

ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PPDRY070A0

Data Sensitivity: No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Cystopteris utahensis*  
**COMMON NAME:** Utah bladder-fern; Utah bladderfern; brittlefern.  
**SYNONYMS:** *Cystopteris fragilis*  
**FAMILY:** Dryopteridaceae

**AUTHOR, PLACE OF PUBLICATION:** Windham & Haufler, American Fern Journal 81(1): 13-14 (-15), fig. 3. 1991.

**TYPE LOCALITY:** Base of Morning Glory Arch in tributary of Negro Bill Canyon, 4300 ft., Grand County, Utah, USA.

**TYPE SPECIMEN:** HT: UT, Windham & Windham 90-282, 2 Jul 1990. IT: ASU, BRY, KANU, MO, UNC, US, UTC.

**TAXONOMIC UNIQUENESS:** *Cystopteris utahensis* is 1 of 12 species in the genus *Cystopteris*. This also includes 2 hybrids, *C. X illinoensis* [*bulbifera* X *tenuis*] and *C. X wagneri* [*tennesseensis* X *tenuis*]. Other species in the genus include *C. bulbifera*, *C. douglasii*, *C. fragilis*, *C. laurentiana*, *C. montana*, *C. protrusa*, *C. reevesiana*, *C. tennesseensis*, and *C. tenuis*. *Cystopteris utahensis* is an allopolyploid derived from the diploid species *C. bulbifera* and *C. reevesiana* (C. H. Haufler and M.D. Windham 1991, *in* Flora of North America 1993).

**DESCRIPTION:** Plants loosely tufted, from short, creeping rhizomes, not cordlike. Internodes short, and scales dark brown and lanceolate. Leaves monomorphic, clustered at stem apex, to 45 cm, nearly all bearing sori. Sori with cup or hood shaped indusium bearing unicellular, gland-tipped trichomes, attached to leaf on side away from margin. Spores are spiny, usually 39-48  $\mu$ m. Petiole is green to straw-colored throughout or darker near base, shorter than blade, with a sparsely scaly base. The blade is elongated, deltate to narrowly deltate, 2-pinnate-pinnatifid, usually widest at or near base, apex short-attenuate. (Flora of North America 1993, Spackman et al. 1997, Welsh et al. 1993).

**AIDS TO IDENTIFICATION:** *Cystopteris reevesiana* has an ovate blade, long internodes on its rhizomes, and light brown rhizome scales.

**ILLUSTRATIONS:** B&W drawing of plant and sori (Spackman et al. 1997).  
Color photo of plant (M. Windham *in* Spackman et al. 1997).  
Color photo of habitat (B. Jennings *in* Spackman et al. 1997).

**TOTAL RANGE:** Utah, Arizona, Colorado (Moffat Co., Dinosaur National Monument), and Texas.

**RANGE WITHIN ARIZONA:** Canyon del Muerto in Canyon de Chelly National Monument, Apache County.

### **SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** Allopolyploid. Perennial forb/herb.

**PHENOLOGY:** Spore-producing period ranges from June-November.

#### **BIOLOGY:**

**HABITAT:** On cliffs of the Weber Formation. Particularly on sandy ledges and in crevices around 5,500 feet elevation.

**ELEVATION:** 4,262 – 8,852 ft (1300-2700 m), particularly 5,500 ft (1678 m).

#### **EXPOSURE:**

#### **SUBSTRATE:**

#### **PLANT COMMUNITY:**

#### **POPULATION HISTORY AND TRENDS:**

### **SPECIES PROTECTION AND CONSERVATION**

#### **ENDANGERED SPECIES ACT STATUS:**

#### **STATE STATUS:**

#### **OTHER STATUS:**

Group 4 (NNDFW, NESL 2005)  
[Group 4 (NNFWD, NESL 2000)]

#### **MANAGEMENT FACTORS:**

#### **PROTECTIVE MEASURES TAKEN:**

**SUGGESTED PROJECTS:** Surveys to determine distribution in state.

**LAND MANAGEMENT/OWNERSHIP:** NPS – Canyon de Chelly National Monument; possibly BIA – Navajo Nation.

## **SOURCES OF FURTHER INFORMATION**

### **REFERENCES:**

- Flora of North America Editorial Committee. 1993. Flora of North America north of Mexico. New York Oxford, Oxford University Press. P. 267.
- Integrated Taxonomic Information System (ITIS). Retrieved 1/15/2003, from the ITIS, <http://www.itis.usda.gov>.
- Missouri Botanical Garden – TROPICOS, Nomenclatural Data Base. *Cystopteris utahensis* Windham & Haufler. <http://mobot.mobot.org/>. Accessed: 15 Jan 2003.
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- Spackman, S., B. Jennings, J. Coles, C. Dawson, M. Minton, A. Kratz, and C. Spurrier. 1997. Colorado Rare Plant Field Guide. Prepared for the Bureau of Land Management, the U.S. Forest Service and the U.S. Fish and Wildlife Service by the Colorado Natural Heritage Program.
- U.S. National Herbarium Type Specimen Register (US). Department of Systematic Biology – Botany, Smithsonian Institution. <http://rathbun.si.edu/botany/types/>.
- USDA, NRCS. 2002. The PLANTS Database, Version 3.5 (<http://plants.usda.gov>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.
- Welsh, S.L., N.D. Atwood, S. Goodrich, and L.C. Higgins, Eds. 1993. A Utah Flora. Second Edition, revised. Print Services, Brigham Young University, Provo, Utah U.S.A. p. 22.

### **MAJOR KNOWLEDGEABLE INDIVIDUALS:**

### **ADDITIONAL INFORMATION:**

**Revised:** 2003-02-06 (SMS)

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