distinctly pedicellate, not thyrsoid-panicked, on pedicels mostly 6-20 mm long; achenes about 3 mm long; involucre strongly graduated, 6 to 10 mm high, the phyllaries all acute or acuminate, in 3-5 lengths, flowers white to purple; pappus of numerous capillary bristles.

AIDS TO IDENTIFICATION: *Eupatorium bigelovii* can be most easily distinguished from *E. pycnocephalum*, by its larger heads (8-15 mm vs. 5 mm or less), longer pedicels (6-20 mm vs. less than 4 mm), larger achenes (3 mm vs. 1.5 mm), and larger involucre (6-10 mm vs. less than 4 mm). The phyllaries are also all acute or acuminate in *E. bigelovii*, whereas in *E. pycnocephalum*, the inner phyllaries are obtuse, and the outer ones acute (Kearney et al 1960). *E. lemmoni* has leaves without stalks, the blades rather blunt, not more than an inch long (Rickett 1970).

ILLUSTRATIONS:

TOTAL RANGE: Arizona, along with Coahila and Monterey, Mexico.

RANGE WITHIN ARIZONA: Pinaleno Mountains, Graham County. Rickett (1970) incorrectly reports this taxon occurs in southwestern Arizona, on the Gila River. Although the type is the "Gila River", it is not found in the southwestern part of the state.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous forb/herb perennial.

PHENOLOGY: Flowers from March to October.

BIOLOGY: Unknown.

HABITAT: Rocky terrain, among shrubs, near water, foothills.

ELEVATION: 8,600 - 9,440 feet (2,623 & 2,880 m)

EXPOSURE: Northeast and southwest facing slopes.

SUBSTRATE: Rock outcrops and walls.

PLANT COMMUNITY: *Populus tremuloides*/*Pseudotsuga menziesii* forest. Associated species include: *Achillea millefolium* (Common yarrow), *Blepharoneuron tricholepis* (Hairy dropseed), *Brickellia fendleri* (Fendler's Brickell-bush), *B. grandiflora* (Tassel flower), *Bromus ciliatus* (Fringed brome), *Cerastium nutans* (Nodding chickweed), *Cystopteris tenuis* (a bladderpod), *Draba petrophila* (Rock whitlow-grass), *Erigeron kuschei* (a fleabane), *Galium fendleri* (Fendler's bedstraw), *Geranium richardsonii* (Richardson geranium), *Heliomeris multiflora* (Many-flowered Viguiera), *Heuchera novomexicana* (New Mexico alum-root), *H. rubescens* (Pink alumroot), *Holodiscus dumosus* (Glandular oceanspray), *Muhlenbergia montana* (Mountain muhly), *Pseudocymopterus montanus* (Mountain parsley), *Pteridium aquilinum* (Bracken fern), *Quercus gambelii* (Gambel oak), *Robinia neomexicana* (New Mexico locust), *Salix scouleriana* (Scouler's willow), *Salvia arizonica* (Arizona sage), *Silene scouleri* (Scouler's catchfly), *Solidago (Oreochrysum) parryi* (Parry's goldenweed), *S. wrightii* (Wright goldenrod), *Symphoricarpos oreophilus* (Mountain snowberry), and *Thalictrum fendleri* (Fendler's meadowrue). (Baker 1999).

POPULATION TRENDS: Unknown. The two known sites in the Pinaleno Mountains, were revisited by Marc Baker and Denise Lisenby on 30 August 1999, where they found approximately 200 individuals at one site, and several scattered individuals at the other. (Baker 1999).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: To determine if *E. bigelovii* is the same taxon as *Brickellia fendleri*, a review of the types is necessary.

LAND MANAGEMENT/OWNERSHIP: USFS - Coronado National Forest.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

- Baker, M. 1999 final draft. The status of known distributions within Coronado National Forest of *Allium glandulosum*, *Conioselinum scopulorum*, *Eriogonum arisolius*, *Eupatorium bigelovii*, *Lupinus huachucanus* and *Stellaria porsildii*. Southwest Botanical Research, Chino Valley, Arizona. SWBR Project No. 99-0103FLORA, in fulfillment of Coronado National Forest purchase order number 43-8197-9-0099. pp. 10-12.
- Integrated Taxonomic Information System (ITIS). Retrieved 3/10/2004 from ITIS, <http://www.itis.usda.gov>.
- Kearney, T.H., R.H. Peebles with collaborators. 1951. Arizona flora. Second edition with supplement by J.T. Howell, E. McClintock and collaborators. 1960. University of California Press. Berkeley, California. p. 845.
- Lehr, J.H. 1978. A catalogue of the flora of Arizona. Desert Botanical Gardens, Phoenix, Arizona. p. 141-2.
- Missouri Botanical Garden – TROPICOS, Nomenclatural Data Base. *Eupatorium bigelovii* A. Gray. http://mobot.mobot.org/cgi-bin/search_vast. Accessed: 10 Mar 2004.
- NatureServe. 2003. NatureServe Explorer: An online encyclopedia of life [web application]. Version 1.8. Arlington, Virginia. Available: <http://www.natureserve.org/explorer>. (Accessed: March 10, 2004).
- Rickett, H.W. ed. 1970. Wild Flowers of the United States: The Southwestern States, Southern California, Arizona and New Mexico. Volume Four, Part Three of Three Parts. The New York Botanical Garden, McGraw-Hill Book Company. New York. p. 736.
- USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.

USDA Plants database Web site-POFPF2; <http://plants.suda.gov/plants/index.html>
Venning, F.D. 1984. A Guide to field identification wildflowers of North America. Golden Press. New York. p. 270.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

Marc Baker, Ph.D. – Chino Valley, Arizona.

ADDITIONAL INFORMATION:

According to Baker (1999), descriptions of both *Eupatorium bigelovii* and *Brickellia fendleri* are vague and seem to overlap. On the site in the vicinity of Heliograph Peak, populations of the same taxon occur. From his review of the literature and a brief study of herbarium and field material, Baker thinks it is doubtful that *E. bigelovii* occurs within the Coronado National Forest. Baker believes that there is a good possibility that *E. bigelovii* and *B. fendleri* represent the same taxon, and feels that a review of the types is necessary.

Revised: 1999-11-05 (RHB)
2000-02-07 (JCP)
2004-03-18 (SMS)

To the user of this abstract: you may use the entire abstract or any part of it. We do request, however, that if you make use of this abstract in plans, reports, publications, etc. that you credit the Arizona Game and Fish Department. Please use the following citation:

Arizona Game and Fish Department. 20XX (= **year of last revision as indicated at end of abstract**). X...X (= **taxon of animal or plant**). Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. X pp.