

# A COLLECTION OF PLANTS FROM THE VICINITY OF LA GUAIRA, VENEZUELA.

By J. R. JOHNSTON.

## INTRODUCTORY NOTES.

In 1900 Capt. Wirt Robinson, of the United States Army, and Dr. M. W. Lyon, jr., of the United States National Museum, spent six weeks in the vicinity of La Guaira collecting for the most part specimens of animals. Incidentally they were able to gather together about 60 plants, which were sent to the United States National Herbarium, and most of which have recently been turned over to me for identification.

The plants in the following list were all collected near La Guaira, Macuto, and San Julian. Macuto is about 5 kilometers to the east of La Guaira on the coast, and San Julian is about 12 kilometers to the east of La Guaira and nearly 1½ kilometers from the shore. For a description of the topography, temperature, and rainfall of this region one should refer to "An annotated list of mammals collected in the vicinity of La Guaira, Venezuela," by Robinson and Lyon, in the Proceedings of the National Museum.<sup>a</sup>

It is sufficient to say in this connection that the shore rises abruptly to an altitude of over 2,500 meters immediately above La Guaira, and that the exposed hills are barren or covered with a dry shrubbery, the low valleys with palms and other trees, and the high gorges with a great luxuriance of tropical vegetation. The very narrow littoral plain is clothed with a typical desert vegetation of cacti, crotons, lantanas, etc.

In addition to the list of Robinson and Lyon's plants it has seemed well worth while to include under each species notes of its further occurrence in Venezuela as determined from other collections. It should be noted that the plants of Fendler, of Birschel, and of Rusby and Squires here cited as occurring in Venezuela have not before been published upon, at least so far as I can ascertain. The notes made here are obtained from reference to the plants at the United States National Herbarium and at the Gray Herbarium of Harvard University.

The identification of the plants shows five species which are new to science. As far as can be ascertained, nine of the remaining species have never been recorded from Venezuela, and three have never before been collected there, these being *Phoradendron trinervium*, *Corchorus pilobolus*, and *Marsdenia maculata*. The remainder of the nine are in the collections that have not been reported upon.

### LIST OF SPECIES.

#### BROMELIACEAE.

**Pitcairnia** sp.

La Guaira, *Robinson & Lyon*, July 11.

**Tillandsia utriculata** L. Sp. Pl. 286. 1753.

Macuto, *Robinson & Lyon*, August 9; Cumaná, according to H.B.K. Nov. Gen. & Sp. 7: 293; Margarita, *Ernst*, 1876, and *Johnston*, 1903.

Further distribution, West Indies.

**Tillandsia** sp.

San Julian, *Robinson & Lyon*, July.

Allied to *T. juncea* Lec. and *T. tenuifolia* L.

#### MUSACEAE.

**Heliconia bihai** L. Mant. 211. 1767.

San Julian, *Robinson & Lyon*, July 20; Margarita, *Johnston*, 1903.

Distribution, general in tropical America.

#### PIPERACEAE.

**Piper** sp.

La Guaira, *Robinson & Lyon*, July 6.

Shrub 2 to 3 meters high.

#### LORANTHACEAE.

**Phoradendron trinervium** (Lam.) Nutt. in Journ. Acad. Phil. n. s. 1: 185. 1848.

San Julian, *Robinson & Lyon*, July 18.

West Indies, Venezuela according to Grisebach.

**Phoradendron** sp.

San Julian, *Robinson & Lyon*, July 18.

Allied to *P. tetra-stachyum* Griseb.

#### URTICACEAE.

**Urera alceaefolia** (Poir.) Gaud. in Freye. Voy. Bot. 497. 1826.

La Guaira, *Robinson & Lyon*, July 11.

Distribution, general in tropical America.

#### MIMOSACEAE.

**Acacia tamarindifolia** Willd. Sp. Pl. 4: 1092. 1805.

Small tree, dry hills, La Guaira, *Robinson & Lyon*, July 12; Margarita, *Miller & Johnston*, 1901, *Johnston*, 1903; Bordones, according to H.B.K. Nov. Gen. & Sp. 7: 310.

Further distribution, Martinique, Cumaná, and Caracas.

**Calliandra** sp.

San Julian, *Robinson & Lyon*, July 17.

## CAESALPINIACEAE.

**Cassia oxyphylla** Kunth, *Mim.* 129. *pl.* 39. 1819.

La Guaira, *Robinson & Lyon*, July 6; Mount Cocollar, according to H.B.K.

*Nov. Gen. & Sp.* 7: 311; Margarita, *Miller & Johnston*, 1901.

Further distribution, Colombia.

## FABACEAE.

**Bradburya virginiana** (L.) Kuntze, *Rev. Gen. Pl.* 1: 164. 1891.

La Guaira, *Robinson & Lyon*, July 11; Margarita, *Miller & Johnston*, 1901.

Further distribution, temperate and tropical American and Niger.

**Mucuna flagellipes** Vog.: Benth. in *Hooker*, *Niger Flora* 307. 1849.

Climbing vine along stream, San Julian, *Robinson & Lyon*, July 18; Colonia

Tovar, *Fendler*, no. 266, 1854-5.

Fendler's specimen is similar to the type. Robinson and Lyon's specimen, however, though approaching it closely, shows some variations. The bracts are entire instead of tridentate. Taubert<sup>a</sup> places *M. flagellipes* in the section of plants having oblique cross lamellae on the pods. In this specimen the lamellae are very obscure, having given place to flat or lamellate tubercles which lie in distinct oblique rows. In other respects the material agrees with typical specimens.

## MELIACEAE.

**Trichilia spondioides** Jacq. *Enum. Pl. Carib.* 20. 1762.

La Guaira, *Robinson & Lyon*, July 12. Shrub, 4 to 5 meters high.

Further distribution, Jamaica, Cuba.

## POLYGALACEAE.

**Securidaca ovata** Johnston, sp. nov.

Shrub, ascending?; leaves widely ovate, occasionally elliptical, glabrous above, finely puberulent on the main veins underneath, with entire margin, rounded or slightly emarginate base, and obtuse or minutely retuse apex; blade 4 to 7 cm. long, 3 to 5 cm. wide; petiole 3 to 5 mm. long, puberulent; stipules unknown but stipular scars present; inflorescence racemose, lateral, 5 to 10 cm. long and bearing 8 to 20 flowers; bracts subulate, pubescent, 2 mm. long; pedicel slender, pubescent, 5 to 14 mm. long; sepals 5, 2 equal, oval, slightly concave, 1 cm. long, the third a little larger and distinctly carinate, puberulent within, the 2 inner sepals corolline, broad, obovate, shortly unguiculate, 12 mm. long, glabrous; the 2 petals of the keel falcate, shortly unguiculate; lip elliptical, the end folded with a dentate margin; stamens 8, adherent to corolla tube, which is cleft at one side; ovary glabrous, flattened; style a little longer than stamens; fruit with wing 4.5 cm. long; dorsal part of carpel prolonged into a small hook curved toward the wing.

San Julian, *Robinson & Lyon*, July 18. Several other species are close to this one in the shape of the leaf. All are distinct, however, in the form of the fruit.

Type specimen, no. 531790, U. S. National Herbarium.

## EUPHORBIACEAE.

**Hura crepitans** L. *Sp. Pl.* 1008. 1753.

La Guaira, *Robinson & Lyon*, July 13; Margarita, *Ernst*, 1876.

Distribution, general in tropical America.

<sup>a</sup> Engl. & Prantl, *Pflanzenfam.* 3<sup>3</sup>: 366.

**Jatropha urens stimulosa** Müll. Arg. in DC. Prod. 15<sup>2</sup>: 1100. 1873-4.

La Guaira, *Robinson & Lyon*, July 12; Margarita, *Ernst*, 1876; *Miller & Johnston*, 1901; *Johnston*, 1903.

Distribution, wide in tropical America.

**Pedilanthus tithymaloides** Poit. Ann. Mus. Par. 19: 390, pl. 19. 1812.

La Guaira, *Robinson & Lyon*, July 6; Cumaná, according to H.B.K. Nov. Gen. & Sp. 7: 295; Margarita, *Ernst*, 1876, and *Miller & Johnston*, 1901.

Distribution, northern South America.

**Phyllanthus acuminatus** Vahl, Symb. Bot. 2: 95. 1791.

La Guaira, *Robinson & Lyon*, July 6, July 11; Caracas, *Birschel*.

Small tree.

Distribution, general in tropical America.

#### TILIACEAE.

**Corchorus pilobolus** Link. Enum. Hort. Berol. 2: 72. 1822.

La Guaira, *Robinson & Lyon*, July 6.

Distribution, tropical and subtropical America.

#### MALVACEAE.

**Abutilon crispum** Sweet, Hort. Brit. ed. 1. 53. 1827.

San Julian, *Robinson & Lyon*, July 19; Colonia Tovar, *Fendler*, 1854-5; Margarita, *Miller & Johnston*, 1901; *Johnston*, 1903.

Further distribution, tropical America and East India.

#### BEGONIACEAE.

**Begonia** sp.

La Guaira, *Robinson & Lyon*, July 6.

Related to *B. acuminata* Dryand.

#### MELASTOMACEAE.

**Clidemia** sp.

La Guaira, *Robinson & Lyon*, July 6.

Small tree.

#### APOCYNACEAE.

**Plumiera caracasana** Johnston, sp. nov.

Shrub 3 meters high; stem thick, at the base of the inflorescence 1.5 to 2 cm. in diameter, tuberculous from numerous raised leaf scars; leaves numerous, spatulate or oblanceolate, glabrous above, and either glabrous below or pilose at the main veins, with midrib and secondary veins prominent on the underside (20 to 30); blade with entire margin, a broadly acute or obtuse apex, and a cuneate base decurrent into the petiole, from 2.5 cm. wide and 7 cm. long to 6 cm. wide and 21 cm. long; petiole lacking or as much as 0.5 cm. in length; inflorescence cymose; common peduncle 7 to 12 cm. long, thick, glabrous; pedicels pilose, 1 cm. long; bracts minute, less than 1 mm. long, more than 2 mm. wide, upper edge curved, apiculate; calyx 5-lobed; 3 lobes broad, rounded, apiculate, the 2 others oval; lobes about 1 mm. long; corolla white, glabrous externally; tube slender, densely pilose within, 3 cm. long; corolla lobes obovate, rounded, equalling tube; follicle 12 cm. long and 2 wide; seeds with wing at apex, obliquely placed.

Between Caracas and La Guaira, altitude 500 meters, *Fendler*, no. 1026, August 16, 1855; La Guaira, *Robinson & Lyon*, July 13, 1900; Margarita, *Miller & Johnston*, 1901.

Type specimen, no. 531827, U. S. National Herbarium (*Robinson & Lyon*).

**Tabernaemontana grandiflora** Jacq. Enum. Pl. Carib. 14. 1762.

La Guaira, *Robinson & Lyon*, July 6; between La Guaira and Caracas, *Fendler*, no. 1027. August, 1855.

Further distribution, Colombia.

#### ASCLEPIADACEAE.

**Calotropis procera** (Willd.) Dryand. in Ait. Hort. Kew. ed. 2. 2: 78. 1811.

La Guaira, *Robinson & Lyon*, July 4; La Guaira, *Fendler*, 1855; Margarita, *Ernst*, 1876; *Miller & Johnston*, 1901.

Further distribution, East India and tropical America.

**Marsdenia maculata** Hook. Bot. Mag. 73: pl. 4299. 1847.

La Guaira, *Robinson & Lyon*, July 6; Margarita, *Miller & Johnston*, 1901; *Johnston*, 1903.

Further distribution, Mexico, Colombia, Trinidad, and Panama.

**Marsdenia robinsoni** Johnston, sp. nov.

Shrubby, climbing; stem slender, puberulent; leaves opposite, elliptical, attenuate at both ends, acuminate at apex, main veins puberulent, otherwise glabrous on both sides, membranaceous; margin entire; petiole puberulent, 1 cm. long; inflorescence axillary, umbellate; umbel sessile or subsessile with 2 or 3 minute bracts; calyx rotate, deeply 5-lobed, externally slightly puberulent, internally glabrous, with margin distinctly ciliate; lobes ovate with rounded apex; minute setaceous glands or appendages alternating with the sepals; corolla rotate, slightly whirled, 5-parted; lobes oval or elliptical-oval, the apex rounded, 4 mm. long, about twice the length of the calyx; small fleshy appendages between the lobes of the corolla; corona fleshy, 5-leaved, each leaf 2-lobed, equaling or shorter than the anthers, the lobes rounded, adnate to anther tube; corona and anther just equaling stigma; terminal appendage of the anther cymbiform, inflexed; apparently also 2 minute lateral appendages; style slightly convex; fruit unknown.

La Guaira, *Robinson & Lyon*, July 27. Distinct from most *Marsdeniae* by rotate corolla and sessile inflorescence.

Type specimen, no. 531794, U. S. National Herbarium.

#### CONVOLVULACEAE.

**Ipomoea biloba** Forsk. Fl. Aegypt. Arab. 44. 1775.

Macuto, *Robinson & Lyon*, July 16; Colonia Tovar, *Fendler*, 1854-55; Margarita, *Ernst*, 1876.

Widely distributed in tropical countries.

#### BORAGINACEAE.

**Cordia cylindristachya** Roem. & Schult. Syst. 4: 459. 1819.

La Guaira, *Robinson & Lyon*, July 17; Margarita, *Ernst*, 1876; *Miller & Johnston*, 1901; *Johnston*, 1903.

Distribution, tropical America.

#### VERBENACEAE.

**Lantana camara** L. Sp. Pl. 627. 1753.

Low shrub, dry ground, San Julian, *Robinson & Lyon*, July 17; Colonia Tovar, *Fendler*, no. 860 (part), January 31, February 23, 1854; Sacupano, *Rusby & Squire*, no. 41, and Paloma, *Rusby & Squire*, no. 312, April, 1896;

Margarita, *Miller & Johnston*, 1901; Caracas, *A. H. Moore*, March 16, 1899. Distribution, tropical America.

**Lantana** sp.

Dry hills, La Guaira, *Robinson & Lyon*, July 13.

**Lantana** sp.

San Julian, *Robinson & Lyon*, July 17.

**BIGNONIACEAE.****Distictis robinsoni** Johnston, sp. nov.

Shrubby, climbing; stem striate; leaves opposite, 2 or 3-foliate, the middle leaflet often giving place to a tendril; leaves broadly lanceolate with obtuse base and attenuate or acuminate apex, the midrib sometimes projecting very slightly; margin entire; leaves membranaceous, not veiny, glabrous on both sides, from 2 cm. wide and 4 cm. long to 3.25 cm. wide and 8.5 cm. long; petiole 1.5 to 5 cm. long, often minutely pubescent; petiolule 0.5 to 3 cm. long; disk-like glands often present at apex of petiole and apex of the peduncle; a pair of obovate stipule-like leaves at the base of the petiole, 3 mm. long and 1.5 mm. wide; inflorescence axillary, 2-flowered; peduncle 2 to 3 cm. long; pedicel 0.5 cm. long; flower glabrous; calyx campanulate, truncate, 6 to 7 mm. long; corolla slender, cylindrical for a length of 1 to 1.5 cm., then expanding into a bell-shaped form, oblique or bending slightly to one side; corolla tube altogether 4 to 5 cm. long, 5-lobed, the lobes subequal; stamens 4, perfect, 1 staminodium equaling the stamens; anthers diverging, glabrous; disk very wide; fruit unknown.

La Guaira, *Robinson & Lyon*, July 15, 1900.

Type specimen, no. 531779, U. S. National Herbarium.

**Tecoma chrysantha** (Jacq.) DC. *Prod.* 9: 221. 1845.

Small tree in dry hills, La Guaira, *Robinson & Lyon*, July 15, 1900; near Caracas, according to Jacquin, *Hort. Schoenbr.* 2: 45.

Further distribution, Colombia (*H. H. Smith*, no. 1140, 1898-1901).

**ACANTHACEAE.****Stenandrium lyoni** Johnston, sp. nov.

Acaulescent; leaves subrosulate, petiolate, oval or elliptical-oval, scabrous on both sides and scatteringly pilose, lighter green on under side, with entire ciliate margin, rounded apex, and truncate base, 2.5 cm. wide and 4 cm. long; mid-vein and about 4 pairs of lateral veins prominent on under side; petiole 0.5 to 1 cm. long; scape 2 to 10 cm. high; bracts 1-flowered, strigose-pubescent, narrowly lanceolate or linear-lanceolate, 9 mm. long; bracteoles 2, narrowly lanceolate, a little more than one-half the length of the calyx; calyx deeply 5-cleft, lobes linear-lanceolate with acuminate apex, 4 mm. long; corolla 5-lobed; lobes subequal, oval-elliptical; stamens 4, included; anthers 1-celled, the cells pubescent at apex; ovary ellipsoidal, glabrous; stigma fimbriate.

San Julian, *Robinson & Lyon*, July 18, 1900.

Type specimen, no. 531791, U. S. National Herbarium.

**RUBIACEAE.****Hamelia patens** Jacq. *Enum. Pl. Carib.* 16. 1762.

La Guaira, *Robinson & Lyon*, July 3; Colonia Tovar, *Fendler*, no. 591, 1854-55.

A shrub, half-climbing.

Robinson and Lyon's specimen is nearly glabrous throughout except on young parts. Fendler's specimen is pubescent throughout with the exception of the upper surface of the leaves.

Distribution, tropical America.

**Pogonopus exsertus** Oerst. Act. Soc. Hist.-nat. Havn. 45. 1852, according to A. S. Oersted, *L'Amérique Centrale* 1863: 17. pl. 13.

La Guaira, *Robinson & Lyon*, July 11, 1900; Colonia Tovar, *Fendler*, No. 584, 1854-55.

Shrub.

Further distribution, Costa Rica.

#### CARDUACEAE.

**Eupatorium ballotaefolium** H.B.K. Nov. Gen. & Sp. 4: 121. 1820.

Dry hills, La Guaira, *Robinson & Lyon*, July 12; Colonia Tovar, *Fendler*, no. 653, 1854-55; Margarita, *Miller & Johnston*, 1901; *Johnston*, 1903.

Shrub 1 to 1.5 meters.

Further distribution, Colombia, Brazil, and Santo Domingo.

**Eupatorium macrophyllum** L. Sp. Pl. ed. 2. 1175. 1763.

La Guaira, *Robinson & Lyon*, July 6; Colonia Tovar, *Fendler*, no. 644, 1854-55. Distribution, general in tropical America.

**Stemmodontia caracasana** (DC.)

*Wedelia caracasana* DC. Prod. 5: 541. 1836.

La Guaira, *Robinson & Lyon*, July 6; Caracas, *Fargas*, no. 97, 1829; *Birschel*; *A. H. Moore*, March 16, 1899; Colonia Tovar, *Fendler*, nos. 682, 683, 1854-55, and no. 1961, January 25, 1857; Margarita, *Johnston*, 1903.

Further distribution, Trinidad, Panama, and Venezuela.