

NOVITATES ANTILLANAE. X

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This new series of additions to the Floras of Hispaniola and Puerto Rico is the result of intensive field work in both islands and brings up to date our knowledge of their vegetation. After publishing our last book: LIOGIER, A. H. & L. F. MARTORELL, Flora of Puerto Rico and Adjacent Islands: a Systematic Synopsis (Editorial de la Universidad de Puerto Rico, 1982), several taxa have been added and new species have to be described.

LORANTHACEAE

Dendropemon linearis Alain, sp. nov.

Rami usque 30 cm longi, in parte inferiori usque 2 mm crassi, teretes plicato-striati, brunnei, juvenili compressi, internodiis usque 2 cm longis, e basi ad apicem paullo dilatati; folia linearia vel anguste lineari-lanceolata, basi in petiolum brevissimum vel subnullum angustata, apice paulatim acuminata, apice ipso apiculata, 2-3.5 cm longa, 2-4 mm lata, nervo medio supra nullo, subtus prominente, lateralibus nullis, margine plana integra, in sicco nigrescentia opaca coriacea; inflorescentiae solitarii axillares, 3-4-florae; pedunculo 12-15 mm longo, compresso, apice versus dilatato et usque 2 mm lato; rachis plus minus compressa; pedicelli 2-5 mm longi; bractea et prophylla inter sese in cupulam 1 mm longam coalita, superne libera triangularia; calycodium non visum; baccae nigrae obovato-cylindratae, 8-9 mm longae.

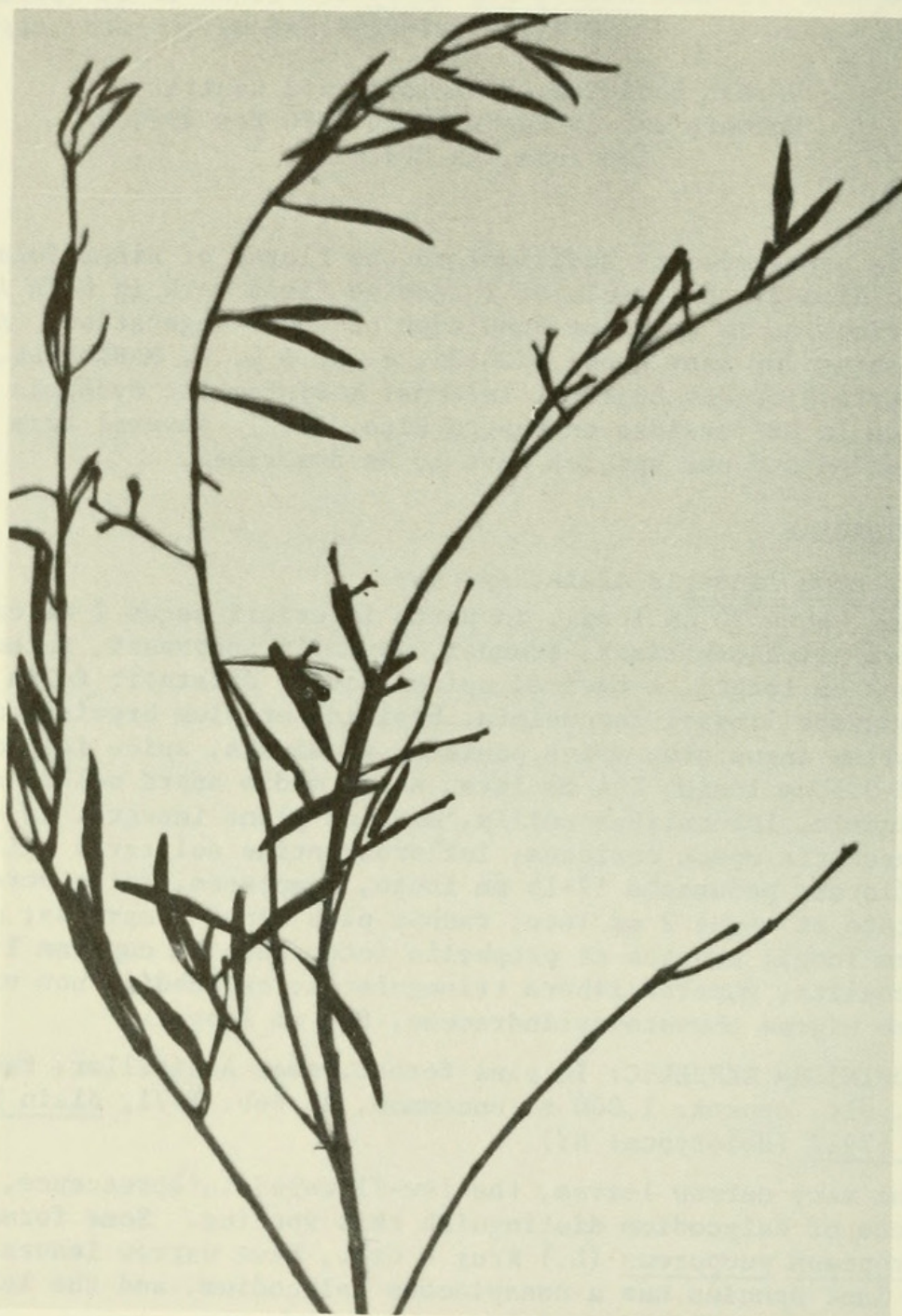
DOMINICAN REPUBLIC: In pine forest, near Aceitillar, Baboruco Mts., alt. approx. 1,000 m, uncommon, 26 Feb. 1971, Alain H. Liogier 17912 (Holotypus: NY).

The very narrow leaves, the few-flowered inflorescence, the absence of calycodium distinguish this species. Some forms of Dendropemon purpureus (L.) Krug & Urb., have narrow leaves, but this last species has a conspicuous calycodium, and the leaves have a well-developed petiole.

POLYGONACEAE

Coccoloba jimenezii Alain, sp. nov.

Frutex 4-5 m altus, ramuli tereti glabri; ochreae cylindraceae, coriaceae, puberulae, 5-7 mm longae, apice breviter bilo-



Dendropemon linearis Alain (A. H. Liogier 17912).

batae; foliia ovata vel oblongo-ovata, apice versus attenuata, apice ipso leviter emarginata, basi cordata, 2-4.8 cm longa, 1-2.5 cm lata, subcoriacea vel coriacea, supra glabra vel nervo medio basim sparse pilosa, nervo medio supra vix prominulo, subtus prominente, lateralibus utroque latere 5-6, supra et subtus prominulis, ad marginem arcuatis et anastomosantibus, venis utroque facie dense reticulatis, margine integra, plana vel leviter recurvata; petioli 6-8 mm longi, puberuli, 1-2 mm sub ochreae apicem abeuntes; inflorescentiae terminales in ramuli brevissimi, 1-5 mm longae, rachis glaber, angulatus; bractee anguste ovato-triangulares, acutae, 1 mm longae, 0.4 mm latae, glabrae; ochreolae membranaceae, tubulari-campanulatae, 1 mm longae, glabrae; pedicelli 2-3 mm longi, glabri; flores feminei solitarii, glabri, hypanthium in fructo 3 mm longum, lobi imbricati, 2 mm longi, apice rotundati; caetera ignota.

DOMINICAN REPUBLIC: In thickets, on serpentine rocks, Sierra Prieta, Villa Mella, Distrito Nacional, alt. 150 m, 24 March 1974, Alain & Perfa Liogier 21450 (Holotypus: NY; Isotypi: SDM, UPR); id., 26 May 1973, Alain & Perfa Liogier 19276 (NY, SDM); id., 24 Oct. 1975, Alain & Perfa Liogier 24125 (NY, SDM).

The ovate, cordate leaves, the short inflorescences distinguish this species. The nearest taxon seems to be C. hotteana Schmidt, with elliptic or ovate to obovate-elliptic leaves, rounded or narrowed at base, the perianth lobes ovate to suborbicular, the fruits up to 6 mm long. This species is named in memory of the late José Jesús Jiménez, a prominent botanist in the Dominican Republic.

LEGUMINOSAE-PAPILIONOIDEAE

Crotalaria intermedia Kotschy

St. CROIX: On roadside, Bonne Esperance, Alain H. Liogier 34234 (UPR). A new record.

Pueraria triloba (L.) Makino

DOMINICAN REPUBLIC: Vicinity of Bonao, Alain & Perfa Liogier 9073-1 (NY, UPR, SDM); new record for Hispaniola. Native of Asia, cultivated and escaped.

Sesbania tomentosa Hook. & Arn.

PUERTO RICO: Gurabo Station, introduced and becoming a weed. A new record (det. Peter E. Gibbs).

EUPHORBIACEAE

Chamaesyce blodgettii (Engelm. ex Hitchc.) Small

PUERTO RICO: Caja de Muertos Isl., R. O. Woodbury & M. Cobin s.n. (UPR 7485); on coastal limestone, Guánica, A. & P. Liogier, L. F. Martorell 29485 (UPR); a new record for Puerto Rico. Bermuda, Bahamas, Florida, Cuba, Jamaica, Virgin Islands, Grand Cayman; oddly enough, this species has not yet been reported from Hispaniola.



Coccoloba jimenezii Alain (A. & P. Liogier 21450).

Adams (Flowering Plants of Jamaica, p. 429. 1972) cites this species for Puerto Rico and the Virgin Islands.

AQUIFOLIACEAE

Ilex cassine L.

PUERTO RICO: Dorado Beach forest, R. O. Woodbury s.n. (UPR 1770); a new record for Puerto Rico. Southern United States, Bahamas, Cuba.

MALVACEAE

Bastardia bivalvis (Cav.) HBK.

St. CROIX: On roadside, Estate Solitude, A. H. Liogier 34213 (UPR). A new record for St. Croix. Greater Antilles, Mexico to Peru and Brazil.

PASSIFLORACEAE

Passiflora berteriana Balb. ex DC.

PUERTO RICO: in dry thickets, Maruca, Guánica, A. & P. Liogier, L. F. Martorell 33732 (UPR); a new record for Puerto Rico. Cuba, Hispaniola.

MYRTACEAE

THE GENUS CALYPTRANTHES IN PUERTO RICO AND ADJACENT ISLANDS.

In their "Botany of Porto Rico and the Virgin Islands", N. L. Britton and P. Wilson list 6 species of Calypttranthes; one of them, C. kiaerskovii Krug & Urban, is considered as an endemic to Tortola and will not be considered in this study, being outside of the area covered. Subsequently, several species have been added to the list, either as species new to science, or as new records for the area. Yet another species has to be added, bringing the total number to 11. The following key will help to identify the different taxa found in the area.

According to R. McVaugh (Taxon 17: 377. 1968), this genus probably consists of about 100 described species in the West Indies; it is well represented in South America, mainly in southern Brazil; it needs a revision, and the number of species known to occur in the West Indies will probably be less than actually listed in each one of the islands.

Key to the species of Calyptranthes in Puerto Rico and Adjacent Islands:

- a. Flowers sessile or subsessile.
 - b. Plants ferrugineo-tomentose in young parts and inflorescences; flowers solitary. C. krugii.
 - b. Plants glabrous; flowers 3-4. C. dumetorum.
- a. Flowers in paniculate, or 1-3-flowered, peduncled inflorescences, or glomerate.
 - c. Flowers 1-3, sessile on 2.5-3.5 cm long peduncles.

- d. Plants glabrous; branchlets 2-lined or slightly 2-winged, not articulate at base.
- e. Flowers solitary on peduncles to 3.5 cm long; leaves ovate or oblong-ovate, rounded to obtuse at apex, 1.7-2.6 cm long. C. peduncularis.
- e. Flowers 1-3, peduncles to 2.5 cm long; leaves rhomboid or oblong, 2-3.5 cm long, narrowed to cuspidate at apex. C. triflorum.
- c. Flowers in panicles, cymes or glomerules.
- f. Leaves 8-11 cm long, oblong-elliptic; flowers in glomerules, on peduncles to 9.5 cm long. C. luquillensis.
- f. Leaves to 7.5 cm long; flowers paniculate or cymose.
- g. Leaves acute or obtuse; inflorescences few-several-flowered.
- h. Leaves oblong-obovate; cymes trichotomous. C. thomasiana.
- h. Leaves elliptic or ovate-elliptic; panicles several-flowered, the flowers subglomerate, nearly sessile. C. portoricensis.
- g. Leaves acuminate; panicles few- to many-flowered.
- i. Leaves cuspidate-acuminate at apex; twigs with appressed brown hairs when young.
- j. Panicles usually as long as the leaves or longer, pubescent; fruits 4-5 mm in diameter. C. pallens.
- j. Panicles usually shorter than the leaves, glabrous or nearly so; fruits 6-7 mm in diameter. C. sintenisii.
- i. Leaves obtuse or at most bluntly acuminate at apex; twigs glabrous. C. zuzygium.

C. dumetorum Alain, Bull. Torrey Bot. Club 92: 298. 1965.

In serpentine barrens, Susua, Puerto Rico (Type: Alain Liogier 9870); Camuy river, R. O. Woodbury s.n., sterile (UPR 2290); endemic.

This rare species has been collected only twice. It is little known; the flowers and fruits are still unknown.

C. krugii Kiaersk., Bot. Tids. 17: 248. 1889.

In forests at middle and higher elevations, in the Luquillo and Guavate forests, and the Central mountain range, Puerto Rico; endemic.

A very variable species, the shape and size of the leaves varying from rounded to obtuse at apex, and from 2-5.5 cm long and 1.3-4.3 cm broad, being sessile or short-petioled; the main characteristic is the sessile flowers.

C. luquillensis Alain, Bull. Torrey Bot. Club 90: 189. 1963.

Rare at middle and higher elevations, in the Luquillo forest, Puerto Rico; endemic (Type: Holdridge 61, NY; C. E. Horne, s.n., NY; R. O. Woodbury 5575 (UPR))

This striking species is unique by its large oblong-elliptic leaves and the glomerate flowers on long peduncles.

C. pallens (Poir.) Griseb., in Abh. Gött. Akad. 7: 215. 1857.

Eugenia pallens Poir. in Lam., Encycl. Suppl. 3: 122. 1813.

Local, mainly in moist coastal forests, ascending to 800 meters, Puerto Rico; southern Florida, Bahamas, Greater Antilles, Virgin Islands, Cayman Islands, Guadeloupe; also in Mexico and Guatemala.

C. peduncularis Alain, Bull. Torrey Bot. Club 90: 189. 1963.

In woods, Maricao State Forest, Puerto Rico (Type: Alain Liogier 9220, NY); endemic.

A very rare and little known species, to be collected again.

C. portoricensis Britton, Bull. Torrey Bot. Club 51: 11. 1924.

Rare in forests, at Luquillo and Maricao forests, from 800 to 1,200 m altitude, Puerto Rico; endemic.

C. sintenisii Kiaersk., Bot. Tids. 17: 250. 1889.

In forests, at lower and middle elevations, at Bayamón and in the Luquillo Mountains, and in moist coastal forest at Dorado, Puerto Rico; Hispaniola.

C. thomasiana Berg., Linnaea 27: 26. 1855.

Locally common in mountains, Vieques and St. Thomas islands; Virgin Islands.

C. triflorum Alain, Bull. Torrey Bot. Club 90: 189. 1963.

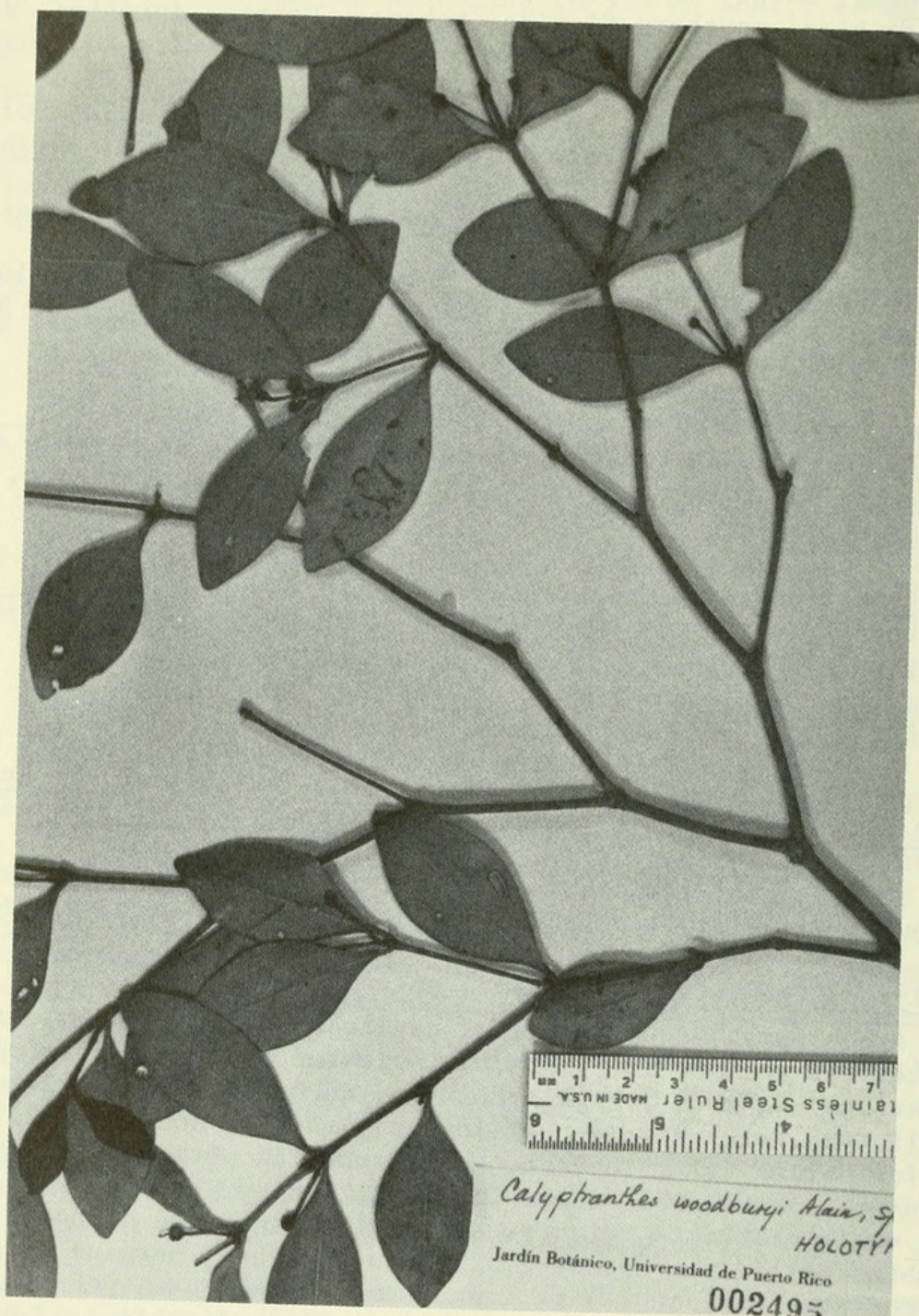
In forests on serpentine, Maricao State Forest, Puerto Rico (Type: Alain Liogier 9342, NY; id., May 24, 1964, R. O. Woodbury s.n., UPR 2316; id., June 1970, R. O. Woodbury s.n., UPR 2315; id., July 1970, R. O. Woodbury s.n., UPR 2314); endemic.

This species is notable by its 3-flowered inflorescences, the flowers sessile, its cuspidate flower-bud, its small rhomboid leaves.

Calyptranthes woodburyi Alain, sp. nov.

Arbor parva usque 7 m alta, caulis usque 10 cm diam, ramulis subteretibus vel paullo compressis, glabrescentes, pilis simplicibus sparsissimis muniti et glandulosi, ad basim articulatis; folia elliptica vel lanceolato-elliptica, 4-4.8 cm long, 1.7-2.1 cm lata, apice obtusa vel rotundata, basi versus in petiolum attenuata vel cuneata, nervo medio supra impresso, subtus prominente, lateralibus et venis obsoletis, glabra, supra olivacea dense glanduloso-punctata subtus pallidiora sparse glanduloso-punctata, margine integra paullo recurvata, petiolo 2-3 mm longo, supra applanato; pedunculi axillares, applanati, 2-3 mm longi, 1-2-flori, pedicelli 1-12 mm longi, glanduloso-punctati; bractae triangulares, 1 mm longae, glabrae; alabastra ovoideo-fusiformia, 5 mm longa, apiculata, apiculo 1.5 mm longo; hypanthium globosum, 2 mm longum et latum, calyptra cuspidata 1.5-2 mm longa.

PUERTO RICO: Quebrada Grande, El Verde, Luquillo Mts., Aug. 1, 1977, R. O. Woodbury s. n. (Holotypus: UPR 2495); El Verde, Luquillo Mts., July 1961, R. O. Woodbury 5096 (UPR); El Verde, Eona Dora River area, June 22, 1960, R. O. Woodbury 3740 (NY); Guavate, April 1961,



Calypttranthes woodburyi Alain (R.O. Woodbury s.n.)

R. O. Woodbury 4869 (UPR); id., Aug. 2, 1977, R. O. Woodbury s. n., (UPR 2496); Carite, Sept. 1971, R. O. Woodbury s. n. (UPR 8818); Maricao, Monte del Estado, June 1975 (R. O. Woodbury s. n. (UPR 8822)).

A species near to C. triflorum Alain, described from Puerto Rico; the main differences are: the sparsely pilose twigs, the larger and not cuspidate leaves, glandular-punctate above; in this species, the flowers are 1-2 on a short peduncle and the pedicel is well developed; the affinity lies in the cuspidate calyptra. Named in honor of R. O. Woodbury, the indefatigable collector of this species.

Some specimens are fruiting and the fruit description is as follows:

Fructiferi pedunculi usque 3.2 cm longi, glabri, glandulosi; fructi globosi, 6 mm diam., glandulosi, brunnei, glabri, apice hypanthi margine coronati.

C. zuzygium (L.) Sw., Nov. Gen. & Sp. Pl. 79. 1788.

Myrtus zuzygium L., Syst. Veg. ed. 10, 2: 1056. 1759.

Rare in moist forests on the north coast, Puerto Rico; Florida, Bahamas, Greater Antilles.

Myrciaria myrtifolia Alain, sp. nov.

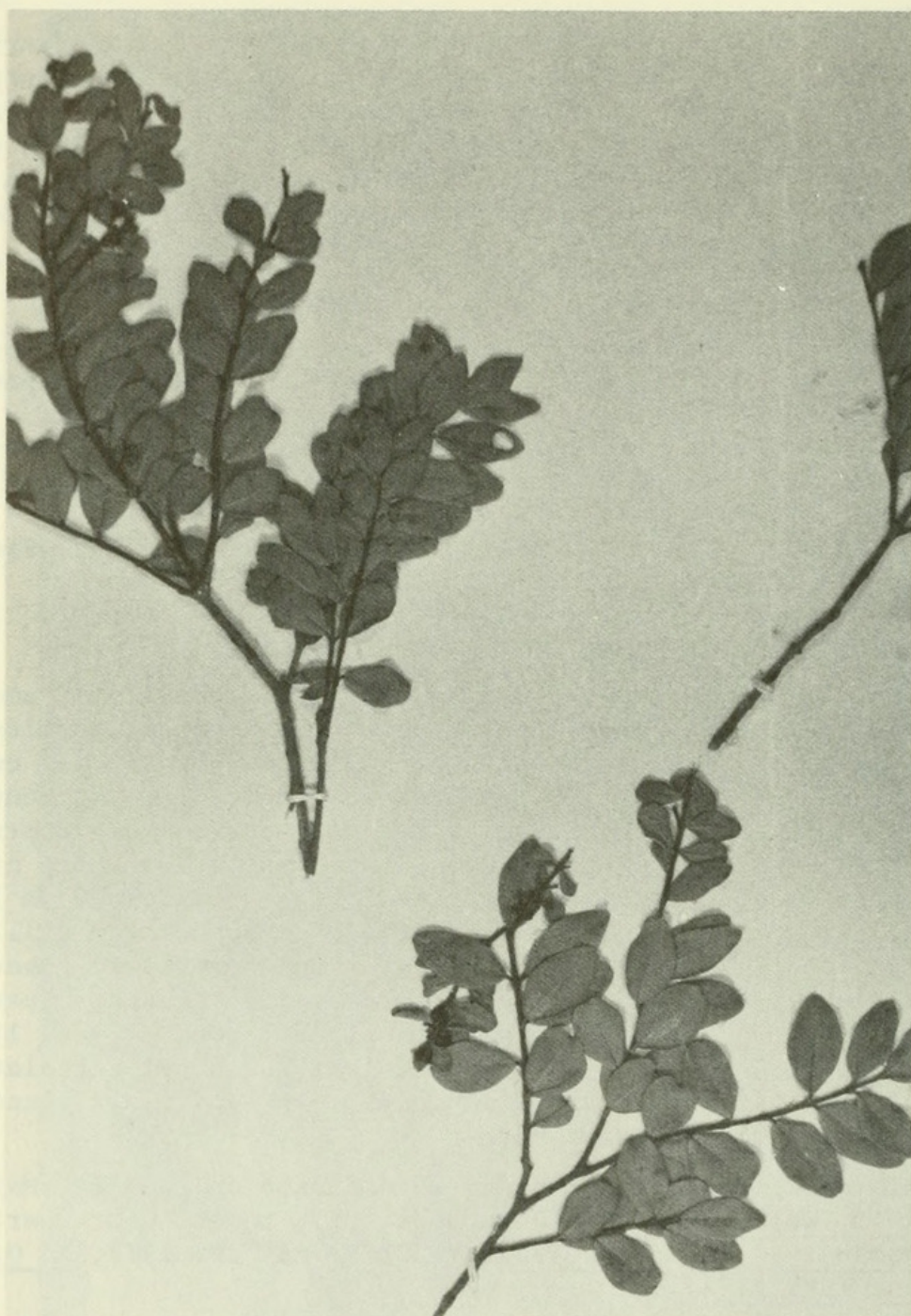
Frutex vel arbor parva, 5 m alta, caulis 10 cm diam.; ramuli teretes vel leviter applanata, pubescentes, rami grisei cortice fisso; folia elliptica vel oblongo-elliptica, 1-2 cm longa, 0.5-1 cm lata, apice obtusa vel rotundata vel emarginata, apice ipso mucronulata, mucrone brunneo, basi obtusa vel rotundata, nervo medio supra impresso, subtus prominulo, nervis lateralibus obsoletis, supra nitida subtus opaca sparse punctata, margine integra, petiolo 2 mm longo supra applanato puberulo; flores in foliorum superiorum axillis solitarii, pedicelli 1.5-2 mm longi, leviter compressi, puberuli; prophylla ovato-deltoida, 1 mm longa, margine ciliata; hypanthium 1-1.5 mm longum campanulatum, glaber, glandulosum, calycis limbus 1.5-2 mm longus, glaber, glandulosus, lobi rotundati ciliolati; petala oblonga apice rotundata 2 mm longa, extus pilosula glandulosa; stamina numerosa; caetera ignota.

PUERTO RICO: Mountain ridge North of Coamo on road 14, May 20, 1971, R. O. Woodbury 21501 (Holotypus, NY); top of Cerro Cariblanco, R. O. Woodbury s. n. (UPR 5123); VIEQUES: May 24, 1978, R. O. Woodbury s. n. (UPR 5124).

This species is notable for its small leaves, probably the smallest in the genus, the absence of lateral nerves or reticulation, the puberulous branches. I do not know of any similar plant in the West Indies.

Psidium calyptranthoides Alain, sp. nov.

Arbor parva glabra, rami hornotini plus minus applanati, brunneo-glandulosi, lenticellosi, vetustiores grisei cortice striato et fisso; folia 2-3 mm longe petiolata, petiolo supra canaliculato,



Myrciaria myrtifolia Alain (R. O. Woodbury 21501).

basi articulado ; lamina elliptica usque oblongo-elliptica, 4.5-7 cm longa, 2.5-4.2 cm lata, apice acuminata apice ipso rotundato, basi in petiolum attenuata, nervo medio supra ad basim leviter impresso, subtus praesertim ad basim prominente, lateralibus utroque latere 5-7 saepe obsoletis ad marginem anastomosantibus, in utroque facie glanduloso-punctata, margine integra leviter revoluta, glaberrima; flores axillares, pedunculi filiformes, in nodi oppositi, 2.5-2.8 cm longi, brunneo-glandulosi; prophylla subulata, 1 mm longa, fimbriata, decidua; alabastra pyriformia, basi subcylindrica, apice globosa, apiculata, 7 mm longa, 4.5 mm lata ad apicem, 1.5 mm lata ad basim, dense glandulosa; calyx in alabastro clausum, ad anthesim irregulariter adaperiens, intus pilosus; petala elliptica, pilosa, stamina numerosa. Fructus non visi.

PUERTO RICO: Monte del Estado Forest, Maricao, 2800 ft. altitude, July 8, 1970, R. O. Woodbury 20506 (Holotype: UPR; Isotype: NY); Dos Picachos, Luquillo Mts., May, 1960, R. O. Woodbury s. n. (UPR 2499).

In this large genus, it is still possible to find undescribed species. The present one resembles at first sight Calypptrogenia biflora Alain, from Hispaniola; the calyx opening irregularly instead of by a calyptra is so far the main generic difference. Rogers Mc Vaugh (Taxon 17: 409-410. 1968) questions the validity of Calypptrogenia. After much experience in the field, I am convinced this is a good genus. Much more material needs to be collected, both in flower or in fruit before this problem can be solved. Calypptrogenia so far in found only in Hispaniola.

PRIMULACEAE

Anagallis arvensis L.

PUERTO RICO: Cerro Avispa, Cercadillo, Cayey, A. & P. Liogier, L. F. Martorell 33862 (UPR); native of western Europe, now widespread as a weed. A new record for Puerto Rico.

CONVOLVULACEAE

Cuscuta campestris Yuncker

St. CROIX: in street, Christiansted, A. H. Liogier 34175 (UPR); cosmopolitan. A new record for St. Croix.

ASCLEPIADACEAE

Cynanchum grisebachianum (Schlecht.) Alain

St. JOHN: In thickets, near Coral Bay, A. H. Liogier 34241 (UPR); Puerto Rico, Lesser Antilles. A new record for St. John.

RUBIACEAE

Several authors have recently decided that Oldenlandia should be included into Hedyotis as a synonym. We have to establish the following new combinations for the Flora of Hispaniola:



Psidium calyptranthoides Alain (R. O Woodbury 20506).

Hedyotis nigrescens (Urban & Ekman) Alain, comb. nov.

Oldenlandia nigrescens Urban & Ekman, Ark. Bot. 24 (4): 36. 1931.

A narrow endemic in the mountains of the Dominican Republic, collected only once by Ekman (Type: Ekman 11712).

Hedyotis selleana (Urban) Alain, comb. nov.

Oldenlandia selleana Urban, Repert. Sp. Nov. 16: 145. 1919.

This species is endemic to Hispaniola, and has been collected many times, both in the Dominican Republic and in Haiti.

The genus Borreria Meyer is also considered as a synonym to Spermacoce L. The following species in the Flora of Hispaniola need to be transferred:

Spermacoce densiflora (DC.) Alain, comb. nov.

Borreria densiflora DC., Prodr. 4: 542. 1830.

Spermacoce spinosa L., Sp. Pl. ed. 2. 148. 1762, as name, not as to the plant, according to J. Steyermark.

Borreria spinosa (L.) Cham. & Schl., Linnaea 3: 340. 1828.

This species is found in Cuba, Jamaica, Hispaniola, the Lesser Antilles and continental tropical America. It is very rare in Hispaniola.

Spermacoce litoralis (Urban) Alain, comb. nov.

Borreria litoralis Urban, Repert. Sp. Nov. 20: 352. 1924.

This species, endemic to Hispaniola is found only on the northern coast both in Haiti and in the Dominican Republic.

Spermacoce rosea (Urban) Alain, comb. nov.

Borreria rosea Urban, Symb. Ant. 7: 414. 1912.

An endemic to the high mountains in the Dominican Republic. The type specimen is from Constanza (Tuerckheim 3377).

CUCURBITACEAE

Psiguria pedata (L.) Howard

St. CROIX: In forest, Estate Solitude, A. H. Liogier 34211 (UPR); Bahamas, Cuba, Hispaniola, Puerto Rico. A new record for St. Croix.

POTAMOGETONACEAE

Potamogeton illinoensis Morong

PUERTO RICO: in water, floating, Río Dorado, Toa Baja, A. H. Liogier 33773 (UPR); North America, Mexico, Central America, West Indies. A new record for Puerto Rico.

GRAMINEAE

Aristida swartziana Steud.

PUERTO RICO: In dry thickets, Maruca, Guánica, A. & P. Liogier, L. F. Martorell 33630 (det. S. Hatch); Jamaica, Hispaniola, Antigua,

Barbuda. A new record for Puerto Rico.

Brachiaria brizantha Stapf

PUERTO RICO: A weed, at Gurabo Station, A. & P. Liogier 33485 (UPR); this species has been introduced as an experimental fodder plant, and is rapidly becoming a weed; native of tropical Africa. "Signal grass".

Dichanthium annulatum (Forssk.) Stapf

St. CROIX: On roadside, Estate South Gate, A. H. Liogier 34185 (UPR); native of the Old World, introduced into the West Indies, a weed. New record for St. Croix.

Eragrostis curvula (Schrad.) Nees

PUERTO RICO: a weed in Santurce, A. Liogier 33717 (UPR); native of South Africa, introduced into the tropics and subtropics. A new record for Puerto Rico.

Rottboellia exaltata L.f.

St. CROIX: On roadside, Estate Canaan, A. Liogier 34228 (UPR); a native of southern Asia, introduced as a weed in the West Indies. A new record for St. Croix.

Rhynchelytrum repens (Willd.) Hitchc.

PUERTO RICO: In grassy places, Tortuguero, Vega Baja, A. H. & P. Liogier, L. F. Martorell 32992, 33473 (UPR); Las Mesas, Mayaguez, A. H. Liogier 30694 (UPR).

R. Fosberg and M.-H. Sachet (Smithsonian Contr. Bot. 47: 1-3. 1981) separate the two species: T. repens (Willd.) Hitchc. and T. rosea Nees; they are easily separated by the color of the spikelets, T. repens having pale glumes and T. rosea with pink glumes, among other differences. According to the two authors cited, T. repens is much rarer than T. rosea, and is more abundant in Africa.

CYPERACEAE

Bulbostylis capillaris (L.) Kunth ssp. antillana (Britt.) T. Koyama

St. CROIX: In sand, Sandy Point, A. H. Liogier 34220 (UPR); Puerto Rico, Lesser Antilles. A new record for St. Croix.

BROMELIACEAE

Tillandsia ariza-juliae L. B. Smith & Jiménez

PUERTO RICO: In forest, Maricao State Forest, A. H. Liogier 33783 (UPR) collected by Mr. Ramón Cantero; Hispaniola. A new record for Puerto Rico.

MUSACEAE

Heliconia subulata R. & P.

PUERTO RICO: In woods, Trujillo Alto, A. & P. Liogier 33489 (UPR) native of Guatemala through Central America, to Brazil and Bolivia. A new record for Puerto Rico.



Liogier, Alain H. 1983. "Novitates Antillanae. X." *Phytologia* 54(2), 101–114.

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