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Authors: Ramos, Zenia Acosta, and Urquiola Cruz, Armando J.

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Novitiae florae cubensis No. 32

ZENIA ACOSTA RAMOS[1] & ARMANDO J. URQUIOLA CRUZ †

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Abstract

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Cuba is an important centre of diversity of the genus *Plinia.* The study of Cuban *Plinia* material, in the herbaria and in the field, resulted in the recognition of 16 morphologically discrete taxa. Seven of them are presented here: those growing in, and endemic to, the Pinar del Río province in W Cuba. One is described as a new species, *P. arenicola,* known from a single locality in the southwestern part of the province, where it is confined to quartzitic sand habitats. One of the seven previously described species, *P. toscanosia,* is reduced to synonymy under *P. dermatodes.*

Additional key words: *Plinia arenicola, Myrtoideae,* taxonomy, Greater Antilles

Introduction

Within *Myrtaceae,* the genus *Plinia* L. is included in the subfamily *Myrtoideae* Sweet, along with all other American genera except the Chilean *Tepualia* Griseb. (of *Leptospermoideae* Burnett, with capsular fruits). The *Myrtoideae* are subdivided into three subtribes. According to the classification of Berg (1855-61), based on embryo features observed by Candolle (1828), *Plinia* belongs to the *Eugeniinae* O. Berg. Among the genera of that subtribe, *Plinia* is the only one to have completely separate, plano-convex cotyledons. Other characteristic features of the genus are the deciduous calyx, leaving a circular scar on the fruit, and the conspicuous, parallel and closely set secondary veins of the leaf blade.

Govaerts & al. (2008) recognise close to 70 species in *Plinia*. In Cuba several species have been named under *Plinia,* most of them from the eastern or western part of the island, and only a single one from central Cuba. In W Cuba the genus is only present in the Pinar del Río province, with seven described species. Based on the revision of herbarium specimens and recent field work, they have been critically re-evaluated. The present paper summarises the results.

Material and methods

Specimens held in the principal Cuban herbaria (HAC, HAJB and HPPR) were studied, as well as those of foreign institutions that hold the Cuban material of Wright (gathered between 1859 and 1864), Ekman (1922 to 1924) and more recent important collections: B, GH, GOET, JE, K, MO, NY, S and US. Herbarium designations follow the standard of Holmgren & al. (1990). Characters considered include leaf shape and venation, dimensions of petiole and lamina, flower and hypanthium features, shape and colour of the mature fruit, the presence of glands, ovarium partition and ovule number.

These features were used in combination to circumscribe natural taxonomic groups, corroborated by a numerical treatment (not detailed here), so as to establish possible synonymy and describe those that had not so far been named.

Results

For the whole of Cuba 16 natural taxonomic entities of *Plinia* could be defined, seven are found in, and are endemic to, W Cuba. The nine others, of C and E Cuba, are

1 Jardín Botánico de Pinar del Río, Camino Guamá, km 1½, Pinar del Río, Cuba.

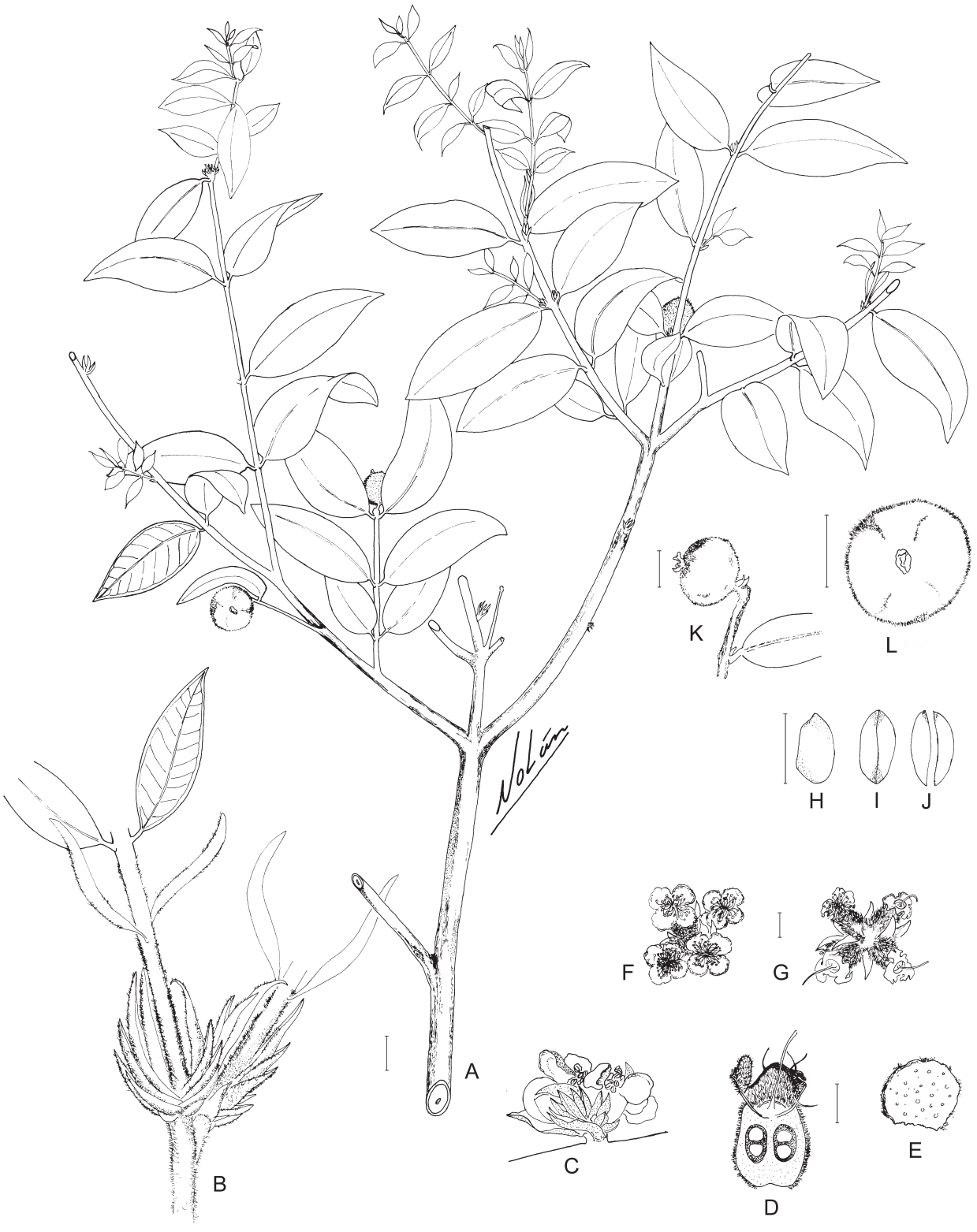

Fig. 1. *Plinia arenicola* – A: leafy branch with fruits; B: bud scales at the base of young branches; C: flower glomerule with surrounding involucral bracts; D: ovary in longisection, crowned by hypanthium and calyx remains; E: petal; F-G: group of 4 flowers, during and after anthesis; H: seed; I: embryo; J: embryo, with the cotyledon separated; K: fruiting twig; L: fruit in frontal view, with calyx scar. – Scale bars: A-C 10 mm, D-E = 1 mm, F-G, K-L = 5 mm, H-J = 7 mm. Drawings by Nolán Iglesias.

not considered here and will be dealt with separately. One of the previously described seven W Cuban species is relegated to synonymy, six species are maintained, one is described as new. A synopsis of W Cuban *Plinia* species, all of which are endemic to the province of Pinar del Río, follows.

1. ***Plinia cubensis*** (Griseb.) Urb. in Repert. Spec. Nov. Regni Veg. 15: 413. 1919 ≡ *Calycorectes cubensis* Griseb., Cat. Pl. Cub.: 90. 1866. – Type: *Wright 2435* (GOET!).

Plinia cubensis, a distinctive species, is the most widespread of the seven. It grows in gallery woods along rivers that cross areas of slates. Isolated individuals have been located in other forest types with poorly drained soil, at Los Pretiles (Mantua) and Pan de Guajaibón (Bahia Honda).

This species is not recognised by Govaerts & al. 2008 as a separate species and a member of *Plinia* but, erroneously, considered as conspecific with *Myrciaria floribunda* (H. West ex Willd.) O. Berg.

2. ***Plinia dermatodes*** Urb., Symb. Antill. 9: 476. 1928. – Type: Cuba, prov. Pinar del Río, "Pinar de Cajálbana, on the very top of the mountain", 28.8.1923, *Ekman 17345* (S!).
= *Plinia toscanosia* Urb., Symb. Antill. 9: 477. 1928. – Type: Cuba, prov. Pinar del Río, "Finca Cochinata, in woods bordering manglares", 7.9.1923, *Ekman 17443* (S!).

This species is extremely variable in its leaves, depending on habitat. It occurs in the Cajálbana area (La Palma) and was formerly present in the region of Toscano (Bahía Honda), where it disappeared due to deforestation for the cultivation of sugarcane and to the invasion of natural habitats by marabú (*Dichrostachys cinerea* (L.) Wight & Arn.). Specimens from the latter area were described as *Plinia toscanosia,* but they fall within the range of variation of *P. dermatodes,* representing an extreme variant growing in a coastal serpentine area under strong marine influence. The original material of *P. dermatodes,* also from serpentine, is from higher altitude, where climatic conditions differ. The two species have names with equal priority and have not been united before. We have given preference to the name *P. dermatodes* to designate the combined species.

3. ***Plinia orthoclada*** Urb., Symb. Antill. 9: 476. 1928. – Type: Cuba, prov. Pinar del Río, "Sabalo, in pinelands", 17.6.1923, *Ekman 16767* (S!).

Since this species was first collected by Ekman in 1923, it was known only from its type gathering until we were recently able to find it again, not only in its locus classicus at Sábalo, but also in other, ecologically similar places, at Santa Teresa (Guane) and San Ubaldo (Sandino). Its currently know populations all grow on quartzitic sands.

4. ***Plinia recurvata*** Urb., Symb. Antill. 9: 477. 1928. – Type: Cuba, prov. Pinar del Río, "Sierra de los Organos, grupo del Rosario, Peña Blanca, c. 700 m", 16.5.1922, *Ekman 13863* (S!).

This is a well defined species with clear cut diagnostic features. Unfortunately, in spite of a thorough search of the locus classicus during two expeditions, we have failed to locate it again. Further exploration of suitable localities of the Sierra del Rosario is necessary, with the aim to locate any subsisting populations.

5. ***Plinia rubrinervis*** Urb., Symb. Antill. 9: 474. 1928. – Type: Cuba, prov. Pinar del Río, "prope Sumidero in Sierra Caliente", 29.11.1923, *Ekman 18188* (S!).

This species is characterised by its pedicellate flowers and fruits (with a 0.5-1 cm long pedicel), also by ovate to elliptic, glandular and fragrant, acuminate leaves with a rounded base, and pale orange fruits.

This species is not recognised by Govaerts & al. 2008 as a separate species and a member of *Plinia* but, erroneously, considered as conspecific with *Myrciaria floribunda* (H. West ex Willd.) O. Berg.

6. ***Plinia rupestris*** Ekman & Urb. in Urban, Symb. Antill. 9: 474. 1928. – Type: Cuba, prov. Pinar del Río, "prope Mendoza en Cerro de Mendoza c. 150 m", 16.6. 1923, *Ekman 16741* (S).

Close to the previous species, from which it differs in its longer and thinner petiole and the cuneate base of is leaf blade.

7. ***Plinia arenicola*** Urquiola & Z. Acosta, **sp. nov.** – Holotype: Cuba, Pinar del Río, Guane, Santa Teresa, El Gato, 22°06'03"N, 84°00'48"W, 3 m, 17.2.2007, *Urquiola, Acosta & Novo 10872* (HPPR; isotypes: B, HAJB). – Fig. 1.

Frutex ad 4 m altus, valde ramosus. *Foliorum petiolus* 2-4 mm tantum longus, 1-2 mm latus, dense strigosus dein glaber; *lamina* elliptica vel ovato-elliptica, subcoriacea, 2.5-5.5 cm longa, 1-2.5 cm lata, margine leviter revoluta, nervis secundariis parallelis. *Gemmae* axillares, squamis 4-6 imbricatis perulatae. *Flores* solitarii vel 2-4 glomerulati, involucro bractearum pilosarum ad maturitaten persistentium circumdati. *Hypanthium* pilosum, supra ovarii apicem valde protractum. *Sepala* 4, post anthesin recurva hypanthium coronantia. *Petala* alba, membranacea, glandulosa. *Stamina* numerosa. Ovarium globosum, biloculare, loculis 2-ovulatis. *Fructus* globosus, maturus atropurpureus, subsessilis. *Semina* 1-4; testa subcartilaginea; embryo e cotyledonibus 2 planoconvexis formatus.

Shrub up to 4 m tall, strongly branched. *Indumentum* of whitish or reddish, simple, 0.1-0.7 mm long hairs. *Branches* longitudinally striate, strigose-pubescent when young, grey or light grey when dry, the older ones green-

ish grey to light cinnamon. *Leaves* with a short, stout petiole (2-4 × 1-2 mm), sometimes channeled above, densely strigose, glabrescent with age; lamina elliptic to ovate-elliptic, membranous becoming subcoriaceus, 2.5-5.5 cm long, 1-2.5 cm wide, reddish to pale green or brown when dry, densely hairy (but glabrescent) along the midvein and distally beneath, less so but papillose with abundant convex glands above, acute to somewhat acuminate, base cuneate to rounded, margins sometimes revolute, the midvein sunken on the upper face but prominent on the lower, the lateral veins 13-15, conspicuous, departing from the midvein at an angle of 45°, the marginal vein similar to the lateral ones. *Axillary buds* with a cover of 4-6 imbricate bracts, narrowly ovoid, 1-5 mm long, pubescent, brownish, acute. *Flowers* solitary or in glomerules of 2-4, surrounded by an involucre of hairy bracts persistent till maturity. *Hypanthium* hairy, prolonged beyond the ovary. *Sepals* 4, their recurved remains persistent for some time after anthesis. *Petals* white, membranous, with numerous translucid glands and hairy margin. *Stamens* numerous; filaments 3 mm long; anthers 0.5 mm long, dithecic, with hairy connective. *Ovary* globose, bilocular, with 2 ovules per locule, densely covered with whitish hairs; style filiform, exceeding the stamens; stigma truncate. *Fruit* subsessile, dark purple to blackish at maturity. *Seeds* 1-4; testa somewhat cartilaginous; embryo consisting of the two plano-convex cotyledons.

Plinia arenicola differs from *P. orthoclada,* the only other species known to occur on white sands, and from all other Cuban *Plinia* species as well, by the abundant indumentum of its young leaves and fruits, its characteristic leaf shape, as well as in the dark purple to black colour of its ripe fruits.

Phenology. — Flowering January to February, fruiting March to May.

Distribution. — Only known from the type locality, where it grows in semi-natural scrub on white quartzitic sands.

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