

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

Plant Abstract

Element Code: PDBRA1N1R0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Lesquerella kaibabensis*

COMMON NAME: Kaibab Bladderpod

SYNONYMS:

FAMILY: Cruciferae

AUTHOR, PLACE OF PUBLICATION: Rollins, R.C. 1982. Contr. Gray Herb. 211:107-113.

TYPE LOCALITY: Pleasant Valley, Kaibab Plateau. 18.6 mi. south of Jacob Lake on Highway AZ 67.

TYPE SPECIMEN: Gray Herbarium. R.C. and K.W. Rollins (79191) 8 June 1979.

TAXONOMIC UNIQUENESS: Genus of approximately 75 species, mainly in North America. Closely related to *L. wardii*, but highly disjunct in distribution.

The taxonomic status of the light yellow flowered *Lesquerella* on the Kaibab Plateau is uncertain. The description of *L. kaibabensis* includes only the light cream petaled populations. Rollins (1985) stated the yellow flowered *Lesquerella* on the Kaibab Plateau may be an undescribed species. Fletcher (1987) reported that: 1) the light yellow flowered populations may be considered a variant of *L. kaibabensis*; 2) the light yellow flowered populations may be a variant of *L. wardii*; or 3) both color forms of the Kaibab Plateau may be considered a variant of *L. wardii*.

DESCRIPTION: Perennial herb with thickened simple or rarely branched caudex. Densely pubescent.

Trichomes with only 3-5 primary branches, which are forked with ascending tips. Prostrate stems arise from below a flat rosette of leaves. Radical leaves entire, mostly basal; broadly ovate to nearly orbicular, 2.0-4.0 cm (0.8-1.6 in.) long; 8.0-41.0 mm (0.32-1.64 in.) wide; petioles 1-3 times the blade length. Short, congested inflorescence with few flowers; petals white to cream. Siliques elliptical to broadly oblong, 6.0-8.0 mm (0.24-0.32 in.) long, slightly compressed contrary to plane of the septum.

AIDS TO IDENTIFICATION: *L. kaibabensis* has shorter styles and larger siliques with a greater number of ovules than *L. wardii*. Siliques of *L. kaibabensis* are glabrous within. Typical *L. wardii* has bright yellow petals. *L. kaibabensis* as described by Rollins (1982) has light cream colored flowers. A light yellow petaled population occurs at Dry Park. This light yellow form also occurs with light cream form near Telephone Hill. Rollins (1982) reported *L. kaibabensis* has trichomes with only 3-5 primary branches which are forked and ascending at the tips. Typical *L. wardii* has 5-7 rayed trichomes that are more massive toward the center, and with the tips lying flat on the leaf surface. Fletcher (1987) reported no consistent difference in trichomes between the light yellow petaled and light cream petaled populations on the Kaibab Plateau.

ILLUSTRATIONS:

TOTAL RANGE: Kaibab Plateau, Coconino County, Arizona. Along Highway AZ 67 from Telephone Hill south to 1 mile south of Kaibab Lodge. Also, Dry Park, Marble Viewpoint, and Dog Canyon southeast of Dog Point.

RANGE WITHIN ARIZONA: See "Total Range."

SPECIES BIOLOGY AND POPULATION TRENDS

- GROWTH FORM:** Herbaceous Perennial. Basal leaf rosette.
- PHENOLOGY:** Flowering and fruiting in June.
- BIOLOGY:** Does not compete well with grasses.
- HABITAT:** On limestone-clay knolls with a high percentage of exposed rock on the surface, within open windswept meadows (pseudo-alpine fellfield). Meadows of the Kaibab Plateau probably functioned as Pleistocene refugia for this and other endemic species (Phillips 1999).
- ELEVATION:** 8,350 - 8,860 feet (2547 - 2702 m).
- EXPOSURE:** All
- SUBSTRATE:** Sandy/loam with exposed limestone. Is the limestone derived from Kaibab or Toroweep limestone?
- PLANT COMMUNITY:** Subalpine Grassland Meadows
- POPULATION TRENDS:** Unknown, probably stable.

SPECIES PROTECTION AND CONSERVATION

- ENDANGERED SPECIES ACT STATUS:** None (USDI, FWS 1996)
[Category 2 USDI, FWS 1985]
- STATE STATUS:** None
- OTHER STATUS:** Forest Service Sensitive (USDA, FS Region 3 1990, 1999)
- MANAGEMENT FACTORS:** Most habitat in parks adjacent to Highway AZ 67. Plant occurs on shoulder of Highway AZ 67 in Pleasant Valley.
- CONSERVATION MEASURES TAKEN:** Kaibab National Forest has prohibited all off-road traffic in meadows adjacent to Highway AZ 67. Forest Plan establishes that livestock utilization in these meadows shall not exceed 30% (however, utilization probably exceeded this level in most years).
- SUGGESTED PROJECTS:** Survey for potential habitat. Search for additional populations. Monitor known populations. Taxonomic work. Surveys need to be conducted in June to ascertain the flower color of the various populations.
- LAND MANAGEMENT/OWNERSHIP:** USFS - Kaibab National Forest, North Kaibab Ranger District.

SOURCES OF FURTHER INFORMATION**LITERATURE CITATIONS:**

- Fletcher, R. 1987. *Lesquerella kaibabensis* and Highway 67 reconstruction. U.S. Forest Service report, Albuquerque, New Mexico.
- Phillips, B.G. 1993. Kaibab National Forest. T&E sensitive species. Williams, Arizona.
- Phillips, B. 1999. *Lesquerella kaibabensis* Rollins (Kaibab Bladderpod), Cruciferae. Draft abstract from Arizona Rare Plant Book, in prep.

- Rollins, R.C. 1982. Species of *Draba*, *Lesquerella*, and *Sibara* (Cruciferae). Contr. Gray Herb. 211:107-113.
- 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. 1985. Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species. Notice of Review. Federal Register 50(188):00032.
- 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):7596-7613.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

- Reggie Fletcher - Regional Ecologist, USFS Region 3, Albuquerque, New Mexico.
- R.C. Rollins - Gray Herbarium, Harvard University, Cambridge Massachusetts.
- Barbara Phillips - Zone Botanist for the Coconino, Kaibab, and Prescott National Forests, Flagstaff, AZ.

ADDITIONAL INFORMATION:

Fletcher (1987) made the following recommendations for the re-alignment of Highway AZ 67. Road expansion through Pleasant Valley should be done on the west side of AZ 67. Maintain existing crushed limestone shoulders. Do not seed road shoulders in Pleasant Valley except with forb seeds collected in Pleasant Valley. Do not seed with grass. Replace the shoulder on the west side of the road with chipped limestone. Do not locate road turnouts or recreational use attractants in Pleasant Valley. Unfortunately, few of these recommendations were followed. Fletcher also viewed "these meadows as Pleistocene refugia, which may help explain the large number of endemic species and ecotypes they contain."

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