

# A NEW SPECIES OF *VACHELLIA* (FABACEAE: MIMOSOIDEAE) FROM HAITI

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## ABSTRACT

***Vachellia koltermanii*** R. García, M. Mejía, Ebinger, & Seigler, a species from Département Ouest, Haiti, is described, illustrated, and compared to related species from Haiti and the Dominican Republic.

KEY WORDS: Haiti, Mimosoideae, new species, *Vachellia koltermanii*

## RESUMEN

***Vachellia koltermanii*** R. García, M. Mejía, J. Ebinger, & D. Seigler, es una especie que se puede encontrar en el Departamento de Ouest, Haiti, de donde ha sido descrita, ilustrada y comparada con especies afines de Haiti y de la Republica Dominicana.

During the course of field work in Département Ouest, Haiti, shrubs of a previously undescribed species were collected. Most closely related to four other species of the genus *Vachellia* from the Dominican Republic (Clarke et al. 2009; Seigler et al. submitted), *V. barahonensis* (Urban & Ekman in Urban) Seigler & Ebinger, *V. cucuyo* (Barneby & Zanoni) Seigler & Ebinger, *V. oviedoensis* (R. García & M. Mejía) Seigler & Ebinger, and *V. azuana* R. García, T. Clase, Ebinger, & Seigler, ined., and one from Haiti, *V. caurina* (Barneby & Zanoni) Seigler & Ebinger, this new species occurs in the central part of Haiti. This taxon seems most closely related to *V. barahonensis*, but it is clearly distinctive and is proposed as a new species.

***Vachellia koltermanii*** R. García, M. Mejía, Ebinger, & Seigler, sp. nov. (**Fig. 1**). TYPE: HAITI. Ouest: 13 km al norte de Croix Bouquets, en la carretera, a Mirabelais en un farallón al borde de la carretera con vegetación arbustiva, secundaria con *Exostema*, *Alvaradoa*, and *Croton*, 5 Apr 1998, R. García, M. Mejía, and D. Kolterman 6921 (HOLOTYPE: JBSD; ISOTYPES: EHH, EIU, ILL).

**Shrub** to 4 m tall; bark unknown; twigs dark gray to dark reddish-brown, terete, not flexuous, glabrous to minutely puberulent; short shoots, 0.5–1.3 mm long, present above the stipular spines; prickles absent. **Leaves** alternate, also clustered on short shoots, 2.5–15.0 mm long; stipular spines light reddish-brown, becoming gray with age, symmetrical, terete, straight, not inflated, 1–5 × 0.3–0.7 mm near the base, glabrous to minutely puberulent; petiole adaxially grooved, 1.0–2.3 mm long, glabrous to minutely puberulent; petiolar gland solitary, located just below the pinna pair, columnar, 0.2–0.7 mm long, apex circular, 0.2–0.6 mm across, depressed, glabrous; rachis adaxially grooved, 0–13.5 mm long, minutely puberulent, lacking glands between the pinna pairs; pinnae (commonly 1 pair of pinnae on leaves from the short shoots) 2 to 6 pairs per leaf, 6–15 mm long, 2–6 mm between pinna pairs; paraphyllidia absent; petiolules 0.2–0.6 mm long; leaflets 12 to 32 pairs per pinna, opposite, 0.2–0.5 mm between leaflets, linear, 1.8–3.5 × 0.5–0.8 mm, lightly puberulent and with scattered minute glands, lateral veins not obvious, 1 vein from the base, base oblique, margins entire, apex obtuse; midvein central. **Inflorescence** a densely-flowered globose head, 6–9 mm across, probably solitary from the short shoots; peduncles 3–6 × 0.2–0.5 mm, puberulent; receptacle slightly enlarged; involucre 4 to 5-lobed, located near the base of the head, persistent; floral bracts spatulate, 0.3–0.6 mm long, sparsely puberulent, persistent. **Flowers** sessile, yellow; calyx 5-lobed, 0.4–0.7 mm long, glabrous; corolla 5-lobed, 1.6–2.3



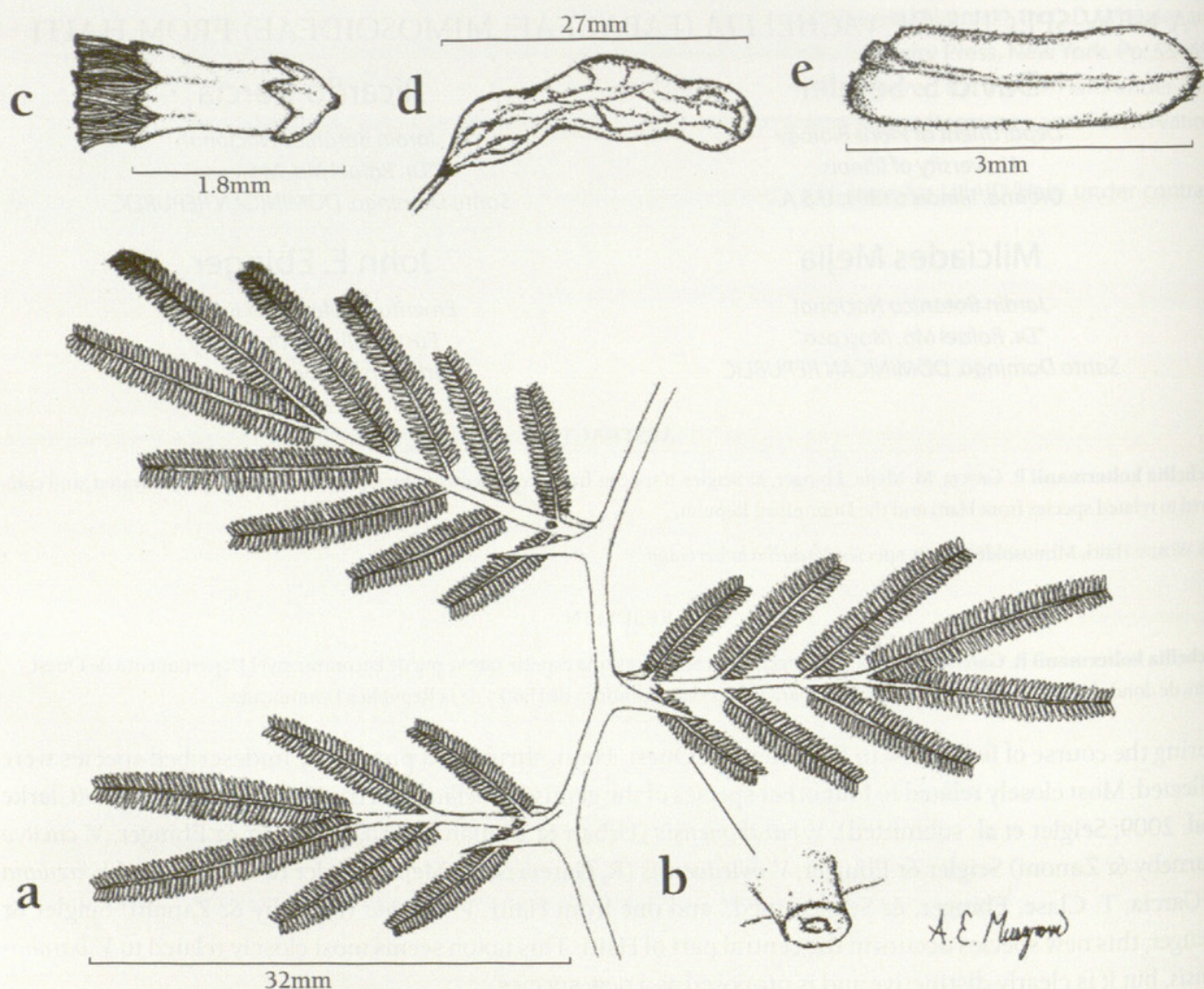


FIG. 1. *Vachellia koltermanii* R. García, M. Mejía, Ebinger, & Seigler. a. Section of bipinnately compound leaf with pinnae, leaflets. b. petiolar gland. c. partially reconstructed flower d. fruit. e. leaflet (adaxial surface). R. García, M. Mejía, and D. Kolterman 6921.

mm long, lightly puberulent, lobes one-quarter the length of the corolla; stamens 17–26; stamen filaments 3.0–4.0 mm long, distinct; ovary lightly pubescent, stipe absent to 0.3 mm long. **Fruits** oblong, 23–35 × 7–10 mm, slightly curved, nearly terete in cross section, not constricted between the seeds, coriaceous, not striate but wrinkled, glabrous, eglandular, indehiscent, dark reddish-brown to black; stipe 0.3–0.7 mm long; apex obtuse, not beaked. **Seeds** unknown.

Some of these data were obtained from a mass of spider-webs attached to one of the specimens (ILL) in which detritus including a few leaflets and peduncles with an involucre and floral bracts attached to the receptacle, and a few *Vachellia* flowers were imbedded.

*Flowers*.—May–July.

*Chromosome number*.—Not determined.

*Distribution*.—Dry thorn-scrub vegetation in Département Ouest, Haiti. This species occurs at low and intermediate elevations (to 400 m), where there is a definite dry season.

*Representative specimens*: Rare species known only from the type collection.

*Etymology*.—Named after Duane Kolterman, Herbario, Universidad de Puerto Rico, Mayagüez, one of the collectors and a student of rare and endangered species of the Greater Antilles.



KEY TO SPECIES OF *VACHELLIA* FROM THE DOMINICAN REPUBLIC AND HAITI

- a. Leaves mostly with 2 or more pairs of pinnae (some species with an occasional leaf with only one pair of pinnae).
  - b. Leaves mostly with 11 or more pairs of pinnae; short shoots absent *Vachellia macracantha*
  - b. Leaves with 10 or fewer pairs of pinnae; most species with a short shoot common just above many of the pairs of stipular spines.
    - c. Legumes inflated, nearly terete in cross section, seeds in two rows (biseriate) or irregularly arranged *Vachellia farnesiana*
    - c. Legumes not inflated, mostly flat in cross section, seeds in a single row.
      - d. Legumes less than 60 mm long, not constricted between seeds.
        - e. Mostly two pairs of pinnae per leaf; leaflets 0.6–2.0 mm wide, glabrous, lateral veins obvious *Vachellia cucuyo*
        - e. Pinnae 2 to 6 pairs; leaflets 0.5–0.8 mm, lightly puberulent, lateral veins not obvious *Vachellia koltermanii*
      - d. Fruit mostly more than 70 mm long, constricted between the seeds.
        - f. Stipular spines to 100 mm long; involucre located near the middle of the peduncle *Vachellia nilotica*
        - f. Stipular spines less than 50 mm long; involucre located at the base of the globose head *Vachellia tortuosa*
  - a. Leaves consistently with 1 pair of pinnae.
    - g. Sprawling shrub to 1 m tall; leaflets finely puberulent (Haiti) *Vachellia caurina*
    - g. Erect shrub or small tree; leaflets glabrous or nearly so.
      - h. Leaflets mostly one (rarely 2) pairs per pinna *Vachellia oviedoensis*
      - h. Leaflets consistently 2 or more pairs per pinna.
        - i. Leaflets 4 to 11 pairs per pinna; petioles 0.1–0.5 mm long *Vachellia barahonensis*
        - i. Leaflets 2 to 4 pairs per pinna; petioles 0.7–5.0 mm long *Vachellia azuana*

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