

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

Plant Abstract

Element Code: PDANA08050

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CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Rhus kearneyi* Barkley

COMMON NAME: Kearney Sumac, Kearney's Sumac, Desert Sumac

SYNONYMS: *Schmaltzia kearneyi* (F.A. Barkley) F.A. Barkley

FAMILY: Anacardiaceae

AUTHOR, PLACE OF PUBLICATION: F.A. Barkley, Ann. Missouri Bot. Gard. 24(3): 363-365, f. 13, 15. 1937.

TYPE LOCALITY: Atlas Mountains, Tinajas, Yuma County, Arizona, U.S.A.

TYPE SPECIMEN: HT: US-1468184. G.J. Harrison and T.H. Kearney 6573, 29 Mar 1930. IT: CAS, MO.

TAXONOMIC UNIQUENESS: Species *kearneyi* is 1 of 17 in the genus *Rhus*, and has 3 subspecies described to it. The subspecies *kearneyi* occurs in the United States, and is endemic to Arizona. The other subspecies of *R. kearneyi* occur in Baja Mexico and include *R.k. borjaensis* and *R.k. virginum*.

DESCRIPTION: Large, evergreen, hardwood shrub to small tree, 1.5-4 m (5-13 ft) high, usually broader than tall, with dense foliage and stout, tough, rigid branches. Petioles and young twigs are a striking reddish color with creamy white flowers clustered at the ends of branches during March. Leaves oblong or oval, 2.5-5 x 1.5-3.5 cm (0.98-1.97 x 0.59-1.4 in [Felger 2000, reports leaves 3.5-8.5 x 2.0-3.8 cm (1.38-3.35 x 0.79-1.49 in)]), simple or occasionally 3-lobed or with 3 leaflets on long shoots, somewhat leathery, shiny green to somewhat bluish glaucous, bicolored with conspicuous white veins, glabrous or with sparse glandular hairs; margins entire or sometimes irregularly undulate or serrate even on the same plant. Evergreen to tardily deciduous during extended drought. Petioles are less than 1 cm long, dark green above, pale below. Base of leaf heart-shaped (cordate or sub-cordate). Twigs, bracts and leaves bear short glands easily detached, and leaves are sparsely puberulent. Inflorescence terminal, spike-like, or panicle, compact and densely flowered, mostly 1.5-3 cm (0.59-1.81 in). Flowers perfect or imperfect, dioecious, small, 3.5 mm (0.14 in) long, cream-white to pink. Sepals 5, green and pink, 2.5-3.5 mm (0.10-0.14 in), broadly ovate-orbicular, obtuse, ciliate with simple, non-glandular hairs; petals white, fading pink, 4.5-5 mm (0.18-0.2 in), broadly elliptic to ovate or obovate, narrowed basally to a claw, without marginal hairs (non-ciliate). Nectary disk of young flowers glistening yellow, with age turning dark yellow-orange and then maroon-red. Ovary greenish white, the

style white, the stigma white, fading dark pink. Fruits approximately 1 cm (0.39 in) long, pubescent with glandular and eglandular hairs. (DBG, 2000; Felger 2000; Falk et al., 2001).

AIDS TO IDENTIFICATION: “At first, *Rhus kearneyi* was confused with *R. integrifolia* of coastal southern California and northern Baja California. The puberulence of the twigs is sparser and not closely appressed...” (DBG 2000). *R. kearneyi* differs from *R. ovata* by its flat oblong or oval leaves, conspicuous venation, shorter petioles, and lower elevation; differs from *R. integrifolia* by its moresparsely, less appressed pubescence, leaves with entire margins, conspicuous venation, non-glandular hairs on sepal margins, petals without marginal hairs (Falk et al., 2001).

ILLUSTRATIONS:

Color photos (<http://www.desert-tropicals.com/...>, 2002)

Line drawing (Falk, Jenkins et al., 2001)

Color photos of plant and habitat (Falk, Jenkins et al., 2001)

Line drawing of leaves (MBJ, in Felger 2000: p. 75)

TOTAL RANGE: Arizona, Baja California, Mexico.

RANGE WITHIN ARIZONA: Yuma County, from the Tinajas Altas, Cabeza Prieta, and Gila Mountains of southwestern Arizona.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Large evergreen, dioecious shrub or small tree.

PHENOLOGY: Flowers January to March (spring); fruit ripens in late summer and persists into winter.

BIOLOGY: Other members in this genus (e.g. *Rhus ovata*) were used by Native Americans; flowers and fruit were eaten, while the leaves were valued for their medicinal properties (Turner et al. 1995).

The *Rhus* genus as a whole is morphologically heterogeneous; the single shared trait amongst all species currently circumscribed under the genus are red fruits that have glandular hairs (Yi et al. 2007) Genetic work indicates that, amongst the *Rhus* species that occur within Arizona, *Rhus kearneyi* is most closely related to *Rhus virens* (Yi et al. 2007).

HABITAT: Plants grow on arid slopes, along canyons and drainages, in relatively small numbers.

ELEVATION: 1,000 to 2,000 feet (305-610 m).

EXPOSURE: North to east-facing slopes in shade; collected on 25-35% slopes.

SUBSTRATE: Rocky slopes of schist, gneiss, and granite.

PLANT COMMUNITY: Lower Sonoran Desert (creosote/bursage). Associated species include: *Acacia*, *Agave*, *Ambrosia dumosa* (White bursage), *A. ilicifolia* (Holly-leaf bursage), *Bursera microphylla* (Elephant-tree), *Cheilanthes* (Lipfern), *Encelia* (Brittlebush), *Ephedra* (Mormon-tea), *Fouquieria splendens* (Ocotillo), *Hyptis emoryi* (Desert Lavender), *Jatropha* (Nettle-spurge), *Justica californica* (= *Beloperone californica*, California Water-willow), *Larrea tridentata* (Creosotebush), *Nolina* (Bear-grass), *Olneya tesota* (Ironwood Tree), *Opuntia*, and *Trixis californica* (American trixis). (From collections in SEINet, accessed 2005).

POPULATION HISTORY AND TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: Salvage Restricted (ARS, ANPL accessed 2011)

OTHER STATUS: [Salvage Restricted (ARS, ANPL 1999)]
Sensitive under ssp. *kearneyi* (USDI, BLM AZ 2000, 2005, 2008, 2010, 2017).

MANAGEMENT FACTORS: *R. kearneyi* has few natural threats, as they are unpalatable to grazing animals and are located on the Barry M. Goldwater Bombing Range, which has limited access and no immediate prospect of development. Because it is inherently rare, this species may be threatened by stochastic events. Thus, management planning should include seed banking for potential reintroduction in the occurrence of a devastating stochastic event (Rice, in CPC accessed 2005).

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: DOD – Barry M. Goldwater Air Force Range; FWS – Cabeza Prieta National Wildlife Refuge.

SOURCES OF FURTHER INFORMATION

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MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

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