

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

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CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Pediomelum megalanthum* var. *epipsilum* (Barneby) J. Grimes
COMMON NAME: Kane scurf-pea; Kane breadroot; Intermountain Indian breadroot
SYNONYMS: *Psoralea epipsila*; *Pediomelum epipsilum*
FAMILY: Fabaceae

AUTHOR, PLACE OF PUBLICATION: *Pediomelum megalanthum* var. *epipsilum* J.T. Kartesz,
A synonymized checklist of the vascular flora of the United States, Canada, and Greenland. 2(2).
1994. *Pediomelum epipsilum* (Barneby) S.L. Welsh, Great Basin Naturalist 46(2): 257. 1986.
Psoralea epipsila Barneby, Leaflets of Western Botany 3(9): 193-194. 1943.

TYPE LOCALITY: Utah: red clay mesa, 17 miles east of Kanab, towards Jepson Spring, Kane
County, alt. 5500 ft., 6 June 1942.

TYPE SPECIMEN: HT: CAS-300410, Ripley and Barneby 4832, 6 June 1942. Paratypes: M.E.
Jones 27985 and 27986.

TAXONOMIC UNIQUENESS: *Pediomelum megalanthum* is 1 of about 26 species in the genus
Pediomelum, all of which are native to North America. 6 species of *Pediomelum* occur in
Arizona. *P.m.* var. *epipsilum* is one of three varieties of *P. megalanthum*, all of which occur in
Arizona. The other varieties are *P.m.* var. *megalanthum* and *P.m.* var. *retrosum*.

Taxonomy disputed, with some botanists considering the three varieties of *P. megalanthum* as
individual species.

DESCRIPTION: Clump-forming, subcaulescent or short-caulescent herbs, 3.5-15.5 (22) cm
(1.4-6 (8.6) in) tall, from slender, sub-terranean caudex branches arising from deep-seated
tuberous roots. Stems with 2-5 elongated internodes, or none, strigose to ascending hairy.
Leaves mainly 5-foliolate; petioles 0.8-11 (13) cm (0.3-4.3 (5) in) long, pubescent like the stems;
leaflets 5, 8-25 (40) mm long, 3-22 (28) mm wide, obovate, grayish, strigulose, and punctate
beneath, bright yellow green, punctate and glabrous to thinly strigose above. Peduncles to 0.5-5
cm (0.2-2 in) long; racemes 2-6 cm (0.78-2.4 in) long; bracts ovate to broadly lanceolate, 10-18
(22) mm long, often obscuring the internodes. Flowers 11-16 (18) mm long, the banner, wings
and keel pale violet. Calyx 11-14 (17) mm long, the tube 5-6 mm long, strongly gibbous, the
lower tooth longer and broader than the upper ones. Pods 1-seeded. (Welsh et al., 1993).

AIDS TO IDENTIFICATION: Leaf and bract morphology separates *P.m.* var. *epipsilum* from other species of *Pediomelum* that occur in Arizona. Leaflets are conspicuously bicolored, cinereous beneath, bright green and glabrous to glabrate above (except along veins). (Welsh and Licher, 2010). Bracts are larger, 6-9 mm (0.2-0.4 in), and caudate (vs. smaller, acuminate, acute, or shortly caudate in others) in *P.m.* var. *epipsilum* (Egan, 2015).

ILLUSTRATIONS: B&W line drawing (Welsh and Thorne, 1979)

TOTAL RANGE: Northern Arizona and southern Utah (Mohave Strip endemic).

RANGE WITHIN ARIZONA: Northern Mohave County, west and east of Fredonia, and east of Pipe Springs. Northern Coconino County, Moenkopi Formation. (Welsh and Licher, 2010).

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial forb.

PHENOLOGY: Flowers April to June.

BIOLOGY:

HABITAT: Sparse pinyon-juniper woodland, mixed desert shrub, and the sagebrush community on the Chinle and Moenkopi Formation.

ELEVATION: 4,000 – 4,630 ft (1220-1412 m).

EXPOSURE:

SUBSTRATE: Clay soils, barren gypsiferous soils of the Chinle and Moenkopi formations.

PLANT COMMUNITY: Associated with *Atriplex-Ephedra-Cowania* community, west of Fredonia, Arizona. Inhabits pinyon-juniper woodlands with cliff-rose and serviceberry and mixed sagebrush – *Eriogonum* communities (Welsh et al. 2003).

POPULATION HISTORY AND TRENDS: Unknown. Not reported in Arizona since 1986. The two occurrences in Arizona have not been surveyed for more than 20 years.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 USDI, FWS 1993]

[C2 USDI, FWS 1985 under *Psoralea epipsila*]

[C2 USDI, FWS 1980 under *Psoralea epipsila*]

[PE USDI, FWS 1976 under *Psoralea epipsila*]

STATE STATUS:

OTHER STATUS:

MANAGEMENT FACTORS: Potential threats include habitat disturbance by grazing, industrial development, land use changes, and road, transmission line and pipeline construction.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: Studies to determine the total range and population size of this obscure plant. Search suitable habitats for new element occurrences, protect existing occurrences.

LAND MANAGEMENT/OWNERSHIP: BIA – Kaibab Reservation.

SOURCES OF FURTHER INFORMATION

REFERENCES:

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MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION:

The name *Pediomelum* is from the Greek words for prairie and apple, a literal translation of the French "Pomme de Prairie," a reference to the edible, tuberous roots of most species. (Welsh et al., 1993).

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