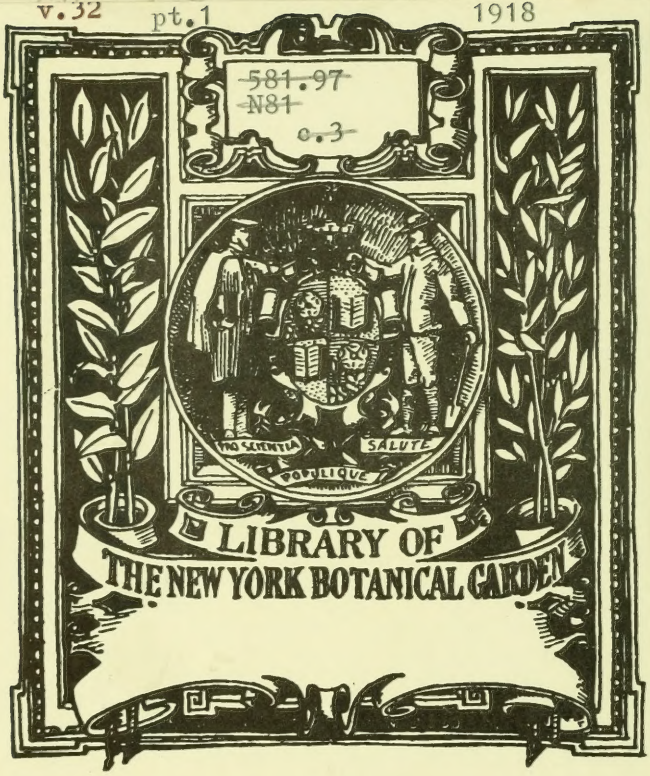
Herb.
XN
.072

HERB
XN .072
v.32 pt.1 1918
~~581.97~~
~~N81~~
~~o.3~~



VOLUME 32 PART 1

NORTH AMERICAN FLORA

RUBIALES

RUBIACEAE (pars)

PAUL CARPENTER STANDLEY

PUBLISHED BY

THE NEW YORK BOTANICAL GARDEN

DECEMBER 28, 1918

XN
.072
V.32
pt.1

Order **RUBIALES***

By Paul Carpenter Standley

Herbs, shrubs, or trees, sometimes scandent, the branches occasionally spinescent. Leaves opposite or verticillate, very rarely alternate, stipulate or estipulate, the blades simple and entire, dentate, or lobate, or sometimes imparipinnate. Inflorescence various, most commonly cymose. Flowers perfect or rarely unisexual, regular or irregular. Hypanthium adnate to the ovary. Calyx usually dentate or lobate, the lobes equal or unequal, 3–10. Corolla gamopetalous, often large and showy, the limb regular, irregular, or bilabiate, 3–10-lobate, the lobes valvate, imbricate, or contorted. Stamens usually as many as the corolla-lobes, equal or unequal, inserted on the corolla-tube; filaments short or elongate or sometimes wanting; anthers various, usually dehiscent by anterior or lateral slits, dorsifixed or basifixed. Disk usually present upon the ovary, various in form. Ovary inferior, 1–10-celled; style short or elongate, simple or 2–10-fid, the stigma various; ovules solitary, geminate, or numerous in each cell, variously arranged. Fruit usually capsular, baccate, or drupaceous, 1–10-celled. Seeds very variable in form and size; testa membranaceous, coriaceous, or spongious, smooth or roughened, sometimes produced into a wing or appendage; endosperm fleshy or corneous, very rarely wanting; embryo small or large, straight or curved; radicle terete or clavellate, superior or inferior.

Stamens usually as many as the corolla-lobes; leaves not ternately dissected.		
Leaves stipulate, the stipules adnate to the stem between the leaves, sometimes developed into leaf-like organs.	Fam. 1.	Rubiaceae.
Leaves estipulate, or, if stipulate, the stipules adnate to the petioles.	Fam. 2.	Caprifoliaceae.
Stamens twice as many as the corolla-lobes; low herbs with ternately dissected leaves.	Fam. 3.	Adoxaceae.

* Published by permission of the Secretary of the Smithsonian Institution.

Family 1. RUBIACEAE*

By Paul Carpenter Standley

Herbs, shrubs, or trees, sometimes scandent, the branchlets often spinescent. Leaves opposite or verticillate, very rarely alternate, stipulate, the blades simple, entire or rarely lobate or dentate. Stipules adnate to the stem between the leaves, persistent or deciduous, often confluent into a sheath, entire, dentate, or setiferous, rarely foliaceous, in one tribe (*Galieae*) resembling the leaves. Inflorescence various, usually cymose, occasionally capitate, the hypanthia sometimes adnate and forming a syncarp. Flowers perfect or rarely unisexual, usually regular and symmetric, frequently dimorphous. Hypanthium adnate to the ovary. Calyx cupular or tubular or nearly obsolete, entire, dentate, or lobate, persistent or deciduous, the lobes often unequal, one or more sometimes foliaceous. Corolla gamopetalous and funnelform, salverform, campanulate, rotate, or rarely urceolate or tubular, glabrous or pubescent within, the limb usually symmetric, the lobes valvate, imbricate, or contorted. Stamens usually as many as the corolla-lobes and alternate with them, inserted in the tube or throat of the corolla, rarely subbasilar and nearly free; filaments short, elongate, or wanting; anthers usually oblong-linear, 2-celled, dehiscent by anterior or lateral slits or rarely by pores, dorsifixed or basifixed. Disk annular, pulvinar, hemispheric, or conic, rarely lobate or reduced to glands. Ovary 1–10-celled; style short or elongate, simple or 2–10-fid, the branches filiform, linear, or spatulate, stigmatose throughout or at the apex, or the stigma terminal, and capitate, oblong, or fusiform; placentae affixed to the septum or to the interior angle of the cell, or basilar, or pendulous from the apex of the cell, simple, bifid, or bilamellate; ovules solitary, geminate, or numerous, superficial or immersed in the placentae, erect, horizontal, ascending, or pendulous, anatropous or amphitropous, the funicle short or wanting. Fruit capsular, baccate, or drupaceous, or of dehiscent or indehiscent cocci, 2–10-celled, or rarely 1-celled. Seeds variable in form and size, naked or immersed in the pulp or placentae; testa usually membranaceous or coriaceous, smooth or roughened, often winged or appendaged; endosperm fleshy or corneous, very rarely wanting; embryo small or large, straight or curved, axial, dorsal, or apical; cotyledons plane or semiterete; radicle terete or clavellate, superior or inferior.

Ovules more than one in each cell.
  Fruit dry.
    Flowers not arranged in compact globose heads.
      Seeds exalate, or, if winged, horizontal.
        Corolla-lobes valvate.
          Seeds horizontal, usually very numerous; stipules entire or bipartite; large shrubs or trees with usually large leaves. I. Condamineeae.

* Published by permission of the Secretary of the Smithsonian Institution.

Seeds imbricate, vertical, usually few; stipules often setose-laciniate; herbs or small shrubs with small leaves. II. OLDENLANDIEAE.
Corolla-lobes imbricate or contorted. III. RONDELETIEAE.
Seeds winged or appendaged, vertically imbricate. IV. CINCHONEAE.
Flowers arranged in compact globose heads; shrubs or trees. V. NAUCLEEAE.
Fruit fleshy.
Corolla-lobes valvate. VI. MUSSAENDEAE.
Corolla-lobes imbricate or contorted. VII. GARDENIEAE.
Ovules solitary.
Seed pendulous, the radicle superior; shrubs or trees.
Flowers in compact globose heads. V. NAUCLEEAE.
Flowers never in compact globose heads.
Stamens inserted in the throat of the corolla. VIII. GUETTARDEAE.
Stamens inserted at the base of the corolla-tube. IX. CHIOCOCCEAE.
Seed ascending, the radicle inferior; plants often herbaceous.
Corolla-lobes contorted; shrubs or trees. X. IXOREAE.
Corolla-lobes valvate.
Ovules basilar, attached at the base of the cell; mostly shrubs or trees.
Ovary 2 celled, or the cells rarely more numerous, the septum thick.
Stamens usually inserted in the throat of the corolla; flowers perfect.
Stigma-lobes short; fruit indehiscent, usually fleshy; plants usually erect. XI. PSYCHOTRIEAE.
Stigma-lobes elongate; fruit dehiscent, dry; plants scandent. XII. PAEDERIEAE.
Stamens usually inserted at the base of the corolla-tube; flowers often dioecious. XIII. ANTHOSPERMEAE.
Ovary 1-celled, or 2-celled but with a very thin septum, the fruit 1-seeded. XIV. COUSSAREEAE.
Ovules lateral, attached to the septum.
Stipules neither foliaceous nor setiferous; trees or large shrubs; flowers confluent by the hypanthia into a dense head. XV. MORINDEAE.
Stipules either foliaceous or setiferous; herbs or low shrubs; flowers never confluent into a true head.
Stipules setiferous. XVI. SPERMACOCEAE.
Stipules foliaceous, usually similar to the leaves. XVII. GALIEAE.

I. **CONDAMINEEAE.** Shrubs or trees. Stipules simple or bipartite, entire. Flowers regular, 4- or 5-parted; corolla-lobes valvate. Ovary 2-celled. Fruit capsular, the seeds numerous in each cell, horizontal, usually exalate, very rarely winged; embryo minute.

Calyx-lobes all similar.
Corolla-tube terete; corolla-lobes simply valvate.
Calyx deciduous; anthers dehiscent by longitudinal slits; inflorescence terminal. 1. CONDAMINEA.
Calyx persistent.
Anthers dehiscent by longitudinal slits, dorsifixed.
Inflorescence axillary; stipules deciduous. 2. CHIMARRHIS.
Inflorescence terminal; stipules persistent. 3. PICARDAEA.
Anthers dehiscent by terminal pores, basifixed; inflorescence terminal. 4. RUSTIA.
Corolla-tube usually angulate; corolla-lobes reduplicate-valvate.
Capsule tardily loculicidal at the apex; leaf-blades not pungent. 5. PORTLANDIA.
Capsule septicidal; leaf-blades pungent. 6. ISIDOREA.
Calyx-lobes dissimilar, one or more of them expanded into a large bract-like limb.
Seeds not winged; corolla-lobes glabrous within; stamens inserted in the middle of the corolla-tube. 7. POGONOPUS.
Seeds winged; corolla-lobes pubescent within; stamens inserted at the base of the corolla-tube. 8. PINCKNEYA.

1. CONDAMINEA DC. Prodr. 4: 402. 1830.

Shrubs or small trees. Leaves sessile or petiolate, the blades large, coriaceous or subcoriaceous. Stipules large, bipartite, chartaceous, nervose. Flowers in terminal long-pedunculate corymbose cymes, ebracteolate, pedicellate; hypanthium turbinate-campanulate; calyx 3–5-lobate or dentate, deciduous; corolla fleshy-coriaceous, funnelform-campanulate, the tube cylindric, villous in the throat, the limb 5-lobate, the lobes oblong, valvate, recurved, glabrous. Stamens 5, inserted on the corolla-tube above the middle; filaments stout, linear, glabrous; anthers dorsifixed, linear-oblong, sagittate at the base, exserted, opening

by longitudinal anterior slits. Disk depressed, explanate. Ovary 2-celled; style stout, filiform, glabrous, exserted, the 2 branches oblong, recurved, obtuse, papillose on the inner side; ovules numerous, crowded on the placentae. Capsule turbinate, thick-coriaceous, areolate-truncate at the apex, 2-celled, loculicidally bivalvate from the apex, the valves recurved. Seeds small, horizontal, obliquely subcuneate, the testa reticulate, the endosperm fleshy; embryo clavate, the cotyledons plano-convex, the radicle short, obtuse.

Type species, *Macrocnemum corymbosum* R. & P.

1. **Condaminea corymbosa** (R. & P.) DC. Prodr. 4: 402. 1830.

Macrocnemum corymbosum R. & P. Fl. Per. 2: 48. 1799.

Shrub or small tree, 2 meters high or more, with brown or yellowish-brown bark; branches stout, subterete, glabrous; stipules usually 4, sometimes connate into 2 or 3, 2–4.5 cm. long, oblong, acuminate or attenuate, puberulent at the base, glabrous above, glandular within at the base; petioles 1 cm. long or shorter, often wanting, very stout; leaf-blades obovate to oblong, 20–55 cm. long or more, 10–25 cm. wide, abruptly short-acuminate at the apex, gradually narrowed to the base or often contracted above the auriculate-cordate base, subcoriaceous, bright-green, glabrous, the costa stout and prominent beneath, the lateral veins 20–30 pairs, prominent, divergent, the veinlets also prominent; peduncles stout, 15–30 cm. long, glabrous or puberulent; bracts minute; pedicels short, stout; calyx campanulate, obtusely and irregularly 5-dentate, about 8 mm. long, glabrous, green; corolla about 2.5 cm. long, purplish outside, green within; stamens 10–12 mm. long, the anthers 5 mm. long; capsule about 1.7 cm. long, bisulcate, glabrous, attenuate at the base, the valves 5-nerved; seeds about 4 mm. long, yellowish.

TYPE LOCALITY: Peru.
DISTRIBUTION: Panama to Peru.
ILLUSTRATIONS: R. & P. Fl. Per. *pl. 189*; Mart. Fl. Bras. 6[6]: *pl. 124;* E. & P. Nat. Pfl. 4[4]: *f. 6, H.*

2. **CHIMARRHIS** Jacq. Sel. Stirp. Am. 61. 1763.

Trees, glabrous or pubescent. Leaves opposite, short-petiolate, the blades usually large. Stipules interpetiolar, convolute, caducous. Flowers small, arranged in axillary many-flowered long-pedunculate corymbose cymes, pedicellate, bracteate and bracteolate; hypanthium campanulate, the 5 lobes of the calyx very short, persistent; corolla short-funnelform, the tube very short, villous in the throat, the limb 5-lobate, the lobes recurved, valvate. Stamens 5, inserted between the corolla-lobes; filaments filiform-subulate, exserted, pubescent at the base; anthers oblong, obtuse, dorsifixed, dehiscent by lateral slits. Disk orbicular. Ovary 2-celled; style short, thickened and sulcate above, shortly bifid, the lobes obtuse; ovules numerous, crowded on thick placentae peltately attached to the septum. Capsule small, bisulcate, septicidally bivalvate from the apex, the valves finally bipartite, the exocarp separating from the endocarp. Seeds numerous, very small, horizontal, crowded, angulate-globose or compressed, sometimes marginate, the testa reticulate; endosperm fleshy; embryo minute, bifid.

Type species, *Chimarrhis cymosa* Jacq.

Peduncles equaling or longer than the cymes; corolla-lobes obtuse. 1. *C. cymosa.*
Peduncles much shorter than the cymes; corolla-lobes acute. 2. *C. ferruginea.*

1. **Chimarrhis cymosa** Jacq. Sel. Stirp. Am. 61. 1763.

Macrocnemum longifolium A. Rich. Mém. Soc. Hist. Nat. Paris 5: 279. 1834.
Chimarrhis cymosa genuina Urban, Symb. Ant. 1: 410. 1899.
Chimarrhis cymosa jamaicensis Urban, Symb. Ant. 1: 411. 1899.
Chimarrhis cymosa microcarpa Urban, Symb. Ant. 1: 411. 1899.

Tree, sometimes 25 meters high; bark of the smaller branches brownish-gray; branchlets glabrous; stipules triangular-lanceolate, 2–4 cm. long, long-acuminate or long-attenuate, glabrous; petioles 1–3 cm. long, stout, semiterete, glabrous; leaf-blades obovate or oval-obovate, 5–30 cm. long, 2–15 cm. wide, obtuse or acutish at the apex, sometimes abruptly acute, acute to attenuate at the base and often decurrent, thin, glabrous, or sometimes short-pilose beneath, paler beneath, the costa stout and prominent, the lateral veins slender, 7–16 on each side,

arcuate; peduncles stout or slender, 7–15 cm. long, compressed, glabrous or puberulent, the cymes much branched, 6–18 cm. broad, the branches stout, compressed, ferrugino-puberulent; bracts minute or rarely foliaceous; pedicels 1–2 mm. long, the flowers often sessile; hypanthium puberulent; calyx minutely denticulate; corolla white, glabrous outside, 4–6 mm. long, the tube one fifth to one third the total length, the throat densely white-villous, the lobes oblong, obtuse; filaments equaling or exceeding the corolla-lobes; anthers 1–2 mm. long; capsule 2–5 mm. long, 2–3.5 mm. thick, often produced above the hypanthium; seeds orbicular or irregularly angulate, 0.4–0.6 mm. long, the testa reticulate, sometimes produced at the angles.

TYPE LOCALITY: Martinique.
DISTRIBUTION: Cuba, Jamaica, and the Lesser Antilles.
ILLUSTRATION: E. & P. Nat. Pfl. 4[4]: *f. 6, A-E.*

2. **Chimarrhis ferruginea** Standley.

Rustia ferruginea Standley, Contr. U. S. Nat. Herb. **18**: 142. 1916.

Small tree; young branches stout, ferrugino-puberulent; petioles stout,1–3 cm. long, sulcate above, rounded beneath; leaf-blades obovate or oval-obovate, 15–30 cm. long, 7–12 cm. wide, rather abruptly acute or acuminate at the apex, acuminate or attenuate at the base, subcoriaceous, glabrous on the upper surface, densely ferrugino-puberulent beneath, the costa prominent beneath, the lateral veins slender, 13–16 on each side, subarcuate; peduncles very stout, about 2.5 cm. long, compressed, densely puberulent, the cymes rather few-flowered, 8–10 cm. long; bracts minute; flowers sessile or nearly so; hypanthium puberulent; calyx obscurely denticulate; corolla white, glabrous outside, the tube 2–4 mm. long, the lobes about as long as the tube, lance-triangular, acute, thick, reflexed, the throat very densely villous with long coarse white hairs; stamens shorter than the hairs of the throat, the anthers about 1 mm. long.

TYPE LOCALITY: Along the Río Fató, Province of Colón, Panama, in forests or thickets, at an altitude of 10 to 100 meters.
DISTRIBUTION: Known only from the type locality.

3. **PICARDAEA** Urban, Symb. Ant. **3**: 376. 1903.

Shrubs or trees, with terete branches. Leaves petiolate, the blades chartaceous, very minutely pellucid-punctate, entire. Stipules interpetiolar, short, scale-like or subannular, coriaceous, persistent. Inflorescence terminal, racemose or corymbose, few-flowered; hypanthium turbinate, subcompressed, the calyx very short, entire; corolla coriaceous, the tube subfunnelform, villous within, the 5 lobes valvate, fleshy, short-villous within along the margins, suberect. Stamens 5, inserted at the middle of the corolla-tube; filaments stout, linear, subvillosulous at the base; anthers dorsifixed, oblong, exserted, dehiscent by longitudinal anterior slits. Disk fleshy, concave, entire. Ovary 2–celled; style filiform, stout, the branches 2, oblong-linear, obtuse, papillose within; placentae thick, affixed to the septum; ovules very numerous. Capsule oval or obovoid, 10-costate, the exocarp coriaceous, the endocarp woody, loculicidally dehiscent from the base, the 2 carpels separating at the base and finally at the apex. Seeds very numerous, crowded, mostly subquadrate or triangular, the testa reticulate; endosperm fleshy; embryo cylindric, the cotyledons ovate, shorter than the radicle.

Type species, *Picardaea haitiensis* Urban.

Leaf-blades 5–8 cm. long, 3–4 cm. wide; corolla reddish; capsule 12–14 mm. long; stipules scale-like, triangular, very shortly acuminate. 1. *P. haitiensis.*
Leaf blades 10–15 cm. long, 4-6 cm. wide; corolla ochroleucous; capsule 10 mm. long or less; stipules annular, cuspidate. 2. *P. cubensis.*

1. **Picardaea haitiensis** Urban, Symb. Ant. **3**: 377. 1903.

Tree or shrub, glabrous; branches grayish-brown; stipules scale-like, triangular, very shortly acuminate, 1.5–2 mm. long; petioles 4–8 mm. long, slender; leaf-blades oval-elliptic, 6–8 cm. long, 3–4 cm. wide, widest at or slightly above the middle, gradually narrowed to the base, obtuse at the apex, lustrous, the costa prominent, the lateral veins 6–8 on each side, subarcuate; peduncles about 2 cm. long, the inflorescences 2–4 cm. long; lower bracts some-

times leaf-like, the others scale-like, lanceolate, 1–3 mm. long; pedicels 1–2.3 cm. long; hypanthium 6–7 mm. long, 4 mm. thick; calyx 1–1.5 mm. long; corolla 2.5–3.5 cm. long, reddish, the tube 5 mm. thick, the lobes ovate, acute, scaberulous outside; filaments 11 mm. long; anthers 6 mm. long; style 18 mm. long; capsule 12–14 mm. long, 7–8 mm. broad, 6 mm. thick; seeds 0.5–0.7 mm. long, yellowish-brown.

TYPE LOCALITY: Near Pétionville, Haïti, at an altitude of 500 to 600 meters.
DISTRIBUTION: Hispaniola.

2. **Picardaea cubensis** (Griseb.) Britton; Urban, Symb. Ant. 7: 391. 1912.

Macrocnemum cubense Griseb. Cat. Pl. Cub. 124. 1866.

Shrub; branches brownish-gray, glabrous; stipules annular, connate, cuspidate, 1–1.5 mm. long, glabrous, the cusp about 1 mm. long; petioles 0.5–2 cm. long, slender, glabrous; leaf-blades obovate or obovate-elliptic, broadest slightly above the middle, 6–15 cm. long, 2–6 cm. wide, cuneate at the base, acute or acutish at the apex, lustrous above and glabrous, dull beneath and glabrous except for tufts of yellowish crispate hairs in the axils of the veins, the costa prominent, the lateral veins 7–10 on each side, nearly straight; peduncles stout, about 4 cm. long, glabrous, the inflorescence about 5 cm. long, the bracts scale-like, deltoid, about 1 mm. long; pedicels 1–2 cm. long; hypanthium 6–8 mm. long, about 4 mm. thick; calyx about 1.5 mm. long; corolla 3.5–4 cm. long, ochroleucous, the lobes ovate, subobtuse; capsule about 1 cm. long.

TYPE LOCALITY: Eastern Cuba.
DISTRIBUTION: Eastern Cuba.

4. **RUSTIA** Klotzsch, in Hayne, Arzn. Gew. 14: *pl. 14.* 1846.

Henlea Karst. Fl. Columb. 1: 38. 1858.

Glabrous shrubs or trees; branchlets terete or obtusely quadrangular. Leaves opposite, petiolate, the blades large. Stipules intrapetiolar, large, caducous. Flowers of medium size, showy, arranged in terminal panicles; pedicels bracteolate; hypanthium campanulate or turbinate; calyx short, 5-dentate or 5-lobate, persistent; corolla funnelform or campanulate, the throat glabrous or pilose, the 5 lobes valvate, short, spreading or recurved. Stamens 5, inserted on the corolla-tube below the throat; filaments subulate or triangular; anthers basifixed, included or exserted, dehiscent by a terminal pore or slit. Disk terete or sulcate. Ovary 2-celled; style filiform, exserted, clavate or bilobate at the apex; ovules very numerous; placentae bipartite, attached vertically to the septum. Capsule thick-coriaceous, oblong-ovoid or clavate, hemispheric at the apex, loculicidally bivalvate. Seeds numerous, minute, horizontal, crowded; testa membranaceous, sometimes marginate; endosperm fleshy; embryo clavate, bifid.

Type species, *Rustia Pohliana* Klotzsch.

1. **Rustia occidentalis** (Benth.) Hemsl. Biol. Centr. Am. Bot. 2: 14. 1881.

Exostema occidentale Benth. Bot. Voy. Sulph. 104. 1844.

Shrub or small tree, glabrous throughout; branches brownish-gray; stipules lance-triangular, 5–8 mm. long, attenuate; petioles slender, 1–2.5 cm. long, semiterete; leaf-blades oblanceolate, 10–19 cm. long, 2.5–5 cm. wide, rather abruptly acuminate to attenuate at the apex, attenuate to the base, subcoriaceous, concolorous or nearly so, somewhat lustrous on the upper surface, the costa slender, prominent beneath, the lateral veins prominent, 9–15 on each side, arcuate, laxly anastomosing near the margin, the veinlets laxly reticulate; peduncles stout, 1–3 cm. long; panicles few-flowered, 6–9 cm. long, narrowly pyramidal, the branches compressed; bracts small, triangular; bractlets minute; pedicels stout, 1–13 mm. long, or sometimes wanting; hypanthium turbinate, 4–5 mm. long; calyx about 1 mm. long, obscurely dentate; corolla salverform, the tube 6–7 mm. long, 3 mm. thick at the base, constricted above,

the lobes purple, 5–6 mm. long, ovate-oblong, obtuse, very thick, the throat puberulent; filaments very stout, the anthers oblong, 5 mm. long, equaling the corolla-lobes, opening by a small pore; capsule rounded-obovoid, 10 mm. long, 5–8 mm. wide, shallowly bisulcate, dark-brown; seeds brown, 1 mm. long or smaller.

TYPE LOCALITY: Gorgona Island, Colombia.
DISTRIBUTION: Costa Rica to Colombia; reported from Guatemala.

5. PORTLANDIA P. Br. (Hist. Jam. 164; hyponym. 1756); L. Syst. ed. 10. 928. 1759.

Gonianthes A. Rich. in Sagra, Hist. Cuba 11: 10. 1850. Not *Gonianthes* Blume, 1823.

Shrubs or trees, glabrous or pubescent, often resinous. Leaves opposite or verticillate, petiolate or sessile, the blades large, usually coriaceous. Stipules intrapetiolar, connate with the petioles to form a sheath, usually persistent. Flowers large, axillary or terminal, the pedicels often bracteate; hypanthium usually turbinate; calyx-lobes 4 or 5, short or elongate, persistent; corolla large, subcampanulate to funnelform or tubular-funnelform, the tube 5-angulate, glabrous in the throat, the limb 4- or 5-lobate, the lobes reduplicate-valvate or subimbricate. Stamens 4 or 5, inserted at the base of the throat or at the base of the corolla-tube, the filaments filiform, pubescent; anthers basifixed, linear, included or short-exserted. Disk lobate. Ovary 2-celled; style filiform, the apex entire, bilobate, or with 2 long branches; ovules numerous, crowded on swollen placentae longitudinally adnate to the septum. Capsule thick-coriaceous, terete, costate, or angulate, loculicidally bivalvate from the apex. Seeds numerous, usually compressed, angulate, the testa usually granulate; endosperm fleshy; embryo minute, the cotyledons ovate, the radicle terete.

Type species, *Portlandia grandiflora* L.

Leaves sessile or nearly so, the blades cordate or subcordate at the base.
- Capsule about 2 cm. long. — 1. *P. Harrisii.*
- Capsule 1 cm. long or less.
  - Flowers pedicellate; leaf-blades elliptic, 5–10 cm. long; corolla pinkish. — 2. *P. nitens.*
  - Flowers sessile.
    - Calyx-lobes linear, about as long as the hypanthium; leaf-blades 1.5–3 cm. long, nearly orbicular. — 3. *P. sessilifolia.*
    - Calyx-lobes triangular, shorter than the hypanthium; leaf-blades 4–11 cm. long, oval-oblong. — 4. *P. Shaferi.*

Leaves petiolate, narrowed or rounded at the base.
- Leaf-blades rounded or very obtuse at the apex; branchlets usually puberulent.
  - Flowers surrounded by an involucre of numerous bractlets, terminal. — 5. *P. involucrata.*
  - Flowers exinvolucrate, often axillary.
    - Leaf-blades 1.5–3 cm. long. — 6. *P. uliginosa.*
    - Leaf-blades mostly 3.5–8 cm. long. — 7. *P. elliptica.*
- Leaf-blades acute or acuminate at the apex; branchlets glabrous.
  - Lobes of the calyx and corolla 4 each. — 8. *P. Ghiesbreghtiana.*
  - Lobes of the calyx and corolla 5 each.
    - Calyx-lobes oblong to ovate, 20–35 mm. long. — 9. *P. grandiflora.*
    - Calyx-lobes linear or subulate, or in one species triangular, but then only 1–6 mm. long.
      - Capsule 1.2 cm. long or less, shorter than the calyx-lobes; corolla about 5 cm. long. — 10. *P. pendula.*
      - Capsule more than 1.2 cm. long, longer than the calyx-lobes.
        - Capsule only obscurely angled.
          - Corolla 20–25 cm. long; leaf-blades 12–20 cm. long, the margins plane. — 11. *P. Lindeniana.*
          - Corolla 5–8 cm. long; calyx-lobes linear; leaf-blades 3.5–14 cm. long.
            - Margins of the leaves plane; stipules not cuspidate.
              - Calyx-lobes 7–15 mm. long; corolla-lobes triangular.
                - Corolla crimson. — 12. *P. coccinea.*
                - Corolla white. — 13. *P. albiflora.*
              - Calyx-lobes 1–6 mm. long; corolla-lobes semi-orbicular. — 14. *P. microsepala.*
            - Margins of the leaves revolute; stipules long-cuspidate. — 15. *P. mexicana.*
        - Capsule acutely angled.

Capsule turbinate, truncate at the apex, the pedicel 2–3 cm. long. 16. *P. daphnoides,*
Capsule oval-elliptic, narrowed at the apex, the pedicel 0.5–0.8 cm. long. 17. *P. domingensis.*

1. **Portlandia Harrisii** Britton, Bull. Torrey Club **39**: 8. 1912.

Shrub or small tree, up to 6 meters high, glabrous throughout; branches grayish, the branchlets very stout, obtusely quadrangular, the internodes short, the leaves often crowded; stipules distinct, 1.5 cm. long, ovate-orbicular, thick-coriaceous, acute or abruptly acute or acuminate, conspicuously nerved; leaves sessile, the blades orbicular or nearly so, 8–14 or rarely only 4.5 cm. long, broadly rounded or truncate at the apex, deeply cordate and clasping at the base, thick-coriaceous, lustrous, the costa very stout and prominent, the lateral veins slender but salient, 8–10 on each side, ascending at an acute angle, nearly straight, laxly anastomosing near the margin, the veinlets prominent, coarsely reticulate; flowers crowded in the axils, on stout pedicels about 1 cm. long, ebracteate; hypanthium 6 mm. long; calyx-lobes lance-oblong, about 15 mm. long and 5 mm. wide, acute to attenuate, claret-colored; corolla about 9 cm. long, the limb 3.5 cm. wide, white, tinged with rose, the tube about 1.2 cm. long, the lobes triangular, 1.5 cm. long, the tips reflexed; filaments pubescent below; anthers linear, yellow, about 2 cm. long; capsule oval or obovoid, 2.5 cm. long, 1.8 cm. wide, compressed, very obscurely angulate, brownish-black; seeds reddish-brown.

TYPE LOCALITY: Peckham Woods, Upper Clarendon, Jamaica.
DISTRIBUTION: On limestone rocks, vicinity of the type locality.

2. **Portlandia nitens** Britton, Bull. Torrey Club **39**: 10. 1912.

Slender shrub, 2.5–3 meters high, the branches stout, dark-gray, the internodes short; leaves sessile, the blades rounded-oval to oval-oblong, 4–9.5 cm. long, 3–7 cm. wide, rounded at the apex, cordate or subcordate at the base, thick-coriaceous, lustrous above, dull beneath, inconspicously veined; flowers corymbose, the pedicels stout, 1 cm. long or shorter, resinous; hypanthium resinous; calyx-lobes linear, 8–11 mm. long; corolla pink, campanulate, 2.5 cm. long, the lobes short, rounded; capsule obovoid-oblong, 1.3 cm. long, dark-brown.

TYPE LOCALITY: Dry thicket, upper valley of the Río Navas, Oriente, Cuba.
DISTRIBUTION: Oriente, Cuba.

3. **Portlandia sessilifolia** Britton, Bull. Torrey Club **41**: 21. 1914.

Branched shrub, 2–12 dm. high, the branches brownish-gray, resinous, the branchlets stout, obtusely quadrangular, puberulent and covered with yellow resin, the internodes short; stipules annular, 1–1.5 mm. long, truncate, resinous; leaves sessile, the blades orbicular, 1.5–3 cm. long, broadly rounded at the apex, truncate or subcordate at the base, lustrous above and pustulate-scaberulous, puberulent and very resinous beneath, the margins thick, revolute, the costa evident beneath, the lateral veins obsolete; inflorescence terminal, sessile, subcapitate, several-flowered, the pedicels very short; hypanthium about 4 mm. long, very resinous; calyx-lobes linear, as long as the hypanthium; corolla tubular-campanulate, 1.5 cm. long, yellow; capsule oblong-obovoid, 5–6 mm. long.

TYPE LOCALITY: Camp La Gloria, south of Sierra Moa, Oriente, Cuba.
DISTRIBUTION: Oriente, Cuba.

4. **Portlandia Shaferi** Standley, sp. nov.

Shrub, the branches brownish-gray, the branchlets compressed, glabrous, the internodes elongate; stipules annular, truncate, 1.5 mm. long, minutely puberulent; leaves sessile, the blades oval-oblong, or the uppermost oval-orbicular, slightly broadest near the base, 3.5–11 cm. long, 3–5 cm. wide, rounded at the apex, subcordate at the base, thick-coriaceous, very lustrous on the upper surface and glabrous, slightly paler beneath, dull, glabrous, or minutely puberulent near the base, the margins slightly revolute, the costa stout, prominent beneath, the lateral veins obscure; inflorescence terminal, capitate, many-flowered, the flowers sessile; corolla narrowly campanulate, 2 cm. long, the lobes short, obtuse or acutish; capsule obovoid-turbi-

nate, 1 cm. long, 0.7 cm. wide, compressed, obscurely costate, truncate at the apex, dark-brown, glabrous, the persistent calyx-lobes triangular, acute, 1.2–2 cm. long; seeds few, flat, irregular in outline, about 3 mm. long, dark-brown, finely reticulate.

Type collected on compact red soil, Río Yamaniguey to Camp Toa, Oriente, Cuba, altitude 400 meters, February, 1910, *J. A. Shafer 4180* (U. S. Nat. Herb. *no. 793795*).

5. **Portlandia involucrata** Wernham, Jour. Bot. **51**: 320. 1913.

Shrub, 0.3–2 meters high, glabrous throughout, the branches gray, the branchlets brownish, striate, the internodes very short; stipules minute, acute; leaves opposite or ternate, the petioles stout, 13 mm. long or less, semiterete, the blades obovate or obovate-elliptic, 2.5–6.5 cm. long, 0.7–2.5 cm. wide, rounded at the apex, cuneately narrowed to the base, thick-coriaceous, lustrous, paler beneath, the margins revolute, the costa evident beneath, the veins obsolete; flowers terminal, solitary, sessile, surrounded at the base by an involucre of numerous foliaceous bracts; capsule ellipsoid, 1 cm. long, 0.7–0.8 cm. wide, black, truncate at the apex, the persistent calyx-lobes linear-oblong, obtuse, 1 cm. long; seeds few, flat, 2.5–3 mm. long, dark-brown, finely reticulate.

TYPE LOCALITY: Camp La Gloria, across Sierra Moa, to Moa Bay, Oriente, Cuba.
DISTRIBUTION: Oriente, Cuba.

6. **Portlandia uliginosa** Wernham, Jour. Bot. **51**: 320. 1913.

Shrub, 3 meters high, the branches slender, dark-gray, the branchlets terete, puberulent, resinous, the internodes elongate; stipules annular, scarcely 1 mm. long, resinous; petioles stout, 2–4.5 mm. long, semiterete, puberulent or glabrate; leaf-blades obovate, oval, or oval-oblong, 1.5–3 cm. long, 0.7–1.5 cm. wide, rounded at the apex, acute or obtuse at the base, thick-coriaceous, glabrous, lustrous on the upper surface, paler and dull beneath, the margin subrevolute, the costa prominent beneath, the veins obsolete; pedicels 1 cm. long, obscurely puberulent; capsule 1.5 cm. long, 6 mm. wide, attenuate at the base, obscurely costate, glabrous, the persistent calyx-lobes subulate, acutish, 1 cm. long.

TYPE LOCALITY: Río Yamaniguey to Camp Toa, Oriente, Cuba.
DISTRIBUTION: Known only from the type locality.

7. **Portlandia elliptica** Britton, Bull. Torrey Club **41**: 22. 1914.

Slender shrub, 3.3 meters high, the branchlets obtusely triangular, brownish-gray, puberulent, the internodes short; stipules annular, truncate, 1 mm. long, puberulent, resinous; petioles stout, 0.3–1 cm. long, semiterete, canaliculate above, puberulent; leaf-blades oval-elliptic to rounded-oval, 3–8 cm. long, 2–4 cm. wide, rounded at the apex, acute or obtuse at the base, thick-coriaceous, lustrous, glabrous above, slightly paler beneath and glabrous or sparsely puberulent, the margins subrevolute, the costa stout, prominent beneath, the lateral veins obsolete or nearly so; flowers terminal or axillary, mostly solitary, the pedicels stout, 0.5–1 cm. long, puberulent; hypanthium 4 mm. long; calyx-lobes linear-lanceolate, acute or acutish, longer than the hypanthium; corolla 2 cm. long, ochroleucous; capsule obovoid, about 1 cm. long and 0.7 cm. wide, acute at the base, slightly narrowed to the truncate apex, slightly compressed, obscurely costate, dark-brown, puberulent; seeds dark-brown, flat, 2–3 mm. long, finely reticulate.

TYPE LOCALITY: Thickets on serpentine rocks, between Baracoa and Florida, Oriente, Cuba.
DISTRIBUTION: Known only from the type locality.

8. **Portlandia Ghiesbreghtiana** Baill. Adansonia **12**: 300. 1879.

Shrub, glabrous throughout, the branches green or blackish, stout or slender, erect or pendent, the branchlets green, somewhat resinous, the internodes short; stipules broadly triangular, 2 mm. long, acute or cuspidate, green, resinous; petioles stout, 2–3 mm. long; leaf-blades elliptic or oval-elliptic, 1.7–4.5 cm. long, 0.8–2 cm. wide, acute or acutish at the apex, acute at the base, coriaceous, lustrous above, slightly paler and dull beneath, the margins thickened, plane, the costa subprominent, the veins obsolete; flowers axillary, numerous, the

pedicels slender, 4–8 mm. long; hypanthium 3 mm. long; calyx-lobes 4, linear-subulate, 4–5 mm. long, attenuate, glandular-denticulate near the base; corolla funnelform, 2.2–2.5 cm. long (white?), the tube 6–7 mm. long, 4-angulate, the limb 2–2.5 cm. broad, the 4 lobes broadly ovate-deltoid, 8–10 mm. long, obtuse or acutish; anthers linear, 8 mm. long; capsule oval-orbicular, 7–11 mm. long and wide, strongly compressed, bisulcate, obscurely costate, rounded at both ends, brown.

TYPE LOCALITY: Near the Hacienda de Huijastla, Mexico.
DISTRIBUTION: Hidalgo to Oaxaca.

9. **Portlandia grandiflora** L. Syst. ed. 10. 928. 1759.

Portlandia grandiflora latifolia DC. Prodr. 4: 405. 1830.

Shrub, 3 meters high, glabrous throughout, the branchlets stout, subangulate, green, the internodes short; stipules distinct, deltoid or rounded-deltoid, 5–8 mm. long, acute or obtuse, sometimes cuspidate, thin; petioles stout, 5–10 mm. long; leaf-blades elliptic-oblong to oval, 11–20 cm. long, 5.5–9 cm. wide, acute or subabruptly acuminate at the apex, acutish to rounded at the base, coriaceous, lustrous, the venation prominent on both surfaces, the costa stout, the lateral veins slender, 7–10 on each side, subarcuate, laxly anastomosing near the margin, the margins plane; flowers axillary, solitary, the pedicels very stout, 1 cm. long or shorter; hypanthium narrowly turbinate, 1–1.5 cm. long; calyx-lobes elliptic, ovate, or lanceolate, 2–3.5 cm. long, acute or abruptly acuminate, foliaceous, several-nerved; corolla tubular-funnelform, 16–20 cm. long, white, the tube 6–8 cm. long, 5–6 mm. thick, the 5 lobes broadly triangular, about 3 cm. long, acute or obtuse.

TYPE LOCALITY: Jamaica.
DISTRIBUTION: Jamaica, in thickets at lower and middle altitudes, in moist districts; St. Thomas (native?).
ILLUSTRATIONS: Jacq. Sel. Stirp. Am. *pl. 44;* Gaertn. Fruct. *pl. 31;* Bot. Mag. *pl. 286;* Lam. Tab. Encyc. *pl. 162;* P. Br. Hist. Jam. *pl. 11.*

10. **Portlandia pendula** C. Wright; Griseb. Cat. Pl. Cub. 126. 1866.

Pendent shrub, 2 meters long or more, glabrous throughout; branches grayish-yellow, the branchlets quadrangular, slender, green; stipules annular, 2–3 mm. long, the lobes triangular, cuspidate; petioles 3–6 mm. long; leaf-blades ovate-oval or elliptic, 2–6 cm. long, 1–2.5 cm. wide, acute or abruptly acute or acuminate at the apex, the tip acute or obtuse, obtuse or acute at the base and decurrent, thin-coriaceous, dark-green on the upper surface and dull or sublustrous, mottled with bronze, slightly paler green beneath, the margin plane or subrevolute, the costa slender but prominent, the lateral veins slender, about 4 on each side, sometimes nearly obsolete; flowers fragrant, axillary, usually solitary, the pedicels slender, 1–2 cm. long, usually recurved, angulate; hypanthium 5 mm. long; calyx-lobes 5, linear-subulate or linear, 12–20 mm. long, acute or attenuate, green mottled with bronze; corolla 5–5.5 cm. long, white, the 5 lobes triangular, acute; capsule oval, 8–10 mm. long, 6–7 mm. wide, bisulcate, obscurely costate, green mottled with bronze; seeds only slightly compressed, reddish-brown, 1 mm. long.

TYPE LOCALITY: Western Cuba.
DISTRIBUTION: On limestone cliffs, Pinar del Río, Cuba.
ILLUSTRATION: E. & P. Nat. Pfl. 4[1]: *f. 7, H.*

11. **Portlandia Lindeniana** (A. Rich.) Britton, Bull. Torrey Club 41: 23. 1914.

Gonianthes Lindeniana A. Rich. in Sagra, Hist. Cuba 11: 10. 1850.
Portlandia gypsophila Macfad.; Griseb. Fl. Brit. W. Ind. 324. 1861.

Tree, up to 8 meters high, glabrous throughout, the bark pale brownish-yellow, irregularly furrowed, the branchlets stout, subterete, the internodes short; stipules annular, 5–8 mm. long, the lobes broadly triangular, cuspidate, thin; petioles stout, 5–8 mm. long, compressed; leaf-blades narrowly ovate-oblong to elongate lance-oblong, 11–20 cm. long, 4–5.5 cm. wide, acute to acuminate at the apex, usually subabruptly so, rounded to acute at the base, coriaceous,

deep-green and lustrous on the upper surface, dull and slightly paler beneath, the costa stout and prominent, the lateral veins prominent beneath, 7–10 on each side, arcuate, laxly anastomosing near the margin, the margins plane; flowers axillary, solitary, the pedicels stout, about 2 cm. long; hypanthium clavate, about 1 cm. long; calyx-lobes 5, narrowly linear, 2.5–3.5 cm. long, attenuate; corolla 20–25 cm. long, white; capsule obovoid-oblong, 4–5 cm. long, 1.5–1.8 cm. thick, terete, brownish-black, constricted at the apex, narrowed at the base; seeds very numerous, 2 mm. long, sharply angulate, dark-brown.

TYPE LOCALITY: Cuba.
DISTRIBUTION: Wooded stream-banks at lower elevations, Oriente, Cuba; Jamaica (?).
ILLUSTRATION: Sagra, Hist. Cuba 11: *pl. 49 bis.*

12. **Portlandia coccinea** Sw. Fl. Ind. Occ. 384. 1797.

Portlandia coriacea Sw.; Spreng. Syst. 1: 708. 1825.

Shrub, 3 meters high, glabrous throughout, the branches grayish, the branchlets stout, subangulate, the internodes short; stipules annular, 5–8 mm. long, the lobes deltoid, acute; petioles very stout, 2–4 mm. long; leaf-blades elliptic or oval-elliptic, 7–11.5 cm. long, 2.3–4 cm. wide, acute or acuminate at the apex, acute at the base, thick-coriaceous, lustrous, paler beneath, the margins plane, the venation prominent on both surfaces, the lateral veins slender, 5–7 on each side, ascending at an acute angle, subarcuate, laxly anastomosing near the margin, the veinlets conspicuous, coarsely reticulate; flowers axillary, solitary or fasciculate, the pedicels slender, about 1.5 cm. long; hypanthium turbinate, 5–6 mm. long; calyx-lobes 5, linear or lance-linear, 7–15 mm. long, attenuate, finely nerved; corolla funnelform, 5.5–7.5 cm. long, crimson, the tube about 5 cm. long, the 5 lobes broadly triangular, 1.5 cm. long, obtuse or acutish; capsule globose-obovoid, 1.5 cm. long, 1–1.2 cm. in diameter, obtuse at the base, slightly constricted at the truncate apex, obscurely costate.

TYPE LOCALITY: Western Jamaica, on mountain cliffs.
DISTRIBUTION: Thickets at lower elevations in dry districts, southwestern Jamaica.

13. **Portlandia albiflora** Britton & Harris, sp. nov.

Shrub or small tree, 2–4.5 meters high, glabrous throughout, the branches stout, grayish, the branchlets subterete, with short internodes; stipules deltoid, acute or acuminate, 5–6 mm. long; petioles very stout, 2–5 mm. long; leaf-blades oval, elliptic-oblong, or oblong, 6.5–18 cm. long, 2–11 cm. wide, rounded to acute at the base, acute or short-acuminate at the apex, thick-coriaceous, very lustrous, the venation prominulous, the lateral veins about 7 on each side, the margin plane; flowers axillary, solitary or fasciculate, the pedicels slender, 1–2 cm. long; hypanthium turbinate or clavate, 5–7 mm. long; calyx-lobes linear or lance-linear, alternate, 1–2 cm. long, thin, green; corolla funnelform, 5–9.5 cm. long, white, tinged with rose outside, the tube 3.5–4.5 cm. long, 1–2 cm. thick in the throat, the lobes deltoid, 1–1.5 cm. long, obtuse; capsule globose-obovoid, 2 cm. long, 1.5 cm. wide, acute or obtuse at the base, slightly constricted at the truncate apex; seeds reddish-brown, 2 mm. long.

Type collected in Cane River Valley, Jamaica, July 12, 1907, *William Harris 9637* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Jamaica.

14. **Portlandia microsepala** Urban, Repert. Sp. Nov. **13**: 478. 1915.

Shrub, glabrous throughout, the branchlets compressed; stipules ovate, 7–8 mm. long; petioles 5–8 mm. long; leaf-blades ovate or oval, 8–15 cm. long, 4–8 cm. wide, acute or short-acuminate at the apex, acute to rounded at the base and short-decurrent, coriaceous or chartaceo-coriaceous, lustrous, the costa prominent beneath, the lateral veins 5 or 6 on each side, the margins plane; flowers axillary, solitary, the pedicels 5–15 mm. long; hypanthium narrowly turbinate; calyx-lobes 5, triangular or triangular-subulate, 1–6 mm. long; corolla 6–7 cm. long, the tube 5 mm. thick, the lobes semi-orbicular; filaments 5 cm. long, the anthers 17 mm. long; capsule obovoid, 2 cm. long, 1.5 cm. wide, obscurely 5-costate; seeds 2–2.3 mm. long, brownish-black, minutely reticulate.

TYPE LOCALITY: Union Hill, near Moneague, Jamaica.
DISTRIBUTION: Jamaica.

15. **Portlandia mexicana** (Zucc. & Mart.) Hemsl. Diag. Pl. Nov. 31. 1879.

Coutarea mexicana Zucc. & Mart.; DC. Prodr. 4: 350. 1830.

Shrub, glabrous throughout, the branches yellowish-gray, the branchlets subangulate, green, the internodes short; stipules subannular, 3–6 mm. long, green, the lobes triangular, long-cuspidate; petioles stout, 3–5 mm. long, subterete; leaf-blades elliptic or very narrowly elliptic-oblong, 3–7.5 cm. long, 0.7–2 cm. wide, acute or acutish at the apex, acute at the base, thick-coriaceous, lustrous above, paler and dull beneath, the margins revolute, the costa stout prominent beneath, the lateral veins evident on the upper surface, 5–8 on each side, obsolete beneath; flowers axillary, solitary, the pedicels stout, 3–12 mm. long, bibracteate at the base; hypanthium 4–5 mm. long, turbinate; calyx-lobes 5, linear or linear-subulate, 10–14 mm. long, acute to attenuate; corolla 6–8 cm. long, the 5 lobes triangular, rounded; capsule oval-obovoid, 1.3–1.8 cm. long, about 1 cm. broad, obscurely costate, acute at the base, truncate at the apex, brownish-black.

TYPE LOCALITY: Mexico.
DISTRIBUTION: San Luis Potosí and Hidalgo.

16. **Portlandia daphnoides** Graham, Edinb. New Phil. Jour. 30: 206. 1841.

Gonianthes Sagraeana A. Rich. in Sagra, Hist. Cuba 11: 11. 1850.
Portlandia longiflora Meissn.; Griseb. Cat. Pl. Cub. 126. 1866.

Shrub, 1–2 meters high, glabrous throughout except on the pedicels, the branches brownish-gray, the branchlets stout, compressed, green, the internodes short; stipules annular, 4–11 mm. long, green, the lobes triangular, acuminate or long-cuspidate; petioles stout, 3–10 mm. long, semiterete, sulcate above; leaf-blades elliptic-oblong or elliptic, 7–16 cm. long, 2.5–6.5 cm. wide, subabruptly acute at the apex or sometimes obtuse, acute at the base and abruptly short-decurrent, coriaceous or subcoriaceous, scarcely paler beneath, the margins plane, the costa stout, prominent, the lateral veins prominent beneath, 4–8 on each side, arcuate, anastomosing near the margin; flowers axillary, sessile, the pedicels stout, 1–3 cm. long, angulate; hypanthium turbinate, 12–15 mm. long; calyx-lobes linear, 1.5–2 cm. long, acuminate; corolla white, 20–32 cm. long, the tube about 10 cm. long, 7 mm. thick; anthers linear, about 4 cm. long; capsule turbinate, 2.5–3 cm. long, truncate at the apex, tapering at the base, acutely angulate; seeds reddish-brown, about 3 mm. long.

TYPE LOCALITY: Cuba.
DISTRIBUTION: On rocks along streams at lower and middle elevations, Cuba.

17. **Portlandia domingensis** Britton, Bull. Torrey Club 41: 24. 1914.

Shrub, glabrous throughout, the branches yellowish-gray, the branchlets subterete, green, the internodes short; stipules annular, 5–7 mm. long, green, the lobes triangular, long-cuspidate; petioles very stout, 2–3 mm. long, shallowly sulcate above; leaf-blades oval or oval-oblong, 5–13 cm. long, 3.5–6.5 cm. wide, abruptly acute or acuminate at the apex, rounded or obtuse at the base, concolorous or nearly so, the margins plane or subrevolute; flowers axillary, solitary, the pedicels very stout, 5–8 mm. long, subangulate; calyx-lobes linear, 1.5–2.5 cm. long, attenuate; capsule oval-elliptic, 4–4.5 cm. long, much constricted at the apex, narrowed at the base, acutely 5-angulate; seeds dark reddish-brown, compressed, 3–4 mm. long, punctic-ulate.

TYPE LOCALITY: Near San Pedro de Macoris, Santo Domingo.
DISTRIBUTION: Known only from the type locality.

DOUBTFUL SPECIES

PORTLANDIA PLATANTHA Hook. Bot. Mag. *pl. 4534.* 1850. Described from cultivated plants, the source of which was not known. The species is very similar to *P. grandiflora*, but the corolla is described as only half as large.

6. ISIDOREA A. Rich.; DC. Prodr. 4: 405. 1830.

Shrubs, the branchlets terete. Leaves opposite, petiolate, the blades narrow, rigid, pungent, the margins revolute. Stipules intrapetiolar, subulate, pungent, persistent. Flowers solitary, axillary and terminal, sessile or pedicellate, bracteate or ebracteate; hypanthium turbinate, acutely 5-costate; calyx 5-lobate, the lobes erect, narrow, costate, persistent; corolla tubular, 5-angulate, the angles thickened, glabrous within, the limb 5-lobate, the lobes short or elongate, imbricate or induplicate-valvate, the margins thickened. Stamens 5, inserted at the base of the corolla; filaments filiform, coherent at the base and villous; anthers dorsifixed near the base, elongate-linear. Disk swollen. Ovary 2-celled; style filiform, the 2 branches linear, obtuse; ovules numerous, crowded, horizontal, on placentae longitudinally attached to the septum. Capsule obovoid-turbinate, 5-angulate, woody, truncate, 2-celled, septicidally bivalvate, the valves bifid. Seeds numerous, horizontal, compressed, angulate, stipitate by a short aril, the testa coriaceous, granulate; endosperm fleshy; embryo small, the cotyledons suborbicular, the radicle terete.

Type species, *Isidorea amoena* A. Rich.

Leaf-blades 2–5 cm. long, broadest at the middle; flowers pedicellate.
- Corolla-lobes broadly triangular, about 4 mm. long, the tube 2.5–3 cm. long, 6–7 mm. thick. 1. *I. pungens.*
- Corolla-lobes narrowly ovate, about 12 mm. long, the tube 2 cm. long, 1.5 mm. thick. 2. *I. leptantha.*

Leaf-blades 0.7–1.4 cm. long, broadest at the base; flowers sessile or nearly so. 3. *I. cubensis.*

1. Isidorea pungens (Lam.) B. L. Robinson, Proc. Am. Acad. 45: 401. 1910.

Ernodea pungens Lam. Tab. Encyc. 1: 276. 1791.
Ernodea pedunculata Poir. in Lam. Encyc. Suppl. 2: 581. 1811.
Isidorea amoena A. Rich.; DC. Prodr. 4: 406. 1830.

Shrub; branches grayish, the branchlets slender, scaberulo-hirtellous; stipules 5–15 mm. long, subulate, dilated at the base, rigid and spine-like, glabrous or puberulent, stramineous; petioles about 1 mm. long, broad, compressed; leaf-blades linear-oblong or narrowly lanceolate, 2–5 cm. long, 2.5–8 mm. wide, obtuse or acutish at the base, acute at the apex and spine-tipped, rigid-coriaceous, glabrous and grayish-green on the upper surface, shallowly sulcate along the costa, paler beneath, glabrous or scaberulous, the costa very prominent, the lateral veins obscure, very numerous, parallel, ascending at a very acute angle, the margins strongly revolute; pedicels slender, 4–8 mm. long, scaberulo-hirtellous, the bractlets slender-subulate, borne at the middle, or wanting; hypanthium 2.5–4 mm. long, scaberulous; calyx-lobes linear-subulate, 10–15 mm. long, glabrous, pungent; corolla purplish-red, the tube 2.5–3 cm. long, 6–7 mm. thick, the lobes 4–5 mm. long, broadly triangular, obtuse, induplicate-valvate; capsule broadly turbinate, about 1 cm. long and broad, glabrous, the angles thin and wing-like; seeds brown, 1.5–2.5 mm. long, finely and densely tuberculate.

TYPE LOCALITY: [Hispaniola].
DISTRIBUTION: Hispaniola.
ILLUSTRATIONS: Mém. Soc. Hist. Nat. Paris. 5: *pl. 25;* E. & P. Nat. Pfl. 4[4]: *f. 7, F, G.*

2. Isidorea leptantha Urban, Symb. Ant. 7: 391. 1912.

Shrub; branches grayish, with short internodes, the branchlets scaberulous; stipules 1.5–5 mm. long, subulate, pungent, stramineous; petioles 1–2 mm. long, broad, compressed; leaf-blades narrowly lanceolate or linear-lanceolate, 2–3 cm. long, 4–6 mm. wide, narrowed to the base, acute at the apex and spine-tipped, rigid-coriaceous, glabrous, grayish-green and lustrous above, slightly paler beneath, the costa very prominent beneath, the lateral veins obscure, numerous, ascending at a very acute angle, the margins revolute or nearly plane; pedicels slender, 5–10 mm. long, ebracteate or with a minute subulate bract at the base; hypanthium 2–3 mm. long, glabrous, the calyx-lobes linear-subulate, 7 mm. long; corolla purplish-red, the tube about 2 cm. long, 1.5 mm. thick, the lobes lance-ovate, about 12 mm. long, 6.5 mm. wide at the base, imbricate; anthers 6 mm. long, obtuse; capsule broadly obconic, 12–15 mm. long, 10 mm. broad.

TYPE LOCALITY: Near Barahona, Santo Domingo, at an altitude of 200 meters.
DISTRIBUTION: Known only from the type locality.

3. **Isidorea** (?) **cubensis** Standley, sp. nov.

Shrub, 3–6 dm. high, the branches slender, dark-brown, the branchlets slender, terete or subangulate, minutely hirtellous, the internodes shorter than the leaves; stipules minute; petioles stout, 1–2 mm. long, short-hirtellous; leaf-blades lanceolate or narrowly lanceolate, broadest at the base, 7–14 mm. long, 3–4 mm. wide, obtuse or acutish at the base, gradually narrowed to the acute apex, coriaceous, green above, very lustrous, scaberulous or glabrate, the costa impressed, brownish beneath, somewhat lustrous, scaberulous, the costa prominent, the lateral veins prominent, the margins strongly revolute; flowers solitary, terminal, sessile or subsessile; calyx-lobes 5 or 6, in fruit linear-subulate, 10–12 mm. long, acute, minutely hirtellous, erect; fruit pyriform-obovoid, 8–12 mm. long, brown, minutely hirtellous.

Type collected among rocks, near water, Arroyo del Medio, above the falls, Oriente, Cuba, altitude 450 to 550 meters, January, 1910, *J. A. Shafer 3230* (herb. N. Y. Bot. Gard.).

7. **POGONOPUS** Klotzsch, Monats. Akad. Berlin **1853**: 500. 1853.

Chrysoxylon Wedd. Monog. Cinch. 100. 1849. Not *Chrysoxylon* Casar. 1843.
Howardia Wedd. Ann. Sci. Nat. IV. **1**: 66. 1854.

Trees or shrubs. Leaves opposite, petiolate, the blades large, thin. Stipules interpetiolar, small, cuspidate, tardily deciduous Flowers showy, pedicellate, in small cymes, these arranged in lax terminal panicles, the pedicels bracteolate at the base; hypanthium turbinate; calyx short, 5-dentate, deciduous, one of the lobes expanded into a large petiolate foliaceous bright-colored limb; corolla tubular, the tube villous in the throat, the limb short, 5-lobate, the lobes valvate. Stamens 5, inserted in the corolla-tube, the filaments slender, glabrous; anthers versatile, linear-oblong, exserted. Disk thick, annular. Ovary 2-celled; style slender, with 2 linear or oblong obtuse branches; ovules numerous, the placentae bifid, longitudinally adnate to the septum. Capsule subligneous, areolate at the apex, 2-celled, loculicidally bivalvate, many-seeded. Seeds horizontal, crowded, the testa thick; endosperm fleshy; embryo large, the cotyledons ovate, the radicle thick.

Type species, *Pogonopus Ottonis* Klotzsch.

1. **Pogonopus speciosus** (Jacq.) K. Schumann, in Mart. Fl. Bras. **6**[6]: 265. 1889.

Macrocnemum speciosum Jacq. Hort. Schoenb. **1**: 19. 1797.
Mussaenda speciosa Poir. in Lam. Encyc. Suppl. **4**: 37. 1816.
Mussaenda aculiflora Bartl.; DC. Prodr. **4**: 370. 1830.
Macrocnemum exsertum Oerst. Vidensk. Meddel. **1852**: 45. 1852.
Pogonopus Ottonis Klotzsch, Monats. Akad. Berlin **1853**: 500. 1853.
Howardia caracasensis Wedd. Ann. Sci. Nat. IV. **1**: 71. 1854.
Calycophyllum tubulosum Seem. Bot. Voy. Herald 135. 1854. Not *C. tubulosum* DC. 1830.
Pogonopus exsertus Oerst. Am. Centr. 17. 1863.
Pogonopus caracasensis Nichols. Dict. Gard. **3**: 175. 1886.
Chrysoxylon speciosum Kuntze, Rev. Gen. 278. 1891.

Shrub or small tree, up to 10 meters high, the branches reddish-brown or grayish, conspicuouslyle nticellate, the branchlets slender, cinereo-puberulent or short-hirtellous, sometimes glabrate; stipules triangular, 3–5 mm. long, cuspidate, puberulent; petioles stout, 2 cm. long or shorter, semiterete, shallowly sulcate on the upper surface, puberulent; leaf-blades obovate, oval-obovate, or rarely elliptic or ovate, 5–23 cm. long, 2–11 cm. wide, those of the inflorescence much reduced, abruptly acuminate or attenuate at the apex, abruptly or gradually acute to long-attenuate at the base, thin, green above, glabrous or sometimes puberulent, paler beneath and sparsely or densely puberulent, the costa slender, prominent, the lateral veins slender, prominent, 8–13 on each side, arcuate, laxly anastomosing near the margin; cymes few-flowered, arranged in a broad leafy panicle; bracts foliaceous or linear; pedicels stout, 1 cm. long or shorter, puberulent or pilose, the bractlets minute; hypanthium 4–5 mm. long, puberulent or densely fulvous-sericeous; calyx about 1 mm. high, 4 of the lobes minute, cuspidate, the fifth expanded into a large limb, this rounded-ovate, 1–5 cm. long, 1–4 cm. wide, on a slender petiole 1–2.5 cm. long, rounded to acute at the apex, rounded and short-decurrent at the base, purplish, palmately 5-nerved, the nerves very prominent, the

secondary ones finely reticulate, glabrous or puberulent; corolla 2.5–3 cm. long, purple, densely or sparsely puberulent or fulvous-sericeous outside, the tube 3–5 mm. thick, the lobes deltoid-ovate, 3–4 mm. long, acute, puberulent within; stamens short-exserted, the filaments very slender, glabrous, the anthers purplish, 1.5 mm. long; capsule 5–7 mm. long, 5–6 mm. wide, brownish-black, coarsely lenticellate, shallowly bisulcate; seeds about 0.5 mm. long, pale-yellowish.

TYPE LOCALITY: Caracas, Venezuela.
DISTRIBUTION: Guatemala to Colombia and Venezuela; reported also from Mexico.
ILLUSTRATIONS: E. & P. Nat. Pfl. 4[1]: *f. 6, P:* Oerst. Am. Centr. *pl. 13;* Jacq. Hort. Schoenb. *pl. 43;* Ann. Sci. Nat. IV. 1: *pl. 10, f. 4–7;* Bot. Mag. *pl. 5110.*

8. PINCKNEYA* Michx. Fl. Bor. Am. 1: 103. 1803.

Trees or shrubs, pubescent, the branches terete. Leaves opposite, petiolate, the blades large, membranaceous. Stipules interpetiolar, membranaceous, caducous. Flowers showy, in terminal and axillary corymbs; hypanthium turbinate; calyx 5-lobate, 3 or 4 of the lobes lance-subulate, 1 or 2 expanded into a large petiolate bright-colored limb; corolla-tube elongate, pilose within, the throat slightly enlarged, the limb 5-lobate, the lobes recurved, valvate, tomentose within. Stamens 5, inserted at the base of the corolla-tube; filaments filiform; anthers versatile, oblong, exserted. Disk large, annular. Ovary 2-celled; style filiform, exserted, obtusely bilobate; ovules numerous, inserted on slender bifid placentae longitudinally attached to the septum. Capsule subglobose, bisulcate, 2-celled, loculicidally bivalvate, the valves bipartite. Seeds numerous, minute, compressed, crowded, horizontal, the testa reticulate, winged; endosperm fleshy; embryo elongate, the cotyledons concavo-convex, the radicle short.

Type species, *Pinckneya pubens* Michx.

1. Pinckneya pubens Michx. Fl. Bor. Am. 1: 105. 1803.

Cinchona caroliniana Poir. in Lam. Encyc. 6: 40. 1804.
Pinckneya pubescens Pers. Syn. Pl. 1: 197. 1805.

Shrub or tree, 9 meters high or less, the trunk sometimes 2.5 dm. in diameter, the wood soft, close-grained, brown, the bark scaly, light-brown, the branchlets reddish-brown, stout, densely white-pilose, becoming glabrate; stipules 5–10 mm. long, lance-triangular or ovate-deltoid, acute or attenuate, brown; petioles stout, 1.5–2.5 cm. long, densely pilose; leaf-blades ovate, oval, oblong-oval, or broadly oval-ovate, 9–20 cm. long, 4.5–10 cm. wide, obtuse or acute at the apex, abruptly acute or acuminate at the base and short-decurrent, dark-green above and sparsely short-pilose, becoming glabrate, paler beneath and densely short-pilose, or in age glabrate, the costa slender, prominent beneath, the lateral veins slender, prominent beneath, 6–8 on each side, arcuate, laxly anastomosing near the margin; corymbs many-flowered, usually about 20 cm. broad, leafy, the bracts linear-subulate, the branches densely pilose, the flowers sessile or short-pedicellate; hypanthium 5–6 mm. long, densely white-sericeous; normal calyx-lobes 6–12 mm. long, sericeous, 1 or 2 of the lobes expanded into a limb, this broadly oval to suborbicular, 3.5–7 cm. long, 2.5–5 cm. wide, pink, broadly rounded to acute at the apex, acute to rounded at the base, short-pilose or glabrate, prominently veined, on a petiole 5–12 mm. long; corolla 3–4 cm. long, the tube about 3 mm. thick, densely sericeous, the lobes lance-oblong or oblong-linear, 6–12 mm. long, acute, yellowish, marked with brown or purple; anthers 2.5 mm. long; capsule ligneous, 1.2–2 cm. long and often broader, reddish-brown, prominently lenticellate; seeds pale-brown, the body 2–3 mm. long, surrounded by a thin wing 1–7 mm. broad.

TYPE LOCALITY: Banks of St. Marys River, Georgia.
DISTRIBUTION: Borders of swamps and streams in the coastal region, South Carolina to Florida.
ILLUSTRATIONS: Michx. Fl. Bor. Am. *pl. 13;* Britton, N. Am. Trees *f. 764;* Gaertn. Fruct. *pl. 194;* Michx. f. Sylva *pl. 49;* W. Barton, Fl. N. Am. *pl. 7;* Audubon, Birds *pl. 165;* E. & P. Nat. Pfl. 4[1]: *f. 6, M-O;* Sarg. Silva *pl. 227, 228;* Sarg. Man. *f. 634.*

* Sometimes spelled *Pinknea* or *Pinkneya.*

II. **OLDENLANDIEAE.** Herbs or rarely shrubs. Leaves usually opposite. Stipules entire, dentate, or setiferous. Flowers 4- or 5-parted; corolla-lobes valvate. Ovary 2-celled, the ovules numerous, the placentae affixed to the middle of the septum or ascending from the base of the septum. Fruit dry, capsular or indehiscent, the seeds few or numerous, small and angulate, globose, or peltate, exalate.

Calyx-lobes 3-dentate at the apex; capsule indehiscent. — 9. DENTELLA.
Calyx-lobes entire; capsule usually dehiscent.
  Flowers 5-parted. — 10. PENTODON.
  Flowers 4-parted.
    Seeds angulate. — 11. OLDENLANDIA.
    Seeds crateriform or concavo-convex, not angulate.
      Plants with tuberous roots; calyx-lobes alternating with small teeth. — 12. CLAVENNA.
      Plants never with tuberous roots; calyx-lobes without intermediate teeth.
        Leaves mostly herbaceous, rarely coriaceous, not imbricate; stems herbaceous or suffruticose. — 13. HOUSTONIA.
        Leaves thick-coriaceous, mostly imbricate; stems woody throughout. — 14. ARCYTOPHYLLUM.

9. DENTELLA Forst. Char. Gen. 25. 1776.

Slender prostrate annual herbs. Leaves small, opposite, petiolate. Stipules small, scarious, connate with the petioles. Flowers minute, solitary, axillary and in the forks of the branches, sessile or short-pedicellate; hypanthium subglobose; calyx membranaceous, tubular, 5-lobate, persistent; corolla funnelform, white, the tube pilose within, the limb 5-lobate, the lobes 2–3-dentate near the apex, induplicate-valvate. Stamens 5, inserted at the middle of the corolla-tube; filaments short; anthers dorsifixed, included, linear. Disk inconspicuous. Ovary 2-celled; style short, the branches filiform; ovules numerous, inserted on hemispheric placentae adnate to the septum. Fruit globose, dry, coriaceo-crustaceous, indehiscent, many-seeded. Seeds minute, angulate, the testa punctate; endosperm fleshy; embryo ovoid, bifid.

Type species, *Oldenlandia repens* L.

1. Dentella repens (L.) Forst. Char. Gen. 25. 1776.

Oldenlandia repens L. Mant. 40. 1767.
Hedyotis repens Lam. Tab. Encyc. 1: 271. 1791.

Plants much branched, the branches slender, obtusely quadrangular, 0.5–6 dm. long, rooting at the nodes, glabrous or obscurely puberulent, the internodes mostly longer than the leaves; stipules broadly deltoid or semiorbicular, about 0.5 mm. long, entire, whitish; petioles 1–2 mm. long; leaf-blades elliptic or obovate-oblong, 4–10 mm. long, 1.5–4 mm. wide, obtuse or acute at the apex, obtuse or acute at the base, somewhat succulent, hispidulous or glabrate, white-ciliate, 1-nerved; calyx-lobes lance-subulate, attenuate, about 1 mm. long; corolla 3–4 mm. long; capsule 2.5 mm. in diameter, densely white-hispid or sometimes glabrate; seeds brownish-black, 0.3–0.5 mm. in diameter.

TYPE LOCALITY: India.
DISTRIBUTION: Tepic and Guerrero, probably adventive; also in India, Australia, Malaysia, and Polynesia.
ILLUSTRATIONS: Forst. Char. Gen. *pl. 13;* Endl. Atakta *pl. 13* (as *Lippaya telephioides*); Rumph. Amb. *pl. 170, f. 4;* E. & P. Nat. Pfl. 4[4]: *f. 8, A.*

10. PENTODON Hochst. Flora 27: 552. 1844.

Decumbent annual herbs, glabrous, more or less succulent, with quadrangular branched stems. Leaves opposite, sessile or petiolate, the blades broad. Stipules short, broad, connate with the petioles, entire or dentate. Flowers small, in few-flowered, axillary and terminal, pedunculate cymes, white, pedicellate, the pedicels bracteolate at the base; hypanthium turbinate; calyx 5-dentate, the teeth persistent, remote; corolla funnelform, pilose or glabrous in the throat, the limb 5-lobate, the lobes short, obtuse, valvate. Stamens 5, inserted in the throat of the corolla; filaments short; anthers dorsifixed, oblong, included. Disk inconspicuous.

Ovary 2-celled; style short, the 2 branches linear; ovules numerous, the placentae affixed to the septum. Capsule membranaceous, hemispheric-turbinate, subdidymous, 2-celled, truncate at the apex, many-seeded, loculicidally dehiscent between the calyx-teeth. Seeds minute, angulate, the testa roughened; endosperm fleshy; embryo minute, clavate.

Type species, *Pentodon decumbens* Hochst.

Corolla pilose within; peduncles mostly as long as the leaves, the flowers racemose, the pedicels slender, usually more than twice as long as the capsule. 1. *P. pentander.*
Corolla glabrous within; peduncles shorter than the leaves or obsolete, the flowers cymose, the pedicels clavate, usually less than twice as long as the capsule. 2. *P. Halei.*

1. Pentodon pentander (Schum. & Thonn.) Vatke, Oesterr. Bot. Zeits. 25: 231. 1875.

Hedyotis pentandra Schum. & Thonn. Beskr. Guin. Pl. 71. 1827.
Oldenlandia pentandra DC. Prodr. 4: 427. 1830.
Oldenlandia macrophylla DC. Prodr. 4: 427. 1830.
Pentodon decumbens Hochst. Flora. 27: 552. 1844.

Stems stout, 2–10 dm. long, much branched, the internodes longer than the leaves; stipules 3 mm. long or shorter, often cuspidate; petioles very short, most of the leaves sessile; leaf-blades lanceolate, lance-oblong, or narrowly oblong-elliptic, 1.5–6.5 cm. long, 0.4–2 cm. wide, rounded or obtuse at the base, usually gradually attenuate to the acuminate apex, sometimes subobtuse, bright-green above, pale beneath, the costa prominent, the lateral veins obsolete; peduncles slender, mostly as long as the leaves, the flowers few, racemose, the pedicels slender, 1 cm. long or shorter, refracted after anthesis; hypanthium at anthesis about 1 mm. long, the calyx-teeth shorter, triangular, acuminate; corolla about 3 mm. long, pilose within; capsules 2.5–3.5 mm. long and broad; seeds minute, brown, scrobiculate.

TYPE LOCALITY: Guinea.
DISTRIBUTION: Adventive in Guadeloupe; native of tropical and subtropical Africa.

2. Pentodon Halei (T. & G.) A. Gray, Syn. Fl. N.Am.1^2: 28. 1884.

Hedyotis Halei T. & G. Fl. N. Am. 2: 42. 1841.
Oldenlandia Halei Chapm. Fl. S. U. S. 181. 1860.
Oldenlandia succulenta C. Wright; Griseb. Cat. Pl. Cub. 285. 1866.

Stems weak, usually much branched, rarely simple, 1–10 dm. long, the internodes mostly longer than the leaves; stipules 2 mm. long or shorter, scarious, often cuspidate and denticulate; petioles slender, marginate, 1.5 cm. long or shorter, the uppermost leaves short-petiolate; leaf-blades mostly ovate, sometimes broadly ovate, oval, elliptic, or lanceolate, 1–5 cm. long, 0.4–2.8 cm. wide, rounded to acute at the base and decurrent, acute or obtuse at the apex, rarely abruptly acuminate, bright-green above, pale beneath, the costa prominent beneath, the lateral veins obsolete; peduncles shorter than the leaves, sometimes obsolete, bearing 2–4 cymose or umbellate flowers, the pedicels clavate above, 7 mm. long or shorter, ascending or spreading in fruit; hypanthium at anthesis 1 mm. long, the calyx-lobes as long or longer, triangular-lanceolate, attenuate; corolla 2 mm. long, glabrous within; capsules 3–4 mm. long, longer than broad; seeds minute, brown, scrobiculate.

TYPE LOCALITY: Red River, near Alexandria, Louisiana.
DISTRIBUTION: In wet soil, Florida to Texas; Cuba.

11. OLDENLANDIA L. Sp. Pl. 119. 1753.

Listeria Neck. Elem. 1: 206. 1790.
Gerontogea Cham. & Schlecht. Linnaea 4: 154. 1829.
Edrastima Raf. Ann. Soc. Linn. Bordeaux 6: 269. 1834.
Stelmotis Raf. New Fl. 4: 101. 1838.
Stelmanis Raf. Aut. Bot. 13. 1840.

Annual or perennial herbs, sometimes suffrutescent, usually dichotomously branched, glabrous or pubescent. Leaves opposite, sessile or petiolate, the blades usually small. Stipules small, acute or acuminate, sometimes setose. Flowers small, in dichotomous axillary and terminal panicles or cymes or sometimes solitary; hypanthium turbinate or subglobose; calyx 4-parted, the lobes usually erect and remote in fruit, rarely approximate; corolla rotate or funnelform, the tube short or elongate, the throat usually glabrous, the limb 4-lobate, the

lobes obtuse, valvate. Stamens 4, inserted in the throat of the corolla; filaments short; anthers dorsifixed, usually exserted. Disk small. Ovary 2-celled; style slender, the 2 branches short, linear, obtuse; ovules numerous, rarely few, inserted on placentae attached to the base or rarely to the middle of the septum. Capsule small, usually membranaceous, terete or angulate, globose or turbinate, wholly attached to the hypanthium, loculicidally dehiscent at the apex or through its whole length, few-seeded. Seeds angulate or subglobose, the testa smooth or minutely granulate; endosperm fleshy; embryo clavate.

Type species, *Oldenlandia corymbosa* L.

Flowers in few-flowered cymes, usually long-pedicellate.
- Corolla inconspicuous, about 1 mm. long; plants annual. — 1. *O. corymbosa.*
- Corolla conspicuous, 3 mm. long or longer; plants annual or perennial.
  - Corolla 3 mm. long; flowers partly sessile in the forks of the branches; plants annual. — 2. *O. Greenei.*
  - Corolla 5–8 mm. long; flowers all pedicellate; plants perennial.
    - Leaf-blades lanceolate to broadly ovate, petiolate. — 3. *O. microtheca.*
    - Leaf-blades linear, sessile.
      - Leaves 4–12 mm. long, succulent; corolla abruptly dilated into the limb, 5–6 mm. long. — 4. *O. Pringlei.*
      - Leaves 15–45 mm. long, not succulent; corolla gradually dilated from base to throat, 8 mm. long. — 5. *O. xestosperma.*

Flowers solitary on slender axillary or terminal pedicels, or crowded in dense axillary fascicles.
- Pedicels shorter than the calyx.
  - Calyx-lobes eciliolate; plants perennial; capsule granulate. — 6. *O. Boscii.*
  - Calyx-lobes ciliolate; plants annual; capsule smooth.
    - Stems white-hirsutulous; leaves short-petiolate. — 7. *O. uniflora.*
    - Stems glabrous; leaves sessile or nearly so. — 8. *O. fasciculata.*
- Pedicels much longer than the calyx.
  - Corolla equaling or shorter than the calyx-lobes.
    - Stems scaberulous; leaf-blades oval or elliptic. — 9. *O. crystallina.*
    - Stems glabrous; leaf-blades linear or linear-lanceolate. — 10. *O. herbacea.*
  - Corolla much longer than the calyx-lobes.
    - Leaf-blades suborbicular, as broad as long; capsule turbinate, longer than broad. — 11. *O. callitrichoides.*
    - Leaf-blades elliptic to rounded-ovate, longer than broad; capsule subglobose, as broad as long.
      - Leaf-blades mostly ovate-deltoid, long-petiolate, broadly rounded or truncate at the base. — 12. *O. ovata.*
      - Leaf-blades mostly elliptic, sessile or short-petiolate, acute or obtuse at the base. — 13. *O. capillipes.*

1. Oldenlandia corymbosa L. Sp. Pl. 119. 1753.

Hedyotis corymbosa Lam. Tab. Encyc. 1: 272. 1791.
Gerontogea corymbosa Cham. & Schlecht. Linnaea 4: 154. 1829.

Annual, erect or decumbent, glabrous except upon the leaf-blades, usually much branched, the branches slender or stout, 1–4 dm. long, obtusely quadrangular; stipules 1–1.5 mm. long, whitish, truncate, bearing 1 or more long bristles; leaves sessile or subsessile, the blades linear to linear-lanceolate, 0.8–3.5 cm. long, 0.5–5 mm. wide, acute to attenuate at the apex, acute to attenuate at the base, herbaceous, deep-green above and usually scaberulous, pale and glabrous beneath, 1-nerved, the margins scaberulous, often subrevolute; flowers in axillary cymes, or rarely solitary, the cymes usually 3-flowered, the peduncles filiform, 5–15 mm. long, often recurved, the pedicels longer or shorter than the peduncles; hypanthium less than 1 mm. long, the calyx-lobes usually longer, triangular, acuminate; corolla white, short-salverform, equaling or slightly exceeding the calyx-lobes; capsule subglobose, 1.5–2 mm. broad and almost as long, bisulcate; seeds 0.2–0.3 mm. long, brown.

TYPE LOCALITY: Tropical America.
DISTRIBUTION: Costa Rica and Panama; Jamaica and the Lesser Antilles; also in South America and in tropical regions of the Old World.
ILLUSTRATIONS: Gaertn. Fruct. *pl. 30, f. 3;* Descourt. Fl. Ant. *pl. 50;* Plum. Ic. Burm. *pl. 212, f. 1;* Lam. Tab. Encyc. *pl. 61, f. 4.*

2. Oldenlandia Greenei A. Gray, Proc. Am. Acad. 19: 77. 1883.

Slender erect annual, 5–30 cm. high, simple or sparsely branched, glabrous throughout, the internodes few, equaling or shorter than the leaves; stipules minute, triangular, cuspidate; leaves sessile or the lower short-petiolate, the blades linear or spatulate-linear, or those of the

lowest leaves elliptic, 6–20 mm. long, 1–2.5 mm. wide, rounded at the apex, gradually attenuate to the base; flowers partly sessile or short-pedicellate in the forks of the branches, partly in lax few-flowered pedunculate axillary cymes; hypanthium less than 1 mm. long, the calyx-lobes as long or slightly longer, thick, narrowly oblong or lance-oblong, obtuse or acute, distant in fruit; corolla 3 mm. long (white?), the tube slender, longer than the calyx-lobes, the lobes shorter than the tube, narrowly oblong; capsule hemispheric or subglobose, 2 mm. long and broad, shallowly sulcate, smooth; seeds minute, angulate.

TYPE LOCALITY: Pinos Altos Mountains, New Mexico.
DISTRIBUTION: Southwestern New Mexico and southeastern Arizona.

3. Oldenlandia microtheca (Schlecht. & Cham.) DC. Prodr. 4: 428. 1830.

Gerontogea microtheca Schlecht. & Cham. Linnaea 5: 169. 1830.
Gerontogea Deppeana Schlecht. & Cham. Linnaea 5: 169. 1830.
Oldenlandia Deppeana DC. Prodr. 4: 428. 1830.
Hedyotis Deppeana Steud. Nom. Bot. ed. 2. 1: 727. 1840.
Hedyotis microtheca Steud. Nom. Bot. ed. 2. 1: 728. 1840.
Oldenlandia latifolia Mart. & Gal. Bull. Acad. Brux. 11[1]: 235. 1844.
Hedyotis latifolia Walp. Rep. 6: 55. 1846.

Perennial, erect or decumbent, sometimes geniculate and rooting at the nodes, 1–4 dm. high, copiously branched, the branches slender, glabrous, or puberulent at the nodes, the internodes mostly longer than the leaves; stipules 1–2 mm. long, the margins fimbriate, the lobes mostly gland-tipped; petioles slender, 2–5 mm. long, glabrous; leaf-blades mostly ovate or lanceolate, sometimes elliptic or broadly ovate, 1–4.5 cm. long, 2.5–18 mm. wide, acute to attenuate at the apex, acute or acuminate at the base, usually rather abruptly so, thin, glabrous or scaberulous on the upper surface, beneath slightly paler, glabrous or scaberulous, the costa slender, prominent beneath, the lateral veins evident but very slender; flowers in terminal and axillary cymes, the cymes slender-pedunculate, few-flowered, lax, the pedicels 3–12 mm. long, filiform, glabrous, usually erect or ascending; hypanthium less than 1 mm. long, glabrous, the calyx-lobes as long or longer, triangular-lanceolate, attenuate, distant in fruit; corolla 5–6 mm. long, white, the tube greenish, obconic, much longer than the calyx-lobes, the lobes much shorter than the tube, papillose inside; style exserted; capsule hemispheric, 2 mm. long and slightly broader, glabrous, bisulcate, smooth; seeds minute, angulate, brownish-black.

TYPE LOCALITY: Papantla, Veracruz.
DISTRIBUTION: San Luis Potosí to Puebla and Yucatán.

4. Oldenlandia Pringlei B. L. Robinson, Proc. Am. Acad. 27: 169. 1892.

Cespitose perennial, from long slender scaly rhizomes, about 1 dm. high, erect or ascending, much branched, the branches slender, granular-puberulent, densely leafy; stipules minute, triangular, succulent; leaves sessile, often with fascicles of leaves in their axils, the blades linear, 4–12 mm. long, 0.6–1.3 mm. wide, acute at the apex, slightly narrowed at the base, very thick and succulent, glaucescent, granular-puberulent or glabrous; flowers mostly in axillary or terminal cymes, or rarely solitary in the axils and pedicellate, the cymes few-flowered, pedunculate, the branches granular-puberulent, the pedicels 6 mm. long or shorter, sometimes wanting; hypanthium about 1 mm. long, granular-puberulent or glabrous, the calyx-lobes shorter, ovate-oblong, obtuse or acutish; corolla salverform, 5–6 mm. long, the tube stout, cylindric, several times as long as the calyx-lobes, the lobes oblong, obtuse or acutish, much shorter than the tube, papillose within; anthers included or short-exserted; capsule obovoid-turbinate, 2.5 mm. long, terete, smooth; seeds minute, obtusely angulate.

TYPE LOCALITY: Alkaline plains, Hacienda de Angostura, San Luis Potosí.
DISTRIBUTION: San Luis Potosí.

5. Oldenlandia xestosperma Rob. & Greenm. Proc. Am. Acad. 32: 41. 1896.

Erect perennial, 2–6 dm. high, slightly puberulent on the stems but elsewhere glabrous, the stems few, from a suffrutescent base, sparsely branched above, the branches slender, terete,

the internodes shorter than the leaves; stipules 1–2 mm. long, triangular, cuspidate or laciniate-lobate, the lobes gland-tipped; leaves sessile, erect or ascending, linear, 1.5–4.5 cm. long, 1–2.5 mm. wide, attenuate at each end; flowers cymose, the cymes terminal, long-pedunculate, few-flowered, the pedicels slender, 2–7 mm. long; hypanthium about 1 mm. long, the calyx-lobes longer, lance-subulate, attenuate; corolla funnelform, about 8 mm. long, purplish, the tube narrowly obconic, several times as long as the calyx-lobes, the lobes oblong-ovate or ovate-triangular, obtuse, about one third as long as the tube; capsule obovoid, 4 mm. long; seeds minute, subangulate, yellowish-brown, lustrous.

TYPE LOCALITY: Open glades, Sierra de San Felipe, Oaxaca, at an altitude of 2400 meters.
DISTRIBUTION: Oaxaca.

6. **Oldenlandia Boscii** (DC.) Chapm. Fl. S. U. S. 181. 1860.

Hedyotis Boscii DC. Prodr. **4**: 420. 1830.

Perennial, glabrous throughout, usually with slender rootstocks, erect or decumbent, 1–3 dm. high, the stems usually numerous and much branched, the branches slender, subangulate, the internodes mostly shorter than the leaves; stipules 1–2 mm. long, the lobes bicuspidate or laciniate-dentate, the teeth tipped with red glands; leaves sessile or short-petiolate, mostly divaricate, the blades linear or elliptic-linear, 8–25 mm. long, 1–4 mm. wide, acute to attenuate at the apex, attenuate at the base, thin, bright-green, 1-nerved; flowers few or solitary in the axils, subsessile; hypanthium about 1 mm. long, the calyx-lobes as long or longer, lance-triangular, acuminate, approximate in fruit; corolla subrotate, white, about half as long as the calyx-lobes; capsule subglobose, 2–2.5 mm. long, bisulcate, coarsely granulate; seeds minute, angulate, brownish-black.

TYPE LOCALITY: South Carolina.
DISTRIBUTION: Wet, sandy soil, South Carolina to Florida, Arkansas, and Texas.

7. **Oldenlandia uniflora** L. Sp. Pl. 119. 1753.

Hedyotis Auricularia Walt. Fl. Car. 85. 1788. Not *H. Auricularia* L. 1753.
Oldenlandia glomerata Michx. Fl. Bor. Am. **1**: 83. 1803.
Hedyotis virginica Spreng. Pug. **2**: 34. 1815.
Hedyotis glomerata Ell. Bot. S. C. & Ga. **1**: 188. 1816.
Edrastima uniflora Raf. Act. Soc. Linn. Bordeaux **6**: 269. 1834.
Stelmotis glomerata Raf. New Fl. **4**: 101. 1838.
Stelmanis glomerata Raf. Aut. Bot. 13. 1840.

Erect or decumbent annual, the stems simple or often much branched, 0.5–6 dm. long, the branches slender, subangulate, white-hirsutulous along the angles, at least above, often densely so, the internodes usually longer than the leaves; stipules 1.5–3 mm. long, the lobes mostly bicuspidate, sometimes laciniately lobed or dentate, white-hirsute; petioles stout, 2.5 mm. long or shorter; leaf-blades mostly ovate, sometimes oval or ovate-elliptic, 6–25 mm. long, 2.5–12 mm. wide, acute or obtuse at the apex, mucronulate, obtuse to acute at the base, thin, bright-green or yellowish-green, scaberulous or hirsutulous along the veins, paler beneath, the lateral veins nearly obsolete; flowers axillary, solitary or densely clustered, subsessile or short-pedicellate, the pedicels shorter than the calyx; hypanthium about 1 mm. long, the calyx-lobes longer, lanceolate to broadly ovate, acute or acuminate, ciliolate, approximate in fruit; corolla subrotate, white, much shorter than the calyx-lobes; capsule subglobose, 1.5–2 mm. long, bisulcate, usually densely white-hirsutulous; seeds minute, angulate, brownish-black, dull.

TYPE LOCALITY: Virginia.
DISTRIBUTION: In moist or wet soil, southern New York to Florida and Texas; Cuba and the Isle of Pines.
ILLUSTRATIONS: Britt. & Brown, Ill. Fl. *f. 3402*; ed. 2. *f. 3922;* Rob. & Fern. Man. *f. 917.*

8. **Oldenlandia fasciculata** (Bertol.) Small, Fl. SE. U. S. 1106. 1903.

Hedyotis glomerata T. & G. Fl. N. Am. **2**: 42, in part, 1841. Not. *H. glomerata* Ell. 1816.
Hedyotis fasciculata Bertol. Mem. Accad. Bologna **2**: 306. 1850.
Oldenlandia glomerata A. Gray, Syn. Fl. N. Am. **1**[2]: 27, in part. 1884. Not *O. glomerata* Michx. 1803.
Oldenlandia littoralis C. Mohr, Bull. Torrey Club **24**: 27. 1897.

Annual, erect or decumbent, the stems much or sparsely branched, 1–6 dm. long, the branches slender, nearly terete, glabrous or slightly pubescent at the nodes, the internodes

usually longer than the leaves; stipules 2–3 mm. long, the lobes usually long-bicuspidate, sometimes with numerous lobes or teeth, often white-hirsutulous; leaves sessile, the blades usually ovate-oblong or elliptic-oblong, 8–25 mm. long, 2.5–6 mm. wide, acute or acuminate at the apex, mucronulate, acute or obtuse at the base, yellowish-green, scaberulous on the margins and sometimes on the costa, the lateral veins usually obsolete; flowers solitary or densely clustered in the axils, sessile or nearly so; hypanthium less than 1 mm. long, glabrous, the calyx-lobes usually shorter, ovate-deltoid or oblong-ovate, acute, mucronate, scaberulo-ciliolate, approximate in fruit; corolla rotate, white, much shorter than the calyx-lobes; capsule subglobose, 2 mm. long, bisulcate, smooth, glabrous; seeds minute, angulate.

TYPE LOCALITY: Alabama.
DISTRIBUTION: In wet sandy soil, Florida to Mississippi; Porto Rico.
ILLUSTRATIONS: Mem. Accad. Bologna **2**: *pl. 17, f. 2;* Contr. U. S. Nat. Herb. **6**: *pl. 8.*

9. **Oldenlandia crystallina** Roxb. Fl. Ind. **2**: 443. 1824.

Annual, 5–8 cm. high, diffusely branched, the branches stout, angulate, scaberulous, the internodes shorter than the leaves; stipules about 1 mm. long, bicuspidate; petioles stout, 1–3 mm. long; leaf-blades elliptic or lance-elliptic, 6–17 mm. long, 2.5–6 mm. wide, acute or obtuse at the apex, acute or obtuse at the base, thin, dark-green above and sparsely scaberulous, paler beneath and scaberulous along the costa, the lateral veins obsolete, the margins scaberulous; flowers axillary, solitary, or rarely on 2-flowered peduncles, the pedicels slender, 5 mm. long or shorter; hypanthium 1 mm. long, glabrous, the calyx-lobes about as long, triangular-lanceolate, acuminate, ciliolate, approximate and somewhat accrescent in fruit; corolla salverform, about equaling the calyx-lobes, white; capsule obovoid, 2.5 mm. long, shallowly bisulcate, angulate, glabrous; seeds minute, subangulate, blackish-brown.

TYPE LOCALITY: Bengal.
DISTRIBUTION: Adventive in Jamaica; native of India and the East Indies.

10. **Oldenlandia herbacea** (L.) DC. Prodr. **4**: 425. 1830.

Hedyotis herbacea L. Sp. Pl. 102. 1753.
Hedyotis commutata Schultes, in R. & S. Syst. Veg. Mant. **3**: 134. 1827.

Erect or procumbent annual, glabrous throughout, the stems usually much branched, 2–10 dm. long, slender, subangulate, the internodes equaling or longer than the leaves; stipules 2–3 mm. long, bicuspidate or tricuspidate; leaves sessile, spreading or reflexed, the blades usually linear, sometimes linear-lanceolate, 1.5–7 cm. long, 1–8 mm. wide, long-attenuate at the apex or rarely acute or acutish, acute to attenuate at the base, thin, pale beneath, the lateral veins usually obsolete; flowers axillary, solitary or clustered, the pedicels filiform, 8–25 mm. long, usually reflexed in fruit; hypanthium about 1.5 mm. long, the calyx-lobes about as long, lanceolate, acuminate, distant in fruit, sometimes ciliolate; corolla salverform, white, about as long as the calyx-lobes; capsule depressed-globose, 2.5–3 mm. long, 3–4.5 mm. wide, shallowly bisulcate, smooth; seeds minute, pale-brown, subangulate, finely reticulate.

TYPE LOCALITY: Ceylon.
DISTRIBUTION: Honduras to Panama; West Indies; also in South America, Africa, India, and the East Indies.
ILLUSTRATIONS: Rheede, Hort. Mal. **10**: *pl. 23, 35;* Gaertn. Fruct. *pl. 30;* Lam. Tab. Encyc. *pl. 62.*

11. **Oldenlandia callitrichoides** Griseb. Mem. Am. Acad. II. **8**: 506. 1863.

Prostrate perennial, forming dense mats, the branches filiform, glabrous, the internodes longer than the leaves; stipules minute, cuspidate; petioles slender, often as long as the blades; leaf-blades suborbicular or ovate-orbicular, 1.5–3.5 mm. long and broad, obtuse or broadly rounded at the apex, usually truncate at the base and abruptly short-decurrent, thin, bright-green, sparsely white-hirsutulous on the upper surface or glabrate, glabrous beneath, the lateral veins obsolete, the costa obscure; flowers axillary, solitary, the pedicels slender-filiform, 5–25 mm. long, often flexuous; hypanthium less than 1 mm. long, the calyx-lobes ovate-triangular, obtuse or acutish, slightly separated in fruit, ciliolate; corolla salverform, white, about 2 mm. long, much exceeding the calyx-lobes; stamens usually exserted; capsule narrowly turbinate,

2.5–3 mm. long, 1 mm. broad at the apex, green, shallowly bisulcate, angulate, minutely scaberulous or glabrate; seeds minute, subangulate, blackish-brown, reticulate.

TYPE LOCALITY: Eastern Cuba.
DISTRIBUTION: In moist soil, Bahamas, Cuba, and Guadeloupe; Yucatán.

12. **Oldenlandia ovata** S. Wats. Proc. Am. Acad. 18: 97. 1883.

Annual, procumbent, diffusely branched, the branches very slender, 1–2 dm. long, glabrous, the internodes mostly longer than the leaves; stipules minute, bicuspidate; petioles slender, 5 mm. long or shorter, scaberulo-ciliolate; leaf-blades ovate or ovate-deltoid, 7–13 mm. long, 3–9 mm. wide, acutish to acuminate at the apex or rarely rounded and mucronulate, rounded to truncate at the base and abruptly short-decurrent, thin, hirsutulo-scaberulous on the upper surface or glabrate, slightly paler beneath and glabrous, the costa very slender, the lateral veins obsolete; flowers axillary, mostly solitary, sometimes on 2-flowered peduncles, the pedicels filiform, 4–15 mm. long, glabrous, ascending or spreading; hypanthium less than 1 mm. long, the calyx-lobes about as long, ovate-oblong, acute or acutish, remote in fruit; corolla salverform, about 3 mm. long, white, the tube about three times as long as the calyx-lobes, the lobes narrowly triangular, acute, papillose within; anthers short-exserted; capsule hemispheric or subglobose, 1.5 mm. high, smooth, glabrous; seeds minute, angulate.

TYPE LOCALITY: Guajuco, Nuevo León.
DISTRIBUTION: Tamaulipas and Nuevo León.

13. **Oldenlandia capillipes** Griseb. Cat. Pl. Cub. 130. 1866.

Prostrate annual (?), the stems numerous, very slender, 1–4 dm. long, simple or sparsely branched, glabrous, the internodes much longer than the leaves; stipules minute, bicuspidate; leaves sessile or nearly so, the blades mostly elliptic, sometimes oval or lanceolate, 2.5–9 mm. long, 1–3.5 mm. wide, obtuse or acute at the apex, obtuse or acute at the base, thin, minutely scaberulous or glabrate on the upper surface, slightly paler beneath and glabrous, the lateral veins mostly obsolete; flowers axillary and terminal, solitary, rarely on 2-flowered peduncles, the pedicels slender, 4–12 mm. long, glabrous; hypanthium less than 1 mm. long, the calyx-lobes mostly shorter, triangular, acutish, remote in fruit; corolla salverform, white, about 4 mm. long, the tube several times as long as the calyx-lobes; capsule hemispheric or subglobose, 2 mm. high, bisulcate, smooth, glabrous; seeds minute, angulate.

TYPE LOCALITY: Western Cuba.
DISTRIBUTION: Known only from the type locality.

EXCLUDED SPECIES

OLDENLANDIA GALIOIDES Willd.; Schultes, in R. & S. Syst. Veg. Mant. **3**: 144. 1827. According to Urban (Symb. Ant. **4**: 581. 1911), this is *Mollugo verticillata* L.

OLDENLANDIA UMBELLATA L. Sp. Pl. 119. 1753. Reported from Mexico by De Candolle (Prodr. **4**: 426. 1830); the report was probably based upon an incorrect identification.

12. **CLAVENNA** Neck. Elem. 2: 145. 1790.

Dunalia Spreng. Pug. **2**: 25. 1815. Not *Dunalia* R. Br. 1814.
Lucya DC. Prodr. **4**: 434. 1830.
Clavennaea Kuntze; Post & Kuntze, Lex. Gen. Phan 128. 1903.

Prostrate perennial herbs with tuberous-thickened roots, the stems slender, cespitose. Stipules minute, interpetiolar, dentate or setiferous. Leaves opposite, petiolate, the blades small, broad. Flowers solitary, axillary, pedicellate, white; hypanthium hemispheric, hispidulous; calyx 4- or rarely 5-dentate, the teeth alternating with the same number of smaller ones, persistent; corolla funnelform-campanulate, 4- or rarely 5-lobate, the lobes short, obtuse, valvate. Stamens 4 or rarely 5, inserted in the corolla-tube; filaments short; anthers small, dorsifixed. Disk inconspicuous. Ovary 2-celled; style short, the 2 branches obtuse; ovules few, inserted on placentae adnate to the septum. Capsule one fourth superior, broadly hemispheric, subdidymous, coriaceous, 2-celled, few-seeded, loculicidally bivalvate, the valves re-

flexed after dehiscence. Seeds crateriform, peltate, nearly smooth; endosperm corneous; embryo minute, clavate.

Type species, *Peplis tetrandra* L.

1. Clavenna tetrandra (L.) Standley.

Peplis tetrandra L. Amoen. Acad. 5: 413. 1760.
Hedyotis tuberosa Sw. Obs. 136. 1791.
Oldenlandia tuberosa Lam. Encyc. 4: 535. 1797.
Lucya tuberosa DC. Prodr. 4: 434. 1830.
Lucya tetrandra K. Schumann, in E. & P. Nat. Pfl. 4[4]: 27. 1891.
Dunalia tetrandra Kuntze, Rev. Gen. 281. 1891.

Stems few or numerous, 5–15 cm. long, simple or sparsely branched, striate-angulate, minutely scaberulous or glabrate, the internodes short or elongate; stipules 0.5 mm. long or shorter; petioles slender, 1–4 mm. long; leaf-blades ovate to rounded-ovate, oval, or elliptic, 5–15 mm. long, 2–9 mm. wide, broadly rounded to acute at the base, usually abruptly decurrent, acute to very obtuse at the apex, thin, bright-green, slightly paler beneath, sparsely hispidulous on both surfaces or glabrate, 3- or 5-nerved, the lateral nerves often obsolete; pedicels filiform, deflexed or spreading after anthesis, 6 mm. long or shorter; hypanthium and calyx at anthesis 1.5 mm. long, densely hispidulous; corolla equaling or slightly exceeding the calyx-teeth; capsule 2.5 mm. long, 3.5–4 mm. broad; seeds oval, 1.5 mm. long, black.

TYPE LOCALITY: Jamaica.
DISTRIBUTION: In crevices of moist cliffs, Greater Antilles.
ILLUSTRATIONS: Sw. Obs. *pl. 1, f. 2;* Jacq. Sel. Stirp. Am. *pl. 180, f. 29.*

13. HOUSTONIA L. Sp. Pl. 101. 1753.

Poiretia J. F. Gmel. Syst. 2: 263. 1791.
Panetos Raf. Ann. Gén. Sci. Phys. 5: 227. 1820.
Chamisme Raf.; Steud. Nom. Bot. ed. 2. 1: 776, as synonym. 1840.
Stenaria Raf.; Steud. Nom. Bot. ed. 2. 1: 776. 1840.

Erect or prostrate herbs or rarely low shrubs, glabrous or pubescent. Leaves opposite, sometimes with fascicles of leaves in their axils, sessile or petiolate, the blades broad or narrow. Stipules entire, dentate, or laciniate, persistent. Flowers often dimorphous, white, purple, or blue, axillary or in dichotomous cymes, the pedicels erect or recurved in fruit; hypanthium terete or compressed, globose, oblong, or turbinate; calyx-lobes 4, sometimes with interposed glands, remote, erect or recurved; corolla funnelform or salverform, the tube short or elongate, glabrous or pilose within, the lobes 4, valvate, glabrous or pilose within. Stamens 4, inserted in the throat of the corolla; filaments short or elongate; anthers dorsifixed, oblong or linear. Disk inconspicuous. Ovary 2-celled; style slender, the branches 2, linear; ovules few or numerous, the placentae attached by the middle to the septum. Capsule one fourth to three fourths superior, few- or many-seeded, loculicidally dehiscent. Seeds crateriform to concavo-convex, peltate, the ventral face concave; endosperm corneous; embryo clavate.

Type species, *Houstonia caerulea* L.

Pedicels recurved in fruit.
  Leaf-blades mostly suborbicular; plants prostrate, perennial, with root-stocks or with slender branches rooting at the nodes. — 1. *H. procumbens.*
  Leaf-blades linear or oblong-linear; plants mostly erect or ascending, or, if prostrate, annual.
    Plants perennial.
      Corolla 15–25 mm. long. — 2. *H. rubra.*
      Corolla 2.5–4 mm. long. — 3. *H. Wrightii.*
    Plants annual.
      Corolla 6–7 mm. long; calyx-lobes 3–4 mm. long. — 4. *H. humifusa.*
      Corolla 2–3 mm. long; calyx-lobes 2 mm. long or shorter.
        Hypanthium glabrous, minutely papillose; pedicels shorter than the capsules. — 5. *H. prostrata.*
        Hypanthium hirsutulous.
          Pedicels equaling or longer than the capsules; plants erect. — 6. *H. subviscosa*
          Pedicels shorter than the capsules; plants procumbent. — 7. *H. Croftiae.*
Pedicels erect or ascending in fruit.
  Plants annual.
    Corolla scarcely exceeding the calyx-lobes. — 8. *H. parviflora.*
    Corolla 4–9 mm. long, much exceeding the calyx-lobes.
      Capsule as long as broad or longer; leaf-blades linear or nearly so.
        Flowers mostly sessile; capsule subglobose. — 9. *H. arenaria.*

Flowers all or mostly on long filiform pedicels; capsule turbinate.
Calyx-lobes obtuse, equaling or shorter than the hypanthium at anthesis; capsule about as broad as long; corolla 4–6 mm. long. 10. *H. Brandegeana.*
Calyx-lobes very acute, longer than the hypanthium at anthesis; capsule longer than broad; corolla 7–8 mm. long. 11. *H. asperuloides.*
Capsule much broader than long; leaf-blades elliptic or broader.
Corolla-tube not exceeding the calyx-lobes. 12. *H. minima.*
Corolla-tube twice as long as the calyx-lobes or longer. 13. *H. pusilla.*
Plants perennial.
Plants with slender creeping rootstocks or with long creeping stems.
Pedicels several times as long as the capsules; stems herbaceous.
Stems erect. 14. *H. caerulea.*
Stems creeping.
Corolla 10–12 mm. long; leaves rounded or obtuse at the apex. 15. *H. serpyllifolia.*
Corolla about 7 mm. long; leaves mostly acute. 16. *H. umbratilis.*
Pedicels about as long as the capsules; stems suffruticose. 17. *H. serpyllacea.*
Plants erect or ascending, never with creeping rootstocks.
Capsule more than half inferior.
Stems glabrous.
Corolla 4–7 mm. long; stems herbaceous.
Capsule longer than broad; leaf-blades mostly linear. 25. *H. angustifolia.*
Capsule broader than long; leaf-blades mostly ovate. 18. *H. gracilis.*
Corolla 10–15 mm. long.
Branches terete, herbaceous; leaves not fasciculate. 19. *H. brevipes.*
Branches angulate, fruticose; leaves more or less fasciculate. 20. *H. mucronata.*
Stems hirtellous or scabrous.
Flowers in cymes; leaves not acerose; corolla-tube minutely hirtellous outside. 21. *H. peninsularis.*
Flowers mostly solitary; leaves acerose; corolla-tube glabrous.
Leaves mostly verticillate; flowers sessile or nearly so; stems fruticose almost throughout. 22. *H. acerosa.*
Leaves opposite; flowers mostly pedicellate; stems fruticose only below. 23. *H. polypremoides.*
Capsule half or less than half inferior.
Plants fruticose throughout; leaves fasciculate. 24. *H. fasciculata.*
Plants herbaceous; leaves not fasciculate.
Capsule broader than long.
Free portion of the capsule scabro-hirtellous; leaves filiform. 33. *H. longipes.*
Free portion of the capsule glabrous; leaves linear to ovate.
Cauline leaves linear. 26. *H. tenuifolia.*
Cauline leaves broadly lanceolate to broadly ovate.
Corolla 6–8 mm. long; calyx-lobes at anthesis lance-linear, about 3 times as long as the hypanthium. 27. *H. purpurea.*
Corolla 9–11 mm. long; calyx-lobes at anthesis ovate-oblong or lance-oblong, less than twice as long as the hypanthium. 28. *H. montana.*
Capsule as long as broad or longer.
Plants with basal rosettes of leaves at time of flowering, the leaves copiously ciliate. 29. *H. canadensis.*
Plants without basal rosettes of leaves at time of flowering, the leaves not ciliate but sometimes scabrous on the margins.
Free portion of the capsule glabrous.
Leaves filiform or narrowly linear; capsule 1.5 mm. long. 30. *H. floridana.*
Leaves all or most of them oblong-linear or broader; capsule 2–4 mm. long.
Calyx-lobes in fruit much exceeding the capsule, about twice as long as the hypanthium. 31. *H. lanceolata.*
Calyx-lobes in fruit little if at all exceeding the capsule, about as long as the hypanthium. 32. *H. longifolia.*
Free portion of the capsule very scabrous.
Capsule about 1.5 mm. long; leaves lance-linear, pungent; flowers in small dense cymes, mostly on very short pedicels. 34. *H. rupicola.*
Capsule about 2.5 mm. long; leaves narrowly linear, not pungent; flowers mostly solitary, on long pedicels. 35. *H. Palmeri.*

1. **Houstonia procumbens** (Walt.) Standley.

Anonymos procumbens Walt. Fl. Car. 86. 1788.
Poirelia procumbens J. F. Gmel. Syst. 2: 263. 1791.
Houstonia rotundifolia Michx. Fl. Bor. Am. 1: 85. 1803.
Anotis rotundifolia DC. Prodr. 4: 433. 1830.
Hedyotis veronicaefolia Steud. Nom. ed. 2. 1: 729. 1840.
Hedyotis rotundifolia T. & G. Fl. N. Am. 2: 38. 1841.
Oldenlandia rotundifolia A. Gray; Chapm. Fl. S. U. S. 180. 1860.

Prostrate perennial, with filiform rootstocks or with long slender stems rooting at the nodes, copiously branched, the branches quadrangular, hirsutulous or glabrous, the internodes short or elongate; stipules minute, ciliate or naked; petioles 4 mm. long or shorter, usually hirsutulous; leaf-blades mostly suborbicular, sometimes oval or obovate, 5–15 mm. long, 2.5–15 mm. wide, broadly rounded at the apex or sometimes acutish, usually rounded at the base but sometimes cuneate, thin, bright-green above and hirsutulous or glabrous, paler beneath and glabrous, 1-nerved, the margins plane or revolute, ciliate; flowers axillary, solitary, the pedicels slender, 16 mm. long or shorter, recurved in fruit, the plants in summer often producing fertile apetalous flowers; hypanthium about 1 mm. long, glabrous or hirsutulous; calyx-lobes as long, ovate-oblong, acutish; corolla salverform, 9–15 mm. long, white, the tube slender, ampliate above, the lobes ovate or oblong, acute, shorter than the tube, the throat hirsutulous; capsule subdidymous, 4–5 mm. broad, almost half inferior, hirsutulous or glabrous; seeds crateriform, rounded, 1–1.5 mm. broad, black, rough-scrobiculate.

TYPE LOCALITY: Carolina.
DISTRIBUTION: In low, sandy soil, South Carolina to Florida and Louisiana.

2. **Houstonia rubra** Cav. Ic. 5: 48. 1799.

Hedyotis rubra A. Gray, Mem. Am. Acad. II. 4: 61. 1849.
Oldenlandia rubra A. Gray, Pl. Wright. 2: 68. 1853.
Houstonia saxicola Eastw. Proc. Calif. Acad. II. 6: 291. 1896.

Densely cespitose perennial, 4–7 cm. high, from a long slender taproot, much branched below, the stems stout, scaberulous or glabrous, minutely papillose, densely leafy, the internodes very short; stipules minute, with a few short glanduliferous setae; leaves sessile, the lowest oblanceolate-linear, the upper linear, 5–25 mm. long, about 1 mm. wide, mucronate, thick, minutely scaberulous and papillose or glabrous, the margins more or less revolute; flowers axillary, solitary, short-pedicellate, the pedicels recurved in fruit; hypanthium very short, glabrous, minutely papillose; calyx-lobes linear-subulate, about 2 mm. long, somewhat elongate in fruit; corolla purple, rarely white, salverform, 1.5–3 cm. long, the tube slender, ampliate above, glabrous outside, the 4 lobes lance-oblong, 5–8 mm. long, acute, minutely papillose within; anthers 2 mm. long; capsule depressed-globose, subdidymous, 3–5 mm. broad, two thirds superior, minutely papillose; seeds cymbiform, 1–1.5 mm. long, black, scrobiculate.

TYPE LOCALITY: Ixmiquilpan, Hidalgo.
DISTRIBUTION: Dry hillsides, southeastern Utah, Arizona, and New Mexico to Puebla.
ILLUSTRATION: Cav. Ic. *pl. 474, f. 1.*

3. **Houstonia Wrightii** A. Gray, Proc. Am. Acad. 17: 202. 1882.

Hedyotis humifusa A. Gray, Pl. Wright. 1: 82, in part. 1852. Not *H. humifusa* A. Gray, 1850.
Oldenlandia humifusa A. Gray, Pl. Wright. 2: 68, in part. 1853.

Cespitose perennial, erect or spreading, 5–20 cm. high, the stems numerous, stout or slender, mostly simple below and branched above, the branches quadrangular, scaberulous or minutely papillose, the internodes usually shorter than the leaves; stipules often conspicuous, 2.5 mm. long or shorter, white, obtuse or subtruncate, entire or minutely denticulate; leaves opposite, sessile, linear, oblong-linear, or the lowest narrowly spatulate, 6–25 mm. long, 0.6–4 mm. wide, acute or obtuse at the apex, thick, glabrous, 1-nerved, the margins often revolute; flowers axillary, usually in terminal cymose inflorescences, short-pedicellate, the pedicels recurved after anthesis; hypanthium glabrous, papillose; calyx-lobes lance-linear, 1.5–2 mm. long, acute; corolla salverform, purplish, 2.5–4 mm. long, glabrous outside, the tube short and thick, the lobes oblong or ovate-oblong, acute or obtuse, equaling or only half as long as

the tube; anthers about 1 mm. long; capsule subdidymous, 3–3.5 mm. wide, about three fourths superior, minutely papillose; seeds cymbiform, 1–1.5 mm. long, black, minutely scrobiculate.

TYPE LOCALITY: West of the Pass of the Limpio, Texas.
DISTRIBUTION: Western Texas to Arizona, and southward to Veracruz and Puebla.

4. **Houstonia humifusa** A. Gray, Proc. Am. Acad. 4: 314. 1858.

Hedyotis humifusa A. Gray, Bost. Jour. Nat. Hist. 6: 216. 1850.
Oldenlandia humifusa A. Gray, Pl. Wright. 2: 68. 1853.

Erect or spreading annual, often forming mats 15 cm. in diameter, usually densely branched, the branches slender or stout, scaberulous, the internodes usually shorter than the leaves; stipules 2.5 mm. long or shorter, white, copiously setiferous; leaves sessile or the lowest short-petiolate, the blades mostly linear, those of the lowest leaves often oblanceolate, 10–15 mm. long, 0.6–3 mm. wide, mucronate, scaberulous, the margins more or less revolute; flowers axillary, the pedicels very short, recurved after anthesis; hypanthium scaberulous; calyx-lobes setaceous-subulate, 3–4 mm. long; corolla slender-funnelform, 6–7 mm. long, pale-purple, glabrous outside, the lobes oblong, acute, shorter than the tube, white-papillose inside; capsule subdidymous, 2.5 mm. broad, about three fourths superior, papillose; seeds cymbiform, 1.5 mm. long, black, scrobiculate.

TYPE LOCALITY: Open gravelly banks of streamlets, near Fredericksburg, Texas.
DISTRIBUTION: Western Texas and southern New Mexico.

5. **Houstonia prostrata** Brand. Zoe 5: 105. 1901.

Houstonia parvula Brand. Zoe 5: 221. 1905.

Depressed or prostrate annual, much branched, the branches slender, 2–8 cm. long, glabrous but minutely whitish-papillose, the internodes longer or shorter than the leaves; stipules minute, usually sparsely setiferous; leaves opposite, sessile, or the lowest short-petiolate, the blades linear or linear-oblanceolate, 5–12 mm. long, 0.6–2 mm. wide, obtuse or acute, glabrous, papillose on the upper surface, 1-nerved, the margins often revolute; flowers axillary, the pedicels stout, much shorter than the capsules, recurved after anthesis; hypanthium less than 1 mm. long, glabrous; calyx-lobes lance-oblong, acutish, about as long as the hypanthium; corolla funnelform, purplish-white, only slightly exceeding the calyx-lobes, glabrous outside; capsule subdidymous, 2.5–3 mm. broad, about three fourths inferior, minutely papillose; seeds cymbiform, 1.5 mm. long, black.

TYPE LOCALITY: Near La Palma, Lower California.
DISTRIBUTION: On sand or gravel beds, Sinaloa and the Cape Region of Lower California.

6. **Houstonia subviscosa** (C. Wright) A. Gray, Proc. Am. Acad. 4: 314. 1858.

Oldenlandia subviscosa C. Wright; A. Gray, Pl. Wright. 2: 68. 1853.

Erect annual, 4–15 cm. high, sparsely branched, the branches slender, ascending, short-hirtellous with coarse whitish hairs, more or less viscid, the internodes mostly equaling or exceeding the leaves; stipules about 0.5 mm. long, scarious, setulose-ciliate; leaves opposite, sessile, linear, 5–15 mm. long, 1 mm. wide or narrower, acute, hirtellous and viscid or glabrate, the margins revolute; flowers axillary, solitary, the pedicels 3–8 mm. long, filiform, hirtellous or glabrate, recurved or refracted after anthesis or rarely only divaricate; hypanthium less than 1 mm. long, minutely viscid-hirtellous; calyx-lobes lance-subulate, acute, slightly elongate in fruit; corolla salverform, 2.5–3 mm. long, white; capsule subdidymous, 2.5–4 mm. broad, scabro-hirtellous; seeds cymbiform, rounded-oval, 1 mm. long, minutely scrobiculate, black.

TYPE LOCALITY: Between Lagrange and Lockhart Springs, Fayette County, Texas.
DISTRIBUTION: Western Texas.

7. **Houstonia Croftiae** Britt. & Rusby, Trans. N. Y. Acad. Sci. 7: 10. 1887.

Spreading annual, much branched, the branches slender, 1–4 cm. long, sparsely hirtellous, the internodes equaling or shorter than the leaves; stipules minute, scarious, laciniate-den-

tate; leaves opposite, sessile or nearly so, oblanceolate or linear-oblanceolate, 5–15 mm. long, 2.5 mm. wide or narrower, obtuse or acute, usually hirsutulous on the costa above, glabrous beneath, ciliate near the base, 1-nerved, the margins revolute; flowers axillary, the pedicels shorter than the calyx; hypanthium about 1 mm. long, hirtellous; calyx-lobes lance-oblong, acute; corolla salverform, 3 mm. long, white; capsule depressed-globose, subdidymous, 2–3 mm. broad, about one fourth inferior, hirtellous; seeds cymbiform, rounded-oval, black, with a short hilar ridge.

TYPE LOCALITY: San Diego, Duval County, Texas.
DISTRIBUTION: Known only from the type locality.

8. **Houstonia parviflora** Holz.; Greenman, Proc. Am. Acad. 32: 284. 1897.

Diffuse annual, much branched, the branches slender, 1–10 cm. long, glabrous or scaberulous, the internodes equaling or exceeding the leaves; stipules minute, naked; leaf-blades linear or oblanceolate-linear, 5–10 mm. long, 2 mm. wide or narrower, acute at the apex, attenuate at the base to a slender petiole half as long as the blade or shorter, glabrous; flowers few or numerous, axillary, solitary, the slender pedicels 3–10 mm. long, erect or ascending; hypanthium less than 1 mm. long, glabrous; calyx-lobes linear-oblong, acute, twice as long as the hypanthium, in fruit longer than the capsule; corolla salverform, equaling or slightly exceeding the calyx-lobes, white, glabrous, the lobes shorter than the tube, obtuse; anthers included; capsule subdidymous, compressed, 2.5 mm. wide, about two thirds inferior; seeds crateriform, 0.8 mm. long, dark-brown, scrobiculate.

TYPE LOCALITY: Round Rock, Texas.
DISTRIBUTION: Southeastern Texas.

9. **Houstonia arenaria** Rose, Contr. U. S. Nat. Herb. 1: 70. 1890.

Erect or ascending annual, 1–4 dm. high, the stems simple or much branched below, the branches slender, ascending or spreading, more or less angulate, glabrous, the internodes longer or shorter than the leaves; stipules minute, scarious, laciniate; leaves sessile or nearly so, linear or lance-linear, 1–3.5 cm. long, 1–5 mm. wide, acute at the apex, attenuate at the base, thin, glabrous, paler beneath, 1-nerved; flowers secund, in lax naked cymes, mostly sessile, the terminal ones often long-pedicellate; hypanthium less than 1 mm. long, glabrous; calyx-lobes oblong, obtuse, equaling or exceeding the hypanthium, in fruit much exceeding the capsule, the margins obscurely scaberulous; corolla funnelform, white, 3–5 mm. long, usually minutely puberulent outside, the lobes oblong, obtuse, half as long as the tube or longer, glabrous within; anthers exserted; capsule subglobose, somewhat narrowed at the base, 2–2.5 mm. thick, costate, almost wholly inferior; seeds oblong, peltate, concavo-convex, minutely scrobiculate, dark-brown.

TYPE LOCALITY: La Paz, Lower California.
DISTRIBUTION: Southern Lower California.

10. **Houstonia Brandegeana** Rose, Contr. U. S. Nat. Herb. 1: 70. 1890.

Erect or ascending annual, 1–2 dm. high, diffusely branched, the branches very slender, subangulate, glabrous or minutely hispidulo-puberulent, the internodes mostly longer than the leaves; stipules minute, scarious, laciniate; leaves sessile, linear or filiform, 5–8 mm. long, 0.5 mm. wide, obtuse, thin, minutely puberulent on the upper surface, glabrous beneath; flowers axillary and in loose cymes, the pedicels filiform, 0.5–3 cm. long, spreading; hypanthium less than 1 mm. long, glabrous; calyx-lobes oblong or oval, equaling or shorter than the hypanthium, in fruit exceeding the capsule; corolla funnelform, 4–6 mm. long, glabrous outside, purplish, the lobes oblong, obtuse, as long as the tube, glabrous within; anthers short-exserted; capsule broadly turbinate, 2 mm. long and nearly as broad, almost wholly inferior; seeds minute, oblong, concavo-convex, dark-brown.

TYPE LOCALITY: La Paz, Lower California.
DISTRIBUTION: Sandy plains, southern Lower California.

11. **Houstonia asperuloides** (Benth.) A. Gray, Proc. Am. Acad. 5: 158. 1860.

Hedyotis asperuloides Benth. Bot. Voy. Sulph. 19. 1844.

Erect or ascending annual, 1–3 dm. high, diffusely branched, the branches very slender, subangulate, minutely hispidulo-puberulent or glabrous, the internodes longer than the leaves; stipules minute, scarious, copiously setiferous; leaves sessile, linear, 0.5–2.5 cm. long, 0.5–1 mm. wide, obtuse or acutish, glabrous, or obscurely puberulent on the upper surface; flowers axillary and in lax terminal cymes, mostly on filiform pedicels 2.5 cm. long or shorter; hypanthium less than 1 mm. long, glabrous; calyx-lobes lance-linear, very acute, longer than the hypanthium, in fruit much exceeding the capsule; corolla funnelform, 7–8 mm. long, usually minutely puberulent outside, pink, the lobes ovate or oblong-ovate, obtuse, glabrous within, usually as long as the tube; stamens exserted; capsule turbinate, 2–3 mm. long and scarcely more than half as wide, almost wholly inferior, retuse at the apex; seeds oval-oblong, peltate, concavo-convex, minutely scrobiculate, pale-brown.

TYPE LOCALITY: Cape San Lucas, Lower California.
DISTRIBUTION: Sandy plains, southern Lower California.
ILLUSTRATION: Benth. Bot. Voy. Sulph. *pl. 13.*

12. **Houstonia minima** Beck, Am. Jour. Sci. **10**: 262. 1826.

Hedyotis minima T. & G. Fl. N. Am. **2**: 38. 1841.
Oldenlandia minima A. Gray, Man. ed. 2. 173. 1856.

Erect annual, 3–10 cm. high, simple or branched, the stems very slender, angulate, scaberulous or glabrous; stipules about 0.5 mm. long, scarious, ovate or truncate, naked; leaves crowded at the base of the stem, distant above, the petioles sometimes longer than the blades, the uppermost leaves often subsessile, the blades rounded-ovate, spatulate, or the uppermost elliptic, 5–10 mm. long, 1.5–6 mm. wide, rounded to acute at the apex, rounded to acute at the base, thin, glabrous, or scaberulous on the upper surface, the margins plane, ciliolate; flowers few, solitary, axillary and terminal, the slender pedicels 1–3 cm. long, erect or ascending, or rarely spreading; hypanthium about 1 mm. long, scaberulous or glabrate; calyx-lobes lance-oblong, acute, twice as long as the hypanthium, in fruit foliaceous and exceeding the capsule; corolla salverform, purplish, 6–9 mm. long, the tube thick, about equaling the calyx-lobes, the lobes oblong or ovate, obtuse or acute, nearly or quite as long as the tube; anthers included; capsule subdidymous, 3–4 mm. broad, half inferior, glabrous; seeds subglobose, crateriform, about 0.8 mm. in diameter, brown, scrobiculate.

TYPE LOCALITY: St. Louis, Missouri.
DISTRIBUTION: Dry woods or meadows, Illinois to Kansas, Arkansas, and Texas.
ILLUSTRATIONS: Britt. & Brown, Ill. Fl. *f. 3396;* ed. 2. *f. 3915.*

13. **Houstonia pusilla** Schoepf, Reise **2**: 306. 1788.

Houstonia Linnaei minor Michx. Fl. Bor. Am. **1**: 85. 1803.
?*Hedyotis crassifolia* Raf. Fl. Ludov. 77. 1817.
Houstonia patens Ell. Bot. S. C. & Ga. **1**: 191. 1821.
?*Houstonia geniculata* Raf. New Fl. **4**: 102. 1838.
Hedyotis caerulea minor T. & G. Fl. N. Am. **1**: 39. 1841.
Oldenlandia patens Chapm. Fl. S. U. S. ed. 2. 625. 1883.
Houstonia patens pusilla A. Gray, Syn. Fl. N. Am. 1^2: 25. 1884.
Houstonia minor Britton, Mem. Torrey Club **5**: 302. 1894.
Oldenlandia caerulea patens Maza, Anal. Hist. Nat. Madrid **23**: 287. 1894.
Houstonia minor pusilla Small, Fl. SE. U. S. 1107. 1903.

Erect or ascending annual, 3–15 cm. high, usually copiously branched, the branches very slender, glabrous, the upper internodes much elongate; stipules minute, scarious, naked or ciliolate; leaves crowded at the base of the stem, distant above, the petioles often as long as the blades, the uppermost leaves subsessile, the blades rounded-ovate, oval, or elliptic, 4–9 mm. long, 1.5–6 mm. wide, rounded to acute at the base, thin, glabrous, or scaberulous on the upper surface, ciliolate; flowers few, terminal and axillary, solitary, the slender pedicels 1–3 cm. long, erect or ascending; hypanthium about 1 mm. long, glabrous or scaberulous; calyx-lobes linear-oblong, acute, twice as long as the hypanthium, in fruit about equaling the capsule; corolla salverform, violet-blue or purple, 6–9 mm. long, the tube slender, twice as long as the

calyx-lobes or longer, the lobes oblong or ovate, obtuse or acute, slightly shorter than the tube; anthers included; capsule subdidymous, 3.5–4.5 mm. wide, half inferior, glabrous; seeds subglobose, about 0.8 mm. in diameter, crateriform, yellowish-brown, scrobiculate.

Type locality: James Island, South Carolina.
Distribution: Dry soil, Virginia to Florida, Texas, and Oklahoma.
Illustrations: Britt. & Brown, Ill. Fl. *f. 3395;* ed. 2. *f. 3914;* Rob. & Fern. Man. *f. 913.*

14. **Houstonia caerulea** L. Sp. Pl. 105. 1753.

Anonymos erecta Walt. Fl. Car. 86. 1788.
Poiretia erecta J. F. Gmel. Syst. 2: 263. 1791.
Houstonia Linnaei Michx. Fl. Bor. Am. 1: 84. 1803.
Houstonia Linnaei elatior Michx. Fl. Bor. Am. 1: 85. 1803.
Houstonia grandiflora Raf. Ann. Gén. Sci. Phys. 5: 225. 1820.
Houstonia ciliata Raf. Ann. Gén. Sci. Phys. 5: 226. 1820.
Hedyotis caerulea Hook. Fl. Bor. Am. 1: 286. 1833.
Anotis caerulea G. Don, Gen. Hist. 3: 535. 1834.
Hedyotis gentianoides Endl. Ic. Gen. xi. 1840.
Anotis gentianoides Walp. Rep. 4: 230. 1847.
Oldenlandia caerulea A. Gray, Man. ed. 2. 174. 1856.
Houstonia caerulea f. *albiflora* Millsp. Fl. W. Va. 375. 1892.
Houstonia caerulea Faxonorum Pease & Moore, Rhodora 9: 210. 1907.

Erect perennial, 6–20 cm. high, with long filiform rootstocks, forming dense tufts or mats, the stems very slender, angulate, glabrous, the upper internodes longer than the leaves; stipules minute, whitish, naked; leaves crowded at the base of the stem, remote above, the petioles sometimes as long as the blades, the uppermost leaves usually subsessile, the blades mostly spatulate or obovate, sometimes oval, rounded-ovate, suborbicular, or elliptic, 4–12 mm. long, 1–6 mm. wide, rounded to acute at the apex, obtuse to attenuate at the base, thin, hirsutulous or glabrous on the upper surface, glabrous beneath, usually ciliolate; flowers few, terminal and axillary, the pedicels slender, erect, 1.5–7 cm. long; hypanthium about 1 mm. long, glabrous; calyx-lobes linear-oblong, acute, twice as long as the hypanthium or longer, in fruit usually much exceeding the capsule; corolla salverform, violet, blue, or white, with a yellow eye, 8–15 mm. long, the tube slender or very thick, three times as long as the calyx-lobes or longer, the lobes oblong to oval, rounded to acute at the apex, equaling or shorter than the tube; anthers included; capsule subdidymous, about 3 mm. broad, almost half inferior, glabrous; seeds subglobose-crateriform, 0.8 mm. in diameter, dark yellowish-brown, scrobiculate.

Type locality: Virginia.
Distribution: Fields and hillsides, Nova Scotia to Wisconsin, Missouri, Alabama, and Georgia.
Illustrations: Britt. & Brown, Ill. Fl. *f. 3393;* ed. 2. *f. 3912;* Bot. Mag. *pl. 370, 2822* (as *H. serpyllifolia);* W. Barton, Fl. N. Am. *pl. 34, f. 1;* Endl. Ic. Gen. *pl. 89;* Meehan, Nat. Fl. 1: *pl. 25;* Moris. Hist. 15, *pl. 4, f. 1;* Pluk. Alm. *pl. 97, f. 9;* Lam. Tab. Encyc. *pl. 79;* Bot. Cab. *pl. 950.*

15. **Houstonia serpyllifolia** Michx. Fl. Bor. Am. 1: 85. 1803.

Houstonia tenella Pursh, Fl. Am. Sept. 106. 1814.
Anotis serpyllifolia G. Don, Gen. Hist. 3: 535. 1834.
Anotis tenella G. Don, Gen. Hist. 3: 535. 1834.
Hedyotis serpyllifolia T. & G. Fl. N. Am. 2: 39. 1841.
Oldenlandia serpyllifolia A. Gray, Man. ed. 2. 174. 1856.

Prostrate perennial, with filiform rootstocks, the stems very slender, prostrate, rooting at the nodes, forming dense mats, the flowering stems ascending, the branches angulate, glabrous; stipules minute, scarious, naked or sparsely ciliolate; leaves petiolate, the petioles slender, usually half as long as the blades or longer, the blades mostly suborbicular, sometimes ovate or oval, 5 mm. long and broad or smaller, rounded or obtuse at the apex, usually rounded at the base, rarely cuneate, glabrous, or minutely scaberulous on the upper surface, usually ciliolate; flowers axillary and terminal, the slender pedicels 1.5–4 cm. long, erect or ascending; hypanthium about 1 mm. long; calyx-lobes linear-oblong, acute or obtuse, twice as long as the hypanthium, in fruit scarcely exceeding the capsule; corolla salverform, 10–12 mm. long, the tube usually twice as long as the calyx-lobes, the lobes oval, usually obtuse or rounded at the apex, commonly equaling or exceeding the tube; anthers included; capsule subdidymous, 2.5–3.5 mm. broad, one third inferior, glabrous; seeds subglobose-crateriform, 0.8 mm. in diameter, black, coarsely scrobiculate.

TYPE LOCALITY: High mountains of [North?] Carolina.
DISTRIBUTION: Mountain slopes, Virginia and West Virginia to South Carolina and western Tennessee.
ILLUSTRATIONS: Britt. & Brown, Ill. Fl. *f. 3394;* ed. 2. *f. 3913.*

16. **Houstonia umbratilis** B. L. Robinson, Proc. Am. Acad. 45: 401. 1910.

Prostrate perennial, the stems herbaceous, branched, glabrous, the branches very slender, matted, quadrangular, rooting at the nodes; stipules minute; leaves very shortly petiolate, the blades ovate or broadly ovate, 2.5–4 mm. long, 1.8–3 mm. wide, rounded or obtuse at the base, acute or acutish at the apex, green above and minutely scaberulous, slightly paler beneath and glabrous, 1-nerved; flowers terminal, solitary or geminate, the pedicels filiform, 1.5 cm. long; hypanthium turbinate; calyx-lobes lance-oblong, acute, twice as long as the hypanthium; corolla funnelform, about 7 mm. long, the lobes ovate; anthers exserted, linear-oblong.

TYPE LOCALITY: Shaded cliffs of mountains near Monterrey, Nuevo León.
DISTRIBUTION: Known only from the type locality.

17. **Houstonia serpyllacea** (Schlecht.) C. L. Smith; Greenman, Proc. Am. Acad. 32: 284. 1897.

Hedyotis serpyllacea Schlecht. Linnaea 9: 599. 1834.
Mallostoma Shannoni Donn. Smith, Bot. Gaz. 18: 203. 1893.
Arcytophyllum Shannoni Standley, Contr. U. S. Nat. Herb. 18: 128. 1916.

Prostrate perennial, the stems 5–20 cm. long, stout, suffruticose, rooting at the nodes, yellowish, hirsutulous or glabrate; stipules minute, green, 1- or 2-cuspidate and glandular-ciliolate; leaves very shortly petiolate or subsessile, the blades oval, ovate-oval, or ovate-elliptic, 3–6 mm. long, 2–4.5 mm. wide, acute to rounded at the apex, rounded at the base, thick, glabrous, the margins usually revolute, scaberulo-ciliolate; flowers axillary, solitary, the pedicels stout, ascending, equaling or shorter than the calyx and capsule; hypanthium glabrous or scaberulous; calyx-lobes lance-linear, 2–4 mm. long; corolla funnelform, about 1 cm. long, the lobes lance-triangular, acute, about as long as the tube, white-hirsutulous within; capsule oblong-obovate, 4 mm. long, costate, about three fourths inferior, obtuse at the apex; seeds rounded-oblong, peltate, concavo-convex, coarsely scrobiculate.

TYPE LOCALITY: Between La Joya and San Salvador [State of Mexico?].
DISTRIBUTION: Veracruz to Guatemala.

18. **Houstonia gracilis** Brand. Zoe 5: 238. 1907.

Perennial, from a stout vertical root, the stems erect or decumbent, 1–4 dm. long, slender, succulent, glabrous, sparsely branched, the internodes usually much longer than the leaves; stipules minute, setiferous; petioles slender, 2–4 mm. long; leaf-blades broadly ovate to lanceolate, 0.6–4 cm. long, 0.5–1.5 cm. wide, rounded to acutish at the base, subobtuse to attenuate at the apex, thin, bright-green, often scaberulous on the upper surface when young; flowers loosely cymose, the pedicels slender, 3–10 mm. long; hypanthium less than 1 mm. long, glabrous; calyx-lobes triangular, acute, equaling the hypanthium; corolla funnelform, purplish, 4–5 mm. long, glabrous outside, the lobes ovate-oblong, obtuse, shorter than the tube, puberulent within; capsule subdidymous, 1.5–2 mm. long, 2.5 mm. wide, subretuse, almost wholly inferior, the free portion glabrous; seeds flat or concavo-convex, oval, about 0.5 mm. long, black, minutely scrobiculate.

TYPE LOCALITY: On rocks near Orizaba, Veracruz.
DISTRIBUTION: Veracruz.

19. **Houstonia brevipes** Rose, Contr. U. S. Nat. Herb. 1: 83. 1890.

Erect perennial, 3–6 dm. high, from a stout perpendicular root, the stems numerous, copiously branched, the branches stout or slender, erect or ascending, terete, glabrous, the internodes longer or shorter than the leaves; stipules minute, 1–4-setiferous; leaves sessile, linear-filiform, 1–3.5 cm. long, about 0.5 mm. wide, acuminate, glabrous; flowers in loose cymes, secund on the branches, partly sessile and partly on stout pedicels 1 cm. long or shorter; hypan-

thium less than 1 mm. long, glabrous; calyx-lobes oblong-lanceolate, acute, at anthesis longer than the hypanthium, fleshy, in fruit equaling or slightly exceeding the capsule; corolla salverform, pink, 10–15 mm. long, glabrous outside, often withering-persistent, the lobes oblong or ovate-oblong, obtuse or acutish, usually less than one third as long as the tube, glabrous within; capsule subglobose, 1.5–2.5 mm. in diameter, two thirds inferior, rounded at the apex; seeds oblong, peltate, concavo-convex, black, minutely scrobiculate.

TYPE LOCALITY: In a canyon near Santa Rosalía, Lower California.
DISTRIBUTION: Southern Lower California and the adjacent islands.

20. **Houstonia mucronata** (Benth.) B. L. Robinson, Proc. Am. Acad. 45: 401. 1910.

Hedyotis mucronata Benth. Bot. Voy. Sulph. 19. 1844.
Houstonia fruticosa Rose, Contr. U. S. Nat. Herb. 1: 132. 1892.

Erect glabrous shrub, 2–6 dm. high, fruticose nearly throughout, much branched, the branches erect or ascending, stout, glabrous, the bark grayish-yellow, the internodes usually very stout; stipules about 1 mm. long, the lobes short-triangular, glandular-setiferous; leaves opposite, usually with dense fascicles of leaves in the axils, sessile, linear or semiterete, 3–18 mm. long, 1 mm. wide or narrower, acute, mucronulate; flowers in small few-flowered terminal cymes, on pedicels 1 cm. long or shorter, often nearly sessile; hypanthium about 1 mm. long; calyx-lobes longer than the hypanthium, lance-oblong, acute or acuminate, very thick, with a stipitate gland in each sinus, in fruit equaling or shorter than the capsule; corolla 10–12 mm. long, salverform, white, the tube slender, the lobes about 3 mm. long, oblong-ovate, acutish; capsule subglobose, 2–2.5 mm. long, two thirds or three fourths inferior, rounded or truncate at the apex; seeds 0.5–0.8 mm. long, oblong, peltate, concavo-convex, dark-brown, minutely scrobiculate.

TYPE LOCALITY: Magdalena Bay, Lower California.
DISTRIBUTION: Southern Lower California and on the adjacent islands.
ILLUSTRATION: Benth. Bot. Voy. Sulph. *pl. 13.*

21. **Houstonia peninsularis** Brand. Zoe 5: 160. 1903.

Erect shrub, 1–3 dm. high, sparsely branched, fruticose below, the branches nearly terete, yellowish-brown, very densely hirtellous, the internodes shorter than the leaves; stipules very short, closely glandular-setiferous; leaves opposite or 3- or 4-verticillate, sessile, linear, 1–4 cm. long, 1.5 mm. wide or narrower, attenuate at the apex, densely hirtellous, the margins subrevolute; flowers in small dense pedunculate terminal cymes, on pedicels 4 mm. long or shorter, often sessile; hypanthium about 1 mm. long, densely hirtellous; calyx-lobes subulate, attenuate, longer than the hypanthium, in fruit equaling or shorter than the capsule; corolla purple, salverform, about 15 mm. long, the tube very slender, hirtellous, the 4 lobes ovate-oblong, acute or obtuse, about one third as long as the tube, minutely papillose within; capsule subglobose, 2–2.5 mm. long, almost wholly inferior, rounded at the apex, densely hirtellous; seeds concavo-convex, minutely scrobiculate.

TYPE LOCALITY: On nearly perpendicular bluffs, Sierra de la Trinidad, Lower California.
DISTRIBUTION: Vicinity of the type locality.

22. **Houstonia acerosa** A. Gray; Benth. & Hook. Gen. 2: 60. 1873.

Hedyotis acerosa A. Gray, Pl. Wright. 1: 81. 1852.
Oldenlandia acerosa A. Gray, Pl. Wright. 2: 67. 1853.
Mallostoma acerosum Hemsl. Biol. Centr. Am. Bot. 2: 31. 1881.
Ereicoctis acerosa Kuntze, Rev. Gen. 281. 1891.

Erect or ascending cespitose shrub, 0.5–3 dm. high, fruticose nearly throughout, the stems usually numerous, simple or sparsely branched above, angulate and striate, scaberulous or minutely hirtellous, the internodes usually much shorter than the leaves; stipules 1 mm. long or shorter, whitish, setuliferous or cuspidate; leaves mostly 3- or 4-verticillate, sessile, 5–12 mm. long, rigid-setaceous or acerose-linear, scaberulous or hirtellous or glabrate, suberect; flowers axillary or terminal, sessile or rarely very short-pedicellate; hypanthium scaberulous, short; calyx-lobes setaceous, 3–6 mm. long, scaberulous or hirtellous, in fruit usually longer than the

capsule; corolla 12–16 mm. long, the tube slender-funnelform, glabrous, the lobes ovate, 8 mm. long or shorter, acute, sometimes less than half as long as the tube and sometimes two thirds as long, white-villosulous within; capsule subglobose, 2.5 mm. long, about two thirds inferior, shallowly bisulcate, rounded or slightly retuse at the apex, densely hirtellous; seeds crateriform, 0.8 mm. long, black, minutely roughened on the back.

TYPE LOCALITY: High prairies, from Live Oak Creek to Las Moras, western Texas.
DISTRIBUTION: Western Texas to Coahuila and San Luis Potosí.

23. **Houstonia polypremoides** A. Gray, Proc. Am. Acad. 21: 379. 1886.

Houstonia polypremoides Bigelovii Greenman, Proc. Am. Acad. **32**: 291. 1897.

Erect shrub, 1–2 dm. high, fruticose below, the stems usually very numerous and much branched, stout, minutely scaberulous or densely hirtellous, the internodes usually longer than the leaves, sometimes shorter; stipules about 0.5 mm. long, mostly bicuspidate; leaves opposite, sessile, the lowest linear-oblong, the upper ones acerose-linear, rigid, 5–12 mm. long, scaberulous or hirtellous, rarely glabrate, the margins revolute; flowers solitary, axillary and terminal, on stout pedicels 13 mm. long or shorter; hypanthium very short, scaberulous or hirtellous; calyx-lobes lance-subulate, 3–4 mm. or rarely 1.5–2 mm. long, scaberulous, in fruit usually longer than the capsule; corolla salverform, white, 8–11 mm. long, the tube slender or stout, ampliate above, glabrous outside, the lobes oblong-ovate, about two thirds as long as the tube, obtuse or acutish, white-villous within; capsule subglobose, 2.5–3 mm. long, broadly rounded or subretuse at the apex, densely hirtellous; seeds crateriform, with a short hilar ridge, black.

TYPE LOCALITY: Santa Eulalia Mountains, Chihuahua.
DISTRIBUTION: Dry, rocky hillsides, western Texas, southern New Mexico, and Chihuahua.

24. **Houstonia fasciculata** A. Gray, Proc. Am. Acad. 17: 203. 1882.

Erect shrub, 1–4 dm. high, fruticose throughout, much branched, the branches stout, ascending, grayish, brown, or blackish-brown, the branchlets whitish, angulate, scaberulous or minutely hirtellous, densely leafy; stipules minute, setulose-denticulate; leaves opposite or 3- or 4-verticillate, usually with dense fascicles of leaves in the axils, sessile, 3–10 mm. long, linear or nearly so, bisulcate on the lower surface, acute, mucronulate, scaberulous or glabrate; flowers in small dense few-flowered short-pedunculate terminal cymes, on very short pedicels; hypanthium about 1 mm. long, scaberulous; calyx-lobes triangular-ovate, about as long as the hypanthium, obtuse; corolla white, 3–4 mm. long, salverform, the lobes recurved, pilose within; capsule oval-ovoid, 2.5 mm. long, about half inferior, obtuse at the apex, compressed, shallowly bisulcate, very scabrous; seeds about 1 mm. long, oblong, peltate, concavo-convex, black, minutely scrobiculate.

TYPE LOCALITY: Presidio, Texas.
DISTRIBUTION: Dry, rocky hillsides, western Texas and southern New Mexico to Coahuila.

25. **Houstonia angustifolia** Michx. Fl. Bor. Am. 1: 85. 1803.

Houstonia rupestris Raf. Ann. Gén. Sci. Phys. **5**: 226. 1820.
Hedyotis stenophylla T. & G. Fl. N. Am. **2**: 41. 1841.
Hedyotis lasiantha Nutt.; A. Gray. Pl. Wright. **1**: 81, as synonym. 1852.
Oldenlandia angustifolia A. Gray, Pl. Wright. **2**: 68. 1853.
Oldenlandia angustifolia filifolia A. Gray; Chapm. Fl. S. U. S. 181. 1860.
Houstonia angustifolia scabra S. Wats. Proc. Am. Acad. **18**: 97. 1883.
Houstonia angustifolia filifolia A. Gray, Syn. Fl. N. Am. 1^2: 27. 1884.
Houstonia angustifolia rigidiuscula A. Gray, Syn. Fl. N. Am. 1^2: 27. 1884.
Houstonia salina A. Heller, Bot. Expl. Tex. 96. 1895.
Houstonia pulvinata Small, Bull, N. Y. Bot. Gard. **1**: 289. 1899.
Houstonia tenuis Small, Fl. S E. U. S. 1109. 1903.
Houstonia rigidiuscula Wooton & Standley, Contr. U. S. Nat. Herb. **16**: 175. 1913.

Plants perennial, the stems few or numerous, erect, ascending, or procumbent, 1–6 dm. long, subsimple or much branched, the branches stout or slender, quadrangular, glabrous, the internodes longer or shorter than the leaves; stipules whitish, scarious, 3 mm. long or shorter, usually deltoid, cuspidate, laciniate or setiferous; leaves sessile or nearly so, linear or oblanceolate-linear to filiform, 1–5 cm. long, 0.5–5 mm. wide, acute or acutish at the apex, mucronulate, usually attenuate to the base, thin or thick and firm, 1-nerved, usually scaberulous or

hispidulous along the margins and on the nerve above, glabrous beneath, the margins often revolute; flowers in dense or lax, more or less leafy cymes, sessile or on long or short, slender or stout pedicels; hypanthium at anthesis about 1 mm. long, glabrous or sparsely scaberulous; calyx-lobes triangular to oblong, acute, equaling or shorter than the hypanthium, usually scaberulo-ciliolate, in fruit equaling or exceeding the capsule but shorter than the hypanthium; corolla funnelform, 4–7 mm. long, usually glabrous outside, purplish, the lobes lance-oblong, acute or acutish, equaling or shorter than the tube, white-villous within; anthers exserted; capsule obovoid-turbinate or oblong, 2.5–3 mm. long, about 2 mm. wide above, almost two thirds inferior, broadly rounded or truncate at the apex, often retuse; seeds oval-oblong, 0.5–0.7 mm. long, concavo-convex, coarsely scrobiculate, black.

TYPE LOCALITY: Florida.

DISTRIBUTION: In dry, often sandy soil, Nebraska to New Mexico and San Luis Potosí, and eastward to Florida, Tennessee, and southern Michigan.

ILLUSTRATIONS: Britt. & Brown, Ill. Fl. *f. 3401;* ed. 2. *f. 3921;* A. Heller, Bot. Expl. Tex. *pl. 9.*

26. **Houstonia tenuifolia** Nutt. Gen. 1: 95. 1818.

Hedyotis longifolia tenuifolia T. & G. Fl. N. Am. 2: 40. 1841.
Oldenlandia purpurea tenuifolia A. Gray; Chapm. Fl. S. U. S. 181. 1860.
Houstonia longifolia tenuifolia Wood, Class-Book ed. 1861. 403. 1861.
Houstonia purpurea tenuifolia A. Gray, Syn. Fl. N. Am. 1[2]: 26. 1884.

Erect perennial, rarely decumbent, the stems solitary or numerous, 1.5–6 dm. long, usually slender, simple below, branched above, the branches ascending or spreading, obtusely angled, glabrous, the internodes often much longer than the leaves; stipules scarious, narrowly or broadly triangular, 2.5 mm. long or shorter, acute or cuspidate, usually glandular-dentate or laciniate; basal leaves usually wanting at anthesis, earlier forming a rosette, the petioles stout, half as long as the blades or shorter, the blades oval to oblong-lanceolate, 1–2.5 cm. long, 4–8 mm. wide, rounded to acute at the apex, obtuse or acute at the base, 1-nerved, scaberulous or glabrate above, glabrous and often purplish beneath; cauline leaves sessile or nearly so, linear or oblong-linear, 1.5–4.5 cm. long, 4.5 mm. wide or narrower, obtuse or acute, glabrous; flowers in very lax leafy cymes, the pedicels filiform, mostly 1–2 cm. long; hypanthium glabrous, at anthesis less than 1 mm. long; calyx-lobes linear-lanceolate, rarely ciliolate, about twice as long as the hypanthium, the lobes in fruit equaling or slightly exceeding the capsule; corolla funnelform, purple, 5–7 mm. long, glabrous outside, the lobes triangular-ovate, obtuse or acutish, usually less than half as long as the tube, white-villous within; anthers exserted; capsule subglobose, slightly compressed, 2 mm. long, usually distinctly broader than long, half inferior, retuse at the apex or rounded, the free portion glabrous; seeds concavo-convex, oval, about 0.5 mm. long, peltate, coarsely scrobiculate, black.

TYPE LOCALITY: Near the confluence of Pigeon River and the French Broad, Tennessee.

DISTRIBUTION: In dry soil, Virginia to Missouri, and southward to Georgia, Texas, and Nuevo León.

ILLUSTRATIONS: Britt. & Brown, Ill. Fl. *f. 3400;* ed. 2. *f. 3920.*

27. **Houstonia purpurea** L. Sp. Pl. 105. 1753.

?*Hedyotis umbellata* Walt. Fl. Car. 85. 1788.
Hedyotis caroliniana Raeusch. Nom. ed. 3. 33. 1797.
Houstonia varians Michx. Fl. Bor. Am. 1: 86. 1803.
Houstonia pubescens Raf. Med. Repos. II. 5: 361. 1808.
Knoxia purpurea Lam.; Poir. in Lam. Encyc. Suppl. 3: 225. 1813.
Houstonia latifolia Willd.; R. & S. Syst. Veg. 3: 527. 1818.
Anotis purpurea G. Don, Gen. Hist. 3: 535. 1834.
Hedyotis purpurea T. & G. Fl. N. Am. 2: 40. 1841.
?*Houstonia umbellata* Walp. Rep. 1: 496. 1842.
Oldenlandia purpurea A. Gray, Man. ed. 2. 173. 1856.
Houstonia purpurea pubescens Britton, Mem. Torrey Club 4: 125. 1894.

Erect perennial, 2–4 dm. high, the stems solitary or numerous, stout, simple below, usually sparsely branched above, the branches ascending, quadrangular, pilose or hirsutulous, at least below, often glabrate above, the internodes mostly longer than the leaves; stipules scarious, 6 mm. long or shorter, broadly triangular, acute, sometimes cuspidate, entire or laciniate; basal leaves usually wanting at anthesis, on stout petioles half as long as the blades or shorter, the blades elliptic or oval, 1.5–2.5 cm. long, 0.5–1 cm. wide, obtuse or acutish at the apex and base, hirsutulous or glabrate above, glabrous and often purplish beneath, 1-nerved;

cauline leaves sessile or the lowest short-petiolate, mostly ovate to lance-oblong, sometimes rounded-ovate, oval, or elliptic, 2–6 cm. long, 0.8–3 cm. wide, obtuse to attenuate at the apex or rarely rounded, usually rounded at the base, thin, glabrous on the upper surface or hirsutulous, especially along the costa, paler beneath and glabrous or sometimes hirsutulous, usually ciliolate, 3- or 5-nerved; flowers in dense small few-flowered terminal cymes, the pedicels 6 mm. long or shorter; hypanthium at anthesis about 1 mm. long, glabrous; calyx-lobes lance-linear, attenuate, at anthesis 3 times as long as the hypanthium or longer, in fruit much exceeding the capsule, rarely ciliolate; corolla funnelform, 6–8 mm. long, purple to nearly white, glabrous outside, the lobes ovate-triangular, usually less than half as long as the tube, more or less white-villous within; anthers exserted; capsule subglobose, 2–3 mm. long, usually broader than long, slightly compressed, half inferior, rounded or retuse at the apex, the free portion glabrous; seeds oval, concavo-convex or subcrateriform, about 1 mm. long, peltate, coarsely scrobiculate, black.

TYPE LOCALITY: Virginia.

DISTRIBUTION: Woods or fields, Maryland to Iowa, and southward to Georgia, Alabama, and Oklahoma.

ILLUSTRATIONS: Britt. & Brown, Ill. Fl. *f. 3397;* ed. 2. *f. 3917;* Rob. & Fern. Man. *f. 914;* Bot. Cab. *pl. 1621.*

28. **Houstonia montana** (Chickering) Small, Fl. SE. U. S. 1325. 1903.

Houstonia purpurea montana Chickering; Small, Fl. SE. U. S. 1325, as synonym. 1903.

Erect perennial, 6–20 cm. high, the stems usually numerous, stout, simple, or sparsely branched above, obtusely quadrangular, glabrous, the internodes mostly shorter than the leaves; stipules 2 mm. long or shorter, scarious, broadly triangular, rounded at the apex, entire, purplish; cauline leaves sessile, oval, broadly ovate, or ovate-oblong, 1–2.5 cm. long, 4–12 mm. wide, rounded to very acute at the apex, broadly rounded to obtuse at the base, glabrous, or scaberulous above along the costa, scaberulo-ciliolate, paler beneath, mostly 1-nerved, the lateral nerves obsolete; flowers few, in a small dense leafy terminal cyme, the pedicels 6 mm. long or shorter; hypanthium about 1.5 mm. long at anthesis, glabrous; calyx-lobes ovate-oblong or lance-oblong, acute, less than twice as long as the hypanthium, in fruit longer than the capsule; corolla funnelform, 9–11 mm. long, purple, glabrous outside, the lobes ovate-oval or oblong-ovate, obtuse, white-villous within, more than half as long as the tube; anthers exserted; capsule subglobose, 3 mm. long, usually broader than long, slightly compressed, half inferior, retuse at the apex, the free portion glabrous; seeds concavo-convex, oval, about 1.3 mm. long, peltate, scrobiculate, black.

TYPE LOCALITY: Summit of Roan Mountain, North Carolina.

DISTRIBUTION: Summits of the highest mountains of western North Carolina and eastern Tennessee.

29. **Houstonia canadensis** Willd.; R. & S. Syst. Veg. **3**: 527. 1818.

Houstonia ciliolata Torr. Fl. U. S. **1**: 173. 1824.
Hedyotis ciliolata Torr.; Spreng. Syst. **4**: Cur. Post. 40. 1827.
Anotis ciliolosa G. Don, Gen. Hist. **3**: 535. 1834.
Oldenlandia purpurea ciliolata A. Gray, Man. ed. 2. 173. 1856.
Houstonia longifolia ciliolata Wood, Class-Book ed. 1861. 403. 1861.
Houstonia purpurea ciliolata A. Gray, Man. ed. 5. 212. 1868.

Erect perennial, 1–2.5 dm. high, sometimes decumbent at the base, the stems few or solitary, simple, or sparsely branched above, often glabrous above; stipules scarious, whitish, 3 mm. long or shorter, broadly triangular, rounded to acute, usually dentate or laciniate; basal leaves present at anthesis and forming a rosette, the petioles slender, often half as long as the blades or longer, ciliate, the blades elliptic to suborbicular, 7–25 mm. long, 3–8 mm. wide, rounded to acutish at the apex, usually acute to attenuate at the base, hirsutulous or glabrate on the upper surface, paler beneath and glabrate, ciliate; cauline leaves sessile or nearly so, linear to oval-oblong, 8–25 mm. long, 6 mm. wide or narrower, hirsutulous or glabrous on the upper surface, glabrous beneath, usually ciliate; flowers in small, lax or dense, terminal cymes, the pedicels sometimes 8 mm. long but usually much shorter; hypanthium at anthesis about 1 mm. long; calyx-lobes linear, acute, usually scaberulo-ciliolate, more than twice as long as the hypanthium, in fruit usually longer than the capsule; corolla funnelform, 6–8 mm. long,

purple, glabrous outside, the lobes ovate-triangular, more or less white-villous within, half as long as the tube or shorter; anthers exserted; capsule subglobose, 2.5–3 mm. long, slightly longer than wide, subcompressed, half inferior, retuse at the apex, the free portion glabrous; seeds concavo-convex, oval, about 1 mm. long, coarsely scrobiculate, black.

TYPE LOCALITY: Canada.
DISTRIBUTION: Southern Ontario to Minnesota, Arkansas, West Virginia, and Pennsylvania.
ILLUSTRATIONS: Bot. Mag. *pl. 3099* (as *H. longifolia*); Britt. & Brown, Ill. Fl. *f. 3398;* ed. 2. *f. 3918;* Torr. Fl. N. Y. *pl. 44.*

30. **Houstonia floridana** Standley, sp. nov.

Houstonia filifolia Small, Fl. SE. U. S. 1109, as to description. 1903. Not *H. angustifolia filifolia* A. Gray, 1884.

Erect or ascending perennial, 1–4 dm. high, much branched throughout, the branches very slender, angulate, usually scaberulous on the angles, the internodes short or elongate; stipules minute, thick, triangular, cuspidate, often laciniate; leaves sessile, narrowly linear or filiform, 6–18 mm. long, glabrous, the margins revolute; flowers in lax leafy cymes, the pedicels slender or stout, 5 mm. long or shorter; hypanthium glabrous, less than 1 mm. long at anthesis; calyx-lobes lance-oblong, acute, longer than the hypanthium, in fruit equaling the capsule; corolla slender-funnelform, 5 mm. long, purple, glabrous outside, the lobes ovate-oblong, obtuse or acute, white-villous within, more than half as long as the tube; anthers exserted; capsule subglobose, 1.5 mm. long and about as wide, slightly narrowed at the base, subcompressed, half inferior, rounded or retuse at the apex, the free portion glabrous; seeds about 0.5 mm. long, concavo-convex, oval, scrobiculate, black.

Type collected in rocky pine woods, Cocoanut Grove, Biscayne Bay, Florida, July, 1895, *A. H. Curtiss 5484* (U. S. Nat. Herb. *no. 247068*).
DISTRIBUTION: In pine woods, southern Florida.

31. **Houstonia lanceolata** (Poir.) Britton, Man. 861. 1901.

Hedyotis lanceolata Poir. in Lam. Encyc. Suppl. 3: 14. 1813.
Anotis lanceolata DC. Prodr. 4: 433. 1830.
Houstonia macrosepala Nutt.; T. & G. Fl. N. Am. 2: 40, as synonym. 1841.
?*Hedyotis Frankii* Presl, Abh. Böhm. Ges. Wiss. V. 3: 86. 1843.
?*Diodia Frankii* Steud. & Hochst.; Presl, Abh. Böhm. Ges. Wiss. V. 3: 86, as synonym. 1843.
Spermacoce lanceolata Frank; Presl, Abh. Böhm. Ges. Wiss. V. 3: 86, as synonym. 1843.
Hedyotis calycosa Shuttlew.; A. Gray, Pl. Wright. 1: 81, as synonym. 1852.
Houstonia purpurea calycosa A. Gray, Syn. Fl. N. Am. 1[2]: 26. 1884.
Houstonia calycosa C. Mohr, Contr. U. S. Nat. Herb. 6: 739. 1901.

Erect perennial, 1.5–4 dm. high, the stems few or numerous, simple below and branched above, stout, quadrangular, densely short-pilose or hirsutulous below, glabrous above, the internodes mostly longer than the leaves; stipules 4 mm. long or shorter, scarious, whitish, acute or cuspidate, often dentate or laciniate; basal leaves wanting at anthesis, petiolate, the blades mostly elliptic, obtuse or acutish at the apex, hirsutulous or glabrate on the upper surface, glabrous beneath, ciliolate; cauline leaves sessile, or the lowest petiolate, lanceolate, lance-oblong, or linear-oblong, 2.5–6 cm. long, 0.4–2 cm. wide, obtuse to attenuate at the apex, rounded to acute at the base, hirsutulous, scaberulous, or glabrate on the upper surface, glabrous and paler beneath, scaberulo-ciliolate, 3–5-nerved; flowers numerous, in small, usually dense, leafy cymes, the pedicels 6 mm. long or shorter, scaberulous; hypanthium at anthesis about 1 mm. long, glabrous; calyx-lobes lance-linear, attenuate, several times as long as the hypanthium, in fruit often twice as long as the capsule or longer; corolla funnelform, 6–7 mm. long, purple, glabrous outside, the lobes ovate-oblong, obtuse or acute, more or less white-villous within, usually less than half as long as the tube; anthers exserted; capsule subglobose, 3–4 mm. long, longer than broad, very slightly compressed, half inferior, rounded or retuse at the apex, the free portion glabrous; seeds concavo-convex, subcrbicular, 0.5–0.8 mm. in diameter, coarsely scrobiculate, black.

TYPE LOCALITY: Carolina.
DISTRIBUTION: Maine to Illinois, Oklahoma, Alabama, and North Carolina.
ILLUSTRATIONS: Britt. & Brown, Ill. Fl. ed. 2. *f. 3916;* Rob. & Fern. Man. *f. 916.*

32. **Houstonia longifolia** Gaertn. Fruct. 1: 226. 1788.

Houstonia obtusifolia Raf. Ann. Gén. Sci. Phys. 5: 226. 1820.
?*Houstonia oblongifolia* Raf. Ann. Gén. Sci. Phys. 5: 226. 1820.
?*Houstonia heterophylla* Raf. Ann. Gén. Sci. Phys. 5: 227. 1820.
Anotis longifolia G. Don, Gen. Hist. 3: 535. 1834.
Hedyotis longifolia Hook. Fl. Bor. Am. 1: 286. 1834.
Oldenlandia purpurea longifolia A. Gray, Man. ed. 2. 173. 1856.
Houstonia purpurea longifolia A. Gray, Man. ed. 5. 212. 1868.

Erect perennial, 1–3 dm. high, the stems few or numerous, simple or sparsely branched, stout or slender, angulate, commonly puberulent or hirsutulous below, sometimes glabrous, glabrous above, the internodes usually elongate; stipules scarious, 3 mm. long or shorter, acute or rounded, often dentate; basal leaves usually wanting at anthesis but sometimes present and forming large tufts, petiolate, the blades elliptic or oblanceolate, 1–3 cm. long, 2–5 mm. wide, obtuse or acute at the apex, acute or attenuate at the base, glabrous or slightly scaberulous on the upper surface, paler and glabrous beneath, 1-nerved; cauline leaves sessile or nearly so, linear, linear-oblanceolate, or narrowly oblong, 1.5–5 cm. long, 8 mm. wide or narrower, obtuse to attenuate at the apex and base, glabrous, or scaberulous on the margins, 1-nerved; flowers numerous, in lax or usually dense, small cymes, the pedicels slender, 8 mm. long or shorter; hypanthium at anthesis about 1 mm. long, glabrous; calyx-lobes lance-linear, attenuate, about twice as long as the hypanthium, in fruit equaling or usually much exceeding the capsule; corolla funnelform, 7–8 mm. long, purple or purplish, glabrous outside, the lobes ovate-oblong, obtuse or acute, more or less white-villous within, about half as long as the tube; anthers exserted; capsule subglobose, 2.5–3 mm. long and nearly as wide, slightly compressed, half inferior, rounded or retuse at the apex, the free portion glabrous; seeds concavo-convex, oblong or oval, 1 mm. long or smaller, scrobiculate, black.

TYPE LOCALITY: Not stated.
DISTRIBUTION: In dry soil, Maine to Saskatchewan, Missouri, Mississippi, and Georgia.
ILLUSTRATIONS: Gaertn. Fruct. *pl. 49, f. 8;* Britt. & Brown, Ill. Fl. *f. 3399;* ed. 2. *f. 3919;* Rob. & Fern. Man. *f. 915;* Torr. Fl. N. Y. *pl. 44;* Lam. Tab. Encyc. *pl. 79.*

33. **Houstonia longipes** S. Wats. Proc. Am. Acad. 18: 97. 1883.

Erect perennial, 1–2.5 dm. high, the stems few, much branched above, the branches very slender, ascending or spreading, angulate, scaberulo-puberulent or glabrous; stipules 1 mm. long or shorter, rather firm, cuspidate, denticulate or laciniate; leaves sessile, filiform, or the lowest spatulate-linear, 12 mm. long or shorter, obtuse, thick, scaberulous or glabrous on the upper surface, glabrous beneath, the margins revolute; flowers few, in lax cymes, the pedicels stout, 3–12 mm. long, ascending or divaricate; hypanthium at anthesis less than 1 mm. long, glabrous, the calyx-lobes oblong-lanceolate, acute, equaling or longer than the hypanthium, scaberulo-ciliolate, in fruit equaling or slightly exceeding the capsule; corolla slender-funnelform, 7–8 mm. long, yellowish-white, glabrous outside, the lobes oblong, obtuse, densely white-villous within, nearly as long as the tube; anthers included; capsule subglobose, 1.5–2 mm. long and somewhat broader, subcompressed, half inferior, rounded or slightly retuse at the apex, the free portion scabrous; seeds concavo-convex or subcrateriform, oval, about 1 mm. long, scrobiculate, black.

TYPE LOCALITY: Mountains northeast of Monclova, Coahuila.
DISTRIBUTION: Coahuila, Nuevo León, and San Luis Potosí.

34. **Houstonia rupicola** Greenman, Proc. Am. Acad. 32: 286. 1897.

Hedyotis stenophylla parviflora [no. 1] A. Gray, Pl. Wright. 1: 81. 1852.
Houstonia fasciculata A. Gray, Syn. Fl. N. Am. 1²: 27, in part. 1884.

Erect perennial, from a woody base, the stems numerous, 4–14 cm. high, simple or branched, the branches stout, rigid, conspicuously angulate, scaberulous or glabrate; stipules minute, triangular, rigid, long-cuspidate, white-setiferous; leaves sessile, linear to narrowly oblong or elliptic-oblong, 3–15 mm. long, 2.5 mm. wide or narrower, acute, mucronate, pungent, thick and rigid, glabrous, lustrous on the upper surface, the margins ciliolate, the costa prominent beneath; flowers in small, dense, terminal and axillary cymes, the pedicels stout, less than 1 mm. long; hypanthium at anthesis less than 1 mm. long, glabrous; calyx-lobes triangular-ovate, equaling or shorter than the hypanthium, acute or obtuse, ciliolate, in fruit equaling the cap-

sule; corolla funnelform, 5 mm. long, glabrous outside, the lobes oblong, obtuse, shorter than the tube, villous within; capsule subglobose, 1.5 mm. long and nearly as wide, half inferior, rounded or truncate at the apex, the free portion scaberulous; seeds minute, oblong, concavo-convex, peltate, scrobiculate, black.

TYPE LOCALITY: Crevices of rocks on the San Pedro River, Texas. (State given erroneously as Arizona in the original description.)
DISTRIBUTION: Western Texas.

35. **Houstonia Palmeri** A. Gray, Proc. Am. Acad. 17: 202. 1882.

Erect perennial, 5–15 cm. high, the stems few, much branched, scaberulo-puberulent or glabrate, the internodes mostly longer than the leaves; stipules minute, triangular or subtruncate, usually cuspidate, denticulate; leaves sessile, linear or linear-filiform, 5–18 mm. long, obtuse or acute, thick and somewhat rigid, glabrous, the margins revolute; flowers very laxly cymose or axillary, the pedicels stout, 5–20 mm. long, ascending; hypanthium at anthesis less than 1 mm. long, glabrous; calyx-lobes linear or lance-linear, acute or subobtuse, more than twice as long as the hypanthium, ciliolate, in fruit usually much longer than the capsule; corolla salverform, 8–10 mm. long, purplish, glabrous outside, the lobes oblong, obtuse, slightly shorter than the tube, white-villous within; capsule subglobose, 2.5–3 mm. long and about as wide, slightly compressed, half or slightly more than half inferior, rounded or subretuse at the apex, the free portion scabrous; seeds crateriform, about 1 mm. long, rounded-oblong, with a conspicuous hilar ridge, coarsely scrobiculate, black.

TYPE LOCALITY: In the mountains east and south of Saltillo, Coahuila.
DISTRIBUTION: Coahuila.

DOUBTFUL SPECIES

HEDYOTIS? ROSEA Raf. Fl. Ludov. 77. 1817. Described from Louisiana, but Rafinesque's name is based upon a description by another author, the identity of whose plant is wholly doubtful.

HOUSTONIA BILOBA Raf. New Fl. 4: 101. 1838. Described from "Arkanzas." Probably either *H. patens* Ell. or *H. minima* Beck.

HOUSTONIA RETICULATA Raf. New Fl. 4: 102. 1838. Described from Alabama; not identifiable from the description.

14. ARCYTOPHYLLUM* Willd.; Schultes, in R. & S. Syst. Veg. Mant. 3: 5. 1827.

Mallostoma Karst. Fl. Columb. 2: 9. 1862.
Pseudrachicallis Karst. Fl. Columb. 2: 10. 1862.
Ereicoctis Kuntze, Rev. Gen. 281. 1891.

Shrubs, erect or prostrate, branched, the branches terete or angulate. Leaves opposite, crowded and usually densely imbricate, thick-coriaceous, small. Stipules entire, bifid, or setose. Inflorescence various, the flowers mostly solitary and axillary or cymose, usually small; hypanthium globose or turbinate; calyx 4-lobate (rarely 5-lobate), the lobes erect, remote; corolla funnelform or salverform, the tube short or elongate, glabrous or villous within, the limb 4-lobate, the lobes glabrous or pilose, valvate. Stamens 4, inserted in the corolla-throat; filaments short; anthers dorsifixed, oblong, included or exserted. Disk fleshy. Ovary 2-celled; style filiform, shortly bilobate; ovules few, the placentae adnate to the septum. Capsule turbinate to globose, 2-celled, usually septicidally dehiscent to the base, few-seeded. Seeds oblong, concavo-convex, punctate; endosperm corneous; embryo clavate.

Type species, *Arcytophyllum blaerioides* Willd.

* Sometimes written *Arcythophyllum*.

1. **Arcytophyllum lavarum** K. Schumann; (Donn. Smith, Enum. Pl. Guat. 5: 36, as synonym. 1899) Standley, Contr. U. S. Nat. Herb. 18: 127. 1916.

Mallostoma lavarum Donn. Smith, Enum. Pl. Guat. 5: 36; hyponym. 1899.

Much branched rigid shrub, 1–2.5 dm. high, glabrous except upon the corollas, the branches dark brownish-gray, the branchlets sharply angulate, brown, densely leafy; stipules triangular or ovate, 1.5 mm. long or shorter, coriaceous, dentate or laciniate; leaf-blades broadly ovate or ovate-oblong, 4–6 mm. long, 2–3 mm. wide, abruptly contracted at the base into a very short petiole, rounded or very obtuse at the apex, lustrous above, paler beneath, the costa very broad and prominent beneath; flowers crowded in small dense terminal cymes, the pedicels stout, 2 mm. long or shorter; hypanthium at anthesis less than 1 mm. long; calyx-lobes broadly ovate, obtuse or acute, much longer than the hypanthium, with 1 or more setae between each pair; corolla salverform, 4–5 mm. long, glabrous outside, the tube thick, the lobes ovate, obtuse, shorter than the tube, white-villous within; capsule subglobose, 1.5–2 mm. long, three fourths inferior; seeds about 0.8 mm. long, oval to orbicular, concavo-convex, coarsely punctate, black.

TYPE LOCALITY: On bare rock slopes at the summit of Chiriquí Volcano, Panama, at an altitude of 3,374 meters.
DISTRIBUTION: Summits of the highest mountains of Costa Rica and Panama.

III. **RONDELETIEAE.** Shrubs or trees, rarely herbs. Stipules usually entire. Flowers perfect; corolla symmetric, the lobes imbricate or contorted. Anthers dorsifixed. Ovary 2-celled; ovules numerous. Fruit capsular, 2-celled. Seeds numerous, horizontal, minute, exalate or rarely winged; endosperm fleshy; embryo small, clavate or cylindric.

Corolla-lobes imbricate.
  Calyx-lobes dissimilar, one of them expanded into a large petiolate colored limb. 15. WARSZEWICZIA.
  Calyx-lobes similar, none of them expanded into a petiolate limb.
    Capsule half superior; shrubs. 16. RACHICALLIS.
    Capsule inferior or nearly so.
      Calyx-tube much longer than the lobes; flowers 4-parted, axillary; ovary oblong; stamens inserted in the throat of the corolla. 17. NEOMAZAEA.
      Calyx-tube short or obsolete.
        Plants shrubs or trees; corolla not rotate; capsule septicidal or loculicidal.
          Calyx bilobate, deciduous; corolla 5–7-parted; flowers axillary; stamens inserted in the throat of the corolla. 18. STEVENSIA.
          Calyx 4–6-lobate, persistent; inflorescence axillary or terminal.
            Stamens inserted in the lower part of the corolla-tube; flowers usually 6-parted. 19. ACROSYNANTHUS.
            Stamens inserted in the throat of the corolla; flowers usually 4–5-parted. 20. RONDELETIA.
        Plants herbaceous; corolla subrotate; capsule opening at the apex. 21. PINAROPHYLLON.
Corolla-lobes contorted.
  Plants trees or shrubs.
    Corolla-tube very short, shorter than the lobes.
      Corolla glabrous within, 4-parted; filaments not appendaged. 22. DEPPEA.
      Corolla villous within, 5-parted; filaments appendaged at the base. 23. ELAEAGIA.
    Corolla-tube elongate, usually much longer than the lobes.
      Corolla tubular, glabrous within; filaments elongate; flowers 4-parted. 24. OMILTEMIA.
      Corolla salverform, subrotate, or funnelform; filaments short.
        Tube of the corolla several times as long as the lobes, these oblong; anthers exserted. 25. LINDENIA.
        Tube of the corolla less than twice as long as the lobes, these lance-linear; anthers included. 26. STYLOSIPHONIA.
  Plants herbaceous.
    Stamens included; leaves opposite. 27. SIPANEA.
    Stamens exserted; leaves verticillate. 28. LIMNOSIPANEA.

15. WARSZEWICZIA Klotzsch, Monatsb. Akad. Berlin 1853: 496. 1853.

Trees or shrubs, more or less pubescent, the branches terete or subangulate. Stipules interpetiolar, large, persistent, glandular within at the base. Leaves opposite, petiolate, large, membranaceous or subcoriaceous. Inflorescence terminal, the flowers small, 5-parted, cymose, the cymes arranged in racemose panicles; hypanthium oblong-ovoid; calyx 5-lobate, the lobes persistent, subequal and rounded, or one of them dilated into a large foliaceous petiolate colored limb; corolla short-funnelform, the tube terete or pentagonal, villous in the throat, the lobes obtuse, imbricate in bud, 2 of them exterior. Stamens 5, inserted in the corolla-throat; filaments short or elongate; anthers dorsifixed, versatile, exserted, obtuse or apiculate. Disk annular. Ovary 2-celled; style included or exserted, glabrous or pilose, short-bifid; ovules numerous, crowded, the placentae adnate to the septum. Capsule small, oblong or subglobose, 2-celled, many-seeded, septicidally bivalvate. Seeds minute, horizontal, 3-angulate, marginate, reticulate; endosperm fleshy; embryo minute, clavate, the cotyledons obtuse, the radicle cylindric.

Type species, *Macrocnemum coccineum* Vahl.

1. Warszewiczia coccinea (Vahl) Klotzsch, Monatsb. Akad. Berlin 1853: 497. 1853.

Macrocnemum coccineum Vahl, Symb. 2: 38. 1791.
Mussaenda coccinea Poir. in Lam. Encyc. 4: 394. 1797.
Calycophyllum coccineum DC. Prodr. 4: 367. 1830.

Shrub or small tree, 4–6 meters high, the branches stout, subquadrangular, grayish or brownish, usually fulvous-pilose when young but sometimes glabrate, the internodes short; stipules narrowly triangular-oblong, 1.5–2 cm. long, acuminate or attenuate, thick, brown, strigillose outside or glabrate; petioles stout, 0.5–2.5 cm. long, sulcate above, rounded beneath, strigillose, pilosulous, or glabrate; leaf-blades oblanceolate-oblong, obovate, obovate-oblong, or broadly oval-obovate, 14–65 cm. long, 4.5–35 cm. wide, narrowed to the subobtuse to attenuate base, sometimes subabruptly acuminate, acute or abruptly short-acuminate at the apex, thin, bright-green above, sublustrous, glabrous or sparsely pilosulous along the costa, the venation plane or prominulous, scarcely paler beneath, dull, sparsely or densely strigillose, especially along the veins, sometimes densely short-pilose, the venation prominent, the costa slender, the lateral veins slender, 15–32 on each side, divaricate, nearly straight, the margins plane; inflorescence 30–40 cm. long, the peduncles stout, 1–5 cm. long, the cymes numerous, dense, few- or many-flowered, short-pedunculate, the rachis glabrous or pilose; bracts triangular, small, the bractlets minute, subulate, ciliate; hypanthium 2–2.5 mm. long, yellowish-tomentulose or strigose; calyx-lobes about 1.5 mm. long, broadly oval, rounded at the apex, erect, glabrous, sometimes ciliolate, one of the lobes often expanded into a red limb, this oval-oblong to narrowly elliptic, 3.5–7 cm. long, 1–2.5 cm. wide, obtuse at the apex, borne on a petiole 1–3 cm. long, glabrous or appressed-pilose; corolla yellow or orange, 5–8 mm. long, the tube equaling or longer than the lobes, strigillose outside; filaments about equaling the corolla-lobes, the anthers 2–4 mm. long; capsule subglobose, 4–5 mm. long, pilosulous; seeds 1 mm. long or shorter.

Type locality: Trinidad.
Distribution: Costa Rica to Peru and Brazil; also in Trinidad.
Illustrations: Vahl, Symb. *pl. 29;* Oerst. Am. Centr. *pl. 12;* Mart. Fl. Bras. 6^6: *pl. 114;* E. & P. Nat. Pfl. 4^4: *f. 9, U-X.*

16. RACHICALLIS* DC. Prodr. 4: 433. 1830.

Erect or prostrate shrubs, much branched. Leaves small, opposite, crowded, sessile, fleshy. Stipules united with the petioles into a sheath. Flowers small, solitary, sessile, yellow, bibracteate, sericeous; hypanthium very short; calyx 4-lobate, the lobes lance-linear, sometimes alternating with small teeth, persistent; corolla salverform, the tube curved, glabrous within, the limb 4-lobate, the lobes imbricate, one of them exterior. Stamens 4, inserted

* Also written *Rhachicallis.*

in the throat of the corolla; filaments short; anthers dorsifixed, linear-oblong, included. Disk swollen, sericeous. Ovary half inferior, 2-celled; style filiform, bilobate, the lobes short, obtuse; ovules numerous, crowded, the placentae peltately attached to the septum. Capsule broadly oblong, half superior, crustaceous, septicidally bivalvate, many-seeded. Seeds angulate, scrobiculate.

Type species, *Hedyotis rupestris* Sw.

1. **Rachicallis americana** (Jacq.) Hitchc. Rep. Mo. Bot. Gard. 4: 92. 1893.

Hedyotis americana Jacq. Enum. Pl. Carib. 12. 1760.
Hedyotis rupestris Sw. Prodr. 29. 1788.
Buchnera rupestris Sw. Fl. Ind. Occ. 1063. 1800.
Rachicallis rupestris DC. Prodr. 4: 434. 1830.

Erect or procumbent shrub, 0.15–2 meters high, much branched, the branches stout, terete, dark-gray to whitish, resinous, densely white-pilose or sericeous or glabrate; stipules 4 mm. long or shorter, densely imbricate, subtruncate to acute, mucronate, brown, sericeous or glabrate outside, densely white-ciliate, sometimes resinous; leaves 2–8 mm. long, linear-oblong to ovate, obtuse or acute at the apex, thick-coriaceous, often as thick as broad, lustrous, green or brownish, sulcate beneath along the costa; hypanthium at anthesis about 1 mm. long, glabrous; calyx-lobes several times as long as the hypanthium, brownish, attenuate, glabrous but densely ciliate with long white hairs, in fruit much exceeding the capsule; corolla 8–10 mm. long, the tube slender, densely sericeous above, glabrate below, the lobes one fourth as long as the tube or shorter, oblong or oval, obtuse or rounded at the apex, sericeous outside, glabrous within; capsule 3 mm. long and nearly as broad, subcompressed, sulcate, rounded or subretuse at the apex, the free portion densely white-pilose; seeds very irregular, 1 mm. long or smaller, brown.

TYPE LOCALITY: [Coastal cliffs near Havana, Cuba].
DISTRIBUTION: On rocks along the coast, Bahamas, Cuba, Isle of Pines, Jamaica, and Yucatán.
ILLUSTRATIONS: Sloane, Hist. Jam. *pl. 202, f. 1;* E. & P. Nat. Pfl. 4[4]: *f. 9, A-D.*

17. **NEOMAZAEA** Krug & Urban; Urban, Ber. Deuts. Bot. Ges. 15: 542. 1898.

Mazaea Krug & Urban; Urban, Ber. Deuts. Bot. Ges. 15: 265. 1897. Not *Mazaea* Bornet & Grun. 1881.

Shrubs or trees, glabrous or pubescent; branches terete. Stipules interpetiolar, triangular, acute, persistent. Leaves opposite, short-petiolate, the blades coriaceous. Flowers solitary in the axils of the leaves, or in axillary racemes or panicles; bractlets 2, minute; hypanthium narrowly oblong; calyx with a distinct tube, 4-lobate, the lobes open in bud, obtuse, equal or unequal; corolla salverform, glabrous within, the tube cylindric, scarcely ampliate above, the throat annular-thickened, the 4 lobes imbricate, ovate, fleshy, spreading or recurved. Stamens 4, inserted in the corolla-throat; filaments very stout; anthers dorsifixed, oblong-linear, obtuse, included. Style filiform, glabrous, bilobate. Disk annular, pilose. Ovary oblong, compressed, 2-celled, costate; ovules few in each cell (2–6), the placentae peltate. Capsule oblong-linear or elliptic, the exocarp thin, crustaceous, the endocarp subosseous, at first septicidally dehiscent, the valves finally deeply bipartite. Seeds few, lance-linear, the testa lineolate, produced at each end; endosperm fleshy; embryo linear; cotyledons linear, obtuse, the radicle terete.

Type species, *Rondeletia phialanthoides* Griseb.

Flowers solitary; leaves 3.5–8 mm. wide. 1. *N. phialanthoides.*
Flowers racemose or paniculate; leaves 1.5–4 cm. wide. 2. *N. Shaferi.*

1. **Neomazaea phialanthoides** (Griseb.) Krug & Urban; Urban, Ber. Deuts. Bot. Ges. 15: 542. 1897.

Rondeletia phialanthoides Griseb. Cat. Pl. Cub. 129. 1866.
Mazaea phialanthoides Krug & Urban; Urban, Ber. Deuts. Bot. Ges. 15: 266. 1897.

Branches stout, grayish, rimose, strigillose-scaberulous when young; stipules 1–1.5 mm. long, thick, erect, strigillose; petioles stout, 1–2.5 mm. long, strigillose; leaf-blades obovate

or obovate-oblong, 10–22 mm. long, 3.5–8 mm. wide, acute or attenuate at the base, rounded or very obtuse at the apex, dark-green above, lustrous, scaberulous or glabrous, the venation obsolete, beneath brownish, sparsely scaberulous or strigillose, the costa prominent, the lateral veins obsolete; peduncles stout, 3 mm. long or shorter; hypanthium 2–3 mm. long, densely whitish-strigillose; calyx about 3 mm. long, sparsely strigillose; corolla-tube 5 mm. long, glabrous outside, the lobes about half as long as the tube, sparsely puberulent outside; capsule 8–10 mm. long, 1.5–2 mm. in diameter, narrowed at the base, grayish, strigillose.

TYPE LOCALITY: Western Cuba.
DISTRIBUTION: Western Cuba.
ILLUSTRATION: Ber. Deuts. Bot. Ges. 15: *pl. 9, f. 10–21.*

2. **Neomazaea** (?) **Shaferi** Standley, sp. nov.

Pisonia inermis Griseb. Cat. Pl. Cub. 24, in part. 1866. Not *P. inermis* Jacq. 1763.

Tree, 6–9 meters high, glabrous throughout, the branches rough, grayish, the internodes very short; stipules small, deltoid; petioles stout, 2–4 mm. long; leaf-blades suborbicular, oval, or oval-oblong, 3–5.5 cm. long, 1.5–4 cm. wide, rounded or obtuse at the base, often abruptly short-decurrent, rounded or very obtuse at the apex, subcoriaceous, somewhat lustrous, green above, the venation prominulous, brownish beneath, the costa prominent, the lateral veins usually 3 on each side, ascending, very irregular, the intermediate veins coarsely and irregularly reticulate, the margins plane or subrevolute; inflorescence axillary, racemose or paniculate, 3–7-flowered, short-pedunculate, much shorter than the leaves, the flowers short-pedicellate, the bracts linear, 1–2 mm. long; hypanthium about 1.5 mm. long; calyx minute, 4-lobate, the lobes oval-ovate, very obtuse; corolla "minute, 4-lobate, the lobes rounded, strongly imbricate, the filaments very short, the anthers short;" fruit elliptic, 6–7 mm. long, 3–3.5 mm. wide, very strongly compressed, brownish-black, conspicuously costate; seeds 2 in each cell, linear, caudate-appendaged at each end.

Type collected on a dry, rocky hillside, Sierra Nipe, along trail from Piedra Gorda to Woodfred, Oriente, Cuba, altitude 400 to 500 meters, December, 1909, *J. A. Shafer 3313* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Cuba.

18. **STEVENSIA** Poit. Ann. Mus. Paris 4: 235. 1804.

Shrubs, more or less pubescent, the branches terete. Stipules sheathing, produced between the petioles as triangular lobes, the lobes obtuse, persistent. Leaves opposite, short-petiolate, thick-coriaceous. Flowers white, solitary in the axils, pedunculate; bractlets 2; calyx closed before anthesis and inclosing the corolla, ovoid-oblong, rostrate-acuminate, in anthesis bifid, the lobes equal or unequal, strigose within, finally deciduous; corolla salverform, the tube cylindric, scarcely ampliate above, glabrous within, the throat naked, the lobes 5–7, imbricate in bud, rounded at the apex, fleshy, spreading. Stamens 5–7, inserted in the corolla-throat; filaments very short; anthers dorsifixed, oblong-linear, emarginate at the base, obtuse at the apex, included. Style glabrous, bifid or bilobate, the lobes linear, truncate. Disk annular. Ovary obovoid, subcompressed, hirsute, 2-celled; ovules numerous, multiseriate, the placentae peltate. Capsule small, globose, the exocarp crustaceous, the endocarp subosseous, loculicidally bivalvate, the valves bipartite. Seeds numerous, ovoid-oblong, reticulate, winged; embryo minute.

Type species, *Stevensia buxifolia* Poit.

1. **Stevensia buxifolia** Poit. Ann. Mus. Paris 4: 235. 1804.

Rondeletia Poitaei Griseb. Fl. Brit. W. Ind. 328. 1861.

Shrub, 2 meters high, the branches short-pilose, resinous; leaves short-petiolate, the blades oval, about 2.5 cm. long, whitish-tomentulose beneath, the venation reticulate; hypanthium in anthesis minute; calyx about 7 mm. long; corolla-tube 8 mm. long, the lobes slightly shorter; anthers 2.5 mm. long; capsule 3–5 mm. in diameter, hirsutulous at the apex, elsewhere tomentulose.

TYPE LOCALITY: Near La Vigie du Cap Français, Haïti.
DISTRIBUTION: Known only from the type locality.
ILLUSTRATIONS: Ann. Mus. Paris 4: *pl. 60;* Gaertn. Fruct. *pl. 197;* Ber. Deuts. Bot. Ges. 15: *pl. 9, f. 1–9.*

19. ACROSYNANTHUS Urban, Symb. Ant. 7: 544. 1913.

Shrubs, glabrous or pubescent. Leaves opposite, short-petiolate, the blades small, coriaceous. Stipules connate between and inside the petioles, truncate, setose-fimbriate, persistent. Flowers solitary at the ends of the branches or cymose, usually 6-parted, sessile or nearly so; bracts and bractlets none; hypanthium obovoid, 6-costate; calyx-lobes open in bud, subequal, fleshy, sometimes with small intermediate teeth; corolla funnelform, the tube pubescent outside, glabrous within, the throat densely white-pilose, the lobes imbricate in bud, 2 of them exterior, obovate, pubescent within, erect-spreading. Stamens 6, inserted in the lower part of the tube, equal; filaments filiform; anthers dorsifixed, included, oblong-linear. Disk plane, pilose. Ovary 2-celled; style filiform, bilobate; ovules few in each cell (13–15), angulate, inserted in 3 or 4 series on the placentae, these attached to the middle of the septum.

Type species, *Acrosynanthus revolutus* Urban.

Flowers solitary; leaf-blades whitish beneath, 0.4–1.3 cm. long, mostly elliptic. 1. *A. revolutus.*
Flowers cymose; leaf-blades not white beneath, usually larger and comparatively narrower.
  Branchlets retrorse-scaberulous; leaf-blades linear-oblong, less than 2 cm. long. 2. *A. parvifolius.*
  Branchlets granular-papillose; leaf-blades oblong to oval, 2.5–9.5 cm. long.
    Leaf-blades oval or oval-oblong, about twice as long as broad. 3. *A. latifolius.*
    Leaf-blades oblong or lance-oblong, 3–4 times as long as broad.
      Leaf-blades 2.5–4 cm. long, glabrous. 4. *A. lucidus.*
      Leaf-blades 5–9.5 cm. long, papillose-scaberulous beneath, especially on the costa. 5. *A. trachyphyllus.*

1. Acrosynanthus revolutus Urban, Symb. Ant. 7: 544. 1913.

Shrub, 3–6 dm. high, or sometimes a small tree 4.5 meters high, the branches stout, terete, nigrescent or grayish, resiniferous, the internodes very short or elongate; sheath of the stipules about 1 mm. long, coriaceous; petioles 1.5–3 mm. long; leaf-blades elliptic or oblong, 4–13 mm. long, 2–3 mm. wide, obtuse at the base, obtuse or very obtuse at the apex, thick-coriaceous, rigid, lustrous above, the venation obsolete, whitish beneath, the costa subprominent, the lateral veins obsolete, the margins revolute; flowers solitary, sessile in the stipular sheaths; hypanthium minutely scaberulous outside; calyx-lobes linear or oblong-linear, 1–2 mm. long, rounded at the apex, carinate, erect; corolla 7 mm. long, the tube minutely retrose-pilose outside, the lobes obovate, rounded or very obtuse at the apex, short-pilose outside, about 3 mm. long, slightly shorter than the tube; filaments 0.6 mm. long, the anthers 1.8 mm. long.

TYPE LOCALITY: Camp La Gloria, near Sierra Moa, Oriente, Cuba.
DISTRIBUTION: Oriente, Cuba.

2. Acrosynanthus parvifolius Britton, sp. nov.

Shrub or small tree, sometimes 3.6 meters high, the trunk with deeply furrowed gray bark, the branches brownish-gray, retrorse-scaberulous when young, more or less resinous, the internodes very short; stipule-sheath 1–1.5 mm. long; petioles stout, 1–3 mm. long, scaberulous; leaf-blades linear-oblong, 1–2 cm. long, 2–5 mm. wide, obtuse or acutish at the base, obtuse or rounded at the apex, thick-coriaceous, green above, lustrous, glabrous, the costa impressed, brownish beneath, glabrous or sparsely scaberulous, the costa prominent, the lateral veins obsolete, the margin revolute; flowers mostly in 3-flowered cymes, these short-pedunculate, the pedicels 1.5–2.5 mm. long; calyx-lobes oblong, obtuse, about 1 mm. long; capsule obovoid, 2.5–3 mm. long, reddish-brown, glabrous.

Type collected in dry openings near pine-land, Río Naranjo, Oriente, Cuba, altitude 450 to 550 meters, February, 1910, *J. A. Shafer 3864* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Dry soil, Oriente, Cuba.

3. Acrosynanthus latifolius Standley, sp. nov.

Straggling shrub, 0.6–4.5 meters high, the branches gray or blackish, with very short internodes, the branchlets granular-papillose; stipule-sheath 1–1.5 mm. long; petioles very stout, 3–6 mm. long, granular-papillose; leaf-blades oval or oval-oblong, 2.5–5.5 cm. long

1.5–3 cm. wide, rounded or very obtuse at the base, rounded or obtuse at the apex, thick-coriaceous, glabrous, dark-green on the upper surface, very lustrous, the costa impressed, the lateral veins obsolete, paler and brownish beneath, the costa salient, the lateral veins obscure, the margin strongly revolute; inflorescence cymose, terminal, the cymes few-flowered, short-pedunculate, the flowers short-pedicellate or sessile; hypanthium 1 mm. long papillose; calyx-lobes 5 or 6, rounded, about as long as the hypanthium; capsule 3.5–4 mm. long, brown.

Type collected in a rocky thicket, vicinity of Camp San Benito, Oriente, Cuba, altitude 900 meters, February, 1910, *J. A. Shafer 4059* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Oriente, Cuba.

4. **Acrosynanthus lucidus** Britton, sp. nov.

Shrub, 2.5–4.5 meters high, the branches stout, blackish-gray, closely and finely papillose, the internodes very short; stipule-sheath 1–2 mm. long, papillose; petioles very stout, 2–6 mm. long, papillose; leaf-blades oblong, 2.5–4.2 cm. long, 6–16 mm. wide, obtuse or acute at the base, obtuse or acutish at the apex, thick-coriaceous, glabrous, green and very lustrous above, the costa impressed, brownish beneath, the costa very prominent, the lateral veins obsolete, the margin strongly revolute; inflorescence cymose, few-flowered, sessile or short-pedunculate, about 1.5 cm. broad, the pedicels stout, 1–3 mm. long; hypanthium 1 mm. long, minutely papillose-scaberulous; calyx-lobes oval, obtuse, about as long as the hypanthium; capsule ellipsoid-globose, 3–4 mm. long, brown, lustrous.

Type collected in serpentine thickets, trail from Navas to Camp Buena Vista, Oriente, Cuba, altitude 650 meters, March, 1910, *J. A. Shafer 4417* (herb. N. Y. Bot. Gard.).
DISTRIBUTION: Oriente, Cuba.

5. **Acrosynanthus trachyphyllus** Standley, sp. nov.

Branches stout, blackish, finely granular-papillose, with short internodes; stipule-sheath about 3 mm. long; petioles stout, 5–13 mm. long, papillose; leaf-blades oblong or lance-oblong, 5–9.5 cm. long, 1.6–3 cm. wide, obtuse or rounded at the base, obtuse or broadly obtuse at the apex, rigid-coriaceous, the lateral veins obsolete, dark-green on the upper surface, glabrous, lustrous, the costa impressed, paler and brownish beneath, rough, more or less scaberulous, especially on the salient costa, the margin revolute, scabrous-ciliate; inflorescence cymose, terminal, short-pedunculate, few-flowered, the pedicels 2–3 mm. long; hypanthium about 1.5 mm. long, papillose; calyx-lobes 5 or 6, oval, obtuse; corolla 5 mm. long, puberulent outside, the lobes oblong-obovate, obtuse, as long as the tube, papillose within.

Type collected at Cañete, Baracoa, Cuba, August, 1917, *J. T. Roig 66* (herb. N. Y. Bot. Gard.).

20. **RONDELETIA** L. Sp. Pl. 172. 1753.

Petesia L. Syst. ed. 10. 894. 1759.
Lightfootia Schreb. Gen. 122. 1789. Not *Lightfootia* L'Hér. 1788.
Willdenovia J. F. Gmel. Syst. 2: 362. 1791. Not *Willdenovia* Thunb. 1790.
Arachnimorpha Desv.; Hamilt. Prodr. 28. 1825.
Rogiera Planch. Fl. Serres 5: 442. 1849.
Arachnothryx Planch. Fl. Serres 5: 442. 1849.

Shrubs or trees, glabrous or pubescent, the branches terete or angulate. Leaves opposite or verticillate, sessile or petiolate, the blades large or small, membranaceous or coriaceous. Stipules interpetiolar, usually broad, sometimes foliaceous, obtuse, acute, or cuspidate, usually persistent. Inflorescence terminal or axillary, cymose, corymbose, or paniculate, rarely 1-flowered; hypanthium usually subglobose, rarely obovoid or oblong; calyx 4- or 5- (rarely 6-) lobate, the lobes narrow or broad, often unequal, sometimes foliaceous, persistent; corolla funnelform or salverform, white, yellowish, or red, the tube usually slender and elongate, often ampliate in the throat, glabrous or pubescent, the throat often annular-thickened, sometimes bearded, the lobes 4 or 5 (rarely 6), spreading, broad, obtuse, imbricate, 1 or 2 exterior. Stamens 4 or 5, inserted in the throat of the corolla, included or exserted; filaments short; anthers dorsifixed, narrowly oblong or broader, obtuse, erect. Disk annular. Ovary 2-celled; style filiform, obtuse or shortly bifid; ovules numerous, crowded on the placentae,

these affixed to the septum. Capsule small or large, usually globose, rarely pyriform or oblong, bisulcate, chartaceous or coriaceous, 2-celled, loculicidally or septicidally bivalvate, the valves usually bipartite, usually many-seeded. Seeds commonly minute, compressed or angulate, sometimes fusiform, often winged, sometimes appendaged at each end, the testa thin; endosperm fleshy; embryo minute, clavate.

Type species, *Rondeletia americana* L.

Inflorescence terminal, or terminal and axillary.
- Corolla densely yellow-barbate in the throat; stipules usually foliaceous and reflexed; flowers 5-parted; seeds mostly exalate. Mexican and Central American. — I. AMOENAE.
- Corolla usually naked in the throat, never yellow-barbate; stipules mostly narrow and erect.
  - Capsule globose or pyriform, little if at all longer than broad.
    - Inflorescence an elongate, spike-like panicle; flowers 4-parted; seeds exalate. Mexican and Central American. — III. LANIFLORAE.
    - Inflorescence various, but never an elongate spike-like panicle.
      - Corolla arachnoid-tomentulose outside; leaves white-tomentose beneath; flowers 4-parted; seeds exalate. Mexican and Central American. — II. LEUCOPHYLLAE.
      - Corolla not arachnoid-tomentose outside.
        - Inflorescence few- or many-flowered, the pedicels short.
          - Flowers 4-parted.
            - Seeds exalate; leaves acuminate, membranaceous. Mexican and Central American. — IV. CALYCOSAE.
            - Seeds alate; leaves acute to rounded at the apex, coriaceous. West Indian. — VI. STELLATAE.
          - Flowers 5-parted.
            - Leaves white-tomentose beneath; corolla 2–2.5 cm. long. Central American. — V. HONDURENSES.
            - Leaves never white-tomentose; corolla less than 2 cm. long.
              - Corolla glabrous outside. West Indian. — VI. STELLATAE.
              - Corolla pubescent outside. West Indian and Central American. — IX. ODORATAE.
        - Inflorescence 1–3-flowered, the pedicels very long; leaves small, coriaceous; flowers 4- or 5-parted; seeds exalate, often appendaged at each end. Cuban. — VIII. PEDICELLARES.
  - Capsule linear-oblong, cylindric, several times as long as broad; leaves coriaceous; flowers 4-parted; seeds appendaged at each end. — VII. TINIFOLIAE.

Inflorescence axillary.
- Capsule globose or subglobose, less than 1 cm. in diameter.
  - Flowers 5-parted.
    - Inflorescence cymose-paniculate, usually many-flowered, the flowers never capitate. West Indian. — X. LAURIFOLIAE.
    - Inflorescence never cymose-paniculate, 1–3-flowered, or many-flowered and the flowers collected into 1–3 dense heads.
      - Flowers numerous, in 1–3 dense heads, rarely solitary, the bracts large; stipules usually large and thin; corolla-tube antrorse-pilose. Jamaican. — XI. UMBELLULATAE.
      - Flowers usually 1–3, the bracts small; stipules small, thick; corolla-tube usually retrorse-pilose. West Indian. — XII. INCANAE.
  - Flowers 4-parted; corolla-tube retrorse-pilose.
    - Leaves loosely pilose beneath. West Indian and Mexican. — XIII. PILOSAE.
    - Leaves white or grayish beneath, at least when young, with a fine close tomentum. West Indian. — XIV. HYPOLEUCAE.
- Capsule pyriform, about 1.5 cm. long; flowers 5–6-parted; seeds exalate. Cuban. — XV. CORREIFOLIAE.

I. AMOENAE

Corolla glabrous outside.
- Calyx-lobes foliaceous, several times as long as the hypanthium; flowers few; leaves setose-pilose beneath. — 1. *R. suffrutescens.*
- Calyx-lobes minute, shorter than the hypanthium; flowers very numerous; leaves glabrous beneath except for tufts of hairs in the axils of the veins. — 2. *R. ligustroides.*

Corolla pubescent outside.
- Branches acutely quadrangular; petioles 5–13 mm. long; leaf-blades usually acute at the base. — 3. *R. stenosiphon.*
- Branches terete or subangulate; petioles very short; leaf-blades subcordate to obtuse at the base.
  - Leaves ternate; flowers capitate. — 4. *R. strigosa.*
  - Leaves opposite; flowers cymose-paniculate.
    - Calyx-lobes linear-subulate, attenuate. — 5. *R. Ehrenbergii.*
    - Calyx-lobes deltoid to oblong, obtuse or acutish.
      - Stipules triangular-subulate, 4–6 mm. long. — 6. *R. gratissima.*

Stipules mostly oblong, foliaceous, 10 mm. long or longer, usually obtuse.
Leaves glabrous beneath or sparsely strigose.
Leaves evidently petiolate.
Leaves glabrous on the upper surface. 7. *R. intermedia.*
Leaves setose-pilose on the upper surface. 8. *R. Pittierii.*
Leaves subsessile. 9. *R. cordata.*
Leaves densely soft-pilose beneath.
Leaf-blades broadly ovate or ovate-oval, usually subcordate at the base; corolla-tube 12 mm. long or shorter. 10. *R. amoena.*
Leaf-blades elliptic or lance-elliptic, obtuse at the base; corolla-tube 15 mm. long. 11. *R. Langlassei.*

II. LEUCOPHYLLAE

Calyx-lobes foliaceous, 10–15 mm. long. 12. *R. darienensis.*
Calyx-lobes not foliaceous, 6 mm. long or shorter.
Inflorescence of numerous once bifid cymes arranged in a raceme, the flowers sessile, secund; stipules bidentate at the apex. 13. *R. Rekoi.*
Inflorescence capitate or cymose-paniculate, the flowers often pedicellate, not secund; stipules entire.
Inflorescence capitate. 14. *R. leptodictya.*
Inflorescence cymose-paniculate.
Calyx-lobes linear or oblanceolate, 3–6 mm. long. 15. *R. leucophylla.*
Calyx-lobes orbicular-oblong or ovate-deltoid, 0.5–2 mm. long.
Leaves scabrous on the upper surface; corolla-tube 8–9 mm. long. 16. *R. aspera.*
Leaves glabrous on the upper surface; corolla-tube 12 mm. long. 17. *R. nitida.*

III. LANIFLORAE

Corolla arachnoid-tomentose outside, sometimes only sparsely so.
Leaves more or less tomentose beneath when young but soon glabrate.
Lobes of the calyx longer than the hypanthium. 18. *R. septicidalis.*
Lobes of the calyx shorter than the hypanthium. 19. *R. gracilis.*
Leaves densely and persistently tomentose beneath with a close, white or fulvous tomentum.
Corolla-tube 12–15 mm. long.
Secondary veins of the leaves obsolete; tomentum of the lower surface of the leaves white, very closely appressed. 20. *R. laniflora.*
Secondary veins of the leaves prominent; tomentum loose, fulvous. 21. *R. Bourgaei.*
Corolla-tube 4–10 mm. long.
Leaves long-pilose beneath along the veins; corolla-tube 8–10 mm. long. 22. *R. villosa.*
Leaves not pilose beneath; corolla-tube 4–8 mm. long. 23. *R. buddleoides.*
Corolla variously pubescent outside, but never tomentose.
Leaves subsessile. 24. *R. Thiemei.*
Leaves conspicuously petiolate.
Leaves densely pilose beneath with long, mostly spreading hairs. 25. *R. rufescens.*
Leaves glabrous beneath or sericeous, or sometimes appressed-pilose.
Corolla-tube glabrous below, setose-pilose at the top; leaves sericeous beneath. 26. *R. stachyoidea.*
Corolla-tube minutely strigose or pilose throughout; leaves glabrous or strigose beneath.
Panicles shorter than the leaves, partly axillary; leaves glabrous. 27. *R. heteranthera.*
Panicles longer than the leaves, all terminal; leaves strigose or pilose-strigillose beneath.
Calyx-lobes dissimilar, one of them large and foliaceous. 28. *R. pansamalana.*
Calyx-lobes similar, none of them foliaceous.
Hypanthium strigillose; leaves glabrous on the upper surface. 29. *R. capitellata.*
Hypanthium pilose with spreading hairs; leaves appressed-pilose on the upper surface. 30. *R. secundiflora.*

IV. CALYCOSAE

Corolla glabrous outside.
Stipules reniform, foliaceous, persistent; corolla-tube 11–12 mm. long. 31. *R. Galeottii.*
Stipules small, not foliaceous, deciduous; corolla-tube 12–16 mm. long. 32. *R. Jurgenseni.*
Corolla pubescent outside.
Flowers few, mostly in 3-flowered cymes. 33. *R. Deamii.*
Flowers numerous, not in 3-flowered cymes.
Calyx-lobes 3 mm. long or shorter.
Stipules triangular-subulate; flowers secund along the branches of the panicle; calyx-lobes 1–3 mm. long. 34. *R. secunda.*

Stipules spatulate or rounded; flowers not secund; calyx-lobes 0.5–1 mm. long.
Calyx-lobes oblong-obovate; inflorescence dense. 35. *R. linguiformis.*
Calyx-lobes narrowly triangular; inflorescence lax. 36. *R. costaricensis.*
Calyx-lobes, at least some of them, 5–8 mm. long.
Corolla-tube 7–8 mm. long; calyx-lobes, at least some of them, oval, foliaceous. 37. *R. aetheocalymna.*
Corolla-tube 15–17 mm. long; calyx-lobes linear-lanceolate. 38. *R. calycosa.*

V. HONDURENSES

A single species. 39. *R. hondurensis.*

VI. STELLATAE

Corolla strigillose outside; leaves hirtellous and scaberulous. 40. *R. brachycarpa.*
Corolla glabrous outside; leaves glabrous.
Flowers 5-parted. 41. *R. subglabra.*
Flowers 4-parted.
Leaves sessile. 42. *R. yamuriensis.*
Leaves petiolate.
Calyx-lobes deltoid, minute. 43. *R. stellata.*
Calyx-lobes oblong or ovate.
Capsule oblong-pyriform, nearly twice as long as thick; leaf-blades long-attenuate at the base. 44. *R. calcicola.*
Capsule globose or pyriform, little if at all longer than thick; leaf-blades cuneate at the base.
Capsule globose, about 7 mm. long. 45. *R. angustata.*
Capsule pyriform, 10–15 mm. long. 46. *R. canellaefolia.*

VII. TINIFOLIAE

A single species. 47. *R. tinifolia.*

VIII. PEDICELLARES

Corolla glabrous outside.
Leaf-blades 3–6 mm. wide; petioles 1–2 mm. long. 48. *R. peduncularis.*
Leaf-blades mostly 10–15 mm. wide; petioles 4–7 mm. long. 49. *R. pachyphylla.*
Corolla pubescent outside.
Flowers 4-parted. 50. *R. pedicellaris.*
Flowers 5-parted.
Leaves glabrous. 51. *R. alaternoides.*
Leaves hirtellous.
Leaf-blades 3–6 mm. wide, cuneate at the base. 52. *R. microphylla.*
Leaf-blades 7–13 mm. wide, rounded or truncate at the base. 53. *R. Shaferi.*

IX. ODORATAE

Inflorescence few-flowered, the flowers clustered at the ends of the branches or subracemose.
Flowers racemose or in axillary 3-flowered cymes; leaves 1.8–3 cm. wide. 54. *R. azuensis.*
Flowers clustered at the ends of the branches; leaves 1–2 cm. wide. 55. *R. heterochroa.*
Inflorescence many-flowered, cymose-corymbose.
Seeds exalate; leaves scabrous on the upper surface, obtuse to subcordate at the base; calyx-lobes oblong-linear. 56. *R. odorata.*
Seeds alate; leaves glabrous on the upper surface, acute at the base; calyx-lobes lanceolate or ovate. 57. *R. panamensis.*

X. LAURIFOLIAE

Corolla glabrous outside or nearly so.
Leaves sessile, obtuse or clasping at the base.
Calyx-lobes linear-subulate, 1.5–2 mm. long; corolla-tube 9–12 mm. long. 58. *R. amplexicaulis.*
Calyx-lobes deltoid, about 0.5 mm. long; corolla-tube 7 mm. long. 59. *R. Harrisii.*
Leaves petiolate, acute at the base.
Leaf-blades 2.5–5 cm. long, glabrous. 60. *R. daphnoides.*
Leaf-blades mostly 7–16 cm. long, sparsely short-pilose beneath.
Petioles 1–2 cm. long; corolla-lobes less than half as long as the tube. 61. *R. pallida.*
Petioles 2–4 cm. long; corolla-lobes half as long as the tube. 62. *R. elegans.*
Corolla densely pubescent outside.
Calyx glabrous. 63. *R. racemosa.*
Calyx densely pubescent.
Calyx-lobes broadly deltoid, usually much less than 1 mm. long.
Lobes of the corolla nearly as long as the tube. 64. *R. laurifolia.*
Lobes of the corolla one third as long as the tube or shorter.

Leaves covered beneath with a fine close pale pubescence.
Corolla-tube very slender, 5 mm. long; leaf-blades 3.5–7.5 cm. long. 65. *R. tomentosa.*
Corolla-tube thick, 8–9 mm. long; leaf-blades mostly 8–15 cm. long. 66. *R. ochracea.*
Leaves nearly or quite glabrous in age.
Leaf-blades rounded or obtuse at the apex. 67. *R. portoricensis.*
Leaf-blades acute or acuminate.
Leaves wholly glabrous. 68. *R. polita.*
Leaves more or less pubescent.
Corolla reddish, the tube slender, 4 mm. long. 69. *R. trifolia.*
Corolla rusty-yellowish, the tube stout, 5 mm. long. 70. *R. thyrsoidea.*
Calyx-lobes linear or narrowly triangular, usually more than 1 mm. long.
Peduncles mostly longer than the leaves; seeds exalate. 71. *R. americana.*
Peduncles shorter than the leaves; seeds usually alate.
Leaves and branches glabrous or nearly so, the pubescence, when present, appressed.
Corolla-tube 3–4 mm. long; leaf-blades obtuse or abruptly and broadly short-acuminate. 72. *R. arborescens.*
Corolla-tube 6 mm. long; leaf-blades subabruptly acuminate, the acumen longer than broad. 73. *R. stereocarpa.*
Leaves more or less pilosulous beneath, the branches densely pilose or sericeous.
Branches pilose-sericeous. 74. *R. Christii.*
Branches pilose with spreading hairs.
Leaf-blades 13–20 cm. long; capsule 6–7 mm. in diameter. 75. *R. martinicensis.*
Leaf-blades 10 cm. long or shorter; capsule 4–6 mm. in diameter.
Calyx-lobes 1–1.5 mm. long; corolla-tube 5.5–6 mm. long. 76. *R. impressa.*
Calyx-lobes 2.5–5 mm. long; corolla-tube 6–8 mm. long. 77. *R. hirsuta.*

XI. UMBELLULATAE

Pubescence sericeous, closely appressed.
Inflorescence pedunculate. 78. *R. cincta.*
Inflorescence subsessile. 79. *R. glauca.*
Pubescence loose and spreading, never sericeous.
Inflorescence 1-flowered; leaves long-pilose. 80. *R. ligulata.*
Inflorescence with few or numerous flowers.
Leaf-blades setose-pilose with long slender hairs, rounded or subcordate at the base. 81. *R. hirta.*
Leaf-blades pilose with very short hairs, acute at the base.
Inflorescence simple, capitate, the peduncles shorter than the petioles. 82. *R. saxicola.*
Inflorescence trichotomous, long-pedunculate. 83. *R. umbellulata.*

XII. INCANAE

Peduncles as long as the leaves or longer.
Petioles about 2 mm. long. 84. *R. Lindeniana.*
Petioles 8–12 mm. long.
Stipules triangular, obtuse. 85. *R. Nimanimae.*
Stipules linear-subulate. 86. *R. Leoni.*
Peduncles shorter than the leaves.
Leaves densely tomentose beneath. 87. *R. incana.*
Leaves glabrous.
Calyx-lobes triangular. 88. *R. chamaebuxifolia.*
Calyx-lobes linear or spatulate-linear. 89. *R. vacciniifolia.*

XIII. PILOSAE

Calyx-lobes deltoid, minute. 90. *R. intermixta.*
Calyx-lobes linear or spatulate.
Calyx-lobes 1.5–4 mm. long.
Leaf-blades cuneate-obovate; inflorescences usually 1-flowered, the peduncles 2 mm. long or shorter; corolla-tube 6–7 mm. long. 91. *R. buxifolia.*
Leaf-blades variable in outline but never cuneate-obovate; inflorescences usually 3-flowered, the peduncles sometimes 2 cm. long; corolla-tube 7–10 mm. long. 92. *R. inermis.*
Calyx-lobes 6–12 mm. long.
Inflorescence short-pedunculate; petioles 6–12 mm. long. 93. *R. scabra.*
Inflorescence long-pedunculate; petioles 2–6 mm. long. 94. *R. pilosa.*

XIV. HYPOLEUCAE

Leaves glabrous above, even when young, or sparsely pubescent along the costa.
  Leaf-blades mostly 1–2 cm. long; peduncles usually 1-flowered.
    Leaf-blades oval, obtuse or rounded at the apex. 95. *R. venosa.*
    Leaf-blades oblong, acute or acutish at the apex. 96. *R. bicolor.*
  Leaf-blades mostly 3 cm. long or longer; peduncles few-flowered.
    Pubescence of the branches retrorse; stipules acute; leaf-blades rounded at the apex. 97. *R. lomensis.*
    Pubescence of the branches antrorse; stipules cuspidate; leaf-blades acute or short-acuminate. 98. *R. nipensis.*
Leaves finely and densely pubescent above when young, the pubescence usually persistent.
  Leaf-blades mostly 0.5–1 cm. long.
    Calyx-lobes about 2.5 mm. long, acute; corolla-lobes glabrous within. 99. *R. Fuertesii.*
    Calyx-lobes 1–1.5 mm. long, obtuse; corolla-lobes pubescent within.
      Leaf-blades narrowly obovate or elliptic, twice as long as broad. 100. *R. Rugelii.*
      Leaf-blades broadly oval or suborbicular, nearly as broad as long. 101. *R. hypoleuca.*
  Leaf-blades mostly 1.5–3 cm. long or longer.
    Calyx-lobes oval or broadly ovate, about as long as broad, rounded or obtuse at the apex.
      Pubescence of the branches retrorse; leaf-blades broadly oval; petioles 4–5 mm. long. 102. *R. baracoensis.*
      Pubescence of the branches antrorse; leaf-blades oval-oblong or obovate; petioles 1–3 mm. long.
        Leaf-blades acute at the base, glabrate beneath in age except along the veins. 103. *R. insularis.*
        Leaf-blades rounded or very obtuse at the base, persistently whitish-tomentulose beneath. 104. *R. camarioca.*
    Calyx-lobes linear or lance-triangular, longer than broad, acute.
      Leaf-blades large, 3.5–6 cm. long, obovate-elliptic. 105. *R. Brauseana.*
      Leaf-blades small, usually less than 3 cm. long.
        Leaf-blades oval or elliptic-oval. 106. *R. Berteriana.*
        Leaf-blades narrowly obovate or oblong. 107. *R. Combsii.*

XV. CORREIFOLIAE

A single species. 108. *R. correifolia.*

Unplaced species. 109. *R. camagueyensis.*

I. **Amoenae.** Leaves usually large, more or less pubescent, rarely glabrous. Stipules usually large, foliaceous, and reflexed. Inflorescence terminal, cymose-paniculate or cymose-corymbose, many-flowered, broad; flowers 5-parted; calyx-lobes small, or large and foliaceous; corolla large, glabrous or antrorse-pilose outside, densely yellow-bearded in the throat. Capsule globose, 7 mm. in diameter or smaller. Seeds usually exalate.

1. **Rondeletia suffrutescens** Brand. Univ. Calif. Publ. Bot. 6: 70. 1914.

Shrub, the branches terete, slender, sparsely pilosulous when young, the internodes elongate; stipules linear or triangular-lanceolate, 3–5 mm. long, attenuate, ascending, persistent, green, strigose; leaves opposite, the petioles slender, 2–4 mm. long, strigose or pilosulous, the blades ovate, oval-ovate, or lance-oblong, 4.5–10 cm. long, 1.5–3.5 cm. wide, rounded or abruptly short-acuminate at the base, subabruptly long-acuminate or attenuate at the apex, very thin, bright-green, sparsely setose-pilose on the upper surface, copiously so beneath, the hairs short, the costa slender, prominent, the lateral veins very slender, 5–8 on each side, arcuate-ascending; inflorescence terminal, cymose-corymbose, the peduncles slender, 4–5 cm. long, the cymes mostly 3-flowered, the pedicels slender, 5–15 mm. long; hypanthium glabrous, subglobose, about 2 mm. long; calyx-lobes 5, linear-lanceolate, 6–14 mm. long, attenuate, bright-green, sparsely setose-ciliate with appressed hairs; corolla glabrous outside, the tube 17 mm. long, 2 mm. thick, the throat densely yellow-pilose, the 5 lobes oblong or oval, 6–7 mm. long; anthers and style included.

TYPE LOCALITY: Cerro del Boquerón, Chiapas.
DISTRIBUTION: Known only from the type locality.

2. **Rondeletia ligustroides** Hemsl. Diag. Pl. Nov. 26. 1879.

Shrub, 2–2.5 meters high, the branches slender, terete, brownish or grayish, glabrous; stipules broadly triangular, about 1 mm. long, obtuse or acute, erect, strigose-ciliate; leaves opposite, the petioles stout, 4–10 mm. long, glabrous, the blades broadly ovate to ovate-lanceolate, 4–8 cm. long, 1–3.2 cm. wide, rounded to short-acuminate at the base, abruptly acuminate or attenuate at the apex, chartaceous, dark-green, glabrous above, glabrous beneath or with tufts of short hairs in the axils of the veins, the costa slender, prominent, the lateral veins very slender, 5–8 on each side, straight or subarcuate, divergent at an angle of about 60°; inflorescence terminal and axillary, cymose-corymbose, the peduncles slender, 1–3 cm. long, the cymes few- or many-flowered, pedunculate, the flowers short-pedicellate; bracts minute, linear or lanceolate, ciliate; hypanthium glabrous or sparsely strigillose; calyx 5-dentate, the teeth subequal, triangular, acute, much shorter than the hypanthium, erect; corolla yellowish-red, glabrous outside, the tube stout, 5–6 mm. long, densely yellow-pilose in the throat, the 5 lobes rounded, 1–1.5 mm. long, puberulent within, spreading; anthers and style included; capsule globose, 2–3 mm. in diameter, dark-brown, glabrous; seeds numerous, minute, compressed or angulate, brown, punctulate.

TYPE LOCALITY: Orizaba, Veracruz.
DISTRIBUTION: Vicinity of the type locality.

3. **Rondeletia stenosiphon** Hemsl. Diag. Pl. Nov. 26. 1879.

Shrub, the branches stout, acutely angulate, brownish-gray, strigillose when young; stipules lance-triangular, 5–12 mm. long, attenuate, thick, erect, strigillose or glabrate; leaves opposite, the petioles stout, 4–13 mm. long, strigillose, the blades obovate, oval-oblong, or elliptic-oval, 7–14 cm. long, 3.5–7.5 cm. wide, subobtuse to acuminate at the base, usually abruptly short-acuminate at the apex, coriaceous, dark-green and lustrous above, glabrous, beneath paler, finely strigillose or glabrate, the costa prominent, the lateral veins slender, 6–8 on each side, straight or subarcuate, ascending at an angle of 45° or more; inflorescence terminal and axillary, cymose-corymbose, 8–14 cm. long, the peduncles stout, 4–6.5 cm. long, the cymes numerous, densely many-flowered, pedunculate, the flowers sessile or short-pedicellate; bracts and bractlets usually minute, triangular; hypanthium densely fulvous-sericeous; calyx-lobes 5, minute, ovate-triangular, acute, erect; corolla densely sericeous-strigillose outside, the tube slender, 8–11 mm. long, densely yellow-pilose in the throat, the 5 lobes oval, 2.5–4 mm. long, spreading, puberulent within; style included or exserted.

TYPE LOCALITY: Yucatán or Tabasco.
DISTRIBUTION: Guatemala and Yucatán or Tabasco.
ILLUSTRATION: E. & P. Nat. Pfl. 4[4]: *f. 9, J. K.*

4. **Rondeletia strigosa** (Benth.) Hemsl. Diag. Pl. Nov. 27. 1879.

Bouvardia strigosa Benth. Pl. Hartw. 75. 1841.

Shrub, 6–10 dm. high, the branches stout, terete, brown, hirtellous or puberulent when young; stipules very short, subtruncate, strigose; leaves mostly ternate, sessile or nearly so, the blades ovate to ovate-oval, 1.5–5 cm. long, rounded or subtruncate at the base, acute to acuminate at the apex, thin, strigillose, dark-green above, paler beneath, the costa slender, prominent, the lateral veins few, most of them rising from near the base at an acute angle; inflorescence terminal, capitate, the flowers few or rarely solitary, short-pedicellate; bractlets minute; hypanthium densely strigose; calyx-lobes 5, linear or lance-linear, 6–10 mm. long, acute, ascending; corolla sparsely strigose outside, the tube slender, 2–2.5 cm. long, densely yellow-pilose in the throat, the 5 lobes obovate-orbicular, 5–10 mm. long, glabrous within, spreading; anthers and style included; capsule globose, about 6 mm. long, dark-brown, strigose.

TYPE LOCALITY: Zunil, Guatemala.
DISTRIBUTION: Mountains of Guatemala and El Salvador.

5. **Rondeletia Ehrenbergii** K. Schumann, sp. nov.

Shrub, the branches stout, terete, grayish-brown, densely fulvous-puberulent or strigillose when young, the internodes short or elongate; stipules narrowly triangular, 5–8 mm. long,

attenuate, erect, fulvous-strigose; leaves opposite, the petioles very stout, 3–5 mm. long, strigose and hirtellous, the blades oval or ovate-oval, 3–5 cm. long, 1–3.3 cm. wide, rounded or subcordate at the base, acute to rounded at the apex and often abruptly short-acuminate, thick-coriaceous, green above, densely strigillose, beneath fulvous, densely short-pilose, the costa stout and prominent, the lateral veins prominent, 6–8 on each side, subarcuate, ascending at an angle of about 45°, the secondary veins very prominent, reticulate; inflorescence terminal and axillary, cymose-corymbose, very dense, 4–5 cm. broad, the flowers numerous, short-pedicellate; bracts elongate, linear-setaceous; hypanthium densely fulvous-strigillose; calyx-lobes 5, linear-subulate, 2.5–4 mm. long, attenuate, erect; corolla densely strigillose outside, the tube slender, 15 mm. long, the throat densely yellow-pilose, the 5 lobes obovate-orbicular, 4 mm. long, spreading, puberulent within; style exserted; capsule globose, 3–3.5 mm. in diameter, strigose.

Type collected at Totonocapán, Guatemala, *Ehrenberg 1033* (U. S. Nat. Herb. *no. 594426*).

6. **Rondeletia gratissima** (Linden) Hemsl. Diag. Pl. Nov. 25. 1879.

Rogiera gratissima Linden; Planch. Fl. Serres **15**: 133. 1864.
Rogiera elegantissima Regel, Gartenflora *pl. 490*. 1865.

Shrub, the branches stout, terete, puberulent when young, or glabrous; stipules triangular-subulate, 4–6 mm. long; leaves opposite, the petioles stout, about 4 mm. long, the blades oblong-elliptic, 5–6.5 cm. long, rounded at the base, short-acuminate and mucronulate at the apex, thick-coriaceous, glabrous; inflorescence terminal, cymose-corymbose, hemispheric, dense, 5–10 cm. broad, the flowers short-pedicellate; bracts minute; hypanthium sparsely puberulent, reddish; calyx-lobes 5, unequal, 1 mm. long or less; corolla rosy-white, sparsely puberulent outside, the tube slender, 12 mm. long, hirsute within, the throat yellow-pilose, the 5 lobes rounded, 2 mm. long, farinose.

TYPE LOCALITY: Mountains of Chiapas.
DISTRIBUTION: Chiapas.
ILLUSTRATIONS: Fl. Serres *pl. 1570, 1571;* Gartenflora *pl. 490*.

7. **Rondeletia intermedia** Hemsl. Diag. Pl. Nov. 26. 1879.

Shrub, the branches stout, terete, reddish-brown, lenticellate, densely strigose when young; stipules oblong, 6–10 mm. long, obtuse, reflexed, strigose outside; leaves opposite, the petioles very stout, 2–4 mm. long, strigose, the blades oval, oblong-oval, or ovate-oval, 6–12 cm. long, 3.5–5 cm. wide, rounded or subcordate at the base, acutish or obtuse at the apex, or sometimes abruptly and broadly short-acuminate, subcoriaceous, dark-green, glabrous above, sparsely strigose beneath or glabrous, the costa stout, prominent, the lateral veins slender, about 6 on each side, subarcuate, ascending at an angle of 45° or more; inflorescence terminal and axillary, cymose-corymbose, the cymes few-flowered, rather dense, the flowers short-pedicellate; bracts minute; hypanthium densely strigillose; calyx-lobes 5, ovate-triangular, 0.5–1 mm. long, acutish, erect; corolla pinkish-white, strigillose outside, the tube slender, 8–10 mm. long, villous within, yellow-pilose in the throat, the 5 lobes rounded; capsule globose, 3–3.5 mm. in diameter, dark-brown, strigose.

TYPE LOCALITY: Chiapas.
DISTRIBUTION: Chiapas and Oaxaca.

8. **Rondeletia Pittierii** Schumann & Krause; K. Krause, Bot. Jahrb. **40**: 316. 1908.

Tree, the branches slender, terete or subangulate, grayish, sparsely pilose when young; stipules oblong, about 8 mm. long, acute, strigillose outside, glabrous within, persistent; leaves opposite, the petioles stout, 2–4 mm. long, the blades ovate-elliptic or oblong-elliptic, 10–15 cm. long, 4–7.5 cm. wide, rounded at the base, short-acuminate at the apex, membranaceous, setose-pilose above with short hairs, beneath strigose along the veins, the venation prominent beneath; inflorescence terminal, cymose-paniculate, the peduncles tetragonous, 6–12 cm. long, appressed-pilose, the panicles 5–15 cm. long, the pedicels 1–1.5 mm. long; bracts and bractlets small, subulate; hypanthium globose, strigillose; calyx-lobes 5, lanceolate, acute,

about as long as the hypanthium; corolla white, appressed-pilose outside, the tube slender, about 1 cm. long, puberulent within, the throat densely yellow-pilose, the 5 lobes ovate, obtuse, 2–3 mm. long; anthers oblong, 2 mm. long.

TYPE LOCALITY: Along the Río Porós, Costa Rica, altitude about 2000 meters.
DISTRIBUTION: Vicinity of the type locality.

9. **Rondeletia cordata** Benth. Pl. Hartw. 85. 1841.

Rogiera cordata Planch. Fl. Serres **5**: 442[b]. 1849.

Shrub, 1–2.5 meters high, or a small tree, the branches stout, terete or subangulate, reddish-brown or grayish, sparsely strigose when young; stipules oblong-triangular, 6–15 mm. long, obtuse, reflexed, foliaceous, strigose outside; leaves opposite, sessile or nearly so, the blades narrowly ovate-oblong, ovate, or ovate-oval, 7–13 cm. long, 3–7 cm. wide, cordate or subcordate at the base, acute to acuminate at the apex, subcoriaceous, green above and glabrous, sublustrous, paler beneath, sparsely strigose along the veins or glabrous, the costa stout, prominent, the lateral veins prominent, 6–8 on each side, straight or subarcuate, ascending at an angle of 45° or more; inflorescence terminal and axillary, cymose-corymbose, 5–15 cm. broad, the peduncles 1–7 cm. long, the cymes usually many-flowered and dense, the flowers short-pedicellate; bracts often large and foliaceous, the bractlets minute; hypanthium strigillose; calyx-lobes 5, rounded to oblong, unequal, 0.5–1 mm. long, obtuse, erect; corolla pink or dull-red, thinly strigillose outside, the tube stout, 8–10 mm. long, hirsute within, densely yellow-pilose in the throat, the 5 lobes rounded, 2 mm. long, puberulent within; anthers and style exserted or included; capsule globose, 3–4 mm. in diameter, reddish-brown, strigillose; seeds numerous, minute, compressed, brownish-yellow.

TYPE LOCALITY: Near Guatemala City, Guatemala.
DISTRIBUTION: Guatemala.

10. **Rondeletia amoena** (Planch.) Hemsl. Diag. Pl. Nov. 26. 1879.

Rogiera amoena Planch. Fl. Serres **5**: 442. 1849.
Rogiera Menechma Planch. Fl. Serres **5**: 442. 1849.
Rondeletia versicolor J. Smith, Bot. Mag. *pl. 4579*. 1851.
Rogiera versicolor Lindl. & Paxt. Fl. Gard. **2**: 69. 1851.
Rondeletia latifolia Oerst. Vidensk. Meddel. **1852**: 43. 1852.
Rondeletia rugosa Benth.; Oerst Vidensk. Meddel. **1852**: 43. 1852.
Rogiera latifolia Decaisne, Rev. Hortic. IV. **2**: 121. 1853.
?*Rondeletia Schumanniana* K. Krause, Bot. Jahrb. **40**: 315. 1908.

Shrub or small tree, the branches stout, terete or subangulate, reddish-brown or grayish, densely villous-pilose when young with fulvous hairs; stipules triangular-oblong, 10–16 mm. long, obtuse, densely appressed-pilose, reflexed, foliaceous; leaves opposite, the petioles very stout, 2–10 mm. long, densely pilose, the blades ovate-oval, oval, or oblong-ovate, 6–15 cm. long, 3.5–10 cm. wide, rounded or subcordate at the base, usually abruptly short-acuminate at the apex, coriaceous, bright-green, glabrous or thinly pilose above, densely short-pilose beneath with fulvous hairs, the costa stout, prominent, the lateral veins slender or stout, prominent, 5–9 on each side, subarcuate, ascending at an angle of 45° or more, the secondary veins often prominently reticulate, the blades often rugose; inflorescence terminal and axillary, cymose-corymbose, 5–18 cm. broad, stout-pedunculate, the cymes often numerous, densely many-flowered, the flowers sessile or short-pedicellate; bracts often large and foliaceous, the bractlets minute; hypanthium densely fulvous-pilose; calyx-lobes 5, unequal, oblong or obovate-oblong, 1–2 mm. long, obtuse, erect or spreading; corolla pink or pinkish, densely appressed-pilose outside with fulvous hairs, the tube stout, 8–12 mm. long, densely yellow-pilose in the throat, the 5 lobes rounded, 2–2.5 mm. long, spreading, puberulent within; style exserted or included; anthers included; capsule globose, 5–6 mm. in diameter, densely pilose; seeds compressed, angulate.

TYPE LOCALITY: Described from cultivated plants of Guatemalan origin.
DISTRIBUTION: Chiapas to Panama.
ILLUSTRATIONS: Fl. Serres *pl. 442;* Lindl. & Paxt. Fl. Gard. *f. 154;* Bot. Mag. *pl. 4579;* Jard. Fleur. **2**: *pl. 112;* Rev. Hortic. IV. **2**: *pl. 7*.

11. **Rondeletia Langlassei** Standley, sp. nov.

Tree, 3–4 meters high, the branches stout, terete, reddish-brown, lenticellate, appressed-pilose with fulvous hairs when young; stipules triangular-oblong, 5–9 mm. long, obtuse, foliaceous, reflexed, strigose-sericeous; leaves opposite, the petioles stout, 2–3 mm. long, fulvous-pilose, the blades lance-elliptic or narrowly ovate-oblong, 9–12.5 cm. long, 2–4 cm. wide, obtuse or acute at the base, acute to attenuate at the apex, thin, deep-green above and thinly appressed-pilose, pale beneath and densely short-pilose with fulvous hairs, strigose along the veins, the costa slender, prominent, the lateral veins slender, about 8 on each side, subarcuate, ascending at an angle of 45°, the secondary veins obscure; inflorescence terminal, cymose-corymbose, hemispheric, 10 cm. broad, the peduncle 5.5 cm. long, the cymes rather laxly many-flowered, the flowers short-pedicellate; bracts large, foliaceous, the bractlets minute; hypanthium subglobose, densely pilose with short fulvous appressed hairs; calyx-lobes 5, oblong, obtuse, 1 mm. long, erect; corolla pink, strigillose outside, the tube slender, 15 mm. long, densely yellow-pilose in the throat, the 5 lobes oblong to oval-obovate, 2.5–5 mm. long, spreading, puberulent within.

Type collected in the Sierra Madre of Michoacán or Guerrero, altitude 1750 meters, January 26, 1899, *E. Langlassé 797* (U. S. Nat. Herb. *no. 386194*).

II. **Leucophyllae.** Leaves large, thin, white-tomentose beneath, at least when young. Stipules small, erect. Inflorescence terminal, many-flowered, cymose-paniculate, cymose-racemose, or capitate, the flowers 4-parted; calyx-lobes short or elongate, narrow or broad; corolla large, arachnoid-tomentose outside, naked in the throat. Capsule globose or subglobose, small. Seeds exalate.

12. **Rondeletia darienensis** Standley, sp. nov.

Branches slender, terete, brown, loosely arachnoid-tomentose when young; stipules linear-oblong, 3–5 mm. long, obtuse, tomentose or glabrate, erect, persistent; leaves opposite, the petioles slender, 0.6–1.7 cm. long, arachnoid-tomentose when young, the blades elliptic, elliptic-oblong, or oval-oblong, 7–16.5 cm. long, 2.5–7.7 cm. wide, rounded to acutish at the base, short-acuminate at the apex, thin, green above, very thinly arachnoid-tomentose when young but soon glabrate, beneath densely arachnoid-tomentose with grayish hairs, the venation prominent, the lateral veins slender, about 9 on each side, subarcuate; inflorescence terminal, cymose-paniculate, trichotomous, few-flowered, the flowers pedicellate; hypanthium densely tomentose; calyx-lobes 4, lanceolate or narrowly elliptic-oblong, 1–1.5 cm. long, 2.5–4 mm. wide,acute to attenuate, glabrous or nearly so within; corolla in bud about 1.5 cm. long, densely tomentose; capsule subglobose, about 4 mm. long.

Type collected at Boca de Pauarandó, on Sambú River, southern Darién, Panama, altitude 20 meters, February, 1912, *H. Pittier 5684* (U. S. Nat. Herb. *no. 867136*).

13. **Rondeletia Rekoi** Standley, Proc. Biol. Soc. Wash. 8: 126. 1918.

Branchlets stout or slender, obtusely tetragonous, densely and persistently white-tomentose, with a close tomentum; stipules linear-oblong, 6–9 mm. long, bidentate at the apex, erect, persistent, densely tomentose outside on the lower half, glabrate and green above; leaves opposite, the petioles very stout, 0.5–1.5 cm. long, white-tomentose, the blades ovate or elliptic-ovate, 8.5–19 cm. long, 3–8.5 cm. wide, rounded and short-decurrent at the base, very acute or subacuminate at the apex, subchartaceous, bright-green above, lustrous, scabrous with short slender curved hairs, the intermediate veins very prominent, finely reticulate, beneath densely covered with a close white tomentum, the costa prominent, the lateral veins slender, about 14 on each side, subarcuate, the margin plane or subrevolute; inflorescence terminal (a pair of cymes present at the base of the peduncle), the peduncles stout, 8–9 cm. long, the rhachis 6–9 cm. long, bearing numerous short-pedunculate bifid cymes, the branches of these 1.5–2.5 cm. long, the flowers sessile, secund, the bractlets oval or oblong, obtuse, green, glabrate, about equaling the hypanthium; hypanthium densely white-tomentose; calyx-lobes 4, oblong or oval, about 1 mm. long, rounded at the apex, green, glabrate, spreading; corolla

white-tomentose outside, the tube stout, 5.5–7 mm. long, glabrous in the throat, the 4 lobes rounded, 2 mm. long, undulate; anthers sessile, included; capsule 3.5–4 mm. broad, didymous-globose, densely white-tomentose; seeds minute, pale-brown, angulate.

TYPE LOCALITY: Hacienda Las Pilas (Cerro Espino), Oaxaca, altitude 400 meters.
DISTRIBUTION: Known only from the type locality.

14. Rondeletia leptodictya B. L. Robinson, Proc. Am. Acad. 45: 402. 1910.

Shrub, 2 meters high, the branches slender, terete, reddish-brown, thinly white-tomentulose whan young, but soon glabrate; stipules linear-lanceolate, 5–10 mm. long, erect, persistent, long-attenuate, thin, brown, pilose on the margins; leaves opposite, the petioles slender, 5–12 mm. long, tomentose or glabrate, the blades broadly obovate to elliptic-oblong, 4–11 cm. long, 1.5–5 cm. wide, acute or obtuse at the base, abruptly acute to attenuate at the apex, with an acute tip, thin, green on the upper surface and thinly villosulous, finely reticulate, beneath loosely white-tomentose when young, glabrate in age, the costa prominent, the lateral veins 7–10 on each side, very slender, ascending at an acute angle; inflorescence terminal, the peduncles slender, 4–6 cm. long, the flowers numerous, sessile in a dense globose head; hypanthium globose, densely white-tomentose; calyx-lobes 4, subequal, linear-oblong or oblanceolate, 2 mm. long, obtuse, tomentulose outside, sericeous within, spreading or reflexed in age; corolla blood-red, the tube very slender, 12–14 mm. long, thinly arachnoid-tomentose outside, glabrous in the throat, the 4 lobes oblong, obtuse, 3–4 mm. long, spreading; style exserted.

TYPE LOCALITY: Banks of the Río Petatlán, near the boundary between Michoacán and Guerrero, at an altitude of 500 meters.
DISTRIBUTION: Known only from the type locality.

15. Rondeletia leucophylla H. B. K. Nov. Gen. & Sp. 3: 395. 1820.

Rondeletia elongata Bartl.; DC. Prodr. 4: 409. 1830.
Bouvardia discolor H. & A. Bot. Beech. Voy. 428. 1840. Not *Rondeletia discolor* H. B. K. 1820.
Arachnothryx elongata Planch. Fl. Serres 5: 442. 1849.
Rondeletia dubia Hemsl. Diag. Pl. Nov. 28. 1879.
Rondeletia leucophylla calycosa Greenman, Proc. Am. Acad. 39: 92. 1903.

Shrub, about 1 meter high, the branches slender or stout, brown or reddish-brown, densely pilose or white-tomentose when young; stipules triangular-lanceolate or lance-subulate, 5–12 mm. long, attenuate, erect, persistent, thin, brown, pilose outside; leaves opposite, the petioles stout or slender, 2–20 mm. long, densely pilose or tomentose, the blades ovate, elliptic-oblong, lance-oblong, or narrowly lanceolate, 3–14 cm. long, 1–6 cm. wide, acute to broadly rounded at the base, acute to attenuate at the apex, thin, green above and densely pilose, beneath densely white-tomentose, with a loose tomentum, this sometimes deciduous in age, the lower surface then pilose, the costa prominent, the lateral veins slender, 6–10 on each side, subarcuate, ascending at an angle of about 45°; inflorescence terminal and axillary, cymose-paniculate, pedunculate, densely many-flowered, 4–6 cm. long and broad, the flowers sessile or subsessile; bracts elongate, linear-attenuate; hypanthium white-lanate and pilose; calyx-lobes 4, linear or oblong-linear, 3–6 mm. long, unequal, acute or attenuate, erect or spreading; corolla red, white-tomentose outside, the tube stout, 8–16 mm. long, naked in the throat, the 4 lobes oblong or rounded, 4–6 mm. long, rounded at the apex, spreading; anthers short-exserted, yellow; capsule subglobose, 3 mm. long, densely white-tomentose and pilose; seeds minute, angulate, pale-brown.

TYPE LOCALITY: Between Alto del Peregrino and Río Papagallo, Guerrero.
DISTRIBUTION: Sinaloa and Jalisco to Oaxaca.
ILLUSTRATION: H. B. K. Nov. Gen. & Sp. *pl. 290.*

16. Rondeletia aspera Standley, sp. nov.

Branches stout, brown, pilose when young with short ascending hairs; stipules linear to oblong-lanceolate, 6–9 mm. long, erect, subpersistent, thin, brown, strigose outside; leaves opposite, the petioles stout, 5–10 mm. long, densely short-pilose, the blades oblong-elliptic to lance-oblong, 6–10 cm. long, 2–4.2 cm. wide, acute or acuminate at the base, acute or acutely short-acuminate at the apex, membranaceous, green above, very scabrous with short slender

hairs, beneath densely white-tomentose when young, the tomentum deciduous in age, the lower surface then short-pilose, the venation prominent, the lateral veins 8 or 9 on each side, subarcuate, ascending at an acute angle; inflorescence terminal, cymose-paniculate, many-flowered, very dense, hemispheric, 3–4 cm. broad, pedunculate, the flowers sessile or nearly so; bracts and bractlets small; hypanthium densely pilose with short whitish appressed hairs; calyx-lobes 4, oval to ovate-deltoid, obtuse or rounded, 1–2 mm. long, erect; corolla arachnoid-tomentose outside the tube stout, 8–9 mm. long, the throat naked, the 4 lobes rounded, about 3 mm. long; anthers included.

Type collected at Pont du Rodeo, below Pacaca, Costa Rica, January, 1891, *H. Pittier 3243* (U. S. Nat. Herb. *no. 941408*).

17. **Rondeletia nitida** Hemsl. Diag. Pl. Nov. 39. 1879.

Shrub, the branches slender, terete, glabrous; stipules ovate-lanceolate, long-acuminate, about 4 mm. long; leaves opposite, the petioles 4–6 mm. long, the blades narrowly lanceolate or lance-elliptic, 5–10 cm. long, 1.2–2.8 cm. wide, long-acuminate at each end, glabrous and lustrous on the upper surface, beneath covered with a close white tomentum; inflorescence terminal, the flowers short-pedicellate, cymose-paniculate, the panicles few-flowered; bracts linear, obtuse; hypanthium white-tomentose; calyx-lobes 4, unequal, orbicular-oblong, 0.5–1.5 mm. long; corolla rose-colored, white-tomentose outside, the tube about 12 mm. long, sparsely pilose within near the base, the throat naked, the 4 lobes orbicular, undulate, spreading; ovary subglobose.

TYPE LOCALITY: Chiapas.
DISTRIBUTION: Chiapas.

III. **Laniflorae.** Leaves large, thin, tomentose or variously pubescent beneath, sometimes glabrate in age. Stipules erect, thick. Inflorescence terminal, many-flowered, cymose-paniculate, the panicles narrow, elongate, thyrsiform; the flowers 4-parted; calyx-lobes small or foliaceous; corolla small or large, usually pubescent outside, the throat naked. Capsule globose, small. Seeds exalate.

18. **Rondeletia septicidalis** B. L. Robinson, Proc. Am. Acad. 45: 403. 1910.

Shrub, the branches slender, terete, reddish-brown, coarsely lenticellate, thinly arachnoid-tomentulose when young, soon glabrate; stipules triangular-lanceolate, about 5 mm. long, attenuate, erect, persistent, thick, brown, glabrous; leaves opposite, the petioles stout, 4–23 mm. long, tomentulose or glabrate, the blades broadly ovate to lance-elliptic or lanceolate, 5–16 cm. long, 1.2–7 cm. wide, acute or abruptly acuminate at the base, narrowed above and abruptly acuminate or long-attenuate, with a narrow acute acumen, thin, green above and glabrous, slightly paler beneath and when young thinly and loosely arachnoid-tomentose but soon glabrous, the costa prominent beneath, the lateral veins slender, 5–9 on each side, arcuate, ascending at an angle of about 45°; inflorescence terminal and axillary, slender-pedunculate, the peduncles 1.5–3.5 cm. long, thinly arachnoid-tomentose or glabrate, the flowers subsessile, in 2–3-flowered cymules, the cymules arranged in a spike-like panicle 6–10 cm. long; bractlets linear, elongate; hypanthium densely floccose-tomentose; calyx-lobes 4, lance-linear, unequal, equaling or longer than the hypanthium, deflexed, floccose-tomentulose or glabrate; corolla red, the tube slender, 6–8 mm. long, glabrous outside below, floccose-tomentulose above, glabrous in the throat, the 4 lobes suborbicular, undulate, 2–3 mm. long; stamens and style included; capsule subglobose, 4 mm. in diameter.

TYPE LOCALITY: Chicharras, Chiapas, at an altitude of 920 to 1840 meters.
DISTRIBUTION: Known only from the type locality.

19. **Rondeletia gracilis** Hemsl. Diag. Pl. Nov. 53. 1880.

Shrub, the branches slender or stout, terete or subangulate, grayish-brown, whitish-tomentose when young but soon glabrate; stipules triangular-cuspidate, 3–5 mm. long, erect, subpersistent, thick, brown, glabrate; leaves opposite, the petioles stout, 0.3–5.5 cm. long, tomen-

tulose or glabrate, the blades lance-elliptic to broadly elliptic-oval, 4.5–25 cm. long, 2–12 cm. wide, obtuse to acuminate at the base, acute or acuminate at the apex, membranaceous, green above and glabrous, slightly paler beneath, tomentulose when young but soon glabrous, the costa stout and prominent, the lateral veins 6–11 on each side, slender, arcuate, ascending at an acute angle; inflorescence terminal, the flowers sessile or subsessile in dense cymes, these arranged in a short-pedunculate spike-like panicle 10–25 cm. long, the bractlets linear, brown; hypanthium fulvous-tomentose; calyx-lobes 4, triangular, acute or acuminate, erect, shorter than the hypanthium, unequal; corolla-tube slender, 6–7 mm. long, thinly floccose-tomentulose outside, glabrous in the throat, the 4 lobes rounded, undulate, about 1.5 mm. long, spreading; anthers and style included; capsule subglobose, about 1.5 mm. in diameter, costate; seeds minute, brown.

TYPE LOCALITY: Alta Verapaz, Guatemala, at an altitude of 1080 meters.
DISTRIBUTION: Guatemala and Honduras.

20. **Rondeletia laniflora** Benth. Pl. Hartw. 85. 1841.

Arachnothryx laniflora Planch. Fl. Serres **5**: 442. 1849.

Shrub, 2–3 meters high, the branches stout, terete, grayish, closely white-tomentose when young; stipules narrowly triangular or subulate, 3–8 mm. long, thick, erect, persistent, white-tomentose; leaves opposite, crowded at the ends of the branches, the petioles stout, 4–10 mm. long, white-tomentose, the blades obovate to narrowly lance-elliptic, 5.5–13 cm. long, 1–4 cm. wide, cuneate to attenuate at the base, long-attenuate or abruptly acuminate at the apex, subcoriaceous, dark-green on the upper surface and glabrous, or when young thinly floccose-tomentulose, white beneath with a very dense close tomentum, the costa prominent, the lateral veins slender, prominent beneath, 7–16 on each side, subarcuate, ascending at an acute angle, the secondary veins obsolete; inflorescence terminal, the flowers sessile or nearly so in dense short-pedunculate cymes, these arranged in a dense narrow panicle 4–7 cm. long; bractlets subulate, tomentose; hypanthium densely white-tomentose; calyx-lobes 4, subequal, oblong, obtuse or acutish, spreading, about as long as the hypanthium; corolla-tube slender, 12–15 mm. long, densely and closely white-tomentose outside, glabrous in the throat, the 4 lobes suborbicular, undulate, 2–3 mm. long; capsule subglobose, 4–5 mm. long and nearly as broad, costate, brown, glabrate; seeds minute, irregular, brown, scrobiculate.

TYPE LOCALITY: Sierra de las Nubes, Guatemala.
DISTRIBUTION: Mountains of Chiapas and Guatemala.

21. **Rondeletia Bourgaei** Standley, sp. nov.

Rondeletia laniflora Hemsl. Biol. Centr. Am. Bot. **2**: 20, in part. 1881. Not *R. laniflora* Benth. 1841.

Shrub, the branches stout, terete or subangulate, yellowish-brown, densely fulvous-tomentose when young, glabrate in age; stipules narrowly or broadly triangular, 5–7 mm. long, attenuate, erect, persistent, thick, brown, fulvous-tomentose or glabrate; leaves opposite, crowded at the ends of the branches, the petioles stout, 2–13 mm. long, tomentose, the blades obovate, elliptic, or oblong-elliptic, 6.5–11.5 cm. long, 2.2–4 cm. wide, acute or acuminate at the base, acute to acuminate at the apex, coriaceous, dark-green on the upper surface, tomentose along the veins or finally glabrate, rugulose, beneath densely fulvous-tomentose, the tomentum loose, the costa stout and prominent, the lateral veins prominent, 10–13 on each side, arcuate, ascending at an angle of 45°–60°, the secondary veins prominent, reticulate; inflorescence terminal, the flowers sessile or subsessile in small dense short-pedunculate cymes, these arranged in a dense narrow short-pedunculate panicle 6–10 cm. long; bractlets linear, tomentose; hypanthium densely tomentose; calyx-lobes 4, unequal, lance-oblong, 1.5–2 mm. long, acute, reflexed, tomentose outside; corolla not known; capsule subglobose, 4–5 mm. long and nearly as broad, smooth, tomentose.

Type collected at San Cristóbal, region of Orizaba, Veracruz, *Bourgeau 2618* (U. S. Nat. Herb. *no. 49964*).

22. **Rondeletia villosa** Hemsl. Diag. Pl. Nov. 27. 1879.

Shrub, the young branchlets more or less villous; stipules ovate-lanceolate, acute, 1–2 cm. long; leaves opposite, the petioles 4–15 mm. long, densely pilose, the blades oblong-elliptic or ovate, 10–25 cm. long, 4–9 cm. wide, acute at the base, acuminate or abruptly acuminate at the apex, green and sparsely pilose above, beneath long-pilose along the veins, arachnoid-tomentose between the veins with white hairs; inflorescence terminal and lateral, the flowers sessile or subsessile in dense few-flowered cymes, these arranged in narrow elongate spike-like panicles 15–24 cm. long; hypanthium densely tomentose; calyx-lobes 4, oblong, obtuse, unequal, longer than the hypanthium; corolla white, white-lanate outside, naked in the throat, the tube slender, 8–10 mm. long, the 4 lobes small, rounded, undulate; capsule subglobose, about 4 mm. in diameter, glabrate; seeds minute, angulate, punctulate.

TYPE LOCALITY: San Pedro Nolasco, Oaxaca.
DISTRIBUTION: Oaxaca, Chiapas, and Tabasco.

23. **Rondeletia buddleoides** Benth. Pl. Hartw. 69. 1840.

Arachnothryx buddleoides Planch. Fl. Serres **5**: 442. 1849.
Rondeletia affinis Hemsl. Diag. Pl. Nov. 28. 1879.

Shrub, 1–1.5 meters high, the branches stout, terete or subangulate, brown, closely white-tomentose when young, glabrate in age; stipules lanceolate or oblong, 3–8 mm. long, obtuse to attenuate, erect, subpersistent, brown, tomentulose or glabrate; leaves opposite, the petioles stout, 3–6 mm. long, tomentose or glabrate, the blades oval-elliptic, elliptic-oblong, elliptic-obovate, or lanceolate, 5–12 cm. long, 1.8–5.5 cm. wide, obtuse to long-acuminate at the base, acute to abruptly long-acuminate at the apex, subcoriaceous, green above and sparsely pilose or glabrous, beneath densely covered with a very close white or fulvous tomentum, the costa slender, prominent, the lateral veins slender, 9–15 on each side, arcuate, ascending at an angle of 45°–60°, the secondary veins usually obscure; inflorescence terminal, the flowers sessile or subsessile in small dense short-pedunculate cymes, these arranged in a narrow spike-like panicle 10–15 cm. long; bractlets linear, very small; hypanthium densely tomentose; calyx-lobes oblong or oval, obtuse, 1 mm. long or shorter, shorter than the hypanthium, spreading; corolla white-tomentose outside, the tube slender, 4–8 mm. long, hirsute within at the base, naked in the throat, the lobes rounded, 1–1.5 mm. long, undulate; style included or exserted; capsule oblong-globose, 3–4 mm. long, glabrate; seeds minute, punctulate.

TYPE LOCALITY: Llano Verde, Oaxaca.
DISTRIBUTION: Veracruz and Oaxaca to Panama.

24. **Rondeletia Thiemei** Donn. Smith, Bot. Gaz. **42**: 299. 1906.

Shrub, the branches grayish-pilose; stipules triangular, subulate-acuminate, 3–4 mm. long; leaves opposite, subsessile, the blades lance-elliptic, 5–8 cm. long, 2–2.5 cm. wide, acute or acuminate at the base, acuminate or long-acuminate at the apex, membranaceous, scaberulous above, grayish-pilose beneath; inflorescence terminal, cymose-paniculate, the panicles sessile, narrow, thyrsiform, 5–6 cm. long, the pedicels 1–3 mm. long; bracts foliaceous, the bractlets linear, 4–6 mm. long; hypanthium pilose; calyx-lobes 4, unequal, one of them lanceolate, 5–6 mm. long, the others subulate; corolla pilose outside, the tube slender, 8–10 mm. long, the throat naked, the lobes rounded, 3 mm. long, glabrous; capsule globose, 5 mm. in diameter, pilose; seeds angulate, scrobiculate.

TYPE LOCALITY: Río Chamelecón, Santa Bárbara, Honduras, altitude 400 meters.
DISTRIBUTION: Known only from the type locality.

25. **Rondeletia rufescens** B. L. Robinson, Proc. Am. Acad. **45**: 402. 1910.

Rondeletia villosa f. *strigosissima* Donn. Smith, Enum. Pl. Guat. **2**: 30; hyponym. 1891.
Rondeletia rufescens ovata B. L. Robinson, Proc. Am. Acad. **45**: 403. 1910.

Shrub, the branches stout, terete or subangulate, brown, densely ferrugino-villous when young, tardily glabrate; stipules triangular, 5–12 mm. long, abruptly long-acuminate or cuspidate, erect, persistent, densely ferrugino-villous; leaves opposite, the petioles stout, 7–22 mm.

long, densely ferrugino-villous, the blades elliptic-oblong, elliptic, or ovate-oblong, 8–15 cm. long, 3–6 cm. wide, rounded to acute at the base, subabruptly acute to attenuate at the apex, rather thin, minutely pilose above and green, paler beneath and densely pilose with short fulvous hairs; inflorescence terminal, short-pedunculate, the flowers sessile or subsessile in dense cymes, these sessile or pedunculate, arranged in a narrow thyrsiform panicle 12–20 cm. long; bracts linear-subulate; hypanthium densely ferrugino-pilose; calyx-lobes 4, lance-oblong, about 1 mm. long, acute, spreading; corolla-tube slender, 8–10 mm. long, short-strigose below, long-strigose above, naked in the throat, the 4 lobes suborbicular, about 2 mm. long, spreading; style exserted.

Type locality: Cobán, Alta Verapaz, Guatemala, at an altitude of 1475 meters.
Distribution: Alta Verapaz, Guatemala.

26. **Rondeletia stachyoidea** Donn. Smith, Bot. Gaz. **43**: 298. 1906.

Shrub or small tree, 4.5 meters high or less, the branches slender, terete, grayish-brown, pilose-strigose when young, glabrate in age; stipules triangular-lanceolate, 6–10 mm. long, attenuate, appressed, persistent, brown, glabrate; leaves opposite, the petioles stout, 3–18 mm. long, the blades ovate-lanceolate to narrowly elliptic-lanceolate, 6–17.5 cm. long, 1.2–3.8 cm. wide, attenuate or abruptly acuminate at the base, long-attenuate at the apex, thin, bright-green and lustrous on the upper surface, glabrous, or strigose along the veins, densely sericeous beneath with long lustrous fulvous hairs, glabrate in age, the costa slender, prominent, the lateral veins slender, about 8 on each side, arcuate, ascending at an acute angle; inflorescence terminal, short-pedunculate, the flowers sessile or subsessile in few-flowered cymes, these spicate, the spikes 7–12 cm. long; bracts linear-subulate; hypanthium sericeous-strigose; calyx-lobes 4, lance-oblong, 3–4 mm. long, attenuate, spreading; corolla white, the tube slender, 7–8 mm. long, glabrous except at the top, there densely setose-pilose, naked in the throat, the 4 lobes rounded, 1.5 mm. long, spreading; anthers and style included; capsule subglobose, 2.5 mm. long, costate, glabrate.

Type locality: Semicoch, Alta Verapaz, Guatemala, at an altitude of 600 to 900 meters.
Distribution: Guatemala to Costa Rica.

27. **Rondeletia heteranthera** Brand. Univ. Calif. Publ. Bot. **4**: 387. 1913.

Shrub, the branches slender, terete, grayish, strigillose when young but soon glabrate; stipules triangular, 2–3 mm. long, acuminate, erect, subpersistent, thick, brown, strigillose or glabrate; leaves opposite, the petioles stout, 3–5 mm. long, minutely strigillose or glabrate, the blades ovate, oval-elliptic, or broadly ovate, 6–10 cm. long, 2.5–4.2 cm. wide, rounded or very obtuse at the base, subabruptly acuminate to long-attenuate at the apex, glabrous or obscurely strigillose beneath along the veins, dark-green above or lustrous, slightly paler beneath, the costa slender, prominent, the lateral veins slender, 4–6 on each side, distant, arcuate, ascending at an angle of 45°–60°; inflorescence terminal and axillary, the flowers short-pedicellate, in few-flowered cymes, these short-pedunculate, arranged in narrow thyrsiform panicles 2–4 cm. long; bracts very small, linear; hypanthium strigillose, subglobose; calyx-lobes 4, triangular, unequal, 0.5 mm. long, acute, erect, shorter than the hypanthium; corolla minutely strigillose outside, the tube stout, 2.5–3 mm. long, naked in the throat, the 4 lobes rounded, about 1 mm. long.

Type locality: Baños del Carrizal, Veracruz.
Distribution: Known only from the type locality.

28. **Rondeletia pansamalana** Standley, sp. nov.

Shrub, the branches slender, terete, strigillose when young; stipules triangular-subulate, 4–6 mm. long, erect, persistent, thick, brown, strigillose; leaves opposite, the petioles slender, 3–15 mm. long, strigillose, the blades elliptic or ovate-elliptic, 9–15 cm. long, 3–4.5 cm. wide, abruptly acute to attenuate at the base, subabruptly attenuate or long-attenuate at the apex, green above and glabrous, paler beneath, strigillose along the veins, the costa slender, promi-

nent, the lateral veins slender, 5–10 on each side, arcuate, ascending at an angle of 45°–60°; inflorescence terminal, slender-pedunculate, the flowers short-pedicellate, in loose few-flowered pedunculate cymes, these arranged in a narrow thyrsiform panicle about 10 cm. long; bracts small, linear; hypanthium finely strigillose, pyriform-globose; calyx-lobes 4, very unequal, 3 of them small, lance-linear, attenuate, the fourth elliptic-oblong, 2.5–3 mm. long, foliaceous, green, obtuse or acutish; corolla thinly strigillose outside, the tube rather stout, 5–6 mm. long, the 4 lobes rounded, 1.5 mm. long, spreading, the throat naked; anthers and style included.

Type collected at Pansamalá, Alta Verapaz, Guatemala, altitude 1140 meters, April, 1886, *H. von Tuerckheim 897* (U. S. Nat. Herb. *no. 49965*).

29. **Rondeletia capitellata** Hemsl. Diag. Pl. Nov. 28. 1879.

Shrub, the branches slender, terete, brownish, pilose, strigillose when young; stipules triangular-subulate, 5–7 mm. long, erect, persistent, strigillose; leaves opposite, the petioles rather slender, 3–9 mm. long, strigillose, the blades ovate, elliptic, or narrowly elliptic-oblong, 7.5–12 cm. long, 2.5–4.5 cm. wide, acute or abruptly short-acuminate at the base, subabruptly acuminate or attenuate at the apex, thin, green above and glabrous or when young sparsely strigillose, beneath pilose-strigillose with very short hairs; inflorescence terminal, the flowers sessile or short-pedicellate in lax or dense few-flowered cymes, these short-pedunculate, arranged in a narrow thyrsiform short-pedunculate panicle about 12 cm. long; bracts linear, strigillose; hypanthium globose, finely strigillose; calyx-lobes 4, unequal, lance-triangular, 0.7–1 5 mm. long, acute or acutish, spreading, equaling or shorter than the hypanthium; corolla red, thinly strigillose outside, the tube slender, 6–8 mm. long, naked in the throat, the 4 lobes rounded, undulate, spreading, about 1.5 mm. long; anthers scarcely exserted.

TYPE LOCALITY: Mexico.
DISTRIBUTION: Veracruz and Oaxaca.

30. **Rondeletia secundiflora** B. L. Robinson, Proc. Am. Acad. 45: 403. 1910.

Shrub, the branches terete, densely grayish-strigillose; stipules triangular-subulate, 2 mm. long, erect; leaves opposite, the petioles slender, 4–6 mm. long, grayish-strigose, the blades ovate-lanceolate, 7–9 cm. long, 2–3.5 cm. wide, acute at the base, acuminate or attenuate at the apex, very thin, appressed-pilosulous, slightly paler beneath, the lateral veins about 8 on each side; inflorescence terminal, secund, 6–8 mm. long, the flowers subsessile in few-flowered cymes, these arranged in a spike-like panicle; hypanthium subglobose, densely hirsute; calyx-lobes 4, spatulate-linear or narrowly lanceolate, 1.4–2 mm. long, unequal, hirsute, erect; corolla 9 mm. long, strigillose outside, the tube slender, the throat naked, the 4 lobes rounded, 1.3 mm. long, spreading.

TYPE LOCALITY: In woods, along the road from Patín to Escuintla, Guatemala.
DISTRIBUTION: Known only from the type locality.

IV. **Calycosae.** Leaves large, thin or thick, more or less pubescent, acute or acuminate. Stipules large or small, erect or reflexed, sometimes foliaceous. Inflorescence terminal, corymbose or paniculate, many-flowered, the flowers 4-parted; calyx-lobes often large and foliaceous; corolla of large or medium size, glabrous or pubescent outside, the throat naked. Capsule small, globose. Seeds exalate.

31. **Rondeletia Galeottii** Standley, sp. nov.

Shrub, glabrous throughout, the branches stout, terete or subangulate, grayish, rimose, the internodes short or elongate; stipules reniform, foliaceous, reflexed, 5–6 mm. broad, reticulate; leaves opposite, the petioles stout, 4–8 mm. long, the blades oval-obovate or oblong-obovate, 8–17 cm. long, 3.5–8 cm. wide, acute to attenuate at the base, subabruptly acuminate at the apex, chartaceous, dark-green above, paler beneath, the costa slender, prominent, the lateral veins slender, 5–7 on each side, subarcuate, ascending at an angle of 45° or more, the margins plane; inflorescence terminal, cymose-corymbose, the peduncles slender, 3.5–6 5 cm.

long, the corymbs 4–8 cm. broad, many-flowered, the flowers sessile or short-pedicellate; bracts linear, foliaceous, the bractlets minute; hypanthium subglobose; calyx-lobes 4, oval or ovate-oval, unequal, 1.5 mm. long or shorter, rounded at the apex; corolla-tube slender, 11–12 mm. long, the throat naked, the 4 lobes rounded, 1.5–2 mm. long; anthers subexserted; style included.

Type collected in Mexico, locality not stated, *H. Galeotti* (U. S. Nat. Herb. *no. 454830*).

32. **Rondeletia Jurgenseni** Hemsl. Diag. Pl. Nov. 29. 1879.

Shrub, glabrous throughout, the branches terete; stipules small, deciduous; leaves opposite, crowded at the ends of the branches, the petioles 4–6 mm. long, the blades ovate-lanceolate, 5–7.5 cm. long, cuneate at the base, acutely acuminate at the apex, membranaceous; inflorescence terminal and axillary, cymose, the cymes few-flowered, 3.5–5 cm. broad, the flowers pedicellate; calyx-lobes 4, linear, obtuse, 2 mm. long; corolla-tube slender, 12–16 mm. long, glabrous outside, puberulent within, the throat naked, the 4 lobes rounded, undulate; ovules very numerous; valves of the capsule finally cleft to the base.

TYPE LOCALITY: Sierra de San Pedro Nolasco, Oaxaca.
DISTRIBUTION: Known only from the type locality.

33. **Rondeletia Deamii** (Donn. Smith) Standley.

Bouvardia Deamii Donn. Smith, Bot. Gaz. 49: 455. 1910.

Shrub, the branches slender, terete, reddish-brown or grayish, sparsely short-pilose when young; stipules deltoid, acute, about 1 mm. long, erect; leaves opposite, the petioles stout, 1–2 mm. long, short-pilose, the blades ovate-orbicular, oval-ovate, or ovate, 2.5–6.5 cm. long, 1.2–2.5 cm. wide, broadly rounded to acute at the base, abruptly acuminate at the apex or attenuate, with an obtuse or acutish acumen, thin, glabrous above or very minutely and sparsely pilose, minutely pilose beneath, especially along the veins, the venation scarcely prominulous beneath, the lateral veins very slender, arcuate, ascending at an angle of 50° or less; inflorescence mostly of terminal 3-flowered cymes, these sessile or slender-pedunculate, the pedicels slender, 8 mm. long or shorter, long-pedicellate, solitary flowers sometimes present in the axils of the uppermost leaves; bracts sometimes large and leaf-like, the bractlets subulate or wanting; hypanthium minutely pilose; calyx-lobes 4, linear, 1–2 mm. long, one of them usually elongate, foliaceous, linear or lance-elliptic, up to 4 mm. long, acute or obtuse, erect or spreading; corolla sparsely short-pilose outside, the tube slender, 7–12 mm. long, naked in the throat, the 4 lobes rounded-oblong, 3 mm. long, spreading, minutely papillose within; anthers and style included, or the anthers subexserted.

TYPE LOCALITY: Base of a precipice near Fiscal, Guatemala, altitude 1110 meters.
DISTRIBUTION: Oaxaca and Guatemala.

34. **Rondeletia secunda** Standley, Contr. U. S. Nat. Herb. 18: 141. 1916.

Shrub, the branches slender, terete, reddish-brown, pilose or thinly tomentose when young but soon glabrate; stipules triangular-subulate, 4–5 mm. long, erect, brown, glabrate; leaves opposite, the petioles stout, 3–7 mm. long, thinly tomentulose or glabrate, the blades elliptic, ovate-elliptic, or oval-elliptic, 10–16 cm. long, 3.5–6.5 cm. wide, rounded to acutish at the base, subabruptly acuminate to long-attenuate at the apex, thin, green, obscurely tomentulose beneath when young but soon glabrate, the costa slender, prominent beneath, the lateral veins slender, 7–9 on each side, subarcuate, ascending at an angle of 45° or more; inflorescence terminal, cymose-paniculate, 6–7 cm. long and broad, lax, the peduncles slender, 4–6 cm. long, the flowers secund, sessile, and usually remote along the slender scorpioid branches; bracts small, linear, green, the bractlets minute, subulate; hypanthium obscurely tomentulose or glabrate; calyx-lobes 4, linear or spatulate-linear, 1–3 mm. long, obtuse, unequal, reflexed; corolla white, sparsely villosulous outside, the tube slender, 10–12 mm. long, naked in the throat, the 4 lobes rounded, 3–4 mm. long, spreading; anthers and style included; capsule globose, 3–4 mm. in diameter, reddish-brown; seeds numerous, minute, angulate, brown, punctulate.

TYPE LOCALITY: Forests around Puerto Obaldía, San Blas Coast, Panama, at an altitude of 50 meters or less.
DISTRIBUTION: Known only from the type locality.

35. **Rondeletia linguiformis** Hemsl. Diag. Pl. Nov. 29. 1879.

Shrub, the branches terete, glabrous; stipules obovate-spatulate, 6–12 mm. long, mucronate; leaves opposite, the petioles 4–8 mm. long, the blades ovate-oblong or elliptic-oblong, 7.5–10 cm. long, attenuate at the base, obtuse to acuminate at the apex, glabrous; inflorescence terminal, the flowers very numerous, subsessile, corymbose, the corymbs large, dense, hemispheric; bracts linear; hypanthium sericeous; calyx-lobes 4, unequal, oblong-obovate, 0.5–1 mm. long; corolla sericeous, the tube 8 mm. long, the throat naked, the 4 lobes oblong, 4 mm. long, farinose within; capsule subglobose, about 6 mm. in diameter; seeds numerous, angulate, reticulate-tuberculate.

TYPE LOCALITY: Guatemala.
DISTRIBUTION: Guatemala.

36. **Rondeletia costaricensis** Standley, sp. nov.

Branches slender, grayish, glabrous; stipules foliaceous, the blades suborbicular, 5 mm. long, green, glabrous; leaves opposite, the petioles slender, 7–10 mm. long, the blades elliptic or oval-elliptic, 13.5–18.5 cm. long, 6.3–8 cm. wide, acute at the base, acuminate at the apex, membranaceous, glabrous, green above, pale beneath, the venation prominent, the lateral veins slender, 6–8 on each side, subarcuate; inflorescence terminal, cymose-paniculate, rather few-flowered, the peduncle slender, 6.5 cm. long, the rachis minutely pilose, the pedicels 1–3 mm. long; hypanthium less than 1 mm. long, minutely appressed-pilose; calyx-lobes 4, narrowly triangular, acute, shorter than the hypanthium, erect; corolla minutely appressed-pilose outside, the tube slender, 9 mm. long, the 4 lobes oval, 3 mm. long.

Type collected near Buena Vista, Costa Rica, altitude 900 meters, April, 1903, *H. Pittier 16696* (U. S. Nat. Herb. *no. 764141*).

37. **Rondeletia aetheocalymna** Donn. Smith, Bot. Gaz. **43**: 298. 1906.

Shrub, 3 meters high, the branches stout, terete, grayish-brown, glabrous or when young sparsely strigillose; stipules narrowly oblong or spatulate-oblong, 8–10 mm. long, obtuse or acute, erect, persistent, thick, brown, glabrous; leaves opposite, the petioles stout, 7–15 mm. long, glabrous, the blades oval, oval-obovate, or oval-ovate, 9–15 cm. long, 4–6.5 cm. wide, acute to abruptly attenuate at the base, abruptly acute or acuminate at the apex, subcoriaceous, glabrous, dark-green and lustrous above, paler beneath, the costa prominent, the lateral veins slender, 8–10 on each side, subarcuate, divergent at an angle of 60° or more; inflorescence terminal or partly axillary, cymose-corymbose, long-pedunculate, the flowers subsessile or on stout pedicels 1 cm. long or shorter, the cymes pedunculate, the corymbs 5–10 cm. long and broad; bracts oblong or linear-oblong, 5–12 mm. long, obtuse or acute, foliaceous; hypanthium densely sericeous; calyx-lobes 4, very unequal, 3 of them elliptic, acute, 2–3 mm. long, the fourth oval or elliptic, 5–8 mm. long, obtuse or rounded at the apex, foliaceous, glabrous or nearly so; corolla white, sericeous outside, the tube stout, 7–8 mm. long, the throat naked, the 4 lobes rounded, 4 mm. long, spreading; anthers and style included; capsule globose, 5–7 mm. in diameter, costate, sericeous; seeds numerous, angulate, brown, punctulate.

TYPE LOCALITY: Along the trail between Sepacuité and Secanquím, Alta Verapaz, Guatemala, at an altitude of 550 to 990 meters.
DISTRIBUTION: Known only from the type locality.

38. **Rondeletia calycosa** Donn. Smith, Bot. Gaz. **56**: 59. 1913.

Shrub, the branches stout, pilose-strigose when young; stipules triangular, cuspidate, 3–4 mm. long, glabrous; leaves opposite, the petioles 4–6 mm. long, the blades lance-elliptic, 6–9 cm. long, 2–3 cm. wide, attenuate to the base, abruptly acuminate or very long-acuminate at the apex, glabrous above, paler beneath, pilose along the nerves, the lateral veins 6 or 7 on each side; inflorescence terminal, cymose-corymbose, 5–6 cm. long, the peduncles 1.5–2.5 cm. long, the pedicels 2–5 mm. long; bracts foliaceous, the bractlets lanceolate, 3–5 mm. long, red, glabrous; hypanthium pilose, ellipsoid, 3 mm. long; calyx-lobes 4, linear-lanceolate, 4–7 mm.

long, unequal, red, 3–5-nerved; corolla red, strigillose-pilose outside, glabrous within, the tube 15–17 mm. long, naked in the throat, the 4 lobes rounded, 3 mm. long; anthers included.

TYPE LOCALITY: In forests, La Palma, Costa Rica, at an altitude of 1460 meters.
DISTRIBUTION: Known only from the type locality.

V. **Hondurenses.** Leaves large, thin, loosely white-tomentose beneath. Stipules large, thin, erect. Inflorescence terminal, cymose-corymbose, many-flowered, the flowers 5-parted; bracts large; calyx-lobes large, narrow; corolla very large, sericeous outside, the throat naked.

39. **Rondeletia hondurensis** Donn. Smith, Bot. Gaz. 27: 335. 1899.

Shrub, the branches stout, terete, densely pilose-sericeous with white or fulvous hairs; stipules 7–10 mm. long, ovate-triangular, 1–3-cuspidate, erect, persistent, thin, brown, densely sericeous; leaves opposite, the petioles 2–4 mm. long, the blades ovate, elliptic, oblong-elliptic, or obovate-oblong, 10–16 cm. long, 3–5.5 cm. wide, acute at the base, subabruptly acuminate to attenuate at the apex, thin, dark-green above and short-pilose, beneath densely arachnoid-tomentose, sericeous along the veins, the costa slender, prominent, the lateral veins slender, 6–8 on each side, subarcuate, ascending at an acute angle; inflorescence terminal, cymose-corymbose, sessile, with usually 3 dense head-like cymes, these many-flowered, short-pedunculate, the flowers sessile; bracts lanceolate, about 1.5 cm. long, pubescent like the leaves; hypanthium densely sericeous, obovoid, 5–6 mm. long; calyx-lobes 5, unequal, lance-linear, 10–14 mm. long, attenuate, erect; corolla densely sericeous outside, the tube stout, 2–2.5 cm. long, about 2.5 mm. thick, dilated above, the throat naked, the 5 lobes rounded-obovate, 1 cm. long; anthers 3 mm. long; style short-exserted.

TYPE LOCALITY: Río Chamelecón, Santa Bárbara, Honduras, at an altitude of 300 meters.
DISTRIBUTION: Known only from the type locality.

VI. **Stellatae.** Leaves of medium size, usually coriaceous and glabrous, sometimes pubescent. Stipules small, thick, erect. Inflorescence terminal, cymose or paniculate. few- or many-flowered, the flowers 4- or 5-parted; calyx-lobes small; corolla of medium size, usually glabrous outside, sometimes strigillose, the throat naked. Capsule large, globose or pyriform. Seeds winged.

40. **Rondeletia brachycarpa** (Griseb.) C. Wright; Sauvalle, Anal. Acad. Habana 6: 122. 1869.

Ferdinandea brachycarpa Griseb. Mem. Am. Acad. II. 8: 505. 1862.

Shrub, 3–4 meters high, the branches stout, terete, dark-brown or grayish, hirtellous or puberulent when young, the internodes usually very short; stipules triangular-subulate, 1–2 mm. long, erect, persistent, thick, brown; leaves opposite, the petioles stout, 2–7 mm. long, strigillose, the blades oval, elliptic-oblong, oblong, or obovate, 2–11 cm. long, 1–4.5 cm. wide, obtuse to attenuate at the base, acutish to rounded at the apex, coriaceous, dark-green above, lustrous, scaberulous, beneath paler, hirtellous or scaberulous, the costa stout and prominent, the lateral veins prominent or sometimes obsolete, 4–8 on each side, arcuate, divergent at an obtuse angle, the margins often revolute; inflorescence terminal, the flowers few or numerous, sessile or short-pedicellate, in small pedunculate cymes, these arranged in a pedunculate panicle 2.5–8 cm. long; bracts and bractlets minute; hypanthium densely whitish-strigillose; calyx-lobes 4, oval or oblong, about 1 mm. long, rounded or obtuse, erect; corolla white-strigillose outside, the tube 5–6 mm. long, slender below, dilated above, naked in the throat, the 4 lobes rounded, spreading, about 2 mm. long; capsule subglobose, 6–7 mm. long, glabrate, reddish-brown, coarsely lenticellate; seeds compressed, about 3 mm. long, yellowish, winged, the wing irregularly laciniate.

TYPE LOCALITY: Thickets near Santa Catalina, Oriente, Cuba.
DISTRIBUTION: Thickets and hillsides, Cuba and Hispaniola.

41. **Rondeletia subglabra** Krug & Urban; Urban, Symb. Ant. 1: 418. 1899.

Shrub, the branches stout, terete, dark-brown or grayish, strigillose or hirtellous when young; stipules minute, triangular, persistent; leaves opposite, the petioles stout, 4–10 mm. long, strigillose or glabrous, the blades broadly oval to oval-oblong or obovate, 2–6.5 cm. long, 2–4 cm. wide, rounded to acutish at the base, broadly rounded to acutish at the apex, thick-coriaceous, glabrous, lustrous, dark-green above, paler beneath, the costa slender, prominent, the lateral veins very slender, 4–6 on each side, ascending at an angle of 45° or more, nearly straight, the margins revolute; inflorescence terminal and axillary, cymose-corymbose, the peduncles 3–25 mm. long, slender, the cymes few-flowered, long-pedunculate, the pedicels 2–10 mm. long; bracts minute, linear; hypanthium strigillose; calyx-lobes 5, linear or spatulate, about 1 mm. long, obtuse, spreading; capsule globose, 3.5–4 mm. in diameter, glabrous, dark-brown.

TYPE LOCALITY: Near Santiago, Oriente, Cuba, at an altitude of 1400 meters.
DISTRIBUTION: Mountains of Oriente, Cuba.

42. **Rondeletia yamuriensis** Britton, Bull. Torrey Club 44: 25. 1917.

Small tree, about 4 meters high, glabrous throughout, the branches stout, angulate, dark-brown or grayish, the internodes short; stipules minute, triangular, erect, persistent, brown; leaves opposite or ternate, sessile, the blades narrowly oblong-oblanceolate, 5–9.5 cm. long, 1–2 cm. wide, attenuate at the base, acutish to rounded at the apex, thick-coriaceous, dark-green and lustrous on the upper surface, paler beneath, the costa very broad, the lateral veins slender, often obscure, 3–7 on each side, remote, divergent, laxly anastomosing near the margin, the margins strongly revolute; inflorescence terminal and axillary, corymbose, few-flowered, the peduncles stout, 4–6 cm. long, the fruiting pedicels 5–10 mm. long; capsule pyriform-globose, 1–1.4 cm. long, dark-brown, lenticellate; seeds compressed, 3–4 mm. long, brown, narrowly winged, the wings irregularly dentate and laciniate.

TYPE LOCALITY: Between Yamuri Arriba and Bermejal, Oriente, Cuba.
DISTRIBUTION: Known only from the type locality.

43. **Rondeletia stellata** (Griseb.) C. Wright; Sauvalle, Anal. Acad. Habana 6: 122. 1869.

Ferdinandea stellata Griseb. Mem. Am. Acad. II. 8: 505. 1862.

Shrub, glabrous, throughout, the branches stout, angulate, brown or grayish, the internodes mostly very short; stipules minute, triangular, cuspidate, erect, persistent, thick, brown; leaves opposite or ternate, the petioles very stout, 2–14 mm. long, the blades obovate or oblong-obovate, 4.5–8.5 cm. long, 1.8–4 cm. wide, acute or acuminate at the base, rounded at the apex, thick-coriaceous, lustrous, slightly paler beneath, the costa stout and prominent, the lateral veins slender, often obsolete, 5–8 on each side, divergent, nearly straight; inflorescence terminal, corymbose, few-flowered, the peduncles 2–5 cm. long, very stout, the pedicels stout, angulate, clavate, 5–10 mm. long, dark-brown, lenticellate; seeds compressed, 2.5–4 mm. long, brown, narrowly winged, the wings irregularly laciniate.

TYPE LOCALITY: Pine lands near Monte Verde, Oriente, Cuba.
DISTRIBUTION: Mountains of Oriente, Cuba.

44. **Rondeletia calcicola** Britton, Bull. Torrey Club 43: 467. 1916.

Shrub, glabrous throughout, the branches stout, terete or angulate, grayish-brown, the internodes short; stipules minute, triangular, acute or cuspidate, erect, persistent, brown; leaves opposite or ternate, the petioles stout, 3–9 mm. long, the blades narrowly oblong-oblanceolate, 6.5–10.5 cm. long, 1–2 cm. wide, long-attenuate at the base, acute or subobtuse at the apex, thick-coriaceous, lustrous, green above, paler beneath, the costa slender, prominent, the lateral veins obscure, the margins subrevolute; inflorescence terminal and axillary, corym-

bose, few-flowered, the pedicels stout, 2–4 mm. long; bracts minute; calyx-lobes 4, oblong, about 1 mm. long, obtuse, spreading; capsule oblong-pyriform, about 1 cm. long, reddish-brown; seeds compressed, 3–4 mm. long, yellowish-brown, appendaged at each end and winged, the wings laciniate.

TYPE LOCALITY: Coe's Camp, Enseñada de Siguanea, Isle of Pines, Cuba.
DISTRIBUTION: Known only from the type locality.

45. **Rondeletia angustata** C. Wright; Sauvalle, Anal. Acad. Habana 6: 122. 1869.

Ferdinandea angustata C. Wright; Griseb. Cat. Pl. Cub. 127. 1866.

Shrub or tree, sometimes 9 meters high (?), glabrous throughout, the branches stout, reddish- or grayish-brown, the internodes mostly very short; stipules broadly triangular, 1–2 mm. long, acute, erect, persistent, brown; leaves opposite or quaternate, the petioles stout, 3–10 mm. long, the blades oblong-oblanceolate or narrowly obovate-oblong, 3–9 cm. long, 1–2.5 cm. wide, cuneate at the base, acute to rounded at the apex, coriaceous, lustrous, paler beneath, the costa slender, prominent, the lateral veins mostly obsolete, the margins subrevolute; inflorescence terminal, the peduncles stout, 0.5–5 cm. long, angulate, the flowers cymose, short-pedicellate, the cymes paniculate; bracts minute; calyx-lobes 4, ovate-oblong, about 1 mm. long, acute, erect, much shorter than the hypanthium; corolla red, the tube 5–6 mm. long, tapering from the base to the apex, naked in the throat, the 4 lobes oval, spreading, 2 mm. long; anthers and style included; capsule subglobose, about 7 mm. long, dark-brown, lenticellate; seeds flat, 2–3 mm. long, brown, appendaged at each end and winged, the wing irregularly laciniate.

TYPE LOCALITY: Swamps near Tascano, Cuba.
DISTRIBUTION: Barrens and along arroyos, central and western Cuba.

46. **Rondeletia canellaefolia** Britton, Bull. Torrey Club 44: 24. 1917.

Shrub, about 2.5 meters high, glabrous throughout, the branches stout; leaves opposite or verticillate, the petioles stout, 5–15 mm. long, the blades elliptic-obovate or elliptic-oblanceolate, 5–10 cm. long, 1.5–3 cm. wide, cuneate or attenuate at the base, obtuse or rounded at the apex, coriaceous, dark-green and lustrous above, paler and dull beneath, the costa prominent, the lateral veins few, obscure, distant, slender; inflorescence terminal and axillary, few-flowered, the peduncles 1.5–5 cm. long, the pedicels short and stout; bracts minute, triangular; calyx-lobes 4, ovate, obtuse, 1–1.5 mm. long; corolla about 6 mm. long, glabrous outside; capsule pyriform, 1–1.5 cm. long.

TYPE LOCALITY: Woods and on cliffs, Sierra Nipe, near Woodfred, Oriente, Cuba, altitude 450 to 550 meters.
DISTRIBUTION: Known only from the type locality.

VII. **Tinifoliae.** Leaves of medium size, coriaceous, strigillose. Stipules small, erect. Inflorescence terminal or partly axillary, corymbose, few-flowered, the flowers 4-parted; calyx-lobes large, broad; corolla large, strigillose outside, the throat naked. Capsule linear-oblong, cylindric, very large. Seeds exalate, appendaged at each end.

47. **Rondeletia tinifolia** Griseb. Cat. Pl. Cub. 129. 1866.

Shrub, about 3 meters high, the branches stout, terete, grayish-brown, strigillose when young but soon glabrate; stipules triangular, 3–4 mm. long, cuspidate or bicuspidate, erect, persistent, thick, brown, strigose; leaves opposite, the petioles stout, 6–18 mm. long, strigillose, the blades oval, ovate, or oval-elliptic, 4–9 cm. long, 1.8–4.5 cm. wide, rounded to short-acuminate at the base, broadly rounded to very acute at the apex, coriaceous, sparsely and very minutely strigillose, dark-green and lustrous above, pale beneath; inflorescence terminal or partly axillary, corymbose, the corymbs few-flowered, pedunculate, 3–5 cm. long, the flowers sessile or long-pedicellate; bracts often foliaceous, the bractlets mostly minute, triangular to

linear, strigillose-sericeous; hypanthium densely strigillose-sericeous; calyx-lobes 4, subequal, oblong to rounded-oval, 2.5–4 mm. long, contracted at the base, rounded or very obtuse at the apex, foliaceous, strigillose or glabrate; corolla white, the tube 17–20 mm. long, 1.5 mm. thick below and 3–4 mm. above, naked in the throat, the 4 lobes rounded, 5 mm. long, thinly strigillose outside; capsule linear-oblong, subterete, 1.5–2 cm. long, 3–4 mm. thick, narrowed at the base, strigillose; seeds numerous, fusiform, short-appendiculate at each end.

TYPE LOCALITY: Western Cuba.
DISTRIBUTION: Provinces of Santa Clara and Pinar del Río, Cuba.

VIII. **Pedicellares.** Leaves small, coriaceous, glabrous or pubescent. Stipules small, erect. Inflorescence terminal or partly axillary, 1–3-flowered, the flowers 4- or 5-parted, long-pedicellate; calyx-lobes small, narrow; corolla small, glabrous or puberulent outside, naked in the throat. Capsule small, globose. Seeds exalate, often appendaged at each end.

48. **Rondeletia peduncularis** A. Rich. in Sagra, Hist. Cub. 11: 14. 1850.

Shrub, 0.3–3 meters high, the branches stout, terete, grayish, strigillose when young, the internodes very short; stipules triangular, 1 mm. long or shorter, acuminate, erect, persistent, brown, glabrous; leaves opposite, often crowded, the petioles stout, 1–2.5 mm. long, glabrous, the blades obovate, oblong, or oblanceolate-oblong, 6–18 mm. long, 3–6 mm. wide, obtuse to attenuate at the base, rounded to acutish at the apex, coriaceous, glabrous, lustrous on the upper surface, the costa subprominent, the lateral veins obsolete, the margins thickened, often revolute; inflorescence terminal and axillary, mostly 1-flowered, sometimes 3-flowered, the peduncles slender, 2.5 cm. long or shorter, the pedicels 2–10 mm. long; bracts linear or oblong, foliaceous, the bractlets linear; hypanthium glabrous; calyx-lobes 5, spatulate or linear-spatulate, 2.5–3.5 mm. long, obtuse, erect; corolla yellowish- or deep-red, glabrous, the tube slender, 12 mm. long, naked in the throat, the 4 lobes oblong, 3–4 mm. long, obtuse, spreading; anthers and style included; capsule subglobose, 4–6 mm. long, dark-brown, glabrous; seeds rounded, 1 mm. long, yellowish-brown, punctulate.

TYPE LOCALITY: Vuelta de Abajo, Cuba.
DISTRIBUTION: Rocky banks of streams, Oriente and Pinar del Río, Cuba.

49. **Rondeletia pachyphylla** Krug & Urban; Urban, Symb. Ant. 1: 419. 1899.

Shrub, 1–2 meters high, the branches stout, terete, grayish, strigillose or hirtellous when young; stipules broadly triangular, 1–2 mm. long, acute, erect, persistent, brown; leaves opposite, often crowded, the petioles stout, 4–7 mm. long, hirtellous, the blades oval or oval-oblong, 12–30 mm. long, 8–15 mm. wide, rounded to acutish at the base, rounded or obtuse at the apex, thick-coriaceous, glabrous, lustrous on the upper surface, paler beneath, the costa stout and prominent beneath, impressed above, the lateral veins obscure, the margins revolute; inflorescence mostly axillary but partly terminal, 1-flowered, the pedicels slender, 1.5–3 cm. long; bracts foliaceous, oblong or oval, petiolate, the bractlets linear-subulate; hypanthium glabrous; calyx-lobes 5, oval- or orbicular-spatulate, 3–5 mm. long, obtuse, foliaceous, erect or spreading; corolla glabrous, pinkish, the tube slender, 12–14 mm. long, naked in the throat, the 5 lobes rounded, about 3 mm. long; anthers and style included; capsule subglobose, 6–8 mm. long, dark-brown; seeds numerous, angulate, 1 mm. long, brownish-yellow.

TYPE LOCALITY: Cuba.
DISTRIBUTION: Rocky banks of streams, Oriente, Cuba.

50. **Rondeletia pedicellaris** C. Wright; Sauvalle, Anal. Acad. Habana 6: 102. 1869.

Shrub, 1.5 meters high, the branches slender, terete, gray, hirtellous when young but soon glabrate, the internodes mostly shorter than the leaves; stipules triangular-subulate, 1–1.5 mm. long; leaves opposite, the petioles stout, 1–1.5 mm. long, the blades oval, oval-oblong, or ovate-

oblong, 0.8–3 cm. long, 0.4–1.8 cm. wide, rounded or obtuse at the base, rounded to acute at the apex, thick-coriaceous, grayish-green on the upper surface and very scabrous, scaberulous or glabrate beneath, the costa stout and prominent, the lateral veins mostly obscure, 3 or 4 on each side, the margins often strongly revolute; inflorescence terminal, usually 1-flowered, sometimes 3-flowered, the peduncles very slender, 1.2–3 cm. long; bracts foliaceous, oval or oblong, petiolate, the bractlets minute; calyx-lobes 4, linear or linear-spatulate, 2 mm. long, obtuse or acutish, erect, strigillose, longer than the hypanthium; corolla dark-purple, puberulent outside, the tube slender, 9 mm. long, naked in the throat, the 4 lobes rounded, spreading, 2 mm. long; capsule globose, 3.5 mm. in diameter, subsulcate, minutely puberulent; seeds fusiform, short-appendiculate at each end, pale-brown, rugulose.

Type locality: Vicinity of Trinidad, Cuba.
Distribution: Cliffs and rocky hillsides, Santa Clara, Cuba.

51. **Rondeletia alaternoides** A. Rich. in Sagra, Hist. Cub. 11: 13. 1850.

Stipules broadly deltoid, short, acute; leaves short-petiolate, the blades usually obovate, 2.5 cm. long or shorter, 1.2–1.6 cm. wide, abruptly decurrent at the base, obtuse at the apex, coriaceous, lustrous, glabrous, the veins reticulate on the upper surface; inflorescence terminal, 1–3-flowered, tomentulose, the peduncles elongate; hypanthium tomentulose; calyx-lobes 5, spatulate-oblong, obtuse, about 1 mm. long; corolla sericeous, 6–8 mm. long, the tube three times as long as the calyx-lobes, the lobes oval, obtuse.

Type locality: Mountains near Santiago, Oriente, Cuba.
Distribution: Known only from the type locality.

52. **Rondeletia microphylla** Griseb. Cat. Pl. Cub. 127. 1866.

Shrub, 3–10 dm. high, much branched, the branches stout, terete, brownish, densely hirtellous when young; stipules minute, triangular, acute, erect, persistent; leaves opposite or ternate, often crowded, the petioles stout, about 1 mm. long, the blades obovate-oblong or narrowly elliptic-oblong, 5–16 mm. long, 3–6 mm. wide, cuneate or obtuse at the base, acute or obtuse at the apex, thin, densely hirtellous, or glabrate in age, dull-green above, slightly paler beneath, the costa slender, prominent, the lateral veins few, mostly obsolete, the margins plane or subrevolute; inflorescence terminal, usually 1-flowered, sometimes 3-flowered, the pedicels slender, 2–13 mm. long; bracts elliptic or oblong, foliaceous, petiolate, the bractlets linear; hypanthium densely hirtellous; calyx-lobes 5, oblanceolate or spatulate-linear, 3–6 mm. long, obtuse, foliaceous, erect; corolla orange-red, hirtellous outside, the tube slender, 8–10 mm. long, naked in the throat, the 5 lobes rounded, 3.5–4 mm. long, spreading; capsule globose, 3–4 mm. in diameter, hirtellous.

Type locality: Western Cuba.
Distribution: Rocky stream banks, Pinar del Río, Cuba.

53. **Rondeletia Shaferi** Urban & Britton; Urban, Symb. Ant. 7: 398. 1912.

Shrub, 1 meter high, the branches terete, brown or grayish-brown, finely and densely hirtellous when young, densely leafy; stipules triangular, 1–2 mm. long, acute, erect, persistent; leaves opposite or ternate, the petioles stout, 1–3 mm. long, the blades oval or oval-ovate, 1–2.5 cm. long, 0.7–1.3 cm. wide, rounded to obscurely cordate at the base, acute or obtuse at the apex, submucronate, thick-coriaceous, hirtellous along the veins or glabrate, lustrous above, paler beneath, the costa stout, prominent beneath, sulcate above, the lateral veins obscure; inflorescence terminal, 1–3-flowered, long-pedunculate, the pedicels stout, 5–20 mm. long; bractlets linear, 2–3 mm. long; hypanthium minutely whitish-hirtellous; calyx-lobes 5, spatulate-linear, about 3 mm. long, acute, rigid, foliaceous, erect; corolla pink, densely retrorse-sericeous outside, the tube stout, 12 mm. long, naked in the throat, the 5 lobes rounded, 2.5 mm. long, spreading, puberulent inside; anthers and style included; capsule globose, 4–5 mm. long, dark-brown, finely hirtellous.

Type locality: Along water in savannas near Holguin, Oriente, Cuba.
Distribution: Known only from the type locality.

IX. **Odoratae.** Leaves large or of medium size, coriaceous, pubescent. Stipules erect. Inflorescence terminal or partly axillary, few- or many-flowered, usually cymose-corymbose, the flowers 5-parted; calyx-lobes elongate, sometimes foliaceous; corolla large or small, pubescent outside, the throat naked. Capsule globose, small or of medium size. Seeds angulate or winged.

54. **Rondeletia azuensis** Urban, Symb. Ant. 7: 543. 1913.

Tree, the branches terete, brownish-black, shortly appressed-pilosulous when young, the internodes 1–2.5 cm. long; stipules triangular-lanceolate or broadly lanceolate, 3–6 mm. long, erect, shortly appressed-pilose; leaves opposite, the petioles 1.5–3 mm. long, the blades ovate, obovate, or oval, 3–5 cm. long, 1.8–3 cm. wide, obtuse at the base or subacuminate, obtusely short-acuminate at the apex, thick-coriaceous, glabrous above, beneath strigose-pilose along the nerves and elsewhere minutely pilosulous, the venation subprominent beneath, impressed above, the lateral veins 3–5 on each side, ascending at an angle of about 60°; inflorescence terminal and axillary, the terminal inflorescences racemose, sessile, few-flowered, the axillary ones 3-flowered, on peduncles 1–1.5 cm. long, the pedicels 1–3 mm. long; bracts 4–7 mm. long; hypanthium very shortly appressed-pilose; calyx-lobes 5, linear, spatulate-linear, or oblong, 4–7 mm. long, obtuse or acutish; capsule globose, 5–6.5 mm. in diameter.

TYPE LOCALITY: Culo de Maco, Province of Azua, Santo Domingo, at an altitude of 2225 meters.
DISTRIBUTION: Known only from the type locality.

55. **Rondeletia heterochroa** Urban, Symb. Ant. 7: 394. 1912.

Branches terete, brown, elenticellate or obscurely lenticellate, shortly sericeous-pilose when young, the internodes 1–2 cm. long; stipules triangular or lanceolate, 2 mm. long, acuminate, erect, sericeous; leaves opposite, the petioles 1.5–3 mm. long, the blades ovate or elliptic, 2.5–4 cm. long, 1–2 cm. wide, acute or subobtuse at the base, acuminate at the apex, thick-coriaceous, lustrous, olivaceous above and glabrous or nearly so, paler beneath, thinly appressed-pilosulous, the costa impressed above, the lateral veins 3 or 4 on each side, ascending at an angle of 45°–50°; flowers solitary or few at the ends of short branchlets, sessile or on pedicels 1.5 mm. long; bracts foliaceous; hypanthium short-sericeous; calyx-lobes 4–6, linear or oblanceolate, 2–4.5 mm. long, acute; corolla densely pilosulous outside, the tube cylindric, 7 mm. long, scarcely 1 mm. thick, annular-thickened in the throat, the lobes suborbicular, one third as long as the tube or shorter, pilosulous within; anthers included, the filaments about 0.7 mm. long; capsule globose, about 4 mm. in diameter.

TYPE LOCALITY: Province of Barahona, Santo Domingo.
DISTRIBUTION: Known only from the type locality.

56. **Rondeletia odorata** Jacq. Enum. Pl. Carib. 16. 1760.

Rondeletia obovata L. Syst. ed. 12. 163. 1767. [Typographical error for *R. odorata*.]
Rondeletia coccinea Moc. & Sessé; DC. Prodr. 4: 408, as synonym. 1830.
Rondeletia speciosa Lodd. Bot. Cab. *pl. 1893*. 1832.
Rondeletia rigida Griseb. Mem. Am. Acad. II. 8: 505. 1862.

Shrub, 0.6–2 meters high, the branches stout, terete, reddish-brown or grayish, densely fulvous- or ferruginous-hirtellous when young; stipules triangular or triangular-lanceolate, 2–10 mm. long, attenuate or cuspidate, erect, persistent, brown, sericeous outside; leaves opposite, the petioles stout, 2–7 mm. long, strigose, the blades oval, oval-oblong, oblong, or obovate-oblong, 2–10 cm. long, 1–4.5 cm. wide, obtuse to subcordate at the base, rounded to acute at the apex, thick-coriaceous, lustrous above and usually very scabrous, beneath hirtellous, strigose along the veins, sometimes glabrate in age, often rugose, the costa very stout and prominent, the lateral veins stout, prominent, 3–6 on each side, ascending usually at an acute angle, the margins commonly revolute; inflorescence terminal, cymose-corymbose, the peduncles stout, 3 cm. long or shorter, the cymes few- or many-flowered, dense, the pedicels 1 cm. long or shorter; bracts linear to oval, often foliaceous, the bractlets linear; hypanthium densely pilose; calyx-lobes 5, linear or spatulate-linear, 3–6 mm. long, obtuse or acute, sparsely pilose, erect; corolla bright orange-red, minutely sericeous or hirtellous outside, the tube slender,

about 15 mm. long, the throat annulate, the 5 lobes rounded, 3–5 mm. long; anthers and style included; capsule globose, 3–4 mm. in diameter, densely short-pilose; seeds numerous, angulate, yellow.

TYPE LOCALITY: Coastal thickets, Havana, Cuba.
DISTRIBUTION: Cuba; Panama.
ILLUSTRATIONS: Jacq. Sel. Stirp. Am. *pl. 42;* Bot. Cab. *pl. 1893;* E. & P. Nat. Pfl. 4[4]: *f. 9, L, M;* Lam. Tab. Encyc. *pl. 162;* Bot. Reg. 22: *pl. 1905;* Bot. Mag. *pl. 3953.*

57. **Rondeletia panamensis** DC. Prodr. 4: 408. 1830.

Rondeletia hirta Bartl.; DC. Prodr. 4: 408, as synonym. 1830. Not *R. hirta* Sw. 1788.

Shrub or small tree, the branches stout, terete, reddish-brown, lenticellate, pilose-sericeous when young; stipules triangular, 3–7 mm. long, acute or cuspidate, erect, sericeous; leaves opposite, often crowded, the petioles stout, 2–7 mm. long, sericeous, the blades ovate, ovate-elliptic, or elliptic-oblong, 5.5–11.5 cm. long, 2.5–6 cm. wide, abruptly acuminate at the base, obtuse to acuminate at the apex, thin, dark-green above and glabrous, or sparsely short-pilose along the veins, paler beneath, appressed-pilose with very short hairs, the costa stout, prominent, the lateral veins slender, 8–10 on each side, arcuate-ascending; inflorescence terminal and axillary, cymose-corymbose, short-pedunculate, the cymes densely few-flowered, short-pedunculate, the flowers sessile or short-pedicellate; bracts foliaceous, lanceolate, 1 cm. long or shorter; hypanthium densely sericeous; calyx-lobes 5, lanceolate or ovate, 5–8 mm. long, foliaceous, attenuate, ascending; corolla white, densely whitish-pilose or sericeous outside, the tube stout, about 1 cm. long, naked in the throat, the 5 lobes rounded, spreading; capsule globose, 8–10 mm. in diameter, densely short-pilose; seeds numerous, winged.

TYPE LOCALITY: Panama.
DISTRIBUTION: Panama.

X. **Laurifoliae.** Leaves large, thin or coriaceous, glabrous or pubescent. Stipules erect. Inflorescence axillary, usually many-flowered, cymose-paniculate, the flowers 5-parted; calyx-lobes small; corolla usually small, glabrous or pubescent outside, the throat naked. Capsule small, globose. Seeds usually winged or appendaged.

58. **Rondeletia amplexicaulis** Urban, Symb. Ant. 5: 502. 1908.

Shrub, 4–5 meters high, the branches very stout, terete or subangulate, grayish-brown, rimose, glabrous; stipules deltoid, 8–10 mm. long, subulate-acuminate, thick, appressed, persistent, reddish-brown and glabrous outside, sericeous within; leaves opposite, sessile, the blades obovate, obovate-elliptic, or oblong-obovate, 15–39 cm. long, 7–15 cm. wide, narrowed to the truncate or cordate base, more or less clasping, subabruptly acuminate at the apex, chartaceous-coriaceous, glabrous, lustrous above, subconcolorous, often vinaceous, the veins sulcate above, prominent beneath, the costa stout, the lateral veins slender, 10–12 on each side, arcuate, ascending at an angle of about 60°; inflorescence axillary, corymbose or paniculate, nearly equaling or shorter than the leaves, the peduncles 6–10 cm. long, compressed, the pedicels 4 mm. long or shorter; lower bracts oblong, foliaceous, the others linear, pilosulous on the margins, the bractlets minute, subulate; hypanthium glabrous or very sparsely and minutely pilosulous; calyx-lobes 5, linear-subulate, attenuate, 1.5–2 mm. long, equaling or slightly longer than the hypanthium, erect; corolla glabrous or obscurely pilosulous outside, the tube cylindric, 9–12 mm. long, 1.5 mm. thick below, the throat annular-thickened, the 5 lobes rounded, 2.5 mm. long, spreading, minutely pilosulous within; anthers included, 1.5–2 mm. long, the filaments very short; capsule subglobose, 4–5 mm. long, 5–7 mm. broad, glabrous except at the summit inside the calyx, there densely and minutely pilose; seeds flat, 1–1.5 mm. long, irregularly winged, brownish-yellow.

TYPE LOCALITY: Shaded stream-banks, Troy, Jamaica, at an altitude of 500 meters.
DISTRIBUTION: Jamaica.

59. **Rondeletia Harrisii** Urban, Symb. Ant. 6: 43. 1909.

Shrub or small tree, up to 4 meters high, the branches stout, terete or subcompressed, grayish, glabrous; stipules triangular, about 2 mm. long, acuminate, erect, glabrous outside,

sericeous within; leaves opposite, sessile, the blades elliptic-oblong to oblong-lanceolate, 6–13 cm. long, 1.5–4.5 cm. wide, subcordate at the base, acuminate to attenuate at the apex, chartaceous, glabrous, green above, paler beneath, the costa slender, prominent, the lateral veins slender, 5–9 on each side, subarcuate, laxly anastomosing; inflorescence axillary, corymbose-paniculate, the peduncles 2–3.5 cm. long, the pedicels 0.5–4 mm. long; bracts minute, ciliate; hypanthium glabrous; calyx-lobes 5, triangular, about 0.5 mm. long, acute, ciliolate; corolla brownish-yellow, glabrous outside, the tube 7 mm. long, the 5 lobes rounded; anthers and style included; capsule subglobose, 3–5 mm. long, dark-brown, sericeous at the apex; seeds numerous, flat, winged, the wings irregularly dentate.

TYPE LOCALITY: Wooded hills northeast of Dolphin Head, Jamaica.
DISTRIBUTION: Known only from the type locality.

60. **Rondeletia daphnoides** Griseb. Fl. Brit. W. Ind. 327. 1861.

Branches slender, yellowish-brown, glabrous; stipules deltoid-subulate, broader than long, hairy within; leaves opposite, the petioles 4–6 mm. long, the blades obovate or elliptic-oblong, 2.5–7 cm. long, 1.2–3 cm. wide, acute to rounded at the base, obtusely short-acuminate at the apex, lustrous, glabrous, the veins very slender, scarcely prominulous beneath; inflorescence axillary, cymose-corymbose, few-flowered, glabrous, the pedicels 4 mm. long, slender; hypanthium glabrous; calyx-lobes 5, deltoid-subulate; corolla glabrous outside, salverform, the tube slender, ampliate above, 6–7 mm. long, the lobes one fourth as long as the tube or longer, puberulent within; anthers included, oblong-linear, twice as long as the filaments; capsule globose, 4 mm. in diameter; seeds minute, appendaged at each end.

TYPE LOCALITY: St. Anns, in the valley between Moneague and Lluidas Vale, Jamaica.
DISTRIBUTION: Jamaica.

61. **Rondeletia pallida** Britton, Bull. Torrey Club 37: 358. 1910.

Tree, 6–10 meters high, the branches stout, terete or compressed, grayish-brown, sparsely strigillose when young, the internodes short; stipules triangular, cuspidate, 3–6 mm. long, rigid, erect, brown, sparsely strigillose or glabrate outside, sericeous within; leaves opposite, the petioles slender or stout, 1–2.5 cm. long, the blades oblong-oval, narrowly elliptic, elliptic-oblong, or lance-oblong, 6.5–18 cm. long, 1.7–7 cm. wide, acute or obtuse at the base, acute to attenuate at the apex, chartaceous or subcoriaceous, bright-green above, glabrous or when young very sparsely slender-pilose, paler and brownish beneath, sparsely and minutely pilosulous or glabrate, the venation plane above, prominent beneath, the costa slender, the lateral veins slender, 6 or 7 on each side, arcuate, ascending at an angle of 45° or more, the margins plane or nearly so; inflorescence axillary, loosely cymose-paniculate or subracemose, 2–6 cm. long, the peduncles slender, equaling or shorter than the petioles, the flowers few, the pedicels 2–5 mm. long; bracts and bractlets linear-subulate, 4 mm. long or shorter, sparsely appressed-pilose; hypanthium glabrous or sparsely strigillose; calyx-lobes 5, linear-lanceolate, 1–1.5 mm. long, attenuate, erect; corolla white or yellowish, glabrous or puberulent outside, the tube cylindric, 7–9 mm. long, 1–1.5 mm. thick, scarcely ampliate above, the throat annular-thickened, the 5 lobes rounded, 2–2.5 mm. long, spreading, puberulent within; anthers included, 1 mm. long; capsule didymous-globose, 4 mm. long, 5–6 mm. broad, glabrous; seeds flat, irregular, broadly winged, brownish, reticulate.

TYPE LOCALITY: Woodlands, southeastern foothills of the John Crow Mountains, Jamaica, at an altitude of 350 meters.
DISTRIBUTION: Vicinity of the type locality.

62. **Rondeletia elegans** Britton, Bull. Torrey Club 37: 357. 1910.

Tree, 5 meters high, the branches densely appressed-pilose when young; leaves opposite, the petioles 2–4 cm. long, pilose, the blades elliptic, 11–16 cm. long, 9 cm. wide or less, narrowed at the base, acuminate at the apex, subcoriaceous, glabrous above, rather densely pubescent beneath when young, in age pubescent along the veins, the costa prominent beneath, the lateral veins about 7 on each side; inflorescence cymose-paniculate, the peduncles about as

long as the petioles, the flowers all pedicellate; hypanthium pubescent; calyx-lobes 5, narrowly lanceolate, about as long as the hypanthium; corolla glabrous outside, 10–14 mm. long, the tube cylindric, crimson, the 5 lobes obovate-orbicular, undulate, tawny-yellow, half as long as the tube; anthers sessile near the top of the tube; capsule subglobose, about 7 mm. long.

Type locality: Woodlands, eastern slopes of the John Crow Mountains, Jamaica, at an altitude of 520 meters.
Distribution: Vicinity of the type locality.

63. **Rondeletia racemosa** Sw. Fl. Ind. Occ. 360. 1797.

Shrub or tree, 2 meters high, the branches stout, terete or subcompressed, grayish-brown, rimose, glabrous; stipules 2–3 mm. long, broadly deltoid or subtruncate, cuspidate, rigid, erect, glabrous outside, sericeous within; leaves opposite, the petioles slender, 1.2–3 cm. long, glabrous, the blades elliptic or lance-elliptic, 7–12.5 cm. long, 2–4 cm. wide, acute or acuminate at the base, acuminate to attenuate at the apex, glabrous, dark-green above, brownish beneath, the costa impressed above, prominent beneath, the lateral veins obscure above, prominulous or obscure beneath, about 7 on each side, arcuate, usually subdivaricate, the margins plane or subrevolute; inflorescence axillary, cymose-paniculate, 2.5–5 cm. long, few- or many-flowered, the branches glabrous, the peduncles mostly shorter than the petioles, the pedicels stout, 4 mm. long or shorter; bracts and bractlets minute, triangular, subulate; hypanthium glabrous or nearly so, turbinate; calyx-lobes 5, triangular, minute, less than half as long as the hypanthium, sericeous within; corolla densely retrorse-strigillose outside with whitish hairs, the tube clavate, 3 mm. long, the throat annular-thickened, the 5 lobes half as long as the tube, puberulent within; capsule globose, 3–4 mm. long, dark-brown, glabrous; seeds flat, 1–1.5 mm. long, pale-brown, winged.

Type locality: Mountain forests of Jamaica.
Distribution: Mountains of Jamaica.

64. **Rondeletia laurifolia** Sw. Fl. Ind. Occ. 363. 1797.

Shrub or tree, 1–12 meters high, the branches stout, terete or subcompressed, grayish-brown, rimose, densely and minutely whitish-strigillose when young but soon glabrate, the internodes very short; stipules broadly deltoid, 3–4 mm. long, acute or acuminate, rigid, erect, sparsely strigillose or glabrous outside, sericeous within; leaves opposite, the petioles stout, 0.7–1.8 cm. long, minutely strigillose or glabrate, the blades elliptic to elliptic-oval, 8–15 cm. long, 3–6.5 cm. wide, obtuse or acute at the base, often abruptly short-acuminate, acute or acuminate at the apex, chartaceous-coriaceous, dark-green and lustrous above, glabrous, beneath slightly paler, strigillose along the veins, elsewhere glabrous or nearly so, the veins plane or sulcate above, the costa stout, prominent beneath, the lateral veins slender, prominulous, 6–8 on each side, arcuate, ascending at an angle of 45° or more, the margins plane; inflorescence axillary, loosely cymose-paniculate, many-flowered, 6–15 cm. long, the branches strigillose, the peduncles 1.5–6 cm. long, the flowers sessile or very shortly pedicellate; bracts sometimes foliaceous, usually lance-subulate, the bractlets triangular, minute; hypanthium 1–1.3 mm. long, subglobose, very densely and minutely whitish-strigillose; calyx-lobes 5, minute, deltoid, shorter than the hypanthium, usually glabrate, erect; corolla brownish-yellow, densely whitish-tomentulose outside, the tube obconic, 1.5 mm. long, the 5 lobes rounded, nearly or quite as long as the tube, tomentulose within, spreading; anthers about 0.5 mm. long, subexserted, ovoid-oblong; seeds winged.

Type locality: Jamaica, in thickets.
Distribution: Jamaica.
Illustration: P. Br. Hist. Jam. *pl. 2, f. 3.*

65. **Rondeletia tomentosa** Sw. Prodr. 41. 1788.

Shrub, 1 meter high; stipules deltoid-subulate, strigose; leaves opposite, the petioles 1–2.5 cm. long, short-pilose, the blades lance-elliptic or elliptic, 3.7–7.5 cm. long, 1.8–3.7 cm. wide, acute at the base, obtuse or acute at the apex, puberulent above or glabrate, grayish-scaberulous beneath, short-pilose along the veins; inflorescence axillary, cymose-paniculate, short-pilose,

equaling or longer than the petioles; calyx-lobes 5, deltoid; corolla brownish, short-pilose outside, the tube slender, ampliate above, 5 mm. long, the lobes one fourth as long as the tube, puberulent within; anthers included; capsule subglobose, 2.5–3 mm. in diameter, puberulent; seeds numerous, marginate, with a short appendage at each end.

TYPE LOCALITY: Rocky hills near Spanish Town, Jamaica.
DISTRIBUTION: Jamaica.

66. **Rondeletia ochracea** Urban, Symb. Ant. 7: 392. 1912.

Tree, the branches very stout, terete or subcompressed, grayish-brown, rimose, densely fulvous-pilose when young with short ascending hairs, the internodes very short; stipules deltoid, acute or acuminate, 6–9 mm. long, rigid, erect, densely appressed-pilose within; leaves opposite, the petioles very stout, 1.5–4 cm. long, densely fulvous-pilose, the blades oval, oval-elliptic, or elliptic, 8–15.5 cm. long, 3.5–7 cm. wide, obtuse to acute at the base, sometimes short-decurrent, very obtuse to acute at the apex, coriaceous, rugulose, lustrous above, bright-green, at first sparsely pilose but soon glabrous, beneath densely covered with a close, short, grayish or fulvous tomentum, the venation impressed above, prominent and reticulate beneath, the costa very stout, the lateral veins stout, 6–9 on each side, arcuate, ascending at an angle of 50° or more; inflorescence axillary, paniculate, few-flowered, much shorter than the leaves, the peduncles 1.5–5 cm. long, the stout pedicels 1.5–2 mm. long; bracts sometimes foliaceous, usually lanceolate or triangular and 1.5–3.5 mm. long; hypanthium densely whitish-tomentulose; calyx-lobes 5, deltoid, minute, half as long as the hypanthium; corolla ochraceous, densely retrorse-pilose outside with short whitish hairs, the tube subcylindric, 8–9 mm. long, stout, the 5 lobes rounded, about one fourth as long as the tube, pilosulous within; anthers included, 2 mm. long, the filaments short; capsule globose, about 4.5 mm. long.

TYPE LOCALITY: Forests near Constanza, Santo Domingo, at an altitude of 1250 meters.
DISTRIBUTION: Mountains of Santo Domingo.

67. **Rondeletia portoricensis** Krug & Urban; Urban, Symb. Ant. 1: 414. 1899.

Shrub or tree, up to 20 meters high, the branches very stout, terete or subcompressed, grayish-brown, rimose, minutely fulvous-strigillose or tomentulose when young, the internodes very short; stipules tubular, 5–7 mm. long, erect, rigid, the lobes deltoid, obtuse or cuspidate, appressed-pilose or glabrate outside, white-sericeous within; leaves opposite, the petioles very stout, 1–2.5 cm. long, appressed-pilose or glabrate, the blades oval, oval-elliptic, or elliptic-oblong, 9–20 cm. long, 4–8 cm. wide, acute at the base, rounded or obtuse at the apex and usually very shortly obtuse-acuminate, coriaceous, dark-green above, lustrous or sublustrous, glabrous, beneath paler, brownish, strigillose along the veins, elsewhere sparsely puberulent or glabrous, the venation impressed above, the costa prominent beneath, stout, the lateral veins prominulous, 8–10 on each side, arcuate, ascending at an angle of about 60°, the margins plane or nearly so; inflorescence axillary, paniculate, 3–7 cm. long, few- or many-flowered, the peduncles longer or shorter than the petioles, the pedicels stout, 6 mm. long or shorter; bracts and bractlets mostly minute, triangular, strigillose; hypanthium densely whitish-strigillose; calyx-lobes 5, deltoid, minute, much shorter than the hypanthium; corolla white, densely retrorse-pilose outside with short white appressed hairs, the tube stout-cylindric below, ampliate above; 7–8 mm. long, the 5 lobes rounded, one third as long as the tube or shorter, puberulent within, anthers included, 1.5–2 mm. long, the filaments very short; capsule subglobose, bisulcate, 4–5.5 mm. long, 5–7 mm. broad, tomentulose; seeds 1–2.5 mm. long, flat, brown, broadly winged, the wing irregularly laciniate.

TYPE LOCALITY: Mount Jimenes, Sierra de Luquillo, Porto Rico.
DISTRIBUTION: Mountains of Porto Rico.

68. **Rondeletia polita** Griseb. Fl. Brit. W. Ind. 326. 1861.

Shrub or tree, 1.5–5 meters high, the branches stout, terete or subcompressed, grayish, rimose, glabrous, the internodes very short; stipules 2–3 mm. long, broadly deltoid, acute or

cuspidate, erect, rigid, glabrous outside, sericeous within; leaves opposite, the petioles stout, 0.8–2.2 cm. long, glabrous, the blades oval-elliptic, elliptic, or lance-oblong, 7.5–13 cm. long, 2–5.5 cm. wide, acute at the base, obtuse to acuminate at the apex, subcoriaceous, glabrous, dark-green above, lustrous, the costa impressed, the other veins plane, brownish beneath, the costa stout, prominent, the lateral veins prominulous, 6–8 on each side, nearly straight, ascending at an angle of 45° or more, the margins plane; inflorescence axillary, paniculate, 4–9 cm. long, the peduncles slender, mostly longer than the petioles, the branches minutely whitish-puberulent, the flowers subsessile; bracts and bractlets triangular or lanceolate, 3 mm. long or shorter; hypanthium densely grayish-tomentulose outside; calyx-lobes 5, minute, broadly deltoid, less than half as long as the hypanthium; corolla densely tomentulose outside, the tube clavate, 4 mm. long, the 5 lobes rounded, one third as long as the tube, tomentulose within; anthers oblong-linear, included, the filaments short; capsule subglobose, 2–2.5 mm. long, bisulcate, tomentulose; seeds flat, about 1 mm. long, yellowish, winged.

Type locality: Near St. Anns Bay, Jamaica.
Distribution: Mountains of Jamaica.

69. **Rondeletia trifolia** Jacq. Sel. Stirp. Am. 60. 1763.

Tree, up to 4 meters high, the branches pilose; stipules deltoid-subulate, pubescent; leaves opposite or ternate, the petioles 8–12 mm. long, pilose, the blades lance-oblong, 7.5–10 cm. long, 2–2.5 cm. wide, acuminate at each end, glabrous above, glabrate beneath or hispidulous along the costa, the venation prominulous beneath; inflorescence axillary, hirsute, paniculate, pedunculate, shorter than the leaves, the flowers pedicellate; calyx-lobes 5, deltoid; corolla reddish, pubescent outside, salverform, the tube slender, ampliate above, 4 mm. long, the 5 lobes one third as long as the tube, puberulent within; anthers included; seeds winged.

Type locality: Hills along Ferry River, Jamaica.
Distribution: Jamaica.
Illustrations: Jacq. Sel. Stirp. Am. *pl. 43;* Jacq. Sel. Stirp. Pict. *pl. 62*.

70. **Rondeletia thyrsoidea** Sw. Prodr. 41. 1788.

? *Petesia stipularis* L. Syst. ed. 10. 894. 1759.
Rondeletia microcalyx Krug & Urban; Urban, Symb. Ant. 1: 412. 1899.

Shrub or small tree, sometimes 6 meters high, the branches stout, terete or obtusely angulate, grayish, densely grayish-puberulent and antrorse-pilose when young; stipules broadly deltoid, acute or cuspidate, 3–5 mm. long, rigid, erect, appressed-pilose outside, sericeous-pilose within; leaves mostly ternate, the petioles stout, 1–2.5 cm. long, puberulent and pilose, the blades narrowly elliptic or elliptic-oblong to oval-elliptic, 4.5–12 cm. long, 1.6–5 cm. wide, acute to attenuate at the base, sometimes abruptly short-decurrent, acute to attenuate at the apex, subcoriaceous, bright-green and lustrous on the upper surface, glabrous except along the impressed costa, there pilosulous, paler and usually brownish beneath, sparsely pilosulous or puberulent or finally glabrate, the venation prominent beneath, the lateral veins slender, 5–8 on each side, arcuate-ascending at an angle of about 45°, the margins usually subrevolute; inflorescence axillary, paniculate, 2–6.5 cm. long, the peduncles equaling or shorter than the petioles, the flowers few or numerous, sessile or very shortly pedicellate; bracts triangular-subulate, rarely foliaceous; hypanthium densely grayish-tomentulose; calyx-lobes 5, deltoid, minute, one third as long as the hypanthium or shorter; corolla yellowish, cinereo-puberulent outside, the tube cylindric, slightly ampliate above, 4–5 mm. long, the throat annular-thickened, the 5 lobes rounded, spreading, one third as long as the tube or shorter, puberulent within; anthers included, 1.3 mm. long, the filaments very short; capsule didymous-globose, 3 mm. long, 3.5–4 mm. wide, brown, tomentulose; seeds flat, 1–1.5 mm. long, brown, reticulate, narrowly winged, the wing entire or denticulate.

Type locality: Dry hillsides, western Jamaica.
Distribution: On hillsides, Jamaica.

71. **Rondeletia americana** L. Sp. Pl. 172. 1753.

Rondeletia dichotoma Pers. Syn. Pl. 1: 203. 1805.

Branches slender, appressed-pilose when young; stipules triangular-acuminate, sericeous within, about 3 mm. long; leaves opposite, the petioles 3–4 mm. long, the blades elliptic-oblong or oblong-obovate, 6.5–10 cm. long, 2–4 cm. wide, acute or acuminate at the base, acute or short-acuminate at the apex, chartaceous, deep-green above, glabrous or minutely appressed-pilose, short-pilose beneath along the veins; inflorescence axillary, cymose-corymbose, many-flowered, short-pilose, the peduncles equaling or exceeding the leaves, the flowers short-pedicellate or sessile; hypanthium appressed-pilose; calyx-lobes 5, linear, subobtuse, as long as the hypanthium; corolla white, sericeous outside, the tube slender, ampliate above, 8 mm. long, the 5 lobes rounded, one fourth as long as the tube; anthers included, oblong-linear, subsessile; capsule globose, 3 mm. in diameter, short-pilose; seeds exalate.

TYPE LOCALITY: America.
DISTRIBUTION: Jamaica and St. Vincent.
ILLUSTRATIONS: Plum. Pl. Am. *pl. 242, f. 1;* Lam. Tab. Encyc. *pl. 162, f. 1.*

72. **Rondeletia arborescens** Griseb. Fl. Brit. W. Ind. 327. 1861.

Tree, the branches stout, terete or subcompressed, grayish-brown, glabrous or nearly so, the internodes very short; stipules deltoid, 4–6 mm. long, acute or cuspidate, rigid, erect, glabrous or sparsely strigose outside, strigose within; leaves opposite, the petioles stout, 0.6–3 cm. long, strigose or glabrate, the blades obovate-oblong or oval-obovate, 6–13 cm. long, 3–6.2 cm. wide, narrowly or broadly cuneate at the base, rounded or very obtuse at the apex and very abruptly and shortly obtuse-acuminate, thick-coriaceous, dark-green above, lustrous, glabrous, the venation impressed, beneath brownish, sparsely strigose along the veins or glabrous, the costa broad, prominent, the lateral veins prominulous, 6 or 7 on each side, subarcuate, ascending at an angle of 45° or more; inflorescence axillary, cymose-paniculate, rather few-flowered, 2.5–5 cm. long, the peduncles about as long as the petioles, the branches sparsely strigose, the flowers on pedicels 1–5 mm. long, bracts linear or subulate, 2–5 mm. long, the bractlets minute, subulate; hypanthium densely whitish-pubescent with minute appressed hairs; calyx-lobes 5, lance-oblong, 1–1.5 mm. long, obtuse or acutish, erect or spreading; corolla yellowish-white, becoming brown, retrorse-pilose outside with short whitish appressed hairs, the tube slender, ampliate above, 3–4 mm. long, annular-thickened in the throat, the 5 lobes rounded, spreading, about half as long as the tube, puberulent within; anthers included, the filaments short; capsule subglobose, bisulcate, 5–6 mm. long, dark reddish-brown, puberulent; seeds compressed, 2–3 mm. long, yellowish, reticulate, broadly winged, the wings irregularly dentate or laciniate.

TYPE LOCALITY: Mountains of Dominica.
DISTRIBUTION: Guadeloupe, Dominica, Martinique, and St. Vincent.

73. **Rondeletia stereocarpa** Griseb. Fl. Brit. W. Ind. 327. 1861.

Shrub or small tree, the branches very stout, terete or subangulate, grayish, glabrous or nearly so, the internodes very short; stipules broadly deltoid or ovate-deltoid, 5–8 mm. long, acute to very obtuse, mucronate, rigid, erect, glabrous outside or very sparsely appressed-pilose, sericeous within; leaves opposite, the petioles stout, 2–4.5 cm. long, glabrous or sparsely strigose, the blades obovate-oblong, obovate, or narrowly obovate-elliptic, 12.5–22 cm. long, 5–7.5 cm. wide, attenuate at the base, abruptly or subabruptly acuminate at the apex, dark-green and lustrous above, glabrous or when young sparsely strigillose, the venation plane or impressed, beneath brownish, glabrous or sparsely strigillose, the costa stout, prominent, the lateral veins slender, prominent, 6 or 7 on each side, subarcuate, ascending at an angle of about 50°, the margins plane; inflorescence axillary, paniculate, 4–11 cm. long, the branches minutely strigillose or glabrate, the flowers numerous, short-pedicellate; bracts linear or subulate, 3–9 mm. long, the bractlets subulate; hypanthium densely whitish-tomentulose; calyx-lobes 5, narrowly triangular or lanceolate, 1.5 mm. long, acute, glabrate, erect, equaling or longer than the hypanthium; corolla densely retrorse-pilose outside with short whitish appressed hairs,

the tube cylindric, subampliate above, 4–6 mm. long, the 5 lobes rounded, about one third as long as the tube, spreading, puberulent within, the throat annular-thickened; anthers included, oblong-linear, 2 mm. long, the filaments very short; capsule globose, 6 mm. in diameter; seeds winged, the wing dentate.

Type locality: Dominica.
Distribution: Guadeloupe, Dominica, and Martinique.

74. **Rondeletia Christii** Urban, Symb. Ant. 3: 377. 1903.

Shrub, 3–4 meters high, the branches terete, grayish-brown, rimose, densely whitish-sericeous with short hairs when young; stipules triangular, 4–5 mm. long, subacuminate, sericeous outside, villosulous within; leaves opposite, the petioles 8–12 mm. long, the blades oval-elliptic or elliptic-oblong, 5–9 cm. long, 2–4 cm. wide, acute or obtuse at the base, narrowed to the acute apex, coriaceous, glabrous above, beneath sparsely appressed-pilose with short hairs, the costa prominent beneath, the lateral veins prominulous, 6–8 on each side, the margins recurved; inflorescence axillary, paniculate, few-flowered, 1.5–2 cm. long, whitish-sericeous, the pedicels 1–2 mm. long; bracts lanceolate, 1.5–2.5 mm. long, the bractlets 1 mm. long or shorter; hypanthium tomentose; calyx-lobes 5, triangular-lanceolate, 0.7–1 mm. long, slightly shorter than the hypanthium; corolla retrorse-pilosulous outside, the tube cylindric, 6 mm. long, glabrous within, the 5 lobes suborbicular, one third as long as the tube or shorter, whitish-tomentulose within; anthers included, 1.7 mm. long, the filaments very short.

Type locality: Fessard, Haïti.
Distribution: Known only from the type locality.

75. **Rondeletia martinicensis** Krug & Urban; Urban, Symb. Ant. 1: 415. 1899.

Shrub, 3.5 meters high, the branches terete, densely fulvous-hirsute when young with short hairs; stipules triangular, emarginate and short-apiculate; leaves opposite, the petioles 1.5–2.5 cm. long, the blades oval-elliptic, 13–20 cm. long, 7–9.5 cm. wide, acute at the base, cuspidate-acuminate at the apex, thick-chartaceous, short-hirsute along the costa, elsewhere sparsely pilose, or glabrate above, the lateral veins about 7 on each side, arcuate; inflorescence axillary, paniculate, 6–8 cm. long, many-flowered, the terminal flower of each cymule sessile, the others on pedicels 2–3 mm. long; bracts linear or linear-subulate; hypanthium tomentose-hirsutulous; calyx-lobes 5, lance-linear, 1.5 mm. long, obtuse, slightly longer than the hypanthium; corolla densely retrorse-strigose outside, the tube cylindric, 6 mm. long, slightly ampliate above, the 5 lobes obovate-orbicular, one third as long as the tube or shorter, the throat naked; anthers included, the filaments very short; capsule didymous-globose, 6–7 mm. broad, short-pilose; seeds 1.5–2 mm. long, winged, the wing irregularly crenate or dentate.

Type locality: In forests, Fond St. Denis, Martinique.
Distribution: Martinique.

76. **Rondeletia impressa** Krug & Urban; Urban, Symb. Ant. 1: 412. 1899.

Shrub, 2.5–3.6 dm. high, the branches stout, terete, grayish-brown, rimose, puberulent and loosely pilose when young with fulvous hairs, the internodes short; stipules broadly deltoid, 3–4 mm. long, cuspidate, rigid, erect, pilose outside, sericeous within; leaves mostly ternate, the petioles stout, 8–15 mm. long, puberulent and pilose, the blades elliptic-oval to elliptic, 7.5–10.5 cm. long, 2.8–5 cm. wide, rounded to acutish at the base, subabruptly short-acuminate at the apex, thick-chartaceous, dark-green above, lustrous, sparsely pilosulous when young but soon glabrate, the venation impressed, beneath brownish, puberulent and sparsely pilosulous along the veins, elsewhere sparsely puberulent or glabrate, the venation prominent, the lateral veins 5–9 on each side, arcuate, ascending at an angle of 50°–60°, the margins subrevolute; inflorescence axillary, paniculate, many-flowered, 3–6 cm. long, the branches densely pilosulous, the peduncles usually twice as long as the petioles, the flowers on pedicels 3 mm. long or shorter; bracts linear-subulate or sometimes foliaceous, the bractlets minute; hypan-

thium densely tomentulose; calyx-lobes 5, lanceolate, 1–1.5 mm. long, acute, about as long as the hypanthium; corolla yellowish, puberulent outside, the tube cylindric, ampliate above, 5.5–6.5 mm. long, the 5 lobes rounded, one third as long as the tube, the throat annular-thickened; anthers included, 1.3 mm. long, the filaments very short; capsule globose, 4–5 mm. in diameter, puberulent and pilosulous; seeds flat, about 1 mm. long, yellowish, reticulate, winged, the wing entire or nearly so.

TYPE LOCALITY: Near Cherry Garden, Jamaica, at an altitude of 200 meters.
DISTRIBUTION: Jamaica.

77. **Rondeletia hirsuta** Sw. Prodr. 41. 1788.

Rondeletia hirta DC. Prodr. 4: 407. 1830. Not *R. hirta* Sw. 1788.
Rondeletia hirta Aitonii DC. Prodr. 4: 408. 1830.
Bouvardia hirsuta A. Rich. Mém. Soc. Hist. Nat. Paris 5: 272. 1834.

Shrub, 1–3 meters high, the branches stout, terete or subangulate, yellowish, densely whitish- or fulvous-pilose when young; stipules deltoid, 4–10 mm. long, cuspidate, rigid, erect, densely appressed-pilose; leaves opposite, the petioles stout, 3–8 mm. long, densely pilose, the blades elliptic, oval, or ovate-oval, 6.5–10 cm. long, 2.8–5.5 cm. wide, coriaceous, dark-green and lustrous on the upper surface, short-pilose or finally glabrate, often rugulose, the venation impressed, beneath paler, densely or sparsely pilosulous, the venation prominent, the lateral veins 6–8 on each side, arcuate, ascending at an angle of 50° or more, the margins recurved; inflorescence axillary, cymose-paniculate, rather few-flowered, the pedicels slender or stout, 1.5–5 cm. long, densely pilose, the cymes loose, the flowers short-pedicellate; bracts often foliaceous, the bractlets lance-subulate, 2–5 mm. long; hypanthium densely short-pilose; calyx-lobes 5, linear-attenuate, 2.5–5 mm. long, appressed-pilose, erect or spreading; corolla yellowish, densely pilose outside, the tube cylindric, 6–8 mm. long, the 4 lobes rounded, about one third as long as the tube, spreading, glabrate within; anthers included, 1.5 mm. long; capsule globose, 5–6 mm. in diameter, densely pilose; seeds flat, 1.5–2.5 mm. long, brownish-yellow, reticulate, winged, the wing irregularly dentate.

TYPE LOCALITY: Mountains near Bath, Jamaica.
DISTRIBUTION: Jamaica.

XI. **Umbellulatae.** Leaves large, thin or coriaceous, sericeous or long-pilose. Stipules large, erect, usually thin. Inflorescence axillary, many-flowered, the flowers 5-parted, collected into 1–3 dense heads, sometimes 1-flowered; bracts large; calyx-lobes usually large, often foliaceous; corolla of medium size, antrorse-pilose outside, the throat naked. Capsule small, globose. Seeds winged or appendaged.

78. **Rondeletia cincta** Griseb. Fl. Brit. W. Ind. 329. 1861.

Tree, 5–6 meters high, the branches stout, terete or subangulate, grayish, finely grayish-sericeous when young, the internodes very short; stipules sheathing, 6–12 mm. long, erect, thick, finely sericeous, the lobes triangular, long-acuminate; leaves opposite, the petioles stout, 6–18 mm. long, finely sericeous, the blades narrowly oblanceolate-oblong, obovate-oblong, or elliptic, 5–7.5 cm. long, 2–3 cm. wide, acute or acutish at the base, acute or acutish at the apex, coriaceous, green above, lustrous, sparsely sericeous when young but soon glabrate, the venation plane or subimpressed, paler beneath, short-sericeous, especially along the veins, the costa stout, the lateral veins prominulous, 4 or 5 on each side, arcuate, ascending at an angle of about 45°, the margins subrevolute; inflorescence axillary, capitate or subcapitate, few-flowered, the peduncles stout, about as long as the petioles, sericeous, the flowers sessile or short-pedicellate; bracts subconnate, broadly ovate, 6–8 mm. long, acute, sericeous, the bractlets ovate, acuminate, 3–5 mm. long, densely sericeous; hypanthium densely sericeous; calyx-lobes 5, ovate, 4–5 mm. long, acute; corolla villosulous-sericeous outside, the tube stout, cylindric, 8 mm. long, the 5 lobes rounded, 2.5 mm. long, puberulent within; anthers included.

TYPE LOCALITY: Westmoreland, on the summit of Dolphin Peak, Jamaica.
DISTRIBUTION: Mountains of Jamaica.

79. **Rondeletia glauca** Griseb. Fl. Brit. W. Ind. 329. 1861.

Shrub or small tree, 2–5 meters high, the branches sericeous; stipules ovate-oblong, acute, deciduous, stout; leaves opposite, the petioles 6–12 mm. long, the blades spatulate-oblong or obovate, 5–9 cm. long, 2.5–4.5 cm. wide, tapering at the base, obtuse at the apex, rigid-coriaceous, minutely strigillose when young, glabrate above in age; inflorescence axillary, capitate, short-pedunculate, the 4 bracts united at the base, ovate; calyx-lobes 5, ovate or oblong, acute, much longer than the hypanthium, half as long as the corolla or longer; corolla pilose outside, the tube stout, cylindric, 6–8 mm. long, the lobes rounded, puberulent within, the throat annular-thickened; fruit globose, 4–5 mm. in diameter, densely sericeous.

TYPE LOCALITY: Rocky woods, Pedro Valley, St. Anns, Jamaica.
DISTRIBUTION: Jamaica.

80. **Rondeletia ligulata** Urban, Symb. Ant. 5: 503. 1908.

Shrub or small tree, 2.5–6 meters high, the branches stout, terete, grayish, densely long-pilose when young, the internodes very short; stipules sheathing, 1.5–2 cm. long, filiform-cuspidate, thin, brown, deciduous, long-pilose outside, pilose-sericeous within; leaves opposite, the petioles 7–12 mm. long, densely long-pilose, the blades obovate, elliptic, or narrowly elliptic-oblong, 4.5–10 cm. long, 1.7–3.5 cm. wide, subobtuse to attenuate at the base, acute or acutish at the apex, chartaceous, dark-green above, setose-pilose with long fulvous hairs, the venation plane or impressed, beneath paler, densely pilose with very long soft hairs, the venation prominent, the lateral veins 3–5 on each side, ascending at an angle of 25–40°, the margins plane; inflorescence axillary, 1-flowered, subsessile or on a peduncle 8 mm. long or shorter; bracts connate, 11–13 mm. long, inclosing the flower in bud, long-pilose, the pedicels about 1 mm. long, the bractlets linear-subulate, 4–8 mm. long; hypanthium densely long-pilose; calyx-lobes 5, lanceolate, 5–7 mm. long, erect or ascending; corolla yellow, densely appressed-pilose outside with long hairs, the tube cylindric, 10 mm. long, the 5 lobes rounded, 4–5 mm. long, glabrous or sparsely puberulent within, the throat annular-thickened; anthers included, 2–3 mm. long, the filaments very short; capsule globose, 5 mm. long, densely pilose; seeds 1–1.5 mm. long, wing-appendaged at each end.

TYPE LOCALITY: Near Troy, Jamaica, at an altitude of 660 to 830 meters.
DISTRIBUTION: Jamaica.

81. **Rondeletia hirta** Sw. Prodr. 41. 1788.

Rondeletia hirsuta DC. Prodr. 4: 408. 1830. Not. *R. hirsuta* Sw. 1788.

Shrub or small tree, up to 4.5 meters high, the branches stout, terete, grayish, densely shaggy-pilose when young with long subfulvous hairs, the internodes short or elongate; stipules oblong-triangular, 6–11 mm. long, acute to attenuate, thick, erect, densely long-pilose outside, sericeous within; leaves opposite, the petioles stout, 2–12 mm. long, densely pilose, the blades oval-elliptic or elliptic-oblong, 7.5–19 cm. long, 3–7 cm. wide, rounded or subcordate at the base, acute or abruptly short-acuminate at the apex, chartaceous, dark-green and sublustrous above, copiously setose-pilose with long slender hairs or finally glabrate, the venation plane or impressed, slightly paler beneath, setose-pilose along the veins with long slender hairs, elsewhere sparsely short-pilose, the venation prominent, the lateral veins slender, 6–11 on each side, nearly straight, ascending at an angle of 45° or more, the margins plane; inflorescence axillary, the peduncles slender, 1.5–6 cm. long, trichotomous, each branch bearing a capitate cyme of few or numerous, sessile or short-pedicellate flowers; bracts often foliaceous, 2 cm. long or shorter, the bractlets linear-subulate, 5–10 mm. long, long-pilose; hypanthium densely long-pilose; calyx-lobes 5, linear-attenuate, 4–7 mm. long, pilose, erect; corolla long-pilose outside, the tube slender, 8 mm. long; anthers included; capsule globose, 5 mm. in diameter, brown, pilose; seeds flat, irregular, 1–2 mm. long, brown, reticulate, winged, the wing dentate.

TYPE LOCALITY: Jamaica.
DISTRIBUTION: Jamaica.
ILLUSTRATIONS: Gaertn. Fruct. *pl. 184;* Bot. Cab. *pl. 350.*

82. **Rondeletia saxicola** Britton, Bull. Torrey Club 39: 8. 1912.

Shrub, about 4 meters high, the branches slender, terete or subangulate, reddish-brown, densely pilose when young with short appressed hairs, the internodes short; stipules sheathing, 6–12 mm. long, thin, brown, the lobes lance-ovate, cuspidate-attenuate, appressed-pilose outside, sericeous within; leaves opposite, the petioles 6–12 mm. long, appressed-pilose, the blades obovate-oblong or oblanceolate-oblong, 6–11 cm. long, 1.8–3 cm. wide, acute or attenuate at the base, acute at the apex, dark-green above and setose-pilose with short appressed hairs, the venation plane, beneath paler, setose-pilose along the veins with appressed hairs, short-pilose elsewhere, the lateral veins slender, prominulous, 5 or 6 on each side, arcuate, ascending at an angle of about 45°, the margins plane; inflorescence axillary, cymose-capitate, few-flowered, the peduncles 5–8 mm. long, the flowers sessile or nearly so; bracts and bractlets linear-lanceolate, 5–8 mm. long; hypanthium densely pilose; calyx-lobes 4, ovate, acute, 3 mm. long, appressed-pilose; capsule globose, about 5 mm. in diameter, pilose.

TYPE LOCALITY: On cliffs, Somerset, Manchester, Jamaica.
DISTRIBUTION: Known only from the type locality.

83. **Rondeletia umbellulata** Sw. Prodr. 41. 1788.

Shrub, 3 meters high, the branches stout, terete or subcompressed, grayish-brown, rimose, densely long-pilose when young; stipules broadly ovate-deltoid, 8–15 mm. long, acute or acuminate, long-cuspidate, very thin, brown, erect, appressed-pilose; leaves opposite, the petioles slender, 8–12 mm. long, pilose, the blades elliptic or lance-elliptic, 7–10 cm. long, 2–3.5 cm. wide, acute or acuminate at the base, acuminate or attenuate at the apex, chartaceous, dark-green above, pilose-strigillose or glabrate, the venation impressed, beneath pale, setose-pilose, especially along the veins, the venation prominent, the lateral veins 5 or 6 on each side, arcuate, ascending at an angle of about 45°, the margins plane or subrevolute; inflorescence axillary, the peduncles slender, nearly or quite as long as the leaves, or sometimes much shorter, trichotomous, each branch terminating in a dense many-flowered capitate cyme, the flowers sessile or nearly so; bracts foliaceous, 2.5–4.5 cm. long, the bractlets linear or lanceolate, foliaceous, 7–12 mm. long; hypanthium densely sericeous-pilose; calyx-lobes 5, lanceolate or lance-oblong, 3–4 mm. long, acute or obtuse, foliaceous, sparsely appressed-pilose, erect; corolla yellowish, densely retrorse-pilose outside with white hairs, the tube cylindric, scarcely ampliate above, 8–9 mm. long, the 5 lobes rounded, about one fourth as long as the tube, puberulent within, the throat annular-thickened; anthers included, linear-oblong, 2 mm. long, the filaments very short.

TYPE LOCALITY: Jamaica.
DISTRIBUTION: Jamaica.

XII. **Incanae.** Leaves small or of medium size, often thick-coriaceous, glabrous or pubescent. Stipules small, erect. Inflorescence axillary, cymose, usually 1–3-flowered, the flowers 5-parted; bracts small; calyx-lobes small or elongate; corolla of medium size, pubescent outside, the throat naked. Capsule small, globose. Seeds exalate, sometimes appendaged at each end.

84. **Rondeletia Lindeniana** A. Rich. in Sagra, Hist. Cub. 11: 13. 1850.

Shrub, the branches stout, terete, grayish-brown, hirtellous when young, the internodes short or elongate; stipules rounded or subtruncate, about 2 mm. long, long-cuspidate, strigillose, thick, erect; leaves opposite, the petioles stout, 1–2 mm. long, strigose, the blades obovate, 1.2–3.5 cm. wide, cuneate at the base, obtuse or very obtuse at the apex, subcoriaceous, strigose along the veins or glabrate, dark-green above, the venation plane or impressed, paler beneath, the costa slender, prominent, the lateral veins obsolete, the margins subrevolute; inflorescence axillary, 3-flowered, the peduncles slender, mostly equaling or exceeding the leaves, hirtellous, the flowers slender-pedicellate; bracts often large and foliaceous, the bractlets subulate; hypanthium densely tomentulose; calyx-lobes 5, linear, 3–5 mm. long, obtuse, sparsely short-pilose, erect; corolla minutely pilose with short whitish appressed hairs, the tube slender,

11–12 mm. long, the 5 lobes rounded, 2.5 mm. long, glabrous or sparsely puberulent within; anthers included; capsule globose, pliosulous; seeds minute, angulate, exalate.

Type locality: Mountains near Santiago, Oriente, Cuba.
Distribution: Mountains of Oriente, Cuba.

85. **Rondeletia Nimanimae** Krug & Urban; Urban, Symb. Ant. 1: 418. 1899.

Tree, the branches terete, grayish-brown, shortly appressed-pilose when young, soon glabrate; stipules triangular, subobtuse; leaves opposite, the petioles 8–12 mm. long, the blades ovate or oval, 4.5–5.5 cm. long, 3.5–4.5 cm. wide, obtuse or rounded at the base, very obtuse or obtusely short-acuminate at the apex, coriaceous, sparsely pilose above when young but soon glabrate, lustrous, the venation obscure above, prominent beneath, the lateral veins 4 or 5 on each side; inflorescence axillary, laxly 1–3-flowered, 7–8 cm. long, the pedicels 1.5–2.5 cm. long; bracts 4–5 mm. long, oblong or elliptic-oblong, the bractlets linear or oblong-linear; hypanthium tomentose; calyx-lobes 5, linear-spatulate or spatulate, 2.5–3 mm. long, obtuse or rounded; corolla white, densely pilose outside, the tube cylindric, 11–12 mm. long, glabrous inside, the 5 lobes rounded, less than a third as long as the tube, pilosulous within; anthers included, 2.5 mm. long, the filaments very short.

Type locality: Near Nimanima, Oriente, Cuba, at an altitude of 800 meters.
Distribution: Known only from the type locality.

86. **Rondeletia Leoni** Britton, Bull. Torrey Club 44: 26. 1917.

Shrub or small tree, up to 3 meters high, the branches slender, shortly appressed-pilose when young; stipules lance-subulate, 3–4 mm. long, shortly appressed-pilose, erect; leaves opposite, the petioles 12 mm. long or shorter, appressed-pilose, the blades elliptic to obovate, 3–8 cm. long, narrowed or cuneate at the base, acute, short-acuminate, or obtuse at the apex, subcoriaceous, densely appressed-pilose when young, glabrate in age or strigose beneath along the veins, the venation inconspicuously reticulate, the margins plane or subrevolute; inflorescence axillary, 4–6 cm. long, 1-few-flowered, the pedicels slender, 1–2 cm. long; bracts often foliaceous, the bractlets linear-subulate; hypanthium densely appressed-pilose; calyx-lobes 5, linear or linear-spatulate, 3–4 mm. long; corolla densely appressed-pilose outside with white hairs, the tube slender, 10–12 mm. long, the lobes oblong-orbicular, 2.5–3 mm. long, deep-purple within; capsule globose, 4–5 mm. in diameter.

Type locality: Sierra del Caballete, Sancti Spiritus Mountains, Santa Clara, Cuba.
Distribution: Vicinity of the type locality.

87. **Rondeletia incana** Sw. Prodr. 41. 1788.

Arachnimorpha incana Hamilt. Prodr. 28. 1825.

Shrub, 0.5–3 meters high, the branches densely pilose when young; stipules triangular, 7–12 mm. long, brown, densely pilose, deciduous; leaves opposite, the petioles 5–12 mm. long, the blades oval to oblong, 3.5–7 cm. long, 2–4 cm. wide, obtuse at the base, obtuse or rounded at the apex, coriaceous, pilose above when young with long soft hairs, finally lustrous and glabrate, the venation impressed, beneath densely pilose or tomentose with brownish hairs, the venation prominent; inflorescence axillary, subcapitate, 3-flowered, the peduncles 1–2.5 cm. long, the flowers short-pedicellate; bracts distinct, ovate, acute, 5–6 mm. long; calyx-lobes 5, 4–6 mm. long, ovate-lanceolate, loosely pilose or lanate, much longer than the hypanthium; corolla pilose, the tube clavate, 8 mm. long, the lobes puberulent within.

Type locality: Rocky, calcareous mountains, Jamaica.
Distribution: Jamaica.

88. **Rondeletia chamaebuxifolia** Griseb. Cat. Pl. Cub. 128. 1866.

Rondeletia avenia C. Wright; Sauvalle, Anal. Acad. Habana 6: 121. 1869.

Shrub, the branches stout, terete, grayish, sericeous-strigillose when young; stipules triangular-acuminate, about 2 mm. long, sericeous, thick, erect; leaves opposite, crowded, the

petioles stout, 1–2.5 mm. long, sericeous-strigillose or glabrate, the blades obovate, narrowly elliptic-oblong, or oblanceolate-oblong, 2–3.5 cm. long, 0.6–1.3 cm. wide, attenuate to obtuse at the base, acute or obtuse at the apex, coriaceous, glabrous, slightly paler beneath, the venation obsolete above, very obscure beneath, the margins plane or subrevolute; flowers axillary, solitary, subsessile, the bractlets minute; hypanthium densely tomentulose outside; calyx-lobes 5, triangular, acute, 1 mm. long; corolla-tube densely retrorse-pilose outside with short whitish hairs; capsule globose, 3–4 mm. in diameter, tomentulose; seeds flat, about 1 mm. long, brown, reticulate.

TYPE LOCALITY: Western Cuba.
DISTRIBUTION: Western Cuba.

89. **Rondeletia vacciniifolia** Britton, Bull. Torrey Club 44: 29. 1917.

Shrub, 3–13 dm. high, the branches stout, terete, grayish, strigillose when young; stipules deltoid, 1.5–2 mm. long, acuminate, erect; leaves opposite, the petioles stout, 1.5–3 mm. long, glabrous, the blades oval or elliptic-oblong, 6–12 mm. long, 2.5–4 mm. wide, acute or acuminate at the base, acutish to rounded at the apex, thick-coriaceous, lustrous above, glabrous, sulcate along the costa, brownish beneath, sparsely strigillose along the costa or glabrous, the costa prominulous, the lateral veins obsolete, the margins subrevolute; flowers axillary, solitary, the peduncles stout, about as long as the petioles, strigose; bractlets deltoid-acuminate, minute; hypanthium densely tomentulose; calyx-lobes 5, linear or spatulate-linear, 2–3 mm. long, obtuse or acutish; capsule globose, 5 mm. in diameter, tomentulose; seeds fusiform, angulate, 1–2 mm. long, reticulate, brown, appendaged at each end.

TYPE LOCALITY: Rocky bank of river, vicinity of Camp San Benito, Oriente, Cuba, at an altitude of 900 meters.
DISTRIBUTION: Mountains of northern Oriente, Cuba.

XIII. **Pilosae.** Leaves small or large, often irregular in outline, usually thin, more or less pubescent. Stipules small, erect. Inflorescence axillary, 1–few-flowered, the flowers 4-parted; bracts small; calyx-lobes small or elongate; corolla of medium size, retrorse-pilose outside, the throat naked. Capsule small, globose. Seeds exalate.

90. **Rondeletia intermixta** Britton, Bull. Torrey Club 44: 26. 1917.

Shrub, about 1.6 meters high, the branches stout, terete, reddish-brown, sericeous-pilose when young; stipules deltoid, acute or acuminate, about 3 mm. long, erect or ascending, thick, sericeous; leaves opposite, crowded at the ends of the branches, the petioles stout, 6–15 mm. long, the blades elliptic or elliptic-oblong, 3–6 cm. long 1.2–1.7 cm. wide, acute or attenuate at the base, acute or acutish at the apex, thick-chartaceous, bright-green above, lustrous, glabrous, or when very young pilose along the costa, the venation subimpressed, beneath densely pilose with yellowish subappressed hairs, the venation prominulous, distinct, the lateral veins about 5 on each side, subarcuate, ascending at an angle of 45° or more; inflorescence axillary, few-flowered, densely short-pilose, the peduncles stout, shorter than the petioles: bracts deltoid, about 1 mm. long; hypanthium densely short-pilose; calyx-lobes 4, deltoid, acute; capsule globose, about 3 mm. in diameter, short-pilose.

TYPE LOCALITY: Gran Piedra, Oriente, Cuba, altitude about 1500 meters.
DISTRIBUTION: Eastern Cuba.

91. **Rondeletia buxifolia** Vahl, Eclog. Am. 2: 11. 1798.

Shrub, 1–2 meters high, the branches stout, terete, grayish-brown, minutely strigillose when young, the internodes very short; stipules subannular, about 1 mm. long, subacuminate, thick, erect, strigillose; leaves opposite, the petioles stout, 2 mm. long or shorter, strigillose, the blades broadly cuneate-obovate or cuneate-spatulate, 1.3–3.5 cm. long, 0.7–1.7 cm. wide, cuneate at the base, broadly rounded at the apex, sometimes shallowly retuse, coriaceous, dark-green above, lustrous, glabrous, the venation impressed or obscure, brownish beneath, sparsely appressed-pilose along the veins, the costa prominent, the lateral veins obscure, as-

cending at an angle of 50°–60°, the margins plane or subrevolute; inflorescence axillary, mostly 1-flowered; sometimes 3-flowered, the peduncles stout, 2 mm. long or shorter; bractlets triangular-acuminate, minute; calyx-tube whitish-tomentulose, the 4 lobes linear or oblanceolate, 1.5–3 mm. long, acute, strigillose; corolla yellowish, the tube slender, 6–7 mm. long, densely retrorse-pilose outside with short whitish hairs, the 4 lobes rounded, one third as long as the tube, puberulent; anthers included; capsule subglobose, 4 mm. long, dark-brown, tomentulose; seeds about 1 mm. long, angulate, brown, reticulate, exalate.

Type locality: Montserrat.
Distribution: Montserrat.
Illustration: Vahl, Eclog. Am. *pl. 12.*

92. **Rondeletia inermis** (Spreng.) Krug & Urban; Urban, Symb. Ant. 1: 416. 1899.

Catesbaea inermis Spreng. Syst. **1**: 417. 1825.
Rondeletia buxifolia DC. Prodr. **4**: 409, in part. 1830. Not *R. buxifolia* Vahl, 1798.
Rondeletia tetrandra Sessé & Moc. Fl. Mex. 23, in part. 1893. Not *R. tetrandra* Roxb. 1814.
Rondeletia inermis angustifolia Krug & Urban; Urban, Symb. Ant. **1**: 416. 1899.
Rondeletia inermis oblongifolia Krug & Urban; Urban, Symb. Ant. **1**: 416. 1899.
Rondeletia inermis intermedia Krug & Urban; Urban, Symb. Ant. **1**: 416. 1899.
Rondeletia inermis latifolia Krug & Urban; Urban, Symb. Ant. **1**: 416. 1899.

Shrub or small tree, 1–5 meters high, the branches stout, terete, brown or grayish, rimose, strigose or strigillose when young; stipules deltoid, about 2 mm. long, acute or subulate-acuminate, thick, erect, strigillose or glabrate outside, sericeous within; leaves opposite, the petioles stout, 2–10 mm. long, strigillose or glabrate, the blades very variable in outline, linear-oblong to elliptic, elliptic-oblong, oval, or broadly obovate, 1–10 cm. long, 0.5–5 cm. wide, usually obtuse at the base, sometimes acute, acute to rounded at the apex, usually apiculate or abruptly short-acuminate, chartaceous or coriaceous, lustrous above, glabrous or when young strigillose, usually sulcate along the costa, the secondary venation prominulous, reticulate, beneath paler, sublustrous, short-pilose along the veins, elsewhere glabrate or puberulent, the venation prominulous, the lateral veins few, usually ascending at a very acute angle, sometimes arcuate and ascending at an obtuse angle, the margins plane or subrevolute; inflorescence axillary, cymose, 1–5-flowered, usually 3-flowered, the peduncles 2 cm. long or shorter, the pedicels 1–5 mm. long; bracts sometimes foliaceous, usually linear or subulate; hypanthium densely grayish-tomentulose; calyx-lobes 4 (rarely 5), oblong-linear to narrowly obovate, acute or obtuse, 1.5–4 mm. long, sparsely strigillose, equaling or twice as long as the hypanthium; corolla yellowish or purplish, the tube slender, 7–10 mm. long, densely retrorse-pilose outside with short whitish hairs, the 4 lobes rounded, about one third as long as the tube, spreading, puberulent; anthers included, 2–2.7 mm. long, the filaments very short; capsule globose, 3–4 mm. in diameter, tomentulose; seeds about 1 mm. long, angulate, brown, reticulate, exalate.

Type locality: Porto Rico.
Distribution: Porto Rico.

93. **Rondeletia scabra** Hemsl. Diag. Pl. Nov. 29. 1879.

Shrub or tree, the branches terete, pilose when young; stipules lance-subulate, 6–8 mm. long; leaves opposite, the petioles 6–12 mm. long, the blades ovate-oblong, 7.5–10 cm. long, attenuate at the base, acute at the apex, subcoriaceous, scabrid above, hispid-pilose beneath, especially along the veins, the lateral veins prominent beneath; inflorescence axillary, usually 3-flowered, short-pedunculate, the flowers short-pedicellate; hypanthium strigillose; calyx-lobes 4, lance-subulate, about 12 mm. long, about equaling the corolla; corolla strigillose-pilose outside, the tube cylindric, 12 mm. long, puberulent within, the 4 lobes rounded, the throat naked.

Type locality: Sierra de San Pedro Nolasco, Oaxaca.
Distribution: Known only from the type locality.

94. **Rondeletia pilosa** Sw. Prodr. 41. 1788.

?Rondeletia triflora Vahl, Symb. **3**: 34. 1794.
Oldenlandia longiflora Lam. Encyc. **4**: 534. 1797.
Hedyotis longiflora Spreng. Pug. **2**: 27. 1815.
Hedyotis villosa Sessé & Moc. Fl. Mex. 21. 1893. Not *H. villosa* Wight & Arn. 1834.

Shrub, 3–4 meters high, the branches stout, terete, reddish-brown, rimose, densely pilose when young; stipules sheathing, 5–9 mm. long, thin, erect, brown, the lobes ovate-deltoid, cuspidate, densely pilose-sericeous; leaves opposite, crowded at the ends of the branches, the petioles stout, 2–6 mm. long, densely pilose, the blades elliptic-ovate, oval-elliptic, or narrowly elliptic-oblong, 4–9 cm. long, 0.7–4.5 cm. wide, subcordate to acute at the base, acute to acuminate at the apex, sometimes apiculate, subcoriaceous, green above, appressed-pilose, the venation impressed, beneath paler and densely soft-pilose, the hairs long and appressed along the veins, short and spreading elsewhere, the venation prominent, the lateral veins 4–6 on each side, straight or arcuate, ascending at a very acute angle, the margins plane or recurved; inflorescence axillary, usually 3-flowered, the peduncles 1.5–7 cm. long, densely pilose, the flowers slender-pedicellate; bracts and bractlets linear, 3–12 mm. long; hypanthium densely long-pilose with appressed hairs; calyx-lobes 4, linear, 6–12 mm. long, ascending; corolla densely retrorse-pilose outside with short white hairs, the tube very slender, 14 mm. long, the 4 lobes rounded, 3 mm. long, puberulent within, the throat naked; capsule globose, 4–5 mm. in diameter, densely pilose; seeds angulate, about 1 mm. long, brown, exalate.

TYPE LOCALITY: St. Croix and Montserrat.
DISTRIBUTION: Porto Rico, Virgin Islands, and Montserrat.
ILLUSTRATIONS: Vahl, Symb. *pl. 54;* E. & P. Nat. Pfl. 4[1]: *f. 9, H.*

XIV. **Hypoleucae.** Leaves usually small, coriaceous, and reticulate-veined, whitish-tomentulose beneath, at least when young. Stipules small, erect. Inflorescence axillary, usually 1–3-flowered, the flowers 4-parted; calyx-lobes small; bracts small; corolla of medium size, retrorse-pilose outside, the throat naked. Capsule small, globose. Seeds exalate.

95. **Rondeletia venosa** Griseb. Cat. Pl. Cub. 128. 1866.

Rondeletia savannarum Britton, Bull. Torrey Club **44**: 29. 1917.

Shrub, about 2 meters high, the branches stout, terete, grayish, rimose, finely sericeous when young, the internodes very short; stipules triangular, 2 mm. long, acute or acuminate, rigid, erect, minutely sericeous; leaves opposite, the petioles very stout, 1–3 mm. long, tomentulose, the blades oval, broadly oval, or elliptic-oval, 9–21 mm. long, 6–13 mm. wide, rounded or obtuse at the base, rounded or very obtuse at the apex, sometimes obscurely apiculate, thick-coriaceous, lustrous above, glabrous, the venation impressed, beneath densely and finely grayish-tomentulose, sericeous along the veins, the venation prominent, reticulate, the lateral veins 3 or 4 on each side, arcuate, ascending at an angle of about 45°, the margin revolute or subrevolute; inflorescence axillary, 1–3-flowered, usually 1-flowered, the peduncles stout, 1–2.5 mm. long; bracts and bractlets minute, triangular-subulate; hypanthium densely tomentulose; calyx-lobes 4, very unequal, 2–4 mm. long, linear or lance-linear, acute; corolla-tube stout, 4 mm. long, densely retrorse-pilose, the 4 lobes rounded, half as long as the tube, sericeous outside, glabrate within; capsule globose, 3–4 mm. in diameter, densely tomentulose.

TYPE LOCALITY: Near San Marcos, Bahia Honda, Pinar del Río, Cuba.
DISTRIBUTION: Oriente and Pinar del Río, Cuba.

96. **Rondeletia bicolor** Britton, Bull. Torrey Club **44**: 30. 1917.

Shrub, about 1.7 meters high, the branches slender, densely short-pilose when young, the internodes short; stipules triangular-subulate, about 3 mm. long, short-pubescent; leaves opposite, the petioles stout, 2–4 mm. long, short-pilose, the blades oblong or oblong-oblanceolate, 2–3 cm. long, 0.6–1.2 cm. wide at the base, acute or obtuse at the apex, thick-coriaceous, dark-green above, glabrous, the costa impressed, the lateral veins obsolete, beneath white-tomentulose, the venation prominent, the lateral veins 4 or 5 on each side; inflorescence 1-

flowered, axillary, the peduncles about 3 mm. long, tomentulose; flowers 4-parted; capsule globose, 3 mm. in diameter, grayish-tomentulose.

TYPE LOCALITY: Loma de Ponciano, Sancti Spiritus Mountains, Santa Clara, Cuba.
DISTRIBUTION: Known only from the type locality.

97. **Rondeletia lomensis** Urban, Symb. Ant. 7: 394. 1912.

Shrub, about 2.5 meters high, the branches stout, terete, grayish-brown, rimose, retrorse-pilose when young with short subappressed fulvous hairs; stipules deltoid, 3–3.5 mm. long, acute or acuminate, erect, thick, short-sericeous; leaves opposite, crowded at the ends of the branches, the petioles stout, 3–5 mm. long, minutely sericeous-pilose, the blades oval, ovate-oval, or oblong-oval, 2–4 cm. long, 1.3–2.2 cm. wide, rounded or very obtuse at the base, rounded or very obtuse at the apex, coriaceous, green above, dull, glabrous, or sparsely strigillose along the costa when young, the venation impressed, reticulate, beneath densely whitish-puberulent or in age glabrate, appressed-pilosulous along the veins, the venation prominulous, the lateral veins 3 or 4 on each side, spreading or ascending at an angle of 60° or more, nearly straight, the margins subrevolute; inflorescence axillary, 1–3-flowered, capitate, the peduncles stout, 3–10 mm. long; bractlets deltoid, about 2 mm. long; hypanthium tomentulose; calyx-lobes 4, triangular; corolla white; capsule globose, 3–4 mm. in diameter, yellowish-tomentulose.

TYPE LOCALITY: Dry serpentine hill, Loma Santa Teresa, near El Yunque, Oriente, Cuba.
DISTRIBUTION: Known only from the type locality.

98. **Rondeletia nipensis** Urban, Symb. Ant. 7: 393. 1912.

Shrub, about 1.3 meters high, the branches stout, terete, reddish-brown, lenticellate, densely pilose when young with fulvescent ascending hairs; stipules broadly deltoid, 3.5–5 mm. long, acuminate or cuspidate, thick, erect, sericeous; leaves opposite, the petioles stout, 2–7 mm. long, pilose, the blades oval, ovate-oval, or oval-oblong, 1.5–5.5 cm. long, 1–3 cm. wide, coriaceous, dark-green above, dull, glabrous, or when young sparsely strigillose along the costa, the venation impressed, beneath strigose along the veins, densely whitish-tomentulose when young, in age glabrate, the venation prominent, reticulate, the lateral veins about 4 on each side, ascending at an angle of 50–60°, subarcuate, the margins subrevolute; inflorescence axillary, capitate, usually 3-flowered, the peduncles stout, 4 cm. long or shorter, the flowers sessile; bracts sometimes foliaceous, usually deltoid-acuminate and 3–4 mm. long; hypanthium densely pilose outside; calyx-lobes 4, ovate-deltoid, obtuse, 1.5–2 mm. long; corolla white, the tube densely retrorse-pilose outside with yellowish hairs.

TYPE LOCALITY: In pinelands, Sierra Nipe, near Woodfred, Oriente, Cuba, at an altitude of 500 to 650 meters.
DISTRIBUTION: Sierra Nipe, Oriente, Cuba.

99. **Rondeletia Fuertesii** Urban, Symb. Ant. 7: 396. 1912.

Shrub, the branches stout, terete, grayish, densely and minutely yellowish-sericeous when young; stipules deltoid, about 2 mm. long, acute or acuminate, thick, erect, minutely sericeous; leaves opposite, crowded at the ends of the short branchlets, the petioles stout, 1–2 or rarely 3.5 mm. long, tomentulose, the blades oval or oval-oblong, mostly 7–10 mm. long and 3–6 mm. wide, sometimes 17 mm. long and 9 mm. wide, acute or acutish at the base, rounded or very obtuse at the apex, minutely apiculate, thick-coriaceous, yellowish-green above, densely and minutely appressed-pilose, the nervation obsolete, beneath densely and minutely whitish-sericeous, the veins very thick and prominent, the lateral ones 2–5 on each side, ascending at an angle of 25–30°, the secondary veins reticulate, the margins plane; flowers axillary, solitary, the peduncles stout, 1–2 mm. long; bractlets linear-subulate, 1–2 mm. long; hypanthium densely tomentulose; calyx-lobes 4, linear, subequal, 2.5 mm. long, acute, sericeous; corolla-tube cylindric, ampliate above, 4.5 mm. long, densely retrorse-pilose outside with short whitish hairs, glabrous within, the 4 lobes rounded, half as long as the tube, puberulent outside, glabrous within; anthers included, 1.5 mm. long, the filaments very short; capsule globose, 3.5 mm. in diameter, tomentulose; seeds angulate, about 0.8 mm. long, brown, reticulate, exalate.

TYPE LOCALITY: Along the Duvergé River, Province of Barahona, Santo Domingo, at an altitude of 75 meters.
DISTRIBUTION: Hispaniola.

100. **Rondeletia Rugelii** Urban, Symb. Ant. 7: 397. 1912.

Rondeletia Poitaei microphylla Griseb. Cat. Pl. Cub. 128. 1866.

Shrub, the branches stout, terete, grayish, lenticellate, densely short-pilose when young, the internodes short; stipules triangular-acuminate, 1.5–2 mm. long, erect, tomentulose; leaves opposite, the petioles 1–1.5 mm. long, the blades narrowly obovate or oblong, 5–10 mm. long, 2–4 mm. wide, acute at the base, obtuse or rounded at the apex, sometimes obscurely apiculate, thick-coriaceous, densely and minutely appressed-pilosulous on the upper surface, grayish beneath and tomentulose, the costa subimpressed above or obsolete, the venation beneath prominent and reticulate, the lateral veins 2 or 3 on each side, ascending at an angle of 40–45°, the margins revolute; inflorescence axillary, 1–3-flowered, the peduncles 1–4 mm. long, the flowers sessile; bracts linear-subulate, 1.5–2.5 mm. long; hypanthium tomentose; calyx-lobes 4, linear, 1–1.5 mm. long, obtuse, subequal, as long as the hypanthium; corolla densely retrorse-pilose with short white hairs, the tube cylindric, 5 mm. long, thickened in the throat, the 4 lobes suborbicular, less than one third as long as the tube, glabrate within; anthers included, 1.5 mm. long, the filaments 0.3 mm. long.

TYPE LOCALITY: Near Matanzas, Cuba.
DISTRIBUTION: Known only from the type locality.

101. **Rondeletia hypoleuca** Griseb. Cat. Pl. Cub. 128. 1866.

Shrub, 1–2 meters high, the branches stout, terete, dark-gray, densely short-pilose when young with fulvescent ascending hairs; stipules deltoid, acuminate, about 2 mm. long, erect, thick, minutely sericeous; leaves opposite, mostly crowded at the ends of the branches, the petioles very stout, 1–2 mm. long, tomentulose, the blades broadly oval or suborbicular, 3–10 mm. long, 3–8 mm. wide, rounded at the base, broadly rounded at the apex, usually minutely apiculate, thick-coriaceous, yellowish-green above, densely and minutely appressed-pilose, the venation obsolete, beneath densely fulvescent-tomentulose, sericeous along the veins, the venation very prominent, the lateral veins 2–4 on each side, arcuate, ascending at an acute angle, the secondary veins reticulate, the margins subrevolute; inflorescence axillary, 1-flowered or rarely 3-flowered, the peduncles stout, about 1 mm. long; bractlets deltoid, minute; hypanthium densely tomentulose; calyx-lobes 4, deltoid or ovate, 1–1.5 or rarely 2 mm. long, obtuse, sericeous; corolla-tube cylindric, ampliate above, 5.5 mm. long, densely retrorse-pilose with whitish hairs, the 4 lobes rounded, about one third as long as the tube, sericeous on both surfaces; anthers included, oblong, 1.5 mm. long, the filaments very short; capsule globose, 3 mm. in diameter, tomentulose.

TYPE LOCALITY: Near Baracoa, Oriente, Cuba.
DISTRIBUTION: In rocky places, Oriente, Cuba.

102. **Rondeletia baracoensis** Britton, Bull. Torrey Club 44: 27. 1917.

Branches stout, terete, grayish, densely retrorse-pilosulous when young with grayish hairs; stipules broadly deltoid, about 2 mm. long, acute or cuspidate, erect, thick, strigillose or sericeous; leaves opposite, crowded at the ends of the branches, the petioles stout, 3–5 mm. long, tomentulose, the blades oval, broadly oval, or oval-oblong, 1.5–2.2 cm. long, 0.8–1.4 cm. wide, rounded or obtuse at the base, rounded at the apex, coriaceous, dark-green above, densely and minutely pilosulous when young, glabrate in age, the venation obsolete, beneath densely grayish-tomentulose when young, glabrate in age, the venation prominent, the lateral veins stout, 3–5 on each side, divaricate or widely ascending, the secondary veins prominently reticulate, the margins revolute or subrevolute; inflorescence axillary, subcapitate, usually 3-flowered, the peduncles stout, 3–10 mm. long, the flowers sessile; bracts and bractlets minute, deltoid; hypanthium tomentulose; calyx-lobes 4, ovate-deltoid, 1–1.5 mm. long, obtuse, minutely sericeous; corolla-tube clavate, 5 mm. long, densely retrorse-pilose, the 4 lobes rounded, one third

as long as the tube, sericeous outside, puberulent within; anthers included; capsule globose, densely whitish-tomentulose.

Type locality: Vicinity of Baracoa, Cuba.
Distribution: Known only from the type locality.

103. **Rondeletia insularis** Britton, Bull. Torrey Club 44: 28. 1917.

Shrub, about 2 meters high, the branches stout, terete, grayish-brown, rimose, densely grayish-pilose when young; stipules deltoid, 2–3 mm. long, acute or acuminate, thick, erect, sericeous; leaves opposite, crowded, the petioles stout, about 2 mm. long, sericeous-strigillose, the blades obovate, cuneate-obovate, or oval-oblong, 1.7–3 cm. long, 0.7–1.3 cm. wide, acute to attenuate at the base, rounded or very obtuse at the apex, minutely apiculate, thick-coriaceous, dark-green above, dull, minutely pilosulous when young, glabrate in age, the venation obsolete, beneath brownish, strigose along the veins, grayish-puberulent when young but soon glabrate, the costa slender, prominent, the lateral veins prominulous, 3 or 4 on each side, subarcuate, ascending at an acute angle, the secondary veins prominulous, reticulate, the margins revolute; flowers axillary, solitary, the peduncles stout, 2–3 mm. long; bracts and bractlets minute, deltoid; calyx-lobes ovate-deltoid, 1 mm. long, obtuse, sericeous; capsule globose, 4–5 mm. in diameter, densely tomentulose.

Type locality: Vicinity of Pueblo Romano, Cayo Romano, Camaguey, Cuba.
Distribution: Known only from the type locality.

104. **Rondeletia camarioca** C. Wright; Sauvalle, Anal. Acad. Habana 6: 102. 1869.

Shrub, 1–2 meters high, the branches stout, terete, grayish or brown, lenticellate, appressed-pilose when young with short, ascending, grayish or fulvous hairs; stipules deltoid, 2–3 mm. long, acute or acuminate, thick, erect, sericeous; leaves opposite, crowded at the ends of the branches, the petioles stout, 1–2 mm. long, tomentulose, the blades oval-oblong or oblong, 1–2 cm. long, 0.5–0.8 cm. wide, rounded or obtuse at the base, rounded or very obtuse at the apex, often apiculate, thick-coriaceous, dark-green above, densely and minutely velvety-pilose when young, sometimes glabrate in age and lustrous, the venation obsolete or impressed, beneath densely whitish-tomentulose, the venation prominent, reticulate, the lateral veins 2–4 on each side, subarcuate, ascending at an acute angle, the margins revolute or subrevolute; inflorescence axillary, usually 1-flowered, sometimes 3-flowered, the peduncles stout, 1–3 mm. long; bracts and bractlets minute, deltoid; hypanthium densely tomentulose; calyx-lobes 4, oval or ovate-oval, 1–1.5 mm. long, rounded at the apex, minutely sericeous; corolla brownish, the tube slender, about 5 mm. long, retrorse-pilose outside, the 4 lobes rounded, about one third as long as the tube, sericeous outside, puberulent within; anthers included; capsule globose, 3–5 mm. in diameter, tomentulose; seeds 1.5–2 mm. long, compressed, rugulose, brown, exalate.

Type locality: Savannas of Camarioca, Matanzas, Cuba.
Distribution: Santa Clara and Matanzas, Cuba.

105. **Rondeletia Brauseana** Urban, Symb. Ant. 7: 395. 1912.

Tree, the branches stout, brownish, lenticellate, pilose when young, the internodes 3–5 cm. long; stipules triangular, linear-acuminate, 3–5.5 mm. long, erect, densely short-pubescent; leaves opposite, the petioles 3–7 mm. long, the blades obovate-elliptic, oval-elliptic, or elliptic-oblong, 2–6 cm. long, 0.7–2.5 cm. wide, obtuse or acute at the base, acute or obtuse at the apex, subcoriaceous, sparsely short-pilose above or glabrate, beneath white-tomentulose at first, later sparsely short-pilose, pale beneath, the costa subimpressed above, the lateral veins elevated beneath, 3–5 on each side, ascending at an angle of 20–50°, the secondary veins prominently reticulate; inflorescence axillary, subcapitate, 3–5-flowered, the peduncles 2–5 mm. long, the flowers sessile or subsessile; bracts and bractlets lance-linear or linear, 1.5–4 mm. long; hypanthium densely sericeous; calyx-lobes 4, linear, equal, 2–2.5 mm. long, obtuse, erect; corolla white, retrorsely white-pilosulous outside, the tube cylindric, 5.5 mm. long, glabrous within, thickened in the throat, the 4 lobes ovate, less than half as long as the tube, glabrous

within; anthers included, 1.7 mm. long, the filaments very short; capsule globose, 3 mm. in diameter, short-pilose; seeds angulate or subcompressed, 0.5–0.8 mm. long, exalate, yellowish-brown, lustrous, reticulate.

TYPE LOCALITY: Near Bahoruco, Province of Barahona, Santo Domingo, at an altitude of 100 meters.
DISTRIBUTION: Known only from the type locality.

106. **Rondeletia Berteriana** DC. Prodr. 4: 409. 1830.

Shrub, the branches stout, terete, reddish-brown or grayish, lenticellate, densely grayish- or fulvous-pilose when young; stipules deltoid, 1.5–2.5 mm. long, acute or long-acuminate, thick, erect, sericeous; leaves opposite, crowded at the ends of the branches, the petioles stout, 1–3 mm. long, tomentulose, the blades oval, elliptic-oval, or obovate-oval, 1–2.5 cm. long, 0.7–1 cm. wide, usually acute at the base, sometimes obtuse, rounded to obtuse at the apex, often minutely apiculate, coriaceous, dark-green above, minutely appressed-pilose when young, glabrate in age, the venation impressed, beneath densely grayish- or fulvescent-tomentulose, sometimes glabrate in age, the venation prominent, reticulate, the lateral veins 3 or 4 on each side, arcuate, ascending at an acute angle, the margins plane or subrevolute; inflorescence axillary, usually 3-flowered, the peduncles stout, 1–3 mm. long, the flowers sessile; bracts minute, triangular; hypanthium densely tomentulose; calyx-lobes 4, lance-triangular, acute or acutish, 1–1.5 mm. long, sericeous; corolla-tube slender, ampliate above, 5 mm. long, densely retrorse-pilose outside, the 4 lobes rounded, one third as long as the tube or shorter, sericeous outside, glabrous or nearly so within; anthers included, 1.3 mm. long; capsule globose, 3–3.5 mm. in diameter, tomentulose; seeds compressed, about 1.5 mm. long, reticulate, brown, exalate.

TYPE LOCALITY: Santo Domingo.
DISTRIBUTION: Santo Domingo.

107. **Rondeletia Combsii** Greenman; Combs, Trans. Acad. St. Louis 7: 427. 1897.

Shrub or small tree, 2.5–5 meters high, the branches stout, terete, reddish-brown or grayish, lenticellate, densely appressed-pilose when young with short yellowish hairs; stipules deltoid-acuminate, 2–4 mm. long, thick, erect, sericeous; leaves opposite, the petioles stout, 2–3 mm. long, tomentulose, the blades oblong, elliptic-oblong, or obovate-oblong, usually 1.5–5 cm. long and 0.5–1.1 cm. wide, acute at the base, acute or obtuse at the apex, thick-coriaceous, densely and minutely velvety-pilose above, the venation impressed, beneath densely and finely grayish-tomentulose, the venation prominent, reticulate, the lateral veins ascending at an acute angle, the margins revolute; inflorescence axillary, usually 3-flowered, the peduncles stout, 2–5 mm. long, the flowers sessile; bracts minute, deltoid; hypanthium densely tomentulose; calyx-lobes 4, narrowly triangular or oblong, 1–2 mm. long, acute; corolla-tube 5 mm. long, densely retrorse-pilose outside, the 4 lobes rounded, about one third as long as the tube; anthers included; capsule globose, about 4 mm. in diameter, tomentulose.

TYPE LOCALITY: Calicita, Santa Clara, Cuba.
DISTRIBUTION: Rocky shores and hillsides, Santa Clara and Havana, Cuba.
ILLUSTRATION: Trans. Acad. St. Louis 7: *pl. 34.*

XV. **Correifoliae.** Leaves large, coriaceous, sparsely sericeous. Stipules small, erect. Inflorescence axillary, cymose, few-flowered, the flowers 5–6-parted; calyx-lobes large; corolla very large, retrorse-pilose outside, the throat naked. Capsule very large, pyriform. Seeds appendaged at each end.

108. **Rondeletia correifolia** Griseb. Cat. Pl. Cub. 129. 1866.

Shrub, 2.5 meters high or less, the branches very stout, terete or subangulate, grayish-brown, densely and very minutely hirtellous or scaberulo-sericeous when young with grayish hairs, the internodes mostly shorter than the leaves; stipules 5–6 mm. long, the base rounded-

deltoid, cuspidate, erect, rigid, brown, minutely sericeous outside; leaves opposite, sessile or nearly so, the broad flat petioles sometimes 4 mm. long, the blades oval or oblong-oval, 4.5–8 cm. long, 2.5–5.2 cm. wide, subcordate at the base, rounded or obtuse at the apex, sometimes apiculate, rigid-coriaceous, deep-green above, glabrous, beneath brown, minutely sericeous beneath along the veins, elsewhere sparsely puberulent or glabrous, the venation plane or subimpressed above, the costa prominent beneath, the lateral veins prominulous, slender, about 6 on each side, straight or subarcuate, ascending at an angle of 45° or more; inflorescence axillary, cymose, few-flowered, the peduncles stout, about as long as the leaves, the pedicels very stout, 1.5 cm. long; bracts verticillate, resembling the leaves but smaller, the bractlets linear, 5 mm. long or shorter; hypanthium densely and minutely grayish- or fulvous-pilose outside; calyx-lobes 5, triangular-oblong, 4–7 mm. long, acute or subobtuse, sericeous inside, erect, often with small intermediate lobes; corolla white, very densely retrorse-pilose outside, with white or fulvous hairs, the tube cylindric, 12 mm. long, 2.5–3 mm. thick, the throat ampliate, 5–7 mm. long, the lobes 5 or 6, obovate-orbicular, about 7 mm. long, tomentulose within, the throat naked; anthers included, subsessile, 3 mm. long, inserted at the base of the throat; capsule pyriform, 12–15 mm. long, acute at the base, truncate at the apex, densely short-pilose; seeds numerous, irregular, angulate or compressed, 1–2 mm. long, appendaged at each end, brown, punctulate.

TYPE LOCALITY: Western Cuba.
DISTRIBUTION: Pinelands and savannas, Pinar del Río, Cuba, and the Isle of Pines.

109. **Rondeletia** (?) **camagueyensis** Britton, Bull. Torrey Club **44**: 30. 1917.

Shrub, about 3 meters high, the branchlets densely strigillose when young, the internodes short; stipules triangular, acute, about 3 mm. long; leaves opposite, the petioles stout, strigillose, 2–3 mm. long, the blades ovate-oval or elliptic-oval, 3–4 cm. long, 1.5–3 cm. wide, chartaceous, rounded to acutish at the base, obtuse or acutish at the apex, green above, scaberulous, the venation impressed, paler beneath, puberulent, short-pilose along the veins, the venation prominent, the lateral veins about 7 on each side; capsule subglobose, 4–6 mm. in diameter, dark-brown, coarsely lenticellate.

TYPE LOCALITY: Arroyo, savanna near Camaguey, Cuba.
DISTRIBUTION: Known only from the type locality.
This species is evidently distinct, but with the incomplete material available it is impossible to place it definitely.

DOUBTFUL OR EXCLUDED SPECIES

RONDELETIA LAEVIGATA Ait. Hort. Kew. ed. 2. **1**: 366. 1810. Reported from Cuba by De Candolle. The species is known definitely only from Trinidad.

RONDELETIA LEPTACANTHA DC. Prodr. **4**: 410. 1830. Described from Cuba. Evidently not of this genus.

RONDELETIA MICRODON DC. Prodr. **4**: 408. 1830. Described from Cuba. Scarcely of this genus.

RONDELETIA NICARAGUENSIS Oerst. Vidensk. Meddel. **1852**: 43. 1852. Described from Nicaragua and reported from Panama. The identity of the plant is very doubtful; said to have axillary inflorescence.

RONDELETIA PARVIFLORA Poir. in Lam. Encyc. **6**: 252. 1804. Described from Martinique. Of the group *Laurifoliae*.

RONDELETIA ROEZLII (Planch.) Hemsl. Biol. Centr. Am. Bot. **2**: 23. 1881. (*Rogiera Roezlii* Planch. Fl. Serres **5**: 442. 1849; *Rogiera elegans* Planch. Fl. Serres **5**: 442. 1849). Described from cultivated specimens of Guatemalan origin. Not identifiable from the description, but very probably a synonym of *R. amoena*.

RONDELETIA ROYENAEFOLIA DC. Prodr. **4**: 410. 1830. Described from Santo Domingo. Perhaps the same as *R. Berteriana* DC.

RONDELETIA SPINOSA K. Schumann, Bull. Herb. Boiss. **3**: 620. 1895. Described from Hidalgo. No species of *Rondeletia* with spine-armed branches is known. Possibly a *Randia*.

New York Botanical Garden Library
3 5185 00275 8371