

A NEW SPECIES OF ACACIA (LEGUMINOSAE:
MIMOSOIDEAE) FROM BAJA CALIFORNIA
SUR, MEXICO

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ABSTRACT

Acacia kelloggiana Carter & Rudd is described from Baja California Sur, Mexico. To date it is known only from Cerro Giganta at the northern end of Sierra de la Giganta and from Sierra de las Palmas, the next range to the north, a distribution from 26°08' to 27°N.

The genus *Acacia* is well represented in Baja California, Mexico. Eleven species are included in Wiggins' (1980) Flora of Baja California, four of which are considered endemic to the peninsula. We here propose another species currently known only from Cerro Giganta in the northern Sierra de la Giganta and from Sierra de las Palmas, the next range to the north.

This new species, known locally as "garabatilla de espina negra", appears most closely related to *Acacia peninsularis* (Britton & Rose) Standley from southern Baja California, and *A. occidentalis* Rose from Sonora and Sinaloa. On the basis of a sterile collection from the vicinity of Bahía Escondido (Wiggins 17529, DS), *A. occidentalis* was considered by Wiggins (1980) to occur in the peninsula. On examination, we believe this to be a specimen of *Mimosa purpurascens* B. L. Robinson, "garabatilla", a common shrub in the area. As indicated in the following key, the most conspicuous differences are in characters of leaves, spines and fruit.

Key to *Acacia kelloggiana* and Related Species

- Leaves with 1–2(–3) pairs of pinnae; leaflets 3–8 pairs, spatulate-obovate, often emarginate, 5–10 mm long, 2.5–6 mm wide, glabrous or puberulent (Baja California Sur, 27°N southward) *A. peninsularis*
Leaves with 1–18 pairs of pinnae; leaflets 5–23 pairs, linear, 3–8 mm long, 0.6–1.8 mm wide, glabrous or puberulent, sometimes minutely glandular-ciliate along margins.
Branches pubescent (sparsely pilose); spines unguiculate, internodal,

- irregularly dispersed; leaves 1.5–4 cm long with 2–4 pairs of pinnae; leaflets 5–12 pairs, puberulent to glabrescent, about 3–5 mm long, 0.6–1.0 mm wide; flowers in heads about 1.5 cm in diameter, the calyx about 1.5 mm long, the petals 2.5 mm long; legume 2–2.5 cm wide, tortuous, chartaceous, contracted between seeds (Sonora, Sinaloa) *A. occidentalis*
- Branches glabrous; spines, when present, strongly unguiculate, stipular, paired (or occasionally subopposite); leaves 5–15 cm long with 1–13(–18) pairs of pinnae; leaflets 9–23 pairs, essentially glabrous, minutely ciliate and glandular along margin, about 5–8 mm long, 0.6–1.8 mm wide; flowers in heads about 2 cm in diameter, the calyx 2.5–3 mm long, the petals 3–4 mm long; legume 1.5–2 cm wide, falcate, subcoriaceous, slightly contracted between the seeds (Baja California Sur, ca. 26°08' to 27°N *A. kelloggiana*

***Acacia kelloggiana* Carter & Rudd, sp. nov.**

Frutices vel arbores ca. 2–7 m alti, maximam partem spinis stipularibus recurvatis armati; folia 5–15 cm longa, pinnarum paribus 1–13(–18); foliolarum paribus 9–23, foliolis linearibus, glabris, 5–8 mm longis, 0.6–0.8 mm latis, nervo medio excentrico, submarginali; inflorescentiae ex pedunculis axillaribus 1(–3) constantes, floribus albidis in capitulis globosis diam. 2 cm dispositis; legumina subfalcata, 8–15 cm longa, 1.5–2 cm lata, subcoriacea, glabra, seminibus 2–8 (Fig. 1).

Acaciae peninsulari atque *A. occidentali* affinis sed foliolis minoribus pluribusque, leguminibus subcoriaceis haud torulosis discedit.

Shrubs or small trees 2–7 m tall, crown spreading; bark glabrous, smooth except for a few low, narrow ridges, the lenticels conspicuous; spines stipular, paired or occasionally subopposite (sometimes lacking), broad-based laterally compressed, strongly recurved, to ca. 9 mm long, dark brown to black; stipules 4–8 mm long, narrowly linear, 1 mm wide or less, early caducous; leaves bipinnate, rarely fascicled, 5–15 cm long; petioles minutely glandular, 1–2 cm long with a sessile cupulate gland often occurring at the mid-point, or occasionally on the lower or upper third (cupulate gland is also frequently present on the rachis at the base of the terminal pair of leaflets and occasionally between the base of the three or four subterminal pairs of leaflets); pinnae opposite or subopposite, 1–13(–18) pairs; leaflets 9–23 pairs, glabrous, but often with minute marginal glands, linear, obtuse, mucronulate, 5–8 mm long, 0.6–1.8 mm wide, the midrib strongly eccentric; inflorescence of 1(–3) axillary peduncles (sometimes peduncles terminal on short axillary stems) 1–2.5 cm long, the receptacle ovoid to oblong, 1.4–3(–5) mm long, 0.8–2 mm broad; flowers in globose heads 2 cm in diameter, 25 or more per head, but only one or two developing pods, whitish, pedicellate, the inconspicuously glandular



FIG. 1. Holotype of *Acacia kelloggiana* Carter & Rudd. Carter & Sousa 5152.

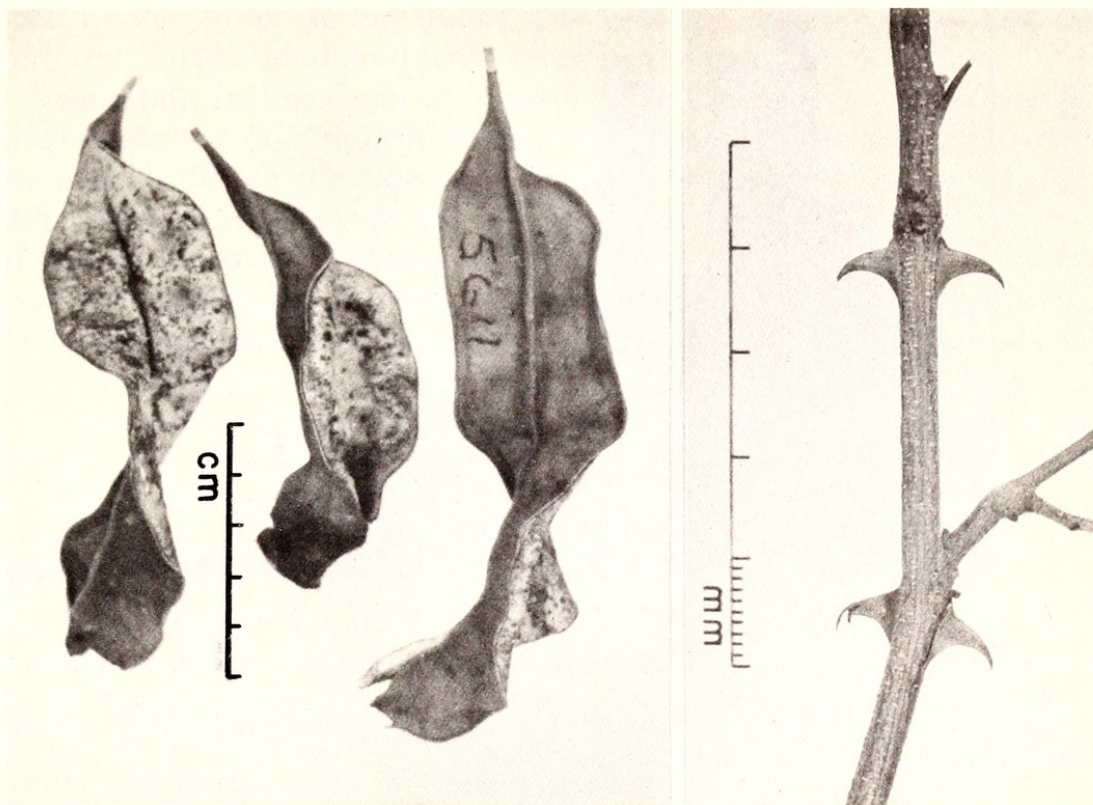


FIG. 2. *Acacia kelloggiana*. Left: Unilaterally dehiscent legumes. Carter 5611; Right: Strongly recurved spines. Carter 5241.

pedicels 2–3 mm long; calyx glabrous (or nearly so), valvate, 2.5–3 mm long, about two thirds the petal length; petals 3–4 mm long with narrow white-membranous glandular margins; stamens exserted, ca. 8 mm long; legume 8–15 cm long, 1.5–2 cm wide, 2–8-seeded, compressed, somewhat falcate, sinuate-margined, slightly constricted between the seeds, subcoriaceous, margin slightly thickened, tan to black in age, usually unilaterally dehiscent, the stipe ca. 5–15 mm long; seeds subovate to ovate, compressed, 7–9 mm long, 6 mm wide, 1.5–3 mm thick, uniformly dark brown, the pleurogram inconspicuous.

TYPE: Mexico, Baja California Sur, Sierra de la Giganta: vicinity of La Matancita, Arroyo Hondo, north side of Cerro Giganta, ca. 26°08'N, 111°34'W, 750 m, 13 Oct. 1966, *Annetta Carter & Mario Sousa* 5152 (Holotype: UC 1472700; isotypes: MEXU, US, BM).

PARATYPES: All Arroyo Hondo collections are from Cerro Giganta (1766 m) nw. of Loreto, Baja California Sur, Mexico, the principal peak of the Sierra de la Giganta, a mountain range that extends along the Gulf of California side of the peninsula from 24°30' to 26°30'N. Arroyo Hondo heads into the n. and ne. side of the peak and forms a huge basin at the base of high basaltic cliffs. La Matancita (750 m) is a permanent water spring high in the nw. side of Arroyo Hondo

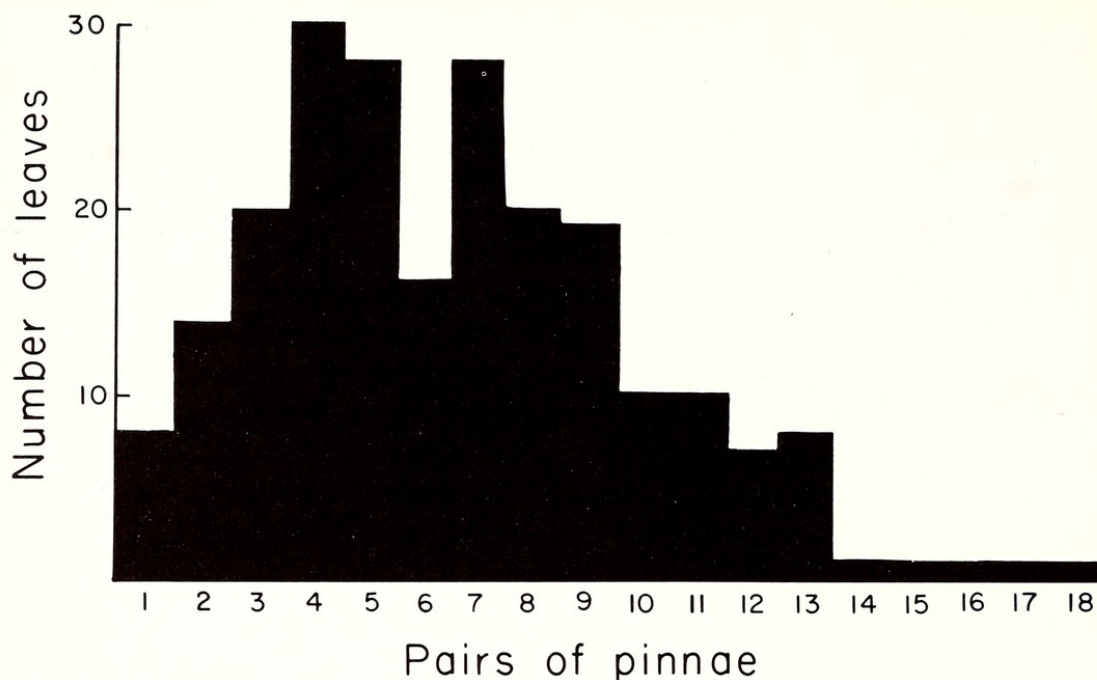


FIG. 3. *Acacia kelloggiana*. Histogram representing frequency distribution of pairs of pinnae (based on 222 leaves of 14 individuals).

basin. (Except as otherwise noted, all collections are at UC. Duplicates will be distributed.) Alt. 690–820 m. Arroyo Hondo: 12 Dec 1938, *H. S. Gentry* 4110 (DS, DES, K, UC); 24 Nov 1947, *Carter, Alexander & Kellogg* 2007; 14 Oct 1966, *Carter & Sousa* 5170, 5176; 29 Aug 1971, *Carter* 5622, 5623, 5623a, 5624. Vicinity of La Matancita, Arroyo Hondo: 13 Oct 1966, *Carter & Sousa* 5156; 3 June 1967, *Carter* 5241; 28 Aug 1971, *Carter* 5611 (previous season's dehisced legumes from under shrub), 5612. With scattered *Nolina beltingii* and leguminous shrubs, ridge nw. of main peak (Cerro Giganta), 1400–1500 m, abundant at this elevation and some distance below, 26 Nov 1947, *Carter, Alexander & Kellogg* 2039. Sierra de las Palmas: La Champaigna, s. of Santa Rosalía, 1440–1600 m, 27–29 Apr 1952, *Fox & Gentry* 11805 (DES).

At the height of the dry season the shrubs are leafless (e.g., *Carter* 5241, June); they come into leaf and bloom with the advent of the summer rains, and by November and December only the dehisced legumes are found.

During the course of his 1930 field trip to Baja California Marcus Jones (1933) did some collecting in the Sierra de la Giganta. From Loreto he went by animal to Arroyo Hondo (his Arroyo "Undo"). In his field journal (p. 107) Jones says, "There is an *Acacia* here with white flowers and hooked spines that is very annoying and at all elevations, rarely 10 ft. high, but have seen little fruit of it." We have

been unable to locate any Jones specimens of this *Acacia* in various herbaria, but he is undoubtedly referring to our *A. kelloggiana*.

Vegetation in the basin of Arroyo Hondo is dense, with *Quercus tuberculata* the dominant in the several steep canyons fingering up to the basalt cliffs of the Comondú Formation (Beal, 1948, pp. 74–77). Other common species at the higher elevations (750–850 m) are *Lysiloma divaricata*, *Mimosa purpurascens*, *Erythrina flabelliformis*, *Croton magdalenae*, *Jatropha vernicosa*, *Karwinskia humboldtiana*, *Pachycormus discolor*, *Alvordia glomerata* and *Franseria arborescens*. On exposed slopes and at lower elevations (600–700 m) are *Lysiloma candida*, *Jatropha cuneata*, *Fouquieria diguetii* and *Lemaireocereus thurberi*. *Acacia kelloggiana* is abundant in the above two associations. On the lower slopes and flats of Arroyo Hondo basin *Prosopis palmeri*, *Jatropha cinerea* and *Ruellia peninsularis* are common. *Ficus palmeri* and *Pachycereus pringlei* are scattered throughout. Local ranchers say that this is the only locality where they have seen “garabatilla de espina negra”. The Gentry and Fox collection from Sierra de las Palmas was growing in *Nolina*-grassland on undulating, broken terrain of a volcanic mountain top. Such a habitat and association occurs also on the crest of Cerro Giganta.

The common name “garabatilla de espina negra” serves to differentiate *Acacia kelloggiana* from “garabatilla”, *Mimosa purpurascens*, a common shrub in the Sierra de la Giganta. The spines of the latter are also broad-based and strongly recurved, but they are light-colored and internodal.

Acacia kelloggiana is named in memory of Louise Kellogg, with whom, in company of Annie M. Alexander, the senior author made her first trip to Baja California in 1947, as well as a number of subsequent memorable trips following Miss Alexander’s death in 1950. Alexander and Kellogg botanical specimens were collected in many remote parts of California and Nevada, and their collection numbers reached almost 6000. Many of their specimens serve as the bases for new taxa; duplicates have been distributed widely by UC, where the first set is deposited.

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