

ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

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**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Lupinus flavoculatus*  
**COMMON NAME:** Yellow-eyed Lupine  
**SYNONYMS:** *Lupinus rubens* var. *flavoculatus* (Basionym)  
**FAMILY:** Fabaceae

**AUTHOR, PLACE OF PUBLICATION:** Heller, Amos Arthur. *Muhlenbergia* 5(11):  
pp. 149-152, pl. 5. 1909.

**TYPE LOCALITY:** Rhyolite, Nye County, Nevada, along northern base of Ladd  
mountain. Elev. 3575 feet.

**TYPE SPECIMEN:** Missouri Botanical Garden: MO-357106 (Isotype). A.A. Heller (9669).  
May 17, 1909. Type specimen deposited in Nevada Agricultural Experiment Station  
Herbarium (also A.A. Heller #9669).

**TAXONOMIC UNIQUENESS:** *L. flavoculatus* is one of 12 *Lupinus* species listed for  
Arizona in SEINet.

**DESCRIPTION:** Annual 0.5–2 dm, hairy; cotyledons disk-like, persistent. **Leaf:** cauline,  
crowded near base; petioles 3–6 cm; leaflets 7–9, 10–20 mm, 5–8 mm wide, adaxially  
glabrous. **Inflorescence:** 3–10 cm, > leaves, dense, flowers spiraled; peduncle 2–5(10) cm;  
pedicels 2–3 mm; bracts 2–3 mm, straight, persistent. **Flower:** 7–10 mm; calyx upper lip 1–3  
mm, deeply lobed, lower 4–5 mm, appendages 0; petals bright blue, banner spot yellow, keel  
blunt, glabrous. **Fruit:** often on 1 side of inflorescence, 0.5–1 cm, ± 5 mm wide, ovate, hairy.  
**Seed:** 1–2, wrinkled. (Jepson eFlora, 2013)

**AIDS TO IDENTIFICATION:**

**ILLUSTRATIONS:**

Herbarium Mount: <http://swbiodiversity.org/imglib/seinet/DES/DES00037/DES00037981.jpg>

Photos: ©Gary A. Monroe :

<http://swbiodiversity.org/seinet/imagelib/imgdetails.php?imgid=298519>,

<http://swbiodiversity.org/seinet/imagelib/imgdetails.php?imgid=298520>.

**TOTAL RANGE:** California (White and Inyo Mountains, eastern Mohave Desert), scattered throughout southern Nevada, extreme SW Utah, and NW Arizona (Grand Canyon NP and the Arizona Strip).

**RANGE WITHIN ARIZONA:** NW corner of state, Mohave and Coconino counties.

## **SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** Low, annual herb.

**PHENOLOGY:** Flowering: from April to June, and especially May.

### **BIOLOGY:**

**HABITAT:** Mid-elevation desert scrub to pinyon-juniper communities on igneous and/or limestone gravels. Predominantly a plant of the Mohave Desert and Great Basin of Nevada and California.

**ELEVATION:** Known range in California up to 7215 feet (2200m) and may extend higher based on specimens currently being reviewed. Arizona collections range from 2785 – 5575 feet (850-1700m).

**EXPOSURE:** Usually not specified, although two Arizona collections noted an east facing exposure.

**SUBSTRATE:** Variable. Arizona collections reported volcanic pumice and limestone gravels, nearly barren basaltic cinders, and limestone gravels and ledges. One collection specified a red clay loam soil.

**PLANT COMMUNITY:** Communities identified with *L. flavoculatus* in Arizona range from pinyon-juniper, blackbrush-yucca-*Ambrosia-Atriplex* to *Larrea* (creosote)-mixed desert scrub. Other plant species listed from Arizona collections sites include: *Artemisia tridentata*, *Thamnosma montana*, *Grayia spinosa*, *Cryptantha angustifolia*, *Ephedra fasciculata*, *Mentzelia multiflora*, *Brickelia oblongifolia* var. *linifolia*, *Yucca baccata*, *Eriogonum davidsonii*, *Ipomopsis polycladon*, *Lupinus brevicaulis*, *Cowania* and *Opuntia*.

**POPULATION HISTORY AND TRENDS:** Although first collected and identified at the turn of the century (1909) in Nevada, the species has only been collected in Arizona since 2000. More recent collections (2008) extend the known range about 100km to the southeast, but there is no data on populations and trends (Christie et al 2011).

**SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None.  
**STATE STATUS:** None.  
**OTHER STATUS:** None.

**MANAGEMENT FACTORS:** Unknown.

**PROTECTIVE MEASURES TAKEN:** None.

**SUGGESTED PROJECTS:** Continue to search for species during field expeditions in NW Arizona to determine if range can be expanded. Collect data on abundance to begin assessment of populations.

**LAND MANAGEMENT/OWNERSHIP:** All collections in Arizona have been from USNPS (Grand Canyon NP) or BLM (Arizona Strip) lands.

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

Christie, K., G. Rink and T. Ayers. 2011. Additions to the flora of Grand Canyon National Park. CANOTIA 7: 41-53.

Jepson eFlora, accessed 9/9/2013, [http://ucjeps.berkeley.edu/cgi-bin/get\\_IJM.pl?tid=31875](http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=31875).

JStor| Global Plants, accessed 9/9/2013, <http://plants.jstor.org/specimen/mo-357106?s=t>.

Tropicos, accessed 9/9/2013, <http://www.tropicos.org/Name/13010633>.

**MAJOR KNOWLEDGEABLE INDIVIDUALS:****ADDITIONAL INFORMATION:**

**Revised:** 2013-09-09 BDT

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AZ. X pp.

Abstract