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Novitiae florae cubensis No. 41

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Acaciella angustissima (*Fabaceae*, *Mimosoideae*), new for Cuba

Abstract

Martínez Quesada E. & Morales Pérez R.: *Acaciella angustissima* (*Fabaceae*, *Mimosoideae*), new for Cuba [Novitiae florae cubensis 41]. – Willdenowia 43: 139–141. June 2013. – Online ISSN 1868-6397; © 2013 BGBM Berlin-Dahlem.
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Acaciella angustissima is recorded for the first time from Cuba. In its native range, it is widespread from the southern USA across Mexico, Central America and the Andes to Argentina. In Cuba, it has been found near Camagüey city, in anthropogenic habitats, indicating recent unintentional introduction. The Cuban plants match the typical variety, *A. angustissima* var. *angustissima*.

Additional key words: *Acacia*, *Leguminosae*, plant introduction, Greater Antilles

Introduction

During field work near the airport of Camagüey city, a species of *Mimosoideae* not matching any of the known representatives of that subfamily in Cuba (Bässler 1998) was found. Its identity could be established as *Acaciella angustissima* (Mill.) Britton & Rose, and this has been confirmed by L. Rico-Arce, co-monographer of that genus (Rico-Arce & Bachman 2006).

Bässler (1998), in his *Mimosaceae* treatment of the "Flora de la República de Cuba", as other workers until recently, did not consider *Acaciella* Britton & Rose as a separate genus but included it in *Acacia* Mill. Later, Rico-Arce (2004) and Rico-Arce & Bachman (2006) reinstated *Acaciella*, pointing out that the genus is characterized by features exceptional in *Acacia* s.str.: the plants are unarmed, they lack extrafloral nectaries, they have pedicellate flowers, and they have pollen in 8-celled polyads.

According to Rico-Arce & Bachman (2006), the native distribution of *Acaciella* extends from the southern USA across Mexico, Central America and the Andes to Argentina. Most of the 15 species recognized by Rico-Arce & Bachman (2006) occur only in Mexico, where species occupy a wide range of habitats from near sea-level to 2500 m. The species are tolerant of a wide range of soil types and form an important natural browsing resource. *A. angustissima* and at least three other species are cultivated for this purpose outside their native range, including in Asia and Australia (Rico-Arce & Bachman 2006).

Results and Discussion

Acaciella angustissima (Mill.) Britton & Rose in N. Amer. Fl. 23: 100. 1928 ≡ *Mimosa angustissima* Mill., Gard. Dict., ed. 8: *Mimosa* no. 19. 1768 ≡ *Acacia angustissima* (Mill.) Kuntze, Rev. Gen. Pl. 3: 47. 1898 ≡ *Senegalia angustissima* (Mill.) Pedley in Bot. J. Linn. Soc. 92: 238. 1986. – Holotype: Mexico, Vera Cruz, 1731, *W. Houstoun* (BM).

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Cuban plants have *stipules* persistent but later deciduous; *petiole* apically with numerous short trichomes, basally with some long trichomes; *rachis* with 5–11 (–15) pairs of pinnae and a persistent, linear, leaf-like extension beyond insertion of apical pair of pinnae; *paraphyllidia* free; *leaflets* with midvein eccentric at base and plane at margin. *Inflorescence* with a c. 2 mm long, ciliate, lanceolate bract below each raceme. *Calyx* and corolla glabrescent outside. *Legume* glabrescent with a beak to 5 mm; *seeds* oval in outline (Fig. 1).

Cuban specimens can be assigned to the typical variety, *Acaciella angustissima* var. *angustissima*, since twigs, petioles, and rachises are ± pubescent to ± glabrous (hispid or pilose-pubescent in var. *filicioides* (Cav.) L. Rico; glabrous in var. *texensis* (Torr. & A. Gray) L. Rico), the leaves have 5–11(–15) pairs of pinnae (usually 18–32 pairs in var. *filicioides*; up to 6(–8) pairs in var. *texensis*), and the legumes have a straight or curved beak 2–5(–7) mm (beak sometimes curved, up to 4 mm in var. *filicioides*; 1–2.5 mm in var. *texensis*).

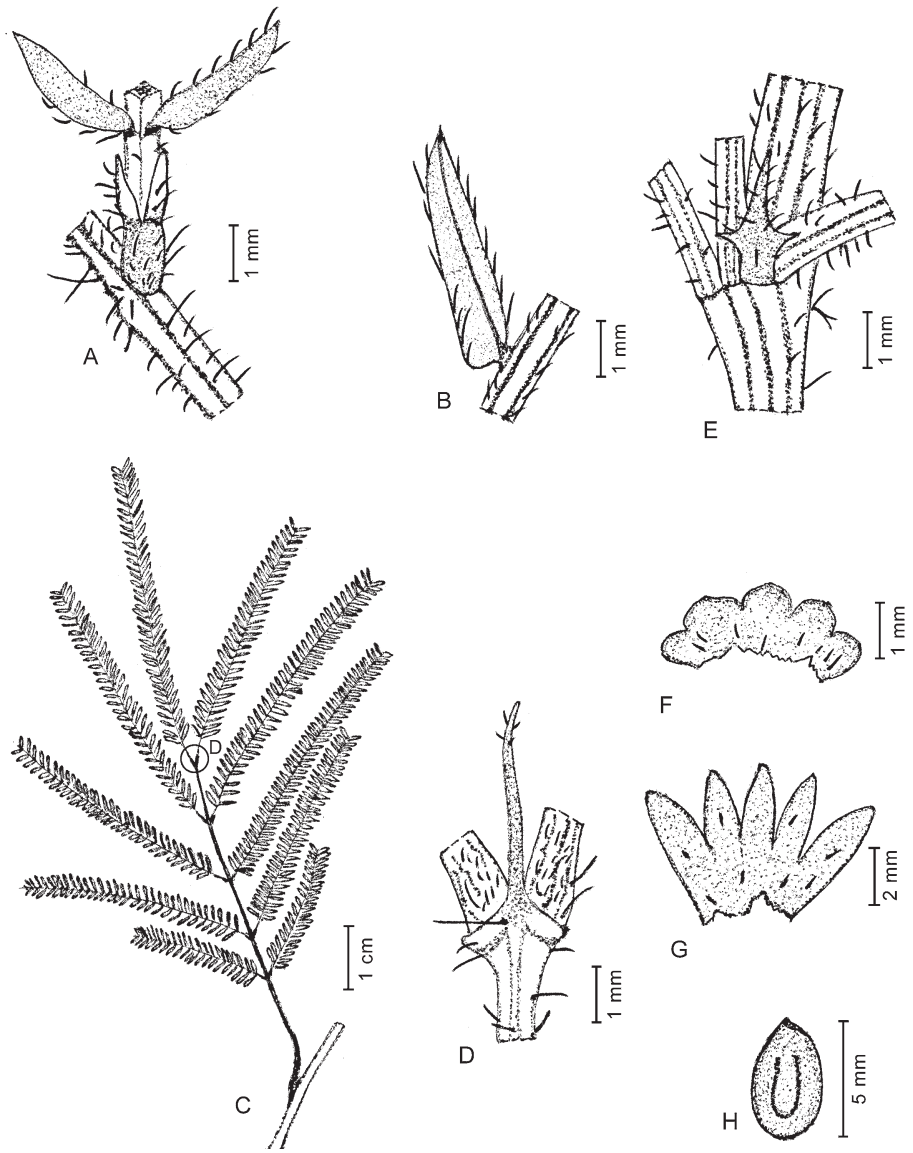

Fig. 1. *Acaciella angustissima* – A: paraphyllidia and trichomes at base of petiole; B: lower surface of leaflet with midvein eccentric at base; C: leaf with 5 pairs of pinnae; D: detail of leaf-like extension of rachis beyond insertion of apical pair of pinnae; E: inflorescence bract below raceme; F: calyx, opened, glabrescent outside; G: corolla, opened, glabrescent outside; H: seed. – All drawn by E. Martínez from *R. Morales 11352* (HACC).

Phenology — In Cuba the species probably flowers and fruits all year.

Distribution and habitat — *Acaciella angustissima* has the widest native distributional range of all species in the genus and occurs from the southern USA through Mexico, Central America and the Andes to Argentina. Outside this range it has been introduced to a number of countries in the Americas, and in Asia and Australia; in the Greater Antilles it is known as an introduction in the Dominican Republic (Rico-Arce & Bachman 2006). In Cuba it has been observed so far in Camagüey province, in the city of Camagüey, near the airport and also near the pig-breeding centre "La Experiencia", in anthropic savanna and at the edge of a plantation of *Eucalyptus*, in acid soils. The occurrence of single plants in anthropogenic habitats suggests a rather recent unintentional introduction, possibly as a result of fruits and/or seeds having been dispersed from the southern USA by hurricane "Ike" in 2008.

Specimens examined — Cuba: Province Camagüey: "Near to the airport of Camagüey city" [21°25'19"N, 77°50'52"W], anthropic savanna, Nov 2010, *R. Morales 11352* (HACC); near pig-breeding centre "La Experiencia" [21°27'25"N, 77°50'52"W], edge of *Eucalyptus* plantation, Dec 2010, *R. Morales-11354* (HACC).

Acaciella angustissima is now the second species of the genus reported from Cuba. The other one is *A. vil-*

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losa (Sw.) Britton & Rose. That species was presumably introduced to the country in the early 19th century, as documented by a single collection made between 1825 and 1832, later described as *A. valenzuelana* A. Rich. (Bässler 1998: 101–102 under *A. glauca* (L.) Moench), which is actually a synonym of *A. villosa* (Rico-Arce & Bachman 2006: 239). This species has not been collected since, and is probably no longer present in the flora of Cuba (Bässler 1998).

Both species can be distinguished easily, as *Acaciella angustissima* has leaflets with a plane margin, whereas in *A. villosa* the whole margin of the leaflets is involute, obscuring the midvein, and both blade surfaces usually have a densely strigose to sericeous pubescence.

Acknowledgements

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References

Bässler M. 1998: *Mimosaceae*. – In: Flora de la República de Cuba. Ser. A, Plantas Vasculares **2.** – Königstein: Koeltz.

Britton N. L. & Rose J. N. 1928: *Mimosaceae*. – Pp. 1–194 in: North American Flora **23.** – New York: New York Botanical Garden.

Rico Arce M. de L. 2004: Two new changes in *Acaciella* (*Mimosoideae*: *Leguminosae*). – Kew Bull. **59:** 327–328.

Rico Arce M. de L. & Bachman S. 2006: A taxonomic revision of *Acaciella* (*Leguminosae*, *Mimosoideae*). – Anales Jard. Bot. Madrid. **63:** 189–244.

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