

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDLOA04020

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Petalonyx nitidus*

COMMON NAME: Shiny-leaved sandpaper plant, Shining sandpaper-plant, Shiny-leaf sandpaper-plant, Shinyleaf sandpaper plant, smooth sandpaper plant.

SYNONYMS: *P. thurberi* var. *nitidus* (Wats.) Jones

FAMILY: Loasaceae

AUTHOR, PLACE OF PUBLICATION: S. Watson, Amer. Naturalist 7(5): 300. 1873.

TYPE LOCALITY: Southern Nevada, U.S.A.

TYPE SPECIMEN: HT: GH-76075. G.M. Wheeler s.n., 1871. IT: US (in 1872).

TAXONOMIC UNIQUENESS: *Petalonyx nitidus* is 1 of 4 species in the genus *Petalonyx* in southwestern North America and 1 of 4 in Arizona. The other species include *P. linearis*, *P. parryi*, and *P. thurberi*.

DESCRIPTION: A low, profusely branched perennial shrub, 30-50 cm (12-20 in) tall and about as broad, with the uppermost parts herbaceous; bark is white and leaves are pale green with white-edges; current growth often sparsely branched. Stems numerous, 15-45 cm (6-18 in) tall; branches minutely rough-hairy. Leaves petiolate, ovate to broadly elliptic, 1.5-4.5 cm long and 1-3 cm wide, those of branches and main axis similar in size, margins serrate to coarsely few-toothed, the surfaces muricate-scabrous; petiole 1-5 mm long. Inflorescence is a dense, 10- to 30-flowered raceme; racemes to 3 cm long, and about 2 cm wide. Bracts ovate, scabrous, short-ciliate; outer bracts 5-12 mm long, 2-6 mm wide, the margin crenate or with small teeth to nearly entire; apex abruptly attenuate. Flowers petals cream colored, 5-11 mm long; sepals linear, 1.4-3 mm long; claws linear, 4-7 mm long, 0.3-0.4 mm wide; stamens exserted, 7-14 mm long; style 8-15 mm long. Fruit ellipsoid or narrowly ovoid.; achene 1-3 mm long.

AIDS TO IDENTIFICATION: Although *Petalonyx nitidus* closely resembles *P. parryi* (Parry sandpaper plant), at the same time there is considerable variation between the two. *P. parryi* is about 3 feet high and woody. It has larger flowers and blooms in April and May. *P. nitidus* is only about half as tall, tends to be herbaceous, and blooms from May to June. The flowers of both species come at the ends of the branches, are white or pale yellow, and sometimes bloom again in October. (Anderson, revised 1996). Distinguished from *P. thurberi* (common sandpaper-plant) by its large, petiolate, usually shining leaves and papery floral bracts.

ILLUSTRATIONS: Line drawing (Jaeger, 1969: fig. 322).
Line drawing (Hickman, 1993: p. 749).
Color photos (Larry Blakely 1997, in CalPhotos at http://elib.cs.berkeley.edu/cgi/img_query).
Color photos (Charles Webber 1998, in CalPhotos at http://elib.cs.berkeley.edu/cgi/img_query).
Color photo of Isotype specimen (US-47960, in <http://ravenel.si.edu/botany/types/fullRecords.cfm?myFamily=>)
Line drawing (in Cristy 1998: Fig. 1, P. 108)

TOTAL RANGE: Confined to southwestern North America, including Arizona, California, Nevada, and Utah.

RANGE WITHIN ARIZONA: Mohave County: Black Mountains; North of Franconia; East of Lake Mohave; and Grand Canyon, Colorado River. Coconino County: Grand Canyon.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial shrub.

PHENOLOGY: Blooms May to June, and sometimes again in October.

BIOLOGY:

HABITAT: Open slopes and mesas, frequently on volcanic substrates including volcanic breccia. "Sandy or rocky canyons in creosote-bush scrub, Joshua-tree woodland, pinyon/juniper woodland." (Hickman, 1993).

ELEVATION: 1,415 – 4,755 ft (432-1450 m). CalFlora (2002) reports elevations of 3,280 – 6,889 ft (1000-2101 m).

EXPOSURE: Collected on south to southwest-facing slopes.

SUBSTRATE: Basalt and loose cinder, and unstable red shales.

PLANT COMMUNITY: Mojave Desert with creosotebush scrub, Joshua Tree woodland, and occasionally the northern pinyon-juniper woodland. Associated species include: *Acacia greggii* (catclaw acacia), *Ambrosia dumosa* (white bursage), *Bebbia juncea* (sweetbush), *Encelia farinosa* (white brittlebush), *E. frutescens* (bush brittlebush), *Ephedra* (Mormon tea), *Euclidia urens* (desert stingbush), *Fouquieria splendens* (Ocotillo), *Juniperus californica* (California juniper), *Larrea tridentata* (Creosotebush), *Lycium* (desert-thorn), *Opuntia erinacea* (Mohave pricklypear)

cactus), *Peucephyllum schottii* (Schott's pigmy-cedar), and *Yucca schidigera* (Mojave yucca). (SEINet accessed 2005).

POPULATION HISTORY AND TRENDS: Unknown. Reported to be locally common where it occurs in Arizona. "It has been more than six decades since this species was collected in Utah; possibly it is no longer a part of the flora." (Welsh et al., 1993).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: None (USDI, BLM AZ 2005)
[Bureau of Land Management Sensitive (USDI, BLM, AZ 2000)]

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BLM – Kingman Field Office; NPS – Grand Canyon National Park and Lake Mead National Recreation Area; Private.

SOURCES OF FURTHER INFORMATION

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MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

Revised: 2002-05-09 (SMS)
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