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THREE NEW ANGIOSPERMS FROM PARC NATIONAL PIC MACAYA, MASSIF DE LA HOTTE, HAITI

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THREE NEW ANGIOSPERMS FROM PARC NATIONAL PIC MACAYA, MASSIF DE LA HOTTE, HAITI[1]

Walter S. Judd and James D. Skean, Jr.[2]

ABSTRACT

Three new angiosperm species, Lobelia hotteana (Campanulaceae), Ossaea woodsii (Melastomataceae), and Miconia macayana (Melastomataceae), are described and illustrated. All three species are known only from Parc National Pic Macaya, in the Massif de la Hotte, Haiti. Their relationships are discussed.

RESUMEN

Se describen e ilustran tres nuevas especies de angiosperma, Lobelia hotteana (Canpanulaceae), Ossaea woodsii (Melastomataceae), y Miconia macayana (Melastomataceae). Las tres especies se conocen solamente del Parc National Pic Macaya, en el Massif de La Hotte, Haití. Se discuten sus afinidades.

[1] This paper is Florida Agricultural Experiment Station Journal Series No. 7850.

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INTRODUCTION

In the course of field work in Parc National Pic Macaya, Massif de la Hotte, Haiti (Judd 1987), the following three undescribed species were collected, and are described below. Other new angiosperm taxa resulting from field work in connection with a recent biogeophysical inventory of Morne la Visite and Pic Macaya National Parks have been (or are being) described elsewhere; these include: *Wallenia formonensis* Judd (Judd 1986a), *Micropholis polita* (Griseb.) Pierre subsp. *hotteana* Judd (Judd 1986b), *Ilex blancheana* Judd (Judd 1986c), *Mecranium revolutum* Skean & Judd (Skean & Judd 1986), *Duranta arida* Britton & Wilson subsp. *serpentina* Sanders & Judd (Judd & Sanders 1986), *Meriania brevipedunculata* Judd & Skean and *M. parvifolia* Judd & Skean (Judd & Skean 1987), and *Salvia* sp. nov. (Skean & Judd, manuscript). In addition undescribed species of *Pilea*, *Rhytidophyllum*, and *Ditta* were collected.

The highly endemic flora of the high elevations of the Massif de la Hotte is poorly known, and our knowledge of the region's flora is based mainly on the extensive collections of E. L. Ekman (see Ekman 1928, and Ekman's unpublished field notes). Continued botanical exploration will likely reveal additional undescribed taxa.

ACKNOWLEDGEMENTS

Special thanks are due Charles A. Woods, who organized the field trips on which these plants were collected; it is a pleasure to name one of the new species, Ossaea woodsii, in recognition of his significant contributions to the knowledge and preservation of the flora and fauna of Haiti. We thank Rogers McVaugh for his helpful comments concerning the specimens of Lobelia hotteana. Thanks are also due the curators of the herbaria (DUKE, JBSD, NCU, NY, US) from which comparative material of Lobelia, Ossaea, and/or Miconia was borrowed. We are grateful to Kent D. Perkins, registrar of the University of Florida Herbarium, for his help in processing specimen loans, and to Norris W. Williams, keeper of the University of Florida Herbarium, for making available the computer facilities of the herbarium. We also thank Richard A. Howard, Carroll E. Wood, Jr., Michael Canoso, and Walter Kittredge for their assistance during the visit of the first author to the Harvard University Herbaria (A, GH). Finally, we thank Wendy Zomlefer for her fine illustrations and David W. Hall for his helpful comments on the manuscript.

Lobelia hotteana Judd & Skean, *sp. nov.* (Campanulaceae, Lobelioideae) Figure 1

Species haec ab Lobelia stricta Sw. differt foliis leviter parvioribus, i.e. 5-11 vs. 7-18 cm longis, inflorescentiis brevioribus, 3-8 cm longis, ferentibus 3-7 flores, vs. inflorescentiis 10-35 cm longis, ferentibus 20-100 flores, et antheris tantum breviter pubescentibus ad apicem.

Suffrutescent, sparsely branched herb to 75 cm tall; stems erect to decumbent, glabrous, covered with conspicuous oval raised scars left by leaf-bases of previous year, the woody base of the stem to 1 cm in diameter. Leaves ca 10-15, somewhat rosulate, spreading to ascending, usually occupying from 5-11 cm of the axis, and clustered ca 20-50 cm below the inflorescence, with 2-5 obovate to linear leafy bracts scattered along axis between leafy portion of stem and base of the inflorescence; blades coriaceous, 5-11 cm long, 0.9-2.5 cm wide, obovate to narrowly obovate, widest at a point between 1/3 and 1/2 the distance from the tip, glabrous, the margin evenly serrate with reddish callose teeth 0.2-0.6 mm long, distal portion with 3-5 teeth per cm, the proximal 1-4 cm very sparsely toothed to entire, the apex acuminate, the base attenuate; petiole 0.3-1.2 cm long. Inflorescence erect, racemose, 3-8 cm long, 5- to 7-flowered, the axis glabrous to moderately pubescent (covered with small unicellular hairs); pedicels ascending, 1.8-2.5 mm long, glabrous to moderately pubescent, each pedicel with a pair of bracteoles; bracteoles linear, 5-10 mm long and 0.6-1 mm wide, nearly glabrous to sparsely pubescent, with margin entire to clearly serrate, borne 2-8 mm below the flower or fruit; flower bracts linear to narrowly elliptic, (0.7-)1.5-3.8 cm long, 1-3 mm wide, glabrous to sparsely pubescent, especially toward base, the margin serrate, the apex acute. Flower zygomorphic, inverted, 18-30 mm long, including the hypanthium. The hypanthium cup-shaped, glabrous to slightly pubescent, portion free from ovary ca 4 mm long; calyx lobes 5, narrowly triangular, 6-11 mm long, 1.5-2.5 mm wide, glabrous to very sparsely pubescent, the margin clearly serrate to nearly entire. Corolla yellowish-green with a dull red tinge, the tube 14-16 mm long, slightly recurved, with a dorsal fissure, fenestrate at base, glabrous to very slightly pubescent, the lobes only slightly recurved, linear, the 2 next to dorsal fissure ca 4-8 mm long, ca 2.7 mm wide, the 3 middle segments ca 2-3 mm long, ca 2.5 mm wide. Filament tube 12-17 mm long, somewhat deflexed, slightly exserted, the 5 filaments connate slightly more than 1/2 their lengths, pubescent; anther tube 7-8 mm long, the 2 smaller anthers minutely white-tufted at tips (with hairs to ca 0.2 mm long). Ovary 2-carpellate, half-inferior,

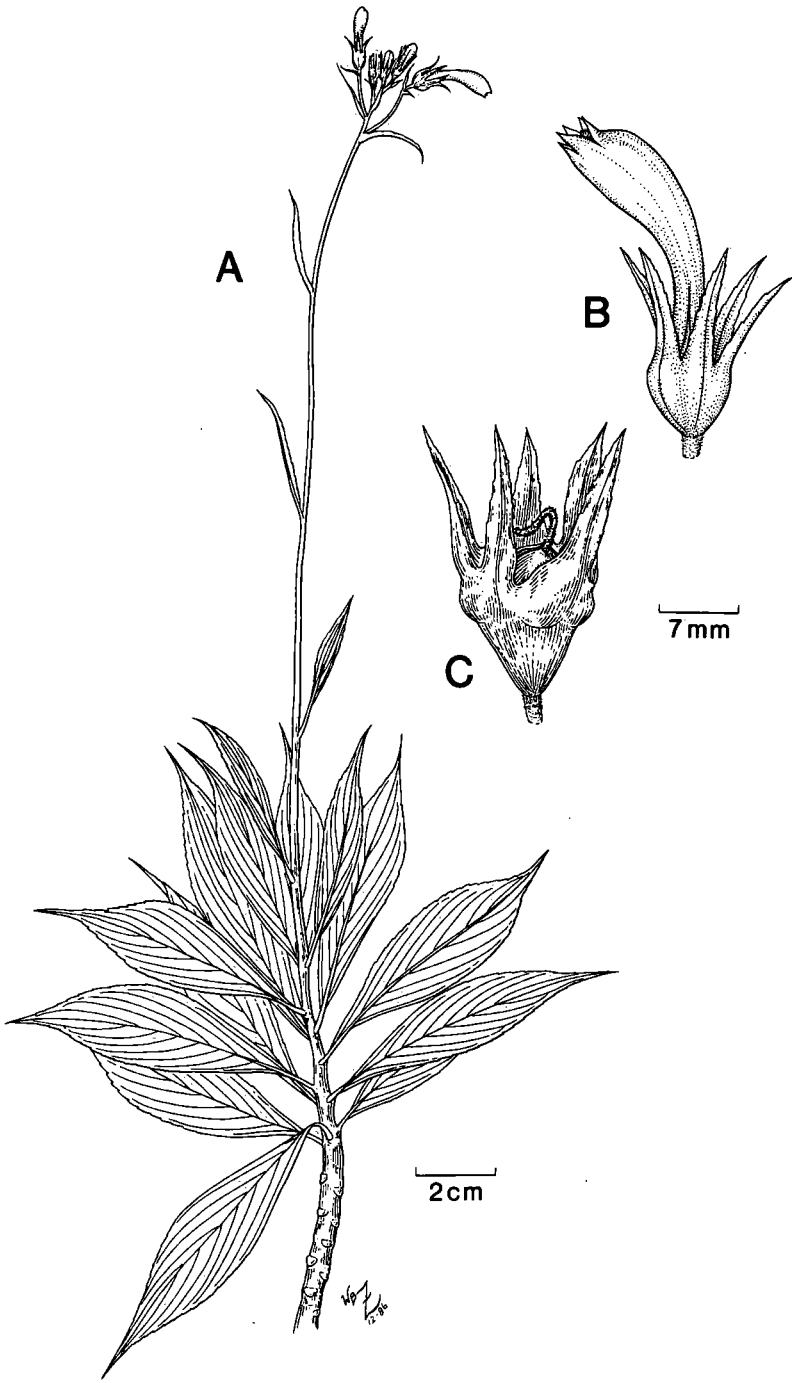

Figure 1. Lobelia hotteana Judd & Skean: A, habit; B, flower; C, fruit. Drawn from Judd 3790.

glabrous. Fruit a capsule, 7-9 mm long, 7-8 mm wide; seeds ellipsoid to ovoid, ca 0.7 mm long, the testa finely reticulate, brown.

Type: Haiti. Departement du Sud: Massif de la Hotte, Parc National Pic Macaya, moist forest of *Pinus occidentalis* Sw., open rocky areas, ravine on south slope of Morne Formon, at 1650-1730 m alt., just east of "1650 camp," locally common, 28 January 1984 (flowers) *Walter S. Judd 3790* (Holotype, FLAS; isotypes, NCU, NY). The species was also seen (but not collected) at ca 2200 m alt. on open rocky ridge just south of Pic Macaya.

Lobelia hotteana probably is related to *Lobelia stricta* Sw., a species restricted to the Lesser Antilles. It differs from this species in its often smaller and less crowded leaves, shorter and fewer-flowered inflorescence, and flowers with smaller corolla lobes and the two smaller anthers with much shorter hair-tufts at the apex (see diagnosis, and McVaugh 1943). This species is also similar to *L. christii* Urb. (also of the Massif de la Hotte) in that its two smaller anthers are only minutely pubescent at the apex (compared with "very minutely beaded" in *L. christii*, see McVaugh 1943). Affinity may also exist with *L. robusta* Graham and *L. assurgens* L. (R. McVaugh pers. comm.).

This new species has been seen only in open rocky areas of moist high-elevation forests of *Pinus occidentalis* Sw. Associated species include: *Agave antillarum* Desc., *Andropogon glomeratus* (Walt.) BSP. subsp. *pumilus* Vasey, *Baccharis myrsinites* (Lam.) Pers., *Castilleja arvensis* Schlecht. & Cham., *Chaptalia albicans* Urb. & Ekm., *Eupatorium flavidulum* Urb. & Ekm., *Garrya fadyenii* Hook., *Gyrotaenia myriocarpa* Griseb., *Isachne rigidifolia* (Poir.) Urb., *Pteris longifolia* L., *Rhytidophyllum auriculatum* Hook., *Rubus* spp., *Senecio stenodon* Urb., and *Weinmannia pinnata* L. At higher elevations near Pic Macaya the species occurs with some of the above species along with *Gaultheria domingensis* Urb., *Miconia* spp., *Myrica picardae* Krug & Urb., *Ternstroemia barkeri* Ekm. & Schmidt, and *Wallenia aquifolia* Urb. & Ekm. Three other members of the Lobeloideae were also collected in the park; these are: *Lobelia robusta* Graham, *L. rotundifolia* Juss., and *Siphocampylus sonchifolius* (Sw.) McVaugh.

Ossaea woodsii Judd & Skean, *sp. nov.*
(Melastomataceae, Miconieae)
Figure 2

Species haec ab Ossaea curvipila Urb. et Ekm. differt foliis leviter angustioribus, i. e., 0.5-1.7 cm vs. 1.2-2.7 cm latis, ramunculis et paginis abaxialibus foliorum carentibus pilis multicellulosis crasse conicis.

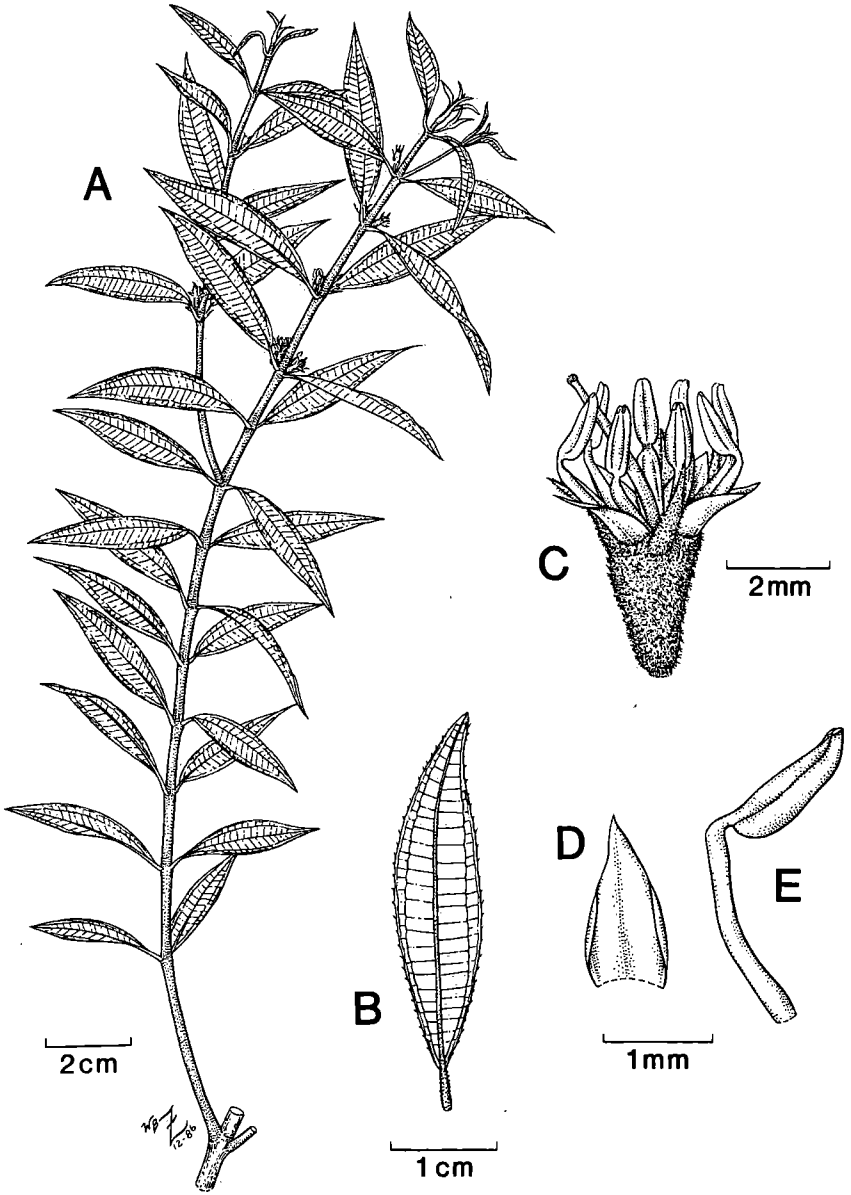

Figure 2. Ossaea woodsii Judd & Skean: A, habit; B, leaf; C, flower; D, petal; E, stamen. Drawn from Skean 1367.

Shrub or small tree to 4 m tall. Young twigs terete to slightly quadrangular, 1-2.5 mm wide, densely covered with ferrugineous, sessile to short-stalked, globular to irregularly stellate, multicellular hairs; internodes 0.5-3.5(-5.5) cm long. Leaves opposite; petiole 2-7 mm long, with dense indumentum similar to that of twigs; blade narrowly ovate to elliptic, 2-6.1 cm long, 0.5-1.7 cm wide, flat, the apex acuminate to acute (with tip more or less rounded to acute), the base rounded to nearly cuneate, the margin obscurely strigose-serrate, with each tooth associated with a stiff, arcuate, multicellular hair ca 0.25-0.5 mm long, plane to revolute, especially near base; venation acrodromous, basal, with a prominent midvein, two secondary veins, and numerous percurrent tertiary veins (more or less perpendicular to midvein), the midvein, two secondary veins, and tertiary veins abaxially raised and adaxially flat to impressed, quaternary and higher order veins reticulate, not raised on abaxial surface; adaxial surface dark green, sparsely scabrous due to stout, conical, multicellular hairs 0.15-0.3 mm long, with (0)1 to 5(6) hairs per rectangular portion of lamina delimited by midvein, secondary vein, and adjacent tertiary veins, the midvein, secondary and tertiary veins with ferrugineous, nearly sessile, irregularly branched or stellate, to elongate and unbranched or terminally branched, multicellular hairs; abaxial surface pale, with minute, ferrugineous, sessile to short-stalked, globular to irregularly branched or stellate, multicellular hairs on all veins. Inflorescences axillary fasciculate cymes, ca 0.4-0.8 cm long, bearing (1)3 to 7 flowers, the axes densely covered with ferrugineous, sessile to short-stalked, globular to irregularly branched or stellate, multicellular hairs. Flowers 4-merous, sessile or nearly so, each associated with 2 linear to narrowly triangular and sparsely pubescent bracteoles, ca 0.7-1.5 mm long, 0.1-0.2 mm wide, with acute apices, and subtended by a narrowly triangular and densely pubescent bract to ca 2 mm long. Hypanthium cylindrical, green, ca 3 mm long, ca 1.5 mm wide, portion free from ovary ca 1 mm long, externally densely covered with ferrugineous, globular to irregularly branched/ stellate, multicellular hairs to 0.05 mm long, and very sparsely scattered stout, conical, multicellular hairs to ca 0.3 mm long, internally glabrous. External calyx lobes 4, conspicuous, ca 1.6 mm long, ca 0.3 mm wide, with indumentum similar to hypanthium; internal calyx lobes 4, broadly triangular, ca 0.25-0.3 mm long, 0.8-1 mm wide, the apex acute to acuminate, the calyx tube ca 0.2 mm long. Petals 4, narrowly triangular, ca 2 mm long, 0.8 mm wide, pink to red, glabrous, the apex acute, the margin entire. Stamens 8, geniculate, the filament 1.5-2 mm long, swollen just below junction with anther, glabrous, the anther ca 1.2 mm long, straight, opening by terminal pores, the anther sacs well developed, occupying nearly entire length of anther, their bases rounded. Ovary 4-carpellate, mainly inferior, more or less globose, ca 1.7 mm long and wide, glabrous, with irregular glandular fringe around base of style, with axile

placentation; style ca 7 mm long, cylindrical, glabrous; stigma minutely papillose. Berries not seen.

Type: Haiti. Departement du Sud: Massif de la Hotte, Parc National Pic Macaya, cloud forest on north slope of Morne Formon, in Grande Ravine du Sud, 1450-1780 m alt., occasional, 6 June 1984 (flowers) *James D. Skean, Jr. 1367* (Holotype: FLAS; isotypes: A, JBSD, NY).

Additional Specimens Examined. Haiti. Departement du Sud: Massif de la Hotte, Parc National Pic Macaya, cloud forest/ moist pine forest on southern slope of Morne Formon, 1620-1660 m alt., uncommon, 28 January 1984 (old flowers) *Walter S. Judd 3802* (A, EHH, FLAS, S, US).

Ossaea woodsii probably is related to several morphologically similar species of *Ossaea* with axillary cymes and small 4-merous flowers, such as *O. scalpta* (Vent.) DC., *O. barahonensis* Urb. & Ekm., *O. curvipila* Urb. & Ekm., and *O. setulosa* Urb. It differs from these species in indumentum characters (see diagnosis). *Ossaea woodsii* can be separated easily from *O. barahonensis*, *O. setulosa*, and *O. curvipila* by its lack of stout conical multicellular hairs (i.e. strigose indumentum) on the twigs and abaxial leaf surfaces and shorter hypanthial hairs, and is differentiated from *O. scalpta* by its more or less sessile, irregularly stellate hairs on the twigs (vs long-stalked, terminally branching hairs), glabrous petals, and longer external calyx lobes. All of the above mentioned species are endemic to Hispaniola (Moscoso 1943). *Ossaea curvipila* and *O. setulosa* also have been collected in the park, and both are restricted to the high elevations of the Massif de la Hotte. The only other *Ossaea* known from the Morne Formon region is *O. alloeotricha* Urb., which was collected by Ekman near the summit of Morne Formon (see *E. L. Ekman H7473*, NY!, S!). This distinctive terminal-flowered species is known only from the type gathering.

Ossaea woodsii is known only from cloud forests and moist forest with *Pinus occidentalis* Sw. from ca 1450 to 1780 m on Morne Formon. Associated species include: *Ardisia fuertesii* Urb., *Banara splendens* Urb., *Besleria lutea* L., *Brunellia comocladiifolia* Humb. & Bonpl., *Calyptranthes nummularia* Berg., *Cestrum coelophlebium* O. E. Schulz, *Citharexylum caudatum* L., *Cleyera ternstroemioides* (O. E. Schmidt) Kobuski, *Cordia lima* (Desv.) Roem. & Schult., *Daphnopsis crassifolia* (Poir.) Meissn., *Dendropanax arboreus* (L.) Decne. & Planch., *D. selleanus* (Urb. & Ekm.) A. C. Smith, *Didymopanax tremulum* Krug & Urb., *Dipholis cubensis* (Griseb.) Pierre, *Eugenia formonica* Urb. & Ekm., *Eupatorium* spp., *Garrya fadyenii* Hook., *Lobelia rotundifolia* Juss., *L. robusta* Graham, *Miconia subcompressa* Urb., *M. xenotricha* Urb. & Ekm., *M. ossaeifolia* Urb. & Ekm., *M. tetrastoma* Naud., *Myrsine coriacea* (Sw.) R. Br. ex Roem. & Schult., *Palicouria alpina* (Sw.) DC., *Persea anomala*

Britt. & Wils., *Piper rugosum* Lam., *Prunus occidentalis* Sw., *Tabebuia berteri* (DC.) Britt., *Trema micrantha* (L.) Blume, *Trichilia havanensis* Jacq., *Vaccinium racemosum* (Vahl) Wilbur & Luteyn, and *Weinmannia pinnata* L.

Miconia macayana **Judd & Skean,** ***sp. nov.***
(Melastomataceae, Miconieae)
Figure 3

Frutex ad 2 m altus. Ramuli hornotini leviter tetragoni, ferruginei, lanosi, internodiis 1.1-2.5(-4) cm longis. Lamina folii, maxime coriacea, ovata, (2.5-)3.9-7.3 cm longa, (1.5-)2.1-3.8 cm lata, plana vel leviter curvata ad paginam abaxialem, saepe leviter undulata, ad apicem acuta, leviter obtusa vel acuminata, ad basin rotunda vel cordata; margo conspicue crenata; pagina adaxialis viridis, fere glabra; pagina abaxialis ferruginea, lanosa; nervatura acrodroma, basalis, nervo primario et nervis secondariis 4, prominentibus, adaxialiter impressis, abaxialiter elevatis, nervis tertiariis abaxialiter prominentibus, elevatis. Petiolus 3-5(-8) cm longus, ferrugineus, lanosus. Inflorescentia terminalis, ferruginea, lanosa, 4-9 capitulis paniculatim dispositis, quoque capitulum cymosum, 6-18 floribus. Flores 5-merous, sessiles. Hypanthium anguste obconicum, leviter pentagonum, ca 3 mm longum, 2.9 mm latum, lanosum, ferrugineum. Sepala 5, lobis externis triangulatis, ca 0.8 mm longis, 1.2 mm latis, maxime lanosis, ferrugineis, lobis internis lingulatis, ca 1 mm longis, 1.2 mm latis, glabris. Petala 5, leviter obovata, ca 2.6 mm longa, 1.8 mm lata, alba, glabra, ad apicem emarginata. Stamina 10, geniculata; anthera ca 1.8 mm longa, ad basin truncata, thecis ca 1.2 mm longis. Stylus ca 3.5 mm longus. Baccae non visi.

Shrub to ca 2 m tall. Young twigs slightly 4-angled, 3-4 mm wide, densely covered with a tangled mat of ferrugineus, fasciculate, multicellular hairs; internodes 1.1-2.5(-4) cm long. Leaves opposite; petiole 3-5(-8) mm long, with dense indumentum similar to that of twigs; blade ovate, (2.5-)3.9-7.3 cm long, (1.5-)2.1-3.8 cm wide, flat or slightly abaxially inrolled, often slightly undulate, extremely coriaceous, the apex acute to slightly obtuse or acuminate, the base rounded to cordate, the margin conspicuously crenate, plane to revolute; venation acrodromous, basal, with a prominent midvein and 4 secondary veins (2 secondary veins inconspicuous in smaller leaves), and numerous percurrent tertiary veins; adaxial surface dark green, midvein and secondary veins prominently impressed, tertiary veins less conspicuously impressed, for the most part glabrous, but with some matted, ferrugineus, fasciculate, multicellular hairs persisting in vein impressions and near apex and base; abaxial surface brown, densely covered with a tangled mat of

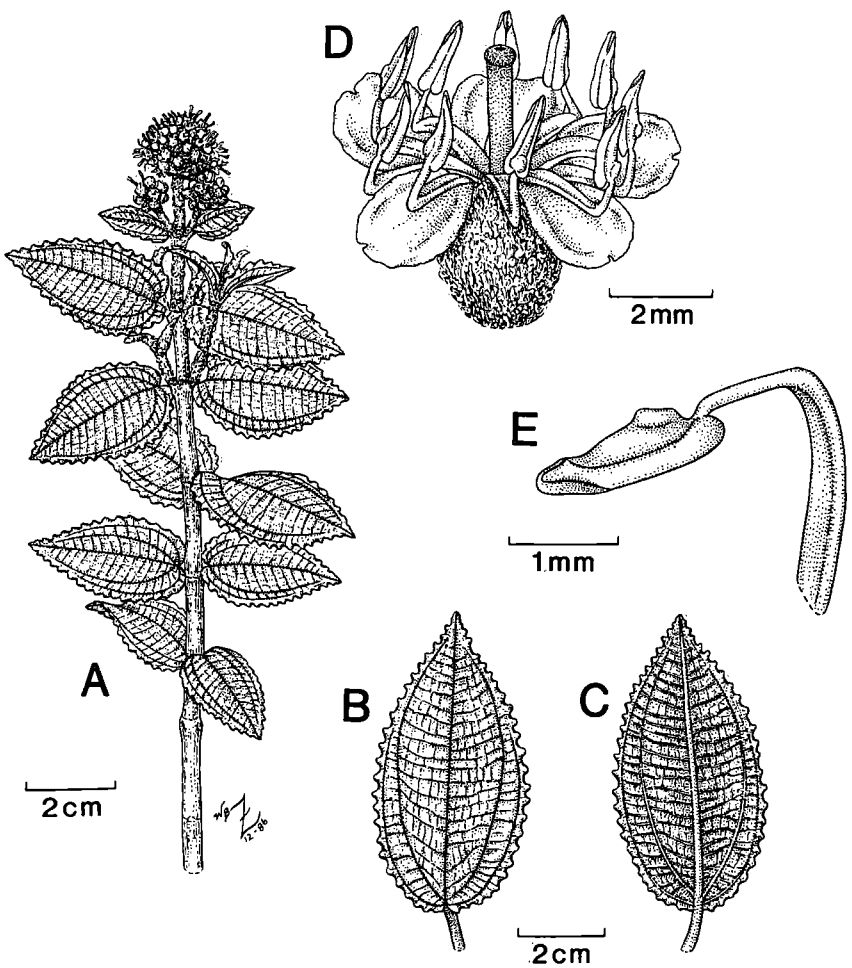

Figure 3. Miconia macayana Judd & Skean: A, habit, B, adaxial view of leaf; C, abaxial view of leaf; D, flower; E, stamen. Drawn from Skean 1428.

ferrugineus, fasciculate, multicellular hairs, midvein and 2 largest secondary veins prominently raised, 2 smaller secondary veins less conspicuously raised, tertiary veins slightly raised, higher order veins reticulate, slightly raised. Inflorescence terminal, a paniculate arrangement of 4-9 heads, the heads sessile or with stalks to ca 7 mm long, each containing 6-18 flowers, representing a reduced aggregation of 3-flowered cymules, subtended by a lingulate, cartilaginous bract, ca 4.7 mm long, 5.2 mm wide, with an obtuse apex and a tangled mat of ferrugineus, fasciculate, multicellular hairs on the abaxial surface; each cymule associated with ca 8 ovate to narrowly elliptic bracts, 3.7-3.8 mm long, 1.7-3.7 mm wide, the apices obtuse, the texture and indumentum similar to that of the bract subtending head; peduncle 1.4-2.1 cm long; indumentum of peduncle and inflorescence axis similar to that of twigs. Flowers 5-merous, sessile. Hypanthium slightly obconical, weakly 5-angled, ca 3 mm long, ca 2.9 mm wide, portion free from ovary ca 1.3 mm long, externally densely covered with ferrugineus, fasciculate, multicellular hairs, internally glabrous. External calyx lobes 5, ca 0.8 mm long, ca 1.2 mm wide, triangular, the apex acute, densely covered and fringed with indumentum similar to that of hypanthium; internal calyx lobes 5, ca 1 mm long, 1.2 mm wide, lingulate, the apex rounded, the margin minutely erose, glabrous. Petals 5, imbricate and twisted in bud, slightly obovate, ca 2.6 mm long, 1.8 mm wide, white, glabrous, the apex rounded, emarginate with an asymmetrically located notch, margin minutely erose. Stamens 10, geniculate, the proximal segment ca 2.2 mm long, glabrous, the distal segment ca 2.3 mm long, glabrous; anther ca 1.8 mm long, base truncate, anther sacs ca 1.2 mm long, opening by 2 longitudinal slits extending over apex down adaxial surface. Ovary 5-carpellate, inferior, broadly conical, ca 1.1 mm long, ca 1.8 mm wide, glabrous, with an apical fringe, ca 0.7 mm long, encircling base of style, the placentation axile; style ca 3.5 mm long, cylindrical; stigma concave. Berries not seen.

Type: Haiti. Departement du Sud: Massif de la Hotte, Parc National Pic Macaya, open moist pine forest/cloud forest on southern slope of Pic Macaya, ca 2150-2200 m alt., locally common, 7 June 1984 (flowers) *James D. Skean, Jr. 1428* (Holotype: FLAS; isotypes A, JBSD, NY).

Additional Specimens Examined: Haiti. Departement du Sud: Massif de la Hotte, Parc National Pic Macaya, *ibid.*, locally common, 6 February 1984 (flower buds) *Walter S. Judd 4125* (EHH, FLAS, S, US).

Miconia macayana is clearly a member of *Miconia* sect. *Chaenopleura* Benth. & Hook., as indicated by its anthers with elongate slits. This section is extremely diverse in the Greater Antilles, and contains many narrow endemics. Close relatives of *M. macayana* are not known; however, it is

similar to *Miconia rigidissima* Urb. & Ekm. in indumentum characters and inflorescence structure. *Miconia macyana* is easily distinguished from the other species of *Miconia* occurring in the Massif de la Hotte by its combination of fairly small, ovate, extremely coriaceous, and conspicuously crenate leaves, with a characteristic dense covering of ferrugineous, fasciculate-sinuous multicellular hairs, and inflorescences composed of condensed cymose heads.

The discovery of this species brings to ten the number of species of *Miconia* known from the Morne Formon-Pic Macaya region, Massif de la Hotte. These species are: *M. apiculata* Urb. & Ekm. (incl. *M. niedenzuana* Urb. & Ekm.), *M. barkeri* Urb. & Ekm., *M. hypioides* Urb. & Ekm., *M. laevigata* (L.) DC., *M. mirabilis* (Aubl.) L. O. Williams, *M. ossaeifolia* Urb. & Ekm., *M. subcompressa* Urb. (incl. *M. plumieri* Urb. & Ekm.), *M. tetrastoma* Naud., *M. xenotricha* Urb. & Ekm., and *M. macayana* Judd & Skean. All have been collected recently by the authors. Seven of these species are endemic to Hispaniola, and six are endemic to the Massif de la Hotte.

Miconia macayana is endemic to the Massif de la Hotte of Haiti where it is known only from exposed ridges in moist forests of *Pinus occidentalis* Sw. and adjacent cloud forests on the southern slope of Pic Macaya at ca 2150-2200 m alt. Associated species in this area include: *Agave antillarum* Desc., *Baccharis myrsinites* (Lam.) Pers., *Brunellia comocladiifolia* Humb. & Bonpl., *Cestrum filipes* Urb. & Ekm., *Chaptalia albicans* Urb. & Ekm., *Didymopanax tremulum* Krug & Urb., *Eupatorium flavidulum* Urb. & Ekm., *Garrya fadyenii* Hook., *Gautheria domingensis* Urb., *Hyptis schusteri* Urb., *Isachne rigidifolia* (Poir.) Urb., *Lobelia hotteana* Judd & Skean, *Lycopodium pithodes* Schl. & Cham., *Miconia hypiodes* Urb. & Ekm., *Myrica picardae* Krug & Urb., *Pilea formonensis* Urb. & Ekm., *Pinus occidentalis* Sw., *Rubus selleanus* Helwig, *Salvia* sp. nov., *Ternstroemia barkeri* Ekm. & Schmidt, *Vaccinium racemosum* (Vahl) Wilbur & Luteyn, *Wallenia aquifolia* Urb. & Ekm., and *Weinmannia pinnata* L.

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