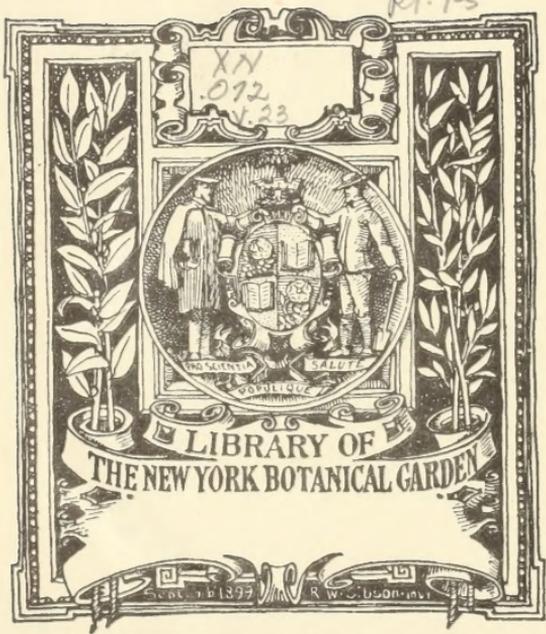
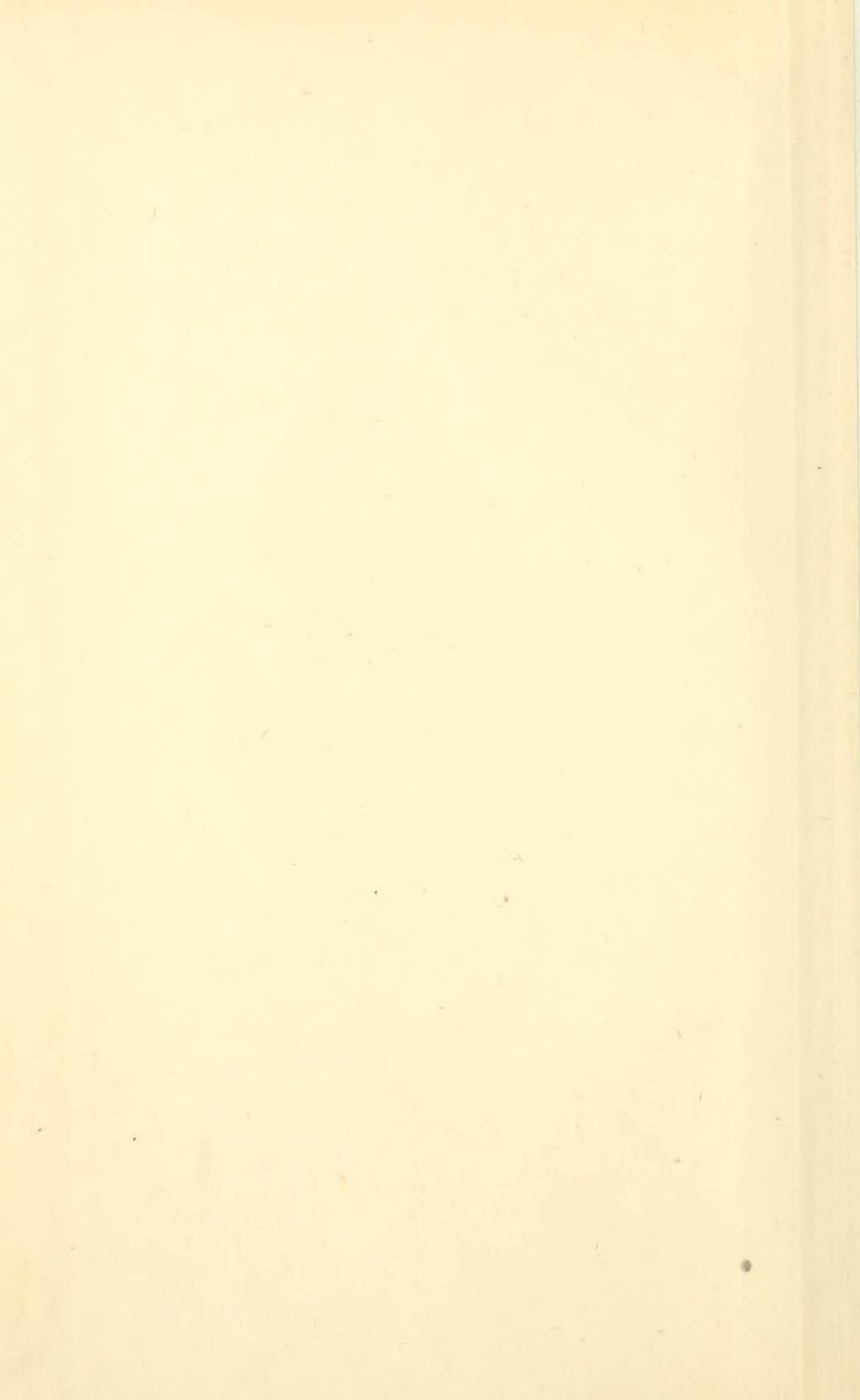


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VOLUME 23

PART I

NORTH AMERICAN FLORA

(ROSALES)

MIMOSACEAE

NATHANIEL LORD BRITTON AND JOSEPH NELSON ROSE



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ANNOUNCEMENT

NORTH AMERICAN FLORA is designed to present in one work descriptions of all plants growing, independent of cultivation, in North America, here taken to include Greenland, Central America, the Republic of Panama, and the West Indies, except Trinidad, Tobago, and Curaçao and other islands off the north coast of Venezuela, whose flora is essentially South American.

The work will be published in parts at irregular intervals, by the New York Botanical Garden, through the aid of the income of the David Lydig Fund bequeathed by Charles P. Daly.

It is planned to issue parts as rapidly as they can be prepared, the extent of the work making it possible to commence publication at any number of points. The completed work will form a series of volumes with the following sequence:

- Volume 1. Myxomycetes, Schizophyta.
- Volumes 2 to 10. Fungi.
- Volumes 11 to 13. Algae.
- Volumes 14 and 15. Bryophyta.
- Volume 16. Pteridophyta and Gymnospermae.
- Volumes 17 to 19. Monocotyledones
- Volumes 20 to 34. Dicotyledones.

The preparation of the work has been referred by the Scientific Directors of the Garden to a committee consisting of Dr. N. L. Britton, Dr. M. A. Howe, and Dr. J. H. Barnhart.

Professor John M. Coulter, of the University of Chicago; Mr. Frederick V. Coville, of the United States Department of Agriculture; and Professor William Trelease, of the University of Illinois, have consented to act as an advisory committee.

Each author will be wholly responsible for his own contributions, being restricted only by the general style adopted for the work, which must vary somewhat in the treatment of diverse groups.

The subscription price is fixed at \$1.50 for each part; it is expected that four or more parts will be required for each volume. A limited number of separate parts will be sold at \$2.00 each. Address:

**THE NEW YORK BOTANICAL GARDEN
BRONX PARK
NEW YORK CITY**

Family 21. **MIMOSACEAE**

BY NATHANIEL LORD BRITTON AND JOSEPH NELSON ROSE

Herbs, shrubs or trees, with alternate compound leaves, and mostly small, regular, perfect or rarely imperfect flowers in heads, umbels, spikes or racemes. Calyx 3-6-toothed, or 3-6-lobed, the teeth or lobes valvate, rarely imbricate, in the bud. Corolla of 3-6 distinct or partly united petals, these also mostly valvate. Stamens few or many, distinct, or the filaments more or less united; anthers small. Ovary 1-celled; style simple. Fruit a legume, dehiscent or indehiscent, chartaceous, coriaceous or woody. Seeds with or without endosperm; cotyledons fleshy.

Calyx-lobes valvate.

Filaments more or less united into a tube; stamens many.

Filaments distinct, or united only at the base.

Stamens many, more than 10.

Stamens 10 or fewer.

Anthers (with rare exceptions) without glands.

Anthers tipped by glands.

Seeds with endosperm.

Seeds (with rare exceptions) without endosperm.

Calyx-lobes imbricated.

I. INGEAE.

II. ACACIEAE. ^{p84}

III. MIMOSEAE. ¹²⁰

IV. ADENANTHEREAE. ¹⁸⁰

V. PIPTADENIEAE. ¹⁸⁰

VI. PARKIEAE. ¹⁷²

I. INGEAE. Stamens many, the filaments united below into a tube or sheath. Calyx-lobes valvate.

A. Leaves once pinnate; unarmed trees.

1. INGA.

B. Leaves bipinnate. [See *Cajoba*.]

1. Margins of the legume-valves not separating.

a. Legume not elastically dehiscent from the apex.

Legume woody, fleshy or coriaceous.

Legume circinnate, flat, fleshy, broad, indehiscent; unarmed trees.

Legume straight, curved or coiled.

Legume coiled or curved, its valves (as far as known) twisting after dehiscence.

Seeds (as far as known) with a fleshy aril; stipules spinescent; leaflets mostly few.

Seeds (as far as known) without a fleshy aril; unarmed trees.

Legume compressed or flattened.

Leaflets obovate, oval, oblong or linear, numerous.

Leaflets elliptic to ovate-lanceolate, few, large; flowers long-racemose; corolla deeply lobed.

Legume subterete, mostly moniliform; leaves 1-pinnate or 2-pinnate.

Legume-valves not twisting after dehiscence, or legume indehiscent.

Inflorescence axillary.

Legume woody; trees or shrubs with stipular spines.

Legume coriaceous or fleshy.

Legume fleshy, indehiscent; unarmed trees.

Trees or shrubs armed with stipular spines.

Legume coriaceous, dehiscent; stipular spines small.

Legume fleshy, indehiscent or tardily dehiscent; spines long, subulate or often wanting on the twigs.

Inflorescence lateral; legume flattened; leaflets few, large; unarmed trees or shrubs.

Legume thin or papery.

Trees or shrubs armed with stipular spines; legume promptly dehiscent.

Unarmed trees; legume dehiscent or indehiscent.

Legume longitudinally dehiscent, or indehiscent.

Legume indehiscent, at length breaking transversely.

b. Legume elastically dehiscent from the apex, compressed, narrowed to the base.

2. Margins of the thin flat legume-valves separating.

2. ENTEROLOBIUM.

3. PITHECELLOBIUM.

4. JUPUNBA.

5. PUNJUBA.

6. COJOBA.

7. EBENOPSIS.

8. SAMANEA.

9. PAINTERIA.

10. CHLOROLEUCON.

11. ZYGIA.

12. HAVARDIA.

13. ALBIZZIA.

14. PSEUDALBIZZIA.

15. ANNESLIA.

16. LYSILOMA.

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1. *INGA* Scop. Introd. 289. 1777.

Unarmed shrubs or trees. Leaves once-pinnate, usually large, the petiole and rachis often winged. Stipules mostly small. Flowers capitate, umbellate, racemose, or spicate. Stamens numerous, united below into a sheath. Legume flattened, subterete or 4-angled, indehiscent, more or less pulpy, the pulp often edible.

Type species, *Mimosa Inga* L.

A. Rachis of the leaf wingless.

1. Flowers in spikes or racemes.

a. Flowers in spikes.

Spikes elongated.

Calyx and corolla glabrous or nearly so.

Calyx and corolla pubescent.

Calyx woolly-pubescent.

Calyx appressed-pubescent.

Calyx striate; leaflets obtuse.

Calyx not striate; leaflets long-acuminate.

Spikes short.

Leaflets 1-3 pairs.

Leaflets not acuminate.

Leaflets acuminate.

Legume 4 cm. broad.

Legume 2.5 cm. broad or less.

Leaflets mostly 2 pairs; legume impressed between the seeds.

Leaflets 3 pairs.

Bractlets small.

Bractlets 3-7 mm. long.

Leaflets several or many pairs.

Legume flat, nearly glabrous.

Corolla 25 mm. long, long-pubescent.

Corolla 8 mm. long, short-pubescent.

Legume nearly terete, sulcate on the sides, densely pubescent.

b. Flowers in racemes.

2. Flowers in heads or umbels.

Flowers sessile.

Leaflets acute; calyx 2 mm. long.

Leaflets obtuse; calyx 3 mm. long.

Flowers pedicelled.

Inflorescence borne on the old wood; legume long-pilose.

Inflorescence in the axils of the leaves.

Stipules large, persistent.

Corolla 3 cm. long; bractlets large, striate.

Corolla 4-7.5 mm. long; bractlets small, not striate.

Legume 12 cm. long or less.

Legume up to 40 cm. long.

Stipules small, caducous or early deciduous.

Leaflets narrow, lanceolate to ovate.

Leaflets broad, obovate to oblong.

B. Rachis of leaf usually broadly winged, sometimes only narrowly, or only winged above.

1. Pedicels filiform, 8-10 mm. long.

2. Pedicels short or wanting.

a. Flowers in heads, umbels or spikes.

Legume strongly flattened (unknown in no. 29).

Legume glabrous.

Legume large and thick.

Legume thin.

Flowers small, in spikes.

Spikes loosely flowered.

Spikes densely flowered.

Flowers very large, in heads.

Legume pubescent, often densely so.

Legume less than three times as long as broad.

Legume densely pubescent; glands stipitate.

Legume glabrate in age; glands sessile.

Leaflets nearly glabrous beneath, broader than in the next species.

Leaflets very pubescent beneath; flowers larger than in the preceding species.

Legume elongated.

Glands sessile or subsessile.

Calyx densely pubescent.

Calyx glabrous or soon glabrate.

1. *I. laurina*.

2. *I. Standleyana*.

3. *I. aestuariorum*.

4. *I. Recordii*.

5. *I. pinetorum*.

6. *I. latipes*.

7. *I. punctata*.

8. *I. leptoloba*.

9. *I. Endlichii*.

10. *I. multijuga*.

11. *I. confusa*.

12. *I. cocleensis*.

13. *I. brevipedicellata*.

14. *I. Jinicuil*.

15. *I. membranacea*.

16. *I. Saffordiana*.

17. *I. Biolleyana*.

18. *I. Paterno*.

19. *I. radians*.

20. *I. Williamsii*.

21. *I. Roussoviana*.

22. *I. gracilipes*.

23. *I. spectabilis*.

24. *I. marginata*.

25. *I. martinicensis*.

26. *I. portobellensis*.

27. *I. Calderoni*.

28. *I. monticola*.

29. *I. mollifoliola*.

30. *I. Goldmanii*.

- Bractlets minute. 31. *I. Hayesii*.
 Bractlets large, spreading. 32. *I. mucuna*.
 Glands stipitate. 33. *I. Tonduzii*.
 Legume thick, often angled, sometimes 4-winged.
 Legume with 4 sharp angles or wings.
 Legume when mature glabrous or glabrate.
 Legume much thinner than that of the following species. 34. *I. Purpusii*.
 Legume thick.
 Both ventral and dorsal side of the legume angled
 between the wings.
 Legume 10-30 cm. long; foliage glabrate. 35. *I. Jimeneziana*.
 Legume about 18 cm. long; foliage densely pubes-
 cent. 36. *I. Rensoni*.
 Sides of the legume not angled, at least not both sides.
 Rachis of leaf with a very narrow wing.
 Corolla 20-24 mm. long. 37. *I. Pittieri*.
 Corolla 13-15 mm. long. 38. *I. panamensis*.
 Rachis of leaf strongly winged.
 Glands sessile; corolla 2 cm. long; Salvador
 species. 39. *I. Preussii*.
 Glands subsessile; corolla 2.5-3 cm. long;
 Guatemala species. 40. *I. Rodrigueziana*.
 Legume velvety-pubescent. 41. *I. salvadorensis*.
 Legume (as far as known) not strongly angled.
 Calyx as long as the corolla. 42. *I. fissicalyx*.
 Calyx shorter than the corolla.
 Calyx striate.
 Corolla slightly pubescent; leaflets glabrate above. 43. *I. Schiedeana*.
 Corolla densely silky; leaflets softly pubescent above. 44. *I. pauciflora*.
 Calyx not striate.
 Flowers large; calyx mostly 9-21 mm. long.
 Calyx not much shorter than the corolla. 45. *I. Donnell-Smithii*.
 Calyx one-half to two-thirds as long as the corolla.
 Bractlets small, 7 mm. long or less.
 Corolla broad.
 Leaflets acuminate. 46. *I. eriocarpa*.
 Leaflets mostly obtuse, mucronate. 47. *I. oophylla*.
 Corolla narrow.
 Legume 1.5 dm. long or shorter; calyx
 10-15 mm. long. 48. *I. Inga*.
 Legume 3 dm. long or longer; calyx 5-8
 mm long. 49. *I. edulis*.
 Bractlets large, 9-10 mm. long.
 Bractlets as long as the calyx. 50. *I. xalapensis*.
 Bractlets longer than the calyx. 51. *I. latibracteata*.
 Flowers small; calyx 4-7 mm. long.
 Calyx one-half as long as corolla.
 Leaflets glabrate above. 52. *I. Micheliiana*.
 Leaflets velvety above.
 Leaflets 4 cm. broad. 53. *I. cobanensis*.
 Leaflets 6-10 cm. broad. 54. *I. eriorhachis*.
 Calyx one-fourth as long as corolla. 55. *I. Oerstediana*.
 b. Flowers in racemes.
 Peduncle elongated; leaflets pointed.
 Branches with spreading hairs. 56. *I. Cookii*.
 Branches with appressed pubescence.
 Calyx 5-6 mm. long. 57. *I. ingoides*.
 Calyx 14-15 mm. long. 58. *I. spuria*.
 Peduncle short; leaflets obtuse. 59. *I. dominicensis*.

C. Species not grouped.

60. *I. Lindeniana*.
 61. *I. Sciadodendron*.

1. *Inga laurina* (Sw.) Willd. Sp. Pl. 4: 1018. 1806.

Mimosa laurina Sw. Prodr. 85. 1788.

Feuillea laurina Kuntze, Rev. Gen. Pl. 184. 1891.

A tree 7.5-15 m. high, glabrous throughout. Rachis of leaf wingless, bearing cup-shaped glands between each pair of leaflets; leaflets 1 to 3 pairs, obovate to lanceolate, cuneate at base, rounded or acuminate at apex, obtuse, 4-14 cm. long; spikes axillary, slender, 4-15 cm. long; calyx 2-3 mm. long; corolla 5 mm. long, white; stamens long-exserted, the slender tube 8 mm. long; legume flat, 5-15 cm. long, 2-3.5 cm. broad.

TYPE LOCALITY: St. Kitts, West Indies.

DISTRIBUTION: Jalisco to Panama; Hispaniola to Virgin Islands, Barbados, Grenada and Trinidad.

ILLUSTRATION: Jacquin, Stirp. Am. pl. 164 (as *Inga fagifolia*).

2. *Inga Standleyana* Pittier, Contr. U. S. Nat. Herb. 18: 204. 1916.

A low tree, the twigs densely brownish-hairy. Rachis of the leaf wingless, brownish-pubescent, bearing cup-shaped glands between the pairs of leaflets; leaflets 4 pairs, ovate to obovate, rounded at base, obtuse or sometimes short-acuminate and acute, in age glabrate and shining above, strongly nerved and densely pubescent beneath, 5-13 cm. long; spikes solitary, or in 2's or 3's, 2.5-5 cm. long, on pubescent peduncles 2-4 cm. long; calyx 5 mm. long, tomentose; corolla 2 cm. long, tomentose; stamens 5-6 cm. long, pink, the tube about as long as the corolla; legume flat, densely brownish-hairy.

TYPE LOCALITY: Near La Palma, southern Panama.

DISTRIBUTION: Known only from the type locality.

3. *Inga aestuariorum* Pittier, Contr. U. S. Nat. Herb.
18: 183. 1916.

A small tree, much branched, the twigs brownish-pubescent. Rachis of the leaf wingless, bearing cup-shaped glands between the leaflets; leaflets 5 or 6 pairs, elliptic to oblong, rounded at base, obtuse, mucronate, puberulent above, pubescent beneath, especially on the prominent nerves, the lowest pair 3 cm. long, the terminal pair 6-12 cm. long; spikes axillary, solitary or in pairs, 3-5 cm. long; peduncles 4-5 cm. long; calyx tubular, striate, pubescent, 7 mm. long; corolla tubular, 18 mm. long or longer, silky-villous, white; stamens pink, the tube about as long as the corolla; legume sessile, rounded at apex, apiculate, 14-20 cm. long, 1.7 cm. broad, very flat, pubescent when young, the valves glabrate in age but the margin reddish-pubescent; seeds about 10, covered with a white sweet pulp.

TYPE LOCALITY: On the Boca Zacate, Diquis Delta, Costa Rica.

DISTRIBUTION: Western coast of Costa Rica.

ILLUSTRATION: Pittier, loc. cit. *pl.* 89.

4. *Inga Recordii* Britton & Rose; Standley, Tropical Woods
7: 5. 1926.

A medium-sized tree, the twigs puberulent. Stipules wanting; petiole 1-2 cm. long, terete; rachis of leaf wingless, pubescent, bearing large cup-shaped glands between the leaflets; leaflets 5 or 6 pairs, lanceolate, long-acuminate, 5-13 cm. long, shining and somewhat pubescent above, pale and appressed-pubescent beneath; spikes 2-4 cm. long, axillary or in terminal panicles; peduncles 1-2 cm. long; bractlets minute; calyx 4-5 mm. long, appressed-pubescent; corolla slender, 18 mm. long, silky-pubescent; stamens 3 cm. long, the sheath included; ovary terete, densely lanate.

TYPE LOCALITY: Stann Creek District, British Honduras.

DISTRIBUTION: Honduras and eastern Guatemala.

5. *Inga pinetorum* Pittier, Contr. U. S. Nat. Herb. 18: 185. 1916.

A tree, the twigs densely brownish-hairy. Stipules ovate, acuminate; rachis of leaf wingless, densely pubescent, bearing small stipitate glands between the leaflets; leaflets 2 pairs, 2.5-3.5 cm. long, obovate, cuneate at base, obtuse or acute, sparsely hairy above, pilose beneath, especially on the veins; inflorescence axillary; peduncles 5-6.5 cm. long, pubescent; spikes about 3 cm. long; calyx 6.5-7 mm. long, slightly hairy; corolla 11-12 mm. long, silky-villous.

TYPE LOCALITY: Pine ridge near Manatee Lagoon, British Honduras.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: Pittier, loc. cit. *pl.* 90.

6. *Inga latipes* Pittier, Contr. U. S. Nat. Herb. 18: 183. 1916.

A tree with angled glabrous twigs. Rachis of leaf wingless, bearing large sessile glands between the leaflets; leaflets 3 pairs, glabrate, shining above, ovate-elliptic, often acuminate,

3.5–12 cm. long; inflorescence a short spike; legume 9–31 cm. long, 4 cm. broad, very flat, glabrous, short-stipitate, the valves elevated by the prominent seeds.

TYPE LOCALITY: Las Vueltas de Tucurrique, Costa Rica.

DISTRIBUTION: Known only from the type locality.

7. *Inga punctata* Willd. Sp. Pl. 4: 1016. 1806.

Inga punctata panamensis Benth. Trans. Linn. Soc. 30: 613. 1875.

Feuilleea punctata Kuntze, Rev. Gen. Pl. 188. 1891.

A small tree, 7–8 m. high, with pubescent twigs. Rachis of leaf wingless, bearing small glands between the leaflets; leaflets 2 pairs, broadly ovate to oblong, acuminate, rounded at base, appressed-pubescent on both sides, very pale beneath, 5–21 cm. long; inflorescence more or less paniculate; peduncles 1–5 cm. long; spikes about 1 cm. long; calyx 3–4 mm. long, appressed-pubescent; corolla 5 mm. long, pubescent; legume 10–12 cm. long, 2.5 cm. broad, somewhat hairy, impressed between the seeds.

TYPE LOCALITY: Caracas, Venezuela.

DISTRIBUTION: Guatemala to Panama and Venezuela; Tobago.

8. *Inga leptoloba* Schl. Linnaea 12: 560. 1838.

Feuilleea leptoloba Kuntze, Rev. Gen. Pl. 188. 1891.

A shrub or small tree, 2–3 m. high, more or less pubescent throughout. Rachis of leaf wingless, bearing a cup-shaped gland between each pair of leaflets; leaflets 2 or 3 pairs, lanceolate, acute, cuneate at base, 8–21 cm. long, when young appressed-pubescent on both sides, in age glabrate above, more or less shining; spikes short, often head-like, axillary, often in fascicles, sometimes in short panicles with peduncles 2–3 cm. long; calyx 4 mm. long, brownish appressed-pubescent; corolla 8 mm. long, silky-pubescent; stamen-tube much longer than the corolla; legume 15 cm. long or less, 16–25 mm. broad, puberulent, short-stipitate.

TYPE LOCALITY: Hacienda de la Laguna, Veracruz.

DISTRIBUTION: Veracruz to Panama.

9. *Inga Endlichii* Harms, Repert. 19: 63. 1923.

A tree, the twigs angled, velvety-pubescent. Rachis of leaf wingless, bearing large cup-shaped glands between the leaflets; leaflets 3 pairs, oblong to ovate, rounded at base, short-acuminate, puberulent or glabrate above, villous beneath, 5–15 cm. long; peduncles 1 to 3 in axils of leaves, 3–5 cm. long; flowers in spikes, subtended by bractlets 3–7 mm. long; calyx 5–7 mm. long, striate, villous; corolla 10–12 mm. long, densely appressed-villous.

TYPE LOCALITY: Jalapa, Veracruz.

DISTRIBUTION: Known only from the type locality, and to us only from the description.

10. *Inga multijuga* Benth. Trans. Linn. Soc. 30: 615. 1875.

Feuilleea multijuga Kuntze, Rev. Gen. Pl. 188. 1891.

A tree, 3–13 m. high, the young branches brownish-tomentose. Rachis of leaf wingless, 2–3 dm. long, pubescent, with large cup-shaped glands between each pair of leaflets; leaflets 5 to 10 pairs, oblong to lanceolate, 4–15 cm. long, acute, or sometimes long-acuminate, glabrate and shining above, reticulate, pale and pubescent beneath; peduncles axillary, sometimes in pairs, 2–3 cm. long, pubescent; spikes 1.5 cm. long or less; calyx 7–8 mm. long, striate, pubescent; corolla about 25 mm. long, appressed-villous; stamen-sheath shorter than the corolla.

TYPE LOCALITY: Panama.

DISTRIBUTION: Panama and Guatemala.

11. *Inga confusa* Britton & Rose, sp. nov.

A shrub or small tree, the young branches densely brownish-pubescent. Rachis wingless, pubescent, bearing large sessile glands between the leaflets; leaflets 5 or 6 pairs, rarely 4 pairs,

oblong, 8–20 cm. long, rounded at base, short-acuminate, pubescent on both sides when young, glabrate above in age, more or less permanently pubescent beneath, especially on the prominent veins; peduncles axillary, often in clusters, 1–3 cm. long, pubescent; spikes short, dense; calyx 4 mm. long, puberulent; corolla 7–8 mm. long, pubescent; stamens 12 mm. long, the tube about as long as the corolla; legume flat, somewhat curved, 10–12 cm. long, 2–2.5 cm. broad, rounded at base and apex, mucronate, somewhat pubescent, especially on the elevated margins.

Panama and Costa Rica. Type collected along the Sambu River, southern Panama, February, 1912, *Pittier 5533*.

12. *Inga cocleensis* Pittier, Contr. U. S. Nat. Herb.

18: 211. 1916.

A tree, the twigs velvety-pubescent. Rachis of leaf wingless, bearing large sessile glands between the leaflets; leaflets 6 pairs, lanceolate, acuminate, 4–13 cm. long, strigose above, densely pubescent and reticulated beneath; peduncles axillary, 4–5 cm. long, brownish-pubescent; spike 4 cm. long; calyx 6–7 mm. long, brownish-pubescent; young legume densely short-pubescent.

TYPE LOCALITY: Bismarck, Panama.

DISTRIBUTION: Known only from the type locality.

13. *Inga brevipedicellata* Harms, Repert. 19: 62. 1923.

A tree, the twigs glabrous or nearly so. Rachis of leaf wingless, with or without small sessile glands between the leaflets; leaflets 3 or 4 pairs, oblong, somewhat hairy when young but soon glabrate, broadly cuneate at base, abruptly acuminate, 5–15 cm. long, the lateral veins prominent; peduncles 1 to 3 in axils of leaves, 3–4 cm. long; racemes 2–3 cm. long; pedicels 2 mm. long, hairy; calyx 3 mm. long, puberulent; corolla 5–6 mm. long, appressed-pilose; legume flat, 23 cm. long, 3.5 cm. broad, glabrous.

TYPE LOCALITY: Mirador, Veracruz.

DISTRIBUTION: Veracruz.

14. *Inga Jinicuil* Schl. *Linnaea* 12: 559. 1838.

Feuillea Jinicuil Kuntze, Rev. Gen. Pl. 188. 1891.

Usually a large tree, glabrous throughout. Rachis of leaf wingless; leaflets 3 pairs, lanceolate, 8–11 cm. long, acute, shining; peduncles axillary, sometimes in fascicles, 2–4 cm. long, puberulent, bearing a small bract near the top; flowers in dense heads; calyx 2 mm. long, glabrous; corolla 6 mm. long, glabrous, white; legume glabrous, 6–10-seeded, flat, oblong, about 2.5 cm. wide.

TYPE LOCALITY: Jalapa, Veracruz.

DISTRIBUTION: Veracruz. Reported by Bentham from Guatemala.

15. *Inga membranacea* Benth. Trans. Linn. Soc. 30: 606. 1875.

Feuillea membranacea Kuntze, Rev. Gen. Pl. 188. 1891.

A shrub or tree, the young twigs puberulent. Rachis of the leaf wingless, with small glands between the leaflets; leaflets 2 or 3 pairs, oval-elliptic, acuminate, obtuse, 3.5–7.5 cm. long, membranous, shining; peduncles axillary, 2.5–3.5 cm. long; flowers capitate; calyx 3 mm. long, glabrous; corolla 6 mm. long, glabrous.

TYPE LOCALITY: Veragua, Panama.

DISTRIBUTION: Known only from the type locality.

16. *Inga Saffordiana* Pittier, Contr. U. S. Nat. Herb.

18: 176. 1916.

A small slender tree, the twigs long-hairy. Rachis of leaf wingless, long-pilose, bearing long-stipitate glands between the pairs of leaflets; leaflets 4 or 5 pairs, lanceolate, rounded at base, acuminate or acute, glabrous except on the veins beneath, the lowest pair 3.5–5.5 cm. long, the terminal pair often 14 cm. long; inflorescence axillary, often borne on the old wood; peduncles very slender, 3–12 cm. long, long-pilose; inflorescence umbellate; pedicels 1.5–2 cm. long; legume 15–32 cm. long, 2.5–3 cm. broad, cuneate at base, mucronate, thickly covered with long brown hairs.

TYPE LOCALITY: Cerro Garagara, Darién, Panama.
DISTRIBUTION: Known only from the type locality.

17. *Inga Biolleyana* Pittier, Contr. U. S. Nat. Herb.

18: 207. 1916.

A tree, the twigs angled and brownish-pubescent. Stipules broadly ovate, acute, 7–9 mm. long, persistent; rachis of leaf wingless, with stipitate glands between the leaflets; leaflets 2 or 3 pairs, ovate-elliptic, acute, becoming glabrate and shining above, reticulated and hairy beneath; heads on peduncles 1–1.5 cm. long, few-flowered; bractlets linear-lanceolate, acute, striate, pubescent, 9–12 mm. long; calyx 10–12 mm. long, appressed-pubescent; corolla about 3 cm. long, silky-villous; staminal tube long-exserted.

TYPE LOCALITY: Turrialba, Costa Rica.
DISTRIBUTION: Known only from the type locality.

18. *Inga Paterno* Harms, Repert. 13: 419. 1914.

A tree up to 8 m. high, glabrous or nearly so throughout. Stipules 15 mm. long, persistent; rachis bearing sessile glands between the leaflets; leaflets 4 or 5 pairs, lanceolate, 4–20 cm. long, acuminate or acute; peduncles axillary, often in clusters, 3–8 cm. long; flowers densely capitate; pedicels 1–2 mm. long; calyx 1–2 mm. long; corolla 5–7.5 mm. long; stamen-tube not as long as the corolla; legume flat and thin, 9–12 cm. long, 4–5 cm. broad, with a short winged stipe, rounded at apex, or sometimes with a tip 3.5 cm. long, glabrous; seeds 2 or 3, large, the surrounding pulp edible.

TYPE LOCALITY: Guadalupe near San Salvador, El Salvador.
DISTRIBUTION: Oaxaca to Guatemala and Costa Rica. Often planted for coffee shade.

19. *Inga radians* Pittier, Contr. U. S. Nat. Herb. 18: 178. 1916.

A tree, the twigs angled, puberulent. Stipules obovate, 1.5 cm. long, persistent; petiole often bearing a gland near the middle; rachis bearing stipitate glands between the leaflets; leaflets 3 or 4 pairs, elliptic to ovate, the lowest pairs 7–12 cm. long, the terminal pair up to 18 cm. long, often rounded at base, long-acuminate, glabrous, very pale beneath; peduncles axillary, often in fascicles, 6–12 cm. long, puberulent; flowers densely capitate, on pedicels 2 mm. long; calyx 2 mm. long or longer, puberulent; corolla funnellform, 8 mm. long or longer, puberulent at top; stamen-tube about as long as the corolla; ovary glabrous; legume up to 4 dm. long; 6.5–8.5 cm. broad, 3 cm. thick, glabrous; seeds about 15, surrounded with a white sweet pulp.

TYPE LOCALITY: Tapachula, Chiapas.
DISTRIBUTION: Chiapas and Oaxaca.

20. *Inga Williamsii* Pittier, Contr. U. S. Nat. Herb.

18: 176. 1916.

A small tree, about 7 m. high, the twigs brownish-tomentose. Rachis wingless, tomentose, bearing small sessile glands between the leaflets; leaflets 3 to 4 pairs, lanceolate to ovate,

2-8.5 cm. long, broadly cuneate at base, acute, more or less tomentose when young, becoming glabrate in age except on the veins; peduncles axillary, solitary or paired, 1 cm. long; flowers in small heads; pedicels 1-1.5 mm. long; calyx 3.5-4 mm. long, tomentose; corolla 5-6 mm. long, densely villous; stamen-tube not longer than the corolla; young legume densely tomentose.

TYPE LOCALITY: Bismarck, Panama.

DISTRIBUTION: Known only from the type locality.

21. *Inga Roussoviana* Pittier, Contr. U. S. Nat. Herb. 18:
175. 1916.

A small tree, 3-8 m. high, the twigs soon glabrate. Rachis of leaf wingless, bearing small glands (often wanting) between the leaflets; leaflets 3 or 4 pairs, obovate to oblong, glabrous or glabrate, cuneate at base, acute, the basal pair 3.5-6.5 cm. long, the terminal pair 9-18 cm. long; inflorescence more or less paniculate; peduncles brown-tomentose, 1-1.5 cm. long; pedicels 4-7 mm. long, tomentose; calyx 5 mm. long, pubescent; corolla 9-11 mm. long, pubescent; stamen-tube about as long as the corolla; legume flat, 11-17 cm. long; seeds 15-21.

TYPE LOCALITY: San Felix, Panama.

DISTRIBUTION: Panama to Guatemala.

ILLUSTRATION: Contr. U. S. Nat. Herb. 18: pl. 82.

22. *Inga gracilipes* Standley, Journ. Wash. Acad. Sci.
15: 101. 1925.

A tree, 6 m. high, the twigs at first puberulent but soon glabrate. Rachis of leaf narrowly winged, bearing broad sessile glands between the leaflets; leaflets 2 pairs, oblong, 6-11 cm. long, acuminate, glabrous, shining above; inflorescence somewhat paniculate; peduncles 2.5-4.5 cm. long; flowers in umbels; pedicels filiform, 8-10 mm. long, glabrous; calyx 3 mm. long, puberulent; corolla 8-9 mm. long, greenish-white, glabrous; stamen-tube short-exserted; mature legume glabrous.

TYPE LOCALITY: Between France Field and Cataval, Panama.

DISTRIBUTION: Known only from the type locality.

23. *Inga spectabilis* (Vahl) Willd. Sp. Pl. 4: 1017. 1806.

Mimosa spectabilis Vahl, Skr. Nat. Selsk. Kjob. 2^l: 219. 1792.

Inga fulgens Kunth, Mim. 36. 1820.

Feuilleea spectabilis Kuntze, Rev. Gen. Pl. 184. 1891.

A tree, 6-15 m. high, the twigs puberulent. Rachis of leaf winged, hairy, bearing large sessile glands between the leaflets; stipules linear, persistent, 6-12 mm. long; leaflets 1 to 3 pairs, broadly ovate to obovate, usually rounded at base, rounded, obtuse, or sometimes acutish or mucronate at apex, glabrous or nearly so, dark green and shining above, light green beneath, 8-26 cm. long, the veins impressed above, prominent beneath; inflorescence paniculate, dense; peduncles stout, 2.5-4 cm. long; flowers in head-like spikes 3-4 cm. long; bractlets ovate-lanceolate, pubescent, often longer than the calyx; calyx 7-8 mm. long, minutely pubescent, irregularly cleft; corolla 18 mm. long, long-silky villous; staminal tube included; legume 3-6 dm. long, 4-7 cm. broad, 1.5-3 cm. thick, obtuse, many-seeded, the margin rounded.

TYPE LOCALITY: Santa Marta, Colombia.

DISTRIBUTION: Costa Rica, Panama and Colombia.

ILLUSTRATION: Vahl, loc. cit. pl. 10; Kunth, loc. cit. pl. 11.

24. *Inga marginata* Willd. Sp. Pl. 4: 1015. 1806.

Feuilleea marginata Kuntze, Rev. Gen. Pl. 188. 1891.

A small tree, the twigs at first pubescent but soon glabrate. Stipules linear-oblong, 6-8 mm. long, caducous; rachis winged, bearing sessile, cup-shaped glands between the

leaflets; leaflets usually 2 pairs, oblong to lanceolate, acuminate, 7-10 cm. long, glabrous or becoming glabrate; inflorescence pilose; spikes axillary, 6 to 10 cm. long, loosely flowered; calyx 1 mm. long; corolla 4 mm. long; stamen-tube exerted; legume flattened, 5-12 cm. long, about 1 cm. wide, compressed, glabrous.

TYPE LOCALITY: Caracas, Venezuela.

DISTRIBUTION: Costa Rica to Panama, Peru, Venezuela, and Brazil.

25. *Inga martinicensis* Presl, Symb. Bot. 1: 65. 1832.

Feuillea martinicensis Kuntze, Rev. Gen. Pl. 188. 1891.

A small tree, the twigs brownish-pubescent. Rachis of leaf narrowly winged; glands small, sessile; leaflets 2 pairs, obovate, 8-12 cm. long, slightly hairy on both sides, shining above; flowers in short-stalked spikes 2-3 cm. long; calyx 4 mm. long, pubescent; corolla 8 mm. long, pubescent; stamens 15 mm. long, the sheath included; legume 10-12 cm. long, 10-14 mm. broad, glabrous, shining, rounded at both ends.

TYPE LOCALITY: Martinique.

DISTRIBUTION: Martinique and Guadeloupe.

ILLUSTRATION: Presl, loc. cit. *pl.* 42.

26. *Inga portobellensis* Beurling, Svensk. Vet. Akad. Handl.

1854: 122. 1856.

A tree, with glabrous branches. Petioles and rachis winged, bearing sessile cup-shaped glands between each pair of leaflets; rachis-wing between the leaflets spatulate and almost terete at base; leaflets 2 pairs, oblong, 10-21 cm. long, rounded or acuminate, glabrous on both sides; peduncles axillary, solitary, 3 cm. long; heads many-flowered; pedicels 2-3 mm. long; calyx tubular, 25-28 mm. long, glabrous or nearly so; corolla 3.5-4 cm. long, the lobes slightly pubescent; stamens 7-8 cm. long, the tube long-exserted; legume 15-16 cm. long, 2.5 cm. broad, rounded at base and apex, apiculate.

TYPE LOCALITY: Porto Bello, Panama.

DISTRIBUTION: Panama and Costa Rica.

ILLUSTRATION: Contr. U. S. Nat. Herb. 18: *pl.* 83, 84.

27. *Inga Calderoni* Standley, Journ. Wash. Acad.

13: 352. 1923.

A shrub or tree, the twigs densely pilose with yellow hairs. Rachis of leaf narrowly winged, densely pilose, bearing hairy stipitate slender glands between the leaflets; leaflets 5 or 6 pairs, oblong-lanceolate, acuminate, 7-10.5 cm. long, pubescent on both sides; peduncles 3 cm. long, pubescent; spike 3-6 cm. long; calyx 8-9 mm. long, pubescent; corolla 16-18 mm. long, pubescent; stamens 4 cm. long, their tube exerted; legume oval, 5 cm. long, 3.5 cm. wide, densely felted.

TYPE LOCALITY: Comasagua, El Salvador.

DISTRIBUTION: El Salvador.

28. *Inga monticola* Pittier, Contr. U. S. Nat. Herb.

18: 190. 1916.

A widely spreading tree, about 16 m. high, the twigs brownish-pubescent. Rachis of leaf narrowly winged, pubescent, bearing large flat sessile glands between the leaflets; leaflets 3 or 4 pairs, ovate to oblong, acute or often abruptly acuminate, glabrous and shining above except on the veins, nearly glabrous beneath; spikes 2-3.5 cm. long, solitary in the axils of upper leaves on peduncles 3-4 cm. long; calyx puberulent, 4-4.5 mm. long; corolla 7-8 mm. long; staminal tube included; legume 8-16 cm. long, 5-6 cm. broad, at first yellowish-pubescent, becoming glabrate in age.

TYPE LOCALITY: Bismarck, Panama.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: Contr. U. S. Nat. Herb. 18: *pl.* 96.

29. *Inga mollifoliola* Pittier, Contr. U. S. Nat. Herb.

18: 189. 1916.

A tree, the twigs densely brownish-tomentose. Rachis of the leaf narrowly winged, densely tomentose, bearing sessile glands between the leaflets; leaflets 3 to 5 pairs, lanceolate, often acuminate, 3.5–12 cm. long, shining and somewhat hairy above, densely hairy beneath; inflorescence axillary or terminal; peduncles 1 to 3 in axils of leaves, 2–4 cm. long, pubescent; spikes at first head-like, 1–2 cm. long; calyx 5–6 mm. long, pubescent; corolla 8.5–10 mm. long, villous; staminal tube included, the filaments pink.

TYPE LOCALITY: Rodeo de Pacuca, Costa Rica.
DISTRIBUTION: Costa Rica.

30. *Inga Goldmanii* Pittier, Contr. U. S. Nat. Herb.

18: 198. 1916.

A tree, 6–10 m. high, the twigs angled and densely brownish-hairy. Rachis winged, bearing subsessile glands between the leaflets; leaflets 3 or 4 pairs, ovate to oblong, obtuse or acute, 7–20 cm. long, shining and sparsely villous with impressed veins above, glabrate or hairy on the prominent veins beneath; peduncles axillary, 4–6 cm. long, densely brownish-hairy; spikes 4–5 cm. long; calyx 14 mm. long, densely pubescent; corolla 25 mm. long, densely tomentose; staminal tube included; legume flat, 20 cm. long, 3.5–4.3 cm. broad, rounded at apex or sometimes apiculate, densely brownish-hispid, its thick stipe 2 cm. long.

TYPE LOCALITY: Near Gatún, Panama.
DISTRIBUTION: Panama and Costa Rica.

31. *Inga Hayesii* Benth. Trans. Linn. Soc. 30: 617. 1875.*Fenillea Hayesii* Kuntze, Rev. Gen. Pl. 188. 1891.

A small tree, 3–8 m. high, the twigs brownish-villous. Rachis winged, bearing short-stalked glands between the leaflets; leaflets 2 or 3 pairs, ovate to lanceolate, acute, sparingly pubescent on both sides, 3–14 cm. long; peduncles axillary, solitary or in pairs, 3–5 cm. long, hairy; calyx 6.5–8 mm. long, glabrous or nearly so, striate; corolla 16–17 mm. long, white-villous; staminal tube included; legume flattened, 17 cm. long, 2 cm. broad, densely yellow-felted.

TYPE LOCALITY: Panama.
DISTRIBUTION: Panama.

32. *Inga mucuna* Walp. & Duch.; Walp. Ann. Bot. 2:

459. 1852.

A tree, the twigs angled and brownish-hairy. Rachis of the leaf broadly winged, densely hairy, bearing small subsessile glands between the leaflets; stipules ovate, persistent; leaflets 2 to 4 pairs, ovate to orbicular, rounded at base, acute, 6–17.5 cm. long, somewhat hairy above, softly pubescent beneath; peduncles axillary, 5–8 cm. long, densely hairy; spikes 3–4 cm. long; bractlets acute, 6 mm. long, caducous; calyx 2 cm. long, glabrous except at the top, striate; corolla 4.5–5 cm. long, villous; staminal tube long-exserted; legume somewhat twisted, 3 dm. long, 5 cm. broad, obtuse, densely brownish-strigose.

TYPE LOCALITY: Panama.
DISTRIBUTION: Panama.

33. *Inga Tonduzii* Donn. Smith, Bot. Gaz. 44: 112. 1907.

A tree with a round top, the twigs covered with dense brown spreading hairs. Stipules 10–12 mm. long, deltoid, acuminate, persistent; rachis of leaf broadly winged, bearing stipitate glands between the leaflets; leaflets 2 or 3 pairs, elliptic, 12–17 cm. long, obtuse at base, acuminate, long-pilose on both sides; peduncles axillary, solitary or in pairs, 2 cm. long, pilose; flowers in spikes 2–3 cm. long, subtended by linear-lanceolate persistent bractlets 7–10 mm.

long; calyx 10 mm. long, hairy; corolla 27 mm. long, villous; legume 17-23 cm. long, 3.5-4 cm. broad, clothed with brown spreading hairs.

TYPE LOCALITY: Las Vueltas, Costa Rica.

DISTRIBUTION: Known only from the type locality.

34. *Inga Purpusii* Pittier, Contr. U. S. Nat. Herb. 18: 199. 1916.

A tree, the twigs angled and brownish-pubescent. Rachis winged, bearing stalked glands between the leaflets; leaflets 2 or 3 pairs, thin, ovate to oblong, acute or often short-acuminate, somewhat hairy on both sides, 10-18 cm. long; peduncles 2-5 cm. long; spikes 8 cm. long or less; bractlets 2-2.5 cm. long, persistent; calyx 17-20 mm. long, hairy, striate; corolla 29-32 mm. long, densely hairy; staminal tube about as long as the corolla; legume flattened, 3 dm. long, 2.5 cm. broad, glabrous.

TYPE LOCALITY: Finca Yolanda, Chiapas.

DISTRIBUTION: Known only from the type locality.

35. *Inga Jimeneziana* Pittier, Contr. U. S. Nat. Herb. 18: 208. 1916.

A tree with a rounded top, the twigs angled and clothed with brownish hairs. Rachis of the leaf narrowly winged, bearing long-stipitate glands between the leaflets; leaflets 3 or 4 pairs, ovate, abruptly acuminate, glabrate and shining above, hairy and strongly veined beneath, 7-21 cm. long; peduncles axillary, solitary or in pairs, 1.5-4 cm. long, hairy, angled; bractlets narrow, 1-1.5 cm. long, hairy, persistent; calyx 11-13 mm. long, pubescent, striate; corolla about 32 mm. long, hairy; staminal tube about as long as the corolla; legume 10-30 cm. long, 3 cm. broad, glabrous, the margin 2-angled.

TYPE LOCALITY: Turrialba, Costa Rica.

DISTRIBUTION: Known only from the type locality.

36. *Inga Rensoni* Pittier, Contr. U. S. Nat. Herb. 18: 209. 1916.

A tree, the twigs sub-angular, densely hairy. Rachis winged, bearing subsessile glands between the leaflets; leaflets 3 or 4 pairs, ovate to ovate-lanceolate, 6-13 cm. long, pubescent on both sides, acute; peduncles axillary, 2-2.5 cm. long; spikes 2-3 cm. long; bractlets linear-lanceolate to ovate, acute, 10-22 mm. long, pubescent, persistent; calyx 14-22 mm. long, striate, appressed-pubescent; corolla 21-22 mm. long, silky-villous; staminal tube included; legume somewhat flattened, 4-angled, 18 cm. long, 3-3.5 cm. broad, glabrous.

TYPE LOCALITY: Banks of Colorado River, near Turrialba, Costa Rica.

DISTRIBUTION: Known only from the type locality.

37. *Inga Pittieri* M. Micheli, Bull. Herb. Boiss. 2: 446. 1894.

A tree, 8 m. high, the twigs densely brownish-pubescent. Stipules ovate to oblong, obtuse, 8-16 mm. long, striate, persistent; rachis of leaf only partly winged, bearing sessile or subsessile glands between the leaflets; leaflets 3 pairs, rarely 1 or 2 pairs, ovate to ovate-elliptic, acute or acuminate, somewhat scabrous-pubescent above, pubescent on the veins beneath, 6-23 cm. long; peduncles axillary or sub-terminal, 1-4 cm. long, pubescent; spikes at first short, becoming 2.5-3.5 cm. long, subtended by a large bract; bractlets narrow, 7-12 mm. long, caducous; calyx 8-13 mm. long, striate, pubescent; corolla 20-24 cm. long, pinkish-white, appressed-pubescent; staminal tube as long as the corolla; legume 9-18 cm. long, about 1.5 cm. thick, 4-sided, glabrous.

TYPE LOCALITY: Banks of the Río Ceibo, Costa Rica.

DISTRIBUTION: Costa Rica and Panama.

ILLUSTRATION: M. Micheli, loc. cit. *pl.* 13.

38. *Inga panamensis* Seem. Bot. Voy. Herald 117. 1853.

Fevillea panamensis Kuntze, Rev. Gen. Pl. 188. 1891.

A small tree, the twigs terete and nearly glabrous. Rachis of the leaf narrowly winged, bearing small sessile glands between the leaflets; leaflets 1 to 3 pairs, ovate to obovate, 7.5-15

cm. long, obtuse, sometimes mucronate, glabrate on both sides; peduncles axillary, somewhat angled, 1.5–3.5 cm. long, hairy; spikes 1.5–2.5 cm. long; bractlets linear, acute, 1–1.5 cm. long, persistent; calyx 7–8 mm. long, somewhat hairy; corolla 13–15 mm. long, silky-pubescent; legume 15 cm. long, 3.8 cm. broad, glabrous, 4-angled.

TYPE LOCALITY: Near Curces, Panama.

DISTRIBUTION: Panama.

39. *Inga Preussii* Harms, Repert. 13: 420. 1914.

A tree, 15 m. high, the twigs somewhat angled and brownish-pubescent. Rachis of leaf often broadly winged, bearing sessile glands between the leaflets; stipules large, ovate, caducous; leaflets 3 or 4 pairs, ovate to oblong, rounded at base, acute, sometimes acuminate, sparsely pilose above, densely villous beneath, 5.5–12 cm. long; peduncles 2–5 cm. long, axillary, solitary or in pairs; spikes 2–4 cm. long; bractlets lanceolate, acute, 7–14 mm. long, persistent; calyx 10–12 mm. long, striate, pubescent; corolla 2 cm. long, silky-villous; staminal tube a little exerted; legume sessile, glabrous, 20–33 cm. long, 4-angled.

TYPE LOCALITY: Near San Salvador, El Salvador.

DISTRIBUTION: El Salvador.

40. *Inga Rodrigueziana* Pittier, Contr. U. S. Nat. Herb. 18: 209. 1916.

A small to medium-sized tree, the twigs somewhat angled, densely brownish-pubescent. Rachis winged, bearing short-stalked glands between the leaflets; stipules large, ovate, striate, deciduous; leaflets 3 or 4 pairs, lanceolate to oblong, acuminate, pubescent on both sides, 10–21 cm. long; peduncles axillary, 5–7 cm. long; spikes 3–5 cm. long; bractlets linear-lanceolate, persistent, 10–18 mm. long; calyx 13–15 mm. long, striate, pubescent; corolla 27–30 mm. long, silky-villous; staminal tube about as long as the corolla; legume 12–25 cm. long, 4-angled, glabrous.

TYPE LOCALITY: Las Viñas, Guatemala.

DISTRIBUTION: Guatemala.

41. *Inga salvadorensis* Britton & Rose, sp. nov.

A shrub, the twigs densely brownish-pubescent. Petiole 1–2 cm. long, densely pubescent; rachis winged, bearing elevated glands between the leaflets; leaflets 4 or 5 pairs, lanceolate to oblong, acuminate, 6–10 cm. long, pubescent on both sides, strongly veined beneath; flowers in spikes 4 cm. long; legume 1.5 cm. long, somewhat flattened, more or less 4-angled, velvety-pubescent.

Near San Salvador, 1923, *Salvador Calderón 1828*.

42. *Inga fissicalyx* Pittier, Contr. U. S. Nat. Herb. 18: 213. 1916.

A tree with angled and brownish-pubescent twigs. Rachis of the leaf winged, bearing large sessile glands between the leaflets; leaflets 5 or 6 pairs, lanceolate, acuminate, more or less pubescent on both sides, the basal pair 2.5–3 cm. long, the terminal pair 8–11 cm. long; peduncles solitary or in pairs, 5–7 cm. long; flowers in spikes 3–5 cm. long; bractlets lanceolate, 10 mm. long, caducous; calyx 20–28 mm. long, brownish-pubescent, with narrow acute lobes; corolla about as long as the calyx or shorter, softly villous; staminal tube as long as the corolla; legume about 15 cm. long, 1 cm. thick, subterete, ridged, densely tomentose, the sides somewhat flattened.

TYPE LOCALITY: Zacuapan, Veracruz.

DISTRIBUTION: Veracruz; Tabasco; Guatemala.

43. *Inga Schiedeana* Steud. Nom. Bot. ed. 2. 1: 810. 1840.

Inga flexuosa Schl. Linnaea 12: 559. 1838. Not Graham, 1828.
Inga Pringlei Harms, Repert. 13: 526. 1915.

A small tree, the twigs densely brown-pubescent. Stipules none; rachis of leaf narrowly winged, bearing small sessile glands between the leaflets; leaflets 4 to 6 pairs, lanceolate, shining and glabrate above, pale and hairy beneath, 2.5-8 cm. long; peduncles 1 to 3 in the axils of the leaves, 1-3 cm. long, brownish-pubescent; spikes at first short and dense, becoming 4-6 cm. long; bractlets linear, 4-7 mm. long, caducous; calyx 5-6 mm. long, somewhat pubescent, especially above, striate; corolla 8-9 mm. long, appressed-pubescent; stamens about 1.5 cm. long, the tube included.

TYPE LOCALITY: Near Jalapa, Veracruz.

DISTRIBUTION: Known only from the type locality and vicinity.

44. *Inga pauciflora* Duch. & Walp. Linnaea 23: 746. 1850.

A shrub, about 3 m. high, the twigs brownish-hairy. Rachis winged, bearing sessile glands between the leaflets, pubescent; leaflets 2 to 4 pairs, ovate to elliptic, acuminate, softly pubescent on both sides, the basal pair 2-5 cm. long, the terminal pair 5.5-13 cm. long; peduncles solitary or in pairs, 1.5-2 cm. long; spikes 2-3 cm. long; calyx 8-10 mm. long, striate, pubescent; corolla 15-17 mm. long, silky-pubescent; staminal tube included; stamens 4.5 cm. long.

TYPE LOCALITY: Panama.

DISTRIBUTION: Panama.

ILLUSTRATION: Pittier, Contr. U. S. Nat. Herb. 18: pl. 103.

45. *Inga Donnell-Smithii* Pittier, Contr. U. S. Nat. Herb. 18:

211. 1916.

A low tree, the twigs densely brownish-hairy. Rachis narrowly winged or partly not winged, bearing sessile glands between the leaflets, brownish-hairy; leaflets 7 pairs, oblong, acuminate, 4-14 cm. long, appressed-pubescent above, becoming glabrate, paler and more pubescent beneath; peduncles axillary, solitary, 2-4.5 cm. long, densely pubescent; spikes 4-8 cm. long; calyx 19-21 mm. long, densely brownish-hairy; corolla 22 mm. long, densely hairy; staminal tube shorter than the corolla, the filaments 7 cm. long; ovary villous at base,

TYPE LOCALITY: El Guarda Viejo, Guatemala.

DISTRIBUTION: Known only from the type locality.

46. *Inga eriocarpa* Benth. Lond. Journ. Bot. 4: 615. 1845.

A tree, the twigs densely brownish-pubescent. Rachis of leaf winged, bearing sessile glands between the leaflets; leaflets 5 pairs, obovate or elliptic-oblong, somewhat acuminate, rather densely pubescent, 4-8 cm. long; spikes few-flowered; bractlets small, ovate; calyx 10 mm. long, densely lanate, the hairs often spreading; corolla 18-20 mm. long, densely lanate.

TYPE LOCALITY: Between San Blas and Guadalajara, Jalisco.

DISTRIBUTION: Morelos; Jalisco.

47. *Inga oophylla* Riley, Kew Bull. 1923: 401. 1923.

A tree, the twigs brownish-pubescent. Rachis winged, bearing large sessile glands between the leaflets; leaflets 4 or 5 pairs, ovate to lanceolate, often obtuse, apiculate, 5.5-12.5 cm. long, above hairy, becoming glabrate and shining, softly pubescent beneath; inflorescence often paniculate; peduncles 1-2 cm. long; spikes 3-6 cm. long; bractlets ovate, obtuse, 5-7 mm. long; calyx 10-12 mm. long, brownish-tomentose; corolla 18-20 mm. long, tomentose; staminal tube a little longer than the corolla, the filaments 7 cm. long.

TYPE LOCALITY: San Ignacio, Sinaloa.

DISTRIBUTION: Sinaloa.

48. *Inga Inga* (L.) Britton, Fl. Bermuda 170. 1918.

Mimosa inga L. Sp. Pl. 516. 1753.

Inga vera Willd. Sp. Pl. 4: 1010. 1806.

Feuilleea Inga Kuntze, Rev. Gen. Pl. 184. 1891.

Inga vera lamprophylla Pittier, Contr. U. S. Nat. Herb. 18: 216. 1916.

Inga vera portoricensis Pittier, Contr. U. S. Nat. Herb. 18: 217. 1916.

A tree, 15 m. high or higher, the twigs pubescent. Rachis broadly winged, bearing sessile glands between the leaflets; leaflets 3 to 5 pairs, oblong to elliptic, pubescent, 10 cm. long or less, acute, often acuminate, darker green above than beneath; peduncles 1.5-6 cm. long; spikes short, few-flowered; calyx 9-15 mm. long, tomentose; corolla 13-16 mm. long, white, densely sericeous; stamens white, 6 cm. long, the tube included; legume 10-15 cm. long, 8-15 mm. thick, tomentose, 4-ribbed.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica; Cuba; Hispaniola; Porto Rico; Trinidad; Guatemala to Colombia and British Guiana. Often grown as coffee shade.

ILLUSTRATIONS: Fawcett & Rendle, Fl. Jam. 4²: f. 47; Sloane, Hist. Jam. pl. 183, f. 1;

49. *Inga edulis* Mart. Flora 20: Beibl. 113. 1837.

Feuilleea edulis Kuntze, Rev. Gen. Pl. 187. 1891.

A tree, sometimes 12 m. high, the twigs brownish-tomentose. Rachis winged, bearing large sessile glands between the leaflets; leaflets 4 to 6 pairs, oval to oblong, acuminate, 15-20 cm. long, glabrate, strongly veined beneath; peduncles 2.5-3 cm. long, axillary, often in clusters of 4 to 6, sometimes in panicles; spikes short; bractlets lanceolate, short, usually caducous; calyx 5-8 mm. long, softly tomentose; corolla 15-18 mm. long, villous; legume 3 dm. long or more, subterete, 12 mm. in diameter, tomentose, many-ribbed.

TYPE LOCALITY: Brazil.

DISTRIBUTION: Veracruz to Panama, Venezuela, and Brazil; Grenada.

ILLUSTRATION: Mart. Fl. Bras. 15²: pl. 136.

50. *Inga xalapensis* Benth. Lond. Journ. Bot. 4: 616. 1845. *

Feuilleea xalapensis Kuntze, Rev. Gen. Pl. 189. 1891.

Inga zacapanica Harms, Repert. 19: 63. 1923.

A tree, the twigs brownish-pubescent. Rachis of leaf narrowly winged, bearing subsessile glands between the leaflets; leaflets 4 or 5 pairs, oblong to lanceolate, acuminate or acute, 6-15 cm. long, dark green and somewhat hairy above, softly pubescent beneath; inflorescence axillary or sometimes paniculate; peduncles 1-3 cm. long; spikes 5-7 cm. long; bractlets lanceolate, nearly as long as the calyx, pubescent, caducous; calyx 9-10 mm. long, pubescent; corolla 14 mm. long; legume velvety-pubescent, subterete, sulcate, 10-15 cm. long.

TYPE LOCALITY: Jalapa, Veracruz.

DISTRIBUTION: Veracruz.

51. *Inga latibracteata* Harms, Repert. 19: 64. 1923.

A small tree, the twigs brownish-pubescent. Rachis of leaf broadly winged, pubescent, bearing large sessile glands between the leaflets; leaflets 3 or 4 pairs, oblong to lanceolate, rounded at base, acute, sometimes acuminate, dark green and somewhat pubescent above, very pale and densely villous beneath, 6-13 cm. long; peduncles 1-4 cm. long, pubescent; spikes 1-1.5 cm. long; bractlets 9-13 mm. long, ovate, acute, densely appressed-villous, caducous; calyx 7-8 mm. long, densely villous; corolla 12-13 mm. long, densely hirsute; staminal tube included.

TYPE LOCALITY: Jalapa, Veracruz.

DISTRIBUTION: Veracruz.

52. *Inga Micheliana* Harms, Repert. 13: 525. 1915.

A tree, the twigs velvety-pubescent. Stipules none; rachis of the leaf broadly winged, bearing small sessile glands between the leaflets; leaflets 3 or 4 pairs, lanceolate to oblong or

obovate, often rounded at apex, sometimes apiculate, becoming glabrate above, pale and villous beneath, 4-10 cm. long; peduncles 2-4 cm. long, pubescent; spikes dense, short; calyx 4-5 mm. long, villous; corolla 10-11 mm. long, densely villous; staminal tube included.

TYPE LOCALITY: On the Rio Negro, Department of Quiché, Guatemala.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: Pittier, Contr. U. S. Nat. Herb. 18: pl. 99.

53. *Inga cobanensis* Pittier, Contr. U. S. Nat. Herb. 18: 188. 1916.

Inga Tuerckheimii Pittier, Contr. U. S. Nat. Herb. 18: 192. 1916.

A tree, the twigs densely brownish-pubescent. Rachis of the leaf narrowly winged, bearing subsessile glands between the leaflets; leaflets 3 pairs, ovate to oblong, rounded at the base, acuminate or acute, 3-11 cm. long, sparsely pubescent above, brownish-pubescent and reticulated beneath; peduncles axillary, in clusters of 3 to 6, 1-3 cm. long, densely pubescent; spikes 1-3 cm. long; calyx 4.5-6.5 mm. long, densely pubescent; corolla 11.5-13 mm. long, densely brownish-villous; staminal tube included, the filaments 3 cm. long.

TYPE LOCALITY: Cobán, Guatemala.

DISTRIBUTION: Known only from the type locality.

54. *Inga eriorhachis* Harms, Repert. 13: 525. 1915.

A tree, the twigs densely brownish velvety-pubescent. Rachis narrowly winged above, terete below, densely velvety, without glands (!); leaflets 4 or 5 pairs, oblong to broadly ovate, densely velvety on both sides, 8-20 cm. long; peduncles axillary in fascicles of 4's or 5's, 2-5 cm. long, densely pubescent; spikes dense, 2-4 cm. long; calyx 6-7 mm. long, villous; corolla 12-14 mm. long, densely villous.

TYPE LOCALITY: Santa Maria de Dota, Costa Rica.

DISTRIBUTION: Known only from the type locality.

55. *Inga Oerstediana* Benth.; Seem. Bot. Voy. Herald. 117. 1853.

Feuilleea Oerstediana Kuntze, Rev. Gen. Pl. 188. 1891.

A tree, the twigs with dense reddish pubescence. Rachis of the leaf narrowly winged, bearing sessile cupulate glands between the leaflets; leaflets 4 or 5 pairs, oblong, 8-20 cm. long, obtuse, densely brownish-pubescent beneath; spikes oblong, often in clusters; calyx velvety, 6 mm. long; corolla 12-14 mm. long, densely pubescent; stamen-tube included; legume elongated, subterete.

TYPE LOCALITY: Panama.

DISTRIBUTION: Costa Rica to northern Colombia and Venezuela.

56. *Inga Cookii* Pittier, Contr. U. S. Nat. Herb. 18: 203. 1916.

A shrub or small tree, the twigs densely covered with long brown hairs. Stipules ovate; rachis winged, bearing slender stipitate glands between the leaflets; leaflets 3 pairs, thin, ovate to lanceolate, acuminate, hairy on both sides, 3.5-9.5 cm. long; peduncles axillary, solitary, hairy, 8 cm. long; flowers in short racemes 3 cm. long; pedicels hairy, 2-3 mm. long; calyx 4 mm. long, hairy; corolla 11-12 mm. long, villous; staminal tube included; ovary glabrous.

TYPE LOCALITY: Near the Finca Sepacuité, Alta Vera Paz, Guatemala.

DISTRIBUTION: Guatemala.

57. *Inga ingoides* (Rich.) Willd. Sp. Pl. 4: 1012. 1806.

Mimosia ingoides Rich. Act. Soc. Hist. Nat. Paris 1: 113. 1792.

Feuilleea ingoides Kuntze, Rev. Gen. Pl. 188. 1891.

A tree, 15 m. high, the twigs reddish-tomentose. Rachis of the leaf winged, bearing small sessile glands between the leaflets, pubescent; leaflets 3-5 pairs, oval to oblong, short-acuminate, 5-12 cm. long, glabrate above, pale and somewhat pubescent beneath; peduncles axillary, solitary or in pairs, 2-4 cm. long; flowers in short racemes; pedicels 3-15 mm. long; calyx 5-10 mm. long, brownish-pubescent; corolla about 12 mm. long, brownish-pubescent;

stamens 5-6 cm. long, the tube included; legume elongated, 2.5 dm. long or longer, subterete, many-ribbed, the margins elevated.

TYPE LOCALITY: Cayenne.

DISTRIBUTION: Guadeloupe; Dominica; Martinique; Trinidad; Colombia to French Guiana.

58. *Inga spuria* H. & B.; Willd. Sp. Pl. 4: 1011. 1806.

Mimosa spuria Poir. in Lam. Encycl. Suppl. 1: 40. 1810.

Feuillea spuria Kuntze, Rev. Gen. Pl. 189. 1891.

A tree, 3-5 m. high, the twigs angled and pubescent. Rachis winged, bearing sessile glands between the leaflets; leaflets 5 or 6 pairs, oblong, acuminate, 7-10 cm. long, dark green and slightly pubescent above, pubescent beneath; peduncles axillary, solitary or in pairs, 2-4 cm. long; racemes 2-4 cm. long; pedicels short or wanting; bractlets small, ovate, caducous; calyx 14-15 mm. long, appressed-pubescent; corolla 2 cm. long, silky-pubescent; filaments 7 cm. long, the sheath as long as the corolla; legume elongated, velvety-pubescent.

TYPE LOCALITY: Venezuela.

DISTRIBUTION: Tamaulipas and Guerrero to Panama and Venezuela; Trinidad.

ILLUSTRATION: Kunth, *Mim. pl. 12*.

59. *Inga dominicensis* Benth. Trans. Linn. Soc. 30: 612. 1875.

Feuillea dominicensis Kuntze, Rev. Gen. Pl. 187. 1891.

Leaflets 2 pairs, ovate-lanceolate to oblong-elliptic, obtuse, shining, 7-10 cm. long; racemes spike-like, short-peduncled, 4 cm. long; pedicels short; calyx 2 mm. long; corolla 6 mm. long; staminal tube included.

TYPE LOCALITY: Dominica.

DISTRIBUTION: Known only from Dominica.

60. *Inga Lindeniana* Benth. Lond. Journ. Bot. 4: 608. 1845.

Feuillea Lindeniana Kuntze, Rev. Gen. Pl. 188. 1891.

A shrub or tree, the twigs angled and reddish hirsute. Rachis of the leaf winged; leaflets 3 pairs, oval, acuminate, 2 dm. long or more, hirsute above, velvety beneath; spikes oblong; bractlets linear-lanceolate, caducous; calyx 10 mm. long, striate, pubescent; corolla 22 mm. long.

TYPE LOCALITY: Teapa, Oaxaca.

DISTRIBUTION: Known only from the type locality, and to us only from the description.

61. *Inga Sciadodendron* Harms, Repert. 19: 62. 1923.

A tree, the twigs densely villous. Rachis of leaf winged, bearing large cup-shaped glands between the leaflets; leaflets 4 pairs, oblong to lanceolate, acuminate, sometimes 17 cm. long, glabrate above, pilose beneath; peduncles 1 to 2 in axils of the leaves, 6-10 cm. long; flowers in spikes subtended by bractlets, these acute, lanceolate and 8-12 mm. long; calyx 10-11 mm. long, appressed-pilose; corolla 15 mm. long, villous.

TYPE LOCALITY: Mirador, Veracruz.

DISTRIBUTION: Known only from the type locality.

2. *ENTEROLOBIUM* Mart. Flora 20: Beibl. 117. 1837.

Unarmed trees, with bipinnate leaves, the petiole gland-bearing, mostly numerous small leaflets, and small capitate perfect flowers. Calyx 5-toothed. Corolla 5-lobed. Stamens many, the filaments united below into a short tube, the anthers small. Ovary sessile. Legume flat, fleshy, large, curved into a nearly complete circle, indehiscent. Seeds transverse.

Type species, *Mimosa contortisiliqua* Vell.

Rachis and peduncles glabrous or puberulent; leaflets 8-15 mm. long; legume 8-10 cm. in diameter.

Rachis brown-puberulent; leaflets 3-5 mm. long; legume 5 cm. in diameter.

1. *E. cyclocarpum*.

2. *E. Schomburgkii*.

1. *Enterolobium cyclocarpum* (Jacq.) Griseb. Fl. Brit. W. Ind.

226. 1860.

Mimosa cyclocarpa Jacq. Fragm. 30. 1801.*Inga cyclocarpa* Willd. Sp. Pl. 4: 1026. 1806.*Pithecolobium cyclocarpum* Mart. Flora 20: Beibl. 115. 1837.*Mimosa Parota* Sessé & Moc. Pl. Nov. Hisp. 257. 1887.*Feuilleea cyclocarpa* Kuntze, Rev. Gen. Pl. 184. 1891.

A very large tree, up to 25 m. high, with widely spreading branches, the foliage glabrous or puberulent. Petioles 2-6 cm. long, usually bearing a sessile gland; pinnae 4-15 pairs, short-stalked; leaflets 20-30 pairs, linear-oblong, acute, 8-15 mm. long, pale beneath; peduncles slender, 1.5-4 cm. long; heads many-flowered; calyx puberulent, about 2.5 mm. long; corolla nearly twice as long as the calyx, its tube glabrate or puberulent, its teeth ciliate; stamens included; legume compressed, 3-4 cm. wide, curved into a nearly complete circle 8-10 cm. in diameter, shining.

TYPE LOCALITY: Caracas, Venezuela.

DISTRIBUTION: Sinaloa and Tamaulipas to Venezuela; Jamaica; Cuba; widely planted in the West Indies.

ILLUSTRATIONS: Jacq., loc. cit. pl. 34, f. 1.

2. *Enterolobium Schomburgkii* Benth. Trans. Linn. Soc. 30:

599. 1875.

Pithecolobium Schomburgkii Benth. Lond. Journ. Bot. 3: 219. 1842.*Feuilleea Schomburgkii* Kuntze, Rev. Gen. Pl. 189. 1891.

A tree, the twigs, petioles, rachis and peduncles densely brown-puberulent. Petiole 2-4 cm. long, bearing a sessile cupulate gland; pinnae 10-20 pairs, sessile; leaflets 40-60 pairs, linear-falcate, closely approximate, shining above, 2-4 mm. long, the venation obsolete, the apex obtuse or rounded; peduncles brown-puberulent, less than 2.5 cm. long; calyx about 2 mm. long; corolla scarcely 4 mm. long; legume about 5 cm. broad, subligneous, glabrous.

TYPE LOCALITY: Rio Negro, Brazil.

DISTRIBUTION: Guatemala; Panama; French Guiana and Brazil.

3. *PITHECELLOBIUM* Mart. Hort. Monac. 188. 1829.**Spelled also *Pithecolobium* and *Pithecollobium*.

Shrubs or trees, with 2-pinnate leaves, and small, mostly perfect flowers in heads or spikes, the stipules usually spinescent. Calyx 5-6-toothed. Corolla 5-6-lobed. Stamens many, long-exserted, the filaments partly united into a tube, the anthers small. Ovary several-many-ovuled; style slender; stigma small, capitate. Legume flattened or turgid, mostly contorted or curved, 2-valved, the valves twisting. Seeds arillate.

Type species, *Mimosa Unguis-cati* L.

A. Leaflets only 1-3 pairs.

1. Petiole and rachis wingless.

a. Flowers spicate.

Pod terete, thick, 2 cm. broad.

Pod (as far as known) flattened or subterete, 1 cm. broad or narrower.

Ovary sessile; spikes mostly solitary.

Corolla 5-12 mm. long.

Corolla 8-12 mm. long.

Corolla 12 mm. long; leaflets oval, obtuse.

Corolla 8 mm. long; leaflets oblong-lanceolate, acuminate.

Corolla 5-7 mm. long.

Bractlets lanceolate, more or less persistent.

Corolla 6-7 mm. long; stamen-tube short-exserted.

Corolla 5 mm. long; stamen-tube long-exserted.

Bractlets deltoid, minute.

Leaflets velvety-pubescent.

Stamen-tube long-exserted; bractlets pungent.

Stamen-tube short-exserted; bractlets not pungent.

Leaflets glabrous.

Calyx only 1 mm. long.

Calyx 2-3 mm. long.

Corolla only 3 mm. long.

1. *P. pachypus*.2. *P. panamense*.3. *P. hondurensis*.4. *P. insigne*.5. *P. calostachys*.6. *P. albicaule*.7. *P. velutinum*.8. *P. macrosiphon*.9. *P. lanceolatum*.10. *P. microstachyum*.

Ovary distinctly stipitate; spikes paniced.

Petiolar gland elevated, stipitate.

Spikes up to 4 cm. long.

Spikes oblong, 0.5-2 cm. long.

Petiolar gland depressed.

b. Flowers capitate.

Leaflets 1-7 cm. long.

Leaflets spinulose-mucronate.

Leaflets orbicular-obovate.

Leaflets narrowly obovate.

Leaflets obtuse or mucronulate.

Leaflets chartaceous.

Calyx and corolla glabrous.

Calyx and corolla puberulent.

Leaflets coriaceous.

Petioles and petiolules stout; leaflets 2.5-7 cm. long.

Petioles and petiolules slender; leaflets 1-3 cm. long.

Leaflets only 3-8 mm. long.

2. Petiole and petiolule broadly winged.

11. *P. paniculatum*.

12. *P. oblongum*.

13. *P. pulchellum*.

14. *P. circinale*.

15. *P. mucronatum*.

16. *P. Unguis-cati*.

17. *P. dulce*.

18. *P. keyense*.

19. *P. bahamense*.

20. *P. Hystrix*.

21. *P. furcatum*.

B. Leaflets several or many pairs.

Leaflets 16-40 pairs.

Leaflets 5-11 pairs.

22. *P. macradenium*.

23. *P. Peckii*.

C. Species not grouped.

24. *P. Bertolonii*.

1. *Pithecellobium pachypus* Pittier, Contr. U. S. Nat. Herb.

20: 457. 1922.

A small tree with grayish-green bark, the twigs stiff, glabrate. Petiole pubescent, 3 cm. long or shorter, bearing a sessile apical gland; pinnae 1 pair; stipular spines 0.5 mm. long; leaflets 1 pair, ovate, 2.5-7 cm. long, obtuse or emarginate, glabrous or nearly so; peduncles densely pubescent, 2-3 cm. long; spikes dense, 3-5 cm. long; bractlets narrow, about 1 mm. long; flowers white, densely pubescent; calyx about 3 mm. long; corolla 5-6 mm. long; stamen-tube nearly twice as long as the corolla, legume turgid, 6-8 cm. long, about 1.5 cm. thick; seeds 2-4, ovoid, shining.

TYPE LOCALITY: Near San Salvador, El Salvador.

DISTRIBUTION: El Salvador.

2. *Pithecellobium panamense* Duch. & Walp. Linnaea 23:

746. 1850.

A shrub or small tree up to about 4 m. high, the twigs glabrous. Petioles stout, glabrous, 1-3.5 cm. long, bearing an apical cupulate gland; stipular spines stout, 6-8 mm. long; pinnae 1 pair; leaflets 1 pair, ovate to ovate-lanceolate, 4-8 cm. long, coriaceous, obtuse, glabrous; peduncles stout, puberulent, 2-4 cm. long; rachis puberulent; bractlets ovate, about 1 mm. long; spikes dense, 6-12 cm. long; flowers puberulent, white; calyx 2.5 mm. long; corolla about 12 mm. long; stamen-tube 2-2.5 cm. long; ovary sessile; legume 7-10 cm. long, falcate, compressed, 2-3-seeded; seeds black.

TYPE LOCALITY: Isthmus of Panama.

DISTRIBUTION: Panama and Colombia.

3. *Pithecellobium hondurense* Britton & Rose, sp. nov.

Twigs stout, puberulent when young; stipular spines very short or wanting. Petioles stout, glabrous, about 2 cm. long or shorter, the apical gland oval, cupulate; pinnae 1 pair; leaflets 1 pair, oblong-lanceolate, 8-11 cm. long, 4-5 cm. wide, acuminate, lustrous above, reticulate-veined, glabrous; spikes 1.5-3 cm. long, solitary in the axils and clustered at the ends of the twigs on short puberulent peduncles; bractlets deltoid, acute, 1 mm. long; calyx puberulent, 1 mm. long; corolla puberulent, 8 mm. long; stamen-tube somewhat exerted.

Low forest, Moho River, British Honduras, March 16, 1907, *M. E. Peck* 721.

4. *Pithecellobium insigne* M. Micheli, Bot. Gaz. 20: 285. 1895.

A shrub or small tree with puberulent twigs. Stipules slender, acute; petioles pilulose, 6.5 cm. long or shorter, bearing a small apical gland; pinnae 1 pair; leaflets 1 pair, ovate-lanceolate, 8-12 cm. long, glabrous, chartaceous, acute or acuminate; peduncles pilulose, 5-10 cm. long; spikes solitary or panicked, dense, 8-12 cm. long, the rachis pilulose; flowers puberulent; bractlets linear-lanceolate, persistent, 2-3 mm. long; calyx 3-4 mm. long; corolla 6-7 mm. long; stamen-tube somewhat longer than the corolla; ovary sessile.

TYPE LOCALITY: San Pedro Sula, Honduras.

DISTRIBUTION: Known only from the type locality.

5. *Pithecellobium calostachys* Standley, Contr. U. S. Nat. Herb.

20: 190. 1919.

A small tree, up to about 6 m. high, the twigs glabrous or when young, puberulent. Stipular spines 7-10 mm. long; petioles 4.5 cm. long or shorter, glabrous, bearing a depressed apical gland; pinnae 1 pair; leaflets 1 pair, ovate to oblong-lanceolate, 3-11 cm. long, chartaceous, glabrous or nearly so, obtuse or acute; peduncles puberulent, about 5 cm. long or shorter; spikes dense, 2.5-7.5 cm. long, the rachis puberulent; bractlets linear-lanceolate, persistent, 2-3 mm. long; flowers densely appressed-pubescent; calyx about 3 mm. long; corolla about 5 mm. long; stamen-tube 10-12 mm. long; ovary sessile; legume curved or coiled, glabrous, compressed, 1.5-2 cm. wide.

TYPE LOCALITY: Tampico, Tamaulipas.

DISTRIBUTION: Tamaulipas to Chiapas and Tabasco.

6. *Pithecellobium albicaule* Britton & Rose, sp. nov.

A shrub or tree with white, densely velvety branches, the stipular spines 1-1.5 cm. long. Pinnae 1 pair; leaflets 1 pair, very oblique, ovate, 2-7 cm. long, acute, softly pubescent on both sides, strongly reticulated; flowers in elongated spikes 8-10 cm. long; bractlets small, narrow, acute, 1-2 mm. long, persistent; calyx 2-3 mm. long, white-pubescent; corolla 5-6 mm. long, densely pubescent; stamens 15 mm. long, the tube slender, long-exserted.

Panuro, Veracruz, April, 1888, *Seler 690, type*; British Honduras.

7. *Pithecellobium velutinum* Britton & Rose, sp. nov.

A tree-like shrub, 3-5 m. high, with grayish-white bark, the young parts densely velvety. Stipular spines stout, 1 cm. long, pubescent; petioles pubescent, 1-2 cm. long, often bearing a small cup-shaped gland at the top; pinnae 1 pair; leaflets 1 pair, oblong to obovate, 2-5 cm. long, obtuse, densely velvety on both sides; peduncle short, 1 cm. long or less; spike slender, 5-6 cm. long; bractlets minute, ovate, persistent; calyx 1 mm. long or less, pubescent; corolla 3 mm. long, pubescent; staminal tube 5 mm. long; ovary pubescent; legume small, about 4 cm. long, 7-10 mm. broad.

Near Labradas, Sinaloa, September 18, 1925, *Roxana S. Ferris & Ynes Mexia 5084*.

8. *Pithecellobium macrosiphon* Standley, Contr. U. S. Nat. Herb.

20: 191. 1919.

Twigs puberulent, becoming glabrate. Stipular spines ascending, 5-6 mm. long; petioles glabrous, 1.5-5 cm. long, bearing a crateriform apical gland; pinnae 1 pair; leaflets 1 pair, elliptic, subcoriaceous, glabrous, 3-7 cm. long, obtuse; peduncles puberulent; spikes dense, 5-6 cm. long; bractlets deltoid, minute; flowers densely puberulent; calyx only about 1 mm. long; corolla about 6 mm. long, stamen-tube nearly 2 cm. long; ovary sessile; legume hard, thick, 1.5-1.8 cm. wide; seeds compressed, dark brown.

TYPE LOCALITY: Between Tumbala and El Salta, Chiapas.

DISTRIBUTION: Chiapas.

9. *Pithecellobium lanceolatum* (H. & B.) Benth. Lond. Journ. Bot.

5: 105. 1846.

Inga lanceolata H. & B.; Willd. Sp. Pl. 4: 1005. 1806.*Mimosa ligustrina* Jacq. Fragm. 29. 1801.*Inga ligustrina* Willd. Sp. Pl. 4: 1007. 1806.*Mimosa lanceolata* Poir. in Lam. Encycl. Suppl. 1: 37. 1810.*Pithecellobium ligustrinum* Klotzsch; Benth. Trans. Linn. Soc. 30: 571. 1875. Not Benth. 1844.*Feuillea ligustrina* Kuntze, Rev. Gen. Pl. 188. 1891.

A tree, 5–12 m. high, the twigs glabrous, the bark smooth or rimose. Stipular spines 0.4–2 cm. long; petioles glabrous or puberulent, 4 cm. long or shorter, with a discoid apical gland; pinnae 1 pair; leaflets 1 pair, coriaceous or subchartaceous, glabrous, 2–7.5 cm. long, obtuse or acutish; peduncles puberulent, 1–5 cm. long; spikes dense, 4–12 cm. long, the rachis puberulent or pubescent; bractlets minute, deltoid, deciduous; flowers white, puberulent or short-pubescent; calyx 2–3 mm. long; corolla 5–6 mm. long; stamen-sheath 6–8 mm. long; ovary sessile or short-stipitate; legume subterete, nearly straight, or curved, glabrous, 8–14 cm. long, about 1 cm. broad; seeds compressed, black.

TYPE LOCALITY: Nova Barcelona [Venezuela].

DISTRIBUTION: Sinaloa to Costa Rica, Colombia and Venezuela.

ILLUSTRATION: Jacq., loc. cit. *pl.* 32, *f.* 5.10. *Pithecellobium microstachyum* Standley, Journ. Wash. Acad.

13: 439. 1923.

A tree, 6–7.5 m. high, the young twigs puberulent or pilulose. Stipular spines 0.5–1.5 cm. long; petioles slender, glabrous or puberulent, the apical gland short-columnar; pinnae 1 pair; leaflets 1 pair, chartaceous, glabrous, or when young, ciliate, oblong-lanceolate to oblong-obovate, obtuse, 2–7.5 cm. long, or upper ones much smaller; peduncles slender, pilulose; spikes slender, panicle, 1–3 cm. long, the rachis pilulose; branchlets lanceolate, persistent, nearly as long as the calyx; flowers whitish, puberulent; calyx only about 1 mm. long; corolla about 2 mm. long; stamen-tube about 2 mm. long; legume short-stipitate, curved or coiled, glabrate, 8–10 mm. wide; seeds black.

TYPE LOCALITY: La Union, El Salvador.

DISTRIBUTION: El Salvador and Honduras.

11. *Pithecellobium paniculatum* Pittier, Contr. U. S. Nat. Herb.

20: 462. 1922.

A shrub about 4 m. high, the twigs glabrous. Stipular spines acicular, 10 mm. long or shorter; petioles 0.5–2.5 cm. long, pubescent, the apical gland small or obsolete; pinnae 1 pair; leaflets 1 pair, obovate or elliptic-ovate, 2–4.5 cm. long, pilose above and on the veins beneath; spikes panicle, dense, 2–4 cm. long, the peduncles and rachis villous; bractlets subulate, 1.5 mm. long, caducous; flowers villous-pubescent; calyx 1.5–2 mm. long; corolla 4–5 mm. long; stamen-tube not longer than the corolla; ovary long-stipitate.

TYPE LOCALITY: San Geronimó, Oaxaca.

DISTRIBUTION: Known only from the type locality.

12. *Pithecellobium oblongum* Benth. Lond. Journ. Bot. 3:

198. 1844.

Feuillea oblonga Kuntze, Rev. Gen. Pl. 188. 1891.

A shrub or a small tree up to about 6 m. high, the slender twigs glabrous, the stipular spines 5–10 mm. long. Petiole 1–3 cm. long, bearing a cupulate sessile gland at the summit; pinnae 1 pair; leaflets 1 pair, obliquely oval to oblong-ovate, 1.5–4 cm. long, glabrous, reticulate-veined; spikes racemose or panicle, oblong, few-several-flowered, 0.5–2 cm. long, on slender, sparingly pubescent peduncles 0.5–2 cm. long; calyx about 1 mm. long, puberulent; corolla 4–5 mm. long; stamen-tube included; legume 6–8 cm. long, 8–10 mm. wide, glabrous.

TYPE LOCALITY: Panama.

DISTRIBUTION: Panama.

13. *Pithecellobium pulchellum* Pittier, Contr. U. S. Nat. Herb.

20: 462. 1922.

A shrub, with glabrous twigs. Stipular spines stiff, 6–15 mm. long; petioles about 1.5 cm. long or shorter, the apical gland with a short stout stipe; pinnae 1 pair; leaflets 1 pair, ovate to obovate, chartaceous, 1–3 cm. long, glabrous or nearly so, rounded or acutish at the apex; spikes 1–2 cm. long, borne in axillary panicles, short-peduncled; bractlets subulate, caducous, 1–2 mm. long; flowers finely pubescent; calyx 1.5 mm. long; corolla about 5 mm. long; stamen-tube not longer than the corolla; stipe of the ovary 1 mm. long; legume glabrous, 1 cm. broad.

TYPE LOCALITY: Culiacan, Sinaloa.
DISTRIBUTION: Sinaloa.

14. *Pithecellobium circinale* (L.) Benth. Journ. Bot. 3:

201. 1844.

Mimosa circinalis L. Sp. Pl. 517. 1753.
Inga circinalis Willd. Sp. Pl. 4: 1023. 1806.
Inga spinifolia Desv. Journ. Bot. 1: 72. 1814.
Pithecolobium spinifolium Benth. Lond. Journ. Bot. 3: 200. 1844.
Feuillea circinalis Kuntze, Rev. Gen. Pl. 187. 1891.

A shrub or a tree, 5–8 m. high, with slender puberulent or short-pilose twigs. Stipular spines 4–8 mm. long, stiff; petioles short-pilose, 0.5–1.5 cm. long, the apical gland depressed; pinnae 1 pair, rarely 2 pairs; leaflets 2 or 3 pairs, orbicular-obovate to elliptic, chartaceous, glabrous, 0.5–2.5 cm. long, obtuse, the midvein excurrent as a spinulose tip; heads short-racemose; peduncles puberulent or short-pilose, 0.5–2 cm. long; flowers white, densely puberulent; calyx about 1.5 mm. long; corolla 5–6 mm. long; stamen-tube included; legume curved or coiled, flat, glabrate, 6–8 mm. broad.

TYPE LOCALITY: Hispaniola.
DISTRIBUTION: Eastern Cuba; Hispaniola.
ILLUSTRATION: Plumier, Pl. Amer. pl. 5.

15. *Pithecellobium mucronatum* Britton; Coker, in Shattuck,

Bahama Isl. 254. 1905.

A shrub about 2 m. high, the young twigs and the peduncles sparingly pubescent. Stipular spines about 1 cm. long or shorter; petioles 0.5–1 cm. long, the apical gland stout-stalked; pinnae 1 pair; leaflets 1 pair, coriaceous, glabrous, narrowly obovate, shining above, 1–2 cm. long, the midvein excurrent; peduncles much longer than the upper leaves; heads about 1.5 cm. in diameter; flowers puberulent; calyx 2–3 mm. long; corolla about 6 mm. long; stamen-tube included.

TYPE LOCALITY: Clarence Harbor, Long Island, Bahamas.
DISTRIBUTION: Type locality and vicinity.
ILLUSTRATION: Catesby, Nat. Hist. Car. pl. 97.

16. *Pithecellobium Unguis-cati* (L.) Mart. Hort. Monac. 188. 1829.

Mimosa Unguis-cati L. Sp. Pl. 517. 1753.
Mimosa guadalupensis Pers. Syn. 2: 262. 1806.
Inga guadalupensis Desv. Journ. Bot. 1: 70. 1814.
Spiroloba Unguis Raf. Sylva Tell. 119. 1838.
Feuillea Unguis-cati Kuntze, Rev. Gen. Pl. 184. 1891.
Zygia Unguis-cati Sudw. U. S. Dept. Agr. For. Bull. 14: 248. 1897.
Pithecolobium flavovirens Britton, Bull. N. Y. Bot. Gard. 3: 442. 1905.

A shrub up to 6 m. high, rarely a small tree 8 m. high, usually armed with stipular spines 2 cm. long or less, the foliage glabrous. Petioles 5–20 mm. long, bearing a round gland at the summit; pinnae 2, each with one pair of obliquely obovate or oblong, obtuse, thin leaflets, 1–5 cm. long; heads slender-peduncled, in terminal racemes, often numerous; calyx about 2 mm. long; corolla 5–6 mm. long; stamens yellowish or pinkish, the tube included; legume

coiled or curved, red, compressed, somewhat constricted between the seeds, 5–10 cm. long, about 7 mm. wide; seeds nearly black, shining, 4–6 mm. broad.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Florida; West Indies; Venezuela.

ILLUSTRATIONS: Plumier, *Pl. Amer. pl. 4*; Jacquin, *Hort. Schoenb. pl. 302*; Britton & Shafer, *N. A. Trees, f. 475*; Sargent, *Silva, N. A. pl. 145*; *Man. Trees N. A. f. 443*; ed. 2, *f. 538*; Fawcett & Rendle, *Fl. Jam. 4^o: f. 45*.

17. *Pithecellobium dulce* (Roxb.) Benth. *Lond. Journ. Bot.*
3: 199. 1844.

Mimosa dulcis Roxb. *Pl. Corom. 1: 67. 1795.*

Inga dulcis Willd. *Sp. Pl. 4: 1005. 1806.*

Inga pungens H. & B.; Willd. *Sp. Pl. 4: 1004. 1806.*

Mimosa pungens Poir. in *Lam. Encycl. Suppl. 1: 36. 1810.*

Inga javana DC. *Prodr. 2: 436. 1825.*

Acacia obliquifolia M. & G. *Bull. Acad. Brux. 10^o: 317. 1843.*

Feuillea dulcis Kuntze, *Rev. Gen. Pl. 184. 1891.*

A tree, 4–16 m. high, or shrubby, the twigs glabrous or pubescent. Stipular spines 0.4–1.6 mm. long, ascending, or often wanting; petioles slender, about 3 cm. long or much shorter; pinnae 1 pair; leaflets 1 pair, oblong to ovate or obovate, obtuse, glabrous or somewhat pubescent, 1–5 cm. long; heads small, paniced; peduncles 0.5–2.5 cm. long, pubescent; flowers whitish, densely canescent; calyx about 2 mm. long; corolla 3–4 mm. long; stamens tube short, included; legume curved or coiled, glabrate, 8–12 mm. wide, compressed.

TYPE LOCALITY: Coromandel, East Indies.

DISTRIBUTION: Sonora, Lower California and Chihuahua to Colombia and Venezuela. Widely planted in tropical and subtropical regions and locally naturalized.

ILLUSTRATION: Roxb. *loc. cit. pl. 99.*

18. *Pithecellobium keyense* Britton; Coker, in Shattuck, *Bahama Isl.*
255; *hyponym. 1905.*

Pithecollobium guadalupense Chapm. *Fl. S. U. S. 116. 1860.* Not *Inga guadalupensis* Desv. 1814.
Zygia guadalupensis Heller, *Cat. N. Amer. Pl. ed. 2, 5. 1900.*

A usually unarmed shrub or small tree, sometimes 6 m. high, the bark gray, slightly fissured, the twigs and leaves glabrous. Petioles 2–3 cm. long, bearing a round gland at the summit; pinnae 2, each bearing a single pair (rarely 2 pairs) of leaflets, which are obliquely obovate or nearly orbicular, firm in texture, 3–7 cm. long, rounded or notched at the apex, or rarely short-pointed, the margins somewhat revolute; peduncles slender, glabrous, as long as the leaves or shorter, sometimes paniced; flowering heads 2–3 cm. in diameter; calyx about 1.5 mm. long; corolla about 3 mm. long; stamens pink, the tube included; ovary pubescent; legume coiled or much curved, brown, 6–15 cm. long, 8–10 mm. broad; seeds black, shining.

TYPE LOCALITY: Nassau, New Providence; Bahamas, *W. C. Coker 57.*

DISTRIBUTION: Florida; Bahamas; Cuba; Yucatan.

ILLUSTRATIONS: Britton & Shafer, *N. Amer. Trees, f. 476, 477*; *Addisonia pl. 26.*

19. *Pithecellobium bahamense* Northrop, *Mem. Torr. Club*
12: 38. 1902.

A shrub, 3 m. high or less, the branches slender, glabrous. Petioles 1–10 mm. long, bearing a stout-stalked gland at the summit; stipular spines 3–7 mm. long; pinnae a single pair; leaflets 1 pair or sometimes 2 pairs, sessile, obliquely oblong, oblanceolate or obovate, subcoriaceous, 1–2.5 cm. long, glabrous, obtuse or mucronate at the apex, shining above, dull beneath; peduncles 2–3 cm. long; flowering heads 2–3 cm. in diameter; calyx about 2 mm. long, corolla about 4 mm. long, pink or crimson; stamens pink or crimson, the tube included; ovary puberulent; legume coiled or much curved, 8–12 cm. long, about 1 cm. wide; seeds black.

TYPE LOCALITY: Nassau, New Providence, Bahamas.

DISTRIBUTION: Bahamas; Cuba.

20. *Pithecellobium Hystrix* (A. Rich.) Benth. in Hook. Ic.*pl. 1168.* 1876.*Inga Hystrix* A. Rich. Ess. Fl. Cub. 1: 471. 1845.*Calliandra Hystrix* Griseb. Cat. Pl. Cub. 83. 1866.*Pithecolobium calliandriiflorum* C. Wright; Griseb. Cat. Pl. Cub. 83. 1866.*Feuilleea Hystrix* Kuntze, Rev. Gen. Pl. 188. 1891.

An intricately branched shrub, 0.5–2 m. high, the twigs very slender, but stiff, puberulent or glabrate, the internodes mostly short. Stipular spines acicular, 4–12 mm. long; petioles 1–6 mm. long; pinnae a single pair; leaflets 1 or 2 pairs, obliquely obovate, 3–8 mm. long, sessile, subcoriaceous, rounded at the apex, rather strongly few-veined, shining above, dull beneath; peduncles 4–20 mm. long; heads few-several-flowered; calyx 2 mm. long; corolla about 5 mm. long; stamens rose or pink, the tube included; legume curved into a nearly or quite complete circle, 6–12 cm. long, 5–8 mm. wide.

TYPE LOCALITY: Near Cabaña, Cuba.

DISTRIBUTION: Bahamas; Cuba.

ILLUSTRATION: Benth. loc. cit.

21. *Pithecellobium* (?) *furcatum* Benth. Lond. Journ.

Bot. 5: 106. 1846.

Feuilleea furcata Kuntze, Rev. Gen. Pl. 187. 1891.

A nearly unarmed shrub, the twigs at first puberulent but soon glabrate. Rachis of the leaf winged, glabrous, bearing a sessile cup-shaped gland at the top; pinnae 1 pair; rachilla also winged, bearing a small gland at the top; leaflets 1 pair, obovate-oblong, acuminate, 7–10 cm. long, oblique, glabrous; peduncles slender, 3 cm. long; spikes 1–2 cm. long; bractlets minute, ovate, persistent; calyx 5 mm. long, puberulent; corolla 10 mm. long, villous; stamens 4 cm. long, the tube slender, long-exserted.

TYPE LOCALITY: On the Río Teapa, Oaxaca.

DISTRIBUTION: Oaxaca and Chiapas.

22. *Pithecellobium* (?) *macrandrium* Donn. Smith, Bot. Gaz.

40: 3. 1905.

A small tree, about 5 m. high, the twigs glabrous. Stipular spines 4–10 mm. long; leaves 2–5 dm. long, the petiole 3–8 cm. long; the rachis pubescent, bearing scutellate stipitate glands between the pinnae; pinnae 10–17 pairs, short-stalked; leaflets 16–40 pairs, oblong, obtuse, apiculate, 9–18 mm. long, pubescent or glabrate; peduncles solitary in the upper axils, stout, pubescent or glabrate, 5–12 cm. long; flowers puberulent, densely spicate; spikes 4–8 cm. long; bractlets ovate, sharply acuminate, persistent, 1.5–2 mm. long; calyx about 2 mm. long; corolla about 10 mm. long; stamen-tube 2–2.5 cm. long; ovary sessile, pubescent; young legume curved, flat.

TYPE LOCALITY: Cubilquitz, Alta Vera Paz, Guatemala.

DISTRIBUTION: Guatemala.

23. *Pithecellobium* (?) *Peckii* Blake, Contr. Gray Herb. 52: 71. 1917.

A small tree, the twigs and leaves glabrous or somewhat puberulent. Stipular spines 2–3 mm. long; petioles about 2 cm. long; pinnae 2 or 3 pairs; rachis bearing a clavate gland; leaflets 5–11 pairs, subsessile, oval or oblong, 1–2.6 cm. long, the apex truncate, rounded or retuse, mucronulate, both surfaces reticulate-veined; spikes axillary in 3's, oblong, 2.3–3.5 cm. long, sessile, the rachis puberulent; bractlets deltoid, 0.8 mm. long, persistent; flowers sessile; calyx turbinate-subhemispheric, 1.2 mm. long; sparsely strigillose; corolla yellow, 6.5 mm. long, the tube glabrous, the teeth strigillose; stamen-tube about 1.5 mm. long; ovary stipitate, densely puberulent; legume circinnate, about 1.2 cm. long, glabrous, subligneous, 1.2–1.7 cm. wide; seeds brown-black.

TYPE LOCALITY: British Honduras.

DISTRIBUTION: Known only from the type locality.

24. *Pithecolobium* (?) *Bertolonii* Benth. *Trans. Linn. Soc.* 30:
588. 1875.

Mimosa monilifera Bertol. *Novi Comm. Bonon.* 4: 441. 1840. Not *Pithecolobium moniliferum* Benth. 1844.
Fevillea Bertolonii Kuntze, *Rev. Gen. Pl.* 187. 1891.

Branches pubescent. Leaves petioled; petioles pubescent; pinnae 2 pairs; leaflets 2 pairs, elliptic, obtuse, pilose; glands urceolate, borne at the end of the petiole and between the leaflets; flowers capitate, the heads racemose, stalked or subsessile, the stalks spreading or reflexed; legume compressed, torulose, constricted between the seeds, falcate, 3-4-seeded, red, velutinous; all pubescence white.

TYPE LOCALITY: Esquintla, Guatemala.

DISTRIBUTION: Known only from the type locality, and to us only from description.

4. *JUPUNBA* Britton & Rose, gen. nov.

Unarmed trees, with bipinnate glanduliferous leaves and small racemose or capitate perfect flowers on axillary peduncles. Calyx 5-toothed. Corolla 5-lobed. Stamens many, united below into a tube. Legume flat, coriaceous, curved, coiled or circinate, dehiscent, the valves (as far as known) twisting after dehiscence. Seeds swollen, exarillate.

Type species, *Acacia Jupunba* Willd.

A. Leaflets obovate to oval, 0.8-6 cm. long, 3-14 pairs on each pinna.

1. Flowers racemose.

a. Racemes elongated, 3-8 cm. long.

Pinnae 4-9 pairs; leaflets 10-14 pairs, 0.8-2.5 cm. long, rhomboid.

1. *J. Alexandri*.

Pinnae 1-3 pairs; leaflets 3-6 pairs, 3-5 cm. long, ovate to elliptic or obovate.

2. *J. troyana*.

b. Racemes short, 1.5 cm. long or less.

Calyx subtruncate at base; seeds oblong, about twice as long as wide.

3. *J. savannarum*.

Calyx narrowed at base; seeds suborbicular to obovate.

Pinnae 3 or 4 pairs; leaflets 4-7 pairs.

Seeds orbicular, blue and white.

4. *J. discolor*.

Seeds broadly obovate, dark brown.

5. *J. glauca*.

Pinnae 1 or 2 pairs; leaflets 2-5 pairs.

Calyx truncate, its teeth minute, mucronulate.

6. *J. truncata*.

Calyx-teeth large, broadly ovate.

7. *J. obovalis*.

Calyx short-campanulate; stamen-tube short.

8. *J. pinetorum*.

Calyx long-campanulate; stamen-tube 5-6 mm. long.

2. Flowers capitate.

Venation of the leaflets reticulated.

9. *J. Jupunba*.

Venation of the leaflets closely parallel.

10. *J. nervosa*.

B. Leaflets oblong to linear, 2-16 mm. long, 6-many pairs on each pinna.

Leaflets narrowed at base.

Leaflets oblong, 10-16 mm. long.

11. *J. asplenifolia*.

Leaflets oblong-obovate, 5-9 mm. long.

12. *J. Abbottii*.

Leaflets rounded or subcordate at base, oblong.

Leaflets 2-5 mm. long, coriaceous, lustrous.

Petioles and rachis puberulent; leaflets 2-3 mm. long.

13. *J. nipensis*.

Petioles and leaf-rachis tomentulose; leaflets 3-5 mm. long.

14. *J. oppositifolia*.

Leaflets 5-7 mm. long, chartaceous, dull.

15. *J. trinitensis*.

1. *Jupunba Alexandri* (Urban) Britton & Rose.

Pithecolobium Jupunba Alexandri Urban, *Symb. Ant.* 2: 258. 1900.

Pithecolobium Alexandri Urban, *Symb. Ant.* 5: 358. 1908.

Pithecolobium Alexandri intermedium Urban, *Symb. Ant.* 5: 359. 1908.

A tree up to about 14 m. high, the young twigs, petioles and leaf-rachis short-pilose. Pinnae 4-9 pairs; rachis with or without a flat orbicular gland below each pair; leaflets 10-14 pairs, rhomboid, chartaceous, 0.8-2.5 cm. long, glabrous, obtuse, strongly reticulate-veined; peduncles sparingly pilose or glabrous, 3-8 cm. long; racemes many-flowered, 3-6 cm. long; pedicels 1-4 mm. long; flowers yellowish, fragrant; calyx turbinate, short-pilose, 3 mm. long; corolla about 6 mm. long, its tube glabrous, its lobes puberulent; stamen-tube included; legume circinate, about 8 cm. long, 10-13 mm. wide, its margins sinuate; seeds blue and white, obovoid, 6-7.5 mm. long.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica.

2. *Jupunba troyana* (Urban) Britton & Rose.

Pithecolobium Alexandri troyanum Urban, Symb. Ant. 5: 359. 1908.

A tree up to 15 m. high, the young twigs, petioles, leaf-rachis and peduncles glabrous or puberulent. Pinnae 1-3 pairs, with a rather large orbicular cupulate gland between each pair; leaflets 3-6 pairs, ovate to obovate or elliptic, submembranous, 3-5 cm. long, obtuse, reticulate-veined, mostly with a small orbicular gland between each pair; peduncles slender, glabrous or puberulent, 2-4 cm. long; racemes 4-8 cm. long; pedicels only about 1 mm. long; calyx narrowly turbinate, glabrate, 2-2.5 mm. long; corolla 5-6 mm. long, its lobes puberulent; stamen-tube included; legume circinate, 5-8 cm. long, about 12 mm. wide, its margins sinuate; seeds blue and white, obovoid, about 7 mm. long.

TYPE LOCALITY: Near Troy, Jamaica.

DISTRIBUTION: Jamaica.

3. *Jupunba savannarum* (Britton) Britton & Rose.

Pithecolobium savannarum Britton, Bull. Torr. Club 41: 4. 1914.

A tree up to 7 m. high, with smooth bark, the foliage finely and densely puberulent when young, glabrous or sparingly puberulent when old. Leaves 1.5-2 dm. long, the rather stout petioles 1-2.5 cm. long; pinnae about 4 pairs, the glands somewhat elevated; leaflets 4-6 pairs, obliquely obovate, 1.5-3 cm. long, chartaceous, loosely reticulate-veined, deep green and somewhat shining above, pale and dull beneath, obtuse or retuse at the apex, acute at the base; peduncles slender, glabrous, 7-9 cm. long; flowers short-racemose, white; pedicels glabrous, 3-6 mm. long; calyx 3-4 mm. long, subtruncate at the base, campanulate, its teeth acute; corolla appressed-pubescent, 8 mm. long, its lobes ovate-oblong; stamens united about one-third their length; ovary and young legume densely pubescent; old legumes 8-10 cm. long, the valves doubly coiled after dehiscence, 4-6 mm. wide across the seed cavities, 2 mm. wide between them; seed-cavities oblong, 8-10 mm. long.

TYPE LOCALITY: Along a water course on barren savannas southeast of Holguin, Oriente, Cuba.

DISTRIBUTION: Known only from the type locality.

4. *Jupunba discolor* (Britton) Britton & Rose.

Pithecolobium discolor Britton, Bull. Torr. Club 41: 4. 1914.

A shrub 3 m. high, or a small tree up to 7 m. high, the young twigs and leaves densely puberulent, the old leaves glabrous or somewhat puberulent, 1-2 dm. long, the stout petioles 2 cm. long or less, the glands on the rachis between the pinnae orbicular, small. Pinnae 3 or 4 pairs; leaflets 4-6 pairs, obovate, chartaceous, 1.5-2.5 cm. long, dark green above, pale beneath, loosely reticulate-veined, obtuse or retuse, obliquely narrowed at the base; peduncles 5-11 cm. long; flowers short-racemose; pedicels puberulent, 4-6 mm. long; calyx narrowly campanulate, 4-5 mm. long, narrowed to the base, puberulent, its teeth ovate; corolla 7-8 mm. long, campanulate-funnelform, pubescent, its lobes oblong-ovate, ciliate; stamens 1.5-2 cm. long, the filaments united about one-fourth their length; legume coiled, 6-8 cm. long, 8-10 mm. wide, constricted between the seeds; seeds blue and white, shining, orbicular, 4 mm. broad.

TYPE LOCALITY: Batabano, Cuba.

DISTRIBUTION: Central and western Cuba; Bahamas.

5. *Jupunba glauca* (Urban) Britton & Rose.

Pithecolobium glaucum Urban, Symb. Ant. 7: 227. 1912.

A tree, the young twigs and petioles densely brownish-tomentulose. Petioles 1-3 cm. long, sometimes bearing a gland 4 mm. in diameter; pinnae 3 or 4 pairs, the glands small, concave; leaflets 4-8 pairs, obovate or subrhombic, chartaceous, 1.5-2.5 cm. long, reticulate-veined, glabrous, or sparingly pilose on the veins beneath, the apex rounded, the base narrowed, glaucous above, pale beneath; peduncles short-pilose, solitary or binate, 5-7 cm. long; flowers

short-racemose, white; calyx turbinate, 3 mm. long, its teeth short; corolla 7 mm. long; stamen-tube about 5 mm. long; legume circinate, 7-8 mm. broad, the coil about 4 cm. in diameter, glabrous, reticulate-veined, constricted between the obovate, dark brown seeds.

TYPE LOCALITY: Bahoruco, near Barahona, Santo Domingo.
DISTRIBUTION: Type locality and vicinity.

6. *Jupunba truncata* (Britton) Britton & Rose.

Pithecolobium truncatum Britton, Bull. Torr. Club 41: 5. 1914.

A tree up to 12 m. high, the bark rough, the young twigs and leaves brownish-puberulent, the old foliage glabrous. Leaves 15 cm. long or less; petiole stout, 1-2 cm. long; glands oblong-orbicular; pinnae 1 or 2 pairs; leaflets 3 or 4 pairs (on leaves of shoots 1 or 2 pairs), obovate, coriaceous, 1.5-4 cm. long (those of shoots larger and suborbicular), obtuse, narrowed at the base, pinnately veined; peduncles 4-9 cm. long; flowers short-racemose; pedicels stout, puberulent, about 2 mm. long; calyx broadly campanulate, puberulent, coriaceous, 3 mm. long, the limb truncate, the teeth minute, mucronate; corolla finely pubescent, its tube 5-6 mm. long, its lobes 3 mm. long, lanceolate, acute; stamens about 2.5 cm. long, the filaments united about one-fourth their length; legume curved to a nearly complete circle, 6 or 7 cm. long, 8-10 mm. wide, scarcely or not at all constricted between the seeds; seeds blue and white, somewhat compressed, obovate, shining, 4 or 5 mm. long.

TYPE LOCALITY: El Cobre, west of Santiago, Cuba.
DISTRIBUTION: Oriente, Cuba.

7. *Jupunba obovalis* (A. Rich.) Britton & Rose.

Inga obovalis A. Rich. Ess. Fl. Cub. 1: 472. 1845.

Calliandra revoluta Griseb. Cat. Pl. Cub. 83. 1866.

Pithecolobium obovale C. Wright; Sauvalle, Anales Acad. Habana 5: 407. 1869.

Feuilleea obovalis Kuntze, Rev. Gen. Pl. 188. 1891.

A tree up to 20 m. in height, the young twigs, petioles and peduncles puberulent, the mature foliage glabrous. Pinnae mostly 2 pairs, with a thick elevated oblong or suborbicular gland 4-8 mm. long between the lower pair and a small orbicular gland between the upper; leaflets 3-5 pairs, broadly obovate, 2-6 cm. long, subcoriaceous, reticulate-veined, dark green above, pale beneath, the apex rounded, the base narrowed; peduncles 3-8 cm. long; flowers short-racemose; pedicels 2-6 mm. long; calyx turbinate, 3-4 mm. long, puberulent or glabrate; corolla about 6 mm. long, deeply lobed, puberulent; stamen-tube short; legume circinate, about 12 mm. broad, the coil 4-5 cm. in diameter, glabrous; seeds ellipsoid, bluish, 4 mm. long.

TYPE LOCALITY: Vuelta de Abajo, Cuba.
DISTRIBUTION: Pinar del Rio and Isle of Pines, Cuba.

8. *Jupunba pinetorum* (Britton) Britton & Rose.

Pithecolobium pinetorum Britton, Bull. Torr. Club 41: 6. 1914.

A tree up to 10 m. high, the young twigs and leaves puberulent, the old foliage nearly or quite glabrous. Leaves 2 dm. long or less; petioles stout, 1.5-3 cm. long; glands oblong, somewhat elevated; pinnae 1 or 2 pairs; leaflets 3 or 4 pairs, coriaceous, oblong or obovate-oblong, pinnately and loosely reticulate-veined, rounded at the apex, narrowed or obtuse at the base, 3-6 cm. long; peduncles 3-6 cm. long; calyx coriaceous, campanulate, 5 mm. long, its teeth broadly obovate, rounded; corolla pubescent, its tube about 6 mm. long, its lobes 3 mm. long, ovate-lanceolate, acute; stamens 2-2.5 cm. long, united about one-fourth their length; legume curved into a nearly complete circle, about 7 cm. long, 12 mm. wide, flat, not constricted between the seeds; seeds blue and white, shining, orbicular-obovate, 5-6 mm. long.

TYPE LOCALITY: Near Paso Estancia, Oriente, Cuba.
DISTRIBUTION: Mountains of Oriente, Cuba.

9. *Jupunba Jupunba* (Willd.) Britton & Rose.

- Acacia Jupunba* Willd. Sp. Pl. 4: 1067. 1806.
Mimosa trapezifolia Vahl, Eclog. 3: 36. 1807.
Inga trapezifolia DC. Prodr. 2: 441. 1825.
Pithecolobium trapezifolium Benth. in Hook. Journ. Bot. 2: 142. 1840.
Pithecolobium micradenium Benth. Lond. Journ. Bot. 3: 217. 1844.
Feuillea Jupunba Kuntze, Rev. Gen. Pl. 185. 1891.
Feuillea micradenia Kuntze, Rev. Gen. Pl. 188. 1891.
Pithecolobium Jupunba Urban, Symb. Ant. 2: 257. 1900.

A tree up to 20 m. high, the young twigs, petioles, leaf-rachis, and peduncles puberulent. Pinnae 2-6 pairs; glands small, orbicular, borne between the pinnae and sometimes on the petiole; leaflets 3-8 pairs, rhombic to rhombic-obovate, chartaceous, reticulate-veined, 1-6 cm. long, rounded or obtuse; peduncles about 8 cm. long, or shorter; flowers capitate; calyx puberulent, 2.5-3 mm. long; corolla about twice as long as the calyx; stamen-tube included; legume circinate, puberulent, 10-15 mm. broad, more or less constricted between the sub-orbicular seeds.

TYPE LOCALITY: Para, Brazil.
 DISTRIBUTION: Guadeloupe to Trinidad, Colombia, and Brazil.
 ILLUSTRATION: Vahl, Eclog. pl. 28.

10. *Jupunba* (?) *nervosa* (Urban) Britton & Rose.

Pithecolobium nervosum Urban, Symb. Ant. 2: 257. 1900.

A tree with nearly glabrous foliage, the young twigs sparingly pilose. Pinnae 1 pair, with a rounded concave gland between them; leaflets 3 or 4 pairs, obliquely oblong to rhomboid, chartaceous, shining, 3-5 cm. long, pinnately closely parallel-veined and reticulated, the midvein excentric, the apex acutish or obtuse, the base rounded; peduncles 2-3 cm. long; flowers capitate; calyx small, cupuliform, pilulose, its teeth short; corolla glabrous, much longer than the calyx; ovary glabrous.

TYPE LOCALITY: Near Corail, Haiti.
 DISTRIBUTION: Known only from the type locality.

11. *Jupunba asplenifolia* (Griseb.) Britton & Rose.

Pithecolobium asplenifolium Griseb. Cat. Pl. Cub. 83. 1866.
Feuillea asplenifolia Kuntze, Rev. Gen. Pl. 187. 1891.

Twigs puberulent or glabrous. Leaves nearly glabrous; pinnae 2-4 pairs, with a depressed gland between each pair; leaflets 6-12 pairs, oblong to oval or oblong-obovate, coriaceous, shining, 10-16 mm. long, dark green above, pale and sparingly pubescent beneath, pinnately few-veined, the apex obtuse, the base narrowed; peduncles elongated; flowers glabrate, pedicelled, short-racemose; pedicels about 4 mm. long; calyx about 4 mm. long; corolla about twice as long as the calyx; stamen-tube included; legume circinate, glabrous, about 7 cm. long, 6-8 mm. wide, its margins subsinuate.

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

12. *Jupunba Abbottii* (Rose & Leonard) Britton & Rose.

Pithecolobium Abbottii Rose & Leonard, Journ. Wash. Acad. 17: 254. 1927.

A large tree, the twigs, petioles, and leaf-rachis densely brown-puberulent. Petioles very short; pinnae 3 or 4 pairs, with a small orbicular gland just below each pair; leaflets 5-12 pairs, oblong-obovate, 5-9 mm. long, coriaceous, indistinctly pinnately veined, dark green above, pale beneath, the apex rounded, the base narrowed; peduncles slender, about 3 cm. long; flowers capitate, pedicelled; pedicels 2-3 mm. long; calyx glabrous, campanulate, 2 mm. long, its teeth broad and short; corolla 5 mm. long, its lobes puberulent; stamen-tube included; legume 4-6 cm. long, 8 mm. wide, glabrous, constricted between the seeds.

TYPE LOCALITY: Shore of San Lorenzo Bay, south coast of Samana Bay, Santo Domingo.
 DISTRIBUTION: Known only from the type locality.

13. *Jupunba nipensis* (Britton) Britton & Rose.

Pithecolobium nipense Britton, Bull. Torr. Club 41: 6. 1914.

A shrub or a tree up to 10 m. high, the young twigs, petioles and rachises permanently short-pubescent. Leaves 4-6 cm. long; petioles 6 mm. long or less; glands circular, elevated; pinnae 3 or 4 pairs; leaflets 10-16 pairs, oblong, coriaceous, approximate, 2-3 mm. long, 1.5 mm. wide, slightly inequilateral, obtuse at the apex, rounded or subtruncate at base, glabrous, dark green and lustrous above, pale and dull green beneath with the midvein prominent, glabrous or with a few scattered hairs; legume curved into a partly complete circle, 6-10 cm. long, 7-8 mm. wide, compressed, glabrous, short-stipitate, not constricted between the seeds, or occasionally constricted; seeds blue, shining, oblong-obovate to obovate-orbicular, 6 mm. long.

TYPE LOCALITY: Woodfred, Sierra de Nipe, Oriente, Cuba.

DISTRIBUTION: Mountains of northern Oriente, Cuba.

14. *Jupunba oppositifolia* (Urban) Britton & Rose.

Pithecolobium oppositifolium Urban, Symb. Ant. 2: 258. 1900.

Twigs, petioles, and leaf-rachis densely brown-puberulent. Petioles stout, 1-2 cm. long; pinnae 12-17 pairs, closely approximate, with small oblong glands between or below the pairs; leaflets 18-30 pairs, oblong or narrowly oval, 3-5 mm. long, dark green above, pale beneath and puberulent on the veins, the apex and base rounded or obtuse; peduncles 5-8 cm. long, pilose; flowers capitate, subsessile; calyx 3.5 mm. long, short-pilose; corolla 5 mm. long, its lobes lanceolate; stamen-tube much shorter than the corolla; ovary tomentose.

TYPE LOCALITY: Mountains near Furcy, vicinity of Port-au-Prince, Haiti.

DISTRIBUTION: Mountains near Furcy, Haiti.

15. *Jupunba trinitensis* (Britton) Britton & Rose.

Pithecolobium trinitense Britton, Bull. Torr. Club 41: 7. 1914.

A tree up to 10 m. high; young twigs, petioles and rachises densely brown-puberulent. Leaves 10-15 cm. long; glands circular, 1 mm. in diameter; petioles 1.5 cm. long or less; pinnae 6-8 pairs, approximate; leaflets 12-16 pairs, oblong, chartaceous, 5-7 mm. long, 3 mm. wide or less, rounded at the apex, obliquely obtuse at the base, glabrous or nearly so and dark green above, pale, and pubescent beneath, at least on the veins, the midvein prominent; peduncles densely puberulent when young, glabrous when old; young flower-heads densely puberulent; flowers apparently capitate; legume curved into a nearly complete circle, about 6 cm. long and 7 mm. wide, somewhat constricted between the seeds; seeds blue, shining, orbicular-obovoid, somewhat compressed, 5 mm. long.

TYPE LOCALITY: Between El Porvenir and Aguacate, Trinidad Mountains, Santa Clara, Cuba.

DISTRIBUTION: Trinidad Mountains and Banao Mountains, Santa Clara, Cuba.

5. PUNJUBA Britton & Rose, gen. nov.

Unarmed trees with short-petioled, bipinnate leaves, the pinnae a single pair, the elliptic to ovate-lanceolate leaflets few, large. Flowers long-racemose. Calyx tubular-obconic, 5-toothed. Corolla nearly tubular, deeply 5-lobed, the lobes narrowly oblong. Stamens many, united below into a tube nearly as long as the corolla. Ovary sessile. Legume coriaceous, compressed, strongly curved, dehiscent, the margins of its valves not separating. Seeds oval, flat, exarillate.

Type species: *Pithecolobium racemiflorum* Donn.-Smith.

1. *Punjuba racemiflora* (Donn.-Smith) Britton & Rose.

Pithecolobium racemiflorum Donn.-Smith, Bot. Gaz. 56: 57. 1913.

A tree, 6-7 m. high, the twigs and leaves glabrous. Stipules subulate, 2-3 mm. long; petioles 3-4.5 cm. long; leaflets 2 or 3 pairs, short-stalked, chartaceous, reticulate-veined, 5-15 cm. long, the apex acuminate, the base narrowed; racemes axillary, elongated, 3.5 dm.

long, loosely many-flowered, puberulent above; pedicels about 6 mm. long; bractlets minute, caducous; calyx about 4 mm. long; corolla 6-7 mm. long; stamen-tube about 6 mm. long; legume curved nearly into a circle, 10-15 cm. long, 12-15 mm. wide, constricted between the 3-5 oval seeds.

TYPE LOCALITY: Las Vueltas, Tucurrique, Costa Rica.

DISTRIBUTION: Known only from the type locality.

6. COJOBA Britton & Rose, gen. nov.

Unarmed shrubs or trees. Leaves twice pinnate or in a few species once pinnate. Pinnae 1 to several pairs. Leaflets few or many pairs. Petiole and rachis gland-bearing. Inflorescence capitate on axillary peduncles. Calyx tubular. Stamens united below into a sheath. Legume terete, moniliform, its valves twisting after dehiscence.

Type species, *Mimosa arborea* L.

A. Leaves bipinnate.

A. Leaflets numerous, relatively small, acute, acuminate or obtuse; pinnae 1-16 pairs.

a. Leaflets linear to linear-lanceolate or oblong, 8-15 mm. long.

Pinnae 5-16 pairs.

Peduncles eglandular.

Leaflets linear-oblong to linear-lanceolate.

Leaflets oblong.

Peduncles with a large curved black gland near the summit;

leaflets narrowly linear-lanceolate.

Pinnae only 1 pair; leaflets oblong, obtuse.

b. Leaflets lanceolate to oblong-obovate, 1.5-5 cm. long.

Leaflets lanceolate or oblong-lanceolate, acute or acuminate.

Leaflets palmately veined at base.

Leaflets pinnately veined.

Petioliules thickened; bractlets linear, persistent, longer than

the calyx.

Venation of leaflets obscure.

Leaflets strongly reticulate-veined.

Petioliules not thickened; bractlets minute.

Pinnae 4-7 pairs; leaflets subcordate.

Pinnae 3 pairs; leaflets rounded at base.

Leaflets oblong to obovate, obtuse.

Leaflets glabrous; peduncles ebracteolate.

Leaflets pubescent and ciliate; peduncles 1-bracted.

B. Leaflets only 1-5 pairs, large, up to 16 cm. long, acuminate; pinnae

1 pair.

Leaflets 3-5 pairs; peduncle 8-16 cm. long; legume 12-22 cm. long.

Leaflets 1-3 pairs; peduncle up to 5 cm. long.

Leaflets cuneate at base; legume 10 cm. long.

Leaflets obtuse at base.

B. Leaves once pinnate.

Leaflets 4-8 pairs, 2-6 cm. long, 1-2.5 cm. wide.

Leaflets 1-5 pairs, 3-12 cm. long, 2-5 cm. wide.

Leaf-rachis short-pilose.

Leaves glabrous.

1. *C. arborea*.

2. *C. guatemalensis*.

3. *C. Tuerckheimi*.

4. *C. micrantha*.

5. *C. Tonduzii*.

6. *C. Donnell-Smithii*.

7. *C. sophorocarpa*.

8. *C. costaricensis*.

9. *C. tenella*.

10. *C. gracilliflora*.

11. *C. Recordii*.

12. *C. dtenata*.

13. *C. Standleyi*.

14. *C. Valerioi*.

15. *C. tubulifera*.

16. *C. rufescens*.

17. *C. glabra*.

1. *Cojoba arborea* (L.) Britton & Rose.

Mimosa arborea L., Sp. Pl. 519. 1753.

Mimosa filicifolia Lam. Encycl. 1: 13. 1783.

Mimosa divaricata Jacq. Hort. Schoenb. 3: 76. 1798.

Acacia arborea Willd., Sp. Pl. 4: 1064. 1806.

Pithecolobium filicifolium Benth. Lond. Journ. Bot. 3: 205. 1844.

Feuillea filicifolia Kuntze, Rev. Gen. Pl. 187. 1891.

Pithecolobium arboreum Urban, Symb. Ant. 2: 259. 1900.

Samanea arborea Ricker in Bailey, Cycl. Hort. 3066. 1917.

A tree, 15-20 m. high with a spreading top and a trunk 1-1.3 m. in diameter, the twigs, petioles, leaf-rachis, and peduncles with short spreading pubescence. Pinnae 8-16 pairs, with a small brownish gland on the rachis between each pair; leaflets 20-40 pairs, obliquely linear-oblong to linear-lanceolate, 8-12 mm. long; peduncles slender, 5-10 cm. long; heads many-flowered; calyx 2 mm. long, usually glabrous except the short teeth; corolla 6-8 mm. long, glabrous; stamens white, their tube included; legume somewhat fleshy, more or less

coiled in age, crimson within, puberulent, or becoming glabrous, smooth or wrinkled; seeds black.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica; Cuba; Hispaniola; Porto Rico; Veracruz; Honduras.

ILLUSTRATIONS: Sloane, *Hist. Jam. pl. 182, f. 1, 2*; Pluk. *Phyt. pl. 251, f. 2*; Jacq. *Hort. Schoenbr. pl. 395*.

2. *Cojoba guatemalensis* Britton & Rose, sp. nov.

Twigs, petioles, leaf-rachis and peduncles densely brown-tomentulose. Pinnae 4-6 pairs; leaflets 8-17 pairs, narrowly oblong, chartaceous, 8-9 mm. long, palmately veined at the base, glabrous, obtuse; glands orbicular, sessile, borne between each pair of pinnae; peduncle about 3 cm. long; legume about 9 cm. long, puberulent.

Volcan de Acatenango, Guatemala, 1892, *John Donnell Smith 2831*.

3. *Cojoba Tuerckheimii* Britton & Rose, sp. nov.

Twigs brownish, scurfy-pubescent. Leaves 1.5-2 dm. long; rachis puberulent; glands cupulate, borne on the petiole and between the pinnae, sessile; pinnae about 15 pairs; leaflets 20-30 pairs, linear-oblong, oblique, 8-12 mm. long, glabrous; peduncles axillary, often in 3's, slender, 3-5 cm. long, short-pubescent, bearing a large curved gland near the top; calyx about 1 mm. long, the teeth brownish-pubescent; corolla-tube slender, 4 mm. long, glabrous, its lobes brownish-pubescent; stamens about 10 mm. long, their tube about as long as the corolla.

Coban, Guatemala, May, 1907, *Tuerckheim II, 1769*.

4. *Cojoba micrantha* (Benth.) Britton & Rose.

Pithecolobium micranthum Benth. *Trans. Linn. Soc.* 30: 589. 1875.

Fevillea micrantha Kuntze, *Rev. Gen. Pl.* 188. 1891.

Glabrous, with short verrucose viscid twigs. Pinnae 1 pair; leaflets 8-12 pairs, oblong, obtuse, coriaceous, shining, 5-8 mm. long; glands scutellate, sessile, borne between the pinnae and between the leaflets; peduncles 1-2 cm. long, often in pairs; calyx only about 0.5 mm. long; corolla 2 mm. long; stamen-tube very short; legume curved, subterete, about 4 cm. long, 6 mm. thick.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Known only from the type locality.

5. *Cojoba Tonduzii* Britton & Rose, sp. nov.

Young twigs, petioles, leaf-rachis, and peduncles brownish-pubescent. Leaves large; glands on petioles and between pinnae cup-shaped; pinnae 5 to 7 pairs; leaflets about 12 pairs, oblong, 1.5-2 cm. long, somewhat 3-nerved at base, glabrous but ciliate; peduncles axillary, sometimes in 3's, slender, 3-4.5 cm. long; flowers appressed-pubescent, subtended by minute bractlets; calyx 3 mm. long; corolla 5-6 mm. long; stamens white, not much longer than the corolla.

Volcan de Pacaya, Guatemala, April 7, 1921, *Tonduz 450*.

6. *Cojoba Donnell-Smithii* Britton & Rose, sp. nov.

A shrub or tree, 2-7 m. high, the young branches and peduncles densely brown-pubescent. Leaves 1-4 dm. long; pinnae 2 to 7 pairs, with a small orbicular gland between each pair; leaflets 8-18 pairs, obliquely lanceolate, 1-2 cm. long, puberulent on the midvein beneath; peduncles slender, up to 6 cm. long; flowers numerous, subtended by linear, elongated bractlets; calyx minute, the teeth brownish-pubescent; corolla slender, about 9 mm. long; stamen-tube included; legume slender, 10-12 cm. long.

Chiapas and Guatemala. Type from Yzabel, Guatemala, April, 1889, *John Donnell Smith 1733*.

7. *Cojoba sophorocarpa* (Benth.) Britton & Rose.

Pithecolobium sophorocarpum Benth.; Benth. & Hook. Gen. Pl. 1: 598. 1865.
Feuillea sophorocarpa Kuntze, Rev. Gen. Pl. 189. 1891.

A shrub or tree, the twigs, leaf-rachis, and peduncles puberulent. Leaves large; stipules small, caducous; pinnae 1 to 5 pairs (3 pairs in our specimen) with a small orbicular scurfy gland between each pair; leaflets 5 to 12 pairs, oblong-lanceolate, somewhat oblique, reticulate-veined, acute, 3-5 cm. long, puberulent on the midvein beneath; petiolules thickened; peduncles axillary, slender, 3-5 cm. long; "flowers sessile, capitate, glabrous; calyx 2 mm. long; corolla 5 mm. long; stamens twice as long as the corolla, their tube included"; legume fleshy; "seeds about 9, ovoid to globose, 12 mm. in diameter."

TYPE LOCALITY: Central America, probably Costa Rica.
DISTRIBUTION: Costa Rica.

8. *Cojoba costaricensis* Britton & Rose, sp. nov.

A round-headed tree, the twigs, petioles, leaf-rachis, and peduncles densely brown-puberulent. Pinnae 4-7 pairs, with a small orbicular cupulate gland between each pair; leaflets 10-14 pairs, oblong-lanceolate, membranous, 1.5-2.5 cm. long, puberulent on the veins beneath, the apex acutish, the base rounded; peduncles slender, 3-6 cm. long; flowers numerous, subtended by minute bractlets; calyx about 3 mm. long; corolla 6-7 mm. long; stamen-tube included.

Costa Rica. Type from La Palma, 1459 m. altitude, 1898, *Tonduz 12503*.

9. *Cojoba tenella* Britton & Rose, sp. nov.

A shrub, the twigs slender, densely brown-pubescent. Petiole and rachis pubescent; glands cup-shaped, sessile, small, borne on the petiole between the pinnae, and sometimes between the pairs of leaflets; pinnae 3 pairs; leaflets 8-10 pairs, lanceolate, subcordate and oblique at base, thin, somewhat veiny beneath but hardly so above, glabrous, or sometimes puberulent, especially along the midvein above, pale beneath and hairy along the veins, sharply acute; peduncle slender, 4-7 cm. long, pubescent, bearing near the top a conspicuous bract 4 mm. long; bractlets small, persistent, as long as the calyx; calyx 2 mm. long, its tube glabrous, its teeth hairy; corolla 7 mm. long, glabrous except the brown-hairy teeth; legume 6 cm. long, reddish, puberulent.

Along Stann Creek, British Honduras, January 27, 1926, *Samuel J. Record*.

10. *Cojoba gracilliflora* (Blake) Britton & Rose.

Pithecolobium gracilliflorum Blake, Contr. Gray Herb. 52: 69. 1917.

A shrub or small tree, the twigs, petioles, leaf-rachis, and peduncles densely short-pilose. Stipules subulate, 2 mm. long; petiole about 2 cm. long or shorter; pinnae 2 or 3 pairs, with a small orbicular gland between each pair; leaflets 6-12 pairs, broadly oblong to obovate, obtuse, chartaceous, 1-4.5 cm. long, glabrous above, pilose on the veins beneath, a small orbicular gland on the rachilla just below each pair; peduncles 2-9 cm. long; bractlets pilose, about 5 mm. long; calyx about 4 mm. long, pilose; corolla 10-12 mm. long, its tube glabrous, its teeth pilose; stamen-tube nearly as long as the corolla; ovary glabrous.

TYPE LOCALITY: Toledo, British Honduras.
DISTRIBUTION: British Honduras.

11. *Cojoba Recordii* Britton & Rose, sp. nov.

A shrub, the twigs and petioles densely brown-pubescent. Petiole 1.5-2.5 cm. long; glands orbicular, very small, borne between the pinnae and between the leaflets; pinnae 2 or 3 pairs; leaflets 8-11 pairs, oblong, thin, 1.5-4 cm. long, dull and hairy above, pubescent beneath, obtuse; peduncle slender, 5-7 cm. long, bearing a linear bract 4 mm. long above the middle; bractlets small, much shorter than the calyx; calyx 2.5-3 mm. long, glabrous

below; corolla very slender, 10 mm. long, glabrous except the teeth, staminal tube longer than the corolla.

Near Botanic Station, Lower Belize River, British Honduras, February 19, 1926, *Samuel J. Record*.

12. *Cojoba catenata* (Donn. Smith) Britton & Rose.

Pithecolobium catenatum Donn. Smith, Bot. Gaz. 48: 294. 1909.

A shrub with twigs and peduncles brownish-pubescent. Leaves large; pinnae 1 pair; leaflets 3 to 5 pairs, obovate to elliptic, subchartaceous, 3-16 cm. long, abruptly short-acuminate, narrowed at base, glabrous except on the nerves, a small orbicular gland between each pair; peduncles 8-18 cm. long; legume 12-22 cm. long; about 10-seeded, deeply constricted between the nearly black seeds.

TYPE LOCALITY: Llanuras de Santa Clara, Comarca de Limon, Costa Rica.

DISTRIBUTION: Known only from the type locality.

13. *Cojoba Standleyi* Britton & Rose, sp. nov.

A small tree or shrub, 1-7 m. high, the twigs at first brownish-pubescent, but soon glabrate. Pinnae 1 pair; leaflets 1-3 pairs, oblong to lanceolate, more or less oblique, cuneate at base, often acuminate, 5-11 cm. long, pubescent on the veins when very young, soon glabrate; peduncle slender, often 5 cm. long; legume 10 cm. long, bright red; seeds turgid, bluish-black, 10 mm. long.

Costa Rica. Type from La Tejona, January 25, 1926, *Paul C. Standley 45859*.

14. *Cojoba Valerioi* Britton & Rose, sp. nov.

A shrub about 2 m. high, the twigs slender, at first brownish-pubescent but soon glabrate. Leaves twice pinnate; petiole 1 to 1.5 cm. long; pinnae 1 pair; leaflets 5, the 4 upper ones in pairs, oblong to lanceolate, 4-10 cm. long, acuminate, often broadly cuneate at base, glabrous; peduncle slender, 6-7 cm. long, axillary; corolla slender, 12 mm. long, green, glabrous except the tip of the lobes; stamens white, long-exserted, the tube about as long as the corolla.

Quebrada Serena, southeast of Tilarán in the province of Guanacaste, Costa Rica, January 27, 1926, *Standley & Valerio 46247*.

15. *Cojoba tubulifera* (Benth.) Britton & Rose.

Inga tubulifera Benth. Lond. Journ. Bot. 4: 584. 1845.

Pithecolobium tubuliferum Pittier, Contr. U. S. Nat. Herb. 18: 181. 1916.

A shrub or tree, the foliage brownish-pubescent. Leaves once-pinnate; leaflets 4 to 8 pairs, 2-6 cm. long, oblong to lanceolate-ovate, oblique; head densely flowered; peduncles 5-7 cm. long; calyx 1 mm. long, pubescent; corolla 8 mm. long, slender, glabrous.

TYPE LOCALITY: Panama.

DISTRIBUTION: Panama and northern Colombia.

16. *Cojoba rufescens* (Benth.) Britton & Rose.

Inga rufescens Benth. Lond. Journ. Bot. 4: 585. 1845.

Inga globulifera Benth. Lond. Journ. Bot. 4: 585. 1845.

Inga Billbergiana Benth. Lond. Journ. Bot. 4: 585. 1845.

Feuillea rufescens Kuntze, Rev. Gen. Pl. 189. 1891.

Feuillea globulifera Kuntze, Rev. Gen. Pl. 188. 1891.

Feuillea Billbergiana Kuntze, Rev. Gen. Pl. 187. 1891.

Pithecolobium rufescens Pittier, Contr. U. S. Nat. Herb. 18: 181. 1916.

A tree, 3-10 m. high, with pubescent branches. Leaves once-pinnate; leaflets 1 to 5 pairs, oblong to lanceolate, elliptic or obovate, 3-12 cm. long, obtuse, acute, or acuminate, sometimes cuneate, glabrous or pubescent; peduncles 2-4 cm. long; calyx 2-3 mm. long, brownish-pubescent; corolla 8 mm. long; legume 10-15 cm. long; seeds turgid, 8-10 mm. long.

TYPE LOCALITY: On an island off the coast of Veragua, Panama.

DISTRIBUTION: Panama and northern Colombia.

17. *Cojoba glabra* Britton & Rose, sp. nov.

A tree, 8-9 m. high, the twigs brownish, glabrous. Leaves once-pinnate; petioles 1-2.5 cm. long, glabrous; leaves 1-pinnate; rachis bearing a cup-shaped gland between the leaflets; leaflets 2 pairs, oblong, 6-12 cm. long, cuneate at base, obtuse, sometimes short-acuminate, glabrous; peduncles 2-2.5 cm. long, glabrous; legume red, 2 cm. long, 10-seeded, with a stipe 1 cm. long, the seeds widely separated.

Moist forest near Santa Maria de Dota, San José, Costa Rica, altitude 1500-1800 meters, December, 1925, *Standley 41743*.

7. *EBENOPSIS* Britton & Rose.

[*SIDEROCARPUS* Small, Bull. N. Y. Bot. Gard. 2: 91. 1901.

Not *Siderocarpus* Pierre, 1888.]

Trees or shrubs with flexuous branches and stiff stipular spines, the leaves 2-pinnate, with a stalked petiolar gland between the lowest pair of pinnae, the leaflets few and small. Flowers spicate or capitate, the peduncles axillary. Calyx campanulate, 5-lobed. Corolla 5-lobed. Stamens many, united below into a tube. Ovary sessile. Fruit a hard woody legume, its valves tardily dehiscent. Seeds transverse, brown.

Type species, *Acacia flexicaulis* Benth.

Flowers spicate.

Spikes slender; legume 10-15 cm. long.

Spikes short, dense; legume 15-18 cm. long.

Flowers capitate.

1. *E. flexicaulis*.

2. *E. caesalpinoides*.

3. *E. confinis*.

1. *Ebenopsis flexicaulis* (Benth.) Britton & Rose.

Acacia flexicaulis Benth. Lond. Journ. Bot. 1: 505. 1842.

Pithecolobium flexicaule Coult. Bot. Gaz. 15: 270. 1890.

Pithecolobium texense Coult. Contr. U. S. Nat. Herb. 1: 37. 1890.

Siderocarpus flexicaulis Small, Bull. N. Y. Bot. Gard. 2: 91. 1901.

Samanea flexicaulis Macbride, Contr. Gray Herb. 59: 2. 1919.

Zygia flexicaulis Sudw. Bull. U. S. Dept. Agr. Div. For. 14: 248. 1897.

A tree, 5-15 m. high, or shrubby, the twigs puberulent or glabrate. Stipular spines 6-12 mm. long; petioles slender, short; pinnae 2 or 3 pairs; leaflets 3-5 pairs, chartaceous, glabrous, oblong to obovate, rounded or obtuse, 5-12 mm. long, reticulate-veined, shining; peduncles pubescent, 1-2 cm. long; spikes dense, slender, 2-4 cm. long; flowers yellow, fragrant; calyx about 0.5 mm. long; corolla about 3 mm. long, the lobes longer than the tube; stamen-tube nearly as long as the corolla; legume turgid, 10-15 cm. long, about 2.5 cm. wide; seeds 10-15 mm. long.

TYPE LOCALITY: Texas.

DISTRIBUTION: Southern Texas to Tamaulipas, Nuevo Leon and Yucatán.

ILLUSTRATIONS: Sargent, *Silva N. Am.* 3: *pl. 147*; Gard. & For. 2: *f. 123*; *Man. Trees N. Am. f. 445*; ed. 2, *f. 540*; Britton & Shafer, *N. Am. Trees, f. 478*.

2. *Ebenopsis caesalpinoides* (Standley) Britton & Rose.

Pithecolobium caesalpinoides Standley, Proc. Biol. Soc. Wash. 37: 45. 1924.

A tree or shrub with short stout branches. Stipular spines 6-10 mm. long, straight; petiole slender, 13-18 mm. long; pinnae 3 or 4 pairs; leaflets 4-7 pairs, oblong, 4-8 mm. long, obtuse, glabrate; flowers in dense oblong spikes about 1 cm. long; calyx 1 mm. long, puberulent; corolla greenish, 3 mm. long; stamen-tube about as long as the corolla; legume 15-18 cm. long, 4.5-5 cm. in diameter.

TYPE LOCALITY: El Tapote near Mazatlan, Sinaloa.

DISTRIBUTION: Known only from the type locality.

3. *Ebenopsis confinis* (Standley) Britton & Rose.

Pithecolobium confine Standley, Contr. U. S. Nat. Herb. 20: 191. 1919.

A densely branched shrub 1-1.5 m. high, or a small tree, with stout stiff glabrous twigs. Stipular spines 6-10 mm. long; petioles puberulent, 4-15 mm. long; pinnae 1 or 2 pairs;

leaflets 3-5 pairs, oblong to cuneate-obovate, subcoriaceous, pubescent or glabrous, 2.5-10 mm. long, the apex rounded or truncate; peduncles 5-10 mm. long, pubescent; flowers capitate, the heads globose; calyx about 1 mm. long; corolla purplish, 2.5 mm. long, its lobes shorter than the tube; stamen-tube included; legume 8-14 cm. long, 2.5-3 cm. wide; seeds 10-18 mm. long.

TYPE LOCALITY: Cape San Lucas, Lower California.

DISTRIBUTION: Southern Lower California and islands adjacent.

8. SAMANEA Merrill, Journ. Wash. Acad. 6: 46. 1916.

Mostly unarmed trees or shrubs with bipinnate leaves and capitate or umbellate flowers. Calyx tubular to campanulate, 5-toothed. Corolla 5-toothed or 5-lobed. Stamens many, long-exserted; filaments united below into a tube; anthers very small. Ovary several-many-ovuled; style slender, or filiform. Legume compressed, indehiscent, mostly straight, coriaceous or fleshy.

Type species, *Mimosa Saman* Jacq.

Leaves with small glands between the pairs of pinnae or on the petiole.

Foliage and inflorescence pubescent; flowers pedicelled.

Glands borne between the pinnae; corolla 10-12 mm. long.

Gland borne on the petiole; corolla about 6 mm. long.

Foliage and inflorescence glabrous; flowers sessile.

Leaves with a very large cupulate gland between the lowest pair of pinnae, and small glands between the other pairs.

1. *S. Saman*.
2. *S. leucocalyx*.
3. *S. filipes*.
4. *S. macradenia*.

1. *Samanea Saman* (Jacq.) Merrill, Journ. Wash. Acad. 6: 47. 1916.

Mimosa Saman Jacq. Fragm. 15. 1800.

Inga Saman Willd. Sp. Pl. 4: 1024. 1806.

Inga cinerea H. & B.; Willd. Sp. Pl. 4: 1024. 1806.

? *Acacia propinqua* A. Rich. Ess. Fl. Cub. 466. 1845.

Calliandra Saman Griseb. Fl. Brit. W. Ind. 225. 1860.

Pithecolobium Saman Benth. Lond. Journ. Bot. 3: 216. 1844.

Feuillea Saman Kuntze, Rev. Gen. Pl. 189. 1891.

Enterolobium Saman Prain, Journ. Asiat. Soc. Bengal 66: 252. 1897.

A tree up to 20 m. high, or higher, with widely spreading branches, the twigs and leaves finely pubescent, the old bark gray, separating in strips, the leaves often 4 dm. long. Pinnae 2-6 pairs, a small circular gland on the rachis between each pair; leaflets 2-8 pairs, obliquely oblong to obovate, 2-4 cm. long, pubescent beneath, becoming glabrous above, obtuse, finely reticulate-veined; umbels many-flowered; peduncles pubescent, 6-12 cm. long; pedicels 2-5 mm. long; calyx pubescent, 6 mm. long; corolla silky-villous, 10-12 mm. long; stamens 4-5 cm. long, pinkish, united toward the base; legume straight or a little curved, compressed, 10-20 cm. long, 10-18 mm. wide, about 6 mm. thick; seeds oblong, dull, 5-8 mm. long.

TYPE LOCALITY: Caracas, Venezuela.

DISTRIBUTION: Nicaragua to Colombia, Bolivia, and Brazil. Widely planted and naturalized in the West Indies and the Old World tropics.

ILLUSTRATION: Jacq., loc. cit. pl. 9.

2. *Samanea leucocalyx* Britton & Rose, sp. nov.

A tree or shrub, the twigs brownish appressed-pubescent. Stipules wanting; petioles at first puberulent, bearing a small gland; pinnae 2 or 3 pairs; leaflets 4-6 pairs, oblong to obovate, rounded at apex, broadly cuneate at base, 2-5 cm. long, glabrous or nearly so above, the midribs often hairy beneath and sometimes short-ciliate; peduncles slender, 3-4 cm. long, puberulent; flowers in dense umbels; pedicels up to 6 mm. long, pubescent; calyx 3 mm. long, 5-toothed, pubescent; corolla 7 mm. long, densely white-lanate; stamens 3-4 cm. long; immature legume glabrous, oblong, cuneate at base.

El Limón, Tabasco, July 12, 1891, *J. N. Rovirosa* 976.

3. *Samanea filipes* (Vent.) Britton & Rose.

Inga filipes Vent. *Choix des Plantes*, pl. 38. 1803.
Pithecolobium filipes Benth. *Trans. Linn. Soc.* 30: 588. 1875.
Feuillea filipes Kuntze, *Rev. Gen. Pl.* 187. 1891.

A small tree, the foliage glabrous. Petioles short; stipules very short, caducous; rachis with a small cupulate gland between each pair of pinnae; pinnae 2 or 3 pairs; leaflets 4 pairs, obovate, coriaceous, obtuse, 2-3 cm. long; peduncles slender, reflexed, as long as the pinnae or longer; flowers sessile; calyx about 4 mm. long; corolla slender, about 12 mm. long, its teeth short; stamen-tube nearly as long as the corolla; legume about 2 dm. long, turgid, pointed, impressed between the oval seeds.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: Vent. loc. cit.

4. *Samanea macradenia* (Pittier) Britton & Rose.

Pithecolobium macradenium Pittier, *Contr. U. S. Nat. Herb.* 20: 465. 1922.

Twigs stout, densely puberulent. Petioles puberulent, 3-7 cm. long; pinnae usually 3 pairs, a cupulate coriaceous gland 8-10 mm. in diameter between the lowest pair, and small stipitate glands between the other pairs; leaflets 5-8 pairs, oblong or the upper pair obovate, 2-5 cm. long, 1-2 cm. wide, dark green and nearly glabrous above, pale and puberulent beneath; peduncles brown-puberulent, stout, 5-6 cm. long; pedicels 2.5 mm. long; calyx campanulate, about 3.5 mm. long, puberulent; corolla white, about 6 mm. long, its tube glabrous, its lobes puberulent; stamen-tube included; legume curved, compressed, sulcate between the seeds, about 10 cm. long and 2 cm. wide.

TYPE LOCALITY: Monte Lirio, Canal Zone, Panama.

DISTRIBUTION: Known only from the type locality.

9. *PAINTERIA* Britton & Rose, gen. nov.

Low depressed shrubs with small stipular spines, small bipinnate leaves with small leaflets, the petiole bearing a small stalked gland at the top, the capitate flowers sessile. Calyx minute, 5-toothed. Corolla small, 5-lobed. Stamens many, the filaments united below. Legume coriaceous, flattened, dehiscent when mature. Seeds black, flattened, lenticular.

Type species, *Pithecolobium revolutum* Rose.

Pinnae 1 pair.

Leaflets with revolute margins.

Leaflets with margins not revolute.

Peduncle wanting or nearly so; leaflets pubescent.

Peduncle short but definite; leaflets glabrous.

Pinnae several pairs.

1. *P. revoluta*.

2. *P. elachistophylla*.

3. *P. compacta*.

4. *P. leptophylla*.

1. *Painteria revoluta* (Rose) Britton & Rose.

Pithecolobium revolutum Rose, *Contr. U. S. Nat. Herb.* 10: 96. 1906.

A low shrub, the twigs short and densely pubescent. Leaves small; stipules spinescent, short; petiole 2-4 mm. long, pubescent; pinnae 1 pair; leaflets 3-5 pairs, linear, pubescent, obtuse, 2 mm. long, the margins strongly revolute; peduncle wanting; legume curved, 5-7 cm. long, 10-12 mm. broad, pubescent, cuneate at base.

TYPE LOCALITY: Near Higuerrillas, Queretaro.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: Rose, loc. cit. pl. 28.

2. *Painteria elachistophylla* (A. Gray) Britton & Rose.

Pithecolobium elachistophyllum A. Gray; *S. Wats. Proc. Am. Acad.* 17: 352. 1882.

A spiny shrub, the stiff branches interlaced, silky-pubescent. Petiole 3-4 mm. long, hairy; pinnae 1 pair; leaflets 4-6 pairs, orbicular, 2-4 mm. long, obtuse, pubescent when young; heads sessile or nearly so, axillary; calyx 1 mm. long, its teeth ciliate; corolla red,

4 mm. long, glabrous except the margin of the lobes; stamens 8-10 mm. long, the tube about as long as the corolla; legume about 10 cm. long, 1.5 cm. broad, strongly curved, short-stipitate, apiculate, pubescent.

TYPE LOCALITY: Monterey, Nuevo León.

DISTRIBUTION: Nuevo León to San Luis Potosí.

3. *Painteria compacta* (Rose) Britton & Rose.

Pithecolobium compactum Rose, Contr. U. S. Nat. Herb. 8: 33. 1903.

Pithecolobium Purpusii Brand. Univ. Calif. Publ. Bot. 4: 85. 1910.

A compact shrub, 3-5 dm. high, very spiny, the twigs appressed-pubescent. Petioles 2-8 mm. long, glabrous; pinnae 1 pair; leaflets 4-7 pairs, glabrous, shining above, obovate to short-oblong, 2-4 mm. long, rounded at apex; heads solitary, borne in the axils of leaves on very short peduncles; calyx 0.5 mm. long; corolla 3.5 mm. long, glabrous; stamens yellowish, the tube about as long as the corolla; legume 8 cm. long, 10-12 mm. broad, pubescent.

TYPE LOCALITY: Tehuacán, Puebla.

DISTRIBUTION: Puebla and Oaxaca.

4. *Painteria leptophylla* (Cav.) Britton & Rose.

Mimosa leptophylla Cav. "Elench. Hort. Matrit. 1803"; Lag. Gen. & Sp. Nov. 16. 1816.

Acacia leptophylla DC. Cat. Pl. Hort. Monsp. 74. 1813.

Inga leptophylla Lag. Gen. & Sp. Nov. 16. 1816.

Pithecolobium Palmeri Hemsl. Diag. Pl. Nov. 3: 50. 1880.

Pithecolobium Palmeri recurvum S. Wats. Proc. Am. Acad. 23: 272. 1888.

Pithecolobium leptophyllum Daveau, Bull. Soc. Bot. France 59: 635. 1912.

A low shrub with twisted branches clothed with spreading hairs. Pinnae 3-6 pairs; leaflets 5-15 pairs, oblong, more or less pubescent when young, ciliate, 1.5-3 mm. long; peduncles 1-2 cm. long, often in clusters, pubescent; calyx 2 mm. long, the teeth pubescent; corolla 3-4 mm. long, glabrous except the lanate teeth; stamens numerous, short, united below into a short tube; legume 10-12 cm. long, 1.5-2 cm. broad, often much curved, pubescent at first but often glabrate in age.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Chihuahua to Durango and Mexico.

10. *CHLOROLEUCON* (Benth.) Britton & Rose, gen. nov.

Pithecolobium §*Chloroleucon* Benth. Lond. Journ. Bot. 3: 221. 1844.

Trees or shrubs, mostly with stipular spines, bipinnate leaves with numerous small leaflets, the petioles usually bearing a small gland, and sessile capitate flowers on axillary peduncles. Calyx 5-toothed. Corolla 5-lobed. Stamens many, the filaments united below. Legume narrow, fleshy, curved or nearly straight, indehiscent or tardily dehiscent, flat or somewhat turgid.

Type species, *Pithecolobium Vincentis* Benth.

A. Legume straight or curved (unknown in no. 8).

Filaments mostly united below the middle, or nearly distinct; pinnae 2-4 pairs.

Leaflets obovate to oblong.

Legume-valves scarcely undulate.

Legume 7-11 mm. wide.

Legume 9-11 mm. wide.

• Foliage glabrous.

Foliage tomentose or densely pubescent.

Legume 7 mm. wide; rachis villous.

Legume 12-15 mm. wide.

Legume-valves distinctly undulate.

Leaflets linear.

Legume about 7 mm. wide; leaflets 7-9 mm. long.

Legume about 10 mm. wide; leaflets 4-7 mm. long.

Stamen-tube long-exserted; pinnae 1 pair.

B. Legume doubly coiled into a circle; tree apparently unarmed.

1. *C. lentiscifolium*.
2. *C. guatemalense*.
3. *C. leucospermum*.
4. *C. Vincentis*.
5. *C. undulatum*.
6. *C. Langlassei*.
7. *C. mangense*.
8. *C. baracense*.
9. *C. guantanamoense*.

1. *Chloroleucon lentiscifolium* (A. Rich.) Britton & Rose.

Acacia lentiscifolia A. Rich. Ess. Fl. Cub. 469. 1845.

Pithecolobium lentiscifolium C. Wright; Sauvalle, Anales Acad. Habana 5: 407. 1869.

A tree, 3-8 m. high, the twigs and leaves glabrous, the bark smooth. Stipular spines stiff, spreading, 5-20 mm. long; petioles 1-2 cm. long, bearing a small orbicular, slightly elevated gland; pinnae 2 or 3 pairs; leaflets 4-7 pairs, subcoriaceous, oblong to obovate, 8-15 mm. long, reticulate-veined, shining above, the apex rounded or subtruncate; peduncles slender, about as long as the petioles; calyx about 2 mm. long; corolla about 5 mm. long, its lobes puberulent; stamen-tube very short; legume 8-14 cm. long, 8-10 mm. wide, straight or much curved; seeds oblong, 4-5 mm. long, nearly white.

TYPE LOCALITY: Near Havana, Cuba.

DISTRIBUTION: Central and western Cuba; Jamaica.

2. *Chloroleucon guatemalense* Britton & Rose; Record, Tropical Woods 10: 24. 1927.

A shrub or tree, the twigs slender, glabrous. Petioles pubescent, bearing a subsessile gland near the middle; pinnae 4 pairs; rachis hairy, bearing a gland between the upper pair; leaflets 5-9 pairs, oblong to obovate, 8-10 mm. long, pubescent on both sides; legume 8-18 cm. long, 8-12 mm. broad, glabrous.

TYPE LOCALITY: Near Olanchito, Honduras.

DISTRIBUTION: Guatemala and Honduras.

3. *Chloroleucon leucospermum* (Brand.) Britton & Rose.

Pithecolobium leucospermum Brand. Univ. Cal. Pub. Bot. 10: 182. 1922.

Branches flexuous; foliage and peduncles villous-pubescent. Stipular spines, when present, stout, up to 2 cm. long; petioles slender, 1-2 cm. long, bearing an obconic gland; pinnae 2-4 pairs; leaflets 8-10 pairs, oblong, or the upper oblanceolate, acutish, or obtuse, 10-13 mm. long; peduncles 1-2 cm. long; calyx about 2 mm. long, sparingly pubescent; corolla ochroleucous, about 3 mm. long, sparingly pubescent; stamen-tube about 2 mm. long; legume glabrous, veined, coriaceous, 10-15 cm. long, 7 mm. wide, nearly straight, flat, at length dehiscent, slightly undulate; seeds oblong, nearly white.

TYPE LOCALITY: Near Cameron, Veracruz.

DISTRIBUTION: Veracruz; Tepic; Yucatán; Guatemala.

4. *Chloroleucon Vincentis* (Benth.) Britton & Rose.

Pithecolobium Vincentis Benth. Lond. Journ. Bot. 3: 222. 1844.

Acacia Vincentis Griseb. Fl. Brit. W. Ind. 222. 1860.

A shrub or small tree, the twigs and petioles sparingly pubescent or glabrous. Petioles slender, 1-2 cm. long, bearing a small orbicular gland above the base; pinnae 3-4 pairs; leaflets 5-9 pairs, submembranous, glabrate, obtuse or subtruncate, oblong to obovate, reticulate-veined, 8-10 mm. long; stipules linear-oblong, deciduous; peduncles 1-2 cm. long, pubescent; calyx about 2 mm. long; corolla about 5 mm. long; legume flat, linear, about 10 cm. long, 12-15 mm. wide.

TYPE LOCALITY: St. Vincent.

DISTRIBUTION: Martinique; St. Vincent.

5. *Chloroleucon undulatum* Britton & Rose, sp. nov.

A shrub, 3-4 m. high, the twigs glabrous or pubescent. Petioles glabrous or pubescent, bearing a subsessile gland near the middle; pinnae 3-5 pairs; leaflets 5-11 pairs, oblong, 5-11 mm. long, glabrous above, glabrous or pubescent beneath, strongly veined; peduncle 1-3 cm. long, pubescent when young; corolla slender, glabrous except the margin of the lobes; legume glabrous, 15-25 cm. long, 5-7 mm. wide, the margins undulate.

Sonora to Colima. Type from Sierra de Alamos, Sonora, March 18, 1910, *Rose, Standley & Russell 13041*.

6. *Chloroleucon Langlassei* Britton & Rose, n. sp.

A tree, 4-6 m. high. Petioles glabrous or pubescent, bearing a small sessile gland near the middle; pinnae 2 or 3 pairs; rachis glabrous or pubescent, often bearing a gland between the upper pair of leaflets; leaflets 10-14 pairs, broadly linear, 5-8 mm. long, glabrous, or pubescent on both sides; peduncle 12-25 mm. long; legume linear, 12-18 cm. long, cuneate at base, rounded or acuminate at apex, glabrous, the margins straight.

Petatlan, Michoacan or Guerrero, November 23, 1898, *E. Langlassé 687a*.

7. *Chloroleucon mangense* (Jacq.) Britton & Rose.

Mimosa mangensis Jacq. Enum. 34. 1760.

Mimosa parvifolia Sw. Fl. Ind. Occ. 984. 1800.

Mimosa antillarum Lam.; Poir. in Lam. Encycl. Suppl. 1: 80. 1810.

Acacia parvifolia Willd. Sp. Pl. 4: 1086. 1806.

Acacia micrantha Desv.; Hamilt. Prodr. 60. 1825.

Inga marthae Spreng.; DC. Prodr. 2: 441. 1825.

Pithecolobium parvifolium Benth. Lond. Journ. Bot. 3: 223. 1844.

Feuillea mangensis Kuntze, Rev. Gen. Pl. 186. 1891.

Enterolobium mangense Fawcett & Rendle, Fl. Jam. 4: 151. 1920.

A small tree, 5-8 m. high, the foliage and inflorescence pubescent or glabrate. Stipular spines 5-15 mm. long, or wanting on many branches; petioles very slender, usually bearing a small sessile gland; pinnae 5-10 pairs, often bearing a gland between one or more of the pairs; leaflets 8-30 pairs, linear or linear-oblong, 4-7 mm. long, acutish or obtuse, rather prominently veined beneath; peduncles 1-2 cm. long; calyx 2-3.5 mm. long; corolla 4-5 mm. long; legume linear, compressed or nearly flat, glabrous, reticulate-veined, curved or nearly straight, 6-14 cm. long, 10-12 mm. wide, very tardily dehiscent.

TYPE LOCALITY: Mango Island, Cartagena, Colombia.

DISTRIBUTION: Jamaica; Panama to Colombia and Brazil.

ILLUSTRATION: Jacq. Sel. Stirp. Pict. pl. 262, f. 70.

8. *Chloroleucon* (?) *baracoense* Britton & Rose, sp. nov.

A shrub, 4 m. high, armed with stipular acicular spines 5-10 mm. long. Petioles 5-10 mm. long; pinnae 1 pair, short-stalked, 2-4 cm. long, with a sessile, minute cupulate gland between them; the rachis sparingly pubescent; leaflets 7-10 pairs, glabrous, chartaceous, strongly veined, 6-8 mm. long, the lower linear or linear-oblong, the upper oblanceolate or obovate; peduncles slender, glabrous, 1-1.5 cm. long; heads several-flowered; flowers sessile, glabrous; calyx nearly tubular, 2.5 mm. long, its 5 teeth very short, subulate; corolla about 6 mm. long; stamens about 18, their tube exerted.

Rocky sea-shore, Caletico, southern Oriente, Cuba, July-August, 1924, *Brother León 12379*.

9. *Chloroleucon* (?) *guantanamoense* (Britton) Britton & Rose.

Pithecolobium (?) *guantanamoense* Britton, Bull. Torr. Club 41: 7. 1914.

A tree, 10 m. high, with flexuous twigs, the foliage sparingly villous-pubescent. Leaves 6-8 cm. long; petioles slender, 1 cm. long or less; glands scutellate, 0.5 mm. in diameter; pinnae 2 pairs; leaflets 20 pairs or fewer, linear, chartaceous, 5-7 mm. long, 1-1.5 mm. wide, inequilateral, pale green but somewhat darker above than beneath, acute at the apex, obliquely obtuse at the base, the few veins prominent beneath; flowers unknown; legume compressed, glabrous, chartaceous, dehiscent, doubly coiled, 6-8 cm. long, 7-8 mm. broad over the seeds, constricted between them, the coils about 2 cm. broad; immature seeds suborbicular, somewhat flattened, 4 mm. in greatest diameter.

TYPE LOCALITY: United States Naval Station, Guantanamo, Cuba.

DISTRIBUTION: Known only from the type locality.

11. *ZYGIA* P. Browne; J. St.-Hil. Expos. Fam. Nat. 2: 246. 1805.

Unarmed shrubs or trees with 2-pinnate leaves and small perfect flowers in heads or short spikes, these sessile or very short-peduncled, often borne on the old wood, the stipules

persistent or caducous. Calyx minute, 5-toothed. Corolla small, tubular, 5-toothed; filaments slender, united at base into a tube, the anthers small. Style slender; stigma small, capitate. Legume flattened, more or less curved, splitting down the ventral suture. Seeds not arillate, flattened, disk-shaped.

Type species, *Mimosa latifolia* L.

Inflorescence capitate.

Leaflets broadly elliptic.

Leaflets dull; inflorescence sessile.

Leaflets shining above; heads peduncled.

Leaflets oblong.

Leaflets large, chartaceous.

Leaflets small, membranous.

Heads sessile; twigs pubescent; leaflets faintly reticulated.

Heads short-peduncled; twigs glabrous; leaflets reticulated.

Inflorescence spicate.

Leaflets cuneate at base, not strongly netted-veined; legume little curved.

Leaflets broad at base, strongly netted-veined; legume strongly curved.

1. *Z. latifolia*.

2. *Z. cognata*.

3. *Z. Peckii*.

4. *Z. Conzattii*.

5. *Z. scopulina*.

6. *Z. longifolia*.

7. *Z. Recordii*.

1. *Zygia latifolia* (L.) Fawcett & Rendle, Fl. Jam. 4²: 150. 1920.

Mimosa latifolia L. Syst. ed. 10, 1310. 1759.

Zygia arborescens St.-Hil. Expos. Fam. Nat. 2: 246. 1805.

Inga latifolia Willd. Sp. Pl. 4: 1020. 1806.

Pithecolobium latifolium Benth. Lond. Journ. Bot. 3: 214. 1844.

Calliandra latifolia Griseb. Fl. Brit. W. Ind. 225. 1860.

Pithecolobium chagrense Pittier, Contr. U. S. Nat. Herb. 20: 465. 1922.

Feuillea latifolia Kuntze, Rev. Gen. Pl. 188. 1891.

A shrub or tree, 3-8 m. high, glabrous. Leaves often 2-3 dm. long; stipules 12 mm. long, more or less persistent; glands borne on the petiole between the pinnae and also between the leaflets; pinnae 1 pair; leaflets usually 5, sometimes only 3, the two upper ones opposite, the others usually alternate, elliptic to oblong, cuneate and somewhat oblique at base, acuminate, 7-15 cm. long, glabrous; flowers in small heads, these sessile or on short peduncles often arising from the old wood, purplish; calyx campanulate, 1.5 mm. long; corolla tubular, 6-7 mm. long, striate, glabrous; stamens twice as long as the corolla, the tube exerted; legume slightly curved, 1-3 dm. long, 2-2.5 cm. broad, glabrous.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica; Martinique; St. Vincent; Trinidad; Honduras to Colombia, Guiana, and Brazil.

ILLUSTRATIONS: Browne, Hist. Jam. pl. 22, f. 3; Mart. Fl. Bras. 15²: pl. 119; Fawcett & Rendle, Fl. Jam. 4²: f. 46.

2. *Zygia cognata* (Schl.) Britton & Rose.

Inga cognata Schl. Linnæa 12: 560. 1838.

Pithecolobium cognatum Benth. Lond. Journ. Bot. 5: 107. 1846.

Feuillea cognata Kuntze, Rev. Gen. Pl. 187. 1891.

A tree, the twigs glabrous. Petioles very short, sometimes only 1 cm. long; petiole and secondary rachis without glands; leaflets 3, large, ovate, with a short obtuse tip, cuneate and oblique at base, glabrous, shining above, 8-15 cm. long; heads fascicled, small, short-peduncled; flowers white; calyx 1 mm. long, glabrous, with the margin ciliate; corolla 5 mm. long, glabrous except the tips of the lobes; staminal tube exerted.

TYPE LOCALITY: Between Colipa and the sea, Veracruz.

DISTRIBUTION: Veracruz.

3. *Zygia Peckii* (B. L. Robinson) Britton & Rose.

Inga Peckii B. L. Robinson, Proc. Am. Acad. 49: 502. 1913.

A shrub or tree, the twigs glabrous. Leaves sessile or nearly so, bearing a large gland between the pinnae; pinnae 1 pair; leaflets 2-3 pairs, oblong, acuminate, 9-17 cm. long, glabrous; peduncle short, axillary; flowers about 18, capitate; calyx 2 mm. long, glabrous; corolla glabrous; staminal tube exerted; legume 13 cm. long, 2 cm. broad, a little curved, glabrous.

TYPE LOCALITY: British Honduras.

DISTRIBUTION: Known only from the type locality.

4. *Zygia Conzattii* (Standley) Britton & Rose.

Calliandra Conzattii Standley, Contr. U. S. Nat. Herb. 20: 188. 1919.

A shrub, the young twigs brownish-pubescent, in age glabrate. Stipules minute, ovate; petioles wanting or very short, sometimes 10 mm. long, usually bearing a cup-shaped gland at the top; pinnae 1 pair; leaflets 2-4 pairs with an odd basal one, the upper ones opposite or nearly so, ovate to oblong, 2-9 cm. long, obtuse or sometimes acuminate, glabrous; rachis of pinnae angled, hairy, without glands; flowers in small sessile heads; calyx 2 mm. long, glabrous; corolla 6 mm. long, glabrous, yellowish; staminal tube exerted beyond the corolla; legume 8-12 cm. long, 12-15 mm. broad, more or less curved, sometimes circular, obtuse, puberulent.

TYPE LOCALITY: Near the Rio de Pilos, Oaxaca.
DISTRIBUTION: Oaxaca.

5. *Zygia scopulina* (Brand.) Britton & Rose.

Calliandra scopulina Brand. Univ. Calif. Pub. Bot. 10: 183. 1922.

A shrub, the branches glabrous. Petiole very short, 1 cm. or less long, bearing a large flat gland at the top; pinnae 1 pair; rachis hairy in lines; leaflets 2 or 3 pairs, ovate to oblong, 6 cm. long or less, obtuse, glabrous, strongly reticulated on both sides, shining; flowers in small axillary heads on peduncles 3-5 mm. long, puberulent; corolla glabrous, 6 mm. long.

TYPE LOCALITY: Cameron, Veracruz.
DISTRIBUTION: Veracruz.

6. *Zygia longifolia* (H. & B.) Britton & Rose.

Inga longifolia H. & B.; Willd. Sp. Pl. 4: 1010. 1806.
Mimosa ligustrina Vahl, Eclog. 3: 34. 1807. Not *Mimosa ligustrina* Jacq. 1801.
Pithecolobium ligustrinum Benth. Lond. Journ. Bot. 3: 213. 1844.
Inga Vahlianum DC. Prodr. 2: 438. 1825.
Pithecolobium glomeratum spicatum Seem. Bot. Voy. Herald. 116. 1853.
Pithecolobium Vahlianum Benth. Trans. Linn. Soc. 30: 594. 1875.
Feuillea longifolia Kuntze, Rev. Gen. Pl. 185. 1891.

A tree, up to 12 m. high, the twigs glabrous. Stipules small, 3-4 mm. long, deciduous; pinnae 1 pair; petiole very short or wanting; glands borne between the pinnae and the terminal pair of leaflets; leaflets lanceolate to oblong or linear-lanceolate, obtuse or acute, sometimes acuminate, 4-12 cm. long, glabrous; flowers in loose fascicled spikes 2 cm. long; calyx 1 mm. long; corolla 6-7 mm. long, glabrous, striate; staminal tube exerted; legume somewhat curved, 15-30 cm. long, 12-15 mm. broad, cuneate at base, glabrous.

TYPE LOCALITY: tropical America.
DISTRIBUTION: Nicaragua; Costa Rica; Panama; Colombia.
ILLUSTRATION: Vahl, loc. cit. pl. 27.

7. *Zygia Recordii* Britton & Rose; Standley, Tropical Woods 7: 6. 1926.

A shrub or medium-sized tree, the twigs glabrous. Leaves sessile or nearly so; pinnae 1 pair with a gland between them and between the upper pair of leaflets; rachis of pinnae pubescent; leaflets 2, 3 or 4, obliquely oblong, 4-9 cm. long, acute, obtuse, retuse or short-acuminate, glabrous, strongly veined on both sides; flowers in short sessile or short-peduncled spikes; calyx 0.5 mm. long; corolla slender, 5 mm. long, glabrous; stamens 12 mm. long, the tube long-exserted; legume 5-10 cm. long, 1 cm. broad, strongly curved, glabrous; seeds flattened, orbicular, 1 cm. in diameter.

TYPE LOCALITY: Along the bank of New River, near Guinea Grass, British Honduras.
DISTRIBUTION: British Honduras and eastern Guatemala.

12. *HAVARDIA* Small, Bull. N. Y. Bot. Gard. 2: 91. 1901.

Shrubs or trees with small stipular spines. Leaves petioled, twice pinnate. Leaflets numerous, usually small. Flowers perfect, capitate or umbellate. Calyx small, 5-toothed.

Corolla 5-lobed or 5-parted. Stamens numerous, short or long, united below into a tube. Legume flat, readily dehiscent, the valves thin, not elastic. Seeds few, flattened, transverse.

Type species, *Pithecolobium brevifolium* Benth.

Flowers small; stamen-tube little if at all exerted.

Flowers pedicelled.

Flowers sessile.

Corolla glabrous.

Corolla pubescent.

Legume 2-2.5 cm. wide.

Legume about 1.5 cm. wide.

Corolla densely white-silky.

Corolla puberulent.

Flowers large, sessile; stamen-tube long-exserted.

Stipular spines straight.

Calyx glabrous; leaflets 4-7 mm. wide.

Calyx pilose; leaflets 2.5 mm. wide or less.

Stipular spines recurved.

Pinnae 1 pair; leaflets 1 pair, 2-5 mm. long.

Pinnae 2 pairs; leaflets 2 or 3 pairs, 1-2.5 cm. long.

1. *H. mexicana*.

2. *H. Nelsonii*.

3. *H. albicans*.

4. *H. Sonorae*.

5. *H. pallens*.

6. *H. leiocalyx*.

7. *H. acallensis*.

8. *H. prehensilis*.

9. *H. platyloba*.

1. *Havardia mexicana* (Rose) Britton & Rose.

Pithecolobium mexicanum Rose, Contr. U. S. Nat. Herb. 1: 100. 1891.

A small tree, 5-10 m. high, the twigs hairy but soon glabrate, the stipular spines, when present, 2-4 mm. long. Petiole and rachis pilose; a small sessile gland on the petiole and sometimes on the rachis; pinnae 2-4 pairs; leaflets 5-10 pairs, oblong, 4-8 mm. long, puberulent on both sides, obtuse, the midvein somewhat excentric; inflorescence paniculate; peduncles slender, 5-15 mm. long, hairy; pedicels about 2 mm. long; calyx 1 mm. long, pubescent; corolla 3 mm. long, pubescent, deeply lobed, the lobes spreading; stamens numerous, 8-10 mm. long, their tube short; legume 7-10 cm. long, 2-2.5 cm. broad, sometimes constricted between the seeds, glabrous; seeds few.

TYPE LOCALITY: Alamos, Sonora.

DISTRIBUTION: Sonora, Sinaloa, and Lower California.

2. *Havardia Nelsonii* Britton & Rose, sp. nov.

A shrub or tree, the twigs puberulent, the old branches glabrate and brownish. Stipular spines black, flattened, 15 mm. long, or shorter; petiole slender, 1-1.5 cm. long, puberulent, bearing a small oblong sessile gland; pinnae 3-6 pairs; leaflets 10-15 pairs, 7-10 mm. long, oblong, obtuse or acutish, very pale, glabrous; peduncles 1-2 cm. long, puberulent, axillary, solitary, or sometimes in fascicles of 3 or 4; calyx cup-shaped, minute, 1 mm. long or less, puberulent; corolla 3 mm. long, glabrous; stamens numerous, 8 mm. long, the tube short, included.

Between San Geronimo and La Venta, Oaxaca, July 13, 1898, *E. W. Nelson 2776*.

3. *Havardia albicans* (Kunth) Britton & Rose.

Acacia albicans Kunth, Mim. 87. 1821.

Pithecolobium albicans Benth. Trans. Linn. Soc. 30: 592. 1875.

Feuillea albicans Kuntze, Rev. Gen. Pl. 187. 1891.

A tree, the twigs terete and puberulent when young, the stipular spines, when present, short and stout. Petiole and rachis puberulent, the petiole bearing a large, sessile gland; pinnae 6-9; leaflets 18-32 pairs, oblong, 3-10 mm. long, glabrous above, paler and puberulent beneath, the midvein somewhat excentric; inflorescence paniculate, puberulent; calyx 1.5 mm. long, puberulent; corolla 3 mm. long; stamens about 7 mm. long, the tube short; legume oblong, 10 cm. long, 2-2.5 cm. broad, rounded at apex, sometimes apiculate, more or less cuneate at base.

TYPE LOCALITY: Campeche.

DISTRIBUTION: Campeche and Yucatan.

ILLUSTRATION: Kunth, loc. cit. pl. 27.

4. *Havardia Sonorae* (S. Wats.) Britton & Rose.

Pithecolobium Sonorae S. Wats. Proc. Am. Acad. 24: 49. 1889.

A shrub or small tree, 3-7 m. high, the twigs canescent, the stipular spines short, recurved. Petiole and rachis pubescent, bearing several small cup-shaped glands, one on the petiole and the others between the pinnae; pinnae 1-4 pairs; leaflets 10-20 pairs, oblong, obtuse, canescent on both sides; inflorescence a compact panicle, pubescent; peduncles 5-15 mm. long; calyx 2.5 mm. long, pubescent; corolla 5 mm. long, canescent; stamens 8-10 mm. long, the tube scarcely exerted; legume 5-10 cm. long, 12-20 mm. broad, short-stipitate, puberulent, apiculate.

TYPE LOCALITY: Guaymas, Sonora.
DISTRIBUTION: Sonora and Sinaloa.

5. *Havardia pallens* (Benth.) Britton & Rose.

Calliandra pallens Benth. Lond. Journ. Bot. 5: 102. 1846.
Pithecolobium brevifolium Benth.; A. Gray, Pl. Wright. 1: 67. 1852.
Acacia nuectiana Buckley, Proc. Acad. Phila. 1861: 453. 1862.
Fevillea brevifolia Kuntze, Rev. Gen. Pl. 187. 1891.
Zygia brevifolia Sudw. Bull. U. S. Dept. Agr. For. 14: 248. 1897.
Havardia brevifolia Small, Bull. N. Y. Bot. Gard. 2: 92. 1901.

A tree or shrub, sometimes 10 m. high, the twigs puberulent, the stipular spines, when present, slender and often 10 mm. long. Petiole and rachis puberulent; petiole bearing a small cup-shaped gland near the middle; pinnae 3-6 pairs, opposite or alternate; leaflets 10-20 pairs, oblong, 3-7 mm. long, obtuse or acutish, puberulent on both sides; inflorescence paniculate, pubescent; peduncles 1-1.5 cm. long; calyx minute, 1 mm. long, pubescent; corolla 6-7 mm. long, puberulent; stamens 12-15 mm. long, the tube shorter than the corolla; legume linear-oblong, 7-10 cm. long, stipitate, acuminate.

TYPE LOCALITY: Zimapan, Hidalgo.
DISTRIBUTION: Southeastern Texas and Tamaulipas, south to northern Hidalgo.
ILLUSTRATIONS: Sargent, Man. Trees N. Am. f. 444; cd. 2, f. 539; Britton & Shafer, N. Am. Trees, f. 479.

6. *Havardia leiocalyx* (Standley) Britton & Rose.

Pithecolobium leiocalyx Standley, Contr. U. S. Nat. Herb. 20: 189. 1919.

A shrub or tree, the young twigs puberulent. Stipular spines short, straight; petiole slender, bearing a small gland near the base; pinnae 2 or 3 pairs; leaflets 3-5 pairs, oval to broadly oblong, oblique at base, rounded at apex, 7-14 mm. long, glabrate in age; peduncles 2.5-3 cm. long; calyx glabrous, 7-8 mm. long; corolla 1.5 cm. long, white-pilose above; stamens 5 cm. long, the tube long-exserted.

TYPE LOCALITY: Salina Cruz, Oaxaca.
DISTRIBUTION: Known only from the type locality.

7. *Havardia acatlensis* (Benth.) Britton & Rose.

Pithecolobium acatlense Benth. Trans. Linn. Soc. 30: 593. 1875.
Fevillea acatlensis Kuntze, Rev. Gen. Pl. 187. 1891.

A shrub, 3-4 m. high, pubescent, but becoming glabrate, the old branches blackish. Spines short, described as sometimes recurved; pinnae 2-4 pairs; leaflets 8-12 pairs, oblong, small, 4 mm. long, acute, pubescent; heads subsessile; flowers 4-8, sessile; calyx 8-12 mm. long, woolly; corolla 14 mm. long, white-villous; stamens 4-5 cm. long, united below into a tube much longer than the corolla; legume oblong, 10-15 cm. long, 2-2.5 cm. broad, apiculate, brownish-pubescent.

TYPE LOCALITY: Acatlan, Puebla.
DISTRIBUTION: Sinaloa to Puebla and Oaxaca.
ILLUSTRATION: M. Micheli, Mem. Soc. Phys. Hist. Nat. Genève 34: pl. 27.

8. *Havardia prehensilis* (C. Wright) Britton & Rose.

Calliandra prehensilis C. Wright; Sauvalle, *Anales Acad. Habana* 5: 406. 1869.

Pithecolobium prehensile Benth. *Trans. Linn. Soc.* 30: 593. 1875.

Feuillea prehensilis Kuntze, *Rev. Gen. Pl.* 188. 1891.

A shrub, up to 1.3 m. high, the twigs long, slender, glabrous. Stipular spines recurved, about 5 mm. long; leaves small; pinnae 1 pair; leaflets 1 pair, 2-5 mm. long, glabrous, oblong to obovate, obtuse; heads sessile, 2- or 3-flowered; calyx 6-7 mm. long, glabrate; corolla 14-16 mm. long, sericeous-pilose; staminal tube long-exserted; legume 4-7 cm. long, 12-18 mm. broad, stipitate, cuneate at base, acute at apex, few-seeded.

TYPE LOCALITY: Potrero Manati, Trinidad, Cuba.

DISTRIBUTION: Santa Clara and Oriente, Cuba.

9. *Havardia platyloba* (Spreng.) Britton & Rose.

Acacia platyloba Spreng. *Syst.* 3: 144. 1826.

Pithecolobium sericiflorum Benth. *Lond. Journ. Bot.* 5: 105. 1846.

Feuillea platyloba Kuntze, *Rev. Gen. Pl.* 186. 1891.

Pithecolobium platylobum Urban, *Symb. Ant.* 5: 360. 1908.

A shrub or small tree, the twigs glabrous, bearing short recurved stipular spines. Petiole glabrous, bearing an oblong sessile gland; pinnae 2 pairs; leaflets 2 or 3 pairs, obovate to orbicular, obtuse, 1-2.5 cm. long, glabrous, pale beneath; peduncles slender, 1-2 cm. long; calyx 5-6 mm. long, split on one side, glabrous; corolla 12-14 mm. long, pubescent; filaments elongated, the slender tube long-exserted; legume 10-15 cm. long, about 3 cm. broad.

TYPE LOCALITY: Near the Magdalena River, Colombia.

DISTRIBUTION: Yucatán; Aruba; Colombia; Venezuela.

13. *ALBIZZIA* Durazz. *Mag. Tosc.* 3: 11. 1772.

Unarmed trees, or some species shrubs, with bipinnate leaves and solitary or paniced heads, umbels or rarely spikes of small, mostly perfect flowers. Calyx 5-toothed. Corolla funnelform, 5-lobed. Stamens numerous, united below, long-exserted; anthers small; pollen-grains agglomerate. Legume broadly linear, flat, thin, not pulpy within, indehiscent or at length dehiscent. Seeds suborbicular to oblong.

Type species, *Albizzia Julibrissin* Durazz.

A. Leaflets relatively small and narrow, linear to oblong, 5-20 mm. long.

Leaflets mucronate.

Leaflets obtuse or acutish.

Twigs, foliage, and inflorescence glabrous or puberulent.

Heads racemose or paniculate, short-peduncled.

Heads long-peduncled, corymbose or binate (flowers unknown in no. 5).

Leaflets densely puberulent, about 4 mm. long; heads sub-corymbose.

Leaflets 8-16 mm. long.

Leaflets linear-oblong, glabrous.

Leaflets oval-oblong, puberulent.

Twigs, petioles, and inflorescence densely velvety or tomentulose.

Leaf-margins not revolute.

Leaflets oval to oblong-lanceolate.

Leaflets oval-oblong, the midvein nearly central.

Leaflets oblong-lanceolate, the midvein excentric.

Leaflets linear-oblong, the midvein central.

Leaf-margins revolute.

1. *A. Julibrissin*.

2. *A. caribaea*.

3. *A. malacocarpa*.

4. *A. (?) idiopoda*.

5. *A. Ortegae*.

6. *A. tomentosa*.

7. *A. Purpusii*.

8. *A. sinaloensis*.

9. *A. Hummeliana*.

B. Leaflets relatively large and broad, oval to ovate or obovate, 1-4 cm. long.

a. Flowers umbellate, distinctly pedicelled.

Leaflets rounded or emarginate at apex.

Leaflets oblong or the upper obovate; legume glabrous, shining, dehiscent.

Leaflets obovate to elliptic; legume pubescent; calyx tomentose.

Leaflets glabrous, or pubescent beneath; legume 2-2.5 cm. wide.

Leaflets pubescent on both sides; legume about 3 cm. wide.

Leaflets acute; calyx densely puberulent.

b. Flowers capitate, sessile, or very short-pedicelled (as far as known).

Leaflets lanceolate to ovate, narrowed to the apex.

10. *A. Lebecke*.

11. *A. cubana*.

12. *A. longepedata*.

13. *A. (?) nicoyana*.

14. *A. adinocephala*.

- Leaflets obovate or oval, obtuse, rounded or cuspidate-apiculate.
 Leaflets broadly obovate; legume 3-4 cm. wide; seeds 8-10 mm. long. 15. *A. occidentalis*.
 Leaflets narrowly obovate, the upper oblique; legume 2.5 cm. wide.
 Legume long-stipitate, glabrous. 16. *A. (?) obliqua*.
 Legume sessile, sparingly short-pubescent. 17. *A. nayaritensis*.
c. Flowers unknown; leaflets oblong to obovate; legume 4-5 cm. wide. 18. *A. plurijuga*.

1. *Albizzia Julibrissin* Durazz. Mag. Tosc. 3: 11. 1772.

Mimosa Julibrissin Scop. Delic. 18. 1786.
Acacia Julibrissin Willd. Sp. Pl. 4: 1065. 1806.
Sericandra Julibrissin Raf. Sylva Tell. 119. 1838.
Feuilleea Julibrissin Kuntze, Rev. Gen. Pl. 188. 1891.

A tree with maximum height of about 12 m., the twigs and foliage glabrous or puberulent. Petioles 3-10 cm. long, bearing an orbicular gland near the base; pinnae 4-12 pairs; leaflets 20-40 pairs, oblong or linear-oblong, 9-15 mm. long, subchartaceous, dull green above, pale beneath, the base subtruncate or obtuse, the apex mucronate, the midvein close to the upper margin; peduncles slender, clustered or racemose, 3-5 cm. long; flowers capitate, sessile; calyx about 3 mm. long; corolla 6-8 mm. long, pink, its lobes ovate; stamens red, the tube much shorter than the corolla; legume broadly linear, 10-15 cm. long, 2-2.5 cm. wide, glabrous, sometimes narrowed between the brown oval seeds, indehiscent, attenuate at each end.

TYPE LOCALITY: Orient.

DISTRIBUTION: Virginia to Florida and Louisiana. Native of Asia.

ILLUSTRATIONS: Britton & Shafer, *N. Am. Trees*, f. 480; Scopoli, loc. cit. f. 8.

2. *Albizzia caribaea* (Urban) Britton & Rose.

Pithecolobium caribaeum Urban, *Symb. Ant.* 2: 260. 1900.

A tree, 8-25 m. high, the young twigs, petioles, leaf-rachis, and peduncles puberulent or glabrate. Petioles 2-4 cm. long, usually bearing a small orbicular gland; pinnae 5-10 pairs, usually with a similar orbicular gland between the upper ones; leaflets 30-50 pairs, linear, approximate, 5-11 mm. long, glabrous, obtuse, shining above, the midvein excentric; heads subracemose, globose; peduncles 6-10 mm. long; flowers nearly or quite sessile; calyx about 1 mm. long, turbinate, its short teeth triangular; corolla about 4 mm. long, its lobes lanceolate; stamen-tube included; legume nearly sessile, 6-14 cm. long, 1.5-2.5 cm. wide, glabrous, at length dehiscent, 7-10-seeded.

TYPE LOCALITY: St. Vincent.

DISTRIBUTION: St. Vincent; Grenada; Tobago; Trinidad; Costa Rica; Panama; Margarita; Venezuela.

3. *Albizzia malacocarpa* Standley; Standley & Calderon, *Fl. Sal.* 96; hyponym. 1925.

A tree, up to 20 m. high, the twigs and leaves densely short-pubescent. Petioles 2-4 cm. long, bearing an orbicular cupulate gland; pinnae 7-14 pairs; leaflets 9-21 pairs, obliquely oblong, chartaceous, 5-6 mm. long, pubescent on both sides, paler beneath than above, the apex acute or acutish, the base rounded or subtruncate, the midvein excentric, the lateral venation obscure; inflorescence subcorymbose; peduncles slender, pubescent, 3 cm. long or shorter; flowers capitate, densely puberulent; calyx narrowly obconic, about 2.5 mm. long; corolla rounded in the bud; legume 8-11 cm. long, about 2 cm. wide, densely puberulent, stipitate, narrowed at the base, at length dehiscent.

El Salvador, Panama and Colombia. Type from San Salvador, El Salvador, *Calderon 2042*, a fruiting specimen; description of flowers taken from *Williams 952*, Cana, Panama.

4. *Albizzia* (?) *idiopoda* (Blake) Britton & Rose.

Pithecolobium idiopodum Blake, *Contr. Gray Herb.* 52: 70. 1917.

A tree, the twigs reddish-puberulent. Petioles 3-3.5 cm. long, puberulent; leaf-rachis short-pilose; glands petiolar and between the pinnae; pinnae 3 or 4 pairs; leaflets 12-21 pairs,

obliquely linear-oblong, subchartaceous, inequilateral, glabrous, indistinctly veined, dark green above, pale beneath, obtuse, 9–18 mm. long; peduncles axillary, geminate, puberulent, about 7 cm. long; umbels subcapitate; bracts about 1.5 mm. long; pedicels 5–6 mm. long, pubescent; calyx obconic, pubescent, 2.6 mm. long, its teeth acute; corolla 6.5 mm. long, its lobes 3 mm. long, pubescent; stamens 24–27, their tube about as long as the corolla-tube; ovary subsessile, pilose; ovules about 16.

TYPE LOCALITY: Pine ridges near Manatee Lagoon, British Honduras.

DISTRIBUTION: Known only from the type locality.

5. *Albizzia Ortegae* Britton & Rose, sp. nov.

Twigs and young foliage densely tomentulose, the mature leaflets glabrous or nearly so. Petioles 2–3 cm. long, bearing a flat oblong gland near the base; pinnae 2 or 3 pairs; leaflets about 4 pairs, oval-oblong, or the upper oblong-obovate, submembranous, 8–16 mm. long, obtuse or rounded, pinnately veined, bright green above, paler beneath, the midvein nearly central; legume broadly linear, glabrous, nearly sessile, 10–13 cm. long, 1.5–3 cm. wide, the valves transversely veined and their margins slightly elevated; seeds obliquely oval, yellowish, 8 mm. long.

El Habal, Sinaloa, 1923, *Ortega 5198*.

6. *Albizzia tomentosa* (M. Micheli) Standley, Journ. Wash. Acad.

13: 6. 1923.

Pithecolobium tomentosum M. Micheli, Mém. Soc. Phys. Hist. Nat. Genève 34: 285. 1903.

A tree, up to about 6 m. high, the twigs, foliage and inflorescence densely tomentulose. Petioles 1–3 cm. long, bearing a large oblong depressed gland near the base; pinnae 3 or 4 pairs; leaflets 6–11 pairs, oval-oblong or the uppermost oblong-obovate, 10–20 mm. long, obtuse or rounded at the apex, tomentulose on both sides, the midvein nearly central; heads small, globose, paniced; peduncles slender, 5–20 mm. long; flowers sessile, whitish-tomentulose; calyx about 1.5 mm. long; corolla about 5 mm. long, its lobes ovate; stamen-tube somewhat shorter than the corolla; legume linear-oblong, puberulent, 8–10 cm. long, 2–2.5 cm. wide, dehiscent; seeds oval, about 8 mm. long.

TYPE LOCALITY: Banks of the Espiritu Santo, Mexico.

DISTRIBUTION: Jalisco; Guerrero; Yucatan.

ILLUSTRATION: Micheli, loc. cit. *pl. 28*.

7. *Albizzia* (?) *Purpusii* Britton & Rose, sp. nov.

A small tree, 5–6 m. high, the twigs slender, angled, velvety-pubescent. Leaves large; petioles velvety, 2–4 cm. long, bearing a large oblong sessile gland; pinnae 10–12 pairs; leaflets many pairs, narrowly oblong, 1.5–2 cm. long, glabrous above, pubescent beneath, 3- or 4-nerved at base, obtuse, the midvein excentric; inflorescence paniculate; peduncles 1–1.5 cm. long, velvety-pubescent; flowers capitate, short-pedicelled; bractlets minute, pubescent; calyx 1.5 mm. long, glabrous except the teeth; corolla 3–4 mm. long, glabrous; filaments 8–10 mm. long, united below into a short tube; ovary pubescent.

Remulatero, Veracruz, April, 1922, *Purpus 8723*.

8. *Albizzia sinaloensis* Britton & Rose, sp. nov.

Twigs and leaf-rachis densely tomentulose. Petioles 3–5 cm. long, bearing a flat oblong gland near the base; pinnae 6–9 pairs, stalked, the rachilla pubescent; leaflets 12–15 pairs, linear to linear-oblong, obtuse or acute, 10–15 mm. long, 2–5 mm. wide, light green, puberulent or glabrate, the midvein nearly central; legume broadly linear, finely pubescent, apiculate, 10–14 cm. long, 2–2.4 cm. wide, at length dehiscent; seeds oval, 7–8 mm. long.

Sinaloa. Type from vicinity of Fuerte, March 26, 1910, *Rose, Standley & Russell 13559*.

9. *Albizzia Hummeliana* Britton & Rose, sp. nov.

A small tree, the twigs angled, puberulent. Leaves 10–12 cm. long; petioles 2–4 cm. long, puberulent, bearing a large oblong, sessile gland near the middle; pinnae 5 pairs; leaflets 9–12 pairs, oblong, 7–12 mm. long, obtuse, glabrous above, strongly nerved and puberulent beneath, the midvein nearly central, the margins revolute; inflorescence paniculate; peduncles slender, 2 cm. long or less, puberulent; heads small; flowers pedicelled; calyx 1.5 mm. long, puberulent, with minute teeth; corolla 3–4 mm. long, glabrous except the tips of the lobes; stamens short, the tube included; ovary densely velvety; legume 11–12 cm. long, 18 mm. broad, acute but not apiculate at apex, cuneate at base, glabrous, the stipe short.

Near Hill Bank, New River Lagoon, British Honduras, January 26, 1926, *Samuel J. Record* 27.

10. *Albizzia Lebbeck* (L.) Benth. Lond. Journ. Bot. 3: 87. 1844.

Mimosa Lebbeck L. Sp. Pl. 516. 1753.

Acacia Lebbeck Willd. Sp. Pl. 4: 1066. 1806.

Mimosa speciosa Jacq. Ic. Pl. Rar. 1: 19. 1786.

Feuilleca Lebbeck Kuntze, Rev. Gen. Pl. 184. 1891.

A tree, up to 15 m. high, often flowering when not over 5 m., the foliage glabrous or sparingly puberulent. Leaves large, often 4 dm. long; petioles 2–10 cm. long, bearing an oblong, sessile gland; pinnae 2–4 pairs; leaflets 4–9 pairs, thin, nearly sessile, obliquely oblong or the terminal pair obovate, obtuse, 2–4 cm. long, reticulate-veined; peduncles 3–10 cm. long; umbels subglobose; pedicels pubescent, 2–5 mm. long; calyx narrowly campanulate, pubescent, about 4 mm. long, its teeth short; corolla about 6 mm. long; stamens yellowish, about 3 cm. long, their tube included; legume straight, broadly linear, narrowed at each end, 1.5–3 dm. long, 2–4 cm. wide, glabrous, shining, rattling in the wind; seeds about 1.5 cm. broad.

TYPE LOCALITY: Upper Egypt.

DISTRIBUTION: West Indies and continental tropical America; native of the Old World tropics.

ILLUSTRATIONS: Jacquin, loc. cit. *pl.* 198; Tussac, *Fl. Ant.* 4: *pl.* 29.

11. *Albizzia cubana* Britton & Wilson, sp. nov.

A tree, up to 12 m. high, or higher, the twigs, petioles, leaf-rachis, and peduncles pubescent, tomentose or glabrate. Petioles 2–5 cm. long, bearing a small, orbicular cupulate gland; pinnae 3–5 pairs, short-stalked; leaflets 5–7 pairs, subchartaceous, obovate to elliptic, 1.5–3 cm. long, reticulate-veined, glabrous on both sides, or loosely pubescent beneath, the apex rounded, the base obtuse or acute; peduncles axillary, 3–8 cm. long; flowers umbellate; pedicels 5–7 mm. long, tomentose; calyx obconic, 5–7 mm. long, densely tomentose, its teeth ovate-lanceolate; corolla densely appressed-pubescent, 10–12 mm. long, its lobes lanceolate; stamen-tube included; legume broadly linear, finely pubescent, 12–21 cm. long, 2–2.5 cm. wide, indehiscent, short-stipitate.

Southern Oriente, Cuba. Type from United States Naval Station, Guantanamo Bay, March, 1909, *Britton* 2050.

12. *Albizzia longepedata* (Pittier) Britton & Rose; Record, Tropical Woods 11: 14. 1927.

Pithecolobium longepedatum Pittier, Contr. U. S. Nat. Herb. 20: 464. 1922.

A large tree, the twigs, petioles, leaf-rachis, and peduncles pilose-pubescent. Pinnae 2–4 pairs; glands small, orbicular, cupulate, borne on the petiole and on the rachis below the pinnae; leaflets 3–7 pairs, ovate to obovate, 1.5–4 cm. long, pubescent on both sides, dark green above, pale green beneath; peduncles axillary, 3–7 cm. long; flowers umbellate; pedicels tomentose, 8–15 mm. long; calyx narrowly campanulate, about 6 mm. long, its teeth ovate; corolla tomentose, 9–10 mm. long, its lobes triangular-lanceolate; stamens pink, the tube included; legume nearly sessile, pubescent, apiculate, about 15 cm. long, 3–3.5 cm. wide, tardily dehiscent.

TYPE LOCALITY: El Coyolar, near Orotina, Costa Rica.

DISTRIBUTION: Guatemala; Costa Rica; El Salvador; Panama; Colombia; Venezuela.

13. *Albizzia* (?) *nicoyana* Britton & Rose, sp. nov.

A large tree, the twigs, petioles, leaf-rachises and inflorescence densely tomentulose. Petioles 3-4 cm. long; pinnae 5 or 6 pairs, short-stalked, bearing an orbicular, somewhat elevated gland between each pair; leaflets about 8 pairs, obliquely oblong or the upper oblong-obovate, 1-2.5 cm. long, thin, acute, dark green and glabrate above, densely whitish-puberulent beneath, pinnately veined; peduncles binate and corymbose, 4 cm. long or shorter; flowers umbellate; pedicels 2-3 mm. long; calyx densely puberulent, 5 mm. long; corolla about 10 mm. long, finely pubescent, its lobes lanceolate; stamen-tube included.

Roadsides and forests, Nicoya, Costa Rica, April, 1900, *A. Tondus 13885*.

14. *Albizzia adinocephala* (Donn.-Smith) Britton & Rose; Record,
Tropical Woods 10: 22. 1927.

Pithecollobium adinocephalum Donn.-Smith, Bot. Gaz. 57: 419. 1914.

Pithecollobium discolor Pittier, Contr. U. S. Nat. Herb. 20: 464. 1922. Not *P. discolor* Britton, 1914.

A large tree, the twigs, petioles and leaf-rachis glabrous or somewhat pubescent. Petioles 2-7 cm. long, bearing an oblong or ovate gland; pinnae 1-3 pairs; leaflets 2-5 pairs, lanceolate to oblong-lanceolate or ovate, subchartaceous, 2-6 cm. long, glabrous, reticulate-veined, bright green above, pale beneath, narrowed to both ends or the base rounded, the apex acute or blunt, a small orbicular gland between the upper pair or pairs; inflorescence subpaniculate; peduncles puberulent, 1-2 cm. long; pedicels 1-2 mm. long; calyx campanulate, puberulent, 1.5-2 mm. long, its teeth acutish; corolla about 3 mm. long, its lobes lanceolate; stamen-tube included; legume broadly linear, 10-17 cm. long, 1.5-2 cm. long, glabrous, very short-stipitate, dehiscent, 10-13-seeded.

TYPE LOCALITY: Near Alajuelita, San José, Costa Rica.

DISTRIBUTION: Costa Rica; El Salvador; Panama.

15. *Albizzia occidentalis* Brand. Proc. Cal. Acad. II 3: 222. 1892.

A tree 5-10 m. high, with smooth dark gray bark, the twigs, petioles and peduncles glabrous. Petioles 2-5 cm. long, bearing a large oval-orbicular depressed gland; pinnae 2-4 pairs; leaflets 3-5 pairs, subchartaceous, reticulate-veined, 2-5 cm. long, obliquely obovate or oval, glabrous or pubescent, obtuse, rounded or cuspidate-apiculate, the upper ones more or less larger than the lower; peduncles axillary, sometimes clustered; flowers capitate, ochroleucous; calyx about 3 mm. long, its teeth triangular, acute; corolla about 9 mm. long, its lobes lanceolate; stamen-tube about as long as the corolla; legume 1.5-2 dm. long, 3-4 cm. wide, glabrous, dehiscent, transversely and reticulate-veined, stipitate, the base narrowed or obtuse; seeds 8-10 mm. long.

TYPE LOCALITY: San José del Cabo, Lower California.

DISTRIBUTION: Sinaloa; Tepic; Lower California.

ILLUSTRATION: Rose, Contr. U. S. Nat. Herb. 1: f. 6 b. as *Leucaetha macrocarpa*.

16. *Albizzia* (?) *obliqua* Britton & Rose, sp. nov.

Twigs, petioles and leaf-rachis glabrous. Petioles 4 or 5 cm. long, bearing a small orbicular gland; pinnae 5-7 pairs, the petioles and rachillas very slender; leaflets 3-5 pairs, subchartaceous, 1.5-2.5 cm. long, very oblique, reticulate-veined, obtuse or acutish, bright green above, pale and sparingly pubescent on the veins beneath; legume broadly linear, 1.5-2 dm. long, 2.5 cm. wide, narrowed to the base, glabrous, apparently indehiscent, the stipe about 2 cm. long; seeds about 6 mm. long.

Ymala, Sinaloa, September or October, 1891, *E. Palmer 1723*.

17. *Albizzia nayaritensis* Britton & Rose, sp. nov.

Rachis slender, short-pubescent. Pinnae 3 or 4 pairs, slender-stalked, the rachilla short-pubescent; leaflets about 7 pairs, sessile, reticulate-veined, glabrous above, puberulent on the veins beneath, the lower oblong to linear-oblong, 1.5-2.5 cm. long, the upper obovate,

3-3.5 cm. long, all obtuse, submembranous; peduncles axillary, slender, pubescent, 3-4 cm. long; flowers nearly or quite sessile, capitate; calyx pubescent, about 2 mm. long; corolla about 3 mm. long, the tube glabrous, the lobes pubescent; stamens about 5 mm. long, their tube about 1.5 mm. long; anthers glabrous; legume 17 cm. long, 2.5 cm. wide, glabrous, freely dehiscent, sessile, narrowed to the apiculate apex, the base cuneate, the valves chartaceous; seeds nearly white, oval, 9 mm. long.

La Palma, Nayarit, 20 m. alt., 1923, *J. G. Ortega 90*.

18. *Albizzia plurijuga* (Standley) Britton & Rose.

Leucaena plurijuga Standley, Contr. U. S. Nat. Herb. 20: 189. 1919.

Twigs puberulent when young, glabrous when older. Petioles glabrate, 3.5-5 cm. long, bearing a large depressed oblong gland near the base; leaf-rachis glabrate; pinnae 3-5 pairs, stalked, the rachilla sparingly pilose; leaflets 5-9 pairs, elliptic to elliptic-obovate, subfalcate, 1.2-3 cm. long, green above, pale beneath, chartaceous, reticulate-veined, short-pubescent when young, becoming glabrous, the apex obtuse, rounded or apiculate; peduncles axillary, in fruit stout and 3-4 cm. long; legume oblong, glabrous, 15-24 cm. long, 4-5 cm. wide, short-pointed, the base cuneate, the stout stipe 1-2 cm. long; seeds oval, about 10 mm. long, smooth, brown.

TYPE LOCALITY: Monte León, Michoacán.

DISTRIBUTION: Michoacán; Querétaro.

14. PSEUDALBIZZIA Britton & Rose, gen. nov.

An unarmed tree, with large bipinnate leaves, the numerous leaflets narrow, the globose short-peduncled heads of small flowers paniced or racemose. Calyx 5-toothed. Corolla of 5 partly united petals. Stamens numerous, about twice as long as the corolla, the filaments united below into a tube. Legume linear, flat, indehiscent, at length breaking transversely between the seed-bearing parts.

Type species, *Acacia Berteriana* Balb.

1. *Pseudalbizzia Berteriana* (Balbis) Britton & Rose.

Acacia Berteriana Balbis; DC. Prodr. 2: 470. 1825.

Inga fragrans Macf. Fl. Jam. 1: 309. 1837.

Pithecolobium Berterianum Benth. Lond. Journ. Bot. 3: 220. 1844.

Pithecolobium fragrans Benth. loc. cit. 1844.

Acacia Balbisii Spreng. Syst. 3: 140. 1825.

Acacia littoralis A. Rich. Ess. Fl. Cub. 1: 467. 1845.

Albizzia Berteriana Maza, Dicc. Bot. 10. 1889.

Fenillea Berteroana Kuntze, Rev. Gen. Pl. 184. 1891.

A tree 6-10 m. high, the twigs, petioles, leaf-rachis, and peduncles glabrous or puberulent. Petioles 5-10 cm. long, bearing an oblong gland above the base; pinnae 6-15 pairs, with a small orbicular gland between the upper pairs; leaflets 15-40 pairs, linear or linear-oblong, 5-8 mm. long, subchartaceous, inequilateral, bright green and lustrous above, pale green and dull beneath, glabrous, obtuse or acutish; flowers capitate; heads numerous, small, globose; calyx 1.5 mm. long; corolla about 3 mm. long; stamen-tube included; legume stipitate, puberulent, 7-12 cm. long, 10-17 mm. wide, the slender stipe 6-10 mm. long; seeds sub-orbicular, compressed.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Jamaica; Cuba; Hispaniola.

15. ANNESLIA Salisb. Parad. Lond. pl. 64. 1807.

CALLIANDRA Benth. in Hook. Journ. Bot. 2: 138. 1840.

Herbs, shrubs, or trees, with bipinnate eglandular leaves and capitate flowers, the heads peduncled, axillary, or in terminal racemes. Calyx 5-toothed or 5-lobed. Corolla funnelform or campanulate, 5-lobed, the petals being united to the middle or above the middle. Stamens numerous; filaments united below into a tube or sheath, long-exserted; anthers small, glandular-

hirsute or glabrous, the pollen-grains agglomerate. Ovary many-ovuled; style filiform. Legume linear, usually narrowed below the middle, flat, not pulpy within, straight or nearly so, elastically dehiscent from the apex, the valves stiff, with raised margins. Seeds obovate or orbicular, compressed.

Type species, *Anneslia falcifolia* Salisb.

1. Unarmed shrubs or trees.

- A. Leaflets few, mostly large and broad.
 Leaflets $1\frac{1}{2}$ -4 pairs, palmately veined.
 Leaflets only 1 pair, pinnately veined.
- B. Leaflets several or many, mostly small.
1. Heads solitary or few, mostly axillary.
- a. Plants low, herbaceous, woody only at the base.
- b. Large or small shrubs, or trees.
 Flowers sericeous, pilose or strigose.
 Flowers glabrous.
 Leaflets chartaceous to subcoriaceous.
 Leaflets shining above, glabrous or ciliate.
 Leaflets elliptic to ovate or obovate.
 Leaflets linear to oblong-lanceolate.
 Pinnae 1-6 pairs; leaflets 10-30 pairs, 6-12 mm. long.
 Heads peduncled; bractlets small.
 Legume (as far as known) narrow, 6-10 mm. wide.
 Legume 15 mm. wide.
 Pinnae 4 or 5 pairs; legume chartaceous.
 Pinnae 2 or 3 pairs; legume coriaceous.
 Heads sessile; bractlets large, imbricated.
 Pinnae 7 or 8 pairs; leaflets 20-65 pairs, linear, 2.5-6.5 mm. long.
- Leaflets dull.
 Pinnae 3-6 pairs; leaflets papillose above, strigose beneath.
 Pinnae 1-3 pairs; leaflets not papillose.
 Leaflets strongly veined beneath.
 Leaflets inconspicuously veined.
 Leaflets membranous or thin.
 Leaflets narrow, linear to oblong or lanceolate.
 Leaflets broad, oblong to elliptic or obovate.
2. Heads in terminal racemes or panicles.
 Racemes not corymbose.
 Stipules small, mostly deciduous; leaflets narrow.
 Pinnae 5-25 pairs.
 Corolla 6-12 mm. long.
 Corolla 14-18 mm. long, densely lanate.
 Pinnae only 1 pair.
 Stipules large, suborbicular; leaflets oblong to obovate.
 Racemes corymbose. #
1. TERGEMINAE.
 2. LAEVES.
 3. HUMILES.
 4. PUBIFLORAE.
 5. PURPUREAE.
 6. BIJUGAE.
 7. BRANDEGEEANAE.
 8. SELERANAE.
 9. BELZENSES.
 10. MICROPHYLLAE.
 11. PAPILLOSAE.
 12. NERVOSAE.
 13. MOLLICULAE.
 14. PORTORICENSES.
 15. FORMOSAE.
 16. HOUSTONIANAE.
 17. PALMERANAE.
 18. WENDLANDIANAE.
 19. QUETZALES.
 20. COMOSAE.

2. Low shrubs armed with stipular spines.

- a. Leaflets $1\frac{1}{2}$ -2 pairs.
 Leaflets acuminate.
 Bractlets linear, longer than the calyx; legume glabrous.
 Bractlets minute, shorter than the calyx.
 Calyx about 1 mm. long; leaflets 2-4 cm. long; legume puberulent.
 Calyx 3 mm. long; leaflets 4-10 cm. long.
 Leaflets obtuse, rounded or acute.
 Leaflets glabrous, or with a few scattered hairs.
 Leaflets nearly membranous.
 Leaflets not strongly reticulated.
 Calyx only about 0.5 mm. long.
 Calyx 2 mm. long.
 Leaflets strongly reticulated.
 Leaflets chartaceous or subcoriaceous.
 Leaflets 3-7 cm. long.
 Leaflets narrowly oblong.
 Leaflets broadly oblong or obovate to ovate-lanceolate.
 Leaflets subcoriaceous; legume 8 mm. wide.
 Leaflets chartaceous.
 Leaflets oblong to ovate-lanceolate, obtuse or acute; legume 13 mm. wide.
1. TERGEMINAE.
 1. *A. centralis*.
 2. *A. Rekoii*.
 3. *A. splendens*.
 4. *A. tergemina*.
 5. *A. yucatanensis*.
 6. *A. Langlassei*.
 7. *A. Seemanni*.
 8. *A. emarginata*.
 9. *A. cruziana*.

- Leaflets broadly obovate, rounded or obtuse.
 Leaflets 0.5-3 cm. long.
 Leaflets glabrous, 1-1.5 cm. long.
 Leaflets with a few scattered hairs, at least when young.
 Leaflets acutish or obtuse; calyx 3 mm. long.
 Leaflets rounded, apiculate; calyx 2 mm. long.
 Leaflets pubescent, mostly on both sides at least when young.
 Stamens 5 cm. long; calyx 4-6 mm. long.
 Stamens 1-3 cm. long; calyx 1.5-3 mm. long.
 Stamens 3 cm. long.
 Stamens 1-1.5 cm. long.
 Leaflets 1.5 cm. long or shorter.
 Leaflets 2-2.5 cm. long.
 Flowers pilose.
 Flowers glabrous.
- b. Leaflets 3 or 4 pairs.
 Leaflets acute or acuminate.
 Upper leaflets long-acuminate, 3-6 cm. long.
 Upper leaflets acute or short-acuminate, 10-12 cm. long.
 Leaflets obtuse.
2. LAEVES.
- A single species.
- Leaflets oval, strongly reticulate-veined.
 Leaflets oblong or linear-oblong.
3. HUMILES.
- Leaflets up to 40 pairs.
 Pinnae 2 or 3 pairs.
 Pinnae 5-9 pairs.
 Leaflets long-pilose on both sides.
 Leaflets glabrous above, pilose or strigose beneath.
 Leaflets 30-40 pairs.
 Leaflets 15-25 pairs.
 Leaflets obliquely ovate-elliptic.
 Leaflets linear-oblong.
 Flowers densely long-strigose.
 Flowers loosely short-strigose.
4. PUBLIFLORAE.
- Leaflets 6-16 pairs.
 Leaflets lanceolate, 6-8 mm. long; calyx 3 mm. long.
 Leaflets linear to oblong or obovate, 2.5-6 mm. long; calyx 1-2 mm. long.
 Leaflets densely long-pilose.
 Leaflets strigose or glabrate.
 Leaflets 4-6 mm. long.
 Leaflets 3-4 mm. long.
 Leaflets strigose, at least beneath; legume 4-5 mm. wide.
 Leaflets glabrous; legume 8 mm. wide; flowers slightly strigose.
 Leaflets linear-oblong, 1.5 mm. wide, obtuse.
 Leaflets oblong to obovate, 3 mm. wide, mucronulate.
5. PURPUREAE.
- A single species.
6. BIJUGAE.
- Leaflets nearly linear, the midvein nearly central.
 Leaflets obtuse.
 Leaflets acute.
 Rachillas densely villous; calyx glabrous.
 Rachillas sparingly pilose; calyx puberulent above.
 Leaflets oblong-lanceolate, the midvein excentric.
 Leaflets 10-20 mm. long, glabrous.
 Leaf-rachis pilose.
 Leaflets strongly reticulate-veined.
 Leaflets slightly reticulate-veined.
 Leaf-rachis slightly pubescent.
 Stipules ovate; corolla 6 mm. long.
 Stipules linear; corolla 8 mm. long.
 Leaflets 8-12 mm. long, ciliate.
 Peduncles axillary; leaflets oblong, acute or obtusish, 8 mm. long.
 Leaflets 3-nerved at base; twigs with appressed pubescence, or glabrate.
 Leaflets 1-nerved at base; twigs pilose.
 Peduncles on short spur-like twigs; leaflets oblong-lanceolate, sharply acute, 8-12 mm. long.
10. *A. sinaloana*.
 11. *A. rupestris*.
 12. *A. leucotricha*.
 13. *A. juchitana*.
 14. *A. canescens*.
 15. *A. mexicana*.
 16. *A. Purpusii*.
 17. *A. Deamii*.
 18. *A. tetraphylla*.
 19. *A. Guildingii*.
 20. *A. rhodocephala*.
 21. *A. fulgens*.
 22. *A. laevis*.
 23. *A. humilis*.
 24. *A. herbacea*.
 25. *A. Cumingii*.
 26. *A. hirsuta*.
 27. *A. pubiflora*.
 28. *A. speciosa*.
 29. *A. Diqueti*.
 30. *A. peninsularis*.
 31. *A. Houghiana*.
 32. *A. mixta*.
 33. *A. californica*.
 34. *A. eriophylla*.
 35. *A. Lagunae*.
 36. *A. mucronulata*.
 37. *A. purpurea*.
 38. *A. Magdalenae*.
 39. *A. densifolia*.
 40. *A. Caeciliae*.
 41. *A. Tonduzii*.
 42. *A. chiapensis*.
 43. *A. bijuga*.
 44. *A. Michellii*.
 45. *A. rubescens*.
 46. *A. xalapensis*.
 47. *A. compacta*.

- A single species. 7. BRANDEGEEANAE. 48. *A. Brandegeei*.
- A single species. 8. SELERANAE. 49. *A. Seleri*.
- A single species. 9. BELIZENSES. 50. *A. belizensis*.
10. MICROPHYLLAE. 51. *A. Pittieri*.
52. *A. nicaraguensis*.
- Leaflets 20-65 pairs, reticulate-veined beneath.
Leaflets 15-25 pairs, the midvein only evident. 11. PAPILLOSAE. 53. *A. simulans*.
54. *A. papillosa*.
- Leaflets 3-5 mm. long; stipules ovate, imbricated.
Leaflets 6-8 mm. long; stipules linear-lanceolate. 12. NERVOSAE. 55. *A. nervosa*.
- A single species. 13. MOLLICULAE. 56. *A. mollicula*.
57. *A. unijuga*.
58. *A. socorrensis*.
- Leaflets densely short-pubescent.
Leaflets glabrous. 14. PORTORICENSES. 59. *A. tetragona*.
60. *A. portoricensis*.
61. *A. mollis*.
62. *A. caracasana*.
63. *A. pallida*.
64. *A. Lambertiana*.
65. *A. interior*.
66. *A. media*.
67. *A. Spraguei*.
68. *A. Couleri*.
69. *A. oaxacana*.
70. *A. Schottii*.
- Branches tetragonal.
Branches terete or subterete.
Leaflets narrowly linear, 4-5 times as long as broad.
Filaments white.
Legume glabrous.
Legume pilose.
Filaments pink.
Leaflets oblong to linear-oblong or lanceolate.
Leaflets lanceolate, reticulate-veined.
Leaflets oblong to linear-oblong.
Leaflets 4-5 mm. wide.
Plant glandular-pubescent.
Plant glabrous.
Leaflets 1.5-3 mm. wide.
A small tree.
Shrubs.
Leaflets about 3 times as long as wide.
Large shrub; stamens 2.5 cm. long.
Low shrubs; stamens 1.5-2 cm. long.
Legume 5 cm. long.
Legume 8-9 cm. long.
Leaflets only about twice as long as wide.
15. FORMOSAE. 71. *A. formosa*.
72. *A. Grisebachii*.
73. *A. costaricensis*.
74. *A. delicata*.
75. *A. capillata*.
76. *A. Cookii*.
77. *A. gracilis*.
78. *A. cubensis*.
79. *A. salvadorensis*.
80. *A. izalcoensis*.
81. *A. suborbicularis*.
- Leaflets glabrous or merely ciliate.
Leaflets acute.
Leaflets elliptic to obovate, the larger ones 2-2.5 cm. long.
Leaflets narrowed or rounded at the base.
Leaflets oblong-obovate, acute; corolla twice as long as the calyx.
Leaflets elliptic-obovate, acutish; corolla about as long as the calyx.
Leaflets obliquely subtruncate at the base.
Leaflets narrowly oblong to oblong-obovate, 6-12 mm. long.
Leaflets obtuse, mucronulate or emarginate (rarely acutish in *C. cubensis*).
Leaflets elliptic to broadly obovate, 2-3.5 cm. long.
Leaflets subchartaceous, green.
Leaflets thin-membranous, darkening in drying.
Leaflets oblong to narrowly obovate, 0.5-2 cm. long.
Leaflets thin-membranous; legume about 5 mm. wide.
Leaflets firm-membranous; legume 7-12 mm. wide.
Leaflets, at least some of them, pubescent.
Leaflets acute or acutish.
Leaflets elliptic-obovate, appressed-pubescent or glabrous.
Leaflets oblong to oblong-lanceolate, sparingly pubescent beneath.
Leaflets obtuse or rounded.
Leaflets only 2 or 3 pairs, orbicular-obovate.
Leaflets 4-6 pairs, oblong to obovate.
Pubescence appressed.

- Pinnae 1 or 2 pairs; legume 7-10 mm. wide.
Pinnae mostly 3 pairs; legume 4-5 mm. wide.
Leaflets pilose beneath.
82. *A. penduliflora*.
83. *A. orientalis*.
84. *A. chapaderoana*.
16. HOUSTONIANAE.
- Leaflets 1-veined or apparently veinless, linear.
Leaflets cultriform, subfalcate, sharply acute; corolla brown-strigose.
Leaflets straight or nearly so, acute or obtuse.
Corolla 12 mm. long, brown-puberulent.
Corolla shorter, variously pubescent or glabrous.
Flowers glabrous.
Leaflets 50-60 pairs, acute.
Leaflets about 30 pairs, obtuse.
Flowers strigose or pilose (unknown in no. 90).
Leaflets acute.
Twigs and leaf-rachis densely tomentose-pilose.
Twigs and leaf-rachis glabrate or strigose.
Leaflets obtuse or rounded.
Twigs and leaf-rachis strigillose.
Flowers brown-strigose.
Corolla white-strigose.
Leaflets 3-4 mm. long; corolla 10 mm. long.
Leaflets 1.5 mm. long; corolla 6 mm. long.
Twigs and leaf-rachis densely pilose-tomentose.
Leaflets short-ciliate; corolla strigose.
Leaflets long-ciliate; corolla pilose.
85. *A. Houstoniana*.
86. *A. grandiflora*.
87. *A. confusa*.
88. *A. similis*.
89. *A. Callistemon*.
90. *A. chihuahuana*.
91. *A. strigillosa*.
92. *A. bella*.
93. *A. colomasensis*.
94. *A. Conzattiana*.
95. *A. albanensis*.
- Leaflets pinnately veined, at least when old.
Pinnae several pairs, approximate; leaflets linear.
Inflorescence terminal.
Leaflets acute.
Leaflets cultriform, subfalcate.
Leaflets nearly straight.
Leaflets 5-6 mm. long, spinulose-tipped.
Leaflets 4-6 mm. long, bluntly acute.
Leaflets rounded or obtuse.
Inflorescence axillary as well as terminal; leaflets obtuse, 5-7 mm. long.
Pinnae few pairs, up to 14 cm. long, distant; leaflets lanceolate.
96. *A. alamosensis*.
97. *A. acapulcensis*.
98. *A. albenscens*.
99. *A. publiana*.
100. *A. anomala*.
101. *A. etzatlana*.
17. PALMERANAE.
- A single species.
102. *A. Palmeri*.
18. WENDLANDIANAE.
- A single species.
103. *A. Wendlandii*.
19. QUETZALES.
- A single species.
104. *A. Quetzal*.
20. COMOSAE.
- A single species.
105. *A. comosa*.
21. HAEMATOSTOMAE.
- Leaflets chartaceous, nerved.
Flowers sessile, capitate or solitary.
Heads several-many-flowered; leaflets reticulate-veined.
Corolla appressed-sericeous.
Leaflets 3-9 pairs, 3-7 mm. long; calyx 2 mm. long.
Leaflets 2 or 3 pairs, 2-4 mm. long; calyx about 1 mm. long.
106. *A. haematostoma*.
107. *A. collettioides*.
- Corolla glabrous.
Leaflets 4-9 pairs, 1-3 mm. long.
Leaflets 5-13 pairs, 4-6 mm. long.
Flowers 1-3; leaflets indistinctly veined; flowers glabrous.
Stamen-sheath not longer than the corolla-tube; shrub.
Stamen-sheath much longer; tree.
108. *A. minutifolia*.
109. *A. pilosa*.
- Flowers slender-pedicelled, umbellate.
Leaflets coriaceous, nerveless, shining.
110. *A. pauciflora*.
111. *A. nipensis*.
112. *A. pedicellata*.
113. *A. enervis*.

1. *Anneslia centralis* Britton & Rose, sp. nov.

A shrub, the twigs terete, slender, glabrous or with a few long hairs. Stipules triangular, acute, 2-3 mm. long, striate, persistent; pinnae 1 pair; leaflets 2 or 3, ovate to lanceolate, acuminate, 2-8 cm. long, glabrous, or a little hairy on the upper side of the midrib, shining and reticulate-veined above; peduncles slender, 2-4 cm. long, at first pubescent; bractlets linear, striate, 2-3 mm. long; flowers glabrous; calyx 2 mm. long, striate; corolla 6 mm. long; filaments about 3 cm. long, the tube somewhat exerted; legume 8-10 cm. long, 8 mm. broad above, cuneate at base, glabrous.

Honduras and Guatemala. Type from near San Pedro, Sula, Honduras, April, 1889, *C. Thieme 5214*. This is, perhaps, the plant doubtfully recorded by Bentham (Trans. Linn. Soc. 30: 538), from Mt. Aguacate, Central America, as *Calliandra carbonaria*.

2. *Anneslia Reko* Britton & Rose, sp. nov.

A small shrub. Petioles short; stipules persistent; pinnae 1 pair; leaflets 3, ovate-lanceolate, acuminate, 2-4 cm. long, glabrous on both sides; peduncles slender, 1.5-2 cm. long, striate, glabrous; flowers glabrous; calyx 1 mm. long; corolla 5-6 mm. long; stamens 3 cm. long, "half red, half white"; legume 10-11 cm. long, with a long tapering base, 8-9 mm. broad above, obtuse, apiculate, puberulent.

Tepinapa, Oaxaca, altitude 100 meters, March 23, 1919, *B. P. Reko 4130*.

3. *Anneslia splendens* Britton & Rose, sp. nov.

A small shrub, the branches elongated, terete, glabrous. Stipules linear, acute, 4-5 mm. long; pinnae 1 pair; leaflets 3, oblong to ovate-lanceolate, very oblique, 4-10 cm. long, short-acuminate, glabrous and reticulate-veined on both sides, pale beneath; peduncles short, 8-10 mm. long, striate, slightly pubescent; calyx 3 mm. long, striate; corolla 12 mm. long, glabrous; stamens elongated, the tube long-exserted.

Road between Tumlata and El Salto, Chiapas, 1895, *E. W. Nelson 3396*.

4. *Anneslia tergemina* (L.) Britton & Rose.

Mimosa tergemina L. Sp. Pl. 517. 1753.
Inga tergemina Willd. Sp. Pl. 4: 1008. 1806.
Inga caripensis H. & B.; Willd. loc. cit. 1009. 1806.
Mimosa caripensis Poir. in Lam. Encycl. Suppl. 1: 39. 1810.
Feuillea tergemina Kuntze, Rev. Gen. Pl. 189. 1891.

A shrub, glabrous throughout, the branches slender. Stipules lanceolate, acuminate, about 2 mm. long; petioles nearly filiform, 0.5-2 cm. long; pinnae 1 pair; leaflets 1 pair or 1½ pairs, obovate to oblong, membranous, delicately reticulate-veined, 1-4.5 cm. long, the apex rounded or obtuse; peduncles axillary, filiform, about 3 cm. long or shorter; heads few-flowered; calyx only about 0.5 mm. long; corolla slender, 6-8 mm. long; stamens 2.5-3 cm. long, their tube somewhat exserted; legume glabrous, 5-10 cm. long, 6-8 mm. wide, long-attenuate to the base, apiculate.

TYPE LOCALITY: Tropical America.

DISTRIBUTION: Dominica; Martinique; St. Lucia; St. Vincent; Trinidad (according to Bentham) northern Venezuela.

5. *Anneslia yucatanensis* Britton & Rose, sp. nov.

Glabrous throughout, with very slender twigs. Stipules ovate to ovate-lanceolate, 2 mm. long or shorter; petioles nearly filiform, 1-1.5 cm. long; pinnae 1 pair, filiform-stalked; leaflets 1½ pairs, oblong to oblong-obovate, 1-2.5 cm. long, obtuse or rounded, submembranous; peduncles nearly filiform, about as long as the petioles; heads few-flowered; calyx 2 mm. long, its teeth short; corolla 6-7 mm. long, its narrow lobes acutish; filaments about 2 cm. long, the tube included.

Yucatán, 1917-1921, *G. F. Gaumer 24240*.

6. *Anneslia Langlassei* (Harms) Britton & Rose.

Calliandra Langlassei Harms, Repert. 17: 87. 1921.

Branches slender, pale, when young sparingly pilose but in age glabrate. Petioles pilose or becoming glabrate, 6-10 mm. long; pinnae 1 pair; leaflets 3, the lower and odd one a third smaller, oblong to ovate-oblong, more or less oblique, obtuse or obtuse-acuminate, glabrous, shining, 2-3.5 cm. long; peduncles somewhat pilose or glabrous, 1-2.5 cm. long; calyx short-tubular, glabrous or nearly so, striate, 2 mm. long; corolla glabrous, 5-6 mm. long.

TYPE LOCALITY: Chichihualco, Mexico.

DISTRIBUTION: Known only from the type locality.

7. *Anneslia Seemanni* (Benth.) Britton & Rose.

Calliandra Seemanni Benth.; Seem. Bot. Voy. Herald 116. 1853.
Feuillea Seemanni Kuntze, Rev. Gen. Pl. 189. 1891.

A shrub, 2-3 m. high, glabrous or sparingly canescent-puberulent. Stipules small, lanceolate; petioles slender, 1-2 cm. long; pinnae 1 pair; leaflets 1½ pairs, obliquely oblong, acutish or obtuse, 2.5-4 cm. long, glabrous or ciliate; peduncles slender, longer than the petioles or as long; heads few-several-flowered; flowers glabrous; calyx about 2 mm. long; corolla about three times as long as the calyx; stamens 2-2.5 cm. long, their tube included; legume glabrous, 7-10 cm. long, about 1 cm. wide; seeds brown, white-dotted.

TYPE LOCALITY: River-banks, Veragua, Panama.
 DISTRIBUTION: Panama and Colombia.
 ILLUSTRATION: Seem. Bot. Herald *pl.* 22.

8. *Anneslia emarginata* (H. & B.) Britton & Rose.

Inga emarginata H. & B.; Willd. Sp. Pl. 4: 1009. 1806.
Inga coriacea H. & B.; Willd. loc. cit. 1010. 1806.
Mimosa emarginata Poir. in Lam. Encycl. Suppl. 1: 39. 1810.
Calliandra emarginata Benth. Lond. Journ. Bot. 3: 95. 1844.
Calliandra coriacea Benth. loc. cit. 1844.
Feuillea emarginata Kuntze, Rev. Gen. Pl. 187. 1891.

A large shrub, glabrous throughout, the branches rather slender. Stipules lanceolate-subulate, 2 mm. long; petioles 1-3 cm. long; pinnae 1 pair, or the upper leaves reduced to stipules; leaflets 1½ pairs, oblong to oblong-obovate, subcoriaceous, obtuse, acutish or slightly emarginate, 3-6 cm. long, shining, reticulate-veined; peduncles subpaniculate or axillary, 1.5-3 cm. long; heads several-flowered; calyx 1.5-2 mm. long; corolla 7-8 mm. long; stamens scarlet, about 2.5 cm. long, their tube included; legume about 9 cm. long and 8 mm. wide, glabrous, subcoriaceous.

TYPE LOCALITY: Acapulco, Guerrero.
 DISTRIBUTION: Guerrero.
 ILLUSTRATION: Kunth, Mim. *pl.* 17.

9. *Anneslia cruziana* Britton & Rose, sp. nov.

A small shrub, glabrous or nearly so throughout. Petioles slender, 1-5 cm. long; pinnae 1 pair; leaflets usually 3, oblong to ovate-lanceolate, oblique, the upper ones usually 3-5 cm. long, obtuse, sometimes retuse, shining; peduncles slender, weak, 2-3 cm. long; calyx 2 mm. long; corolla 6 mm. long; stamens red, 3 cm. long, the tube longer than the corolla; legume about 10 cm. long, 13 mm. broad near the tip, apiculate, glabrous, somewhat reticulated.

Veracruz. Type from Cameron, Nov. 15, 1926, *Purpus 11000*.

10. *Anneslia sinaloana* Britton & Rose, sp. nov.

A shrub about 1 m. high, the slender twigs at first densely villous, soon becoming glabrous. Stipules lanceolate, acuminate, about 5 mm. long; petioles very slender, glabrous, 1.5-3 cm. long; pinnae 1 pair; leaflets 1½ or 2 pairs, broadly obovate, 2-6 cm. long, or the lower one much smaller, chartaceous, glabrous, dull, reticulate-veined; peduncles rather stout, villous, 1-2 cm. long; heads several-flowered; flowers glabrous; calyx and corolla cherry-red; calyx 2 mm. long; corolla 5 mm. long; stamens white, about 12 mm. long, their tube included; legume about 6 cm. long, only 3 mm. wide, glabrous.

Mazatlan, Sinaloa, January 17-19, 1897, *Rose 1380*.

11. *Anneslia rupestris* (Brand.) Britton & Rose.

Calliandra rupestris Brand. Zoe 5: 199. 1905.

A small tree, about 4 m. high, the twigs glabrous. Stipules ovate-lanceolate, 2-4 mm. long; petioles 1-1.5 cm. long, sparingly pubescent; pinnae 1 pair; leaflets 2 pairs, oblong-obovate, chartaceous, glabrous, or the margins ciliate, about 3 cm. long or shorter, strongly reticulate-veined; peduncles solitary or 2 in the axils, about 12 mm. long, loosely pilose; calyx

2 mm. long, its teeth pubescent; corolla glabrous, 5 mm. long; stamens 3-5 cm. long, purple below, lighter above; legume (*Rose, Standley and Russell 14155*) oblanceolate, glabrous, 3-5 cm. long, 5-7 mm. wide, coriaceous, obtuse.

TYPE LOCALITY: Near Copradia, Sinaloa.
DISTRIBUTION: Sinaloa.

12. *Anneslia leucotricha* Britton & Rose, sp. nov.

Twigs and petioles loosely pubescent with white hairs when young, soon glabrous. Stipules linear-lanceolate, 4-5 mm. long; petioles 1-2 cm. long; leaflets 2 pairs, oblong-obovate, chartaceous, 1.5-2.5 cm. long, acutish or obtuse, ciliate and with scattered white hairs when young, glabrous when old, strongly reticulate-veined; peduncles slender, 1.5-3 cm. long; heads several-flowered; calyx about 3 mm. long, its teeth white-hairy; corolla glabrous, about thrice as long as the calyx; stamens 10-15 mm. long.

Acasonica, Veracruz, 1919, *Purpus 8391*.

13. *Anneslia juchitana* Britton & Rose, sp. nov.

Young twigs, petioles, and peduncles loosely white-pilose. Stipules triangular-ovate, about 2 mm. long; petioles about 2 cm. long or shorter; leaflets $1\frac{1}{2}$ or 2 pairs, oblong-obovate, 0.5-2 cm. long, rounded, minutely apiculate, chartaceous, strongly reticulate-veined, ciliate when young and sparingly pubescent, glabrous when old; peduncles about as long as the petioles or shorter; calyx 2 mm. long; corolla about 5 mm. long, bearing a few white hairs in bud; stamens about 15 mm. long, their tube included.

Oaxaca and Guatemala. Type from Juchitan, Oaxaca, January 31, 1896, *Seler 1988*.

14. *Anneslia canescens* (Schl. & Cham.) Britton & Rose.

Inga canescens Schl. & Cham. *Linnaea* 5: 592. 1830.
Calliandra canescens Benth. *Lond. Journ. Bot.* 3: 96. 1844.
Feuillea canescens Kuntze, *Rev. Gen. Pl.* 187. 1891.

A branching shrub, with soft spreading pubescence. Petioles slender, 1.5-2.5 cm. long, pilose; pinnae 1 pair; leaflets 2 pairs, the lower pair much smaller, the innermost one very small, all oblique, elliptic, obtuse, mucronate, pubescent on both sides, the upper ones 2 cm. long; heads axillary, solitary; peduncles erect, stout, 5 cm. long; flowers pilose; calyx 4-6 mm. long; corolla 10-12 mm. long; stamens united to above the corolla, 5 cm. long.

TYPE LOCALITY: Between Marantial and Puente del Rey, Veracruz.
DISTRIBUTION: Known only from the type locality.

15. *Anneslia mexicana* (Brand.) Britton & Rose.

Calliandra mexicana Brand. *Univ. Calif. Pub. Bot.* 10: 183. 1922.

A shrub, the twigs reddish, pilose. Stipules ovate to lanceolate, acute, striate, persistent, pubescent; pinnae 1 pair; leaflets 2 pairs, obliquely obovate; obtuse, apiculate, 1-1.5 cm. long, more or less pubescent on both sides, or glabrous in age, reticulate-veined; peduncles axillary, 2.5-4 cm. long, pilose; calyx 2.5 mm. long, pubescent; corolla 5.5 mm. long, the lobes pubescent; stamens red, 3 cm. long, the tube about as long as the corolla; legume 5-6 cm. long.

TYPE LOCALITY: Near Remulatero, Veracruz.
DISTRIBUTION: Veracruz; Tamaulipas.

16. *Anneslia Purpusii* (Brand.) Britton & Rose.

Calliandra Purpusii Brand. *Univ. Calif. Pub. Bot.* 6: 180. 1915.

A shrub, the young twigs pubescent. Pinnae 1 pair; leaflets 2 pairs, oblong-obovate, retuse or mucronate, 1.5 cm. long or shorter, pubescent on both sides, reticulate-veined, somewhat papillose, one of the lower ones very small; peduncles axillary, pubescent, about 2 cm. long; flowers appressed-pubescent; calyx nearly 2 mm. long; corolla 5-6 mm. long;

stamens red, 1.3 cm. long, the tube somewhat exerted; legume 9 cm. long, 6-8 mm. broad, densely pubescent, somewhat incurved, apiculate.

TYPE LOCALITY: Cerro de Picacho, Oaxaca.
DISTRIBUTION: Oaxaca.

17. *Anneslia Deamii* Britton & Rose, sp. nov.

A shrub, 2-3 m. high, the young twigs, the peduncles, petioles and under leaf-surfaces short-pilose, the upper leaf-surfaces appressed-pubescent when young. Stipules lanceolate, about 2 mm. long; petioles 1-2.5 cm. long; leaflets 2 pairs, or 1½ pairs, obovate, submembranous, 2-2.5 cm. long, obtuse, apiculate, reticulate-veined; peduncles nearly filiform, about as long as the petioles or shorter; heads few-flowered; flowers pilose; calyx narrowly campanulate, 2-2.5 mm. long; corolla about 6 mm. long.

Guatemala, along path to Motagua River from Gualan, June 14, 1909, *Deam 6258*.

18. *Anneslia tetraphylla* (G. Don) Britton & Rose.

Inga tetraphylla G. Don, Gen. Hist. 2: 392. 1832.
Calliandra tetraphylla Benth. Trans. Linn. Soc. 30: 544. 1875.
Fevillea tetraphylla Kuntze, Rev. Gen. Pl. 189. 1891.

A small tree or shrub, the very slender young twigs short-villous. Stipules ovate, acute, 2 mm. long, when young imbricated; petioles slender, at first short-villous, becoming glabrous, 1.5-2.5 cm. long; pinnae 1 pair; leaflets mostly 2 pairs, oblong, 1.5-3 cm. long, acute or obtuse, appressed-pubescent on both sides, or sometimes glabrate, ciliate, reticulate-veined when old; peduncles slender, villous, 0.5-2 cm. long; heads several-flowered; flowers glabrous; calyx 1.5 mm. long; corolla about 6 mm. long; stamens 12-15 mm. long; legume about 9 cm. long, 5 mm. wide, glabrous, obtuse.

TYPE LOCALITY: Mexico.
DISTRIBUTION: Sonora to Colima.

19. *Anneslia Guildingii* (Benth.) Britton & Rose.

Calliandra Guildingii Benth. Lond. Journ. Bot. 3: 96. 1844.
Fevillea Guildingii Kuntze, Rev. Gen. Pl. 184. 1891.

Glabrous throughout, the twigs slender. Petioles 1-2.3 cm. long; pinnae 1 pair; leaflets 2 to 4 pairs, obliquely lanceolate or subrhomboid, shining, coarsely reticulate-veined, acute or short-acuminate, the upper ones 3-4 cm. long, the lower ones smaller; peduncles axillary, about twice as long as the petioles; heads ellipsoid, many-flowered; calyx about 4 mm. long; corolla 10-11 mm. long; stamens about 6 cm. long, their sheath about as long as the corolla; legume scimitar-shaped, glabrous, long-stipitate, about 11 cm. long.

TYPE LOCALITY: St. Vincent.
DISTRIBUTION: St. Vincent.

20. *Anneslia rhocephala* (Donn. Smith) Britton & Rose.

Calliandra rhocephala Donn. Smith, Bot. Gaz. 49: 454. 1910.

A glabrous shrub, 2-5 m. high, the twigs rather stout. Stipules ovate-oblong, about 8 mm. long; petiole 1-1.5 cm. long; pinnae 1 pair; leaflets 3 pairs, or 3½ pairs, oblong to elliptic-lanceolate, acute or short-acuminate, shining, coarsely reticulate-veined, dark green above, light green beneath, the upper ones 10-12 cm. long, 3-4 cm. wide, the lower smaller; peduncles solitary or clustered, 1-3 cm. long; heads many-flowered; calyx about 3 mm. long; corolla about 8 mm. long; stamens red, about 2.5 cm. long, their tube a little longer than the corolla.

TYPE LOCALITY: Near Puerto Barrios, Guatemala.
DISTRIBUTION: Known only from the type locality.

21. *Anneslia fulgens* (Hook. f.) Britton & Rose.

Calliandra fulgens Hook. f. Bot. Mag. 124: pl. 7626. 1898.

A shrub or small tree. Leaves large, with pubescent petioles and rachis; pinnae 1 pair; leaflets 3 or 4 pairs, linear-oblong, 5-6 cm. long, obtuse, 3-nerved, glabrate in age, ciliate;

flowers in a large head on a short peduncle; calyx minute, truncate; corolla 8–10 mm. long, glabrous, pink, the lobes rounded; filaments 2.5 cm. long, scarlet, the tube exerted.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Only known from cultivated plants.

ILLUSTRATION: Bot. Mag. pl. 7626.

22. *Anneslia laevis* (Rose) Britton & Rose.

Calliandra laevis Rose, Contr. U. S. Nat. Herb. 5: 194. 1899.

A small tree, 7.5 m. high or higher, glabrous throughout. Petioles 1–2 cm. long; pinnae 1 pair; petiolules about as long as the petioles; leaflets 1 pair, lanceolate to oblong or oblanceolate, nearly sessile, pinnately veined, 5–10 cm. long; peduncles 2.5–3.5 cm. long; calyx 2 mm. long; corolla 6–8 mm. long; stamens 3.5 cm. long; legume 10–13 cm. long, about 12 mm. wide.

TYPE LOCALITY: Near Colomas, Sinaloa.

DISTRIBUTION: Sinaloa and Jalisco.

23. *Anneslia humilis* (Schl.) Britton & Rose.

Acacia humilis Schl. Linnaea 12: 567. 1838.

Calliandra reticulata A. Gray, Pl. Wright. 2: 53. 1853.

Anneslia reticulata Britton, Trans. N. Y. Acad. Sci. 14: 32. 1894.

Feuilleea humilis Kuntze, Rev. Gen. Pl. 188. 1891.

Feuilleea reticulata Kuntze, Rev. Gen. Pl. 189. 1891.

Subherbaceous with a thick woody base, glabrous, or sparingly pilose-pubescent, branched below, the thick woody root sometimes 3–6 dm. long, the stems suberect or spreading, 1–2 dm. long. Stipules ovate, 2–4 mm. long; petioles slender, 1–3 cm. long; pinnae 1–4 pairs; leaflets 4–11 pairs, obliquely oval, obtuse or rounded, strongly 3–5-nerved and reticulate-veined, 4–10 mm. long; peduncles slender, 1.5–3 cm. long; axillary, solitary or binate; heads few-several-flowered; calyx pilose or glabrous, about 2 mm. long; corolla glabrate, 3–4 mm. long; stamens pink, 7–10 mm. long; legume glabrous or sparsely pubescent, 3–5 mm. long, apiculate.

TYPE LOCALITY: Near Regla, Hidalgo.

DISTRIBUTION: New Mexico and Arizona, south to Hidalgo and Jalisco.

24. *Anneslia herbacea* (Engelm.) Britton & Rose.

Calliandra humilis Benth. Lond. Journ. Bot. 5: 103. 1846.

Calliandra herbacea Engelm.; A. Gray, Mem. Am. Acad. II. 4: 39. 1849.

More or less pilose, or glabrate, branched below, subherbaceous from a woody base and a deep woody root; stems slender, 1–2 dm. long, erect or diffuse. Stipules lanceolate, 2–4 mm. long; petioles slender, 1–3 cm. long; pinnae 3–9 pairs; leaflets 10–18 pairs, oblong or linear-oblong, obtuse, 3-nerved, sparingly reticulate-veined, 1.5–5 mm. long; peduncles slender, 1–3 cm. long, axillary, mostly solitary; heads several-flowered; calyx 4–5-toothed, about 2 mm. long; corolla about 6 mm. long; stamens about twice as long as the corolla; legume 4–7 mm. long, about 7 mm. wide, pubescent when young, becoming glabrous.

TYPE LOCALITY: Between San Miguel and Las Vegas, New Mexico.

DISTRIBUTION: Western Texas; New Mexico and Arizona to Zacatecas and Jalisco.

25. *Anneslia Cumingii* (Benth.) Britton & Rose.

Calliandra Cumingii Benth. Lond. Journ. Bot. 2: 140. 1844.

Feuilleea Cumingii Kuntze, Rev. Gen. Pl. 1: 187. 1891.

A low shrub. Pinnae 2 or 3 pairs; leaflets 10–25 pairs, oblong-linear, 4–6 mm. long, glabrous or slightly pubescent; petioles puberulent; stipules and bracts small, lanceolate-subulate; peduncle terminal, solitary, bearing bracts near the middle; flowers pilose; calyx 1 mm. long; corolla 8 mm. long; stamens purple, 2.5 cm. long; ovary glabrous.

TYPE LOCALITY: Panama.

DISTRIBUTION: Panama.

26. *Anneslia hirsuta* (G. Don) Britton & Rose.

Inga hirsuta G. Don, Gen. Hist. 2: 395. 1832.
Calliandra hirsuta Benth. Trans. Linn. Soc. 30: 554. 1875.
Calliandra nitida S. Wats. Proc. Am. Acad. 22: 410. 1887.
Feuilleea hirsuta Kuntze, Rev. Gen. Pl. 188. 1891.

A shrub, 1 m. high, or lower, the twigs, foliage, peduncles, and flowers densely whitish-pilose. Stipules lanceolate, 4-6 mm. long; petioles about 1 cm. long; pinnae 4-11 pairs; leaflets 15-25 pairs, linear or linear-oblong, obtuse, 2-5 mm. long, densely pilose on both sides when young, becoming glabrate and shining above when old; peduncles solitary or fascicled in the axils of short scales below the leaves, slender, 2-5 cm. long, sometimes bracteolate at or above the middle; heads few-several-flowered; calyx only about 1 mm. long; corolla 6-8 mm. long; stamens red, 2-2.5 cm. long, their tube included; legume 4-6 cm. long, about 1 cm. wide, densely puberulent, cuspidate.

TYPE LOCALITY: New Spain.
 DISTRIBUTION: Jalisco; Tepic; Zacatecas.

27. *Anneslia pubiflora* Britton & Rose, sp. nov.

Twigs terete, strigose. Stipules linear, 8-10 mm. long; petioles 1 cm. long or shorter, pilose; pinnae 6-9 pairs, the rachilla pilose; leaflets 30 or more pairs, oblong, 4-6 mm. long, acute, dull green, glabrous above, ciliate, loosely pilose beneath especially when young; peduncles axillary, slender, 3-4 cm. long, pilose; heads few-flowered; calyx 2-3 mm. long, pilose, especially above; corolla slender, pilose, 10 mm. long; stamens 3 cm. long, their tube included.

Open oak and pine forests near Fenix, Chiapas, May, 1925, *Purpus* 10346.

28. *Anneslia speciosa* (Mart. & Gal.) Britton & Rose.

Inga speciosa Mart. & Gal. Bull. Acad. Brux. 10^o: 320. 1843.
Calliandra Cumingii Galeottii Benth. Lond. Journ. Bot. 3: 106. 1844.

Shrubby; twigs, petioles and peduncles purple, pubescent. Pinnae 6 or 7 pairs; leaflets about 20 pairs, obliquely ovate-elliptic, acute, glabrous above, appressed-pilose beneath; peduncles axillary, shorter than the leaves; heads semiglobose; calyx campanulate, small; corolla purple, villous; stamens red, long-exserted.

TYPE LOCALITY: Socorro and Sierra de Gavezia, Oaxaca, Mexico.
 DISTRIBUTION: Known only from the type locality, and to us only from the description.

29. *Anneslia Diqueti* Britton & Rose, sp. nov.

Twigs densely strigose. Stipules linear-lanceolate, about 3 mm. long; petioles 0.5-1 cm. long; pinnae 5 or 6 pairs; leaflets 15-25 pairs, linear-oblong, acute, 3-5 mm. long, loosely villous beneath, glabrous and shining above; peduncles axillary, solitary, strigose, nearly filiform, 3-4 cm. long; heads few-flowered; flowers densely long-strigose; calyx about 2 mm. long; corolla about 6 mm. long; stamens red, about 2.5 cm. long, their tube included.

Sierra de Nayarit, Territoire Huichol, Jalisco, *Léon Diquet*.

30. *Anneslia peninsularis* (Rose) Britton & Rose.

Calliandra peninsularis Rose, Contr. U. S. Nat. Herb. 5: 135. 1897.

Twigs, petioles, leaf-rachis and peduncles densely puberulent. Petioles short; pinnae 6 pairs; leaflets about 20 pairs, linear-oblong, 4-6 mm. long, acute or obtuse, glabrous above, appressed-pubescent beneath, the midvein excentric; peduncles very slender, 3.7-5 cm. long; heads many-flowered; calyx about 1.5 mm. long; corolla 6-8 mm. long, loosely strigose; stamens about 2 cm. long, the tube included; legume 6-8.7 cm. long, 8 mm. wide, rather densely appressed-pubescent, the base long-tapering, the apex obtuse, apiculate.

TYPE LOCALITY: La Paz, Lower California.
 DISTRIBUTION: Known only from the type locality.

31. *Anneslia Houghiana* Britton & Rose, sp. nov.

Twigs, leaf-rachis, and peduncles densely strigose. Stipules linear-lanceolate, villous, 3-4 mm. long; petioles about 12 mm. long, or shorter; pinnae 2-4 pairs; leaflets 6-16 pairs, lanceolate, chartaceous, strongly reticulate-veined, 6-8 mm. long, acute or acutish, bright green and glabrous above, pale and loosely strigose beneath, the midvein excentric; peduncles slender, elongated, 3-6 cm. long; heads several-flowered; calyx sparingly strigose, about 3 mm. long; corolla long-strigose, 8-10 mm. long; stamens nearly 3 cm. long, their tube included.

Puebla and Oaxaca. Type from near Tehuacan, Puebla, August 1, 2, 1901, *Rose and Hay 5909*.

32. *Anneslia mixta* Britton & Rose, sp. nov.

Twigs, foliage, and peduncles densely strigose with long whitish hairs. Stipules linear-lanceolate, about 4 mm. long; petioles only 2-5 mm. long; pinnae 2-4 pairs, nearly sessile; leaflets 6-10 pairs, oblong or the upper pair obovate, 2.5-5 mm. long, obtuse, reticulate-veined, chartaceous, densely strigose on both sides, becoming glabrate above, the prominent midvein nearly central; peduncles about as long as the leaves or shorter; heads several-flowered; calyx about 1 mm. long; corolla loosely strigose, about 6 mm. long; stamens about 2.5 cm. long, their tube included.

San José del Cabo, Lower California, September 24, 1890, *Brandegee 194*.

33. *Anneslia californica* (Benth.) Britton & Rose.

Calliandra californica Benth. Bot. Voy. Sulph. 14. 1844.
Feuillea californica Kuntze, Rev. Gen. Pl. 187. 1891.

A shrub, the twigs, petioles, rachis and peduncles appressed-pubescent. Stipules subulate, rigid, about 2 mm. long; petioles about 1 cm. long or shorter; pinnae 1-4 pairs; leaflets 6-15 pairs, oblong, obtuse or rounded, 4-6 mm. long, appressed-pubescent on both sides or becoming glabrous above, subcoriaceous, the venation obscure; peduncles 6-20 mm. long; heads several-flowered; flowers strigose; calyx 1.5-2 mm. long; corolla about 7 mm. long; stamens nearly 2 cm. long, their short tube included; young legume densely appressed-pubescent.

TYPE LOCALITY: Bay of Magdalena, Lower California.

DISTRIBUTION: Lower California.

ILLUSTRATION: Bentham, loc. cit. *pl. 11*.

34. *Anneslia eriophylla* (Benth.) Britton, Trans. N. Y. Acad.

Sci. 14: 32. 1894.

Calliandra eriophylla Benth. Lond. Journ. Bot. 3: 105. 1844.
Calliandra Chamaedrys Engelm.; A. Gray, Mem. Am. Acad. II. 4: 39. 1849.
Calliandra conferta Benth.; A. Gray, Pl. Wright. 1: 63. 1852.
Feuillea texana Kuntze, Rev. Gen. Pl. 1: 187. 1891.
Feuillea eriophylla Kuntze, Rev. Gen. Pl. 1: 187. 1891.

A densely branched shrub, 2-3 dm. high, the slender twigs stiff, appressed-pubescent. Stipules setaceous; pinnae 1 to 7 pairs; leaflets 5 to 15 pairs, oblong or linear-oblong, 3-4 mm. long, acute or obtuse, reticulate-veined or the venation obscure, more or less strigose; heads few-flowered; flowers strigose; calyx 1-1.5 mm. long; corolla 4-6 mm. long; stamens about 2 cm. long, their tube short; legume 3-6 cm. long, about 5 mm. wide, densely short-pubescent.

TYPE LOCALITY: Chili, Puebla.

DISTRIBUTION: New Mexico and Arizona to Jalisco and Puebla.

35. *Anneslia Lagunae* Britton & Rose, sp. nov.

Twigs, petioles, and leaf-rachis short-pubescent. Petioles slender, about 1.5 cm. long or shorter; pinnae 4-7 pairs; leaflets 8-12 pairs, oblong or linear-oblong, 4-5 mm. long, about 1.5 mm. wide, obtuse, rounded or minutely apiculate at the apex, glabrous or sparingly ciliate, the venation obscure; peduncles 3-4 cm. long; heads solitary, few-flowered; flowers sparingly strigose; corolla about 4 mm. long; filaments about 15 mm. long; legume 6 cm. long, 9 mm. wide, apiculate, sparingly strigose.

La Laguna, Lower California, 1906, *Nelson and Goldman 7455*.

36. *Anneslia mucronulata* Britton & Rose, sp. nov.

Twigs woody, subterete, puberulent when young. Stipules linear, 2-3 mm. long; leaves 2-3 cm. long, the petioles short; rachis and rachilla puberulent; pinnae 2 or 3 pairs; leaflets 6-10 pairs, oblong or the upper ones obovate, chartaceous, glabrous, 4-7 mm. long, 3 mm. wide, light green and dull above, paler beneath, inconspicuously veined, apiculate; peduncles solitary, glabrous, about 1.5 cm. long, thickening in fruit; heads few-flowered; calyx 1.5 mm. long; corolla sparsely strigose, 5-6 mm. long; stamens about 2 cm. long; legume 5-6 cm. long, about 7 mm. wide, densely pubescent.

San José del Cabo, Lower California, March 16, 1911, *Rose 16473*.

37. *Anneslia purpurea* (L.) Britton, Mem. Brooklyn Bot. Gard. 1: 50. 1918.

Mimosa purpurea L. Sp. Pl. 517. 1753.

Inga purpurea Willd. Sp. Pl. 4: 1021. 1806.

Inga obtusifolia Willd. loc. cit. 1022. 1806.

Mimosa obtusifolia Poir. in Lam. Encycl. Suppl. 1: 46. 1810.

Calliandra purpurea Benth. Lond. Journ. Bot. 3: 104. 1844.

Calliandra obtusifolia Karst. Fl. Col. 2: 41. 1863.

Fenilleca purpurea Kuntze, Rev. Gen. Pl. 188. 1891.

A small tree, 4-5 m. high, or shrubby, glabrous throughout. Stipules ovate, striate, almost 4 mm. long; petioles slender, 0.5-3 cm. long; pinnae 1 pair; leaflets 3-8 pairs, chartaceous, elliptic to obovate or ovate, 4-5-nerved, reticulate-veined, 6-20 mm. long, shining above, the apex rounded, obtuse or acutish; peduncles axillary, solitary, 4 cm. long, or shorter; heads several-flowered; calyx about 2 mm. long; corolla about 6 mm. long; stamens purple, about 15 mm. long, the sheath included or a little exerted; legume glabrous, 5-8 cm. long, 10-13 mm. wide.

TYPE LOCALITY: tropical America.

DISTRIBUTION: St. Kitts; Antigua; Guadeloupe; Montserrat; Martinique; St. Vincent; Grenada; northern Venezuela (according to Bentham.)

ILLUSTRATIONS: Bot. Rep. pl. 372; Bot. Reg. pl. 129; Karst. Fl. Col. pl. 121; Plumier, Pl. Am. pl. 10, f. 2.

38. *Anneslia Magdaleneae* (Benth.) Britton & Rose.

Acacia Magdaleneae Bert.; DC. Prodr. 2: 455. 1825.

Calliandra Magdaleneae Benth. Lond. Journ. Bot. 5: 102. 1846.

Fenilleca Magdaleneae Kuntze, Rev. Gen. Pl. 188. 1891.

A tree, 4-7 m. high, or shrubby, the twigs glabrous or somewhat pubescent. Stipules ovate or ovate-lanceolate, 2-3 mm. long; petioles pubescent, short; pinnae 1 pair; rachilla pubescent; leaflets 15-30 pairs, linear or linear-oblong, 6-10 mm. long, obtuse, glabrous, shining, reticulate-veined, the midvein nearly central; peduncles about as long as the petioles, puberulent; heads several-many-flowered; flowers glabrous; calyx about 1.5 mm. long; corolla 2-3 mm. long; stamens purple, 2-2.5 cm. long; legume thick, coriaceous, glabrous, 8-10 cm. long, about 1 cm. wide.

TYPE LOCALITY: Santa Marta, Colombia.

DISTRIBUTION: Panama (according to Bentham); Colombia.

39. *Anneslia densifolia* (Rose) Britton & Rose.

Calliandra densifolia Rose; Harms, Repert. 17: 89. 1921.

A shrub, 2-4 m. high, the twigs somewhat pubescent. Stipules ovate to linear, long-acuminate, persistent; petiole 5 mm. long or less; pinnae 1 pair, 4-6 cm. long; rachilla densely villous; leaflets about 25 pairs, linear, 5-6 mm. long, reticulate-veined beneath, glabrous, ciliate, acute; peduncles 8 mm. long or less; calyx glabrous; corolla glabrous, purplish; stamens long, purple; legume about 6 cm. long.

TYPE LOCALITY: Monte León Station, Michoacán.

DISTRIBUTION: Known only from the type locality.

40. *Anneslia Caeciliae* (Harms) Britton & Rose.

Calliandra Caeciliae Harms, Repert. 17: 89. 1921.

A shrub with light gray bark, the young growth with brownish-appressed pubescence. Leaves in fascicles at the end of short slender branches; stipules ovate, acute, persistent; petioles 1 cm. long or shorter, sometimes wanting; pinnae 1 pair, 2-4 cm. long; rachilla sparingly pilose; leaflets 20-40 pairs, linear, about 5 mm. long, acute, ciliate, strongly veined beneath; heads small on very short peduncles; calyx 1 mm. long, pubescent at the teeth; corolla-tube 3 times as long as the calyx, glabrous; filaments short.

TYPE LOCALITY: Uaxackanal, Department Huehuetenango, Guatemala.

DISTRIBUTION: Chiapas to Guatemala.

41. *Anneslia Tonduzii* Britton & Rose, sp. nov.

A shrub or small tree, the long slender branches at first pubescent. Stipules lanceolate-linear; petioles 1 cm. long or less; pinnae 1 pair; rachilla puberulent; leaflets 13-17 pairs, oblong to oblong-lanceolate, 8-12 mm. long, acute, shining, glabrous but somewhat ciliate, reticulate-veined; peduncles 6 mm. long; calyx small, striate, glabrous; corolla glabrous; stamens 4 cm. long; legume oblong-linear, 10-14 cm. long, 6-8 mm. broad.

Guatemala and Costa Rica. Type collected at Bonica, Costa Rica, 1891, *Tonduz 4544*.

42. *Anneslia chiapiensis* Britton & Rose, sp. nov.

A tree, 3-8 m. high, the young twigs with both spreading and appressed hairs, the old branches glabrate and with light gray bark. Stipules lanceolate, acuminate, striate, persistent, glabrous, 3-4 mm. long; petioles 1 cm. long or less; pinnae 1 pair; leaflets 10-16 pairs, oblong, 12-18 mm. long, acute, glabrous, reticulate-veined, ciliate, shining, 3-nerved; peduncles 1 cm. long or less, pubescent; calyx glabrous, 2 mm. long; corolla glabrous, 8 mm. long; stamens 4 cm. long; legume 8-12 cm. long, 1 cm. broad, very thick-margined, glabrous.

Chiapas and Oaxaca. Type from near Tapachula, Chiapas, 1896, *Nelson 3838*.

43. *Anneslia bijuga* (Rose) Britton & Rose.

Calliandra bijuga Rose, Contr. U. S. Nat. Herb. 5: 135. 1897.

A tree with wide-spreading top, the young branches pubescent but soon glabrate. Stipules ovate, acute; petioles 10 mm. long or less, sometimes wanting; pinnae 2 pairs; leaflets 9-12 pairs, oblong, acute, glabrous or nearly so, shining above, pale beneath; peduncles solitary or binate, 1.5-2.5 cm. long, glabrous, bracteolate; calyx 2 mm. long, glabrous; corolla 6 mm. long, glabrous; stamens 3.7 cm. long, bright crimson; legume 10 cm. long, 12 mm. broad, puberulent, acute.

TYPE LOCALITY: Acapulco, Guerrero.

DISTRIBUTION: Known only from the type locality.

44. *Anneslia Michellii* Britton & Rose, sp. nov.

A tree, the young branches pubescent. Stipules linear, 5 mm. long; petioles 1 cm. long or less, pubescent; pinnae 2 pairs, 4-8 cm. long; leaflets 10-12 pairs, ovate-oblong to lanceolate, 8-15 mm. long, glabrous, lustrous, a little ciliate, not strongly reticulated; peduncles 2-3 cm. long, pubescent; calyx 2 mm. long, glabrous; corolla 7-8 mm. long, glabrous except a few hairs on the lobes; stamens dark purple, 3 cm. long, their tube much longer than the corolla; legume 10-14 cm. long, 10-14 mm. wide, the valves thin and reticulated.

Michoacan and Jalisco. Type from Monte de las Cortaduras, near Inguaran, Michoacan, March 20, 1898, *Langlassé 41*.

ILLUSTRATION: Mém. Soc. Phys. Hist. Nat. Genève 34: pl. 26 as *Calliandra bijuga*.

45. *Anneslia rubescens* (Mart. & Gal.) Britton & Rose.

Acacia rubescens Mart. & Gal. Bull. Acad. Brux. 10²: 315. 1843.

A shrub, the twigs and petioles with scanty appressed pubescence. Stipules linear, acute; pinnae 2-5 pairs; leaflets 8-18 pairs, oblique, oblong, 6-10 mm. long, 3-nerved at base, acute,

glabrous and shining above, ciliate, pale and nearly glabrous beneath; peduncles slender, 2-5 cm. long, glabrous or nearly so; calyx 2 mm. long, glabrous or with a few short hairs on the teeth; corolla 7-8 mm. long, glabrous, the teeth purplish; stamens elongated, red, the tube about twice as long as the corolla.

TYPE LOCALITY: Near Zacuapan, Veracruz.

DISTRIBUTION: Known only from the type locality.

46. *Anneslia xalapensis* (Benth.) Britton & Rose.

Calliandra xalapensis Benth. Lond. Journ. Bot. 3: 106. 1844.

A stout shrub, the twigs and petioles pilose. Stipules lanceolate, acuminate, hairy; pinnae 2-5 pairs; leaflets 10-14 pairs, oval to oblong, obtuse or acutish, 5-7 mm. long, ciliate, otherwise glabrous or nearly so, 1-nerved; peduncle 2 cm. long, hairy, especially near the top; calyx 1.5 mm. long with hairy lobes; corolla 4-5 mm. long, the lobes a little hairy; filaments elongated.

TYPE LOCALITY: Jalapa, Veracruz.

DISTRIBUTION: Known only from the type locality.

47. *Anneslia compacta* Britton & Rose, sp. nov.

A low spreading shrub, with stout woody branches, the twigs at first densely pilose. Leaves borne in fascicles at the ends of short stubby branches which are covered with the long-persisting scarious stipules; petioles 1 cm. long or less, pubescent; pinnae 1-3 pairs, approximate; leaflets 10-16 pairs, oblong-lanceolate or narrowly oblong, 8-12 mm. long, shining above, sharply acute, glabrous, long-ciliate, 3-nerved, strongly reticulate-veined beneath; peduncles axillary, 2-4 cm. long, glabrous; calyx 2 mm. long, glabrous with rounded lobes; corolla 8-9 mm. long, glabrous; stamens 2-2.5 cm. long, the sheath scarcely exerted.

Chiapas. Type from Hacienda Monserrate, Sept. 1923, *Purpus 9063*.

48. *Anneslia Brandegei* Britton & Rose, sp. nov.

Twigs, petioles, leaf-rachis, and peduncles puberulent. Stipules nearly linear, pilose, 3-5 mm. long; petioles very slender, 1.5-2.5 cm. long; pinnae 4-6 pairs; leaflets 12-18 pairs, oblong or ovate-oblong, 6-9 mm. long, obtuse or acutish, mucronulate, chartaceous, ciliate when young, glabrous when old, faintly shining above, reticulate-veined, the midvein somewhat excentric; peduncles about 3 cm. long or shorter; heads few-flowered; flowers glabrous; calyx about 1 mm. long; corolla about 6 mm. long; stamens about 2 cm. long, their tube nearly as long as the corolla; legume narrowly oblong, densely short-pubescent, about 9 cm. long, 1.7 cm. wide, the base narrowed, the apex rounded and obliquely apiculate.

Sierra de San Francisquito, Lower California, Sept. 29, 1899; *T. S. Brandegee*.

49. *Anneslia Seleri* (Harms) Britton & Rose.

Calliandra Seleri Harms, Repert. 17: 90. 1921.

Low shrub, sometimes creeping, the upright branches 1-2 dm. high, the young parts somewhat pubescent. Stipules ovate, striate, persistent; petioles short, hairy; pinnae 2-3 pairs; leaflets 7-12 pairs, obliquely oblong-lanceolate, 4-9 mm. long, acutish, glabrous, pale and strongly veined beneath, faintly shining above, somewhat ciliate; peduncles stout, pubescent, reddish, 2.5-4 cm. long; calyx striate, 3-4 mm. long, glabrous, or hairy at the teeth; corolla glabrous or nearly so, reddish, 8-9 mm. long; stamens long, reddish; legume coriaceous, 6-7 cm. long, 15 mm. wide, glabrous, the valves thick, not very elastic.

TYPE LOCALITY: Comitán, Chiapas.

DISTRIBUTION: Known only from the type locality.

50. *Anneslia belizensis* Britton & Rose; Standley,

Tropical Woods, 11: 19. 1927.

A tree, 10 m. high, with very hard yellowish wood, the twigs long-hairy. Petiole and rachis hairy; petiole 1 cm. long or shorter; pinnae 2 pairs; leaflets about 20 pairs, thick,

shining above, paler beneath, glabrous, ciliate, linear-oblong, 8-12 mm. long, acute; flowers in large sessile heads, often clustered at the end of branches; bractlets lanceolate, persistent, the outer ones hairy on the back, the inner ones long-ciliate; calyx 5-6 mm. long, the tube glabrous, striate, the teeth hairy; corolla 1 cm. long, glabrous except its hairy lobes; stamens numerous, 3-4 cm. long, the tube included; legume spatulate, 9-10 cm. long, 9 mm. broad above, densely white-lanate, the tip acutish.

TYPE LOCALITY: Hillbank, Orange Walk District, British Honduras.

DISTRIBUTION: Known only from the type locality.

51. *Anneslia Pittieri* (Standley) Britton & Rose.

Calliandra Pittieri Standley, Contr. U. S. Nat. Herb. 18: 104. 1916.

A tree, 5-8 m. high, with slender, glabrous or slightly pubescent twigs. Stipules linear-lanceolate, about 3 mm. long; petioles 1-2 cm. long; pinnae 7-15 pairs, the slender rachis and rachillas short-pilose; leaflets 20-65 pairs, linear, 3-5 mm. long, acute or obtuse, ciliate or glabrous, faintly shining, reticulate-veined beneath; the midvein nearly central; peduncles 1.5-4.5 cm. long, sparingly pubescent; heads few-flowered; flowers glabrous or puberulent; calyx 1-1.5 mm. long; corolla 5-6 mm. long; stamens 2-3 cm. long, pink, at least above, their tube included; legume 5-8 cm. long, 9-11 mm. wide, long-attenuate to the base, puberulent, its apex short-tipped.

TYPE LOCALITY: La Esmeralda, near Jamundi, Cauca Valley, Colombia.

DISTRIBUTION: Panama and Colombia.

52. *Anneslia nicaraguensis* (Taub. & Loes.) Britton & Rose.

Calliandra nicaraguensis Taub. & Loes. Bot. Jahrb. 23: 113, 124. 1896.

A tree, 5 m. high, the twigs yellow-villous. Stipules deltoid-subulate, villous, 7-8 mm. long; petioles and rachis villous; petioles about 3 cm. long; pinnae 7 or 8 pairs; leaflets 15-25 pairs, linear-elliptic, 2.5-6.5 mm. long, about 1 mm. wide, obtuse, subcoriaceous, sparingly ciliate, the midvein sulcate, otherwise nerveless; peduncles axillary, about 5 cm. long; flowers glabrous; calyx scarcely 2 mm. long; corolla about 4 mm. long; stamens about 1.8 cm. long; style filiform.

TYPE LOCALITY: Cañada Yasica, Matagalpa, Nicaragua.

DISTRIBUTION: Known only from the type locality, and to us only from the description.

53. *Anneslia simulans* Britton & Rose, sp. nov.

A compact shrub or tree, 3-6 m. high, the twigs short and spur-like, covered by the persisting imbricated ovate stipules, the young twigs, petioles and rachis densely pubescent. Stipules acute, about 2 mm. long; pinnae 4-6 pairs; leaflets 9-13 pairs, oblong-lanceolate, 3-5 mm. long, papillose and usually hairy above, strigose beneath, acute or obtuse; peduncles 1.5-3 cm. long, pubescent; calyx 2.5 mm. long, glabrous except the teeth; corolla 6 mm. long, glabrous; filaments 3.5 cm. long, the lower half white, the upper half bright rose.

Between La Venta and Nilttepec, Oaxaca, July, 1895, *E. W. Nelson 2795*.

54. *Anneslia papillosa* Britton & Rose, sp. nov.

A shrub, the young twigs, petioles and rachis densely short-pubescent. Stipules linear-lanceolate, 2-3 mm. long; pinnae 3 or 4 pairs; leaflets 10-15 pairs, oblong, or oblong-lanceolate, 6-8 mm. long, pubescent and papillose above, strigose beneath; peduncles 1-3 cm. long, pubescent; calyx about 2 mm. long, glabrous except the teeth; corolla 5 mm. long, glabrous; stamens 2.5-3 cm. long, purple; legume 8-10 cm. long, 5-6 mm. broad, densely pubescent, long-apiculate.

Veracruz. Type from near Cameron, October, 1925, *Purpus 10582*.

55. *Anneslia nervosa* Britton & Rose, sp. nov.

A low shrub, the twigs pubescent when young, glabrate when old, gray or brown, often short and spur-like. Leaves very small; stipules ovate, acute, persistent; petioles 2-3 mm.

long; pinnae 1 pair, about 1 cm. long or shorter; leaflets 5-7 pairs, linear, 1-2 mm. long, dull, strongly nerved beneath, obtuse, puberulent, somewhat ciliate; legume slender, 5-6 cm. long, 2-4 mm. broad, puberulent, obtuse.

Tehuacan, Puebla, September 12, 1906, *J. N. Rose and J. S. Rose 11416*.

56. *Anneslia mollicula* (Mart. & Gal.) Britton & Rose.

Acacia mollicula Mart. & Gal. Bull. Acad. Brux. 10²: 313. 1843.

Calliandra malacophylla Benth. Lond. Journ. Bot. 3: 100. 1844.

Feuillea malacophylla Kuntze, Rev. Gen. Pl. 188. 1891.

Calliandra unijuga pueblensis Macbride, Contr. Gray Herb. 59: 4. 1919.

A shrub, much branched, the short twigs densely pilose. Leaves small; petioles and rachis pilose; pinnae usually 1 pair, rarely 2 pairs; leaflets 2-5 pairs, dull, obovate, 6-12 mm. long, obtuse, inconspicuously veined, glabrous or nearly so above, paler and softly pubescent beneath; peduncles slender, 1.5-3 cm. long, pilose; flowers glabrous; calyx about 1 mm. long; corolla 3-4 mm. long; stamens 10-12 mm. long; legume 5 cm. long, obtuse, mucronate, glabrous.

TYPE LOCALITY: Mountains of Tehuacan de las Granadas, Mexico.

DISTRIBUTION: Puebla and Oaxaca.

57. *Anneslia unijuga* (Rose) Britton & Rose.

Calliandra unijuga Rose, Contr. U. S. Nat. Herb. 5: 193. 1899.

A shrub, 1-2.5 m. high, with many short stiff grayish branches, glabrous throughout. Petioles 2-4 mm. long; pinnae 1 pair; leaflets 2-4 pairs, oblong, 2-4 mm. long, obtuse, dull, inconspicuously veined, sometimes apiculate; peduncles 1-2 cm. long; calyx and corolla glabrous; stamens long, white with pink tips; legume 3.5 cm. long, rounded at apex, apiculate.

TYPE LOCALITY: Cuicatlán, Oaxaca.

DISTRIBUTION: Oaxaca.

58. *Anneslia socorrensis* (I. M. Johnston) Britton & Rose.

Calliandra socorrensis I. M. Johnston, Contr. Gray Herb. 70: 71. 1924.

A low, glabrous, much branched shrub, the twigs short. Stipules oblong, lanceolate, 2-3 mm. long, acute, persistent; pinnae 2 pairs; leaflets 5-7 pairs, oblong, 4-12 mm. long, dull, chartaceous, obtuse, faintly veined, strongly oblique at base; peduncles axillary, 2-3 cm. long; legume 5-6 cm. long, about 9 mm. wide, glabrous, about 5-seeded.

TYPE LOCALITY: Socorro Island, off the coast of Lower California.

DISTRIBUTION: Known definitely only from the type locality; perhaps also occurring on the mainland of Lower California.

59. *Anneslia tetragona* (Willd.) Donn. Smith, Enum. Pl.

Guat. 1: 10. 1889.

Acacia tetragona Willd. Sp. Pl. 4: 1069. 1806.

Mimosa quadrangularis Poir. in Lam. Encycl. Suppl. 1: 72. 1810.

Acacia quadrangularis Link, Enum. Hort. Berol. 2: 445. 1822.

Calliandra tetragona Benth. Journ. Bot. Hook. 2: 139. 1840.

Feuillea tetragona Kuntze, Rev. Gen. Pl. 189. 1891.

Calliandra portoricensis multijuga M. Micheli, Bot. Gaz. 20: 285. 1895.

A shrub, 2-5 m. high, pilose or glabrate, the branches 4-angled. Stipules lanceolate, striate, 6-8 mm. long; pinnae 4-7 pairs; leaflets 15-25 pairs, oblong-linear, oblique, obtuse, 6-12 mm. long, ciliate; peduncles axillary, solitary or clustered, 4-7 cm. long; calyx 3 mm. long, glabrous; corolla 6 mm. long, glabrous; filaments white, 4 cm. long; legume 10-12 cm. long, glabrous.

TYPE LOCALITY: River Guarito, Caracas, Venezuela.

DISTRIBUTION: Veracruz and Jalisco to Panama, Ecuador and Venezuela.

ILLUSTRATION: Bot. Mag. pl. 2651.

60. *Anneslia portoricensis* (Jacq.) Donn. Smith, Enum. Pl.
Guat. 2: 18. 1891.

Mimosa portoricensis Jacq. Coll. 4: 143. 1790.
Acacia portoricensis Willd. Sp. Pl. 4: 1069. 1806.
? *Acacia venusta* Willd. Enum. Hort. Berol. 1052. 1809.
Acacia angulata Desv. Journ. Bot. 3: 68. 1814.
Acacia linearis Desv.; Hamilt. Prodr. 59. 1825.
Acacia Hamiltoni Desv.; Hamilt. Prodr. 59. 1825.
Acacia vespertina Macf. Fl. Jam. 1: 318. 1837.
Lysiloma Marchiana Griseb. Fl. Br. W. I. 223. 1860.
Feuillea portoricensis Kuntze, Rev. Gen. Pl. 184. 1891.

A shrub, usually not over 3 m. high, rarely a tree up to 8 m. high, the twigs and foliage glabrous or pubescent; pinnae 2-6 pairs; leaflets 10-30 pairs, linear or linear-oblong, straight or slightly curved, 8-16 mm. long, 2.5 mm. wide or less, few-veined, obtuse, thin; peduncles slender, clustered or solitary, 3-10 cm. long; calyx 2 mm. long; corolla 3-4 mm. long; stamens white, 1.5-2 cm. long; legume 4-10 cm. long, 6-9 mm. wide, glabrous when mature, obtuse, narrowed toward the base.

TYPE LOCALITY: Porto Rico.

DISTRIBUTION: Jamaica; Haiti to Tortola; San Luis Potosí to El Salvador. Recorded from tropical Africa.

ILLUSTRATIONS: Jacq., Ic. Pl. Rar. pl. 633; Fawcett & Rendle, Fl. Jam. 4: fig. 44.

61. *Anneslia mollis* (Standley) Britton & Rose.

Calliandra mollis Standley, Contr. U. S. Nat. Herb. 17: 431. 1914.

More or less herbaceous with erect or ascending villous branches. Stipules ovate, 5-7 mm. long, acute, striate, pilose; pinnae 3-6 pairs, or the upper leaves reduced to stipules only; leaflets 7-22 pairs, narrowly oblong, membranous, 8-18 mm. long, acute, appressed-pubescent on both sides; peduncles slender, axillary, 1.5-4 cm. long, villous, solitary or clustered; calyx 2 mm. long, glabrous; corolla 4 mm. long, glabrous; filaments 1.5-2 cm. long, white; legume 8 cm. long, 6-7 mm. broad, densely pilose.

TYPE LOCALITY: Near Nicoya, Costa Rica.

DISTRIBUTION: Costa Rica.

62. *Anneslia caracasana* (Jacq.) Britton & Rose.

Mimosa caracasana Jacq. Coll. 4: 142. 1790.
Acacia caracasana Willd. Sp. Pl. 4: 1068. 1806.
Calliandra caracasana Benth. Trans. Linn. Soc. 30: 543. 1875.
Feuillea caracasana Kuntze, Rev. Gen. Pl. 187. 1891.

A slender shrub, 1-3 m. high, the twigs, leaf-rachis and peduncles sparingly pubescent or glabrate. Petioles very slender, 2-4 cm. long; stipules lanceolate, striate, acute, 4-6 mm. long; pinnae 3-5 pairs, or the upper leaves sometimes represented only by the stipules; leaflets 12-30 pairs, linear, linear-oblong or the upper pair oblong-obovate, more or less pubescent and ciliate, obtuse or acutish, mostly 6-8 mm. long and about 1 mm. wide, or the upper and lower pairs shorter; peduncles filiform, solitary or clustered, 1-5 cm. long; heads small, several-flowered; calyx puberulent, about 0.5 mm. long; corolla about 2 mm. long; stamens pink or purple, about 10 mm. long, their tube included; legume 6-8 cm. long, about 8 mm. wide, pubescent or, perhaps, sometimes glabrous.

TYPE LOCALITY: Caracas, Venezuela.

DISTRIBUTION: Haiti (according to Urban); Venezuela; Colombia; Ecuador.

ILLUSTRATION: Jacq., Ic. Pl. Rar. pl. 632.

63. *Anneslia pallida* Britton & Rose, sp. nov.

A shrub, the twigs slender and somewhat pubescent. Stipules linear, 4 mm. long; petiole 6-12 mm. long; pinnae 2-4 pairs; leaflets 14-16 pairs, narrowly oblong, 4-6 mm. long, acute, glabrous, ciliate, pale and reticulated beneath; peduncles axillary, often clustered; calyx 2 mm. long, glabrous; corolla 6-7 cm. long, glabrous.

Puliorages de la Cruz de Guanacaste, Costa Rica, 1890, *Pittier 2727*.

64. *Anneslia Lambertiana* (D. Don) Britton & Rose.

Acacia Lambertiana D. Don, Bot. Reg. 9: pl. 721. 1823.

Calliandra Lambertiana Benth. Lond. Journ. Bot. 3: 100. 1844.

Feuillea Lambertiana Kuntze, Rev. Gen. Pl. 188. 1891.

A shrub, 4 m. high, the twigs and leaf-rachis villous. Stipules elliptic-oblong, acute, striate; pinnae 2-4 pairs, or the upper leaves reduced to stipules; leaflets 10-15 pairs, oblong, obtuse, mucronulate, glandular-villous on both sides, 12 mm. long; peduncles clustered, slender, 1-3 cm. long; calyx glabrous; corolla glabrous, 4 mm. long; stamens elongate, red.

TYPE LOCALITY: Grown from Mexican seeds.

DISTRIBUTION: Known to us only from the description and illustration.

ILLUSTRATION: Bot. Reg. 9: pl. 721.

65. *Anneslia interior* Britton & Rose, sp. nov.

Herbaceous, glabrous throughout, the twigs elongated, terete. Leaves large; stipules ovate, 8-9 mm. long, striate; pinnae 2 or 3 pairs; leaflets 15-18 pairs, oblong, membranous, 12-20 mm. long, 4-5 mm. wide, obtuse; inflorescence axillary, somewhat paniculate, 4-5 cm. long; peduncles 1-4 cm. long; calyx about 1 mm. long; corolla about 3 mm. long; filaments 2 cm. long, purple.

Mountains of southern Durango, August 15, 1897, *Rose 2317*.

66. *Anneslia media* (Mart. & Gal.) Britton & Rose.

Acacia media Mart. & Gal. Bull. Acad. Brux. 10: 316. 1843.

Calliandra angelica Benth. Lond. Journ. Bot. 3: 100. 1844.

Feuillea angelica Kuntze, Rev. Gen. Pl. 187. 1891.

A small tree, the twigs glabrate or softly pubescent. Pinnae 1 or 2 pairs; leaflets 6-10 pairs, approximate, elliptic to oblong, 4-8 mm. long, obtuse, pubescent on both sides; stipules lanceolate; heads axillary, long-peduncled; flowers white; corolla about 2 mm. long; stamens long-exserted, white.

TYPE LOCALITY: Mountains of Regla, Hidalgo.

DISTRIBUTION: Known only from the type locality.

67. *Anneslia Spraguei* Britton & Rose, sp. nov.

?*Calliandra portoricensis major* Sprague, Bot. Mag. 133: pl. 8129. 1907.

Twigs, leaves and peduncles densely tomentose or glabrate. Stipules linear-oblong, about 4 mm. long; petioles 2-3 cm. long; pinnae 3 or 4 pairs, nearly sessile; leaflets 15-30 pairs, linear-oblong, obtuse, about 8 mm. long, the faint midvein somewhat excentric; peduncles solitary or clustered, slender, 6-12 cm. long; heads several-flowered; flowers glabrous; corolla about 3 mm. long; stamens about 2.5 cm. long, their sheath very short.

Veracruz. Type from Jalapa, *Schiede 690*.

68. *Anneslia Coulteri* (S. Wats.) Britton & Rose.

Calliandra Coulteri S. Wats. Proc. Am. Acad. 17: 352. 1882.

Stem herbaceous, very slender, glabrous, 2-3 dm. high. Stipules lanceolate, 4 mm. long; pinnae 1 or 2 pairs; rachis pubescent, 1-3 cm. long; leaflets 6-10 pairs, oblong, 4-8 mm. long, acute, glabrous, with ciliate margins; peduncles axillary, slender, 2.5-5 cm. long; calyx and corolla glabrous; stamens 2-2.5 cm. long, united near the base, pink; legume 3 cm. long, glabrous.

TYPE LOCALITY: Soledad, Coahuila.

DISTRIBUTION: Hidalgo; Coahuila.

69. *Anneslia oaxacana* (Rose) Britton & Rose.

Calliandra oaxacana Rose, Contr. U. S. Nat. Herb. 5: 193. 1899.

A shrub, 9-15 dm. high, the branches slender and glabrous. Stipules 2 mm. long, obtuse; pinnae 1 or 2 pairs; leaflets 14-18 pairs, oblong, 5-6 mm. long, acute, thin, glabrous except a

few marginal hairs; peduncles axillary, solitary or clustered, slender, 5-7 cm. long; flowers glabrous; calyx about 1 mm. long; corolla nearly 3 mm. long; stamens 2 cm. long, united near the base, reddish; legume 8-9 cm. long, obtuse, glabrous.

TYPE LOCALITY: Tomellin Cañon, Oaxaca.
DISTRIBUTION: Oaxaca, Hidalgo, and Puebla.

70. *Anneslia Schottii* (Torr.) Britton & Rose.

Calliandra Schottii Torr.; S. Wats. Proc. Am. Acad. 20: 364. 1885.

A small shrub, glabrous or pubescent, the branches slender. Stipules lanceolate to ovate, 2-4 mm. long, striate; pinnae 1-3 pairs; leaflets 4-7 pairs, oblong to elliptic, obtuse, 6-10 mm. long; upper leaves sometimes reduced to stipules; peduncles 2-7 cm. long; calyx about 1 mm. long; corolla 2-3 mm. long; stamens about 15 mm. long, white, their tube very short; legume 4 cm. long, glabrous.

TYPE LOCALITY: Arroyo de los Samotas, Sierra Verde, Sonora.
DISTRIBUTION: Sonora, Chihuahua, and southern Arizona.

71. *Anneslia formosa* (Kunth) Britton & Millsp. Bahama Fl. 159. 1920.

Acacia formosa Kunth, Mim. 102. 1821.
Calliandra formosa Benth. Lond. Journ. Bot. 3: 98. 1844.
Feuillea formosa Kuntze, Rev. Gen. Pl. 187. 1891.

A tree, 2-4 m. high, glabrous throughout. Stipules oblong, obtuse, 6-7 mm. long; petioles 2-3 cm. long; pinnae 2 pairs; leaflets 5 or 6 pairs, oblong-obovate or elliptic-obovate, acute or obtusish, membranous, the upper ones about 2 cm. long, the lower pair much smaller, only about 6 mm. long; peduncles very slender, 2-4 cm. long; heads solitary or subpaniculate; calyx 5-parted, its lobes linear-oblong; corolla nearly twice as long as the calyx; filaments white, about 2 cm. long, united near the base.

TYPE LOCALITY: Guanajuato.
DISTRIBUTION: Guanajuato.
ILLUSTRATION: Kunth, Mim. pl. 32.

72. *Anneslia Grisebachii* Britton & Rose.

Calliandra gracilis Griseb. Mem. Am. Acad. II, 8: 180. 1860.

A shrub or small tree, up to 3 m. high, glabrous or nearly so throughout, with slender elongated branches. Stipules oblong, obtuse or acutish, 4-7 mm. long; petioles 1.5-3 cm. long; pinnae 2 or 3 pairs, the petiolules slender; upper leaves sometimes reduced to stipules; leaflets elliptic-obovate, thin, the upper about 2 cm. long, the lower much smaller, the apex acute or acutish, the base rounded or obtuse; peduncles very slender, solitary or 2-several together in the axils, 5-7 cm. long; heads several-flowered; calyx 2-3 mm. long; corolla as long as the calyx or a little longer; filaments about 12 mm. long; legume 6-7 cm. long, about 4 mm. wide, glabrous.

TYPE LOCALITY: Eastern Cuba.
DISTRIBUTION: Oriente and Santa Clara, Cuba; Yucatan.

73. *Anneslia costaricensis* Britton & Rose, sp. nov.

Glabrous throughout; branches slender. Stipules ovate, acute, about 6 mm. long; petioles very slender, 5-6 cm. long; pinnae 3 pairs; leaflets 10-15 pairs, oblong, or the upper oblong-obovate, 2-2.5 cm. long, oblique and subtruncate at base, acute, thin, pale beneath, the lower pair much smaller and narrow; legume glabrous, very elastic and coiled in age, about 8 cm. long and only 3 mm. wide, the valves thin.

Rio Convento, Costa Rica, January, 1897, Pittier 10643.

74. *Anneslia delicata* Britton & Rose, sp. nov.

Branches very slender, glabrous. Stipules lanceolate, acute, about 3 mm. long; petioles very slender, glabrous, 1.5-2 cm. long; pinnae 2 pairs; rachillas very sparingly pilose; leaflets

5 or 6 pairs, oblong or the upper pair oblong-obovate, 6-12 mm. long, glabrous or sparingly ciliate, thin, acute or mucronate; upper leaves reduced to stipules only; peduncles nearly filiform, glabrous, 2-4 cm. long; heads few-flowered; calyx about 1 mm. long; corolla about twice as long as the calyx; stamens about 1 cm. long; legume about 6 cm. long, 4-5 mm. wide, glabrous.

San José del Cabo, Lower California, September, 1890, *T. S. Brandegee*.

75. *Anneslia capillata* (Benth.) Britton & Rose.

Calliandra capillata Benth. Lond. Journ. Bot. 3: 98. 1844.
Feuillea capillata Kuntze, Rev. Gen. Pl. 187. 1891.

A shrub, the twigs glabrous. Stipules broadly oblong, membranous, striate, 6 mm. long, 4 mm. broad; pinnae 2 or 3 pairs; leaflets 3-6 pairs, strongly oblique, obovate-elliptic, glabrous, the upper 2.5 cm. long; peduncles slender, often fascicled; calyx 2 mm. long; corolla 5 mm. long; filaments 3-4 cm. long, united at base into a short tube.

TYPE LOCALITY: Base of Mount San Felipe, Oaxaca.

DISTRIBUTION: Known only from the type locality.

76. *Anneslia Cookii* Britton & Rose, sp. nov.

Glabrous throughout, the branches slender. Stipules narrowly oblong, obtuse, about 6 mm. long; petioles very slender, 3-5 cm. long; pinnae 1 or 2 pairs, the petiolules 1-3 cm. long; leaflets 3 pairs, broadly obovate, membranous, 2-3.5 cm. long, the apex rounded, the base obliquely narrowed; legume about 10 cm. long, 1 cm. wide, long-attenuate at the base.

Guatemala and British Honduras. Type from between Yaxmuyan and Yaxha, tidal district, Peten, Guatemala, April 9, 1922, *O. F. Cook and R. D. Martin 209*.

77. *Anneslia gracilis* (Mart. & Gal.) Britton & Rose.

Acacia gracilis Mart. & Gal. Bull. Acad. Brux. 10: 311. 1843.

Glabrous throughout, the branches slender, elongated. Stipules oblong-lanceolate, obtuse or acutish, 3-4 mm. long; petioles slender, 1.5-3.5 cm. long; pinnae 1 or 2 pairs, the petiolules 4-7 mm. long; leaflets 5-7 pairs, oblong to narrowly obovate, thin, 0.5-2 cm. long, the apex obtuse or mucronate, the base obtuse, more or less subtruncate; peduncles axillary, slender, 2.5-5 cm. long, solitary or sometimes 2; heads several-flowered; calyx about 1 mm. long; corolla about twice as long as the calyx; filaments about 10 mm. long; legume 5-6 cm. long, 5 mm. wide, glabrous, obtuse, the base short-attenuate.

TYPE LOCALITY: Granitic rocks on the coast of Oaxaca.

DISTRIBUTION: Western Mexico from Sonora to Oaxaca.

78. *Anneslia cubensis* (Macbride) Britton & Rose.

Calliandra formosa cubensis Macbride, Contr. Gray Herb. 59: 4. 1919.

A shrub, or, apparently, a tree up to about 16 m. high, glabrous. Stipules narrowly linear or linear-lanceolate, 4-6 mm. long; petioles 1-4 cm. long; pinnae 2 or 3 pairs; leaflets 6-12 pairs, oblong to oblong-obovate, firm-membranous or subchartaceous, 6-22 mm. long, the apex rounded (rarely acutish), the base obliquely subtruncate; peduncles slender, solitary or clustered, about 4 cm. long or shorter; calyx 2.5-3 mm. long; corolla 4-6 mm. long; filaments 1-1.5 cm. long; legume 5-9 cm. long, 7-12 mm. wide.

TYPE LOCALITY: Cuba.

DISTRIBUTION: Eastern and northeastern Cuba; Bahamas.

79. *Anneslia salvadorensis* Britton & Rose, sp. nov.

A shrub, about 2 m. high, the young twigs, petioles, rachis, and peduncles somewhat pubescent. Stipules linear-oblong to ovate, about 1 cm. long; petioles slender, 1.5-5 cm. long; pinnae 2 or 3 pairs; leaflets 4-7 pairs, oblong to elliptic-obovate, more or less oblique, 1-2.5 cm. long, acute or acutish, appressed-pubescent, at least beneath, or sometimes glabrous;

heads solitary or subcorymbose; peduncles 2-3 cm. long; calyx about 2 mm. long, glabrous; corolla purple, about 4 mm. long; stamens about 2 mm. long, white; legume 5-8 cm. long, glabrous.

El Salvador and Guatemala. Type from vicinity of San Salvador, February 2-7, 1922, *Standley 20452*.

80. *Anneslia izalcoensis* Britton & Rose, sp. nov.

A shrub, 2-3 m. high, the slender twigs glabrous. Stipules ovate-lanceolate, acute, 2-3 mm. long; petioles 2.5-4 cm. long, glabrous or sparingly pubescent; pinnae 2 pairs; rachis and rachillas puberulent; leaflets 4-6 pairs, oblong or oblong-lanceolate, 2-2.7 cm. long, thin, oblique, glabrous or nearly so above, sparingly pubescent beneath, at least on the veins, the apex acutish, the base obtuse or subtruncate; peduncles axillary, solitary, slender, glabrous in fruit, 4-6.5 cm. long; legume about 6 cm. long, 7-9 mm. wide, sparingly pubescent, at least when young.

Vicinity of Izalco, Sonsonate, El Salvador, March, 1922, *Standley 21818*.

81. *Anneslia suborbicularis* Britton & Rose, sp. nov.

Stems slender, pubescent or nearly glabrous; stipules oblong to ovate-oblong, obtuse or acutish, 5-7 mm. long; petioles slender, pubescent or glabrous, 2-4 cm. long; pinnae 1 or 2 pairs, slender-stalked; upper leaves reduced to stipules; leaflets 2 or 3 pairs, orbicular-obovate or broadly obovate, obtuse, thin, the larger ones about 3 cm. long, the smaller 0.6-1 cm. long, all appressed-pubescent on both sides or some of them glabrous; peduncles filiform, glabrous or nearly so, solitary or clustered, 1-4 cm. long; heads small, few-several-flowered; calyx nearly 1 mm. long; corolla about 3 mm. long; filaments about 1.5 cm. long.

Baños del Carrizal, Veracruz, August, 1912, *Purpus 6084*.

82. *Anneslia penduliflora* (Rose) Britton & Rose.

Calliandra penduliflora Rose, Contr. U. S. Nat. Herb. 5: 193. 1899.

A shrub, 3 m. high, with light gray bark, the twigs terete, densely pubescent. Stipules 6-10 mm. long, ovate, strongly nerved, pubescent; pinnae 1 or 2 pairs; leaflets 4-6 pairs, oblong to obovate, the largest 4-5 cm. long, rounded at apex, oblique at base, pubescent on both sides; inflorescence somewhat paniculate; peduncles slender, 2-5 cm. long, pubescent or glabrous; calyx and corolla glabrous; corolla about 4 mm. long; stamens white, 2-4 cm. long, their tube short; legume 6-8 cm. long, 7-10 cm. wide, glabrous, obtuse or acutish.

TYPE LOCALITY: Bolaños de Mexico, Jalisco.

DISTRIBUTION: Durango to Oaxaca.

83. *Anneslia orientalis* Britton & Rose, sp. nov.

A small tree, about 3 m. high, the slender twigs, petioles, and leaf-rachis finely pubescent. Stipules broadly oblong, obtuse, 4-6 mm. long; petioles 3-3.5 cm. long; pinnae 2-4 pairs, mostly 3 pairs, their stalks 6-12 mm. long; leaflets 4-6 pairs, membranous, oblong to obovate, finely appressed-pubescent on both sides, obtuse, apiculate, the upper 1.5-2 cm. long, the others progressively smaller, the lower only 5-10 mm. long, upper leaves often reduced to stipules; peduncles very slender, glabrous, about 4 cm. long or shorter; heads several-flowered; calyx about 4 mm. long, its oblong lobes distinct nearly to the base; corolla about 4.5 mm. long; filaments nearly 3 cm. long, united near the base; legume narrowly linear, glabrous, 6 cm. long, 4-5 mm. wide.

Sevilla Estate, near Santiago, Oriente, Cuba, August 27, 1906, *Norman Taylor 4*.

84. *Anneslia chapaderoana* Britton & Rose, sp. nov.

Branches slender, pilose above, at length becoming glabrous. Stipules narrowly oblong, obtuse or acutish, 8-12 mm. long; petioles 2-5 cm. long, pilose, becoming glabrous; pinnae 2 or 3 pairs, short-stalked; leaflets 4 or 5 pairs, elliptic to obovate, obtuse or mucronulate,

darkening in drying, subchartaceous, pilose beneath, 1.5–2.5 cm. long, or the lower pair much smaller; peduncles axillary, very slender, 4 cm. long or shorter; heads many-flowered; flowers apparently purple; filaments about 2 cm. long.

Guatemala and Guerrero. Type from Chapadero, Santa Rosa, Guatemala, August, 1892, Heyde and Lux 3740.

85. *Anneslia Houstoniana* (Mill.) Britton & Rose.

Mimosa Houstoniana Mill. Gard. Dict. ed. 8, no. 16. 1768.

Mimosa Houstoni L'Hér. Sert. Angl. 30 [18]. 1788.

Acacia Houstoni Willd. Sp. Pl. 4: 1062. 1806.

Anneslia falcifolia Salisb. Parad. Lond. pl. 64. 1807.

Inga Houstoni DC. Prodr. 2: 442. 1825.

Anneslia Houstoni Sweet. Hort. Brit. ed. 2, 163. 1830.

Acacia metrosideriflora Schl. Linnaea 12: 567. 1838.

Calliandra Houstoni Benth. in Hook. Journ. Bot. 2: 139. 1840.

Feuillea Houstoni Kuntze, Rev. Gen. Pl. 1: 188. 1891.

Calliandra inermis Druce, Bot. Ex. Club Br. I. 3: 415. 1914. Not *Gleditsia inermis* L. 1759.

Calliandra Houstoniana Standley, Contr. U. S. Nat. Herb. 23: 386. 1922.

A shrub or small tree, 1–6 m. high, the twigs pubescent, or becoming glabrate. Pinnae 7–12 pairs; leaflets 30–50 pairs, 4–7 mm. long, linear, cultriform, falcate, acute, glabrous and shining above, pale green and strigose or glabrate beneath; inflorescence an elongated narrow panicle; peduncles short, often only 1 cm. long; pedicels very short, often less than 4 mm. long; calyx about 2 mm. long, densely brown-tomentose; corolla 8–10 mm. long, densely brown-tomentose; stamens purple, 4–5 cm. long; legume 8–12 cm. long, 1.5 cm. broad, densely brown-pubescent.

TYPE LOCALITY: Veracruz.

DISTRIBUTION: Tamaulipas to Guerrero, El Salvador, Guatemala and Honduras.

ILLUSTRATIONS: Salisbury, loc. cit.; Banks, Rel. Houst. pl. 26; Bot. Reg. 2: pl. 98.

86. *Anneslia grandiflora* (L'Hér.) Britton & Rose.

Mimosa grandiflora L'Hér. Sert. Angl. 30 [18]. 1788.

Acacia grandiflora Willd. Sp. Pl. 4: 1074. 1806.

Calliandra grandiflora Benth. Journ. Bot. Hook. 2: 139. 1840.

Feuillea grandiflora Kuntze, Rev. Gen. Pl. 188. 1891.

A tall shrub, the twigs, leaf-rachis, and inflorescence densely brown-pilose. Leaves 1.5 dm. long or longer; petioles 1–1.5 cm. long; pinnae 8–13 pairs, approximate; leaflets 30–60 pairs, linear, nearly straight, acute, shining and glabrous above, sparingly appressed-pubescent beneath, ciliate, the midvein somewhat excentric, the larger ones about 8 mm. long; panicle dense, 5–6 cm. long; peduncles about 1 cm. long; pedicels about 3 mm. long; flowers densely brown-puberulent; calyx 4 mm. long, its broadly triangular teeth acute; corolla 12 mm. long, its oblong-lanceolate lobes acute; stamens 4.5–5 cm. long.

TYPE LOCALITY: East Indies [in error].

DISTRIBUTION: Veracruz.

ILLUSTRATIONS: Andrews, Bot. Rep. pl. 592; Colla, Hort. Ripul. pl. 9.

87. *Anneslia confusa* (Sprague & Riley) Britton & Rose.

Calliandra confusa Sprague & Riley, Kew Bull. 1923: 371. 1923.

A tree, 4–6 m. high, glabrous or very nearly so throughout. Petioles and rachis somewhat angled; pinnae about 15 pairs; leaflets 50–60 pairs, linear, acute, 6–8 mm. long, glabrous, but sometimes ciliate, the midvein nearly central; inflorescence terminal, racemose-paniculate, 2–3 dm. long; bracts lanceolate-linear, 8 mm. long, obtuse, striate, caducous; peduncles 2–4 together, about 8 mm. long; pedicels 3–4 mm. long; calyx 1.5–2 mm. long, the teeth unequal, obtuse; corolla 5 mm. long, its lobes oblong-lanceolate, obtuse; stamens 4 cm. long; legume 8 cm. long, glabrous or soon glabrate.

TYPE LOCALITY: Cobán, Guatemala.

DISTRIBUTION: Chiapas to Costa Rica.

88. *Anneslia similis* (Sprague & Riley) Britton & Rose.

Calliandra similis Sprague & Riley, Kew Bull. 1923: 372. 1923.

Branches and leaf-rachis sparsely pilose. Leaves 6-8 cm. long; stipules lanceolate, acuminate, 3 mm. long; pinnae 9-11 pairs; leaflets about 30 pairs, oblong, obtuse, 2.5-4 mm. long, 1 mm. wide or less, glabrous except the sparsely ciliolate margins, the midvein prominent; inflorescence terminal, racemose-paniculate, about 1.4 dm. long, sparsely hirsute; peduncles 2 or 3 together, 7-8 mm. long; pedicels 2.5-3 mm. long; flower-buds obovate; flowers glabrous; calyx about 2 mm. long, its triangular teeth obtuse; corolla 6 mm. long, its lobes elliptic-ovate, obtuse or acutish; filaments about 3 cm. long, their tube very short; legume about 8 cm. long, 1 cm. wide, pilose, apiculate, the base rather long-attenuate.

TYPE LOCALITY: San José, Costa Rica.

DISTRIBUTION: Type locality and vicinity.

89. *Anneslia Callistemon* (Schl.) Britton & Rose.

Acacia Callistemon Schl. Linnaea 12: 568. 1838.

Calliandra anomala Callistemon Macbride, Contr. Gray Herb. 59: 4. 1919.

?*Inga anomala pedicellata* DC. Prodr. 2: 442. 1825.

A shrub, the twigs, leaf-rachis and inflorescence tomentose-pilose. Leaves about 1.5 dm. long; petioles 1-1.5 cm. long; pinnae 12-24 pairs, approximate; leaflets 25-45 pairs, linear, straight, acute, about 4 mm. long, thin, glabrous, ciliate, the midvein nearly central; panicle dense, 8-12 cm. long; peduncles about 1 cm. long; flowers long-strigose; calyx about 3 mm. long; corolla about 9 mm. long; filaments about 6 cm. long; young legume 7.5 cm. long, 10-12 mm. wide, white-pilose, long-attenuate to the base.

TYPE LOCALITY: Regla, Hidalgo.

DISTRIBUTION: Hidalgo.

90. *Anneslia chihuahuana* Britton & Rose, sp. nov.

Stem and peduncles finely pubertulent. Leaves 10-15 cm. long; petioles 1-1.5 cm. long, puberulent or glabrate; pinnae 12-20 pairs, the rachis very slender; leaflets 20-35 pairs, linear-lanceolate, 5-6 mm. long, 1-nerved, acute, ciliate or becoming glabrous; terminal panicle about 10 cm. long, with peduncles also in the upper axils; fruiting peduncles 1-1.5 cm. long; legume 5-8 cm. long, 6-8 mm. wide, apiculate, long-attenuate at the base, densely strigose.

Southwestern Chihuahua, August-November, 1885, Palmer 266.

91. *Anneslia strigillosa* Britton & Rose, sp. nov.

?*Inga anomala pedicellata* DC. Prodr. 2: 442. 1825.

Branches, petioles, leaf-rachis, and peduncles strigillose. Leaves 8-15 cm. long, the petioles 1-2 cm. long; pinnae 15-30 pairs, approximate; leaflets 20-30 pairs, linear, 3-6 mm. long, obtuse, ciliolate or glabrous; panicles dense, 6-12 cm. long; peduncles about 1 cm. long or shorter; flowers brown-strigose; calyx narrowly campanulate, about 3 mm. long; corolla about 8 mm. long; filaments 5-6 cm. long; legume 4-6 cm. long, about 13 mm. wide, loosely subpilose.

Veracruz. Type from Eugenio, Sierra de la Cruz, Orizaba, 1853, *F. Mueller 1594*.

ILLUSTRATIONS: ?Hernandez, Mex. 104, f. 1, 2; ?Mocino & Sessé, Calques Dess. pl. 206.

92. *Anneslia bella* Britton & Rose, sp. nov.

Stems slender, about 2 mm. high, the branches, petioles, leaf-rachis and inflorescence sparingly strigose. Stipules narrowly lanceolate, 2-3 mm. long; leaves 10-15 cm. long; petioles 2 cm. long or shorter; pinnae 6-15 pairs, rather distant; leaflets 15-40 pairs, linear, 3-4 mm. long, obtuse, ciliate, the midvein nearly central; panicle about 10 cm. long; peduncles 1-2 cm. long; pedicels about 3 mm. long; calyx 2 mm. long, its triangular lobes acutish; corolla densely whitish-strigose, about 10 mm. long; filaments about 4 cm. long; legume 8-14 cm. long, 10-13 mm. wide, pilose.

Jalisco and Michoacán. Type from between Bolaños and Guadalajara, September 20, 1897, *Rose 3036*.

93. *Anneslia colomasensis* Britton & Rose, sp. nov.

Twigs, petioles, leaf-rachis, and inflorescence rather densely strigillose. Stipules lanceolate, about 3 mm. long; leaves 6–10 cm. long, the petioles 6–8 mm. long; pinnae 10–12 pairs, the rachillas slender; leaflets about 60 pairs, linear, obtuse, ciliate, 1.5 mm. long; inflorescence racemose-paniculate, narrow, about 1.5 dm. long; peduncles about 6 mm. long; pedicels 2 mm. long; flowers densely white-strigose; calyx about 1 mm. long, its teeth triangular-ovate; corolla about 6 mm. long, its lanceolate lobes acute; filaments about 2 cm. long; legume 5 cm. long, 6 mm. wide, long-pilose or becoming glabrate.

Sinaloa and Nayarit. Type from near Colomas, Sinaloa, July 14, 1927, *Rose 1660*.

94. *Anneslia Conzattiana* Britton & Rose, sp. nov.

Branches and panicle-axis densely tomentose, the hairs black and white. Leaves 8–15 cm. long, the petioles and leaf-rachis densely pubescent; petioles 5–8 mm. long; pinnae 15–20 pairs; leaflets 20 or more pairs, linear-oblong, 3 mm. long, obtuse, ciliate, faintly veined beneath; panicle short, compact; pedicels short; flowers pilose-strigose; calyx 2 mm. long; corolla 1 cm. long, appressed-pubescent; legume spatulate, 6–7 cm. long, densely pilose.

Oaxaca and Guatemala. Type from Cerro San Antonio, Oaxaca, 1,600 m. alt., June 26, 1906, *Conzatti 1424*.

95. *Anneslia albanensis* Britton & Rose, sp. nov.

Branches and panicle-axis densely pilose-tomentose, rather stout. Leaves 8–12 cm. long, the petioles and leaf-rachis densely pilose; petioles about 1 cm. long or shorter; pinnae 12–24 pairs; leaflets 40–60 pairs, linear-oblong, about 3 mm. long, obtuse or rounded, long-ciliate, faintly pinnately veined; panicle short, compact; peduncles and pedicels short; flowers whitish pilose-strigose; calyx about 2 mm. long; corolla about 9 mm. long; filaments about 4 cm. long.

Monte Alban, Oaxaca, December 29, 1895, *Seler 1734*.

96. *Anneslia alamosensis* Britton & Rose, sp. nov.

Stems 2–3 m. high, the young twigs, the petioles, and leaf-rachis puberulent. Leaves 10–12 cm. long; petioles 2–3 cm. long; pinnae 4–7 pairs; rachillas loosely pilose; leaflets 40–60 pairs, linear-lanceolate, cultriform, 5–7 mm. long, sharply acute, dull, strigose beneath, glabrous above, pinnately veined; inflorescence terminal, racemose, about 10 cm. long; legume about 9 cm. long, 12–14 mm. wide, densely tomentose.

Vicinity of Alamos, Sonora, March 14, 1910, *Rose, Standley & Russell 12792*.

97. *Anneslia acapulcensis* Britton & Rose, sp. nov.

A shrub, the branches terete, glabrous or nearly so. Pinnae 5 or 6 pairs; leaflets 15–25 pairs, oblong, 8–12 mm. long, somewhat oblique, acute, glabrous and shining above, scantily appressed-pubescent and faintly veined beneath; inflorescence 1–2 dm. long; legume about 10 cm. long, 10 mm. wide, somewhat pubescent.

Acapulco, Guerrero, October, 1894, *Palmer 59*.

98. *Anneslia albescens* Britton & Rose, sp. nov.

Twigs, leaf-rachis, and inflorescence loosely strigose. Leaves about 8 cm. long; petiole 1–1.5 cm. long; pinnae 6 or 7 pairs, 3–5 cm. long; leaflets 20–40 pairs, linear to linear-oblong, the larger ones about 4 mm. long, glabrous, acute, or obtusish, pinnately veined, ciliate when young; panicle about 12 cm. long; peduncles 5–7 mm. long; pedicels 3–4 mm. long; flowers sparingly strigose; calyx 3 mm. long, its ovate lobes acute; corolla about 10 mm. long, its lobes oblong-lanceolate, acute; filaments about 4 cm. long; young legume densely white-strigose.

Durango. Type from extreme southern Durango, August 13, 1897, *Rose 2254*.

99. *Anneslia pueblana* Britton & Rose, sp. nov.

Branches and inflorescence strigillose-puberulent. Leaves 12–15 cm. long; petioles 1–2 cm. long; rachis loosely strigose; pinnae 10–12 pairs, rather distant; leaflets 20–40 pairs, linear, about 5 mm. long, sparingly strigose and ciliolate, becoming glabrous, pinnately veined beneath, the apex obtuse or rounded; panicle 6–7 cm. long; peduncles about 1 cm. long; pedicels about 3 mm. long; flowers loosely whitish-strigose; calyx 3.5 mm. long; corolla about 1 cm. long; filaments 4–5 cm. long.

Vicinity of San Luis Tultitlanapa, Puebla, near Oaxaca, June–August, 1908, *Purpus 2666*.

100. *Anneslia anomala* (Kunth) Britton & Rose.

Inga anomala Kunth, Mim. 70. 1820.

Calliandra Kunthii Benth. Journ. Bot. Hook. 2: 139. 1840.

Calliandra anomala Macbride, Contr. Gray Herb. 59: 4. 1919.

A shrub with pubescent or tomentulose branches. Leaves 1.5–2 dm. long, the rachis pubescent; petioles 1–2 cm. long; pinnae 12–17 pairs; leaflets 5–7 mm. long, ciliate, the mid-vein prominent, the lateral venation rather distinct; heads forming a terminal thyrus 1–2 dm. long, and also borne in the upper axils; peduncles pubescent, about 1 cm. long or shorter; heads few-flowered; flowers brown-strigose; calyx about 3 mm. long; corolla 10–12 mm. long; legume densely pilose, 6–9 cm. long, about 1 cm. wide, apiculate, the base long-attenuate.

TYPE LOCALITY: Near Pascuero, Michoacán.

DISTRIBUTION: Michoacán; Puebla.

ILLUSTRATION: Kunth, loc. cit. *pl. 22*.

101. *Anneslia etzatlana* Britton & Rose, sp. nov.

Branches, petioles, and rachis glabrous, or sparsely hirsute. Leaves 1.5–2 dm. long; petioles 2.5–3 cm. long; pinnae 5 or 6 pairs, distant, the upper ones 12–14 cm. long, the lower 5–7 cm. long; leaflets 30–70 pairs, obliquely lanceolate, 6–8 mm. long, inequilateral, reticulate-veined, sharply acute and spinulose-tipped, lustrous above, ciliolate and sparingly strigose beneath when young, glabrous when old; panicle sparingly hirsute, about 10 cm. long; peduncles about 1 cm. long; pedicels stout, 2 mm. long; flowers finely puberulent; calyx 2 mm. long, its broad short teeth obtuse; corolla 8–9 mm. long, its oblong lobes obtuse; stamens 5–6 cm. long, purple.

Near Etzatlan, Jalisco, October 2, 1903, *Rose & Painter 7525*.

102. *Anneslia Palmeri* (S. Wats.) Britton & Rose.

Calliandra Palmeri S. Wats. Proc. Am. Acad. 22: 410. 1887.

A shrub, up to 1.5 m. high, the branches white-pilose. Leaves large, up to 2 dm. long; petioles and rachis white-pilose; pinnae about 15 pairs; leaflets 40–60 pairs, villous beneath, shining and glabrous above, oblong, subfalcate, acute, 6–10 mm. long; inflorescence racemose, elongated; peduncles 6 mm. long in fruit; heads few-flowered; calyx 6–8 mm. long, white-lanate; corolla 14–18 mm. long, deeply cleft, white-lanate; stamens 7.5 cm. long, the tube short; legume 10–14 cm. long, about 1 cm. wide, cuneate at base, acute, densely tomentose.

TYPE LOCALITY: Guadalajara, Jalisco.

DISTRIBUTION: Jalisco and Nayarit.

103. *Anneslia Wendlandii* (Benth.) Britton & Rose.

Calliandra Wendlandii Benth. Trans. Linn. Soc. 30: 556. 1875.

Feuillea Wendlandii Kuntze, Rev. Gen. Pl. 189. 1891.

A shrub, the branches softly villous. Petioles only 4–6 mm. long; pinnae 1 pair, 2.5 cm. long; leaflets many pairs, linear, falcate, 4–6 mm. long; raceme elongated; flowers pedicelled, strigose-sericeous; filaments 6–7.5 cm. long, purple; legume thick, very villous.

TYPE LOCALITY: Guatemala.

DISTRIBUTION: Known only from type locality, and to us from description only.

104. *Anneslia Quetzal* Donn. Smith, Bot. Gaz. 13: 28. 1888.

Calliandra Quetzal Donn. Smith, Enum. Pl. Guat. 8: 36. 1907.

A shrub, glabrous throughout, the branches somewhat glaucescent. Stipules reniform, very large, 1.5–3.5 cm. broad, persistent; petioles 2.5–3.5 cm. long; pinnae 1–3 pairs; leaflets 6–8 pairs, obliquely oblong to ovate, 2.5–3.5 cm. long, slightly cordate at base, dark green above, pale beneath; inflorescence elongated, terminal, 1–2 dm. long; peduncles clustered, 1–2 cm. long; flowers 4 or 5 in an umbel on pedicels 4–6 mm. long; calyx 4–6 mm. long, the lobes rounded; corolla 12–15 mm. long; stamens 5–7 cm. long, white, the tube included; legume 10 cm. long, 1.5 cm. broad above, glabrous, the margins much thickened.

TYPE LOCALITY: Santa Rosa, Department of Baja Verapaz, Guatemala.
DISTRIBUTION: Guatemala.

105. *Anneslia comosa* (Sw.) Britton & Rose.

Mimosa comosa Sw. Prodr. 85. 1788.

Inga comosa Willd. Sp. Pl. 4: 1026. 1806.

Calliandra comosa Benth. in Hook. Lond. Journ. Bot. 5: 104. 1846.

Feuillea comosa Kuntze, Rev. Gen. Pl. 187. 1891.

A shrub or a small tree, up to about 7 m. high, branching at the very top, the branches straight, erect, the twigs and leaves glabrous. Petioles slender, 4 cm. long or shorter; pinnae 2 or 3 pairs, short-stalked; leaflets 8–10 pairs, oblong or oblong-lanceolate, 8–12 mm. long, 4–6 mm. wide, obtuse, sessile, the base broadly truncate, the venation rather prominent, the midvein somewhat excentric; heads 4–8-flowered, in terminal corymbose racemes; peduncles 5–10 mm. long; racemes 2–5 cm. long; flowers glabrous, sessile; calyx 1.2–1.5 mm. long, 3–5-toothed, the short teeth obtuse; corolla white, 4–5 mm. long in bud (petals 3–5, according to Swartz); stamens 20–40, white (according to Swartz); legume scimitar-shaped, 5–7 cm. long, minutely puberulent, 3–8-seeded.

TYPE LOCALITY: Jamaica.
DISTRIBUTION: Mountains of northern Jamaica.

106. *Anneslia haematostoma* (Bertero) Britton, Mem. Brooklyn Bot. Gard. 1: 50. 1918.

Acacia haematomma Bertero; DC. Mem. Leg. 448. 1825.

Calliandra haematomma Benth. Lond. Journ. Bot. 3: 103. 1844.

Feuillea haematomma Kuntze, Rev. Gen. Pl. 188. 1891.

Calliandra haematostoma pubescens Urban, Symb. Ant. 2: 263. 1900.

Calliandra haematomma pubescens Macbride, Contr. Gray Herb. 59: 6. 1919.

A much-branched shrub, 3 m. high or less, the twigs sparingly pilose or glabrous. Stipular spines acicular; petioles short; leaflets 3–9 pairs, oblong to obovate, 3–7 mm. long, obtuse or mucronate, glabrous or pubescent, strongly few-nerved; peduncles mostly pubescent, usually shorter than the leaves, commonly clustered toward the ends of the branches; calyx striate, glabrous or pubescent, about 2 mm. long; corolla silky-pubescent, 5–7 mm. long; stamens red, 1–2 cm. long, their tube included; legume pubescent, 5–8 cm. long, 6–8 mm. wide.

TYPE LOCALITY: Santo Domingo.
DISTRIBUTION: Bahamas; Cuba (according to Bentham); Santo Domingo; Porto Rico; St. Thomas.

ILLUSTRATION: DC. Mem. Leg. pl. 68.

107. *Anneslia colletioides* (Griseb.) Britton, Bull.

Torr. Club 41: 18. 1914.

Calliandra colletioides Griseb. Mem. Am. Acad. II. 8: 180. 1860.

Feuillea colletioides Kuntze, Rev. Gen. Pl. 187. 1891.

A shrub, 1–2 m. high, the slender twigs glabrous or sparingly pubescent, the stipular spines acicular, about 1 cm. long or shorter, straight. Petioles 1–2 mm. long, slender; leaflets 2 or 3 pairs, 2–4 mm. long, obovate, obtuse or mucronulate, glabrous, strongly veined; peduncles axillary, solitary or binate, pilose-pubescent, 4–10 mm. long, heads 6–10-flowered; calyx striate, glabrous, 5-toothed, about 1 mm. long; corolla appressed-sericeous, 4–5 mm.

long, its lobes ovate; stamens about 15 mm. long, red, their tube about as long as the corolla; legume 2.5-4 cm. long, 4-5 mm. wide, pubescent.

TYPE LOCALITY: Near Nouvelle Sophie [Oriente], Cuba.

DISTRIBUTION: Oriente, Cuba.

ILLUSTRATION: Hook. *Icones Pl.* pl. 1167.

108. *Anneslia minutifolia* (Urban) Britton & Rose.

Calliandra haematostoma minutifolia Urban, *Symb. Ant.* 2: 263. 1900.

Calliandra haematomma minutifolia Macbride, *Contr. Gray Herb.* 59: 6. 1919.

A shrub, with slender branches. Stipular spines straight, 3-5 mm. long; leaflets 6-9 pairs, obovate or oblong-obovate, 1-3 mm. long, obtuse; peduncles pilose, 1 cm. long or shorter; heads several-flowered; calyx glabrous, striate, about 2 mm. long, its teeth ovate; corolla glabrous, about 5 mm. long, its lobes ovate-lanceolate; stamens red, about 15 mm. long, their tube included.

TYPE LOCALITY: Near Cadets, Haiti, at 1,200 m. altitude.

DISTRIBUTION: Haiti.

109. *Anneslia pilosa* (Bertero) Britton & Rose.

Acacia pilosa Bertero; DC. *Prodr.* 2: 455. 1825.

Calliandra haematomma glabrata Griseb. *Fl. Brit. W. Ind.* 224. 1860.

A straggling shrub or a small tree, up to 4 m. high, with spreading branches, the slender twigs glabrous, at least in age. Stipular spines subulate, straight, 2-10 mm. long; petioles 1-3 mm. long, glabrous, or pilose; leaflets 5-13 pairs, linear-oblong or obovate, 4-6 mm. long, obtuse, strongly veined, glabrous; peduncles solitary or binate in the upper axils, pilose, about 1 cm. long or shorter; heads about 15-flowered; calyx striate, glabrous, 5-toothed, 1.5-2 mm. long; corolla about 3 times as long as the calyx, glabrous, its lobes ovate-lanceolate, about as long as the tube; stamens red, about 2 cm. long, their tube included; legume 3-4 cm long, 5-7 mm. wide, densely pubescent.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Dry parts of southern Jamaica.

110. *Anneslia pauciflora* (A. Rich.) Britton & Rose.

Acacia pauciflora A. Rich. *Ess. Fl. Cub.* 461. 1845.

Calliandra pauciflora Griseb. *Cat. Pl. Cub.* 83. 1866.

A much-branched shrub, 0.3-1 m. high, the slender twigs glabrous, or when young, pilose. Stipular spines 2-3 mm. long, somewhat curved; petioles very short; rachis sparingly pilose; leaflets 4-7 pairs, oblong or obovate, 1-3 mm. long, obtuse, glabrous or ciliate, the midvein excentric, the lateral venation obscure; heads axillary, short-peduncled, 1-3-flowered; flowers glabrous, or slightly strigillose; calyx about 2 mm. long, its teeth lanceolate, acute; corolla about twice as long as the calyx, its lobes lanceolate; stamens red or purple, 8-10 mm. long, their tube about as long as the corolla; legume 2-3 cm. long, about 5 mm. wide, glabrous.

TYPE LOCALITY: Cuba.

DISTRIBUTION: savannas of Santa Clara, Cuba.

111. *Anneslia nipensis* Britton & Rose, sp. nov.

A tree, up to about 7 m. high, the very slender twigs sparingly pilose or glabrous, the stipular spines slightly curved, 1.5-2 mm. long. Petioles very short; rachis loosely pilose; leaflets 2 or 3 pairs, oblong or obovate, obtuse, indistinctly veined, 2-2.5 mm. long, glabrous or sparingly ciliate; heads short-peduncled in the axils, 2-3-flowered; calyx 2.5 mm. long, its

teeth lanceolate, acuminate; corolla about 5 mm. long, its lobes lanceolate; stamens red, about 15 mm. long, the tube about 10 mm. long, much longer than the corolla.

Dry rocky hillside, between Piedra Gorda and Woodfred, Oriente, Cuba, January 13, 1910, *Shafer 3710*.

112. *Anneslia pedicellata* (Benth.) Britton & Rose.

Calliandra pedicellata Benth. Lond. Journ. Bot. 3: 102. 1844.

Feuillea pedicellata Kuntze, Rev. Gen. Pl. 188. 1891.

A shrub, 2 m. high or lower, the slender twigs pilose when young, the stipular spines acicular, straight or slightly curved, 3-7 mm. long. Petioles 1-2 mm. long; rachis loosely pilose, or glabrous; leaflets 4-10 pairs, oblong or obovate, obtuse, 3-5.5 mm. long, faintly veined above, rather strongly veined beneath, glabrous or sparingly ciliate; peduncles slender, glabrous or sparingly pilose, 1.5-3 cm. long, solitary or binate in the axils, or racemose at the ends of the branches; flowers slender-pedicelled; pedicels 5-7 mm. long; umbels several-flowered; calyx broadly campanulate, glabrous, striate, 1.5 mm. long, its teeth ovate; corolla about 4 mm. long, glabrous, its lobes ovate; stamens about 15 mm. long, white, their tube included; legume 5-9 cm. long, about 5 mm. wide, villous-pubescent.

TYPE LOCALITY: Haiti.

DISTRIBUTION: Hispaniola.

113. *Anneslia enervis* Britton, Bull. Torr. Club 41: 18. 1914.

A shrub or small tree, 4 m. high, with slender, stiff, somewhat zigzag twigs sparingly pubescent when young, soon glabrous, the stipular spines minute or wanting. Leaves very small; pinnae 2, the petiole and petiolules each about 1 mm. long, rather stout; pinnules 2 to each pinna, 2-3 mm. long, obovate, sessile, nerveless, shining, rounded at the apex, oblique at the base; heads nearly sessile in the upper axils, few-flowered; calyx campanulate, 1.5 mm. long, its teeth acute; corolla about 3 mm. long; stamens 6-7 mm. long; legume glabrous, 3-4 cm. long, 5 mm. wide, abruptly tipped at the apex, narrowed from below the middle to the base, the valves subcoriaceous.

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

DISTRIBUTION: Mountains of Oriente, Cuba.

ACACIA LITTORALIS A. Rich. Ess. Fl. Cub. 467. 1845.

Unarmed, the branches pulverulent-tomentose, gray, terete. Leaves bipinnate; pinnae 2-8 pairs; leaflets 30-40 pairs, narrowly oblong, obtuse, subcoriaceous, shining above, pale and pubescent beneath; stipules minute; petiole and rachis villous, eglandular; flowers capitate, sessile; heads small, peduncled, in a loose terminal raceme; calyx turbinate, villous at the mouth, obsoletely 5-toothed; corolla glabrate, twice as long as the calyx, its lobes oval-lanceolate, acute; stamens 20-25, distinct; legume unknown.

TYPE LOCALITY: Pinar del Rio, Cuba.

DISTRIBUTION: Known to us only from the description.

Note.—The species was referred by Grisebach to *Calliandra portoricensis*, which is otherwise unknown from Cuba; the character of distinct stamens would, apparently, exclude it from *Anneslia*.

16. *LYSILOMA* Benth. Lond. Journ. Bot. 3: 82. 1844.

Unarmed trees or shrubs, with slender branches, bipinnate leaves, the small flowers in racemes, heads or spikes. Calyx campanulate, 5-lobed. Corolla 5-lobed. Stamens more than twice as many as the corolla-lobes, the filaments united below into a tube. Ovary sessile or short-stalked; style slender or filiform; ovules several or numerous. Legume flat, linear or oblong, the valves separating from the continuous margins. Seeds transverse, flattened.

Type species, *Lysiloma bahamensis* Benth.

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VOLUME 23

PART 2

NORTH AMERICAN FLORA

(ROSALES)

MIMOSACEAE (Continuatio)

NATHANIEL LORD BRITTON AND JOSEPH NELSON ROSE



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THE NEW YORK BOTANICAL GARDEN

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ANNOUNCEMENT

NORTH AMERICAN FLORA is designed to present in one work descriptions of all plants growing, independent of cultivation, in North America, here taken to include Greenland, Central America, the Republic of Panama, and the West Indies, except Trinidad, Tobago, and Curaçao and other islands off the north coast of Venezuela, whose flora is essentially South American.

The work will be published in parts at irregular intervals, by the New York Botanical Garden, through the aid of the income of the David Lydig Fund bequeathed by Charles P. Daly.

It is planned to issue parts as rapidly as they can be prepared, the extent of the work making it possible to commence publication at any number of points. The completed work will form a series of volumes with the following sequence:

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Volume 16. Pteridophyta and Gymnospermae.

Volumes 17 to 19. Monocotyledones

Volumes 20 to 34. Dicotyledones.

The preparation of the work has been referred by the Scientific Directors of the Garden to a committee consisting of Dr. N. L. Britton, Dr. M. A. Howe, and Dr. J. H. Barnhart.

Professor John M. Coulter, of the University of Chicago; Mr. Frederick V. Coville, of the United States Department of Agriculture; and Professor William Trelease, of the University of Illinois, have consented to act as an advisory committee.

Each author will be wholly responsible for his own contributions, being restricted only by the general style adopted for the work, which must vary somewhat in the treatment of diverse groups.

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THE NEW YORK BOTANICAL GARDEN

BRONX PARK

NEW YORK CITY

A. Flowers spicate or racemose [as far as known].

- a. Spikes or racemes elongated.
 Flowers sessile, spicate [as far as known].
 Calyx hirsute or puberulent [as far as known].
 Legume broadly linear, puberulent; petiolar gland conic. 1. *L. jorullensis*.
 Legume oblong, glabrous.
 Legumes 4-6.5 cm. wide; petiolar gland flat or slightly elevated.
 Legume 4-4.5 cm. wide, narrowed at the base; leaflets glabrous. 2. *L. cuneata*.
 Legume 6.5 cm. wide, the base rounded; leaflets ciliate. 3. *L. platycarpa*.
 Legumes 2-3 cm. wide.
 Pinnae about 7 pairs; leaflets pubescent on both sides. 4. *L. durangensis*.
 Pinnae 7-15 pairs; leaflets glabrous, ciliate, or when young appressed-pubescent. 5. *L. desmostachys*.
 Flowers glabrous or nearly so; petiolar gland depressed; leaflets ciliate. 6. *L. cuernavacana*.
 Flowers pedicelled, racemose; leaflets glabrous, or ciliate.
 Petiolar gland elevated or conic.
 Racemes 2-3 cm. long; stipules small, narrow. 7. *L. Purpusii*.
 Racemes 3-4 cm. long; stipules triangular-ovate, 2 cm. long. 8. *L. pedicellata*.
 Petiolar gland flat-depressed; stipules caducous or wanting. 9. *L. acapulcensis*.
- b. Spikes or racemes short, 0.9-1.8 cm. long.
 Flowers sessile, spicate. 10. *L. brevispicata*.
 Flowers short-pedicelled, racemose. 11. *L. aurita*.

B. Flowers capitate, the heads globose.

- a. Pinnae only one or two pairs; leaflets broad.
 Leaflets few; stipules large, reniform, persistent; legume 3.5-4 cm. broad. 12. *L. tergemina*.
 Leaflets numerous; stipules minute, deciduous; legume 2-2.5 cm. broad. 13. *L. candida*.
- b. Pinnae 3-23 pairs; leaflets numerous.
 Leaflets oval to obovate, 8-15 mm. wide. 14. *L. latisiliqua*.
 Leaflets linear to oblong, 2-5 mm. wide. 15. *L. bahamensis*.
 Leaflets 8-15 mm. long; legumes 2.5-4 cm. wide.
 Leaflets 2-8 mm. long; legume mostly narrower.
 Leaflets pubescent, at least beneath. 16. *L. Standleyana*.
 Leaflets 2.5-3 mm. long; petiolar gland 0.5 mm. broad.
 Leaflets 3-7 mm. long; petiolar glands 1.5 mm. broad.
 Pinnae 4-8 pairs; leaflets pubescent on both sides. 17. *L. Watsoni*.
 Leaflets not reticulate-veined. 18. *L. Kellermanii*.
 Leaflets reticulate-veined beneath. 19. *L. Nelsonii*.
 Pinnae 15-23 pairs; leaflets glabrate above.
 Leaflets glabrous, or the margins ciliate.
 Stipules triangular-ovate or obliquely triangular-lanceolate.
 Leaflets 4-6 mm. long, about 1 mm. wide, linear.
 Leaflets about 30 pairs, 6 mm. long, obtuse; pinnae nearly sessile. 20. *L. divaricata*.
 Peduncles bractless. 21. *L. Seemannii*.
 Peduncles large-bracted at about the middle.
 Leaflets 15-25 pairs, 3-5 mm. long; pinnae short-stalked. 22. *L. Ortegae*.
 Leaflets rounded at the apex. 23. *L. Calderonii*.
 Leaflets acute or acutish.
 Leaflets about 5 mm. long, and 1.5 mm. wide, oblong, brownish beneath. 24. *L. Thornberi*.
 Stipules lanceolate or wanting.
 Pinnae 4-9 pairs. 25. *L. australis*.
 Leaflets oblong, dark green above, pale beneath.
 Leaflets linear, nearly equally green on both sides.
 Leaflets 6-8 mm. long. 26. *L. chiapensis*.
 Leaflets 2.5 mm. wide, membranous. 27. *L. salvadorensis*.
 Leaflets 1.5-2 mm. wide, chartaceous.
 Leaflets 3-5 mm. long.
 Legume 2.5-3.5 cm. wide.
 Foliage and peduncles glabrous or puberulent; leaflets 3-4 mm. long. 28. *L. affinis*.
 Petioles, rachis and peduncles short-pilose; leaflets 5 mm. long. 29. *L. pueblensis*.
 Legume mostly only 1-2 cm. wide. 30. *L. microphylla*.
 Pinnae 15-20 pairs; leaflets ciliate; flowers pedicelled. 31. *L. multifoliolata*.

1. *Lysiloma jorullensis* Britton & Rose, sp. nov.

Twigs, petioles, leaf-rachis and peduncles densely tomentose. Petioles 2-3 cm. long, bearing a conic gland about 2 mm. high; pinnae 15-20 pairs; leaflets about 50 pairs, linear,

obtuse, 5–6 mm. long, pubescent and ciliate, the base subtruncate, the midvein nearly central; peduncles slender, 3–4 cm. long; flowers in spikes 6–7 cm. long, very nearly sessile; calyx campanulate, densely short-pilose, 1.5–2 cm. long, its teeth short, acute; corolla glabrate, about 4 mm. long; legume broadly linear, 15–25 cm. long, 2.7 cm. wide, narrowed at the base, densely and finely puberulent.

Volcan de Jorullo, Michoacán, March, 1903, *Nelson 6956*.

2. *Lysiloma cuneata* Britton & Rose, sp. nov.

Twigs, petioles and leaf-rachis densely pilose. Petioles stout, about 1.5 cm. long; glands orbicular, flat, borne at the end of the petiole and between the upper pairs of pinnae; pinnae 9 or 10 pairs, the rachilla pilose; leaflets 30–40 pairs, linear, 5–6 mm. long, glabrous, slightly curved, obtuse, the midvein nearly central, the lateral venation wholly obscure; legume oblong, glabrous, 16–19 cm. long, 4–4.5 cm. wide, its stipe about 1 cm. long.

Balboa, Sinaloa, January, 1923, *Ortega 4991*.

3. *Lysiloma platycarpa* Britton & Rose, sp. nov.

A tree, 12–15 m. high, the twigs, petioles and leaf-rachis pilose. Petioles stout, 1–1.5 cm. long; glands depressed or slightly elevated, large, borne on the petiole at or below the lower pair of pinnae, and between the upper pairs; pinnae 10–12 pairs, the rachilla pilose; leaflets 25–30 pairs, linear, about 4 mm. long, glabrous but ciliate, straight or slightly curved, obtuse, the venation obscure; legume oblong, about 15 cm. long, and 6.5 cm. wide, glabrous, its base rounded, its stout stipe about 6 mm. long.

Monte de la Gloria, Michoacán, 1060 m. alt., March 23, 1898, *Langlans 69*.

4. *Lysiloma durangensis* Britton & Rose, sp. nov.

Twigs, petioles and leaf-rachis pilose. Petioles 1–2 cm. long; glands much elevated, rounded, 1–1.5 mm. high and about as broad as high, pubescent, borne near the end of the petiole and between the upper pair of pinnae; pinnae 4–6 pairs; leaflets 16–26 pairs, linear-lanceolate, obtuse, 3–5 mm. long, pubescent on both sides, the venation obscure; peduncles 3–5 cm. long, pilose; legume narrowly oblong, 6–8 cm. long, about 1.8 cm. wide, glabrous, pointed, the base cuneate, the stipe about 1 cm. long.

La Bijada, Tamazula, Durango, *Ortega 4410*.

5. *Lysiloma desmostachys* Benth. *Lond. Journ. Bot.* 3: 84. 1844.

Acacia desmostachys Benth. *Pl. Hartw.* 13. 1839.

A tree, up to 15 m. high, the twigs, petioles and leaf-rachis and peduncles pilose. Stipules caducous or wanting; glands more or less elevated, borne on the petiole and between the upper pair of pinnae; pinnae 7–15 pairs; leaflets 40–60 pairs, glabrous, ciliate, or when young appressed-pubescent, linear or linear-oblong, obtuse or acutish, 3–5 mm. long, the midvein nearly central, the lateral venation obscure; spikes solitary or clustered, densely flowered; peduncles slender, 1–2.5 cm. long; flowers sessile; calyx finely pubescent, 1–1.5 mm. long; corolla pubescent, about twice as long as the calyx; stamens about 3 times as long as the corolla; legume oblong, glabrous, 12–20 cm. long, 3–3.7 cm. wide, its base narrowed, its stipe 8–10 mm. long.

TYPE LOCALITY: León, Guanajuato.

DISTRIBUTION: Veracruz to Guanajuato, Jalisco, Guatemala and El Salvador.

6. *Lysiloma cuernavacana* Britton & Rose, sp. nov.

A tree, up to about 7 m. high, the twigs, petioles, leaf-rachis and peduncles pilose. Petioles 2–3 cm. long, bearing a depressed ellipsoid gland 2–3 mm. long just below the lower pair of pinnae; pinnae 16–30 pairs, with a similar smaller gland between the upper pair; leaflets 20–40 pairs, linear, 3–6 mm. long, obtuse or acutish, glabrous, or sparingly pubescent, ciliate,

the midvein nearly central, the lateral venation obscurely reticulated; spikes mostly racemose in the axils, 3-6 cm. long; peduncles short; calyx glabrous or sparingly pilose, about 1.5 mm. long; corolla glabrous, 2-2.5 mm. long; stamens about twice as long as the corolla; legume narrowly oblong, glabrous, about 20 cm. long and 4 cm. wide, its stipe about 1 cm. long.

Valley below Cuernavaca, Morelos, October 16, 1900, *Pringle 8382*, the flowering part, *type*; near Cuernavaca, May 27-30, 1899, *Rose and Hough 4354*, the fruit.

7. *Lysiloma Purpusii* Britton & Rose, sp. nov.

Twigs, petioles, leaf-rachis and peduncles pilose. Petioles 1.5-3 cm. long, bearing a depressed gland; stipules narrow; pinnae 12-20 pairs; leaflets 25-40 pairs, linear, 4-8 mm. long, glabrous, obtuse, delicately pinnately veined when young, the midvein distinct but the lateral venation obscure when old; peduncles slender, 1.5-3 cm. long; spike-like racemes dense, 2-2.5 cm. long; pedicels about 1 mm. long; flowers densely short-pubescent; calyx about 1.5 mm. long; corolla about 2 mm. long; stamens 6-7 mm. long; legume narrowly oblong, 14 cm. long, 3 cm. wide, glabrous, its base obtuse, its stout stipe 8 mm. long.

Rocky banks of creeks, Monserrate, Chiapas, 1925, *Purpus 10283*.

8. *Lysiloma pedicellata* Britton & Rose, sp. nov.

A tree, 8-10 m. high, the twigs, petioles, leaf-rachis and peduncles loosely pilose, or glabrate, the bark dark brown. Stipules triangular-ovate, 1.5-2 cm. long, 1 cm. wide, glabrous, acuminate; glands elevated, rounded, borne on the short petiole just below the lower pair of pinnae, and between the upper pairs; pinnae 8-16 pairs; rachilla pilose; leaflets 30-40 pairs, linear, obtuse, glabrous or ciliate, 5-6 mm. long, delicately pinnately veined, about equally green on both sides; spike-like racemes axillary, solitary, densely flowered, 3-4 cm. long, the slender peduncles 2-4 cm. long; pedicels 0.5-1 mm. long; calyx about 1.5 mm. long, short-pilose; corolla about 2.5 mm. long, somewhat pubescent; stamens about 3 times as long as the corolla.

Arroyo del Tacictapa, San Ignacio, Sinaloa, May 13, 1918, *Montes and Salazar 348*.

9. *Lysiloma acapulcensis* (Kunth) Benth. Lond.

Journ. Bot. 3: 83. 1844.

Acacia acapulcensis Kunth, Mim. 78. 1819.

Branches white, glabrous; twigs, petioles, and leaf-rachis villous-hirsute. Stipules wanting or caducous; petioles about 1.5 cm. long or shorter, bearing a depressed flat orbicular gland; pinnae about 9 pairs, with a flat orbicular gland between the 2 or 3 upper pairs; leaflets 35-45 pairs, linear-oblong, about 4 mm. long, obtuse or acute, glabrous with appressed-ciliate margins, dark green above, pale beneath; peduncles solitary, binate or ternate, 1-2 cm. long, hirsute; racemes dense, 3-5 cm. long; flowers short-pedicelled; bractlets capillary-linear; calyx very small, hirsute, its teeth acute; corolla glabrous, 2-3 times as long as the calyx, its acute lobes ovate-oblong, ciliate; stamen-tube short; ovary glabrous; style capillary.

TYPE LOCALITY: Coastal sands near Acapulco, Guerrero.

DISTRIBUTION: Definitely known only from the type locality, and to us only from description and illustration.

ILLUSTRATION: Kunth, loc. cit., pl. 24.

10. *Lysiloma brevispicata* (Rose) Britton & Rose.

Lysiloma acapulcensis brevispicata Rose, Contr. U. S. Nat. Herb. 1: 100. 1891.

A tree, 10-13 m. high, with a trunk up to 3 dm. in diameter, or larger, the twigs pilose. Stipules caducous; petioles pilose, bearing a large gland near the middle; pinnae 3-5 pairs; leaflets many pairs, linear, 4-5 mm. long, hairy on both sides; peduncles axillary, in clusters of 3-6, pilose, 3-4 cm. long; flowers pubescent, sessile, in dense spikes 12-20 m. long; calyx about 2 mm. long; corolla about 3 mm. long; stamens 2-3 times as long as the corolla.

TYPE LOCALITY: Near Alamos, Sonora.

DISTRIBUTION: Known only from the type locality.

11. *Lysiloma aurita* (Schl.) Benth. Lond. Journ. Bot. 3: 83. 1844.*Acacia aurita* Schl. Linnaea 12: 572. 1838.*Lysiloma Schiedeana* Benth. Lond. Journ. Bot. 3: 83. 1844.

A shrub, or perhaps a small tree, the twigs, petioles, leaf-rachis and peduncles villous or pubescent. Petioles 1-3 cm. long, bearing an oblong, slightly elevated gland; pinnæ 15-25 pairs; stipules oblong, semicordate, acuminate, membranous, 1.5-2 cm. long, or sometimes wanting; leaflets 25-60 pairs, linear, 4-5 mm. long, membranous, glabrous or ciliate, obtuse, the midvein nearly central, the lateral venation very obscure; peduncles axillary, solitary or binate, filiform, 3 cm. long or shorter, bearing a small linear bract; flowers short-racemose, densely puberulent, short-pedicelled; racemes 0.6-1.6 cm. long; calyx obconic, about 2 mm. long; corolla 3-4 mm. long.

TYPE LOCALITY: Malpas de Naulingo, Mexico.

DISTRIBUTION: Veracruz.

12. *Lysiloma tergemina* Benth. Trans. Linn. Soc. 30: 534. 1875.

A small tree, 3-4.5 m. high, or shrubby, glabrous throughout. Stipules reniform, suborbicular or broadly ovate, 8-15 mm. long, obtuse or acute, reticulate-veined, subcordate, persistent; petioles 2-3 cm. long, bearing a small orbicular gland at the end; pinnæ 1 pair, on petiolules about one-half as long as the petioles; leaflets 1½ pairs, subchartaceous, obliquely oval, 4-9 cm. long, inequilateral, obtuse or rounded, reticulate-veined; peduncles slender or filiform, 2.5-4 cm. long; flowers capitate, white; calyx membranous, about 2.5 mm. long, its teeth acute; corolla about 4 mm. long; legume oblong, glabrous, shining, 10-15 cm. long, 3.5-4.5 cm. wide, transversely veined, apiculate, narrowed at the base, its stipe 1-1.5 cm. long, its valves thin.

TYPE LOCALITY: [Acatlán] Puebla.

DISTRIBUTION: Puebla; Guerrero; Morelos.

13. *Lysiloma candida* Brand. Proc. Calif. Acad. II. 2: 153. 1889.

A tree, 3-8 m. high, or shrubby, the trunk up to 3 dm. in diameter, the old bark smooth and white, the twigs and petioles glabrous or puberulent. Stipules oblong, 6-15 mm. long, deciduous; petioles about 1.5 cm. long or shorter, bearing a small orbicular, slightly elevated gland at the summit; pinnæ 1 or 2 pairs; petiolules slender; leaflets 4-7 pairs, chartaceous, oblong or oval, 8-20 cm. long, pinnately veined, light green on both sides, the apex rounded, the base obliquely obtuse, the midvein nearly central; inflorescence short-racemose; peduncles slender, glabrous or puberulent, 1-2 cm. long; flowers capitate; calyx white-canescens or glabrate, 2-3 mm. long; corolla about 5 mm. long; stamen-tube about 3 mm. long; legume oblong, thin, glabrous, transversely veined, 8-15 cm. long, 2-3 cm. wide, stipitate, 8-15-seeded; seeds oval, flat, 6-10 mm. long.

TYPE LOCALITY: Purisima, Lower California.

DISTRIBUTION: Southern Lower California.

14. *Lysiloma latisiliqua* (L.) Benth. Trans. Linn. Soc. 30: 534. 1875.*Mimosa latisiliqua* L. Sp. Pl. 519. 1753.*Acacia latisiliqua* Willd. Sp. Pl. 4: 1067. 1806.*Acacia latisiliqua paucifoliola* DC. Prodr. 2: 467. 1825.*Acacia formosa* A. Rich. Ess. Fl. Cub. 463. 1845.*Lysiloma Sabicu* Benth. Kew Journ. Bot. 6: 236. 1854.*Lysiloma formosa* Hitchc. Rep. Mo. Bot. Gard. 4: 83. 1893.*Lysiloma paucifoliola* Hitchc.; Northrop, Mem. Torr. Club 12: 38. 1902.

A tree, attaining a height of 20 m. or more, usually much smaller, the gray bark somewhat scaly, the slender twigs glabrous. Stipules obovate, rounded; leaves 1-2 dm. long, the petiole bearing a small circular gland; pinnæ 2-4 pairs; leaflets 3-7 pairs, oval or obovate, 1-2.5 cm. long, rounded at the apex, rounded or narrowed at the base, glabrous, reticulate-veined, short-petioled; heads solitary and long-peduncled in the axils; flowers greenish white; calyx about 1 mm. long; corolla about twice as long as the calyx, its lobes villous above;

stamens 2-3 times as long as the corolla; legume oblong, 7-15 cm. long, 2-3 cm. wide, rounded at the apex; seeds brown, flat, 6-10 mm. long.

TYPE LOCALITY: Hispaniola.

DISTRIBUTION: Bahamas; Cuba; Hispaniola.

ILLUSTRATIONS: Plumier, Pl. Am., pl. 6; Oliver in Hook. Ic. Pl. pl. 1722.

15. *Lysiloma bahamensis* Benth. Lond. Journ. Bot. 3: 82. 1844.

Acacia bahamensis Griseb. Fl. Brit. W. Ind. 221. 1860.

Lysiloma latisiliqua A. Gray; Sauvalle, Anales Acad. Habana 5: 406. 1869. Not *Mimosa latisiliqua* L. 1753.

A tree, attaining a maximum height of about 16 m. with a trunk up to 1 m. in diameter, the smooth, gray bark splitting into scales, the twigs slender, glabrous. Stipules ovate, acuminate; leaves 8-14 cm. long, the petiole bearing a large gland near the lowest pair of pinnae; pinnae 2-5 pairs, 3-8 cm. long; leaflets 10-33 pairs, oblong or oblong-lanceolate, sessile, 8-15 mm. long, obtuse, unequally rounded at the base, glabrous; heads racemose, globose, on peduncles 2-4 cm. long; flowers white, mostly perfect; calyx campanulate, about 1 mm. long; corolla twice as long as the calyx, its lobes reflexed; stamens twice as long as the corolla; legume linear-oblong, 8-15 cm. long, 2-2.5 cm. wide, nearly straight, pointed; seeds flat, about 12 mm. long, dark brown, shining.

TYPE LOCALITY: Bahamas.

DISTRIBUTION: Florida; Bahamas; Cuba; Hispaniola; Yucatan.

ILLUSTRATIONS: Britton & Shafer, N. Am. Trees, f. 481, 482; Sargent, Silva N. Am. pl. 144 (as *Lysiloma latisiliqua*); Man. Trees N. Am. f. 446; ed. 2, f. 541.

16. *Lysiloma Standleyana* Britton & Rose, sp. nov.

Twigs slender, glabrate. Leaves small, only 2-3 cm. long. Petioles slender, puberulent, 5-7 mm. long, bearing a somewhat elevated gland 0.5 mm. long just below the lower pair of pinnae; pinnae 2-4 pairs; leaflets 10-15 pairs, linear-oblong, pale green, 2.5-3 mm. long, obtuse, loosely and sparingly pubescent, the delicate midvein nearly central, the lateral venation obsolete; legume 8-10 cm. long, 12-14 mm. wide, glabrous, about 10-seeded, the stipe 1 cm. long.

Oaxaca. Type from Tomellin, September, 1905, *Rose 10082*.

17. *Lysiloma Watsoni* Rose, Contr. U. S. Nat. Herb. 1: 99. 1891.

A small tree, about 3 m. high, the twigs and leaf-rachis densely pilose. Petioles 1.5-2 cm. long, bearing a large conic gland; pinnae 4-8 pairs; leaflets 15-45 pairs, linear-oblong, 4-8 mm. long, chartaceous, obtuse, pubescent on both sides, the midvein nearly central; peduncles 3-4 cm. long; legume linear-oblong, 12-20 cm. long, 2-2.5 cm. wide, glabrous, acute, its stipe 1-2.5 cm. long; seeds oblong-oval, 9 mm. long.

TYPE LOCALITY: Alamos, Sonora.

DISTRIBUTION: Sonora.

18. *Lysiloma Kellermanii* Britton & Rose, sp. nov.

A shrub or small tree with glabrous twigs. Petioles somewhat pilose, 2-3 cm. long, bearing a large cup-shaped gland above the middle or just below the first pair of pinnae; pinnae 4 or 5 pairs; leaflets about 25 pairs, linear, 3-4 mm. long, pubescent on both sides, reticulate-veined beneath; peduncles 2-3 cm. long; legume oblong, 11-14 cm. long, 20-22 mm. broad, glabrous, acute, cuneate at base, its stipe 3-7 mm. long.

Chiapas and Guatemala. Type from El Rancho, Guatemala, December 28, 1907, W. A. Kellerman 7745.

19. *Lysiloma Nelsonii* Britton & Rose, sp. nov.

Twigs, petioles and leaf-rachis densely short-pilose. Petioles stout, 1.5-2.5 cm. long, bearing a slightly elevated gland about 2 mm. long; stipules caducous or wanting; pinnae

15–23 pairs, the rachilla pilose; leaflets 30–50 pairs, linear, 2–3 mm. long, obtuse, pubescent beneath, glabrate above, the midvein eccentric, the lateral venation obscure; fruiting peduncles stout, 2–3 cm. long; flowers apparently capitate; legume linear-oblong, glabrous, pointed, 12–14 cm. long, 2–2.6 cm. wide, its base narrowed, its stipe 1.5–2 cm. long.

Valley of Comitán, Chiapas, about 2000 m. alt., December 8, 1895, *Nelson 3485*.

20. *Lysiloma divaricata* (Jacq.) MacBride, *Contr. Gray Herb.*

59: 6. 1919.

Mimosa divaricata Jacq. *Hort. Schoenb.* 3: 76. 1798.

Acacia divaricata Willd. *Sp. Pl.* 4: 1070. 1805.

A tree, the twigs and leaves glabrous. Stipules triangular-ovate, acute, about 1 cm. long; glands elevated, rotund, borne on the petiole below the lower pinnae, and on the rachis between the upper pair; petioles about 1.5 cm. long; pinnae 6–9 pairs; leaflets about 30 pairs, linear, obtuse, 6 mm. long; peduncles slender, 2–3 cm. long; flowers densely capitate; calyx oblong, villous; corolla glabrous, twice as long as the calyx; stamens twice as long as the corolla, the filaments connate at the base.

TYPE LOCALITY: West Indies.

DISTRIBUTION: Known only from the original description and illustration.

ILLUSTRATION: Jacquin, *loc. cit. pl. 395*.

21. *Lysiloma Seemannii* Britton & Rose, *sp. nov.*

Lysiloma Schiedeana Benth. *Lond. Journ. Bot.* 3: 83. 1844. [As to the plant of Central America.]

Glabrous or nearly so. Stipules triangular-ovate, acuminate, auriculate, 10–16 mm. long; petioles 3–4 cm. long; glands elevated, borne below the lower pair of pinnae and between the upper pairs; pinnae about 6 pairs, nearly sessile; leaflets about 25 pairs, linear, glabrous, about 6 mm. long, obtuse, scarcely 1.5 mm. wide, subglaucescent; peduncles slender, 2–3 cm. long, bracted at about the middle, glabrous or puberulent, bearing 1 or 2 globular heads of sessile flowers; bracts lanceolate, 5–10 mm. long; calyx 1 mm. long; corolla about 1.5 mm. long, puberulent; stamens 3–4 times as long as the corolla, their sheath included; legume about 12 cm. long, 16–18 mm. wide, glabrous, narrowed at both ends, the stipe 10–12 mm. long.

TYPE LOCALITY: Central America.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: Bentham, *Bot. Voy. Sulph. pl. 31*.

22. *Lysiloma Ortegae* Britton & Rose, *sp. nov.*

Twigs and leaves glabrous. Twigs very slender; stipules narrowly triangular-ovate, 5–7 mm. long, acuminate; petioles, rachises and rachillae very slender; petiole 1–1.5 cm. long, bearing a small, slightly elevated gland; pinnae 5 or 6 pairs; leaflets 15–20 pairs, linear, obtuse, 3–5 mm. long; peduncles nearly filiform, sparingly pubescent, 1–2 cm. long; flowers sessile, in small globose heads, puberulent; calyx 1 mm. long; corolla about 2 mm. long; stamens about 6 mm. long.

La Cruz, Sinaloa, 1921, *J. G. Ortega 4173*.

23. *Lysiloma Calderonii* Britton & Rose, *sp. nov.*

A tree, up to 6 m. high, the twigs slender, glabrous. Stipules obliquely triangular-lanceolate, about 6 mm. long, caducous; petioles and rachis very slender, sparingly short-pubescent; glands orbicular, depressed or somewhat elevated, borne between the lower and the upper pair of pinnae; pinnae 5–7 pairs; leaflets 20–25 pairs, linear, acute or acutish, about 5 mm. long, glabrous, the midvein central, the lateral venation obscure above, delicate beneath; peduncles solitary or binate, short-pubescent, 2 cm. long; heads globose; flowers sessile; calyx puberulent, about 2 mm. long; corolla about 4 mm. long, its tube glabrous; stamens about 6 mm. long, their sheath included; legume linear, glabrous, 12–15 cm. long, 1–1.7 cm. wide, apiculate, the base narrowed, the stipe 1.5 cm. long.

El Salvador. Type from Cerro de la Olla, 1922, *Calderón 1011*.

24. *Lysiloma Thornberi* Britton & Rose, sp. nov.

A shrub or small tree; young twigs pilose, but glabrate in age. Leaves 10 to 15 cm. long; stipules 10 to 12 mm. long, ovate, thin, caducous; petiole and rachis pilose; petiole bearing a small, slightly elevated gland; pinnae 6 to 8 pairs; leaflets 20 to 35 pairs, linear-oblong, 5-6 mm. long, obtuse, glabrous, the midrib nearly central; peduncles slender, 2 to 3 cm. long, pilose; flowers capitate, sessile, white; calyx 1.5 mm. long, densely pubescent; corolla somewhat longer than the calyx; stamen-sheath short; legume oblong, 10-17 cm. long, 12-20 mm. wide, glabrous, glaucous, stipitate, apiculate, the base cuneate.

Rincon Mountains, Arizona. Type collected in 1926 by *J. J. Thornber*.

25. *Lysiloma australis* Britton & Rose, sp. nov.

A tree, the twigs and leaves glabrous. Stipules wanting or caducous; petiolar gland orbicular, flat, borne just below the lower pinnae; petioles slender, 1.5-2 cm. long; pinnae 4 or 5 pairs; petiolules about 2 mm. long; leaflets oblong, about 6 mm. long, 1.5-2 mm. wide, obtuse, dark green and indistinctly veined above, pale and delicately veined beneath, the midvein central; peduncles 3-4 cm. long; flowers capitate, sessile; calyx puberulent, 1.5 mm. long; stamens about 6 mm. long; legume linear, glabrous, 12-15 cm. long, about 2 cm. wide, narrowed at both ends, its stipe about 1 cm. long.

El Parian, Nochistlan, Oaxaca, 1000 m. alt., July 28, 1907, *Conzatti 1928*.

26. *Lysiloma chiapensis* Britton & Rose, sp. nov.

Twigs and leaves glabrous. Stipules caducous or wanting; petiolar gland depressed or slightly elevated, borne at or below the lower pair of pinnae; pinnae 4-6 pairs; leaflets 20-30 pairs, linear, 6-8 mm. long, about 2.5 mm. wide, nearly equally green on both sides, membranous, the midvein nearly central, the lateral venation delicately reticulated beneath, obsolete above; peduncles glabrous, nearly filiform, 2-4 cm. long; flowers densely capitate, sessile; young buds whitish-puberulent; calyx about 1 mm. long; corolla about 3 mm. long; stamens 8 or 9 mm. long, drying dark in color, their sheath included.

Rocky banks of creeks, Monserrate, Chiapas, July, 1925, *Purpus 10062*.

27. *Lysiloma salvadorensis* Britton & Rose, sp. nov.

A tree, about 10 m. high, the slender twigs, petioles and leaf-rachis sparingly pubescent. Petioles slender, 2-3 cm. long, bearing an elevated rounded gland about 1 mm. broad at about the middle; pinnae 5 or 6 pairs; leaflets 20-30 pairs, linear, 6-8 mm. long, 1.5-2 mm. wide, glabrous, slightly paler green beneath than above, chertaceous, the apex obtuse, the slender midvein nearly central, the lateral venation delicately reticulated beneath, obscure above; peduncles broadly linear, glabrous, about 8 cm. long, and 2 cm. wide.

Vicinity of San Vicente, El Salvador, March 2-11, 1922, *Standley 21205*; ? Costa Rica.

28. *Lysiloma affinis* Britton & Rose, sp. nov.

A tree, 8-10 m. high, the twigs slender, glabrous. Stipules caducous or wanting; glands orbicular, slightly elevated, borne between the lower and the upper pairs of pinnae; petioles and rachis glabrous or puberulent; pinnae 5-9 pairs; leaflets 20-30 pairs, linear, obtuse, glabrous, 3-4 mm. long, the midvein nearly central, the lateral venation delicate beneath, obscure above; peduncles filiform, 2-3 cm. long; heads small, globose; flowers sessile; calyx puberulent, about 1 mm. long; corolla about twice as long as the calyx; stamens about 3 times as long as the corolla; legume oblong, glabrous, shining, 15 cm. long, 2.5-3 cm. wide, narrowed at both ends, the stipe 4-7 mm. long.

Guerrero to Tepic. Type from San Geraminito, Guerrero, 75 m. alt., December 10, 1898, *Langlassé 715*.

29. *Lysiloma pueblensis* Britton & Rose, sp. nov.

Twigs slender, glabrous. Stipules lanceolate, acuminate, about 6 mm. long, puberulent, caducous; glands orbicular, depressed, borne below the lower pair of pinnae and between the upper pair; rachis, petioles and peduncles short-pilose; pinnae 5-7 pairs; leaflets 20-30 pairs, linear, glabrous, obtuse, about 5 mm. long, the midvein nearly central, the lateral venation obsolete above, delicate beneath; peduncles solitary or binate, filiform, 2-3 cm. long; heads globose; flowers sessile; calyx densely puberulent, about 1 mm. long; corolla about twice as long as the calyx; stamens about 6 mm. long; legume narrowly oblong, glabrous, 10 cm. long, 2.5-2.7 cm. wide, narrowed at both ends, its valves membranous; seeds oblong, compressed, shining, 7 mm. long.

Santa Lucia, vicinity of San Luis Tultitlanapa, Puebla, near Oaxaca, June, 1908, *Purpus 2663*.

30. *Lysiloma microphylla* Benth. Lond. Journ. Bot. 3: 83. 1844.

A shrub or small tree, 4-5 m. high, the young twigs, petioles, leaf-rachis and peduncles puberulent. Stipules small, lanceolate, caducous; petioles slender, 1-2 cm. long, bearing a rounded elevated gland at or near the summit; leaf-rachis slender; pinnae 5-9 pairs; leaflets linear-oblong, 3-4 mm. long, membranous, obtuse, glabrous or ciliate; peduncles very slender, 1-3 cm. long; flowers capitate, sessile, the heads globose; calyx densely puberulent, about 1.5 mm. long; corolla 3-4 mm. long, its lobes lanceolate; stamen-tube short; legume glabrous, linear or linear-oblong, 1-2.5 cm. (rarely 3 cm.) wide, 7-11 cm. long, the stipe 1-1.5 cm. long; seeds oblong, 5-6 mm. long.

TYPE LOCALITY: León, Guanajuato.

DISTRIBUTION: Sonora to Guanajuato and Oaxaca; Lower California.

31. *Lysiloma multifoliolata* Britton & Rose, sp. nov.

A tree, about 6 m. high, the twigs, petioles, rachis and peduncles densely pilose. Stipules lanceolate, 10-15 mm. long, caducous; petiolar gland elevated, about 1.5 mm. broad, rounded; pinnae 15-25 pairs, the rachilla pilose; leaflets 40-50 pairs, linear, 2.5-3.5 mm. long, membranous, obtuse, glabrous, the margins ciliate, the midvein central, the lateral venation faint; peduncles solitary or binate, slender, 1.5-3 cm. long; heads globose; flowers short-pedicelled; buds densely short-pubescent; calyx about 1 mm. long; corolla about 2.5 mm. long; stamens white, about 9 mm. long; their sheath about as long as the corolla.

El Salvador and Chiapas. Type from Zacatecaluca, El Salvador, March, 1922, *Calderon 340*.

II. ACACIEAE. Stamens many, more than 10, distinct. Calyx-lobes valvate.

- Legume pruinose, compressed, constricted between the seeds or sinuate-margined. 17. ACACIA.
 Legume not pruinose, rarely constricted. (See FERACACIA, ACACIELLA and ACACIOPSIS.)
 Legume indehiscent, terete, thin-walled, long-beaked. 18. TAUCROERAS.
 Legume dehiscent, promptly or tardily.
 Legume woody, coriaceous, cartilaginous, or fleshy.
 Legume fleshy or cartilaginous; trunk armed with long spines.
 Legume nearly flat, fleshy, unconstricted. 19. BAHAMIA.
 Legume subterete, cartilaginous, constricted between the seeds. 20. FERACACIA.
 Legume woody or coriaceous, straight or little curved.
 Legume subterete, woody; seeds in 2 rows. 21. VACHELLIA.
 Legume compressed or turgid.
 Legume tardily dehiscent; involucre subtending the capitulum, or wanting.
 Legume oblong, very oblique; unarmed tree. 22. LUCAYA.
 Legume linear, scarcely oblique; spiny trees or shrubs.
 Pinnae few to many pairs; leaflets narrow, small, numerous. 23. POPONAX.
 Pinnae 1 pair; leaflets 1 or 2 pairs, broad, coriaceous. 24. FISHLOCKIA.
 Legume promptly dehiscent; involucre borne on the peduncle or at its base. 25. MYRMECODENDRON.
 Legume mostly thin, flat or compressed.

- Legume linear; petiole glanduliferous; flowers sessile. 26. ACACIOPSIS.
 Legume oblong or linear.
 Flowers capitate or short-racemose, pedicelled; legume
 narrowly oblong; petiole eglandular. 27. ACACIELLA.
 Flowers capitate or spicate; legume broadly oblong; petiole
 usually glanduliferous. 28. SENEGALIA.

17. ACACIA Willd. Sp. Pl. 4: 1049. 1806.

A shrub or small tree armed with straight stipular spines, the leaves bipinnate, the narrow leaflets small, the petiole and rachis usually bearing a few small glands. Peduncles axillary, slender, bearing a small involucre near the middle. Flowers densely capitate, yellow. Calyx campanulate, 5-toothed. Corolla 5-lobed. Stamens numerous, distinct. Legume flat, constricted between the seeds or sinuate-margined, pruinose or glabrate, the joints orbicular or quadrate.

Type species, *Acacia nilotica* (L.) Willd.

1. *Acacia nilotica* (L.) Willd.; Delile, Fl. Aegypt. III. 79. 1812.

Mimosa nilotica L. Sp. Pl. 521. 1753.

Mimosa arabica Lam. Encycl. 1: 19. 1783.

Acacia arabica Willd. Sp. Pl. 4: 1085. 1806.

A shrub or a tree, up to about 8 m. high, the slender twigs pubescent or glabrate, with a pair of stipular, acicular or slender-subulate pale spines up to 4 cm. long at some or all of the nodes. Leaves petioled, 5-15 cm. long, more or less pubescent; pinnae 3-8 pairs; leaflets 10-30 pairs, linear-oblong, 5-8 mm. long, 1-nerved, obtuse; flowers yellow, in dense, globose, peduncled heads about 1.5 cm. in diameter; legume linear, nearly flat, 5-15 cm. long, 8-15 mm. wide, short-beaked.

TYPE LOCALITY: Egypt.

DISTRIBUTION: Naturalized in Jamaica, Cuba, and in the Lesser Antilles from St. Thomas to Grenada, Barbados and Tobago. Native of tropical Africa and Asia.

ILLUSTRATION: Hayne, Arzn. 10: pl. 32.

18. TAUROCERAS Britton & Rose, gen. nov.

Shrubs or trees. Stipular spines either small and nubulate, or very large, hollow, and ant-inhabited. Leaves twice pinnate, the petioles bearing several glands. Peduncles axillary, thickened, bearing a cup-shaped involucre at base. Flowers in dense heads or spikes, borne on a thickened axis, sessile, very small. Calyx minute. Corolla not much longer than the calyx. Stamens numerous, distinct, very short. Legume terete, inflated, indehiscent, with a thin fragile shell, terminated by a sharp, often elongated beak, fleshy within but in age spongy, ultimately bursting irregularly. Seeds oblong, somewhat flattened, the axis at right angles to the legume, the funiculus short.

Type species, *Acacia spadicigera* Schl. & Cham.

Flowers in dense spikes.

Flowers capitate.

1. *T. spadicigerum*.

2. *T. cornigerum*.

1. *Tauroceras spadicigerum* (Schl. & Cham.) Britton & Rose.

Acacia spadicigera Schl. & Cham. Linnaea 5: 594. 1830.

Acacia nicoyensis Schenck, Repert. 12: 360. 1913.

Acacia cubensis Schenck, Repert. 12: 360. 1913.

Acacia furcella Safford, Journ. Wash. Acad. 4: 359. 1914.

Acacia Hernandezii Safford, Journ. Wash. Acad. 4: 358. 1914.

A shrub or small tree, 2-7 m. high, the twigs glabrous, rather slender. Spines often very large, and swollen, united at base, sometimes 8 cm. long; pinnae 1-12 pairs; leaflets many pairs, linear, 5-7 mm. long, glabrous, tipped with a brown gland; peduncles axillary, often very short, thick, glabrous, bearing a cup-shaped involucre at the base; flowers in a dense oblong spike 1-2.5 cm. long; legume oblong, terete, 6-8 cm. long, including the long-attenuate tip.

TYPE LOCALITY: Near Laguna Verde, Veraacruz.

DISTRIBUTION: Sinaloa and San Luis Potosi to Oaxaca, Veraacruz and Costa Rica. Introduced into Cuba.

2. *Tauroceras cornigerum* (L.) Britton & Rose.

Mimosa cornigera L. Sp. Pl. 520. 1753.

Acacia cornigera Willd. Sp. Pl. 4: 1080. 1806.

Acacia sphaerocephala Schl. & Cham. *Linnaea* 5: 594. 1830.

Acacia veracruzensis Schenck, *Repert.* 12: 362. 1913.

Acacia dolichocephala Safford, *Journ. Wash. Acad.* 5: 355. 1915.

An erect shrub, the twigs glabrous; branches virgate. Spines often much elongated, ascending or widely spreading, united at base, white, usually terete, 2–11 cm. long; petiole short, bearing an oblong elevated gland; pinnae 5–16 pairs; leaflets 10–25 pairs, linear, obtuse; peduncles axillary, thick, 5–7 mm. long, glabrous, bearing a connate involucre near the base; flowers in dense globose or short-oblong heads; legume oblong, terete, 6 cm. long, the beak 1.5 cm. long.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Tamaulipas and San Luis Potosí to Veracruz, and Oaxaca.

19. *BAHAMIA* Britton & Rose, gen. nov.

A glabrous shrub or small tree, the trunk formidably armed with clusters of long stiff spines, the stipules spinescent. Leaves bipinnate; pinnae 1 pair; leaflets several or many pairs. Peduncles fascicled or solitary, the globose exinvolucrate heads many-flowered. Flowers yellow. Calyx 5-toothed. Corolla 5-lobed. Stamens 30–35, distinct. Legume linear, curved, fleshy, at length longitudinally dehiscent.

Type species, *Acacia acuífera* Benth.

1. *Bahamia acuífera* (Benth.) Britton & Rose.

Acacia acuífera Benth. *Lond. Journ. Bot.* 1: 496. 1842.

A much-branched shrub or small tree, up to about 4 m. high, the trunk armed with clusters of rigid sharp spines 4–10 cm. long, the slender twigs warty. Stipules spinescent, 2–20 mm. long; petiole 3–10 mm. long, bearing a sessile, nearly flat gland at the end, between the single pair of short-stalked pinnae; pinnae 5–9 cm. long, the rachis bearing small glands between the pairs of leaflets; leaflets 8–17 pairs, oblong, coriaceous, 5–15 mm. long, obtuse at the apex, obliquely truncate at the sessile base, shining above, dull beneath; peduncles solitary or fascicled, slender, 2–3.5 cm. long; flowers yellow, in dense globose heads about 8 mm. in diameter; stamens about twice as long as the corolla; legume linear, curved, 5–7 cm. long, 5–7 mm. thick, slightly impressed between the seeds.

TYPE LOCALITY: Bahamas.

DISTRIBUTION: Bahamas.

20. *FERACACIA* Britton & Brother León, gen. nov.

Small trees, glabrous throughout, the trunk and branches formidably armed with clusters of stiff spines, the twigs with straight, binate stipular spines. Leaves bipinnate; pinnae a single pair; leaflets few to many pairs, narrow and small. Flowers 5-parted, sessile, in small peduncled heads. Corolla cylindric. Stamens many; filaments short, distinct. Legume linear, subterete, cartilaginous, constricted between the oval or obovate seeds, at length longitudinally dehiscent.

Type species, *Acacia Daemon* Ekman.

Leaflets 10–30 pairs narrowly linear, 1-veined.

Leaflets 4–7 pairs, oblong or linear-oblong, pinnately veined.

1. *F. Daemon*.

2. *F. (?) belairioides*.

1. *Feracacia Daemon* (Ekman) Britton & Brother León.

Acacia Daemon Ekman; *Urban, Symb. Ant.* 9: 438. 1928.

A tree, 4–6 m. high. Spines of the trunk and branches 3–10 cm. long, 4 mm. thick or less, dark brown, somewhat swollen and fistulose, narrowed below the middle. Twigs slender, angular; stipular spines straight, 1–2.5 cm. long; petioles 1–2 mm. long; pinnae 1.5–3 cm. long, with a stout-stipitate concave gland between them; leaflets 10–25 pairs, narrowly linear, 3–8 mm. long, 0.5–1 mm. wide, lustrous above, chartaceous, the base oblique, the apex rounded, the

midvein central, the lateral venation none; peduncles axillary or lateral, solitary or few together, 0.5–2 cm. long, bracteolate at about the middle; heads 5–6 mm. in diameter; calyx campanulate, 1 mm. long; corolla nearly 2 mm. long; stamens about 2.5 mm. long; legume arcuate, 4–10 cm. long, 4–5 mm. broad, the segments oblong; seeds about 3 mm. wide.

TYPE LOCALITY: Ceiba Mocha, near Canasi, Matanzas, Cuba.

DISTRIBUTION: Matanzas, Santa Clara and Oriente, Cuba.

2. *Feracacia* (?) *belairioides* (Urban) Britton & Brother León.

Acacia belairioides Urban, Symb. Ant. 9: 439. 1928.

A spiny tree, with glabrous, angled twigs. Stipular spines straight, 1–2 cm. long; petioles 1–4 mm. long; pinnae 1.5–2 cm. long, with a short, stipitate, concave gland between them; leaflets 4–7 pairs, oblong or linear-oblong, 4–8 mm. long, 1–2.5 mm. wide, chartaceous, the base obliquely truncate, the apex rounded, the midvein prominent, the lateral venation spreading.

TYPE LOCALITY: El Paraiso, near Holguin, Oriente, Cuba.

DISTRIBUTION: known only from the type locality, and to us only from the description of barren specimens.

21. *VACHELLIA* Wight & Arn. Prodr. 272. 1834.

Shrubs or small trees with spinescent stipules, bipinnate leaves, the leaflets small and numerous, and small polygamous flowers in peduncled, globose heads. Calyx 5-toothed. Corolla tubular-funnelform, 5-toothed. Stamens numerous; filaments distinct, exerted; anthers minute. Ovary sessile, several-many-ovuled; style filiform. Legume nearly terete, pulpy within, the valves coriaceous, very tardily dehiscent. Seeds in 2 separate rows.

Type species, *Acacia Farnesiana* Willd.

1. *Vachellia Farnesiana* (L.) Wight & Arn. Prodr. 272. 1834.

Mimosa Farnesiana L. Sp. Pl. 521. 1753.

Acacia Farnesiana Willd. Sp. Pl. 4: 1083. 1806.

Acacia acicularis Willd. Enum. 1056. 1809.

Usually a shrub, not over 3 m. high, rarely a small tree up to 9 m., much branched, the twigs glabrous or nearly so. Leaves 5–10 cm. long, with a small gland on the petiole; stipular spines whitish, 0.5–5 cm. long; pinnae 2–6 pairs; petiole and rachis commonly pubescent; leaflets 10–25 pairs, linear, or linear-oblong, obtuse, 3–5 mm. long; peduncles slender, pubescent, 2–4 cm. long; heads of flowers about 12 mm. in diameter, fragrant, bright yellow; legume turgid, somewhat curved, glabrous, 4–7 cm. long, about 1 cm. thick.

TYPE LOCALITY: Domingo.

DISTRIBUTION: Florida; Louisiana; Texas; West Indies; southern and Lower California to Sonora, Panama, Venezuela and Argentina; Old World tropics.

ILLUSTRATION: Wight, Icon. 1: pl. 300.

22. *LUCAYA* Britton & Rose, gen. nov.

A small unarmed tree, with glabrous bipinnate leaves, the pinnae 1–3 pairs, the leaflets broad, the yellow flowers in dense globose peduncled heads. Calyx 4-toothed. Corolla 4-lobed. Stamens numerous, distinct. Legume oblong, woody, straight or slightly curved, compressed, very oblique, dehiscent.

Type species, *Acacia choriophylla* Benth.

1. *Lucaya choriophylla* (Benth.) Britton & Rose.

Acacia choriophylla Benth. Lond. Journ. Bot. 1: 495. 1842.

An unarmed tree, up to 8 or 9 m. high, the twigs and leaves glabrous. Stipules minute, subulate; petioles rather stout, 8–15 mm. long, glandular; leaves 1–2 dm. long; pinnae 1–3 pairs, short-stalked; leaflets 3–7 pairs, sessile, oblong to obovate, subcoriaceous, 1.5–3 cm. long, 8–15 mm. wide, rounded or slightly emarginate at the apex, mostly obtuse at the base; peduncles mostly clustered in the axils, slender, glabrous, often numerous, 2–3.5 cm. long; flowers yellow, in dense globose heads 6–8 mm. in diameter, the corolla puberulent; stamens

about twice as long as the corolla; legume stipitate, woody, oblong, straight or somewhat curved, compressed, 4-8 cm. long, 1.5-2.5 cm. wide, about 8 mm. thick, short-pointed, glabrous, tardily dehiscent.

TYPE LOCALITY: Bahamas.

DISTRIBUTION: Bahamas; cays of northern Cuba.

23. POPONAX Raf. Sylva Tell. 118. 1838.

Shrubs or trees with spinescent stipules and bipinnate leaves, the petiole usually gland-bearing, the leaflets small and numerous, the yellow flowers in peduncled globose heads. Calyx minute, 5-toothed. Corolla small, tubular. Stamens distinct, numerous; filaments short. Legume mostly elongated, often turgid, more or less pulpy within, the valves woody or coriaceous, tardily dehiscent. Seeds in one row, often globular, black.

Type species, *Mimosa tortuosa* L.

Legume 1.5-3 cm. broad; pubescence on young parts yellowish.

Legume narrow, usually elongated.

Legume glandular.

Legume densely glandular; leaflets 5-7 pairs.

Legume somewhat glandular; leaflets many pairs.

Legume not glandular.

Legume pubescent or puberulent.

Legume velvety-pubescent.

Legume puberulent (unknown in No. 6).

Spines elongated.

Spines very short; pinnae few pairs.

Legume glabrous.

Legume short, subterete; leaflets narrowly linear.

Legume elongated, more or less flattened.

Young leaves and twigs white-lanate.

Young leaves and twigs slightly pubescent.

Legume long-attenuate.

Legume not long-attenuate.

Spines normally concave, large.

Spines slender, often elongated.

Legume 8-10 mm. wide.

Legume 12-17 mm. wide.

1. *P. Pennatula*.

2. *P. glandulifera*.

3. *P. macracanthoides*.

4. *P. Schaffneri*.

5. *P. tortuosa*.

6. *P. polypyrigenes*.

7. *P. Cowellii*.

8. *P. Houghii*.

9. *P. attenuata*.

10. *P. cymbispina*.

11. *P. lutea*.

14. *P. campechiana*.

1. *Poponax Pennatula* (Schl. & Cham.) Britton & Rose.

Inga Pennatula Schl. & Cham. Linnaea 5: 593. 1830.

Acacia Pennatula Benth. Lond. Journ. Bot. 1: 390. 1842.

A tree or shrub, 3-6 m. high, the young twigs densely lanate, more or less yellowish, the spines short, stout, 1.5 cm. long or less. Leaves narrow; petiole short, lanate when young, bearing a large cup-shaped gland; pinnae many pairs; leaflets many pairs, pubescent when young, often glabrate in age, 2-3 mm. long; peduncles axillary, often in clusters, lanate when young, 1-2.5 cm. long; flowers fragrant; legume oblong, pubescent at first, glabrate in age, oblong, 6-12 cm. long, 1.5-3 cm. broad, fleshy within, tardily dehiscent, the valves woody; seeds globular to short-oblong, 7 mm. long.

TYPE LOCALITY: Hacienda de la Laguna, Veracruz.

DISTRIBUTION: Sinaloa and Tamaulipas to Guatemala, El Salvador and Colombia.

2. *Poponax glandulifera* (S. Wats.) Britton & Rose.

Acacia glandulifera S. Wats. Proc. Am. Acad. 25: 147. 1890.

A shrub, less than 1 m. high, the branches stout, dark-colored, appressed-pubescent when young, more or less glandular. Stipular spines slender, terete, rigid, 10 mm. long or less; leaves small; petiole bearing a small gland near the top; pinnae 1 or 2 pairs; leaflets 5-7 pairs, thickish, linear-oblong, 1-3 mm. long; peduncles axillary, 6-8 mm. long; legume narrow, 3-8 cm. long, somewhat flattened, densely glandular, more or less constricted between the seeds, tardily dehiscent; seeds dark, somewhat flattened, 7 mm. long.

TYPE LOCALITY: Carnero Pass, Coahuila.

DISTRIBUTION: Coahuila.

3. *Poponax macracanthoides* (Bert.) Britton & Rose.

Acacia macracanthoides Bert.; DC. Prodr. 2: 463. 1825.

A shrub, or a tree, 5-14 m. high, the twigs densely pubescent, the spines puberulent or pubescent 0.5-5 cm. long. Petiole bearing an oblong sessile gland; pinnae many pairs; leaflets many pairs, small, obtusish; peduncles axillary, clustered, 1-2 cm. long; heads small, densely flowered; legume 6-8 cm. long, 7-12 mm. wide, flattened, or compressed, obtuse, puberulent or pubescent, and usually with many small sessile glands.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica; Bahamas; Cuba to Tortola, Guadeloupe and Grenada; Venezuela.

4. *Poponax Schaffneri* (S. Wats.) Britton & Rose.

Pithecolobium Schaffneri S. Wats. Proc. Am. Acad. 17: 352. 1882.

Acacia subtortuosa Shafer; Britton and Shafer, N. Am. Trees 524. 1908.

Samanea Schaffneri Macbride, Contr. Gray Herb. 59: 2. 1919.

A stout shrub, the branches rigid, at first pubescent, usually bearing spines 3 cm. long or shorter. Petiole and rachis pilose, bearing small circular glands between some or all the pinnae; pinnae 2-5 pairs; leaflets 10-15 pairs, oblong, acute, 2 to 3 mm. long; peduncles 1-2.5 cm. long; legume thick but flattened, 7-12.5 cm. long, 8-10 mm. wide, velvety-pubescent.

TYPE LOCALITY: San Luis Potosí, Mexico.

DISTRIBUTION: Southern Texas to Durango and Puebla.

ILLUSTRATION: Britton and Shafer, loc. cit. f. 485.

5. *Poponax tortuosa* (L.) Raf. Sylva Tell. 118. 1838.

Mimosa tortuosa L. Syst. Nat. ed. 10, 1312. 1759.

Acacia tortuosa Willd. Sp. Pl. 4: 1083. 1806.

A shrub or small tree, 3-8 m. high, the twigs pilose when young, armed with spines 1-4 cm. long. Pinnae 2-8 pairs; leaflets 10-20 pairs, oblong-linear, 4-7 mm. long, obtuse; peduncles slender, 1.5-3.5 cm. long, solitary or clustered, pilose; legume narrow, 8-14 cm. long, more or less constricted between the seeds, puberulent or glabrate, about 8 mm. thick.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica; Hispaniola?; St. Thomas to Tortola, and Martinique; Curaçao; Bonaire; Aruba.

6. *Poponax polypyrgenes* (Greenman) Britton & Rose.

Acacia polypyrgenes Greenman; Combs, Trans. Acad. Sci. St. Louis 7: 419. 1897.

A spreading shrub or small tree, 3-5 m. high, the very slender twigs glabrous, the nearly straight spines 3-6 mm. long. Leaves 1-3 cm. long, glabrous; petiole 3-4 mm. long, bearing a minute circular gland; pinnae 1-5 pairs; leaflets 8-14 pairs, linear to oblong, obtuse, 1-2 mm. long; peduncles solitary, about 8 mm. long; heads only about 6 mm. in diameter.

TYPE LOCALITY: Villa Nueva, Cienfuegos Bay, Santa Clara, Cuba.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: Combs, loc. cit. pl. 33.

7. *Poponax Cowellii* Britton & Rose, sp. nov.

A tree, about 5 m. high, with spreading branches, the twigs glabrous, the acicular spines only 6 mm. long or shorter. Leaves 6-8 dm. long; petiole 1-2 cm. long, bearing a large circular gland; rachis puberulent; pinnae 12-25 pairs; leaflets many pairs, narrowly linear, 1.5-2 mm. long, 1 mm. wide, glabrous, 1-veined, the lower acute, the upper obtuse; legume little flattened, 6 cm. long, 1 cm. broad, glabrous, woody, the apex rounded, the base narrowed.

Hillside thicket near Santiago, Oriente, Cuba, March 10-25, 1912, Britton, Britton & Cowell 12593.

8. *Poponax Houghii* Britton & Rose, sp. nov.

A shrub, the twigs white-lanate, some of the spines small, others 2 cm. long, swollen, and open on one side. Leaves small, puberulent; petiole without a gland; pinnae 5-12 pairs; leaflets 15-20 pairs, linear-oblong, 1.5-2 mm. long, puberulent; peduncle 1 cm. long or less; flower-buds pubescent; legume somewhat curved, 8-9 cm. long, 7-8 mm. broad, flattened, obtuse, cuneate at base, glabrous when mature.

Tomellin Cañon, Oaxaca, June 23, 1899, *Rose & Hough 4669*.

9. *Poponax attenuata* Britton & Rose, sp. nov.

A shrub or tree, the twigs glabrous, bearing very small stipular spines. Leaves 4-8 cm. long; petiole short, bearing a large, somewhat elevated gland; pinnae 20-25 pairs; leaflets 20-30 pairs, 2 mm. long or less, glabrous, 1-veined, acute; peduncles 1-1.5 cm. long; legume 10-15 cm. long, 1 cm. broad, somewhat flattened, with long tapering base and apex, glabrous.

Near Río de Santa Lucia, Puebla, August, 1908, *C. A. Purpus 3050*.

10. *Poponax cymbispina* (Sprague & Riley) Britton & Rose.

Acacia cochliacantha S. Wats. Proc. Am. Acad. 21: 427. 1886. Not H. & B. 1806.
Acacia cymbacantha Zucc.; Benth. Trans. Linne Soc. 30: 501; hyponym. 1875.
Acacia cymbispina Sprague & Riley, Kew Bull. 1923: 394. 1923.

A shrub or tree, the twigs at first puberulent but soon glabrate, the stipular spines often small or none, but sometimes up to 6 cm. long, concave and papery. Leaves 6-10 cm. long; petiole puberulent, bearing a large cup-shaped gland near the middle; pinnae 6-25 pairs; leaflets 15-30 pairs, oblong-linear, 1.5-2 mm. long, obtuse; heads often in clusters; calyx puberulent; corolla 2.5 mm. long, puberulent; legume 4.5-10 cm. long, compressed, obtuse or acute, narrowed at base, glabrous.

TYPE LOCALITY: Guaymas, Sonora.

DISTRIBUTION: Chihuahua and Sonora to Guerrero, Veracruz and Oaxaca; Lower California.

11. *Poponax lutea* (Mill.) Britton & Rose.

Mimosa lutea Mill. Gard. Dict. ed. 8, no. 17. 1768.
Acacia platyacantha Schl. Linnaea 12: 565. 1838.
Acacia lutea Hitchc. Rep. Mo. Bot. Gard. 4: 83. 1893.

A shrub or tree, the slender twigs glabrous, the stipular spines either minute or sometimes 3-4 cm. long, more or less flattened. Leaves large; petiole flattened, bearing a short-stalked gland near the top; pinnae often 20 pairs; leaflets many pairs, linear, 3-4 mm. long, acute, glabrous; peduncles 1-2 cm. long; legume narrow, 1-2 dm. long, 8-10 mm. broad, somewhat flattened, becoming subterete, glabrous.

TYPE LOCALITY: Not cited.

DISTRIBUTION: Veracruz.

12. *Poponax campechiana* (Mill.) Britton & Rose.

Mimosa campechiana Mill. Gard. Dict. ed. 8, no. 20. 1768.

A tree, 7-10 m. high. Twigs slender, puberulent, the stipular spines terete, often 2 cm. long. Petiole puberulent, bearing a sessile oblong gland; rachis bearing 3 or 4 sessile cup-shaped glands between the uppermost pairs of pinnae; pinnae 20-30 pairs; leaflets 30-40 pairs, 1.5-2 mm. long, glabrous, acute; peduncle 1-1.5 cm. long, puberulent; calyx and corolla pubescent; legume oblong, 6-7 cm. long, 12-17 mm. broad, swollen, obtuse, glabrous.

TYPE LOCALITY: Campeche.

DISTRIBUTION: Yucatán; Mérida; Honduras.

24. *FISHLOCKIA* Britton & Rose, gen. nov.

A small tree, with spinescent stipules, bipinnate leaves of 1 pair of pinnae and 1 or 2 pairs of broad coriaceous leaflets, the yellow flowers in axillary peduncled heads. Calyx minutely 5-toothed. Corolla narrow, 5-lobed. Stamens about 20, distinct. Legume linear, short, curved, subcoriaceous, tardily dehiscent.

Type species, *Acacia anegadensis* Britton.

1. *Fishlockia anegadensis* (Britton) Britton & Rose.

Acacia anegadensis Britton, Mem. N. Y. Bot. Gard. 6: 572. 1916.

An intricately branched tree, up to 8 m. high, the main branches widely spreading, the slender twigs tortuous, glabrous. Stipules a pair of rigid acicular, persistent spines 5-15 mm. long; leaves 2-3 cm. long; petiole glabrous, or sparingly pubescent, 3-6 mm. long, channeled above, bearing a sessile, saucer-shaped gland about 0.5 mm. in diameter at the top; petiolules a little longer than the similar petiole, with a smaller, similar gland between the leaflets; leaflets obliquely oblong or oblong-obovate, glabrous, 10-16 mm. long, strongly and loosely reticulate-veined, rounded or emarginate at the apex, obliquely obtuse at the base, lustrous on both sides; peduncles solitary or 2-4 together in the upper axils, slender, loosely pubescent, shorter than the leaves; heads 5-6 mm. in diameter; calyx about 0.6 mm. long; corolla narrow, its teeth ciliolate, much shorter than the tube; stamens 3-4 mm. long, the filaments filiform, the anthers minute; legume short-stipitate, apiculate, glabrous, veiny, 3-4 cm. long, swollen; seeds suborbicular, brown, dull, 3-4 mm. in diameter, 1.5 mm. thick.

TYPE LOCALITY: Near West End, Anegada.

DISTRIBUTION: Known only from the type locality.

25. *MYRMECODENDRON* Britton & Rose, gen. nov.

Shrubs or trees. Stipular spines sometimes acicular and small but often very large, hollow, inhabited by ants. Leaves twice pinnate; petioles bearing 1 to several glands; leaflets numerous, small. Peduncles axillary, bearing a cup-shaped involucre at the middle or near the base. Flowers in heads or spikes, sessile, yellow or purplish. Calyx small. Corolla small, but longer than the calyx. Stamens numerous, very short. Legume compressed, dehiscent along one or both sutures, the valves thickened. Seed surrounded by a fleshy pulp.

Type species, *Acacia Hindsii* Benth.

Flowers spicate.

Legume opening on the ventral suture only.

Legume opening along both sutures (as far as known).

Leaflets 1-nerved.

Bractlets not peltate.

Spines turgid.

Corolla purple; leaflets ciliate.

Corolla yellow; leaflets not ciliate.

Spines flattened.

Bractlets peltate.

Bractlets puberulent.

Bractlets not puberulent.

Leaflets 3-nerved.

Flowers capitate.

Heads in dense axillary clusters.

Heads in racemes.

Racemes much elongated; peduncles very short.

Racemes short.

Spines dark brown; leaves elongated.

Spines white.

1. *M. Hindsii*.

2. *M. hirtipes*.

3. *M. Standleyi*.

4. *M. gladiatum*.

5. *M. oaxacanum*.

6. *M. Collinsii*.

7. *M. costaricense*.

8. *M. Cookii*.

9. *M. melanoceras*.

10. *M. Donnellianum*.

11. *M. globuliferum*.

1. *Myrmecodendron Hindsii* (Benth.) Britton & Rose.

Acacia Hindsii Benth. Lond. Journ. Bot. 1: 504. 1842.

Acacia bursaria Schenck, Repert. 12: 363. 1913.

Acacia sinaloensis Safford, Journ. Wash. Acad. Sci. 4: 365. 1914.

Acacia tepicana Safford, Journ. Wash. Acad. Sci. 4: 366. 1914.

A shrub or small tree, the twigs glabrous or slightly puberulent, the stipular spines either small and terete or very large, flattened, 3-5 cm. long, gray, brown, or black, united

at base. Petiole with a row of elevated cup-shaped glands; rachis with a gland between each pair of pinnae; pinnae 6-15 pairs; leaflets 12-20 pairs, linear-oblong, 3-8 mm. long, obtuse or acutish; inflorescence spicate, axillary; spikes slender, 3-5 cm. long; bractlets peltate; flowers glabrous; legume 4-6 cm. long, beaked, somewhat compressed, splitting open on one side, the valves thickish, leathery; seeds imbedded in fleshy pulp.

TYPE LOCALITY: Manzanillo, Colima.

DISTRIBUTION: Sinaloa to Tepic, Honduras and El Salvador.

2. *Myrmecodendron hirtipes* (Safford) Britton & Rose.

Acacia hirtipes Safford, Journ. Wash. Acad. Sci. 4: 367. 1914.

A tree or shrub. Large spines 3-4 cm. long, spreading, united at base in pairs, puberulent; pinnae 5-12 pairs; leaflets 9-18 pairs; peduncles puberulent, 1-2 cm. long, bearing a small involucre above the middle; flowers in spikes 11-15 mm. long; bractlets and calyx-teeth puberulent; flowers reddish.

TYPE LOCALITY: Río de las Cañas, Guatemala.

DISTRIBUTION: Known only from the type locality.

3. *Myrmecodendron Standleyi* (Safford) Britton & Rose.

Acacia Standleyi Safford, Journ. Wash. Acad. Sci. 4: 367. 1914.

A shrub, the twigs puberulent. Some of the spines elongated, 2.5-3.5 cm. long, somewhat flattened, at first puberulent; petioles bearing several cup-shaped glands; rachis with glands between the pinnae; pinnae often 25 pairs; leaflets about 30 pairs, thickish, 3 mm. long; peduncles axillary, often in clusters, puberulent, bearing a cup-shaped involucre above the middle; flowers in spikes 18-20 mm. long; bractlets and calyx-teeth puberulent.

TYPE LOCALITY: Acaponeta, Tepic.

DISTRIBUTION: Known only from the type locality.

4. *Myrmecodendron gladiatum* (Safford) Britton & Rose.

Acacia gladiata Safford, Journ. Wash. Acad. Sci. 5: 359. 1915.

A shrub or tree, the twigs puberulent. Stipular spines stout, united at base, sometimes 5 cm. long, flattened, brown; petiole and rachis puberulent, bearing a cup-shaped gland between each pair of pinnae; pinnae about 20 pairs; leaflets about 20 pairs, oblong-linear, 3.5-4.5 mm. long, rounded at apex, waxy tipped; flowers in spikes 10-16 mm. long.

TYPE LOCALITY: Rosario, Sinaloa.

DISTRIBUTION: Sinaloa; Tepic.

ILLUSTRATION: Safford, loc. cit. f. 2.

5. *Myrmecodendron oaxacanum* Britton & Rose, sp. nov.

A shrub, several meters high, the twigs, petiole, rachis and peduncle densely short-pubescent. Spines on the old branches large (?), hollow (?), but on the young twigs acicular, short, yellow; rachis bearing small cup-shaped glands between each pair of pinnae; pinnae 10-12 pairs; leaflets 20 pairs or more, linear, 2 mm. long, obtuse, puberulent; peduncles axillary, 1-1.5 cm. long, involucre above the middle; spikes dense, 1.5 cm. long; legume glabrous, 5-10 cm. long, somewhat compressed, dehiscent along both sutures.

Fonameca, Oaxaca, altitude 110 m., July 3, 1925, *E. Makrinius* 488.

6. *Myrmecodendron Collinsii* (Safford) Britton & Rose.

Acacia Collinsii Safford, Science II 31: 677. 1910.

Acacia yucatanensis Schenck, Repert. 12: 361. 1913.

A shrub, 3-4.5 m. high, the twigs glabrous. Some of the stipular spines small, some large, 3-5 cm. long, brownish, polished, more or less united at base; pinnae many pairs; leaflets 15-20 pairs, linear-oblong, 6-8 mm. long; peduncles axillary, often in clusters, glabrous, bearing a toothed involucre near the base; bractlets peltate, glabrous; calyx glabrous; legume terete or nearly so, 5 cm. long, 2-valved.

TYPE LOCALITY: Chiapas.

DISTRIBUTION: Chiapas, Oaxaca and Yucatán.

7. *Myrmecodendron costaricense* (Schenck) Britton & Rose.

Acacia costaricensis Schenck, Repert. 12: 361. 1913.

Acacia panamensis Schenck, Repert. 12: 362. 1913.

Acacia penonomensis Safford, Journ. Wash. Acad. Ser. 4: 363. 1914.

Acacia Nelsonii Safford, Journ. Wash. Acad. Sci. 4: 363. 1914.

A shrub, 1-5 m. high, the twigs glabrous. Some of the spines very large, glossy, brown to black, often 4 cm. long, swollen at base, more or less connate, terete; pinnae 4-8 pairs; leaflets 14-20 pairs, linear-oblong, 8-10 mm. long, glabrous, obtuse, 3-veined at base; peduncles axillary, often in clusters, puberulent, bearing a 3-lobed involucre near the base; flowers in slender dense spikes 3-3.5 cm. long; bractlets peltate; legume 4-6 cm. long, somewhat compressed, long-beaked, 2-valved.

TYPE LOCALITY: Near Lagasto, Costa Rica.

DISTRIBUTION: Guerrero to Panama.

8. *Myrmecodendron Cookii* (Safford) Britton & Rose.

Acacia Cookii Safford, Science II 31: 677. 1910.

Acacia buerophora B. L. Robinson, Proc. Am. Acad. 49: 502. 1913.

A shrub or tree, the twigs glabrous or nearly so. Spines stout, 4-6 cm. long, terete or nearly so; leaves large; pinnae 14-16 pairs; leaflets many pairs, linear, 6-7 mm. long, obtuse, glabrous; peduncles axillary, often in clusters of 15 or fewer, short, bearing a 3-lobed involucre near the middle; flowers in dense heads; legume 14-30 cm. long, glabrous, 2-valved.

TYPE LOCALITY: Secanquim, Alta Verapaz, Guatemala.

DISTRIBUTION: British Honduras and Guatemala.

9. *Myrmecodendron melanoceras* (Beurling) Britton & Rose.

Acacia melanoceras Beurling, Sv. Vet. Akad. Handl. 1854: 123. 1856.

Acacia multiglandulosa Schenck, Repert. 12: 362. 1913.

A shrub or tree, 3-7 m. high, the twigs puberulent. Larger spines brown to black, 4-5 cm. long, terete, united at base; leaves 3-4 dm. long; petioles bearing many small glands at the base in 2 or 3 rows; pinnae many pairs; leaflets 25-30 pairs, 5-6 mm. long, linear, acute, glabrous; flowering racemes of heads 2-3 dm. long; peduncles 2-12 mm. long.

TYPE LOCALITY: Panama.

DISTRIBUTION: Panama.

ILLUSTRATION: Standley, Contr. U. S. Nat. Herb. 27: pl. 32.

10. *Myrmecodendron Donnellianum* (Safford) Britton & Rose.

Acacia Donnelliana Safford, Journ. Wash. Acad. Sci. 4: 361. 1914.

A shrub or tree. Long spines brownish to black, polished, up to 4 cm. long; pinnae 14-18 pairs; leaflets 30-40 pairs, linear-oblong; inflorescence a short raceme of dense heads; peduncles up to 2 cm. long, with a small involucre near the base.

TYPE LOCALITY: San Pedro de Sula, Guatemala.

DISTRIBUTION: Guatemala.

11. *Myrmecodendron globuliferum* (Safford) Britton & Rose.

Acacia globulifera Safford, Journ. Wash. Acad. Sci. 4: 360. 1914.

A shrub or tree, the twigs glabrous. Large spines terete, 4-5 cm. long, waxy, white; pinnae about 15 pairs; leaflets 18-26 pairs, 3.5 mm. long; inflorescence a short raceme; peduncles very short, glabrous, bearing a small involucre below the middle; flowers in small, dense, heads.

TYPE LOCALITY: Silam, Yucatán.

DISTRIBUTION: Yucatán.

26. *ACACIOPSIS* Britton & Rose, gen. nov.

Shrubs or trees mostly with slender stipular spines. Leaves bipinnate, the petiole gland-bearing; pinnae 1 to several pairs; leaflets small or large. Inflorescence axillary, capitate

or spicate; bractlets persistent; flowers sessile, small; stamens numerous, distinct, short. Legume very narrow, thin, 2-valved, readily dehiscent, the valves separating into 2 layers. Seeds oblong, lenticular, the axis parallel with the legume, the funiculus long.

Type species, *Acacia Pringlei* Rose.

A. Flowers spicate.

Legume densely lanate or softly pubescent.

Leaflets 1 pair.

Leaflets 4-6 pairs.

Legume not lanate (as far as known).

Petiole and rachis glabrous.

Petiole and rachis pilose.

Mature leaflets glabrate.

Stipular spines elongated.

Leaflets large (12 mm. or more broad).

Leaflets smaller (6 mm. broad).

Stipular spines short or none.

Flowering spikes elongated, often more than 10 cm. long.

Flowering spikes 3 to 6 cm. long.

Rachis of spike pilose; leaflets usually 4, dull.

Rachis of spike glabrous; leaflets 3, shining.

Mature leaflets pubescent or puberulent.

Leaflets puberulent.

Leaflets pubescent.

B. Flowers capitate.

Leaflets short, flat.

Legume pubescent.

Legume not pubescent.

Pinnæ mostly 4 to 9 pairs; leaflets not viscid.

Pinnæ 1-4 pairs; leaflets viscid.

Leaflets elongated, terete or nearly so.

1. *A. Bilimekii*.
2. *A. Brandegeana*.
3. *A. rigidula*.
4. *A. Conzattii*.
5. *A. amentacea*.
6. *A. Pringlei*.
7. *A. unijuga*.
8. *A. sesquijuga*.
9. *A. sonorensis*.
10. *A. californica*.
11. *A. biaciculata*.
12. *A. constricta*.
13. *A. vernicosa*.
14. *A. Schottii*.

1. *Acaciopsis Bilimekii* (Macbride) Britton & Rose.

Acacia Bilimekii Macbride, Contr. Gray Herb. 59: 6. 1919.

Acacia ambigua Rose, Contr. U. S. Nat. Herb. 8: 31. 1903. Not Hoffmgg. 1826.

Acacia sericocarpa Rose, Contr. U. S. Nat. Herb. 8: 300. 1905. Not Fitzg. 1904.

A low, somewhat diffuse shrub, 1-2 m. high, the twigs pubescent, with long stipular spines. Leaves subsessile; pinnæ 1 pair; leaflets 1 pair, oblong, 8 mm. long, obtuse, slightly pubescent; flowers in slender spikes; legume linear, 7-8 cm. long, densely lanate, 4-5 mm. wide, constricted between the seeds.

TYPE LOCALITY: Matamoras, Puebla.

DISTRIBUTION: Puebla and Morelos.

ILLUSTRATION: Rose, Contr. U. S. Nat. Herb. 8: 31. f. 7.

2. *Acaciopsis Brandegeana* (I. M. Johnston) Britton & Rose.

Acacia Brandegeana I. M. Johnston, Contr. Gray Herb. 75: 27. 1925.

A shrub, 2-3 m. high, the twigs pubescent, with straight, slender stipular spines. Petiole 2-3 mm. long, bearing at the top a small deltoid concave gland; pinnæ 1 pair; leaflets 4-6 pairs, oblong, 3-6 mm. long, obtuse, mucronate, strongly veined; flowers in spikes 2.5 cm. long; calyx 1 mm. long; legume somewhat falcate, softly pubescent, at least when young, 4-11 cm. long.

TYPE LOCALITY: Shores of Agua Verde Bay, Lower California.

DISTRIBUTION: Southern Lower California.

3. *Acaciopsis rigidula* (Benth.) Britton & Rose.

Acacia rigidula Benth. Lond. Journ. Bot. 1: 504. 1842.

A small tree or shrub, 3-4.5 m. high, the branches stiff, with straight stipular spines sometimes 5 cm. long. Pinnæ 1 pair, glabrous; leaflets 3-6 pairs, oblong, 6-15 mm. long, obtuse, apiculate, often shining; flowers in slender sessile spikes 2-3 cm. long; legume 6-8 cm. long, puberulent.

TYPE LOCALITY: Texas.

DISTRIBUTION: Southern Texas to Tamaulipas, Nuevo León and San Luis Potosí.

4. *Acaciopsis Conzattii* (Standley) Britton & Rose.

Acacia Conzattii Standley, Contr. U. S. Nat. Herb. 20: 186. 1919.

A shrub, the twigs slender, pilose when young, bearing slender, straight stipular spines sometimes over 3 cm. long. Petiole slender, 1.5–2.5 cm. long, pilose, bearing a large cup-shaped gland near the base; pinnae 1 pair; leaflets 2 pairs, oblong, 1–2.5 cm. obtuse; flowers in sessile spikes 2–5 cm. long.

TYPE LOCALITY: Estacion Almaloyas, Oaxaca.

DISTRIBUTION: Known only from the type locality and vicinity.

5. *Acaciopsis amentacea* (DC.) Britton & Rose.

Acacia amentacea DC. Prodr. 2: 455. 1825.

A shrub with stiff glabrous branches, the stipular spines acicular, 1–2.5 cm. long, white in age. Leaves sessile or nearly so; rachis grooved, somewhat pilose; pinnae 1 pair; leaflets 2 pairs, oblong, 1–2 cm. long, 6–8 mm. wide, obtuse, glabrous; inflorescence a dense sessile spike.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Jalisco.

6. *Acaciopsis Pringlei* (Rose) Britton & Rose.

Acacia Pringlei Rose, Contr. U. S. Nat. Herb. 3: 316. 1895.

A tree, 6–9 m. high, the twigs at first pubescent, but in time glabrate, the spines 1 cm. long or less, straight. Pinnae 1 pair; leaflets 2 pairs, orbicular to obovate, 2.5–4 cm. long, rounded at apex or sometimes acutish; flowers in slender spikes 7–11 cm. long, these often in fascicles of 5 or 6; legume linear, 12–15 cm. long, glabrous.

TYPE LOCALITY: Tomellin Cañon, Oaxaca.

DISTRIBUTION: Guerrero and Oaxaca.

7. *Acaciopsis unijuga* (Rose) Britton & Rose.

Acacia unijuga Rose, Contr. U. S. Nat. Herb. 8: 32. 1903. [Exclude description of the legume.]

A large tree, the wood white and hard, the twigs at first pubescent. Stipules small, spinescent; petiole 2 cm. long or less; pinnae 1 pair; leaflets 2 pairs, oblong to orbicular, 2–4 cm. long, rounded at apex, glabrous; flowers in slender spikes 2.5–3 cm. long.

TYPE LOCALITY: Las Palmas, San Luis Potosí.

DISTRIBUTION: Known only from the type locality.

8. *Acaciopsis sesquijuga* Britton & Rose, sp. nov.

A tree with light-colored, glabrous twigs. Stipules small or wanting; petiole 1–2 cm. long, usually glabrous but sometimes a little pilose, bearing a large sessile cup-shaped gland near the middle; pinnae 1 pair; leaflets 1½ pairs, oblong to obovate, with a broad cuneate base, rounded or retuse at apex, apiculate, glabrous, 1–2.5 cm. long, somewhat shining; flowering spikes 4–6 cm. long, dense, the rachis glabrous.

Silam, Yucatán, G. F. Gaumer 1307.

9. *Acaciopsis sonorensis* (Rose) Britton & Rose.

Acacia sonorensis Rose, Contr. U. S. Nat. Herb. 8: 31. 1903.

A small tree or shrub, 2–5 m. high, the twigs at first pubescent, bearing long or short stipular spines. Petiole very short; petiole and rachis pubescent; pinnae 1 pair; leaflets 2 or 3 pairs, oblong, 6–12 mm. long, obtuse, somewhat pubescent; flowers in slender spikes 3–4 cm. long with a very hairy axis; legume linear, 7–8 cm. long, glabrate, long-stipitate.

TYPE LOCALITY: Guaymas, Sonora.

DISTRIBUTION: Sonora.

10. *Acaciopsis californica* (Brand.) Britton & Rose.

Acacia californica Brand. Proc. Calif. Acad. II. 3: 221. 1892.

A small tree, 5-8 m. high, the twigs pubescent, bearing short stiff stipular spines. Petiole and rachis pubescent; pinnae 1 pair; leaflets 2 pairs, oval to short-oblong, 1-2 cm. long, rounded at apex, pubescent; flowers in slender spikes 4-10 cm. long; ovary slender, hairy.

TYPE LOCALITY: La Palma, Lower California.

DISTRIBUTION: Southern Lower California.

11. *Acaciopsis biaciculata* (S. Wats.) Britton & Rose.

Acacia biaciculata S. Wats. Proc. Am. Acad. 21: 452. 1886.

Prostrate, the branches slender, 3-10 dm. long, appressed-pubescent, armed with acicular whitish stipular spines sometimes 2-2.5 cm. long. Petiole pubescent, bearing a small cup-shaped gland near the top; pinnae 1-4 pairs; leaflets about 10 pairs, oblong, 2 mm. long, glabrous; flowers capitate; heads slender-peduncled; legume narrow, more or less falcate, 2-4 cm. long, finely pubescent, stipitate.

TYPE LOCALITY: Near Chihuahua City, Chihuahua.

DISTRIBUTION: Chihuahua; Querétaro.

12. *Acaciopsis constricta* (Benth.) Britton & Rose.

Acacia constricta Benth.; A. Gray, Pl. Wright. 1: 66. 1852.

Acacia constricta paucispina Wootton & Standley, Bull. Torr. Club 36: 105. 1909.

A shrub, 1-6 m. high, the twigs at first puberulent and more or less glandular, in age reddish brown, often developing slender, more or less elongated stipular spines. Pinnae 4-9 pairs; leaflets several pairs, oblong or linear, 2-4 mm. long, glabrous or pubescent, obtuse; peduncles slender, 2-4 cm. long, pubescent; flowers yellow, in dense heads; legume slender, 8-10 cm. long, 2-4 mm. wide glabrous, somewhat glandular, constricted between the seeds.

TYPE LOCALITY: Western Texas.

DISTRIBUTION: Southern Texas to Arizona, Sonora, San Luis Potosí and Puebla.

13. *Acaciopsis vernicosa* (Standley) Britton & Rose.

Acacia vernicosa Standley, Contr. U. S. Nat. Herb. 20: 187. 1919.

A shrub, 1-2 m. high, glabrous or nearly so, viscid throughout with sessile glands, the spines 1.5 cm. long or less. Petiole 3-7 mm. long, with a cup-shaped gland near the top; pinnae 1-4 pairs; leaflets 7-9 pairs, oval-oblong, 1-3 mm. long, thickish, rounded at apex, 1.2 mm. long or less, viscid, glabrous; flowers capitate; peduncles 1-2 cm. long; legume 4-7 cm. long, 3-5 mm. wide, more or less constricted between the seeds.

TYPE LOCALITY: Santa Rosalia, Chihuahua.

DISTRIBUTION: Texas to Arizona, Chihuahua, Zacatecas and Puebla.

14. *Acaciopsis Schottii* (Torr.) Britton & Rose.

Acacia Schottii Torr. Bot. Mex. Bound. Surv. 62. 1859.

A shrub, sometimes a meter high, the twigs pale and glabrous, the old branches dark, spiny. Petiole and rachis puberulent; pinnae 1 pair; leaflets 3-5 pairs, filiform, subterete, 4 mm. long; peduncles 2-3 cm. long; flowers capitate; legume 5-7.5 cm. long, 6-9-seeded, constricted between the seeds, glabrous, somewhat glandular.

TYPE LOCALITY: Near the Cañon of San Carlos, Texas.

DISTRIBUTION: Western Texas and Chihuahua.

27. *ACACIELLA* Britton & Rose, gen. nov.

Mostly shrubs or small trees, rarely herbaceous, unarmed. Leaves bipinnate; petioles without glands. Pinnae few to many pairs; leaflets small or large, few to many pairs.

Inflorescence often paniculate; flowers always pedicelled, capitate or short-racemose, the clusters globose or oblong. Legume flat, linear to narrowly oblong; valves mostly thin and splitting downward from the apex, not separating into layers; seeds not longer than broad, lenticular, the axis at right angles to the legume; funicule slender.

Type species, *Acacia villosa* Sw.

A. Leaflets revolute-margined. (See *A. Oerstedii*.)

Flowers capitate.

Leaflets not pale beneath.

Leaflets pale beneath.

Legume obtuse, apiculate.

Legume acuminate.

Flowers short-racemose.

Leaflets pinnately veined.

Leaflets not pinnately veined.

Leaflets appressed-pubescent.

Leaflets densely tomentose.

B. Leaflets flat.

1. Leaflets 1-veined.

Flowers short-racemose.

Flowers capitate or subcapitate.

Twigs and inflorescence densely pilose.

Twigs and inflorescence glabrous, pubescent or loosely pilose.

Leaflets oblong, 1.5-3 mm. wide.

Inflorescence axillary; plant glabrous.

Heads mostly in a long terminal panicle; stem and rachis

long-pilose.

Leaflets linear, about 1 mm. wide or narrower.

Leaflets abundantly long-ciliate.

Leaflets glabrous or sparingly ciliate. (See *A. ciliata*.)

Pinnæ 3-8 pairs.

Leaflets linear-oblong, ciliate.

Leaflets linear, eciliate.

Legume linear, 4-8 mm. wide.

Legume oblong, 10 mm. wide.

Pinnæ 7-many pairs.

Legume 10-15 mm. wide.

Legume linear, 10 mm. wide.

Legume oblong, 12-15 mm. wide.

Legume 4-10 mm. wide.

Legume chartaceous.

Legume 3-5 cm. long, blunt.

Legume 6-8 cm. long, acute.

Legume membranous.

Legume only 4 mm. wide.

Leaflets 2-4 mm. long.

Leaflets 6-9 mm. long.

Legume 5-10 mm. wide.

Leaflets copiously long-ciliate.

Leaflets glabrous or sparingly ciliate.

Pinnæ up to 20 pairs; legume 3-5

cm. long.

Pinnæ 12 pairs or fewer; legume

5-8 cm. long.

Leaflets oblong, 3-4 mm. long,

obtuse.

Leaflets linear, 3-5 mm. long,

acute or acutish.

2. Leaflets pinnately veined. (See *A. Valenzuelana*.)

a. Leaflets small, linear to linear-oblong or oblong.

Plants prostrate; leaflets 3-5 mm. long, obtuse, long-ciliate.

Plants erect.

Leaflets pilose beneath.

Leaflets linear; legume 6-8 mm. wide.

Leaflets oblong; legume 9 mm. wide.

Leaflets glabrous beneath.

Twigs and rachis velvety-pubescent.

Twigs and rachis glabrous or pilose.

Flowers short-racemose.

Flowers capitate or subcapitate.

Leaflets long-ciliate.

Leaflets eciliate or short-ciliate.

Leaflets firm in texture, rounded or obtuse.

Glabrous; leaflets 5-6 mm. long.

Twigs and rachis long-pilose, at least when

young; leaflets 2-3 mm. long.

Leaflets thin, acute or acutish.

1. *A. carbonaria*.

2. *A. Rekoii*.

3. *A. polypodioides*.

4. *A. Fisheri*.

5. *A. Bakeri*.

6. *A. Calderoni*.

7. *A. breviraecemosa*.

8. *A. hirsuta*.

9. *A. Goldmanii*.

10. *A. elongata*.

11. *A. umbellifera*.

12. *A. filicioides*.

13. *A. texensis*.

14. *A. delicata*.

15. *A. angustissima*.

16. *A. angulosa*.

17. *A. costaricensis*.

18. *A. Rensonii*.

19. *A. Smithii*.

20. *A. Ferrisii*.

21. *A. ciliata*.

22. *A. salvadorensis*.

23. *A. talpana*.

24. *A. hirta*.

25. *A. prostrata*.

26. *A. Painterii*.

27. *A. bicolor*.

28. *A. velutina*.

29. *A. Hartwegii*.

30. *A. igualensis*.

31. *A. Houghii*.

32. *A. leucothrix*.

- Leaflets 1.5-2.5 mm. wide. 33. *A. Lemmonii*.
 Leaflets 1 mm. wide.
 Heads numerous, in long terminal panicles. 34. *A. submontana*.
 Heads few, mostly in short axillary panicles.
 Legume strongly nerved, 9-10 mm. wide. 35. *A. Holwayi*.
 Legume faintly nerved, 6-7 mm. wide. 36. *A. suffrutescens*.
- b. Leaflets oval to oblong, elliptic or suborbicular.
 Leaflets small, 5-14 mm. long.
 Foliage pubescent.
 Flowers pubescent. 37. *A. Valenzuelana*.
 Flowers glabrous. 38. *A. Cumingii*.
 Flowers subcapitate.
 Flowers short racemose.
 Leaflets 7-13 pairs. 39. *A. Oerstedii*.
 Leaflets 9-20 pairs. 40. *A. villosa*.
 Foliage glabrous.
 Leaflets 20-30 pairs, 2.5-8 mm. long. 41. *A. laevis*.
 Leaflets 7-16 pairs, 5-14 mm. long.
 Leaflets up to 14 mm. long. 42. *A. penicillata*.
 Leaflets 5-7 mm. long. 43. *A. Shrevei*.
 Leaflets large, 1-5 cm. long.
 Leaflets rounded or obtuse.
 Leaflets 4-10 pairs. 44. *A. tequilana*.
 Pinnae 3-7 pairs; leaflets suborbicular.
 Pinnae 2 or 3 pairs; leaflets oval or elliptic.
 Leaflets oval or ovate, 4-7 mm. wide. 45. *A. durangensis*.
 Leaflets elliptic, 8-13 mm. wide. 46. *A. crinata*.
 Leaflets 2 or 3 pairs, 1.5-3 cm. long. 47. *A. Rosei*.
 Leaflets 2 or 3 pairs, acute, 2-6 cm. long. 48. *A. Ortegae*.
 C. Species not grouped. 49. *Acacia stipellata*.

1. *Acaciella carbonaria* (Schl.) Britton & Rose.

Acacia carbonaria Schl. Linnaea 12: 571. 1838.

A shrub, the twigs pilose. Pinnae 8-10 pairs; leaflets 10-20 pairs, 4 mm. long, narrowly elliptic, acutish, the base obliquely rounded, glabrous or hairy and shining above, hairy and strongly veined beneath, the margin revolute; peduncles 3.5 cm. long, axillary, in pairs; calyx short-hirsute; corolla glabrous, except at the tips of the lobes; legume oblong, 5-6 cm. long, 10 mm. wide, cuneate at base, pointed, slightly pubescent.

TYPE LOCALITY: Between Veracruz and Plan del Rio, Veracruz.
 DISTRIBUTION: Veracruz; Oaxaca.

2. *Acaciella Reko* Britton & Rose, sp. nov.

A low shrub, the twigs slender, pilose. Pinnae 6-9 pairs; leaflets 8-25 pairs, oblong, 3-5 mm. long, acutish, pubescent on both sides, pale beneath, the margin revolute; inflorescence paniculate, pubescent; peduncles slender, 1 cm. long; flowers capitate; pedicels slender; calyx minute, pubescent; corolla 3 mm. long, glabrous except at the tips of the lobes; legume oblong, 4-5 cm. long, 10 mm. wide, obtuse, cuneate at base, long-stipitate, apiculate, puberulent.

Las Pilas, Oaxaca, Nov. 4, 1917, *B. P. Reko* 3612.

3. *Acaciella polypodioides* (Standley) Britton & Rose.

Acacia polypodioides Standley, Contr. U. S. Nat. Herb. 20: 184. 1919.

A slender shrub, the twigs densely pilose and with numerous minute sessile glands. Pinnae 2-8 pairs, 2.5-6 cm. long; leaflets 12-25 pairs, oblong, 2.5-6 mm. long, obtuse, shining and puberulent above, pale and glabrous beneath, the margin revolute; inflorescence paniculate; peduncles slender, 10-12 mm. long, pubescent; flowers capitate; calyx and corolla pubescent; legume oblong, 3-5 cm. long, 8-10 mm. wide, long-acuminate, cuneate at base, stipitate, pubescent.

TYPE LOCALITY: Chiapo, Chiapas.
 DISTRIBUTION: Chiapas, Oaxaca and Veracruz.

4. *Acaciella Fisheri* Britton & Rose, sp. nov.

A shrub, 1 meter high, or higher, the twigs pilose. Stipules linear, long-ciliate; pinnae 4-9 pairs; leaflets 10-25 pairs, oblong, acutish, 4-5 mm. long, pinnately veined, shining and glabrous or slightly pubescent above, glabrous and pale beneath, the margin revolute; peduncles 1-1.5 cm. long, pubescent; head-like racemes somewhat elongated; calyx and corolla somewhat pubescent.

Mata de Agua, Veracruz, August 13, 1926, *George L. Fisher 81*.

5. *Acaciella Bakeri* Britton & Rose, sp. nov.

A low shrub, less than 1 m. high, the twigs slender and pilose. Stipules linear; pinnae 3-6 pairs; leaflets 10-20 pairs, oblong, 4-7 mm. long, obtuse, appressed-pubescent on both sides, the margin slightly revolute; inflorescence more or less paniculate; flowers short-racemose; calyx and corolla densely pubescent.

Granada, Nicaragua, Feb. 8, 1903, *C. F. Baker 116*.

6. *Acaciella Calderoni* (Standley) Britton & Rose.

Acacia Calderoni Standley, Journ. Wash. Acad. 13: 439. 1923.

A shrub, the twigs brown, densely fulvous-pilose. Stipules linear-subulate, 5-7 mm. long; pinnae 6-9 pairs; leaflets 20-25 pairs, oblong, 4-6 mm. long, obtuse, densely tomentose on both sides, pale beneath, the margin revolute; peduncles axillary, 1 cm. long, densely pilose; flowers in dense spike-like racemes; calyx and corolla densely pilose.

TYPE LOCALITY: Near Chalchuapa, El Salvador.

DISTRIBUTION: Known only from the type locality and vicinity.

7. *Acaciella breviracemosa* Britton & Rose, sp. nov.

A shrub, 2-4 m. high, the branches slender, somewhat angled, puberulent. Pinnae 6-15 pairs; leaflets 18-25 pairs, linear, 4-8 mm. long, acute, glabrous, slightly ciliate, flat, very pale beneath, not reticulate-veined; inflorescence a raceme or panicle; peduncles 1.5-2 cm. long; flowers short-racemose; calyx and corolla glabrous.

Sonora and Jalisco. Type from near Guadalajara, Jalisco, 1886, *E. Palmer 647*.

8. *Acaciella hirsuta* (Schl.) Britton & Rose.

Acacia hirsuta Schl. *Linnaea* 12: 572. 1838.

A shrub, the twigs sulcate, densely pilose. Pinnae 11-13 pairs; leaflets 40-60 pairs, linear, 1-veined, glabrous, ciliate, acute, 4-6 mm. long; inflorescence densely pilose in elongated axillary and terminal panicles; flowers capitate, the heads very small.

TYPE LOCALITY: Tiocelo, Veracruz.

DISTRIBUTION: Known only from the type locality.

9. *Acaciella Goldmanii* Britton & Rose, sp. nov.

A shrub with slender branches, glabrous or nearly so. Pinnae about 6 pairs; leaflets many pairs, linear-oblong, acute, thickish, pale beneath, glabrous, 1-veined; peduncles slender, axillary; legume linear-oblong, cuspidate, broadly cuneate at base, stipitate, 3-5 cm. long, about 8 mm. wide, sparsely pubescent.

Between San Pedro and Tres Pachilas, Lower California Desert, 1905, *Nelson & Goldman 7336*.

10. *Acaciella elongata* Britton & Rose, sp. nov.

Herbaceous, the branches elongated, clothed with numerous long yellow hairs. Leaves 1-2 dm. long; petiole and rachis long-pilose; pinnae 7-12 pairs; leaflets 20-30 pairs, oblong, 1-veined, thickish, 4-5 mm. long, obtuse, glabrous, glaucous; heads in an interrupted elongated panicle; flowers capitate; calyx and corolla glabrous.

Sierra Madre of southern Durango, August 13, 1897, *J. N. Rose 3470*.

11. *Acaciella umbellifera* (Kunth) Britton & Rose.

Acacia umbellifera Kunth, Mim. 100. 1819.

A tree, the twigs 5-angled, somewhat pilose. Stipules linear-subulate, about 1 mm. long; pinnae 7-10 pairs; leaflets 17-37 pairs, linear, 3-4 mm. long, acute, 1-veined, glabrous, ciliate; inflorescence axillary and terminal; peduncles 8-15 mm. long; flowers capitate.

TYPE LOCALITY: Near the City of Mexico.

DISTRIBUTION: San Luis Potosi; Querétaro.

ILLUSTRATION: Kunth, Mim. pl. 31.

12. *Acaciella filicioides* (Cav.) Britton & Rose.

Mimosa filicioides Cav. Ic. 1: 55. 1791.

Acacia filicina Willd. Sp. Pl. 4: 1072. 1806.

Mimosa ptericina Poir. in Lam. Encycl. Suppl. 1: 74. 1810.

Acacia filicioides Trelease, Rep. Ark. Geol. Surv. 1888⁴: 178. 1891.

A shrub, about 1 m. high, the twigs long-pilose. Leaves large; petiole and rachis long-pilose; pinnae 6 pairs; leaflets many pairs, linear-oblong, 4-6 mm. long, acute, long-ciliate, the midvein subcentral; flowers capitate.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Known only from the type locality, and, to us, only from the description and illustration.

ILLUSTRATION: Cav. loc. cit. pl. 78.

13. *Acaciella texensis* (Torrey & Gray) Britton & Rose.

Acacia texensis Torrey & Gray, Fl. N. Am. 1: 404. 1840.

A low shrub, the branches slender, glabrous or with a few appressed hairs. Petiole and rachis with scanty appressed pubescence; pinnae 2-8 pairs; leaflets 6-20 pairs, linear, obtuse, glabrous, 1-veined, appressed-pubescent; heads axillary, or in short terminal racemes; calyx and corolla glabrous; legume linear, 4-6 cm. long, 4-8 mm. wide, acuminate, cuneate at the base and long-stipitate, sparingly appressed-pubescent.

TYPE LOCALITY: Texas.

DISTRIBUTION: Texas to Arizona, Durango and Puebla.

14. *Acaciella delicata* Britton & Rose, sp. nov.

A shrub with slender glabrous branches. Stipules minute, linear; pinnae 6 pairs or fewer; leaflets many pairs, 5-6 mm. long, glabrous, 1-veined, acute; peduncles in clusters of 3-5, axillary or sometimes forming terminal racemes; flowers capitate; calyx and corolla glabrous; legume oblong, 4 cm. long, 10 mm. wide, broad at apex, mucronate, rounded at base, stipitate.

Acapulco, Guerrero, 1894-95, *E. Palmer 298*.

15. *Acaciella angustissima* (Mill.) Britton & Rose.

Mimosa angustissima Mill. Gard. Dict. ed. 8. no. 19. 1768.

Acacia glabrata Schl. Linnaea 12: 569. 1838.

Acacia angustissima Kuntze, Rev. Gen. Pl. 3²: 47. 1898.

A small tree or shrub, the branches angled, glabrous or hirsute. Leaves large; pinnae 10-many pairs; leaflets many pairs, linear, 4-7 mm. long, glabrous, acute, 1-veined; heads in terminal racemes; legume oblong, 4-7 cm. long, about 10 mm. wide, glabrous, or sparingly pubescent, acuminate, cuneate and stipitate at base.

TYPE LOCALITY: Campeche.

DISTRIBUTION: Veracruz; Campeche; Yucatán; Guatemala.

16. *Acaciella angulosa* (Bertol.) Britton & Rose.

Acacia angulosa Bertol. Fl. Guat. 442. 1840.

Acacia insignis Mart. & Gal. Bull. Acad. Brux. 10²: 313. 1843.

A shrub or small tree, up to about 5 m. high, the branches angled, glabrous. Leaves large; pinnae 8-12 pairs; leaflets many pairs, linear, acute, 1-veined, appressed-ciliate; inflorescence a

large terminal panicle; flowers capitate; pedicels and calyx pubescent; legume oblong, 4-5 cm. long, 12-15 mm. wide, long-stipitate, glabrous.

TYPE LOCALITY: Volcano d'Acqua, Guatemala.
DISTRIBUTION: Oaxaca; Veracruz; Guatemala.

17. *Acaciella costaricensis* Britton & Rose, sp. nov.

A small tree, the twigs brownish, angled, glabrous. Pinnae 10-12 pairs; leaflets many pairs, linear, 4-5 mm. long, 1-veined, glabrous, pale beneath; inflorescence paniculate; flowers in small heads, glabrous; legume chartaceous, 3-5 cm. long, 7-9 mm. wide, blunt, glabrous, stipitate.

Santa Maria de Dota, Provincia de San José, Costa Rica, December, 1925, *Paul C. Standley 41877*.

18. *Acaciella Rensonii* Britton & Rose, sp. nov.

A shrub, sometimes 2 m. high, the twigs glabrous or nearly so. Leaves large, sometimes with 20 or more pairs of pinnae; leaflets many pairs, linear, 4-6 mm. long, glabrous, appressed-ciliate; flowers in small heads, the short peduncles axillary or in short racemes or panicles; calyx and corolla glabrous; legume chartaceous, 6-8 cm. long, acute, glabrous.

Vicinity of San Salvador, El Salvador. Type collected February 20, 1904, *Charles Rensson 115*.

19. *Acaciella Smithii* Britton & Rose, sp. nov.

A shrub, the twigs somewhat angled, glabrous. Pinnae 10 pairs or more; leaflets many pairs, linear, 1-veined, 2-4 mm. long, glabrous, pale beneath; peduncles axillary or in interrupted racemes; legume linear-oblong, membranous, 4-5 cm. long, 4 mm. broad, acuminate, rounded or broadly cuneate at base, long-stipitate, bearing many small sessile glands.

Monte Alban, Oaxaca. Type collected in November, 1894, *Charles L. Smith 349*.

20. *Acaciella Ferrisiae* Britton & Rose, sp. nov.

A shrub or small tree; twigs angled and glabrous or nearly so. Pinnae usually 7-9 pairs, sometimes only 3-5 pairs, glabrous; leaflets many pairs, linear-oblong, 6-9 mm. long, acutish, 1-veined, pale green, glabrous; inflorescence paniculate, glutinous; peduncles 1-1.5 cm. long; flowers creamy white, slightly fragrant; calyx and corolla glabrous; legume linear, 4-6 cm. long, 4 mm. wide, acuminate, cuneate at base, stipitate, glabrous.

Maria Madre, Tres Marias Islands, Nayarit, Oct. 22, 1925, *Roxana S. Ferris 5610*.

21. *Acaciella ciliata* Britton & Rose, sp. nov.

A shrub, the twigs slender, densely pilose. Petiole and rachis pilose; pinnae 7-9 pairs, leaflets many pairs, linear, glabrous, copiously long-ciliate; heads in terminal panicles; legume narrowly oblong, 3.5-7 cm. long, about 7 mm. wide, cuneate and long-stipitate at base, acuminate, glabrous.

Near La Paradis, Oaxaca, August 19, 1894, *E. W. Nelson 995*.

22. *Acaciella salvadorensis* Britton & Rose, sp. nov.

A slender shrub, 3 m. high, the branches angled, brownish, glabrous or nearly so. Pinnae 15-20 pairs; leaflets many pairs, linear, 1-nerved, 4-5 mm. long, glabrous; inflorescence a terminal panicle; flowers subcapitate; calyx and corolla glabrous; legume membranous, 3-5 cm. long, 7-10 mm. wide, apiculate, glabrous.

El Salvador and Honduras. Type collected near Ahuachapán, June, 1922, *Paul C. Standley 19871*.

23. *Acaciella talpana* Britton & Rose, sp. nov.

A shrub, the slender branches at first puberulent. Pinnae about 10 pairs; leaflets about 20 pairs, oblong, 3-4 mm. long, obtuse, glabrous, 1-veined; legume linear-oblong, 7-8 cm. long, 8-10 mm. broad, yellowish, acuminate, membranous.

Near Talpa, Jalisco, March 7, 1897, *E. W. Nelson 4039*.

24. *Acaciella hirta* (Nutt.) Britton & Rose.

Acacia hirta Nutt.; Torrey & Gray, Fl. N. Am. 1: 404. 1840.

Herbaceous, about 1 m. high, the elongated twigs somewhat hirsute, or glabrous. Pinnæ 10-13 pairs; leaflets 24-30 pairs, acute or acutish, linear, glabrous, or sparingly ciliate; legume oblong, 5-7 cm. long, 6-10 mm. wide, cuneate at base, long-stipitate, glabrous.

TYPE LOCALITY: Plains of the Arkansas River.

DISTRIBUTION: Missouri and Oklahoma to Texas, San Luis Potosí and Sonora; Florida.

ILLUSTRATIONS: Britton & Brown, Ill. Fl. f. 2028 (as *Acacia filiculoides*); ed. 2, f. 2429 (as *Acacia angustissima*).

25. *Acaciella prostrata* Britton & Rose, sp. nov.

Woody only at base, the branches prostrate, 3-4 dm. long, a little hairy but soon glabrate. Pinnæ 3-5 pairs; leaflets 6-15 pairs, oblong, 3-4 mm. long, obtuse, glabrous, long-ciliate, pinnately veined; peduncles axillary, slender, 2 cm. long; calyx and corolla glabrous.

Near Guadalajara, Jalisco, July, 1893, C. G. Pringle 4478.

26. *Acaciella Painteri* Britton & Rose, sp. nov.

A slender shrub, 3 m. high, or higher, the twigs pale, densely tomentose. Petiole and rachis pubescent; pinnæ 5-10 pairs; leaflets 20-35 pairs, linear-oblong, 4-5 mm. long, dark green and glabrous above, pinnately veined, pale and pilose beneath; heads in terminal racemes or panicles; peduncles 5-9 mm. long, slender; calyx and corolla glabrous; legume linear-oblong, 5-6 cm. long, 6-8 mm. wide, cuneate at base, stipitate, glabrous.

Jalisco. Type collected near Guadalajara, Sept. 28, 1903, J. N. Rose & Joseph H. Painter 7388.

27. *Acaciella bicolor* Britton & Rose, sp. nov.

A shrub, much branched, the twigs slender, glabrous. Pinnæ 6-8 pairs; leaflets many pairs, oblong, 4-8 mm. long, acute, appressed-pilose on both sides, pale and sparingly faintly pinnately veined beneath; inflorescence paniculate; flowers capitate, long-pedicelled; calyx and corolla glabrous; legume linear-oblong, 5-6 cm. long, 9-10 mm. wide, glabrous, more or less rounded at apex, apiculate, broadly cuneate at base, stipitate.

Acapulco, Guerrero, 1894-95, E. Palmer 297.

28. *Acaciella velutina* Britton & Rose, sp. nov.

A shrub, the branches slender, velvety-pubescent. Leaves large; petiole and rachis pubescent; pinnæ 12-15 pairs; leaflets many pairs, linear-oblong, 3-4 mm. long, acute, glabrous, ciliate, strongly pinnately veined beneath; inflorescence a pubescent terminal panicle; flowers capitate; calyx and corolla glabrous.

Near San Blasquito, Tepic, August 5, 1897, J. N. Rose 4196.

29. *Acaciella Hartwegi* (Benth.) Britton & Rose.

Acacia Hartwegi Benth. Pl. Hartw. 13. 1839.

Woody only at base, the branches long and slender, pubescent. Stipules linear; pinnæ usually 5-7 pairs, but rarely only 3 or 4 pairs; leaflets 12-15 pairs, oblong, obtuse, glabrous, ciliate, pinnately veined beneath; peduncles 1-2.5 cm. long; flowers short-racemose; calyx and corolla glabrous; legume oblong, 6 cm. long, appressed-pubescent, cuneate at base, stipitate.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Jalisco and Durango.

30. *Acaciella igualensis* Britton & Rose, sp. nov.

A low shrub, the twigs grooved, long-pilose. Leaves large; stipules small, linear; petiole and rachis long-pilose; pinnæ 7-10 pairs; leaflets many pairs, linear-oblong, 4-5 mm. long, pinnately veined beneath, long-ciliate; peduncles in clusters in an interrupted raceme; flowers

in dense heads; calyx and corolla glabrous; legume oblong, 4-5 cm. long, 6-7 mm. wide, rounded and apiculate at apex, cuneate at base, long-pilose, stipitate.

Near Iguala, Guerrero, August 11, 1905, *Rose, Painter & Rose 9351*.

31. *Acaciella Houghii* Britton & Rose, sp. nov.

A shrub, glabrous throughout. Pinnae 2-5 pairs; leaflets many pairs, linear-oblong, 5-6 mm. long, obtuse, thickish, pinnately veined, the midvein sub-central; heads mostly in a terminal interrupted raceme.

Near Cuernavaca, Morelos, May, 1899, *J. N. Rose & Walter Hough 4367*.

32. *Acaciella leucothrix* (Standley) Britton & Rose.

Acacia leucothrix Standley, Contr. U. S. Nat. Herb. 20: 185. 1919.

A low shrub, the twigs slender, gray, long-pilose, at least when young. Leaves small; stipules persistent, linear, 2-3 mm. long; pinnae 3 or 4 pairs; leaflets 9-14 pairs, linear-oblong, 2-4 mm. long, obtuse, glabrous, pale and pinnately veined beneath; peduncles pilose, 6-10 mm. long; flowers subcapitate; calyx and corolla glabrous; legume oblong, 3.5-5 cm. long, 7-8 mm. wide, short-stipitate, glabrous.

TYPE LOCALITY: San Dieguito, San Luis Potosí.

DISTRIBUTION: San Luis Potosí and Tamaulipas.

33. *Acaciella Lemmoni* (Rose) Britton & Rose.

Acacia Lemmoni Rose, Contr. U. S. Nat. Herb. 12: 409. 1909.

A shrub, the branches short, pilose. Pinnae 5-9 pairs; leaflets 9-20 pairs, green and glabrous on both sides, oblong, 6-8 mm. long, 1.5-2.5 mm. wide, thin, acute, pinnately veined beneath, the midvein very excentric; inflorescences in a terminal panicle, pilose; flowers subcapitate; calyx and corolla glabrous; legume oblong, pilose, 5-6 cm. long, 6-7 mm. wide, acuminate, cuneate at base, long-stipitate.

TYPE LOCALITY: Huachuca Mountains, Arizona.

DISTRIBUTION: Southeastern Arizona.

34. *Acaciella submontana* Britton & Rose, sp. nov.

A small shrub, the branches slender, grooved, glabrous. Leaves large; stipules linear; pinnae 7-12 pairs; leaflets many pairs, linear, 3-5 mm. long, 1 mm. wide, acute, pinnately veined beneath, glabrous on both sides, thin, appressed-ciliate; peduncles slender, glabrous, 1-1.5 cm. long, often in clusters of 5-7, in interrupted terminal panicles; heads small, globose; calyx and corolla glabrous.

Sinaloa and Tepic. Type from near San Blascito, Tepic, August 4, 1897, *J. N. Rose 3345*.

35. *Acaciella Holwayi* Britton & Rose, sp. nov.

A low shrub, the branches and inflorescence long-pilose. Petioles and rachis pilose; pinnae 4-10; leaflets 15-60 pairs, thin, linear-oblong, 4-7 mm. long, acute, glabrous on both sides, ciliate, pinnately veined beneath; inflorescence paniculate; flowers capitate; calyx and corolla glabrous; legume 6-7 cm. long, 9-10 mm. broad, strongly veined, acuminate, cuneate at base, long-stipitate, long-ciliate, sparingly pilose.

Yautepec, Morelos. Type collected Oct. 24, 1903, *E. W. D. Holway 5237*.

36. *Acaciella suffrutescens* (Rose) Britton & Rose.

Acacia suffrutescens Rose, Contr. U. S. Nat. Herb. 12: 409. 1909.

A shrub, 1-3 dm. high, the twigs pilose or glabrous. Pinnae 6-12 pairs; leaflets 12-20 pairs, linear-oblong, indistinctly pinnately veined, 4-5 mm. long, acutish, glabrous or appressed-ciliate; inflorescence axillary and terminal, the heads racemose or panicled; peduncles slender, 1.5 cm. long, or shorter; flowers glabrous; legume 4-5 cm. long, 6-8 mm. wide, faintly nerved, glabrous.

TYPE LOCALITY: Santa Cruz Valley, Arizona.

DISTRIBUTION: Arizona.

37. *Acaciella Valenzuelana* (A. Rich.) Britton & Rose.

Acacia Valenzuelana A. Rich. Ess. Fl. Cub. 1: 462. 1845.

A shrub, the twigs angled, brownish-pilose. Pinnae 4-8 pairs; leaflets 15-25 pairs, oblong, 5-7 mm. long, 1.5-2 mm. wide, acutish, densely appressed-pubescent on both sides; peduncles axillary, 1-1.5 cm. long, pilose; flowers in short racemes; pedicels 2 mm. long; calyx and corolla pubescent; ovary pubescent; legume oblong, 1-5 cm. long, acute or acuminate, pubescent.

TYPE LOCALITY: Vuelta de Abajo, [Pinar del Rio]. Cuba.
DISTRIBUTION: Known only from the type locality.

38. *Acaciella Cumingii* (Benth.) Britton & Rose.

Acacia Cumingii Benth. Lond. Journ. Bot. 1: 525. 1842.

A shrub, the branches appressed-pubescent to nearly glabrous. Petiole appressed-pubescent; pinnae 5-9 pairs; leaflets 20-25 pairs, obliquely oblong, obtuse or acutish, 8-15 mm. long, about 2 mm. wide, glabrous above, sparingly pilose beneath; heads about 30-flowered, more or less paniculate; legume glabrous, oblong, long-cuneate at base.

TYPE LOCALITY: Panama.
DISTRIBUTION: Known only from the type locality.

39. *Acaciella Oerstedii* Britton & Rose, sp. nov.

Twigs, petioles and rachis densely long-pilose. Stipules linear; pinnae 5 pairs; leaflets 7-13 pairs, oval, 7-9 mm. long, obtuse, the margin perhaps slightly recurved, appressed-pubescent on both sides; peduncles densely pubescent, 10-15 mm. long; flowers in a short raceme; calyx and corolla glabrous.

Costa Rica, 1846-48, *A. S. Oersted*.

40. *Acaciella villosa* (Sw.) Britton & Rose.

Mimosa villosa Sw. Fl. Ind. Occ. 2: 982. 1800.
Acacia villosa Willd. Sp. Pl. 4: 1067. 1806.
Acacia lophanthoides DC. Prodr. 2: 457. 1825.

A shrub, 3-4 m. high, the twigs pubescent. Petioles and rachis pilose; pinnae 4-7 pairs; leaflets 9-20 pairs, oval, 6-10 mm. long, obtuse, pinnately veined, dark green and with a few short appressed hairs above, pale and appressed-pubescent beneath; peduncles axillary, pubescent; flowers short-racemose; legume oblong, 4-5 cm. long, 6-9 mm. wide, cuneate at base, stipitate, pubescent.

TYPE LOCALITY: Jamaica.
DISTRIBUTION: Jamaica.

41. *Acaciella laevis* (Standley) Britton & Rose.

Acacia laevis Standley, Contr. U. S. Nat. Herb. 20: 185. 1919.

Herbaceous, the branches erect, terete, purplish brown, glaucous. Leaves large; stipules linear, 4-5 mm. long, long-ciliate; pinnae 3-11 pairs; leaflets 20-30 pairs, oval, 2.5-8 mm. long, obtuse, glabrous, appressed-ciliate, pinnately veined beneath; peduncles 2-4 cm. long, in clusters of 3-5, in a terminal interrupted raceme or panicle, leafy below; flowers capitate; calyx and corolla glabrous; legume linear-oblong, 5.5 cm. long, 10-12 mm. wide, long-stipitate, chartaceous, rounded and rostrate at apex, glabrous and glaucous.

TYPE LOCALITY: Near Guadalajara, Jalisco.
DISTRIBUTION: Jalisco.

42. *Acaciella penicillata* (Standley) Britton & Rose.

Acacia penicillata Standley, Contr. U. S. Nat. Herb. 20: 185. 1919.

Stems elongated, slender, glabrous and somewhat glaucous, 1 m. high or higher. Stipules ovate-lanceolate, striate, 4 mm. long; petioles 4.5-9 cm. long, purplish, glabrous; pinnae 1-5

pairs; leaflets 12-15 pairs, oval, 6-14 mm. long, rounded at apex, glabrous, faintly nerved on both sides, pale beneath; inflorescence an elongated interrupted raceme, the peduncles in clusters of 3's and 4's; calyx minute, campanulate, truncate or nearly so; corolla 3.5-4 mm. long, glabrous.

TYPE LOCALITY: Cerro de San Felipe, Oaxaca.
DISTRIBUTION: Oaxaca.

43. *Acaciella Shrevei* Britton & Rose, sp. nov.

A shrub, 1 m. high or less, the twigs sparingly pilose. Pinnae 6-10 pairs; leaflets 7-19 pairs, oval, 5-7 mm. long, obtuse, or sometimes apiculate, pale and, pinnately veined beneath; peduncles axillary, often in pairs, 1.5 cm. long or less; calyx and corolla glabrous; legume linear-oblong, 4-5 cm. long, 6-7 mm. broad, the apex broadly ovate-apiculate, the base rounded or broadly cuneate, stipitate, glabrous or sparingly pubescent.

Huachuca Mountains, Arizona, September 26, 1916, *Forrest Shreve 5064*.

44. *Acaciella tequilana* (S. Wats.) Britton & Rose.

Acacia tequilana S. Wats. Proc. Am. Acad. 22: 409. 1887.

Slender, subherbaceous, 2 m. high, glabrous throughout. Leaves 1.5 to 2 dm. long; pinnae 3-5 pairs; leaflets 5-10 pairs, thickish, strongly pinnately veined on both sides, suborbicular, 10-15 mm. long, obtuse or retuse, subcordate; inflorescence paniculate; flowers capitate; corolla greenish; stamens short; legume linear-oblong, pointed, 3-7 cm. long, 7-9 mm. wide, the slender stipe 1-2 cm. long.

TYPE LOCALITY: Tequila, Jalisco.
DISTRIBUTION: Jalisco.

45. *Acaciella durangensis* Britton & Rose, sp. nov.

Twigs long-pilose. Stipules narrowly oblong, 6-7 mm. long; petioles 3 cm. long, glabrous; pinnae 2 pairs; leaflets 5-8 pairs, oval or ovate, rounded at apex, 8-14 mm. long, glabrous, pale and strongly pinnately veined beneath; peduncles 2-3 cm. long, in clusters of 2-5, axillary, or perhaps sometimes in racemes; flowers capitate, the heads small; legume oblong, 6-7 cm. long, glabrous, long-stipitate, long-apiculate.

Scanori, Durango, 1924, *J. G. Ortega 5299*.

46. *Acaciella crinita* (Brand.) Britton & Rose.

Acacia crinita Brand. Zoe 5: 198. 1905.

A shrub, 4-5 m. high, the twigs and often the petiole yellowish pilose, otherwise glabrous. Petioles slender; pinnae 2 or 3 pairs, 4-10 cm. long; leaflets 4-8 pairs, elliptic, up to 23 mm. long, 8-13 mm. wide, obtuse or retuse; heads on clustered, slender peduncles 3-4 cm. long; calyx and corolla glabrous; stamens white; legume oblong, thin, 6-7 cm. long, long-stipitate.

TYPE LOCALITY: Cerro Colorado, Sinaloa.
DISTRIBUTION: Sinaloa and Durango.

47. *Acaciella Rosei* (Standley) Britton & Rose.

Acacia Rosei Standley, Contr. U. S. Nat. Herb. 20: 187. 1919.

Twigs slender, glabrous or sparsely puberulent. Petioles 2-4 cm. long; pinnae 1 or 2 pairs; leaflets 2 or 3 pairs, oval to ovate, somewhat oblique, 1.5-5 cm. long, usually obtuse, nearly glabrous; heads forming an interrupted raceme, the peduncles in clusters of 3 to 8, 2 cm. or less long, puberulent; calyx puberulent; corolla glabrous; stamens short; legume oblong, very thin, 3-4.5 cm. long, 13-15 mm. wide, rounded at apex, cuneate at base, glabrous, long-stipitate.

TYPE LOCALITY: Observatory Hill, Mazatlán, Sinaloa.
DISTRIBUTION: Sinaloa and Durango.

48. *Acaciella Ortegae* Britton & Rose, sp. nov.

A shrub, the twigs slender, sparsely puberulent; petioles 2-4 cm. long; pinnae 1 or 2 pairs; leaflets 2 or 3 pairs, elliptic, 2-6 cm. long, acute, glabrous, or sometimes sparingly pubescent beneath; inflorescence an interrupted raceme 1-2 dm. long, sometimes leafy below, the peduncles in clusters of 3-8, 1-2 cm. long; flowers capitate, white; calyx puberulent; corolla glabrous; legume very thin, 4-6 cm. long, 10-12 mm. broad, cuneate at base, apiculate, long-stipitate.

Sinaloa, Durango and Colima. Type from Mazatlán, Sinaloa, December, 1926, *J. G. Ortega 6501*.

49. *Acaciella stipellata* (Schl.) Britton & Rose.

Acacia stipellata Schl. *Linnaea* 12: 574. 1838.

A shrub, the twigs pilose. Pinnae 5-13 pairs; leaflets 12-34 pairs, linear, 4 mm. long, obtuse, glabrous above, ciliate; flowers subracemose; calyx-teeth ciliate; petals glabrous, lanceolate.

TYPE LOCALITY: Near City of Mexico.

DISTRIBUTION: Known only from the type locality and to us only from the description.

ACACIA CUSPIDATA Schl. *Linnaea* 12: 573. 1838.

A shrub, the branches subglabrous. Pinnae 2-10 pairs; leaflets 12-22 pairs, linear, 3-4 mm. long, obtuse, glabrous, the margin appressed-ciliate; heads often in lateral racemes; legume acuminate, stipitate, cuneate at base, 6-7 cm. long, 10 mm. wide, torulose, glabrous.

TYPE LOCALITY: Near Mexico City. (Collected by Muhlenpfordt.) We have not seen the type of this species. The original description says the petiole is glandular, which, with the torulose legume, would exclude this plant from the genus *Acaciella*.

28. *SENEGALIA* Raf. *Sylva Tell.* 119. 1838.

Shrubs, vines or trees, with bipinnate leaves, the petiole usually bearing a gland, the white or yellow flowers capitate, spicate, or rarely racemose. Calyx mostly 5-toothed or 5-lobed, the lobes valvate. Corolla mostly 5-lobed. Stamens many, distinct, the anthers small. Legume compressed, flat, mostly thin, dehiscent, its valves chartaceous or coriaceous.

Type species, *Mimosa Senegal* L.

A. Valves and margins of the legume thick. (Unknown in *S. reniformis*; see *S. rugata*.)

Flowers in spikes or racemes.

Flowers pedicelled.

Flowers sessile.

Flowers in heads.

Leaflets large, 1 pair.

Leaflets small, many pairs.

Young legume white.

Young legume not white.

Young branches angled.

Young branches terete or nearly so.

Pinnae 1-3 pairs; leaflets oblong to elliptic.

Pinnae several pairs; leaflets many, small, linear.

Legume short, straight, glabrous.

Legume elongated, curved, pubescent.

B. Valves of the legume thin, the margins not much thickened (see *S. rugata*.)

a. Flowers spicate or racemose.

1. Petiole and rachis terete.

Shrubs or trees.

Branches prickly.

Spikes short.

Leaflets many pairs.

Leaflets mostly 4-6 pairs.

Spikes slender, elongated.

Leaflets oblong to obovate.

Legume 2 cm. broad; leaflets 6-10 mm. long.

Legume 1.5 cm. broad; leaflets 4-6 mm. long.

Leaflets linear.

Branches unarmed (see *S. suma*.)

Valves of the legume thin, papery.

Ovary and legume very pubescent, at least when

young.

1. *S. reniformis*.

2. *S. sororia*.

3. *S. crassifolia*.

4. *S. Berlandieri*.

5. *S. subangulata*.

6. *S. anisophylla*.

7. *S. rufescens*.

8. *S. interior*.

9. *S. Emoryana*.

10. *S. Gaumeri*.

11. *S. Wrightii*.

12. *S. Greggii*.

13. *S. oaxacana*.

- Spikes elongated, 10 cm. or more long.
 Spikes short and dense.
 Legume, as far as known, glabrous.
 Stipules persistent, slender, setaceous, acicular.
 Calyx glabrous; legume 8-15 cm. long.
 Leaflets glabrous.
 Leaflets pubescent.
 Calyx silky; legume 9-10 cm. long.
 Stipules not persistent.
 Leaflets oblong, very oblique.
 Leaflets linear.
 Leaflets pinnately veined beneath.
 Leaflets not pinnately veined.
 Leaflets obtuse.
 Pinnae 6-10 pairs.
 Pinnae 5 pairs.
 Leaflets acute.
 Petiole 5-6 mm. long.
 Leaflets glabrate in age, midvein excentric.
 Leaflets very pubescent, midvein submarginal.
 Petiole very short.
 Leaflets glabrous.
 Leaflets pubescent.
 Bractlets ovate.
 Bractlets linear.
- Valves of legume coriaceous.
 Prickly tree; leaflets linear.
 Unarmed trees.
 Leaflets many pairs, linear, 3-5 mm. long.
 Leaflets 12 or fewer pairs, oblong, 8-12 mm. long.
- Stems vine-like, often densely prickly.
 Corolla pubescent.
 Corolla glabrous, at least when old.
 Corolla puberulent; gland on petiole oblong.
 Corolla glabrous; gland on petiole cup-shaped.
2. Petiole and rachis flattened.
- b. Flowers capitate. (See no. 55.)
1. Stipules inconspicuous or none.
 *Leaflets elliptic to oblong or spatulate.
 Legume 2.5 cm. broad or less, sessile or short-stipitate.
 Leaflets oblong to elliptic or obovate.
 Legume rounded at base.
 Twigs and young leaves glabrous or sparingly pubescent.
 Leaflets reticulately veined beneath.
 Legume curved; leaflets pubescent.
 Legume straight; leaflets glabrous.
 Leaflets strongly veined beneath, but not much reticulated.
- Twigs and young leaves densely pubescent.
 Legume cuneate at base. (Unknown in *S. Palmeri*.)
 Rachis of leaf prickly.
 Foliage glabrous.
 Foliage densely pubescent.
 Rachis of leaf not prickly.
- Leaflets cuneate-spatulate.
 Flowers pedicelled; plant glabrous.
 Flowers sessile; peduncles and petioles pilose.
- Legume 2.5 cm. broad or more, long-stipitate.
- **Leaflets linear or linear-oblong.
 Shrubs and trees.
 Pinnae several or many pairs.
 Midvein of leaflets submarginal or excentric.
 Leaflets oblong or linear-oblong.
 Leaflets sharply acute.
 Leaflets obtuse or acutish.
 Leaflets narrowly linear.
 Midvein of leaflets subcentral.
 Heads racemose; margin of leaflets not recurved.
 Legume glabrous.
 Legume velutinous.
- Pinnae axillary; margin of leaflets recurved.
 Pinnae few pairs.
 Leaflets not strongly veined beneath.
 Leaflets strongly veined beneath.
 Legume sessile; branches prickly.
 Legume stipitate; branches not prickly.
14. *S. macilenta*.
 15. *S. sericea*.
 16. *S. millifolia*.
 17. *S. Cockerellae*.
 18. *S. compacta*.
 19. *S. mammifera*.
 20. *S. Russelliana*.
 21. *S. acattensis*.
 22. *S. dolichostachya*.
 23. *S. Coulteri*.
 24. *S. durangensis*.
 25. *S. submontana*.
 26. *S. Salazari*.
 27. *S. centralis*.
 28. *S. Suma*.
 29. *S. angustifolia*.
 30. *S. muricata*.
 31. *S. Iguana*.
 32. *S. Rekoana*.
 33. *S. Hayesii*.
 34. *S. heterophylla*.
 35. *S. Purpusii*.
 36. *S. micrantha*.
 37. *S. Roemeriana*.
 38. *S. Lozani*.
 39. *S. Palmeri*.
 40. *S. saltilloensis*.
 41. *S. malacophylla*.
 42. *S. peninsularis*.
 43. *S. confusa*.
 44. *S. Vogeliana*.
 45. *S. Langlassei*.
 46. *S. glomerosa*.
 47. *S. Liebmannii*.
 48. *S. Deamii*.
 49. *S. riparioides*.
 50. *S. albanensis*.
 51. *S. occidentalis*.
 52. *S. subsessilis*.
 53. *S. Painterii*.

- Prickly vines or vine-like shrubs.
 Midvein of leaflets submarginal. 54. *S. tenuifolia*.
 Midvein of leaflets eccentric or subcentral.
 Leaflets sharply acute. 55. *S. acanthophylla*.
 Leaflets acute to obtuse.
 Leaflets only 3-5 mm. long, less than 1 mm. wide.
 Branches densely prickly; peduncles pilose. 56. *S. maschalocephala*.
 Branches sparingly prickly; peduncles puberulent.
 57. *S. picachensis*.
 Leaflets 5-12 mm. long, 1-3 mm. wide.
 Legume attenuate at both ends. 58. *S. Ortegae*.
 Legume obtuse or acute.
 Leaflets membranous, very pale beneath. 59. *S. membranacea*.
 Leaflets subchartaceous, green on both sides.
 Legume thin, chartaceous.
 Flowers canescent or puberulent.
 Petiolar gland sessile. 60. *S. potosina*.
 Petiolar gland long-stalked. 61. *S. acapulcensis*.
 Flowers glabrous.
 Legume densely puberulent. 62. *S. Westiana*.
 Legume glabrous. 63. *S. guadalupensis*.
 Legume thick, somewhat fleshy, breaking into joints. 64. *S. rugata*.
 2. Stipules large, ovate.
 Pinnae 4-8 pairs; legume 2-2.5 cm. wide; scandent shrub. 65. *S. tamarindifolia*.
 Pinnae 2 or 3 pairs; legume 1.5 cm. wide; small tree. 66. *S. grenadensis*.

1. *Senegalia reniformis* (Benth.) Britton & Rose.

Acacia reniformis Benth.; Hook. Ic. Pl. 12: 59. 1875.

A glabrous shrub, somewhat prickly. Stipules large, foliaceous, orbicular to reniform; pinnae 1 or 2 pairs; leaflets 1 pair, orbicular to reniform, 2.5-3.5 cm. long, glabrous, coriaceous; inflorescence a slender raceme, 2.5-3.5 cm. long; peduncles short; calyx and corolla glabrous; stamens numerous; ovary stipitate, glabrous.

TYPE LOCALITY: Banks of the Río Moctezuma, near Las Apuntas, Mexico.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: Hook. loc. cit. *pl.* 1165.

2. *Senegalia sororia* (Standley) Britton & Rose.

Acacia sororia Standley, Contr. U. S. Nat. Herb. 20: 186. 1919.

A shrub or tree, with a few prickles about 2 mm. long, the young branches cinereous-puberulent. Petiole stout, 6-15 mm. long, with a large sunken gland at the apex; pinnae 2 or 3 pairs; leaflets 1 or 2 pairs, obliquely ovate to orbicular, coriaceous, puberulent on both sides, 7-25 mm. broad; flowers spicate, sessile; calyx densely pilose; legume stipitate, oblong, 4.5-8 cm. long, densely puberulent, its valves thick, hard; seeds 3 or 4, 13 mm. long.

TYPE LOCALITY: Near Higuerrillas, Querétaro.

DISTRIBUTION: Known only from the type locality.

3. *Senegalia crassifolia* (A. Gray) Britton & Rose.

Acacia crassifolia A. Gray, Mem. Am. Acad. II, 5: 317. 1854.

Bauhinia lunarioides A. Gray; S. Wats. Bibl. Index 205, hyponym, 1878.

A shrub, 2-4 m. high, the twigs purplish, often glaucous, more or less prickly. Pinnae 1 pair; leaflets 1 pair, orbicular to subreniform, 2-5 cm. broad, thickish, glabrous; inflorescence racemose; peduncles 1.5 cm. long or less, often puberulent; flowers capitate; calyx and corolla pubescent; legume 7 cm. long, 2 cm. broad, cuneate at base, glabrous, the valves thick; seeds somewhat angled, 10-14 mm. long.

TYPE LOCALITY: La Peña, Coahuila.

DISTRIBUTION: Coahuila and San Luis Potosí.

ILLUSTRATION: Hook. Ic. Pl. 12: *pl.* 1166.

4. *Senegalia Berlandieri* (Benth.) Britton & Rose.

Acacia Berlandieri Benth. Journ. Bot. 1: 522. 1842.
Acacia tephroloba A. Gray, Pl. Wright. 1: 65. 1852.

A small tree or shrub, the white-tomentose branches unarmed or prickly. Petiolar gland sessile; stipules small, caducous; pinnae 10-12 pairs; leaflets 30-50 pairs, linear, 4 mm. long, tomentose, becoming glabrate; peduncles axillary, sometimes in pairs or in leafy racemes, pubescent, 2-5 cm. long; flowers in dense heads, yellow; calyx and corolla pubescent; ovary densely white-lanate; legume somewhat turgid when ripe, 1-1.5 dm. long, 1.4-2.5 cm. broad, tomentose.

TYPE LOCALITY: Monterey, Nuevo León.

DISTRIBUTION: Southern Texas to Tamaulipas and Querétaro.

5. *Senegalia subangulata* (Rose) Britton & Rose.

Acacia subangulata Rose, Contr. U. S. Nat. Herb. 5: 194. 1899.

A shrub, 5-7 m. high, the branches angled, more or less prickly and puberulent. Stipules 2-4 mm. long; petioles short, puberulent, bearing a large oblong depressed gland; rachis angled; pinnae 4-7 pairs; leaflets 20-30 pairs, oblong, 5-7 mm. long, obtuse, thickish, puberulent, the midvein excentric; inflorescence a large panicle; peduncles often in clusters, 2-3 cm. long, pubescent; flowers capitate; calyx and corolla pubescent; legume oblong, 10 cm. long, cuneate at base, puberulent, the margins and valves thick.

TYPE LOCALITY: Tehuacán, Oaxaca.

DISTRIBUTION: Puebla and Oaxaca.

6. *Senegalia anisophylla* (S. Wats.) Britton & Rose.

Acacia anisophylla S. Wats. Proc. Am. Acad. 21: 452. 1886.

A small tree, the branches terete, brownish, puberulent, bearing a few, small, straight prickles. Pinnae 1-3 pairs; leaflets 4-7 pairs, oblong, obtuse, glabrous, 6-15 mm. long; inflorescence racemose; flowers in heads on short pubescent peduncles; calyx and corolla pubescent; ovary velvety pubescent; legume flattened, coriaceous, oblong, 10-12 cm. long, long-stipitate, glabrous and somewhat glaucous, with very thick margins.

TYPE LOCALITY: Near Jimulco, Coahuila.

DISTRIBUTION: Coahuila.

7. *Senegalia rufescens* Britton & Rose, sp. nov.

A shrub, the twigs terete and somewhat pilose, with short recurved prickles. Petiole and rachis somewhat pubescent, with black reflexed prickles; pinnae 4 or 5 pairs; leaflets 10-20 pairs, linear, 7-10 mm. long, glabrous above, pale, a little pubescent and reticulate-veined beneath; legume short-oblong, rust-colored, 5 cm. long, 2.5 cm. broad, at first pilose, in age glabrous, a little glaucous, with thickened valves and a slender stipe 12 mm. long.

Tomellin Cañon, Oaxaca, September 7, 1906, *J. N. Rose & J. S. Rose 11344*.

8. *Senegalia interior* Britton & Rose, n. sp.

A shrub, with prickly branches, glabrous. Leaves 1.5-2 dm. long, the rachis somewhat prickly; pinnae 15-20 pairs; leaflets 20-25 pairs, linear, acute, 4-6 mm. long, glabrous, somewhat reticulate veined beneath, the midrib submarginal; peduncles 2 cm. long; flowers capitate; legume oblong, 6-10 cm. long, 1.5 cm. wide, cuneate at base, curved, brownish tomentose the valves coriaceous.

Jalisco and Zacatecas. Type from Bolaños, Jalisco, September, 1897, *J. N. Rose 2893*, type.

9. *Senegalia Emoryana* (Benth.) Britton & Rose.

Acacia Emoryana Benth. Trans. Linn. Soc. 30: 522. 1875.

A shrub, somewhat prickly, the twigs at first pubescent, but glabrate in age. Pinnae 3-6 pairs; leaflets 10-15 pairs, oblong-linear, acute, oblique, pubescent, 4-7 mm. long, the midrib

excentric; spikes short, almost head-like, very dense, 6-8 mm. long; legume 6-11 cm. long, 2.5-3 cm. broad, thin, stipitate.

TYPE LOCALITY: Near Socale Creek, Texas.

DISTRIBUTION: Texas.

ILLUSTRATION: Sargent, *Man. Trees N. Am.* ed. 2, f. 544.

10. *Senegalia Gaumeri* (Blake) Britton & Rose.

Acacia Gaumeri Blake, *Proc. Biol. Soc. Wash.* 34: 44. 1921.

A tree, 8 m. high, bearing numerous short prickles, the young branches pubescent but soon glabrate. Stipules subulate, deciduous; petiole bearing an ovate gland; rachis at first pubescent, soon glabrate; pinnae 2-4 pairs; leaflets 4-6 pairs, linear, 8-15 mm. long, somewhat oblique at apex; inflorescence paniculate, pubescent; spikes 1-2 cm. long, many-flowered; bractlets small, deciduous; calyx turbinate; legume oblong, 10-12 cm. long, 20-22 mm. wide, thin, glabrous, stipitate, apiculate.

TYPE LOCALITY: Silam, Yucatán.

DISTRIBUTION: Yucatán.

11. *Senegalia Wrightii* (Benth.) Britton & Rose.

Acacia Wrightii Benth.; A. Gray, *Pl. Wright.* 1: 64. 1852.

A shrub or small tree, glabrous throughout, the branches bearing short scattered prickles, or sometimes unarmed. Leaves often fascicled, especially on the older branches; petiole 4-12 mm. long, bearing a small gland at the top; pinnae 1 or 2 pairs; leaflets 2-6 pairs, oblique, obovate to short-oblong, obtuse or retuse, often apiculate, 2-3-nerved, 6-10 mm. long, glabrous; inflorescence a slender raceme; peduncles 2-5 cm. long; legume glabrous, flattened, thin, somewhat falcate, 5-7.5 cm. long, about 2 cm. wide, usually rounded at base, rounded at apex, short-stipitate.

TYPE LOCALITY: Prairies west of San Antonio, Texas.

DISTRIBUTION: Texas to Tamaulipas, and Nuevo León.

ILLUSTRATIONS: Sargent, *Silva N. Am.* pl. 142; *Man. Trees N. Am.* f. 449; ed. 2, f. 545; Britton & Shafer, *N. Am. Trees*, f. 483.

12. *Senegalia Greggii* (A. Gray) Britton & Rose.

Acacia Greggii A. Gray, *Pl. Wright.* 1: 65. 1852.

Acacia Durandiana Buckley, *Proc. Acad. Phila.* 1861: 453. 1861.

A shrub or small tree, the twigs glabrous or pubescent, more or less prickly. Pinnae 1-3 pairs; leaflets 3-7 pairs, obovate to narrowly oblong, usually pale, obtuse, 4-6 mm. long; racemes spike-like, 2-2.5 cm. long; legume 5-7.5 cm. long, about 15 mm. wide, glabrous or tomentose, thin, the apex rounded, the base usually narrowed.

TYPE LOCALITY: Patos, Chihuahua.

DISTRIBUTION: Texas to Nevada, California, Chihuahua, Sonora and Lower California.

ILLUSTRATIONS: Sargent, *Silva N. Am.* pl. 143; *Man. Trees N. Am.* f. 450; ed. 2, f. 546; Britton & Shafer, *N. Am. Trees*, f. 484.

13. *Senegalia oaxacana* Britton & Rose, sp. nov.

A shrub, 1-3 m. high, the twigs puberulent, armed with numerous short reflexed prickles. Petioles short, pubescent, bearing a small gland near the middle; rachis angled, often prickly, somewhat hairy, bearing a small gland between 2 or 3 of the upper pairs of pinnae; pinnae 15-20 pairs; leaflets many pairs, small, linear, acute, glabrous on both sides, often ciliate; spikes slender, 7-10 cm. long; calyx minute, pubescent.

Valley of Oaxaca, September 8, 1894, *E. W. Nelson* 1249.

14. *Senegalia macilenta* (Rose) Britton & Rose.

Acacia macilenta Rose, Contr. U. S. Nat. Herb. 8: 31. 1903.

A tree, 6 m. high, the twigs puberulent, unarmed. Petiole and rachis pubescent, bearing a gland near the base of the petiole and between 1 or more of the uppermost pairs of pinnae; pinnae 10-25 pairs; leaflets 20-30 pairs, linear, 4-6 mm. long, acute, glabrous and shining above, often pubescent beneath; inflorescence a terminal raceme of spikes 2-3 dm. long; spikes often in pairs, 10-12 cm. long; calyx minute, puberulent; legume 10-12 cm. long, 2 cm. broad, tomentose, thin, obtuse, cuneate at base.

TYPE LOCALITY: Colima.

DISTRIBUTION: Colima and Jalisco.

15. *Senegalia sericea* (Mart. & Gal.) Britton & Rose.

Acacia sericea Mart. & Gal. Bull. Acad. Brux. 10^o: 311. 1843.

Acacia pubeblensis Brand. Univ. Cal. Pub. Bot. 4: 85. 1910.

An unarmed shrub, the twigs angled and densely tomentose. Stipules setaceous, persistent; petiole pubescent, often bearing a cup-shaped gland below the lower pair of pinnae; pinnae 5-8 pairs; leaflets about 30 pairs, minute, linear, 2-3 mm. long, acutish, pubescent on both sides; spikes densely flowered, 4-8 cm. long; flowers yellow, sweet-scented; calyx and corolla densely pubescent; ovary softly pubescent; legume oblong, 8-18 cm. long, glabrate, stipitate, thin.

TYPE LOCALITY: Tehuacán, Puebla.

DISTRIBUTION: Puebla.

16. *Senegalia millifolia* (S. Wats.) Britton & Rose.

Acacia millifolia S. Wats. Proc. Am. Acad. 21: 427. 1886.

A small tree or shrub, 3-4 m. high, the twigs slender, angled, soon glabrate. Stipules acicular, 1-2 mm. long, persistent; petiole and rachis sulcate, with or without glands between the pinnae; pinnae 5-10 pairs; leaflets 25-35 pairs, linear, acute, 2-3 mm. long, glabrous, at least in age; flowers in loose spikes 2.5-3 cm. long, white or pale yellow; legume 8-15 cm. long, 1.8 cm. broad, thin, glabrous.

TYPE LOCALITY: Hacienda San José, Chihuahua.

DISTRIBUTION: Southern Arizona, Chihuahua, and Sonora.

17. *Senegalia* (?) *Cockerellae* Britton & Rose, sp. nov.

A shrub or tree, the twigs angled, glabrous or nearly so. Stipules setaceous, persistent; pinnae 5-10 pairs; leaflets 10-20 pairs, linear-oblong, 4-7 mm. long, acute, appressed-pubescent on both sides, the midvein nearly central; inflorescence more or less paniculate; peduncles 8-15 mm. long, slender, hairy; spike 2-4 cm. long, many-flowered; calyx minute, 1 mm. long or less, cup-shaped, glabrous; corolla 2.5 mm. long, glabrous.

Gualan, Guatemala, 1912, *Wilmatte P. Cockerell* 61.

18. *Senegalia compacta* (Rose) Britton & Rose.

Acacia compacta Rose, Contr. U. S. Nat. Herb. 8: 31. 1903.

A large shrub, 2-3 m. high, the twigs puberulent. Petiole somewhat pubescent, bearing a small cup-shaped gland; stipules acicular; pinnae 2-15 pairs; leaflets 12-15 pairs, oblong-linear, 2-3 mm. long, obtusish, glabrous above, pubescent beneath; calyx minute, silky; corolla pubescent; legume oblong, 10 cm. long, 16 mm. wide, glabrous, acute, short-stipitate.

TYPE LOCALITY: Tomellin Cañon, Oaxaca.

DISTRIBUTION: Oaxaca.

19. *Senegalia mammifera* (Schl.) Britton & Rose.

Acacia mammifera Schl. *Linnaea* 12: 563. 1838.

A shrub, without spines, the twigs reddish, glabrous. Petiole short, bearing a small cup-shaped gland; pinnae 2-4 pairs; leaflets 10-15 pairs, oblong, 6-8 mm. long, oblique, appressed-pubescent on both sides, pale beneath, the midrib very excentric; flowers in slender spikes 2.5-5 cm. long; legume oblong, thin, 8-16 cm. long, 1.5-3 cm. wide, glabrous, stipitate.

TYPE LOCALITY: Barranca de Acholaya [Mexico].

DISTRIBUTION: Hidalgo.

20. *Senegalia Russelliana* Britton & Rose, sp. nov.

A slender shrub, 3-4 m. high, the very young branches and leaves puberulent but soon glabrate. Stipules subulate, 2-3 mm. long, deciduous; pinnae 5-12 pairs; leaflets numerous, often 20-30 pairs, linear 5-8 mm. long, 1.5 mm. wide acute, usually glabrous, somewhat oblique, pinnately-veined beneath; flowers in slender spikes 5-12 cm. long; calyx minute, glabrous; filaments short, numerous, yellow; legume 10-15 cm. long, 2-2.5 cm. broad, flat and thin, acute, glabrous, tapering at base into a slender stipe.

Sinaloa. Type from near San Blas, March 22, 1910, *Rose, Standley & Russell 13204*.

21. *Senegalia acatlensis* (Benth.) Britton & Rose.

Acacia acatlensis Benth. *Lond. Journ. Bot.* 1: 513. 1842.

Young branches and petioles tomentose, becoming glabrate. Stipules setaceous, somewhat pungent, deciduous; pinnae 6-10 pairs; leaflets many pairs, 1.5-2 mm. long, obtuse, glabrate; spikes elongated, axillary, in fascicles, or somewhat racemose; flowers puberulent; ovary glabrous.

TYPE LOCALITY: Acatlán, Puebla.

DISTRIBUTION: Puebla.

22. *Senegalia dolichostachya* (Blake) Britton & Rose.

Acacia dolichostachya Blake, *Proc. Biol. Soc. Wash.* 34: 43. 1921.

A shrub, 5 m. high, unarmed, glabrous, or when very young puberulent. Petiole puberulent, bearing an oval gland near the middle; pinnae 5 pairs; leaflets 24-29 pairs, linear, 3.5 mm. long, 1 mm. wide, obtuse; spikes 3-3.5 cm. long; bractlets minute, persistent; calyx about 0.5 mm. long, pubescent.

TYPE LOCALITY: Las Bocas, Silam, Yucatán.

DISTRIBUTION: Known only from the type locality.

23. *Senegalia Coulteri* (Benth.) Britton & Rose.

Acacia Coulteri Benth.; A. Gray, *Pl. Wright.* 1: 66. 1852.

A shrub or tree, the twigs glabrous or nearly so, unarmed. Stipules minute, setaceous, caducous; petiole slender, bearing a small cup-shaped gland between the lowest pair of pinnae or sometimes near the middle; petiolules 5-6 mm. long; pinnae 3-9 pairs; leaflets 10-25 pairs, oblong-linear, acutish, 6 mm. long, glabrous above, a little hairy beneath, the midvein excentric; spikes elongated, 6-10 cm. long; calyx 1 mm. long, puberulent; corolla 2-3 mm. long, puberulent; legume thin, 12-18 cm. long, 1.5-2 cm. wide, acute, cuneate at base, glabrous, stipitate.

TYPE LOCALITY: Zimapan, Hidalgo.

DISTRIBUTION: Hidalgo; Nuevo León; San Luis Potosí; Tamaulipas.

24. *Senegalia durangensis* Britton & Rose, sp. nov.

A shrub or tree, the twigs puberulent, unarmed. Stipules minute, pubescent, caducous; petiole puberulent, bearing an oblong gland near the middle or near the top; pinnae 8-12 pairs; leaflets many pairs, linear, acute, 6-8 mm. long, 1 mm. wide, pubescent on both sides, densely so when young, the midvein submarginal; spikes 8 cm. long; calyx and corolla puberulent.

San Ramón, Durango, 1906, *E. Palmer 107*.

25. *Senegalia submontana* Britton & Rose, sp. nov.

A shrub or tree, the branches terete. Stipules minute, setaceous, deciduous; petiole slender, bearing a large sessile cup-shaped gland at or below the first pair of pinnae; rachis bearing one or more glands at or near the top; pinnae 12-20 pairs; leaflets 30-50 pairs, linear, 4-6 mm. long, acute, glabrous; spike 3 cm. long or more; legume 12-15 cm. long, 2 cm. broad, flat and thin, glabrous, cuneate at base, stipitate.

Cerro San Antonio, Oaxaca, October 12, 1907, *C. Conzatti 25346*.

26. *Senegalia Salazari* Britton & Rose, sp. nov.

A shrub or tree, 6-8 m. high, the twigs angled. Stipules minute, setaceous; petiole and rachis glabrous, bearing a cup-shaped gland between the upper pair of leaflets; pinnae 4-6 pairs; leaflets many pairs, linear, 4-5 mm. long, acute, pubescent beneath, ciliate; spikes slender, 6-10 cm. long; bractlets ovate; flowers white; calyx and corolla puberulent.

Michoacán. Type from Xochiapa, 1912, *F. Salazar*.

27. *Senegalia centralis* Britton & Rose, sp. nov.

A tree, 6-7 m. high, the twigs angled, puberulent. Stipules setaceous, minute, deciduous; petiole slender, puberulent, bearing a cup-shaped gland near the center; rachis bearing 1 or more glands between the uppermost pair of pinnae; pinnae 12-22 pairs; leaflets many pairs, minute, 2-3 mm. long, acute, glabrous, ciliolate; flowers yellow, spicate; bractlets linear.

El Salvador and Guatemala. Type from near San Salvador, 1923, *S. Calderón 1774*.

28. *Senegalia Suma* (Roxb.) Britton & Rose.

Mimosa Suma Roxb. Fl. Ind. 2: 563. 1832.
Acacia Suma Kurz; Brandis, For. Fl. 187. 1874.

A tree, 10 m. high, the twigs pubescent, with a pair of small prickles just below the stipules, or unarmed. Leaves 2 dm. long, the petiole pubescent, bearing a large elliptic gland; rachis pubescent, bearing small glands at the bases of some of the pinnae; pinnae 10-40 pairs; leaflets 25-50 pairs, linear, 4-8 mm. long, acute; inflorescence tomentulose; spikes slender, 6-10 cm. long; calyx tomentose; legume linear-oblong, 6-12 cm. long, 1-1.8 cm. wide, glabrous, subcoriaceous, reticulate-veined, pointed, the base cuneate.

TYPE LOCALITY: Calcutta, India.

DISTRIBUTION: St. Croix; Guadeloupe; St. Vincent; Grenada; naturalized from the East Indies.

29. *Senegalia angustifolia* (Lam.) Britton & Rose.

Mimosa angustifolia Lam. Encycl. 1: 12. 1783.
Acacia skleroxylla Tussac, Fl. Ant. 1: 146. 1808.

A tree, 6-17 m. high, the twigs unarmed, puberulent, becoming glabrous. Pinnae 3-15 pairs; leaflets many pairs, linear, 3-5 mm. long, about 1 mm. wide, glabrous, green above pale beneath, the midvein nearly central; spikes slender, 8-10 cm. long; calyx puberulent; legume oblong, 10-12 cm. long, 12-18 mm. wide, glabrous, coriaceous, short-stipitate.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Hispaniola.

ILLUSTRATION: Tussac, loc. cit. pl. 21.

30. *Senegalia muricata* (L.) Britton & Rose.

Mimosa muricata L. Syst. ed. 10, 1311. 1759.
Acacia muricata Willd. Sp. Pl. 4: 1058. 1806.
Acacia nudiflora Willd. Sp. Pl. 4: 1058. 1806.

A tree, 10-15 m. high, the twigs finely pubescent. Leaves often 2 dm. long, more or less pubescent. Pinnae 4-6 pairs; leaflets 8-16 pairs, elliptic or oblong, 10-18 mm. long, 10 mm. wide or less, coriaceous, obtuse at the apex, rounded or subcordate at base, glabrous; spikes slender, 7-15 cm. long; calyx 1.5 mm. long; legume broadly linear, 5-15 cm. long, 1-2 cm. wide, coriaceous, glabrous, brown and transversely white-banded within.

TYPE LOCALITY: West Indies.

DISTRIBUTION: Porto Rico to Martinique. Recorded from Hispaniola.

31. *Senegalia Iguana* (M. Micheli) Britton & Rose.

Acacia Iguana M. Micheli, Mém. Soc. Genève 34: 281. 1903.

A high climbing shrub, up to 15 m. long, the twigs tomentose, bearing numerous short reflexed prickles. Petiole prickly, bearing a large gland near its base; pinnae 6-8 pairs; leaflets 15-25 pairs, oblong, 10-16 mm. long, acute, glabrous above, pale and pubescent beneath, ciliate, the midvein excentric; inflorescence more or less paniculate; spikes 4-5 cm. long, densely flowered; calyx 2.5 mm. long, angled, pubescent; corolla 4-5 mm. long, pubescent; stamens numerous, short; ovary long-stipitate, pubescent.

TYPE LOCALITY: La Puerta, west coast of Mexico [Guerrero?].

DISTRIBUTION: Known only from near the type locality.

ILLUSTRATION: M. Micheli, loc. cit. pl. 25.

32. *Senegalia Rekoana* Britton & Rose, sp. nov.

A climbing shrub, the twigs zigzag, pubescent, armed with short prickles. Petiole bearing a large oblong gland near the base; pinnae about 8 pairs; leaflets many pairs, linear, 8-10 mm. long, glabrous above, pale and glabrous beneath except for some hairs on the very excentric midvein, slightly ciliate; spikes 3-4 cm. long; calyx 2 mm. long, angled, glabrate; corolla 4 mm. long, puberulent, but becoming glabrate.

Cerro Espino, Oaxaca, October, 1917, B. P. Reko 3639.

33. *Senegalia Hayesii* (Benth.) Britton & Rose.

Acacia Hayesii Benth. Trans. Linn. Soc. 30: 524. 1875.

A large, woody, clambering vine, the branches puberulent, with numerous small prickles. Leaves 3-4 dm. long; petiolar gland cupulate; pinnae 8-10 pairs; leaflets 10-20 pairs, oblong-linear, 8-10 mm. long, glabrous or nearly so, falcate, mucronate, the midvein excentric; flowers glabrous, in spikes 10-12 mm. long; calyx 2 mm. long; corolla 4 mm. long.

TYPE LOCALITY: Mammee Station, Panama.

DISTRIBUTION: Canal Zone, Panama.

34. *Senegalia heterophylla* (Benth.) Britton & Rose.

Prosopis (?) *heterophylla* Benth. Lond. Journ. Bot. 5: 82. 1846.

Acacia Willardiana Rose, Contr. U. S. Nat. Herb. 1: 88. 1890.

A slender unarmed tree, 3-5 m. high, with drooping glabrous branches. Petiole phyllode-like, 7-30 cm. long, with glands; pinnae, when present, 1-4; leaflets, when present, usually 4 or 5 pairs, but sometimes 12-15 pairs, 2 to 5 mm. long, acute, glabrous; inflorescence a panicle of slender spikes; spikes 5 cm. long; calyx 2 mm. long, glabrous; petals 3 mm. long, acute, glabrous; stamens very many, often 150; legume 8-12 cm. long, 10-18 mm. broad, obtuse, stipitate, glabrous.

TYPE LOCALITY: Sonora.

DISTRIBUTION: Sonora.

35. *Senegalia Purpusii* (Brand.) Britton & Rose.

Acacia Purpusii Brand. Univ. Cal. Pub. Bot. 3: 380. 1909.

A shrub, the young twigs more or less prickly. Petiole short, pubescent, bearing a small cup-shaped gland; rachis puberulent, sometimes prickly; pinnae 2-4 pairs; leaflets 12-14 pairs, oblong, mucronate, 9 mm. wide, glabrous above, sparingly appressed-pubescent and reticulate-veined beneath; peduncles 2-2.5 cm. long, stout; flowers capitate; calyx and corolla pubescent; ovary and young legume pubescent; mature legume glabrate, somewhat curved, oblong, mucronate, short-stipitate, 8-10 cm. long, 2-2.3 cm. wide, the base rounded.

TYPE LOCALITY: Near San Luis Tultitlanapa, Puebla.

DISTRIBUTION: Known only from the type locality and vicinity.

36. *Senegalia micrantha* (Benth.) Britton & Rose.

Acacia micrantha Benth. Trans. Linn. Soc. 30: 526. 1875.

An erect shrub, the twigs glabrous, a little glaucous and somewhat prickly. Petiole 6-15 mm. long, not prickly, bearing an oblong gland; pinnae 1 or 2 pairs; leaflets 6-8 pairs, oblong, 6-8 mm. long, obtuse, glabrous, reticulate-veined beneath; peduncles axillary, 15-20 mm. long; flowers capitate, glabrous; calyx 1 mm. long; corolla 2 mm. long; legume 5 cm. long, 12-18 mm. broad, glabrous, glaucescent, rounded at base, stipitate.

TYPE LOCALITY: Mexico.
DISTRIBUTION: Tamaulipas.

37. *Senegalia Roemeriana* (Scheele) Britton & Rose.

Acacia Roemeriana Scheele, Linnaea 21: 456. 1848.

A shrub, 2 m. high, the twigs glabrous, more or less prickly. Leaves glabrous, or nearly so; pinnae 1-3 pairs; leaflets 4-8 pairs, oblong, 8-15 mm. long, obtuse, more or less oblique, strongly veined; peduncles slender, 2-3 cm. long, glabrous; flowers capitate; legume oblong, 6-10 cm. long, 2-3 cm. broad, obtuse, stipitate, glabrous, rounded at the base.

TYPE LOCALITY: Austin, Texas.
DISTRIBUTION: Southern Texas to Chihuahua.

38. *Senegalia Lozanii* Britton & Rose, sp. nov.

A shrub, 5 meters high, unarmed or nearly so, the twigs densely pubescent. Leaves 1-2 dm. long; stipules minute, ovate; petiole and rachis pubescent, bearing a small sessile gland below the lower pair of pinnae; pinnae 1-4 pairs; leaflets 5-11 pairs, oblong to broadly spatulate, obtuse or retuse, mucronate, pubescent on both sides, 8-15 mm. long, thin, strongly veined beneath; flowers capitate; heads in axillary fascicles on peduncles 2-2.5 cm. long; stamens 5 mm. long; legume oblong, 7-9 cm. long, 2 cm. broad, glabrous, very short-stipitate, with thin valves.

Sierra Madre, above Monterey, Nuevo León, March 29, 1906, C. G. Pringle 10216.

39. *Senegalia Palmeri* (S. Wats.) Britton & Rose.

Acacia Palmeri S. Wats. Proc. Am. Acad. 17: 350. 1882.

A stout, prickly shrub, the twigs somewhat angled, at first puberulent, but soon glabrate. Rachis somewhat prickly; pinnae 1-3 pairs; leaflets 2-5 pairs, oblong to oblong-ovate, 6-8 mm. long, obtuse, glabrous; peduncles in fascicles, 2-2.5 cm. long; calyx glabrous, 2-3 mm. long; ovary glabrous.

TYPE LOCALITY: In the mountains south of Saltillo, Coahuila.
DISTRIBUTION: Known only from the type locality.

40. *Senegalia saltilloensis* Britton & Rose, sp. nov.

A prickly shrub or small tree, the slender twigs puberulent. Petiole and rachis puberulent, prickly; pinnae 1-3 pairs; leaflets 5-7 pairs, oblong, 5-9 mm. long, obtuse, densely pubescent on both sides, strongly veined beneath, the midrib excentric; flowers capitate; peduncles 1.5-2 cm. long; legume 8-10 cm. long, 1.5-2 cm. broad, obtuse, cuneate at base, short-stipitate, glabrous.

Near Saltillo, Coahuila, Mexico, May, 1898, E. Palmer 169.

41. *Senegalia malacophylla* (Benth.) Britton & Rose.

Acacia malacophylla Benth.; A. Gray, Pl. Wright. 1: 64. 1852.

Shrub or half climbing, softly pubescent, the prickles few, recurved; pinnae 2 or 3 pairs; leaflets 6-10 pairs, obliquely obovate to oblong, 6-12 mm. long, pubescent on both sides, obtuse, strongly veined; legume flat, 8 cm. long, 2 cm. broad, cuneate at the base, glabrous, its valves thin.

TYPE LOCALITY: Uplands of the Leoma, western Texas.
DISTRIBUTION: Texas, and reported from northern Mexico.

42. *Senegalia peninsularis* Britton & Rose, sp. nov.

A tree, 2 m. high, the twigs slender, gray, glabrous, somewhat prickly. Leaves small; pinnae 1 or 2 pairs; leaflets 3 to 8 pairs, spatulate, 8-10 mm. long, pale, glabrous, strongly nerved beneath; peduncles in fascicles of 2 to 5 in the axils of the leaves, glabrous, slender, 2-3 cm. long; flowers capitate, fragrant, short-pedicelled; calyx and corolla glabrous; stamens numerous, short, united at the very base; ovary glabrous; legume flat, thin, 6 cm. long or more, stipitate.

Concepcion Bay, Lower California, April 6, 1911, *J. N. Rose 16702*.

43. *Senegalia confusa* Britton & Rose, sp. nov.

A shrub, the young branches densely pubescent, more or less prickly. Petiole short, pilose, bearing a small gland near the middle; pinnae 1 or 2 pairs; leaflets 3-7 pairs, glabrous except the ciliate base, 6-8 mm. long, broadly cuneate, obtuse; peduncles often in clusters of 4's, pilose, 1-3 dm. long; flowers capitate, sessile; legume oblong, 6-10 cm. long, flat, glabrous, obtuse.

Lower California. Type from La Paz, June 14, 1897, *J. N. Rose 1319*.

44. *Senegalia Vogeliana* (Steud.) Britton & Rose.

Acacia ambigua Vogel, *Linnaea* 10: 600. 1836. Not Hoffm. 1826.
Acacia Vogeliana Steud. *Nom. ed.* 2, 1: 9. 1840.

A small, unarmed tree, the twigs puberulent, becoming glabrous. Pinnae 4-6 pairs; leaflets 8-15 pairs, obliquely oval-oblong, 8-15 mm. long, rounded or obtuse, pale green, glabrous, reticulate-veined beneath, the midvein slightly excentric; inflorescence a large tomentose panicle; flowers capitate; heads small, short-peduncled; legume 12.5 cm. long, 2.5 cm. broad, long-stipitate, thin, glabrous.

TYPE LOCALITY: Haiti.
DISTRIBUTION: Hispaniola.

45. *Senegalia Langlassei* Britton & Rose, sp. nov.

A tree, 12-15 m. high, the twigs puberulent, somewhat prickly. Petiole and rachis puberulent and prickly; pinnae 6-8 pairs; leaflets 15-25 pairs, linear-oblong, 7-9 mm. long, acute, appressed-pubescent on both sides, pale beneath, the midvein submarginal; flowers capitate, the heads in large panicles; calyx 2 mm. long, puberulent; corolla 4 mm. long, pubescent; stamens numerous, twice as long as the corolla.

La Botella, Michoacán or Guerrero, November 27, 1898, *E. Langlassé 677*.

46. *Senegalia glomerosa* (Benth.) Britton & Rose.

Acacia glomerosa Benth. *Lond. Journ. Bot.* 1: 521. 1842.

A tree, the twigs usually unarmed, but sometimes with recurved prickles, tomentose or glabrate. Petiole with a scutelliform gland; pinnae 6-8 pairs; leaflets 12-35 pairs, 12 mm. long, oblique, oblong, or linear-oblong, obtuse, at first puberulent but in age glabrate, tomentose beneath; inflorescence a glomerate panicle; flowers capitate; calyx pubescent; corolla white-pubescent; ovary long-stipitate, villous; legume glabrous, 1.5 dm. long, 3 cm. wide.

TYPE LOCALITY: Rio Janeiro, Brazil.
DISTRIBUTION: Yucatán to El Salvador; Colombia to Venezuela, Guiana (according to Bentham) and Brazil.

47. *Senegalia Liebmannii* Britton & Rose, sp. nov.

A shrub or tree, the twigs puberulent. Petiole and rachis terete, puberulent, bearing a small cup-shaped gland near the middle of the petiole and between 1 or 2 of the uppermost pairs of pinnae; pinnae 4-7 pairs; leaflets 25-40 pairs, narrowly linear, 4-7 mm. long, glabrous, sometimes sparingly ciliate, the midvein excentric; legume 9-11 cm. long, 10-12 mm. wide, short-stipitate, acuminate.

Pacific Coast of Oaxaca, 1841-3, *Liebmann 4380*.

48. *Senegalia Deamii* Britton & Rose, sp. nov.

An unarmed tree, 8-9 m. high, the twigs brownish, puberulent. Stipules wanting or caducous; petiole and rachis pubescent, bearing a large, sessile, cup-shaped gland near the middle of the petiole and one or more between the upper pair of leaflets; pinnae 6-10 pairs; leaflets 20-30 pairs, linear-oblong, glabrous above, pubescent beneath, 4-6 mm. long, the midvein subcentral; inflorescence a terminal panicle; peduncles 6-10 mm. long, pubescent, often in fascicles of 3 to 6, bearing a small bract near the middle; calyx and corolla small, glabrous; stamens short; ovary pilose; legume oblong, 9-10 cm. long, thin, glabrous, obtuse, apiculate, cuneate at base, stipitate.

Guatemala and Honduras. Type from roadside east of Gualán, Guatemala, June 15, 1909, Charles C. Deam 6286.

49. *Senegalia riparioides* Britton & Rose, sp. nov.

A shrub or small tree, 3-5 m. high, the puberulent or glabrous twigs sparingly armed with small reflexed prickles. Leaves puberulent or glabrate; petiole 2-4 cm. long, bearing a small, circular gland; pinnae 7-10 pairs; leaflets 15-30 pairs, linear, acutish, 4-7 mm. long, 1-1.5 mm. wide, sparingly pinnately veined beneath, the midvein subcentral; flowers capitate; legume 6-11 cm. long, about 2 cm. wide, thin, puberulent, obtuse, apiculate, short-stipitate.

Yucatán and El Salvador. Type from vicinity of Ahuachapán, El Salvador, January, 1922, Paul C. Standley 19348.

50. *Senegalia albanensis* Britton & Rose, sp. nov.

A shrub or tree, the twigs velvety-pubescent. Stipules minute, setaceous; petiole short, velvety, bearing a large gland at or below the lowermost pair of pinnae; rachis bearing a large cup-shaped gland between the uppermost pair of pinnae; pinnae 10-20 pairs; leaflets about 20 pairs, 2 mm. long, pubescent on both sides, pale beneath, the margin revolute; flowers capitate; ovary densely pubescent; legume 6-8 cm. long, 1 cm. broad, cuneate at base, usually obtuse and mucronate, glabrate in age, long-stipitate.

Monte Alban, Oaxaca, September 5, 1894, Charles L. Smith 320.

51. *Senegalia occidentalis* (Rose) Britton & Rose.

Acacia occidentalis Rose, Contr. U. S. Nat. Herb. 8: 32. 1903.

A small, prickly tree or shrub, the twigs pubescent. Petiole pubescent, bearing a small gland above the middle; pinnae small, 2-4 pairs; leaflets 5-13 pairs, linear, 3-5 mm. long, faintly veined, at first pubescent, becoming glabrate, the midvein very excentric; peduncles axillary, often in clusters of 3-5, pubescent, 1-2 cm. long; flowers in dense heads; calyx and corolla glabrous; legume oblong, 7 cm. long, 2 cm. broad, thin, glabrous, stipitate.

TYPE LOCALITY: Between Nogales and Guaymas, Sonora.

DISTRIBUTION: Sonora and Sinaloa.

52. *Senegalia subsessilis* Britton & Rose, sp. nov.

A glabrous shrub, armed with small prickles. Stipules small, setaceous; petiolar gland small, slightly elevated; petiole and rachis also bearing numerous minute sessile glands and a few prickles; pinnae small, 2-6 pairs; leaflets 3-8 pairs, linear-oblong, 2-4 mm. long, acutish, strongly nerved beneath, the midvein excentric; fruiting peduncles only 3 or 4 mm. long; legume 10 cm. long, 2-2.5 cm. broad, sessile, more or less constricted between the seeds, the base broadly cuneate.

Near Ixmiquilpan, Hidalgo, 1905, J. N. Rose 8926.

53. *Senegalia Painteri* Britton & Rose, sp. nov.

An unarmed shrub, the twigs reddish-brown, glabrous. Stipules minute, ciliate; petiole and rachis pilose, bearing a small depressed gland between each pair of pinnae; pinnae 2-4 pairs; leaflets 6-10 pairs, linear-oblong, somewhat oblique, acute, 4-7 mm. long, strongly

nerved beneath, ciliate, but otherwise glabrous, the midvein excentric; peduncles 10–15 mm. long; legume thin, glabrous, 10–12 cm. long, 2 cm. broad, rounded at apex, apiculate, cuneate at base, with a stipe 8–10 mm. long.

Near Higuerillas, Querétaro, August 23, 1905, *J. N. Rose 9805*.

54. *Senegalia tenuifolia* (L.) Britton & Rose.

Mimosa tenuifolia L. Sp. Pl. 523. 1753.

Acacia tenuifolia Willd. Sp. Pl. 4: 1091. 1805.

Acacia martinicensis Presl, Bot. Berm. 65. 1844 (according to Duss.).

Acacia microcephala A. Rich. Ess. Fl. Cub. 1: 469. 1845.

A clambering vine, very prickly, the twigs puberulent. Petiole more or less prickly, with a gland near the middle; pinnae many pairs; leaflets many pairs, linear, the midvein submarginal; inflorescence paniculate, puberulent; flowers capitate; calyx and corolla glabrous; legume oblong, 7–11 cm. long, 2–3 cm. broad, short-stipitate, glabrous.

TYPE LOCALITY: tropical America.

DISTRIBUTION: Cuba; Martinique; Guadeloupe; Guerrero to Costa Rica; Venezuela to Brazil.

55. *Senegalia acanthophylla* Britton & Rose, sp. nov.

A large woody vine, the branches glabrous, bearing numerous reflexed prickles. Petiole and rachis pubescent in lines, bearing numerous elevated glands; pinnae 8–15 pairs; leaflets many pairs, 8–10 mm. long, 2 mm. wide, oblique, sharply acute, glabrous above, often glabrous beneath except along the excentric midrib, the margins ciliate; inflorescence paniculate; flowers subsessile, numerous, short-spicate; calyx and corolla glabrous; legume 1.5–2 dm. long, 3 cm. broad, flat.

Chiapas, Guatemala and Costa Rica. Type from La Florida, Costa Rica, June 18, 1897, *Pittier 11278*.

56. *Senegalia maschalocephala* (Griseb.) Britton & Rose.

Acacia maschalocephala Griseb. Cat. Pl. Cub. 82. 1866.

Stems climbing, the branches bearing numerous short recurved prickles, densely pilose, or becoming glabrate. Petiole short, bearing a small depressed gland; rachis of the leaf pilose and prickly like the branches; pinnae 6–10 pairs; leaflets 15–20 pairs, linear, falcate, 4–6 mm. long, glabrous, acutish, the faint midvein excentric; inflorescence axillary or somewhat paniculate; peduncles pilose, often prickly, 1–2 cm. long; heads globular, many-flowered; calyx puberulent; legume flat, thin, oblong, 8–10 cm. long, 15–18 mm. wide, tapering at base into a short slender stipe.

TYPE LOCALITY: Cuba.

DISTRIBUTION: Cuba.

57. *Senegalia picachensis* (Brand.) Britton & Rose.

Acacia picachensis Brand. Univ. Calif. Publ. Bot. 6: 179. 1915.

A shrub, the foliage glabrous, the twigs brownish, bearing reflexed prickles. Lower leaves about 1 m. long; petiole bearing an oblong concave sessile gland; rachis often prickly, sometimes bearing small cup-shaped glands between the uppermost pinnae; pinnae 7–12 pairs; leaflets 10–20 pairs, oblong-linear, 6–7 mm. long, obtusish, puberulent beneath, at least when young; inflorescence a panicle or raceme of small heads; peduncles slender, puberulent, 1 cm. or less long; calyx and corolla glabrous, white; legume flat, 6 cm. long, 1.5 cm. broad, cuneate at base, the margin sinuate.

TYPE LOCALITY: Picacho, Oaxaca.

DISTRIBUTION: Known only from the type locality.

58. *Senegalia Ortegae* Britton & Rose, sp. nov.

A woody vine, the stem and rachis of leaves bearing short recurved prickles, when young densely lanate, but in age glabrate. Petioles short, bearing a gland near the middle; pinnae 15-20 pairs; leaflets many pairs, linear-oblong, about 5 mm. long, 1 mm. broad, glabrous, the midvein subcentral, the lateral veins somewhat prominent; inflorescence paniculate; peduncles short, 5-15 mm. long, bibracteate; calyx and corolla canescent; legume long-stipitate, 8-10 cm. long, 2 cm. wide, alternate at both ends, densely pubescent.

Sinaloa. Type from vicinity of Villa Union, April 2, 1910, *Rose, Standley & Russell 13902*.

59. *Senegalia membranacea* Britton & Rose, sp. nov.

A vigorous clambering vine, very prickly. Leaves 2-3 dm. long, the petiole and rachis prickly; pinnae 6-8 pairs; leaflets 25-40 pairs, oblong, 6-12 mm. long, glabrous except a tuft of hairs on the midvein beneath, acute, membranous, very pale beneath, the midvein excentric; legume 16 cm. long, 2.5 cm. broad, glabrous; seeds flat, black, short-oblong, 10-11 mm. long.

Ramulatero, Veracruz, April, 1922, *C. A. Purpus 8716*.

60. *Senegalia potosina* Britton & Rose, sp. nov.

A vine with quadrangular stems 1-2 inches thick, climbing into the tops of trees, the twigs puberulent and prickly. Petiole prickly, bearing a small stalked gland near the top; rachis prickly, bearing several stalked glands between the upper pinnae; pinnae 10-15 pairs; leaflets 20-30 pairs, linear, 5-6 mm. long, reticulate-veined beneath, glabrous except a few hairs on the midvein beneath, the midvein subcentral; inflorescence paniculate; flowers capitate; calyx and corolla puberulent; legume oblong, 12 cm. long, 18-25 mm. broad, stipitate, velvety-pubescent.

Lowland forests near Las Palmas, San Luis Potosí, July 24, 1891, *C. G. Pringle 3782*.

ILLUSTRATION: *Contr. U. S. Nat. Herb.* 8: 32, f. 8.

61. *Senegalia acapulcensis* Britton & Rose, sp. nov.

A woody vine, the branches somewhat angled, more or less prickly. Leaves glabrous; petiole bearing a cup-shaped gland; pinnae 8-10 pairs; leaflets many pairs, subchartaceous, linear, the midvein excentric; inflorescence paniculate, puberulent; flowers capitate; calyx and corolla puberulent; legume oblong, 8-10 cm. long, 2-2.5 cm. broad, glabrous, glaucous.

Acapulco, Guerrero. Type collected in 1895, *E. Palmer 624*.

62. *Senegalia Westiana* (DC.) Britton & Rose.

Acacia Westiana DC. *Prodr.* 2: 464. 1825.

A glabrous, woody vine, up to 7 m. long or longer, the slender twigs armed with reflexed prickles. Leaves 7-15 cm. long, the petiolar gland scutellate; pinnae 4-12 pairs; leaflets 15-25 pairs, thin, linear or linear-oblong, 4-7 mm. long, 1-1.5 mm. wide, sparingly pinnately veined beneath, the midvein slightly excentric, the apex acutish or obtuse; flowers capitate, the heads panicled; stamens white; legume 6-10 cm. long, 1-2 cm. wide, short-stipitate, chartaceous, densely tomentulose, the base narrowed.

TYPE LOCALITY: St. Croix.

DISTRIBUTION: Porto Rico to Tortola and St. Croix.

63. *Senegalia guadalupensis* (DC.) Britton & Rose.

Acacia guadalupensis DC. *Prodr.* 2: 464. 1825.

A high clambering vine, the branches glabrous, often very prickly. Pinnae 7-9 pairs; leaflets 15-20 pairs, linear-oblong, 6-14 mm. long, 1.5-2.5 mm. wide, acutish or obtuse, pinnately veined, glabrous; flowers capitate; inflorescence paniculate; calyx and corolla puberulent; legume oblong, 10-13 cm. long, 2 cm. broad, glabrous, acute or acuminate, cuneate at base, stipitate.

TYPE LOCALITY: Guadeloupe.

DISTRIBUTION: Antigua to Guadeloupe and Martinique; ? St. Martin.

64. *Senegalia* (?) *rugata* (Lam.) Britton & Rose.

Mimosa rugata Lam. Encycl. 1: 20. 1783.
Mimosa concinna Willd. Sp. Pl. 4: 1039. 1806.
Acacia concinna DC. Prodr. 2: 464. 1825.

A pubescent trailing or high-climbing vine, sometimes 10 m. long, copiously armed with small, slightly curved prickles. Pinnae 4-8 pairs; leaflets 12-30 pairs, linear-oblong, 7-14 mm. long, oblique, obtuse; inflorescence paniculate; peduncles slender, 3 cm. long or shorter; heads globose; calyx about 3 mm. long, a little shorter than the corolla; legume 8-13 cm. long, 1.5-2 cm. wide, fleshy, constricted between the seeds and at length breaking transversely.

TYPE LOCALITY: India,
 DISTRIBUTION: Naturalized in Jamaica; native of southern Asia.

65. *Senegalia tamarindifolia* (L.) Britton & Rose.

Mimosa tamarindifolia L. Sp. Pl. 523. 1753.
Acacia tamarindifolia Willd. Sp. Pl. 4: 1092. 1806.

A prickly, glabrous, vinelike shrub. Stipules large, foliaceous, ovate, acute; petiole and rachis sometimes prickly, often bearing glands between the pinnae; pinnae 4-8 pairs; leaflets 10-20 pairs, linear-oblong, oblique, 1-1.5 cm. long, the midvein excentric; flowers in large paniced heads; calyx angled, puberulent; corolla glabrous; legume 7-14 cm. long, 2-2.5 cm. wide, glabrous or puberulent.

TYPE LOCALITY: Tropical America.
 DISTRIBUTION: Martinique; Guadeloupe; Margarita.
 ILLUSTRATION: Jacq. Hort. Schoenb. 3: pl. 396.

66. *Senegalia grenadensis* Britton & Rose, sp. nov.

A small tree, the slender twigs armed with straight prickles 1-1.5 mm. long. Twigs and foliage glabrous; leaves about 5 cm. long; petiole slender, 1-1.5 cm. long, unarmed, bearing a small orbicular gland at the lowest pair of pinnae; stipules ovate, about 1 cm. long; rachis slender; pinnae 2 or 3 pairs; leaflets 7-10 pairs, linear-oblong, chartaceous, 6-8 mm. long, about 1.5 mm. wide, pinnately veined beneath, the midvein somewhat excentric, the apex rounded or obtuse; legume linear-oblong, about 8 cm. long and 1.5 cm. wide, minutely puberulent, short-stipitate, the apex pointed, the base subcuneate.

Point Saline, Grenada, July 17, 1905, *W. E. Broadway* 1808.

III. MIMOSEAE. Stamens 10 or fewer, distinct; anthers (with rare exceptions) glandless. Calyx-lobes valvate.

Margins of the legume-valves persistent; unarmed trees, shrubs, or herbs.

Trees or large shrubs.

Bractlets orbicular, peltate or short-tipped.

Legume short-beaked or beakless; seeds transverse.

Legume with a long subulate beak; seeds longitudinal.

Bractlets ovate, caudate, villous; seeds obliquely transverse.

Herbs or low shrubs; legumes narrowly linear, rarely oblong.

Margins of the legume-valves ultimately separating; plants mostly prickly.

Legume subtriangular, subterete, or little flattened.

Legume flat.

Leaves bipinnate.

Valves of the legume jointed.

Legume wingless.

Legume softly lacinate-winged.

Valves of the legume continuous.

Valves of the broad legume membranous.

Valves of the legume chartaceous or subcoriaceous.

Woody vine; legume broad; flowers mostly 3-parted.

Shrubs; legume narrow; flowers 4- or 5-parted.

Legume wingless.

Legume winged, the wing spinulose-dentate.

Leaves mostly reduced to linear phyllodes; valves of the legume jointed.

29. LEUCAENA.
 30. RYNCHOLEUCAENA.
 31. CAUDOLEUCAENA.
 32. ACUAN.
 33. LEPTOGLOTTIS.
 34. MIMOSA.
 35. PTEROMIMOSA.
 36. NEOMIMOSA.
 37. LOMOPLIS.
 38. MIMOSOPSIS.
 39. ACANTHOPTERON.
 40. HAITIMIMOSA.

29. *LEUCAENA* Benth. Journ. Bot. 4: Hook. 416. 1842.

Unarmed trees or shrubs, with bipinnate leaves, the petiole or the rachis usually glanduliferous, the white, mostly bracteolate flowers in peduncled heads. Calyx narrowly campanulate, 5-toothed. Petals 5, distinct, valvate. Stamens 10, distinct, exserted, the anthers not gland-bearing, often pilose. Ovary stipitate; ovules numerous; style filiform; stigma minute. Legume linear to oblong, flat, membranous, completely 2-valved, the ovate or obovate flat seeds transverse.

Type species, *Mimosa glauca* L.

Leaflets broad, lanceolate to ovate or suborbicular, mostly 2-6 cm. long, 1-3 cm. wide.

Legume velutinous.

Legume broadly oblong, 3.5-4 cm. wide.

Legume linear or linear-oblong, 1.5-1.8 cm. wide.

Legume subtruncate or rounded at apex with a minute more or less excentric tip.

Pinnæ 2 or 3 pairs; legume broadly short-cuneate at base.

Pinnæ 6 pairs; legume long-cuneate at base.

Legume with a triangular apex, the tip not excentric.

Leaflets pubescent on both sides.

Leaflets glabrate above.

Legume glabrous.

Legume 12-18 mm. wide, 12-16 cm. long.

Legume narrowly linear, 12-16 mm. wide, 12-16 cm. long.

Leaflets broadly ovate to obovate or suborbicular.

Leaflets lanceolate to ovate.

Pinnæ 4 or 5 pairs.

Pinnæ 2 pairs.

Legume broadly linear, 16-18 mm. wide, 8-16 cm. long.

Larger leaflets 5-6 cm. long.

Leaflets broadly ovate to elliptic.

Leaflets ovate to ovate-lanceolate.

Larger leaflets 2-4 cm. long.

Leaflets 1-3 cm. long, few-veined.

Leaflets 3-4 cm. long, many-veined.

Legume 23-28 mm. wide, up to 18 cm. long; leaflets oblong-lanceolate.

Legume unknown; leaflets densely pubescent on both sides.

Peduncles less than 1 cm. long.

Peduncles 2-5 cm. long.

Leaflets narrow, linear to lanceolate or oblong.

Involucure (as far as known) appressed to the head of flowers, or wanting.

Leaflets oblong, 1-2 cm. long, 4-8 mm. wide, the apex rounded or obtuse.

Legume 1.5-2 cm. wide, slender-stipitate.

Legume 2.5 cm. wide, stout-stipitate.

Leaflets linear to linear-oblong or lanceolate.

Leaflets 8-20 mm. long, acute, pale green.

Leaflets faintly veined.

Flowers glabrous; legume glabrous.

Flowers pubescent or puberulent; legume finely pubescent.

Leaflets strongly reticulate-veined; legume glabrous.

Leaflets 2-8 mm. long.

Pubescence various, not white-pulverulent.

Leaflets pubescent on both sides.

Leaflets rounded at apex, 2-3 mm. long.

Leaflets, at least of some of the leaves, acute or mucronate.

Leaflets 2-3 mm. long.

Leaflets 4-5 mm. long.

Pubescence villous.

Pubescence appressed.

Petiolar gland orbicular; peduncle not glandular; bractlets hairy on the back and margin; legume 12-16 cm. long.

Petiolar gland oblong; peduncle glandular; bractlets naked; legume 7-10 cm. long.

Leaflets glabrous or papillate, or their margins ciliate.

Leaflets strongly revolute-margined; rachis and rachilla densely long-pilose.

Leaflets not revolute-margined.

Leaflets densely papillate.

Leaflets not densely papillate.

1. *L. Rekoii*.

2. *L. pubescens*.

3. *L. Brandegeei*.

4. *L. sonorensis*.

5. *L. cruziana*.

6. *L. microcarpa*.

7. *L. Palmeri*.

8. *L. Purpusii*.

9. *L. Houghii*.

10. *L. macrocarpa*.

11. *L. sinaloensis*.

12. *L. pseudotrichoides*.

13. *L. macrophylla*.

14. *L. Nelsonii*.

15. *L. lanceolata*.

16. *L. Shannonii*.

17. *L. salvadorensis*.

18. *L. glabrata*.

19. *L. glauca*.

20. *L. Collinsii*.

21. *L. pueblana*.

22. *L. stenocarpa*.

23. *L. guatemalensis*.

24. *L. pallida*.

25. *L. Dugesiana*.

26. *L. revoluta*.

27. *L. oaxacana*.

- Leaflets rounded at apex; legume 2.5 cm. wide. 28. *L. esculenta*.
 Leaflets acute or acutish; legumes narrower (as far as known)
 Leaflets 3-4.5 mm. long.
 Legume 1-1.8 cm. wide, apiculate.
 Leaflets strongly ciliate, the midvein slightly excentric. 29. *L. brachycarpa*.
 Leaflets nearly eciliate, the midvein very excentric. 30. *L. Standleyi*.
 Legume 2-2.2 cm. wide, subulate-tipped. 31. *L. Doylei*.
 Leaflets 4-6 mm. long.
 Leaflets not plicate-striate.
 Twigs subterete; pinnae 10-20 pairs; anthers pilose. 32. *L. paniculata*.
 Twigs angled; pinnae up to 45 pairs; anthers glabrous. 33. *L. confusa*.
 Leaflets plicate-striate beneath. 34. *L. laxifolia*.
 Twigs, peduncles and young leaves densely white-pulverulent. 35. *L. pulverulenta*.
 Involucre distant from the head of flowers.
 Leaflets linear, acutish or obtuse.
 Peduncles 1-2 cm. long. 36. *L. diversifolia*.
 Peduncles only 5-8 mm. long. 37. *L. trichandra*.
 Leaflets oblong, cuspidate. 38. *L. cuspidata*.
 Species not grouped. 39. *L. Blancii*.

1. *Leucaena Reko* Britton & Rose, sp. nov.

A shrub with pale green branches. Leaflets few pairs, ovate to lanceolate, rounded or with a broad cuneate base, acute or acuminate, 3-6 cm. long, glabrous; heads large, racemose, short-peduncled; bractlets orbicular, ciliate; flowers glabrous; calyx nearly 2 mm. long; petals about 3 mm. long; stamens 6-7 mm. long; legume oblong, 12-14 cm. long, 3.5-4 cm. broad, velvety-pubescent, the stipe 2-3 mm. long.

Pochutla, Oaxaca, September 28, 1917, *Reko 3632*.

2. *Leucaena pubescens* Britton & Rose, sp. nov.

Twigs, petioles and rachis pubescent. Petiole 1.5-2.5 cm. long, bearing a gland just below the lower pair of pinnae; pinnae 2 or 3 pairs; leaflets 3 or 4 pairs, ovate to orbicular, somewhat oblique, apiculate, pale and pubescent beneath, glabrate above; rachilla bearing a small orbicular gland just below the upper pair of leaflets; fruiting peduncle 2 cm. long; legume 10-20 cm. long, 1.7 cm. broad, velutinous, the apex subtruncate, with a minute excentric tip, tapering at base into a stipe 8-20 mm. long.

Mazatlan, Sinaloa, 1925, *Ortega 5988*.

3. *Leucaena Brandegeei* Britton & Rose, sp. nov.

Twigs, petioles and rachis densely pilose. Leaves large; pinnae 6 pairs; leaflets 3-6 pairs, ovate to lanceolate, 2-4 cm. long, acute or acutish, broadly cuneate at base, appressed-pubescent on both sides, paler beneath than above; rachilla bearing a small, elevated gland below the upper pair of leaflets; fruiting peduncle 2.5 cm. long; legume 14-20 cm. long, velutinous, 1.6-1.8 cm. broad, the apex rounded, with a minute tip, long-cuneate at base and tapering into a slender stipe 1-2 cm. long.

La Mesa, Cape region of Lower California, 1893, *T. S. Brandegee*.

4. *Leucaena sonorensis* Britton & Rose, sp. nov.

A shrub or small tree about 4 m. high. Leaves large, 3-4 dm. long; petioles, rachis and rachilla pubescent; petiolar gland not prominent; rachilla bearing a small low-conic gland below the upper pair of leaflets; rachis bearing a rather large conic gland near its upper end; pinnae about 5 pairs, long-stalked; leaflets about 5 pairs, lanceolate or the upper oblong-lanceolate, acute or short-acuminate, 3.5-5 cm. long, pubescent on both sides; legume linear, velutinous, 15-17 cm. long, 1.6-1.8 cm. wide, its tip triangular, its base cuneate, its stipe about 1 cm. long.

Sierra de Alamos, Sonora, March 14, 1910, *Rose, Standley & Russell 12321*.

5. *Leucaena cruziana* Britton & Rose, sp. nov.

Old branches gray, glabrous. Pinnae several pairs; leaflets 2 or 3 pairs, 2-4 cm. long, ovate to lanceolate, somewhat oblique, dark green and slightly pubescent above, appressed-pubescent beneath; gland oblong depressed, borne at the lower pair of pinnae; legume 12-16 cm. long, 1.6-1.8 cm. wide, densely velutinous, the tip triangular, acute, the base cuneate, the stipe 1-1.5 cm. long.

Barranca de Panoaya, Veracruz, December, 1919, *Purpus* 8387.

6. *Leucaena microcarpa* Rose, Contr. U. S. Nat. Herb.

5: 141. 1897.

A small tree, about 6 m. high, the twigs, petioles and leaf-rachis glabrous. Pinnae 2 or 3 pairs, slender-stalked; glands small, orbicular, slightly elevated, borne just below the lower pair of pinnae and sometimes between the upper pair; leaflets 2-5 pairs, elliptic to obovate or suborbicular, 1.5-4 cm. long, obtuse, glabrous, or sparingly pubescent on the veins beneath, reticulate-veined; legume linear, 7-13 cm. long, 10-14 mm. wide, glabrous, pointed, the slender stipe 1-1.8 cm. long.

TYPE LOCALITY: Miraflores, Lower California.

DISTRIBUTION: Sinaloa; Lower California.

7. *Leucaena Palmeri* Britton & Rose, sp. nov.

Glabrous throughout. Leaves 2-2.5 dm. long; petioles 3-4 cm. long, bearing an inconspicuous, low, oblong gland; pinnae 4 or 5 pairs; leaflets 3-6 pairs, oblong-lanceolate, acute, 2-3 cm. long, faintly reticulate-veined; rachilla bearing a minute orbicular gland below the upper pair of leaflets, and a subulate terminal appendage 2-3 mm. long; peduncles 3-4 cm. long; legume linear, 13-18 cm. long, about 14 mm. wide, obtuse, glabrous.

Near Alamos, Sonora, September 16-30, 1890, *Palmer* 718.

8. *Leucaena Purpusii* Britton & Rose, sp. nov.

A small tree 4-5 m. high, glabrous throughout. Glands slightly elevated, borne near the base of the petiole and just below the upper pair of leaflets; petioles 2-3 cm. long; pinnae 2 pairs; leaflets 4 or 5 pairs, lanceolate to ovate, acute, 3.5 cm. long, pale, few-veined; flowers white, glabrous; legume linear, 10-18 cm. long, 12-16 mm. broad, rounded at apex, apiculate, glabrous, shining, tapering at base into a slender stipe 1.5-2 cm. long.

Rim of the barranca Rio Remudadero, Veracruz, January, 1926 *Purpus* 10607.

9. *Leucaena Houghii* Britton & Rose, sp. nov.

A shrub, the twigs and petioles glabrous. Pinnae 1 to 2 pairs; petiole 1-2 cm. long, bearing a large somewhat elevated gland; rachilla bearing a large orbicular gland at the upper pair of leaflets; leaflets 1-3 pairs, pubescent when very young, soon glabrous, elliptic to broadly ovate, finely reticulate-veined, 4-5 cm. long, the apex acute, obtuse or rounded; legume 10-12 cm. long, 15-17 mm. wide, glabrous, tapering at base into a slender stipe, about 1 cm. long.

Cuernavaca, Morelos, May 27-30, 1899, *Rose & Hough* 4362, type; Monte d'Inguaran, Michoacan or Guerrero, *Langlassé* 12.

10. *Leucaena macrocarpa* Rose, Contr. U. S. Nat. Herb.

1: 327. 1895.

A shrub, or a small tree about 8 m. high, the twigs, foliage and peduncles glabrous. Petioles 1-4 cm. long, the gland oblong, depressed, borne below the lower pinnae; pinnae mostly 2 pairs, slender-stalked; leaflets 2 or 3 pairs, ovate to oval or ovate-lanceolate, 3-6 cm. long, chartaceous, acute or acuminate, reticulate-veined, bright green and glabrous above, paler and glabrous, or pubescent on the veins beneath; peduncles solitary or several together, 0.5-2 cm. long, in a terminal raceme or thyrsum; involucre appressed; calyx about 1.5 mm. long; petals

a little longer than the calyx; stamens about 2.5 mm. long; legume broadly linear, glabrous, about 11 cm. long, 1.8 cm. wide, acute at each end, its slender stipe about 1.5 cm. long.

TYPE LOCALITY: Río Blanco, Jalisco.

DISTRIBUTION: Jalisco; Guerrero.

ILLUSTRATION: Rose, loc. cit. f. 6a [Fig. 6b shows legume of an *Albizzia*].

11. *Leucaena sinaloensis* Britton & Rose, sp. nov.

A low shrub, the twigs terete, glabrous. Stipules minute, ovate-acuminate, often caducous; pinnae 2-4 pairs; leaflets 2-5 pairs, broadly ovate or orbicular to oblong, mucronate, 1-3 cm. long, few-veined, glabrous; peduncles axillary, solitary or in clusters of 3 or 4, 2-3 cm. long, glabrous; involucre small, sometimes below the top of the peduncle; petals glabrous; anthers hairy; legume 9-16 cm. long, about 1.7 cm. wide, cuneate and short-stipitate at base, rounded at apex with a short mucro, glabrous.

Sinaloa. Type from vicinity of Palmar, April 15, 1910, *Rose, Standley & Russell 14650*.

12. *Leucaena pseudotrichoides* (DC.) Britton & Rose.

Acacia pseudotrichoides DC. Prodr. 2: 466. 1825.

A tall tree, or shrubby, the twigs and foliage glabrous. Petioles slender, 3-5 cm. long, bearing a depressed oblong gland at about the middle, or above, or sometimes glandless; pinnae 1 or 2 pairs, slender-stalked; leaflets 2-4 pairs, ovate to elliptic or the upper pair obovate, chartaceous, 2-4.5 cm. long, acute or obtuse, reticulate-veined on both sides, bright green above, paler beneath; rachilla bearing an elevated gland just below the upper pair of leaflets; peduncles 3-5 in the axils, glabrous, slender, 1-2 cm. long; heads small; bractlets ciliate; legume broadly linear, 10-12 cm. long, about 1.8 cm. wide, glabrous, the apex acute, apiculate, the base obliquely cuneate, the stipe 10-12 mm. long.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Santo Domingo.

13. *Leucaena macrophylla* Benth. Bot. Voy. Sulph. 90. 1844.

Twigs and foliage glabrous. Stipules short and broad; glands elevated, concave, borne between the lower pinnae and the upper leaflets; pinnae 2 or 3 pairs; leaf-rachis terminated by a bristle; leaflets 2-4 pairs, ovate to oblong-lanceolate, acuminate or acute, 3-5 cm. long, subcoriaceous, reticulate-veined, the oblique base narrowed; heads numerous in axillary and terminal racemes; bracts short, broadly orbicular; peduncles 5-15 mm. long, heads subtended by 4 orbicular bracts; bractlets subulate, the apex peltate, ciliate; calyx tubular-campanulate, 1.5 mm. long, the apex hirtellous, with 5 very short teeth; corolla scarcely longer than the calyx; stamens a little longer than the corolla; anthers pilose; legume broadly linear, glabrous, about 18 cm. long, 2-2.8 cm. wide, the tip triangular, the base attenuate, the stipe 1.5-2 cm. long.

TYPE LOCALITY: Acapulco, Guerrero.

DISTRIBUTION: Guerrero; Colima.

14. *Leucaena Nelsonii* Britton & Rose, sp. nov.

Twigs and foliage densely pubescent. Petioles 1.5-2 cm. long, bearing a large subconic gland just below the lowest pair of pinnae; pinnae 2 pairs, slender-stalked; leaflets 3 or 4 pairs, oblong-lanceolate or ovate-lanceolate, 3-6 cm. long, acute or acuminate, densely pubescent on both sides, the excurrent rachilla bearing a small subconic gland below the upper pair; peduncles shorter than the diameter of the flower-head or as long; involucre subtending the head, its bracts spreading; bractlets orbicular, ciliate.

Between San Marcos and Copala, Guerrero, February 8, 1895, *Nelson 2286*.

15. *Leucaena lanceolata* S. Wats. Proc. Am. Acad. 21: 427. 1886.

A shrub, about 1.6 m. high, the twigs and leaves finely pubescent. Pinnae 2-5 pairs, slender-stalked; petiole 2-4 cm. long, bearing a low-conic gland about 1 mm. in diameter below the lower pinnae; leaflets 3-7 pairs, lanceolate or the lower ones ovate, acute or short-acuminate,

2-4 cm. long; rachilla slender, bearing a small orbicular gland below the upper pair of leaflets; peduncles rather stout, glabrate, 2-5 cm. long; involucre short, appressed to the base of the head; bractlets orbicular, ciliate; flowers glabrous; calyx about 2 mm. long; petals about 4 mm. long; stamens about 9 mm. long; anthers pubescent.

TYPE LOCALITY: Hacienda San Miguel, Chihuahua.
DISTRIBUTION: Chihuahua; Sinaloa.

16. *Leucaena Shannoni* Donn. Smith, Bot. Gaz. 57: 419. 1914.

A tree 6-10 m. high, or shrubby, the twigs, petioles and leaf-rachis sparingly pubescent or glabrous. Petiolar gland oblong; petioles 1.5-5 cm. long; pinnae 4-6 pairs, slender-stalked, the stalks 3 cm. long or shorter; leaflets 9-17 pairs, oblong, or the upper ones elliptic-obovate, glabrous or sparingly pubescent, 12-22 mm. long, 5-8 mm. wide, reticulate-veined, the apex rounded; rachilla bearing a small gland at the upper pair of pinnae; peduncles 12-22 mm. long; heads racemose; flowers glabrous; calyx 2 mm. long; petals spatulate-lanceolate, 3 mm. long; stamens 6 mm. long; legume rather broadly linear, 10-15 cm. long, 1.5-2 cm. wide, densely velutinous, the tip triangular, the base narrowed into a short stipe.

TYPE LOCALITY: El Salvador.
DISTRIBUTION: Chiapas; El Salvador; Nicaragua.

17. *Leucaena salvadorensis* Standley, sp. nov.

Twigs, petioles and peduncles finely puberulent. Glands large, suborbicular, concave with thick margins, borne at or below the lower pair of pinnae and just below the upper pair; pinnae 6-8 pairs, slender-stalked; leaflets 25-35 pairs, narrowly oblong, 10-14 mm. long, faintly veined, glabrous, pale green, the apex obtuse or rounded, the base obliquely subtruncate, the midvein very excentric; peduncles clustered, 1.5-4 cm. long, very stout in fruit; involucre small, appressed; flowers glabrous; calyx 2.5 mm. long, puberulent; petals 4 mm. long, puberulent; stamens about 6 mm. long; legume 15-18 cm. long, 2.5 cm. wide, finely velutinous, the tip triangular, the base cuneate, the stout stipe about 1.5 cm. long.

Jocoro, Morazan, El Salvador, 1924, *Calderón 2031*, coll. J. M. Perla.

18. *Leucaena glabrata* Rose, Contr. U. S. Nat. Herb. 5: 140. 1897.

A tree about 9 m. high, the trunk up to 3 dm. in diameter, the twigs glabrous. Glands elliptic, cupulate, 1.5-2 mm. long, borne between or below the lowest pair of pinnae, and between the upper 1 or 2 pairs; petiole glabrous, 3-4 cm. long; rachis glabrous; pinnae 4-7 pairs, slender-stalked, the rachilla glabrous or puberulent; leaflets 12-16 pairs, narrowly lanceolate, glabrous, oblique, 10-18 mm. long, pale green, the midvein excentric; peduncles 1-2.5 cm. long; calyx 2 mm. long, subtruncate; petals 4 mm. long, linear; legume broadly linear, glabrous, 12-20 cm. long, about 2 cm. wide, apiculate, the base cuneate, the stipe about 12 mm. long.

TYPE LOCALITY: Acapulco, Guerrero.
DISTRIBUTION: Guerrero; Chiapas; Puebla; Jalisco.

19. *Leucaena glauca* (L.) Benth. Journ. Bot. Hook. 4: 416. 1842.

Mimosa glauca L. Sp. Pl. 520. 1753.
Mimosa leucocephala Lam. Encycl. 1: 12. 1783.
Acacia glauca Willd. Sp. Pl. 4: 1075. 1806.
Acacia leucocephala Link, Enum. 2: 444. 1822.

Usually a shrub, or a tree 6-10 m. high, recorded as reaching 20 m., the young twigs puberulent, the foliage glabrous or nearly so. Leaves 1-2 dm. long; petiole 3-6 cm. long, with or without a gland; pinnae 3-10 pairs; leaflets 10-20 pairs, linear-oblong or lanceolate, thin, 8-15 mm. long, acute, light green above, pale beneath; heads axillary or terminal, mostly clustered, 1.5-3 cm. in diameter; peduncles stout, puberulent or pubescent, 2-3 cm. long; calyx obconic, pubescent, 1 mm. long, its short teeth blunt; petals linear-spatulate, pubescent;

stamens about 3 times as long as the petals; legume linear, 10–15 cm. long, about 1.5 cm. wide, finely pubescent, abruptly acute or mucronate at the apex, tapering at the base.

TYPE LOCALITY: America.

DISTRIBUTION: Florida; Bermuda; West Indies; continental tropical America north to Veracruz; Old World tropics.

ILLUSTRATIONS: Britton & Shafer, *N. Am. Trees*; f. 488, Britton, *Fl. Berm. f. 189*; Sargent, *Silva N. Am. pl. 139*.

20. *Leucaena Collinsii* Britton & Rose, sp. nov.

Leaves nearly 2 dm. long, the petiole and rachis puberulent on the upper side. Petiole stout, 2.5–3 cm. long, bearing a depressed elliptic gland about 3 mm. long above the middle; pinnae about 14 pairs, short-stalked, the slender rachilla short-pilose above; leaflets 35–45 pairs, lanceolate, 6–9 mm. long, glabrate with ciliate margins, acute, pale green and reticulate-veined beneath, the midvein excentric; legume linear, glabrous, 15–18 cm. long, 16–18 mm. wide, blunt-pointed, the base cuneate, the stipe about 1 cm. long or shorter.

Castla Gutierrez, Chiapas, January 6, 1907, *Collins & Doyle 157*.

21. *Leucaena puablana* Britton & Rose, sp. nov.

Twigs, petioles and leaf-rachis finely puberulent. Glands orbicular, depressed, borne between the three or four upper pairs of pinnae, and sometimes on the petiole below the lower pair; pinnae 15–20 pairs, nearly sessile; leaflets 25–40 pairs, linear, 2–3 mm. long, about 0.7 mm. wide, puberulent on both sides, ciliate, the apex rounded, the slender midvein nearly central, the lateral venation wholly obscure; peduncles 1–3 cm. long; flowers glabrous; calyx about 1 mm. long.

Puebla and Oaxaca. Type from Valley of Cuicatlan, Oaxaca, 1,300 m. alt., November 9, 1894, *Nelson 1886*.

22. *Leucaena stenocarpa* Urban, *Symb. Ant.* 2: 266. 1900.

Twigs, foliage and peduncles densely pubescent. Stipules triangular-subulate, 2–2.5 mm. long; glands orbicular, cupulate, 1.5 mm. broad, borne between the lowest and the uppermost pair of pinnae; petioles 1–2 cm. long; pinnae 8–16 pairs, nearly sessile; leaflets 16–25 pairs, linear-oblong, acute, 2–3 mm. long, about 1 mm. wide, acute or acutish, densely pubescent on both sides, the midvein nearly central, the margins recurved; peduncles 0.5–1.5 cm. long; involucre short, appressed; bractlets puberulent; calyx 1.5 mm. long; petals 2.5 mm. long; stamens about 6 mm. long; legume linear, glabrous, reticulate-veined, 5–9 cm. long, 10–12 mm. wide, nearly sessile, apiculate.

TYPE LOCALITY: Foot hills of Sierra San Felipe, Oaxaca.

DISTRIBUTION: Oaxaca.

23. *Leucaena guatemalensis* Britton & Rose, sp. nov.

Twigs, foliage and peduncles densely short-villous. Stipules subulate with a triangular base, 6–8 mm. long; glands suborbicular, cupulate, 1.5 mm. broad, borne on the petiole below the lower pair of pinnae, and between the upper pair; pinnae 12–15 pairs, nearly sessile; leaflets 25–35 pairs, linear, 3–5 mm. long, oblique, acutish, pubescent or puberulent above, villous beneath, the faint midvein somewhat excentric; peduncle about 2.5 cm. long; flowers glabrous; involucre appressed; legume linear, about 9 cm. long, 1.4 cm. wide, puberulent, its base cuneate, its stipe about 1 cm. long.

Guatemala. Type collected on plains near Guatemala, July, 1860, *Hayes 23*.

24. *Leucaena pallida* Britton & Rose, sp. nov.

Twigs, petioles and rachis minutely puberulent. Petiolar gland depressed, cupulate, suborbicular, 3–3.5 mm. broad, borne just below the lower pair of leaflets; pinnae 10–16 pairs, short-stalked; leaflets 20–60 pairs, appressed-pubescent on both sides, those of some (upper) leaves linear, acute, 5–9 mm. long, the midvein excentric, those of some (lower) leaves linear-

oblong, obtuse, only 2 mm. long; peduncles axillary, puberulent, 1.5-2.5 cm. long; involucre small, appressed; bractlets orbicular, pubescent; flowers sessile; calyx-lobes puberulent; petals about 4 mm. long, glabrous; stamens 8-9 mm. long; legume linear, glabrous, apiculate, 12-16 cm. long, 12-14 mm. wide, stipitate, the base cuneate.

Near Huejuquilla, Jalisco, *J. N. Rose 2569*.

25. *Leucaena Dugesiana* Britton & Rose, sp. nov.

A shrub, the twigs, petioles and rachis minutely puberulent. Petiolar gland large, depressed, cupulate, oblong, 3-4 mm. long, borne just below the lower pair of pinnae; pinnae 12-16 pairs, short-stalked; leaflets 30-50 pairs, with scanty appressed pubescence, but soon glabrate, abruptly acute, short-ciliate, 5-8 mm. long, thickish; peduncles axillary, 1-2 cm. long, in clusters of 2-4, puberulent and with sessile red glands, angled; flowers sessile; bractlets orbicular, glabrous; calyx glabrous; petals 3 mm. long, glabrous; legume 7-10 cm. long, 10-12 mm. broad, glabrous, shining, cuneate at base.

Guanajuato. Type from Guanajuato, July 11, 1899, *Rose & Hough 4841*; collected also by *A. Dugès* in 1880.

26. *Leucaena revoluta* Britton & Rose, sp. nov.

Shrub, or small tree 3-4 m. high, the shoots, petiole, rachis and peduncle densely long-pilose, the old branches glabrate, brownish. Leaves 1 dm. long or less; petiole bearing a large cupulate gland near the lower pair of pinnae and the rachis sometimes bearing one between the upper pair; pinnae 4-12 pairs; leaflets 15-25 pairs, linear, densely pubescent when young, in age glabrate on both sides, ciliate, 4-5 mm. long, acute, the midvein excentric, the margins revolute; peduncle 1 cm. long or less; heads about 7 mm. in diameter the flowers puberulent.

Mountain slopes near Fenix, Chiapas, 1925, *Purpus 10158*.

27. *Leucaena oaxacana* Britton & Rose, sp. nov.

Twigs, petioles and rachis sparingly puberulent or glabrous. Petioles 1-2 cm. long, bearing a depressed gland 2-2.5 mm. long, at or below the lowest pair of pinnae; pinnae 10-24 pairs, short-stalked; leaflets 20-50 pairs, narrowly linear, sharply acute, densely papillate, ciliolate, 4-6.5 mm. long, 1-1.5 mm. wide, the faint midvein somewhat excentric; peduncles 2-4 together, glabrous, 1.5-2.5 cm. long; involucre approximate to the head, its bracts spreading; bractlets orbicular, ciliate, peltate; calyx 1.5 mm. long, its lobes puberulent; petals 3 mm. long; stamens about 5 mm. long; anthers glabrous; legume 8-9 cm. long, 11-14 mm. wide, glabrous, its rounded apex minutely tipped, its base short-cuneate, its stipe about 7 mm. long.

Near the city of Oaxaca, Oaxaca, June 16-21, 1899, *Rose & Hough 4648*.

28. *Leucaena esculenta* (Moc. & Sessé) Benth. Trans.

Linn. Soc. 30: 442. 1875.

Acacia esculenta Moc. & Sessé; DC. Prodr. 2: 470. 1825.

A tree, 6-15 m. high, the twigs angular, glabrous or minutely puberulent, the foliage glabrous or nearly so. Glands large, nearly flat, borne on the petiole below the lowest pair of pinnae and on the rachis between the upper pair or pairs; petioles stout, 1-2 cm. long; pinnae 12-22 pairs, short-stalked; leaflets 25-50 pairs, linear, glabrous or ciliolate, rounded, 4-6 mm. long, the midvein nearly central; heads in a terminal raceme or thyrus; peduncles stout, glabrous, 1.5-2.5 cm. long; involucre small, appressed; bractlets orbicular, ciliolate; flowers sessile; calyx 2.5-3 mm. long, glabrous; petals glabrate, a little longer than the calyx; stamens about 8 mm. long, the anthers slightly pubescent; legume broadly linear, 10 cm. long or longer, 2.5 cm. wide, glabrous, shining, narrowed into a stout stipe about 1 cm. long.

TYPE LOCALITY: New Spain.

DISTRIBUTION: Puebla.

29. *Leucaena brachycarpa* Urban, Symb. Ant. 2: 265. 1900.

A tree, 5-8 m. high, or shrubby, the twigs, petioles, leaf-rachis and peduncles more or less densely short-pilose. Glands elliptic or orbicular, depressed or cupulate, large, borne between the lower and the upper pairs of pinnae; stipules triangular, acuminate, about 1 mm. long. Petiole 1-2 cm. long; pinnae 10-25 pairs, short-stalked; leaflets 25-55 pairs, linear, densely short-pubescent when young, glabrous with ciliate margins when old, 3-4.5 mm. long, 0.7-1 mm. wide, acute or subacuminate, the midvein nearly central; heads solitary or 2-6 together in the axils; peduncles 1-2 cm. long; involucre short, appressed; flowers strigose; calyx about 2 mm. long; petals about 4 mm. long, lanceolate; legume 6-12 cm. long, 15-18 mm. wide, puberulent, apiculate, its base narrowed, its stipe 6-10 mm. long.

TYPE LOCALITY: Hope, Jamaica.

DISTRIBUTION: Veracruz: naturalized in Jamaica; introduced in Martinique.

30. *Leucaena Standleyi* Britton & Rose, sp. nov.

Twigs slender, glabrous; leaves small, about 8-12 cm. long, the rachis and rachillae glabrous or sparingly short-pubescent. Glands orbicular, cupulate, borne at or below the lowest pair of pinnae and between the upper pair; petioles 1.5-2.5 cm. long; pinnae 15-22 pairs, short-stalked; leaflets 20-30 pairs, linear, slightly curved, 3-4 mm. long, acute, pale beneath, glabrous or ciliate, the midvein excentric; fruiting peduncles 1-1.5 cm. long; legume linear, glabrous, 6-8 cm. long, 1.2-1.5 cm. wide, its apex abruptly apiculate, its base short-cuneate, its stipe 6-9 mm. long.

Santa Ana, El Salvador, January 28-30, 1922, *Standley 20409*.

31. *Leucaena Doylei* Britton & Rose, sp. nov.

Twigs slender, subterete, glabrous or sparingly puberulent. Petioles 2-3 cm. long, bearing a flat oblong gland 3-4 mm. long near the base; rachis glabrate, bearing a small depressed gland between the upper pair of pinnae; pinnae 20-25 pairs; leaflets 30-50 pairs, linear, 3-4 mm. long, acute, puberulent when young, glabrous with ciliate margins when old, the faint midvein slightly excentric; heads subracemose; peduncles very short, only about 5 mm. long; flowers sessile; involucre short, appressed to the head; calyx glabrous, about 2 mm. long; petals glabrous, 4 mm. long; stamens about 9 mm. long; legume 15 cm. long, 2 cm. wide, glabrous, shining, its triangular apex tipped with a subulate beak 8 mm. long, its base cuneate, the stipe 1.5 cm. long.

Castla Gutierrez, Chiapas, January 6, 1907, *Collins & Doyle 161*.

32. *Leucaena paniculata* Britton & Rose, sp. nov.

A tree, glabrous or nearly so throughout, the twigs subterete. Petioles stout, 1-2 cm. long, bearing a large, nearly flat gland below the lower pair of pinnae; rachis slender, bearing smaller glands between the two or three upper pairs of pinnae; pinnae 6-20 pairs, very nearly sessile; leaflets 25-45 pairs, linear, acute, glabrous or ciliate, 4-5 mm. long, the midvein somewhat excentric; heads slender-peduncled in a terminal thyrus; peduncles 1-1.5 cm. long; involucre small, appressed to the head; bractlets glabrate; flowers sessile; calyx glabrous, about 2.5 mm. long; petals a little longer than the calyx, glabrous; stamens about twice as long as the petals; anthers pilose; legume narrowly linear, glabrous, 20 cm. long, 1.3 cm. wide, pointed, short-stipitate, the seeds obliquely transverse.

Morelos; Jalisco; Oaxaca. Type from near Cuernavaca, Morelos, August 15, 1906, *Rose & Rose 11090*.

33. *Leucaena confusa* Britton & Rose, sp. nov.

A tree, glabrous or nearly so throughout, the twigs angled. Petioles stout, 2-3 cm. long, bearing an oblong, nearly flat gland about 3 mm. long; rachis bearing small cupulate glands between the 2 or 3 pairs of pinnae; pinnae 20-54 pairs; rachilla very slender; leaflets 25-60 pairs, linear, acute, about 5 mm. long, glabrous, the faint midvein somewhat excentric; heads in a long terminal thyrus, the small involucre appressed; peduncles 2-4.5 cm. long; flowers

sessile, glabrous; calyx about 2 mm. long, glabrous, or its lobes minutely ciliate; petals about 3 mm. long; stamens 9-12 mm. long, the anthers glabrous.

Jalisco, Morelos, Guerrero, and Oaxaca. Type from hills, Tequila, Jalisco, October 18, 1893, *Pringle 4534*.

34. *Leucaena laxifolia* Urban, *Symb. Ant.* 2: 266. 1900.

Young twigs minutely pilulose. Stipules triangular-subulate or setaceous, 2-4 mm. long; petioles 1.5-2 cm. long, bearing a short-obovate, depressed gland with raised margins; pinnae 12-20 pairs; leaflets 25-40 pairs, linear, straight, acute, 4-6 mm. long, about 1 mm. wide, the margin minutely pilulose, punctate with small impressed glands above, plicate-striate beneath, the midvein not prominent; heads (without stamens) 10-12 mm. in diameter; involucre appressed; flowers glabrous; calyx 3 mm. long; corolla 4 mm. long, style 8 mm. long; ovary glabrous.

TYPE LOCALITY: Mexico.
DISTRIBUTION: Veracruz.

35. *Leucaena pulverulenta* (Schl.) Benth. in Hook. *Journ. Bot.* 4: 417. 1842.

Acacia pulverulenta Schl. *Linnaea* 12: 571. 1838.

A tree up to about 18 m. high, with a trunk 4-5 dm. in diameter, the young twigs and leaves and the peduncles densely whitish-puberulent, the older twigs and foliage nearly glabrous; stipules minute, caducous; petioles 2-4 cm. long, bearing an elliptic-orbicular gland below the lower pair of pinnae; pinnae 10-20 pairs, very short-stalked; leaflets 15-30 pairs, linear, acute or obtuse, 3-6 mm. long, the midvein somewhat excentric; peduncles fascicled in the axils, slender, 2-3 cm. long; involucre wanting; flower-heads oblong; flowers densely white-strigose; calyx 1-1.5 mm. long; petals linear-spatulate, acute, 3-4 times as long as the calyx; legume linear, 10-27 cm. long, 16-19 mm. wide, glabrous, short-tipped, the stipe 1-2 cm. long.

TYPE LOCALITY: Banks of the Misantla River, San Antonio, Veracruz.

DISTRIBUTION: Southern Texas to Nuevo León, Tamaulipas and Veracruz.

ILLUSTRATIONS: Britton & Shafer, *N. Am. Trees f. 487*; Sargent, *Silva N. Am.* 3: *pl.* 140
Man. Trees N. Am. f. 452; ed. 2, *f. 549*; Rose, *Expl. Smithsonian Inst.* 1927, *f. 88*.

36. *Leucaena diversifolia* (Schl.) Benth. *Journ. Bot. Hook.*

4: 417. 1842.

Acacia diversifolia Schl. *Linnaea* 12: 570. 1838.

Twigs and leaf-rachis minutely puberulent. Stipules triangular-subulate, about 5 mm. long; petiolar gland suborbicular, cupulate, elevated, 1.5 mm. broad, borne just below the lower pair of pinnae; petioles 1.5-2 cm. long; pinnae about 17 pairs or fewer, short-stalked; leaflets 20-60 pairs, linear, 4-6 mm. long, closely approximate, glabrous, or sparingly puberulent, acutish or obtuse, subfalcate, shining, the venation prominent beneath; peduncles solitary or geminate, 1-2 cm. long; involucre borne about 3 mm. below the head of glabrous flowers; corolla somewhat longer than the calyx; legume linear, puberulent, 7-10 cm. long, 1-1.5 cm. wide, the stipe 6-8 mm. long.

TYPE LOCALITY: Jalapa, Veracruz.
DISTRIBUTION: Veracruz.

37. *Leucaena trichandra* (Zucc.) Urban, *Symb. Ant.* 2: 267. 1900.

Acacia trichandra Zucc. *Abhand. Acad. Wiss. Münch.* 2: 349. 1842.

An unarmed tree or shrub, the twigs verruculose. Pinnae 3-9 pairs; petioles sparingly pubescent, bearing a sessile gland just below the lowest pair of pinnae; leaflets 18-20 pairs, linear, ciliate, acutish, mucronulate, 4-6 mm. long; stipules lanceolate-subulate, 3-4 mm. long; peduncles 1-3, axillary, 5-8 mm. long; heads small, globose.

TYPE LOCALITY: Grown from Mexican seeds in the Munich Garden in 1835; origin not recorded.
DISTRIBUTION: Known only from the type specimen preserved in the Munich herbarium.

38. *Leucaena cuspidata* Standley, Contr. U. S. Nat. Herb.
20: 189. 1919.

Glabrous or nearly so throughout; twigs slender, nearly terete. Stipules ovate, cuspidate, 2-3 mm. long; petioles slender, 1-2.5 cm. long, bearing a small depressed orbicular gland at the lower pair of pinnae; pinnae 5-9 pairs, short-stalked; rachilla glabrous or at first sparingly pilose; leaflets 15-40 pairs, ovate-oblong, coriaceous, 3-4.5 mm. long, about 2 mm. wide, strongly veined, cuspidate, dark green above, paler beneath; peduncles axillary, 2-3.5 cm. long, involucre above the middle; flowers sessile in globular heads, ebracteolate (?); calyx glabrate, about 2 mm. long; petals about 3 mm. long; stamens about 5 mm. long; immature legume oblanceolate, about 11 cm. long, 1.6 cm. wide, glabrous, subulate-tipped, the short stout stipe about 5 mm. long, the margins thickened.

TYPE LOCALITY: Minas de San Rafael, San Luis Potosí.

DISTRIBUTION: Known only from the type locality.

39. *Leucaena Blancii* Goyena, Fl. Nic. 1: 379. 1909.

A tall or medium-sized tree, the twigs with roughened bark. Petioles 4 cm. long, bearing a sessile gland near the middle; pinnae 7-9 pairs; leaflets 15-20 pairs, glaucous beneath; peduncles solitary or in fascicles, 2.5 cm. long; flowers in heads, sessile; legume sessile, cuneate at base, 17 cm. long, 2 cm. broad near the middle, reddish.

TYPE LOCALITY: Nicaragua.

DISTRIBUTION: Known only from the type locality and to us only from the description. Compared by the author with *L. glauca*.

30. *RYNCHOLEUCAENA* Britton & Rose, gen. nov.

An unarmed tree, with bipinnate leaves, the few pairs of pinnae with many pairs of small narrow leaflets, the small flowers densely capitate in globular, involucre heads. Bractlets not caudate. Calyx 5-toothed. Petals 5, narrowly oblanceolate. Stamens 10, distinct. Legume narrowly linear, glabrous, many-seeded, tipped with a long subulate beak, the base long-attenuate, the seeds longitudinal.

Type species, *Leucaena Greggii* S. Wats.

1. *Ryncholeucaena Greggii* (S. Wats.) Britton & Rose.

Leucaena Greggii S. Wats. Proc. Am. Acad. 23: 272. 1888.

A small tree, about 5 m. high, the young twigs, petioles and peduncles loosely pubescent. Petioles 2-3 cm. long; stipules triangular-subulate, 6-15 mm. long; pinnae 5-9 pairs, short-stalked, with a subcylindric gland between each pair; leaflets 10-30 pairs, linear-lanceolate, 6-12 cm. long, 1-1.5 mm. wide, finely pubescent, becoming glabrate, sharply acute, the midvein nearly central, the lateral venation obsolete; peduncles solitary or geminate, 3-4 cm. long; involucre of 2 appressed bracts; heads dense, 2-2.5 cm. in diameter; bractlets short-pointed (?); flowers sessile; calyx-tube glabrous, its lobes pubescent; petals pubescent at the apex, about 5 mm. long; stamens about 8 mm. long; legume 15-20 cm. long, 8-12 mm. wide, narrowed above into a subulate beak 1.5-5 cm. long and below into a short stout stipe, the valves impressed between the seeds.

TYPE LOCALITY: Rinconada, Nuevo León.

DISTRIBUTION: Coahuila; Nuevo León; southern Texas.

ILLUSTRATIONS: Sargent, Man N. Am. Trees f. 451; ed. 2, f. 547, the flowering part.

31. *CAUDOLEUCAENA* Britton & Rose, gen. nov.

An unarmed shrub or tree, with bipinnate leaves, the pinnae few pairs, the leaflets rather broad, the small flowers densely capitate in long-peduncled heads which are subtended by an involucre of 2 narrow bracts. Flowers nearly sessile, subtended by ovate, long-caudate, villous bractlets. Calyx 5-toothed. Petals 5, narrowly oblong. Stamens 10, distinct. Legume narrowly linear, elongated, glabrous, many-seeded, the seeds somewhat obliquely transverse.

Type species, *Leucaena retusa* Benth.

1. *Caudoleucaena retusa* (Benth.) Britton & Rose.

Leucaena retusa Benth.; A. Gray, Pl. Wright. 1: 64. 1852.
Acacia sabeana Buckl. Proc. Acad. Phila. 1861: 453. 1862.

A shrub, or a tree up to about 8 m. high, the twigs, petioles, leaf-rachis and peduncles pubescent or villous. Stipules ovate or lanceolate, subulate-tipped, 10-15 mm. long; glands more or less elevated, globose to subcylindric, borne between some or all the pairs of pinnae; petioles 1.5-5 cm. long; pinnae 2-5 pairs, slender-stalked; leaflets 4-8 pairs, oblong, elliptic, or the upper obovate, 0.7-2.5 cm. long, reticulate-veined, villous when young, glabrous when mature, the midvein more or less excentric, the apex obtuse, rounded, retuse or mucronate; peduncles rather stout, solitary or clustered, about as long as the petioles or shorter; heads globose; bractlets 4-6 mm. long, the subulate tip about as long as the ovate base; calyx tubular, membranous, about 2.5 mm. long; petals slightly longer than the calyx; stamens 6-8 mm. long; legume 15-25 cm. long, 8-12 mm. wide, the apex acute, the base cuneate, the stipe 5-10 mm. long; seeds 6-8 mm. long.

TYPE LOCALITY: Bottom of the Río Nueces, Texas.

DISTRIBUTION: Texas and New Mexico.

ILLUSTRATION: Sargent, Man. Trees N. Am. ed. 2, f. 548.

32. ACUAN Medic. Theod. 62. 1786.

Desmanthus Willd. Sp. Pl. 4: 1014. 1806.

Darlingtonia DC. Ann. Sci. Nat. 4: 97. 1825.

Perennial herbs, or shrubs, with bipinnate leaves, small, mostly filiform stipules, and greenish or whitish small regular flowers in axillary peduncled heads, the rachis or petiole usually glanduliferous. Flowers sessile, perfect, or the lowest sometimes staminate, neutral or apetalous. Calyx campanulate, its teeth short. Petals valvate, distinct, or slightly united or coherent below. Stamens 10 or 5, distinct, mainly exerted; anthers all alike. Ovary nearly sessile; ovules few or many. Legume linear or oblong, straight or curved, flat, few-several-seeded, 2-valved, the valves coriaceous or membranous.

Type species, *Mimosa virgata* L.

Legumes linear, straight or slightly curved.

Leaflets 1-veined or apparently veinless.

Petiolar gland at or below the lower pair of leaflets, rarely at all pairs, or wanting.

Legumes not constricted between the seeds.

Herbaceous or suffrutescent.

Leaflets glabrous or sparingly ciliate.

Legumes blunt, acute or short-tipped.

Petiolar gland large, ellipsoid, 1.2-2 mm. long; plant erect.

Petiolar gland orbicular, smaller.

Legumes 4-5 mm. wide.

Legumes 2-3 mm. wide.

Legumes about 2 mm. wide, strict; plant erect; leaflets few.

Legumes about 3 mm. wide.

Legumes 5-7 cm. long; leaflets many; plant erect.

Legumes 3-6 cm. long; leaflets usually few; plant diffuse.

Legumes long-attenuate from above the middle; leaflets many, very narrow.

Leaflets ciliate or pubescent.

Stem and branches densely short-villous.

Legumes 3 mm. wide, 3-7 cm. long.

Legumes 5 mm. wide, 3-4 cm. long.

Stem and branches glabrous, or somewhat pubescent.

Legumes 2-7 cm. long; seeds several or many.

Legumes 5 mm. wide, 2.5-3 cm. long, acute.

Legumes narrower, mostly longer.

Heads small, few-flowered.

Heads short-peduncled; legumes 3-5 cm.

long; leaflets linear-oblong.

Heads on long filiform peduncles; legumes

6 cm. long; leaflets linear.

Heads several-many-flowered.

1. *A. virgatum*.
2. *A. latum*.
3. *A. bahamense*.
4. *A. insulare*.
5. *A. depressum*.
6. *A. guadeloupense*.
7. *A. velutinum*.
8. *A. Arsenoi*.
9. *A. Painteri*.
10. *A. acuminatum*.
11. *A. Pringlei*.

- Legumes subulate-tipped; leaves apparently glandless.
 Legumes short-tipped.
 Leaflets 3-4 mm. long; stamens 10.
 Leaflets 4-6 mm. long; stamens 5.
 Legumes only about 7 mm. long; seeds 1 or 2.
- Tall shrubs or small trees.
 Legumes 6 mm. wide.
 Legumes 3-4 mm. wide.
 Staminodes of basal flowers short.
 Legumes 7-12 cm. long, short-tipped.
 Legumes 5-7.5 cm. long, subulate-tipped.
 Staminodes of basal flowers elongated, 10-12 mm. long;
 legume 2.5-3 cm. long.
- Legumes constricted between the seeds.
 Legumes 2 mm. wide; stem glabrous.
 Legumes 4 mm. wide; stem pubescent.
- Petiolar gland nearly basal, below two accessory stipules. [See *A. virgatum*.]
 Leaflets strongly veined.
 Leaflets glabrous or ciliate; legume pointed.
 Leaflets pubescent; legume obtuse.
- Legumes linear-oblong, short, curved or falcate.
 Heads few-flowered; stamens 10; legumes curved.
 Heads several-flowered; stamens 5; legumes falcate.
12. *A. interior*.
 13. *A. Cooleyi*.
 14. *A. Tracyi*.
 15. *A. oligospermum*.
 16. *A. fruticosum*.
 17. *A. Covillei*.
 18. *A. subulatum*.
 19. *A. Palmeri*.
 20. *A. leptolobum*.
 21. *A. texanum*.
 22. *A. bicornutum*.
 23. *A. reticulatum*.
 24. *A. obtusum*.
 25. *A. pumilum*.
 26. *A. illinoense*.

1. *Acuan virgatum* (L.) Medic. Theod. 62. 1786.

- Mimosa virgata* L. Sp. Pl. 519. 1753.
Mimosa pernambucana Mill. Gard. Dist. ed. 8, no. 3. 1768. Not L. 1753.
Mimosa angustisiliqua Lam. Encycl. 1: 10. 1783.
Acacia virgata Gaertn. Fr. & Sem. 2: 317. 1791.
Desmanthus virgatus Willd. Sp. Pl. 4: 1047. 1806.
Desmanthus strictus Bertol. Giorn. Arcad. 21: 190. 1824.
Acacia angustisiliqua Desf. Cat. Hort. Paris ed. 3, 300. 1829.
Desmanthus virgatus strictus Griseb. Fl. Br. W. Ind. 218. 1860.
Acacia leptosperma Bello, Anal. Soc. Esp. Hist. Nat. 10: 265. 1881.

Erect or ascending, glabrous or sparingly pubescent above, 0.5-2 m. high. Stipules setiform, 2.5-4 mm. long; leaves 4-8 cm. long, the petiole and rachis glabrous or somewhat pubescent; petioles 5-10 mm. long; pinnae 1-7 pairs, with an oblong or elliptic gland 1.2-2 mm. long between the lowest pair or rarely below an accessory pair of stipules; leaflets 10-20 pairs, linear, or linear-oblong, 4-9 mm. long, glabrous, acute or apiculate, the midvein delicate; peduncles glabrous, 2-5 cm. long; heads few-several-flowered; stamens 10; legumes few or several, linear, straight or slightly curved, 6-9 cm. long, 3-4 mm. wide, short-pointed.

TYPE LOCALITY: East Indies.

DISTRIBUTION: Florida; Bermuda; West Indies; Veracruz and Morelos to Panama, Brazil and Paraguay; tropical Asia.

ILLUSTRATIONS: Jacq. Hort. Vind. pl. 80; Gaertn. Fr. & Sem. pl. 148; Pluk. Alm. pl. 307, f. 3; Mart. Fl. Bras. 15²: pl. 79; Britton, Fl. Berm. f. 190.

2. *Acuan latum* Britton & Rose, sp. nov.

Suffrutescent, erect, glabrous, or sparingly puberulent, up to 5 dm. high or higher. Stipules setiform, 3-5 mm. long; leaves 3-6 cm. long, the petiole and rachis slender; petioles 0.5-1 cm. long; pinnae 3-6 pairs; gland small, orbicular, borne at or below the lower pinnae; leaflets 12-20 pairs, linear, acute or acutish, 3-4 mm. long, delicately 1-veined; fruiting peduncles 1.5-3 cm. long; heads very small; legumes linear, short-pointed, 4-6 cm. long, 4-5 mm. wide.

Veracruz; El Salvador; Panama; Colombia. Type from Panama, January, 1860, *Hayes 765*.

3. *Acuan bahamense* Britton & Rose, sp. nov.

Erect, usually branched, glabrous, or puberulent above, 3-5 dm. high. Stipules setiform, 3-5 mm. long; petiole and rachis slender, puberulent; petiole about 10 mm. long or shorter; pinnae 1-3 pairs, an orbicular or suborbicular gland between the lower pair; leaflets 7-10 pairs, linear-oblong, or the upper oblong-obovate, glabrous, or when young ciliate, 3-6 mm. long, the apex obtuse, acute or mucronulate, the slender midvein slightly excentric; peduncles very

slender, 2-3 cm. long; heads few-flowered; stamens 10; legumes narrowly linear, straight, short-tipped, 3-6 cm. long, about 2 mm. wide.

Bahama Islands. Type from Acklin's Island, December 21, 1905 to January 6, 1906, *Brace 4325*.

4. *Acuan insulare* Britton & Rose, sp. nov.

Suffrutescent, glabrous, erect or nearly so, 0.6-1.3 m. high. Stipules filiform, 3-5 mm. long; leaves 6 cm. long or shorter; petioles 5-10 mm. long; pinnae 2-6 pairs, with an orbicular gland 0.5-1 mm. broad between the lower pair; leaflets 10-16 pairs, linear, obtuse or acutish, 3-5 mm. wide, the delicate midvein somewhat excentric; peduncles 2-3 cm. long; heads several-flowered; stamens 10; legumes narrowly linear, 5-7 cm. long, 2-3.5 mm. wide, short-tipped.

Bermuda; Porto Rico; Cuba; Jamaica. Type from wooded hills near Santiago, Oriente, Cuba, March 10-25, 1912, *Britton, Britton & Cowell 12842*.

ILLUSTRATION: ? Fawcett & Rendle, *Fl. Jam.* 4: f. 41.

5. *Acuan depressum* (H. & B.) Kuntze, *Rev. Gen. Pl.* 158. 1891.

Desmanthus depressus H. & B.; Willd. *Sp. Pl.* 4: 1046. 1806.

Desmanthus diffusus Willd. *Sp. Pl.* 4: 1046. 1806.

Mimosa depressa Poir. in *Lam. Encycl. Suppl.* 1: 58. 1810.

Desmanthus tenellus DC. *Prodr.* 2: 445. 1825.

Desmanthus pratorum Macf. *Fl. Jam.* 1: 311. 1837.

Diffusely branched or suberect, the branches prostrate or ascending, 2-4 dm. long, glabrous or sparingly pubescent. Stipules 2-3.5 mm. long; leaves 1.5-4 cm. long; petioles 12 mm. long or shorter; pinnae 1-4 pairs, with a small orbicular gland between the lowest pair; leaflets 8-12 pairs, linear, glabrous, obtuse or acute, 3-5 mm. long, the midvein delicate; peduncles 1-3 cm. long; heads few-flowered; stamens 10; legumes 1 to few, linear, straight or a little curved, 2-6 cm. long, about 3 mm. wide, pointed.

TYPE LOCALITY: South America.

DISTRIBUTION: Southern Florida; West Indies; Texas to Panama, Colombia, Peru and Brazil.

ILLUSTRATIONS: Kunth, *Mim. pl.* 35.

6. *Acuan guadeloupense* Britton & Rose, sp. nov.

Shrubby, erect, simple or branched, slender, glabrous, 5 dm. high or higher. Stipules filiform, 1-2.5 mm. long; petiole and rachis nearly filiform; petioles 8-12 mm. long; pinnae 3-5 pairs, with an orbicular gland about 0.5 mm. broad between the lower pair; leaflets 10-20 pairs, narrowly linear, acutish, 2-4 mm. long, the delicate midvein nearly central; peduncles slender, about 2 cm. long; legumes one to several, linear, 4-7 cm. long, 3-4 mm. wide, long-tuate above the middle.

Guadeloupe Island, West Indies, 1892, *Père Duss 2630*.

7. *Acuan velutinum* (Scheele) Kuntze, *Rev. Gen. Pl.* 158. 1891.

Desmanthus velutinus Scheele. *Linnaea* 21: 455. 1848.

Desmanthus peduncularis Buckl. *Proc. Acad. Phila.* 1861: 454. 1862.

Branched at the base, prostrate, ascending or nearly erect, 2-5 dm. long, the branches, petioles, leaf-rachis and peduncles densely short-villous. Stipules setiform, 3-5 mm. long; leaves 3-5 cm. long; petiole about 1 cm. long or shorter; pinnae 3-6 pairs, with a small orbicular gland between the lowest pair; leaflets linear-oblong, acute or obtuse, 2.5-4 mm. long, ciliate, the faint midvein somewhat excentric; peduncles very slender, 3-6 cm. long; heads several-many-flowered; calyx puberulent; stamens 10; legumes 2-8, linear, short-pointed, straight or slightly curved, 3-7 cm. long, about 3 mm. wide, subulate-tipped.

TYPE LOCALITY: Comal Creek near New Braunfels, Texas.

DISTRIBUTION: Texas; Coahuila.

8. *Acuan Arsenei* Britton & Rose, sp. nov.

Suffrutescent, diffuse or ascending, up to 6 dm. long, the slender stem and branches densely short-villous. Stipules filiform, about 3 mm. long; leaves 4-6 cm. long, the petiole and rachis short-villous; petioles short; pinnae 2-6 pairs, with a small orbicular gland between the lower pair; leaflets 12-20 pairs, linear, acute, long-ciliate, 2.5-4 mm. long, the venation obscure; peduncles slender, short-villous, 3-6 cm. long; heads small, several-flowered; legumes linear, nearly straight, 3-4 cm. long, 5 mm. wide, short-tipped.

Coahuila and Puebla. Type from Saltillo, Coahuila, 1909, *Brother Arsène 3455*.

9. *Acuan Painterii* Britton & Rose, sp. nov.

Suffrutescent, branched from the base, the branches ascending or diffuse, puberulent, 2-3 dm. long. Stipules setiform, 3-4 mm. long; leaves 2-4 cm. long; petiole and rachis puberulent; petioles very short, 3-6 mm. long; pinnae 2-5 pairs, rather close together, with a small orbicular gland between the lower pair; leaflets 12-16 pairs, linear-oblong, acute or mucronulate, 2-3 mm. long, ciliate, the midvein nearly central; fruiting peduncles 2-3.5 cm. long; legumes 1-4, broadly linear, short-tipped, 2-3 cm. long, 5 mm. wide.

Querétaro, San Luis Potosí, and Hidalgo. Type from between Higuarillas and San Pablo, Querétaro, August 24, 1905, *Rose, Painter & Rose 9810*.

10. *Acuan acuminatum* (Benth.) Kuntze, Rev. Gen. Pl. 158. 1891.

Desmanthus acuminatus Benth. Journ. Bot. Hook. 4: 357. 1842.

Diffuse, branched, the stems glabrous or sparingly pubescent, 3-7 dm. long. Stipules setiform, 3-7 mm. long; leaves 3-5 cm. long, the petiole and rachis pubescent or glabrate; pinnae 1-4 pairs, with an orbicular gland 0.7-1.5 mm. broad between the lower pair; leaflets 6-12 pairs, linear-oblong, mucronate, ciliate, 2.5-4 mm. long, the faint midvein nearly central; peduncles 1-4 cm. long; heads few-flowered; stamens 10; legumes 2-8, linear, somewhat curved or nearly straight, 3-5 cm. long, about 3 mm. wide.

TYPE LOCALITY: Rio Brazos, Texas.

DISTRIBUTION: Texas.

11. *Acuan Pringlei* Britton & Rose, sp. nov.

Shrubby, the slender glabrous branches decumbent or ascending, 2-3 dm. long. Stipules setiform, 3-5 mm. long; leaves 3-5 cm. long; petiole and rachis nearly filiform, puberulent; pinnae 4-6 pairs, with a small orbicular gland between the lower pair; leaflets 10-18 pairs, linear, acute or mucronate, ciliate, membranous, 2-3 mm. long, the faint midvein nearly central; peduncles filiform, glabrous, 4-6 cm. long; heads small, few-flowered; stamens 10; legumes 2 or 3, linear, slightly curved, short-beaked, 5-6 cm. long, 3-4 mm. wide.

Rich shaded places, Monterey, Nuevo León, June 26, 1888, *Pringle 1902*.

12. *Acuan interior* Britton & Rose, sp. nov.

Suffrutescent, apparently erect or ascending, up to 8 dm. long, the stem, branches and peduncles glabrous. Stipules setiform, 2-4 mm. long; leaves 4-7 cm. long, the petiole and rachis sparingly pubescent, glandless; petioles 4-7 mm. long; pinnae 4-7 pairs; leaflets 10-20 pairs, linear-oblong, acutish or obtuse, about 3 mm. long, ciliate, the midvein delicate; peduncles slender, about 3 cm. long or shorter; heads many-flowered; stamens 10; legume narrowly linear, subulate-tipped, 5-6 cm. long, about 2 mm. wide.

Durango and Michoacán. Type from vicinity of Morelia, Michoacán, July 29, 1909, *Brother Arsène 2521*.

13. *Acuan Cooleyi* (Eaton) Britton & Rose.

Acacia Cooleyi Eaton, Man. ed. 5, 89. 1829.

Desmanthus Jamesii T. & G. Fl. N. Am. 1: 402. 1840.

Desmanthus Jamesii Fendleri S. Wats. Smithsonian. Misc. Coll. 258: 214. 1878.

Desmanthus Cooleyi Branner & Coville, Rep. Geol. Surv. Ark. 1888: 178. 1891.

Acuan Fendleri Heller, Cat. N. Am. Pl. ed. 2, 106. 1900.

Shrubby, decumbent or ascending, 2-5 dm. long, the angled stems and branches glabrous or puberulent. Stipules setiform, minute, 1-2 mm. long, or wanting; leaves 3-4 cm long; petiole and rachis puberulent or glabrate; pinnae 2-7 pairs, with an orbicular gland between the lower pair; leaflets 8-15 pairs, oblong or linear-oblong, 3-4 mm. long, acutish or mucronulate, ciliate, at least when young, the delicate midvein somewhat excentric; peduncles about 2 cm. long, or shorter, sometimes very short; heads several-many-flowered; stamens 10; legumes solitary or few, linear, straight or a little curved, 3-7 cm. long, about 3 mm. wide, pointed.

TYPE LOCALITY: Sources of the Canadian River, New Mexico.

DISTRIBUTION: Nebraska and Oklahoma to Texas, Arizona and Durango.

14. *Acuan Tracyi* Britton & Rose, sp. nov.

Stem slender, glabrous, 6 dm. long or longer, widely branched, its angles roughish. Stipules filiform, 3-5 mm. long; leaves 3-6 cm. long, the rachis very slender, glabrous, the petiole very short; pinnae 2-5 pairs, with a small suborbicular gland between the lower pair; leaflets 10-15 pairs, linear, acute, 4-6 mm. long, ciliate, at least when young, the slender midvein excentric; heads several-flowered; peduncles 2-4 cm. long; legumes narrowly linear, about 6 cm. long, 3 mm. wide, short-pointed.

Texas. Type from Pierce, September 16, 1901, *S. M. Tracy 7786a*.

15. *Acuan oligospermum* (Brand.) Britton & Rose.

Desmanthus oligospermus Brand. Proc. Cal. Acad. II. 3: 132. 1891.

Shrubby, nearly prostrate, branched, 2-5 dm. long, the slender branches glabrous, or puberulent above. Stipules setiform, about 3 mm. long; leaves 3-4 cm. long, the very slender petiole and rachis puberulent; petiole 5-15 mm. long; pinnae 2-4 pairs; gland orbicular, minute, borne between the lower pair; leaflets 8-12 pairs, linear-oblong or the upper ones oblong-obovate, sparingly appressed-pubescent, ciliate, 3-4 mm. long, obtuse or rounded, the delicate midvein nearly central; peduncles filiform, glabrous, 2-3 cm. long; heads very small, few-flowered; stamens 5; legume linear-oblong, about 7 mm. long, 2 mm. wide, acuminate, glabrous, 1-2-seeded, described as indehiscent.

TYPE LOCALITY: San José del Cabo, Lower California.

DISTRIBUTION: Known only from the type locality.

16. *Acuan fruticosum* (Rose) Standley, Contr. U. S. Nat. Herb.

23: 366. 1922.

Desmanthus fruticosus Rose, Contr. U. S. Nat. Herb. 1: 131. 1892.

A shrub, or a small tree 3-4 m. high, glabrous throughout, the branches slender. Stipules setaceous, 3-4 mm. long; leaves 6-10 cm. long, the petiole and rachis slender; petioles 1.5-3 cm. long; pinnae 3 or 4 pairs, with a rather large suborbicular gland between the lower pair, and sometimes with a smaller one between the other pairs; leaflets 12-20 pairs, linear-oblong, 6-10 mm. long, 1.5-2 mm. wide, the apex rounded, the slender midvein a little excentric; peduncles 3-5 cm. long, sometimes bearing 2 or 3 bractlets above; heads many-flowered; stamens 10; legumes several or many, linear, 6-9 cm. long, 5-6 mm. wide, short-pointed.

TYPE LOCALITY: Carmen Island, Lower California.

DISTRIBUTION: Southern Lower California.

ILLUSTRATION: Rose, loc. cit. *pl. 13*.

17. *Acuan Covillei* Britton & Rose, sp. nov.

A shrub, 1.3 m. high or lower, the slender twigs glabrous. Stipules setiform, 2-3 mm. long; leaves 2-3 cm. long, sometimes 2 or 3 together at the nodes; petiole and rachis slender, sparingly pubescent; petioles only about 5 mm. long; pinnae 1 or 2 pairs, the orbicular gland about 0.4 mm. broad; leaflets only 6-8 pairs, oblong, ciliolate or becoming glabrous, obtuse, 1-veined, 3-4 mm. long; fruiting peduncles about 2 cm. long; legumes elongated-linear, short-tipped, 7-10 cm. long, 3-4 mm. wide.

Sonora and Sinaloa. Type from Guaymas, Sonora, February 11, 1903, *Coville 1670*.

18. *Acuan subulatum* Britton & Rose, sp. nov.

Suffrutescent, glabrous, up to 5 dm. high, or higher. Stipules setiform, 2-3 mm. long; leaves 4-5 cm. long; petiole and rachis nearly filiform; petioles about 1 cm. long; pinnae 4 or 5 pairs, with a small orbicular or broadly elliptic gland between the lower pair; leaflets 10-15 pairs, linear, acutish, 3-4 mm. long, the delicate midvein nearly central; heads several-flowered; peduncles slender, in fruit 2-4 cm. long; legumes narrowly linear, 5-9 cm. long, 3-3.5 mm. wide, subulate-tipped.

Sinaloa. Type from Culiacan, October 25 to November 18, 1891, *Palmer 1783*.

19. *Acuan Palmeri* Britton & Rose, sp. nov.

Shrubby; branches slender, glabrous. Stipules setiform, 2-3 mm. long; leaves only 2-3 cm. long, the petiole and rachis sparingly puberulent; pinnae 2 pairs, with an elliptic or sub-orbicular gland between the lower pair, and sometimes a smaller one between the upper pair; leaflets 6-10 pairs, linear-oblong or the upper ones oblong-obovate, 3-5 mm. long, obtuse, ciliate, at least when young, the delicate midvein excentric; peduncles filiform, glabrous, 1-2 cm. long; heads several-flowered, the lower flowers with linear narrow filaments 10-12 mm. long; stamens 10; legumes solitary or few, linear, acuminate, 2.5-3 cm. long, 3 mm. wide, glabrous.

Guaymas, Sonora, 1887, *Palmer 86*.

20. *Acuan leptolobum* (Torrey & Gray) Kuntze, Rev. Gen. Pl. 158. 1891.

Desmanthus leptolobus Torrey & Gray, Fl. N. Am. 1: 402. 1840.

Herbaceous, ascending, 6-10 dm. long, the stem and branches rough-angled. Stipules setiform, 4-6 mm. long; leaves 3-5 mm. long; petioles 4-8 mm. long; pinnae 5-10 pairs; gland small, orbicular, borne between the lowest pair of pinnae, or wanting; leaflets 10-24 pairs, linear-lanceolate, acute, ciliate, or glabrous, 3-4 mm. long, the delicate midrib slightly excentric; peduncles 1-2.5 cm. long; heads few-flowered; stamens 5; legumes linear, nearly straight, acuminate, glabrous, 6-8-seeded, slightly constricted between the longitudinal seeds, 4-7 cm. long, about 2 mm. wide.

TYPE LOCALITY: Texas.

DISTRIBUTION: Missouri to Texas.

ILLUSTRATIONS: Britton & Brown, Ill. Fl. ed. 1, *f. 2029*; ed. 2, *f. 2431*.

21. *Acuan texanum* Britton & Rose, sp. nov.

Stem slender, short-pubescent above, widely branched, 4 dm. long or longer. Stipules filiform, 3-6 mm. long; leaves 3-5 cm. long, the petiole only 5 mm. long or shorter, the slender rachis puberulent; pinnae 3-5 pairs, with an orbicular gland between the lower pair; leaflets linear, obtuse, acutish or mucronulate, ciliate, 3-4 mm. long; fruiting peduncle about 3 cm. long; legumes linear, 4-4.5 cm. long, 3 mm. wide, short-pointed, more or less constricted between the seeds.

Pierce, Texas, September 16, 1901, *S. M. Tracy 7786*.

22. *Acuan bicornutum* (S. Wats.) Britton & Rose.

Desmanthus bicornutus S. Wats. Proc. Am. Acad. 21: 426. 1886.

Mimosa canonis M. E. Jones, Contr. West. Am. Bot. 12: 6. 1908.

Erect, glabrous, or minutely puberulent above, 1-1.5 m. high. Stipules filiform, borne at the petiole-bases, and also near the base of the petiole just above a large suborbicular gland; leaves about 10 cm. long or shorter; petioles 1-3 cm. long; pinnae 7-13 pairs; leaflets 25-50 pairs, linear, acute, 2-3 mm. long, the delicate midvein excentric; heads many-flowered, axillary and in terminal leafy racemes; peduncles 4 cm. long or shorter; stamens 9 or 10; legumes linear, 3-7 cm. long, about 3 mm. wide, sharply acute, glabrous, 8-15-seeded.

TYPE LOCALITY: San José, southwestern Chihuahua

DISTRIBUTION: Chihuahua.

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VOLUME 23

PART 3

NORTH AMERICAN FLORA

(ROSALES)

MIMOSACEAE (Conclusio)

NATHANIEL LORD BRITTON AND JOSEPH NELSON ROSE



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ANNOUNCEMENT

NORTH AMERICAN FLORA is designed to present in one work descriptions of all plants growing, independent of cultivation, in North America, here taken to include Greenland, Central America, the Republic of Panama, and the West Indies, except Trinidad, Tobago, and Curaçao and other islands off the north coast of Venezuela, whose flora is essentially South American.

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Volumes 20 to 34. Dicotyledones.

The preparation of the work has been referred by the Scientific Directors of the Garden to a committee consisting of Dr. N. L. Britton, Dr. M. A. Howe, and Dr. J. H. Barnhart.

Professor John M. Coulter, of the University of Chicago; Mr. Frederick V. Coville, of the United States Department of Agriculture; and Professor William Trelease, of the University of Illinois, have consented to act as an advisory committee.

Each author will be wholly responsible for his own contributions, being restricted only by the general style adopted for the work, which must vary somewhat in the treatment of diverse groups.

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THE NEW YORK BOTANICAL GARDEN

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23. *Acuan reticulatum* (Benth.) Kuntze, Rev. Gen. Pl. 158. 1891.*Desmanthus reticulatus* Benth. Journ. Bot. Hook. 4: 357. 1842.*Desmanthus rhombifolius* Buckl. Proc. Acad. Phila. 1861: 454. 1862.

Nearly herbaceous, diffuse, much-branched from the base, 3-16 dm. long. Stems and branches slender, puberulent; stipules setiform, 2-5 mm. long; leaves 4-6 cm. long, the petiole and rachis puberulent; gland minute, orbicular, or wanting; pinnae 1-4 pairs; leaflets 4-10 pairs, oblong, elliptic or the upper pair elliptic-obovate, 3-5 mm. long, glabrous or ciliate, strongly 2-3-nerved and reticulate-veined, the apex rounded or mucronulate; peduncles very slender, puberulent, 4-10 cm. long; heads few-flowered; stamens 10; legume linear, straight or slightly curved, closely obliquely veined, sharply tipped, 2.5-5 cm. long, about 3 mm. wide.

TYPE LOCALITY: San Felipe, Texas.

DISTRIBUTION: Texas.

24. *Acuan obtusum* (S. Wats.) Heller, Cat. N. Am. Pl. 67. 1898.*Desmanthus obtusum* S. Wats. Proc. Am. Acad. 17: 349, 371. 1882.*Acuan fallax* Small, Bull. N. Y. Bot. Gard. 2: 97. 1901.*Desmanthus fallax* K. Schum. Bot. Jahresb. 29: 540. 1903.

Decumbent or prostrate, the slender stems finely pubescent, 1-3 dm. long. Stipules setiform, 3-5 mm. long; leaves 2-4 cm. long, the petiole and rachis puberulent; gland small, orbicular, borne between the lower pair of pinnae; pinnae 1-4 pairs; leaflets 8-14 pairs, oblong, obtuse or mucronulate, 3-5 mm. long, pubescent and ciliate, 2-3-nerved and faintly reticulate-veined; heads small, few-flowered; peduncles 2-6 cm. long, slender, puberulent; heads few-flowered; stamens 6; legumes narrowly linear, 1.5-3.2 cm. long, about 2 mm. wide, straight, obtuse or acutish, apiculate.

TYPE LOCALITY: Western Texas.

DISTRIBUTION: Western and southwestern Texas.

25. *Acuan pumilum* (Schl.) Britton & Rose.*Mimosa pumila* Schl. Linnaea 12: 557. 1838.*Desmanthus incurvus* Benth. Lond. Journ. Bot. 5: 84. 1846.*Acuan incurvum* Kuntze, Rev. Gen. Pl. 158. 1891.*Desmanthus pumilus* Macbride, Contr. Gray Herb. 59: 14. 1919.

Stems glabrous, or sparingly pubescent above, diffuse, 3-4 dm. long. Stipules filiform, 3-4 mm. long; leaves 4-6 cm. long; petioles and rachis slender, glabrous or nearly so; gland small or wanting; petiole 6-12 mm. long; pinnae 5-10 pairs; leaflets 10-18 pairs, linear-oblong, 3-4 mm. long, acutish, ciliate at least when young, the midvein slightly excentric, the lateral venation obscure; peduncles glabrous, 2-4 cm. long in fruit; heads few-flowered; stamens 10, 6-8 mm. long; legume flat, falcate, 2-3 cm. long; about 5 mm. wide, reticulate-veined, glabrous.

TYPE LOCALITY: Near Regla, Mexico.

DISTRIBUTION: Mexico; Hidalgo; Zacatecas.

26. *Acuan illinoense* (Michx.) Kuntze, Rev. Gen. Pl. 158. 1891.*Mimosa virgata* Bartr. Travels 421. 1791. Not *Mimosa virgata* L. 1753.*Mimosa illinoensis* Michx. Fl. Bor. Am. 2: 254. 1803.*Mimosa glandulosa* Michx. Fl. Bor. Am. 2: 254. 1803.*Acacia brachyloba* Willd. Sp. Pl. 4: 1071. 1806.*Acacia glandulosa* Willd. Sp. Pl. 4: 1071. 1806.*Mimosa contortuplicata* Zucc. in Roemer, Coll. 160. 1809.*Acacia virgata* Raf. Fl. Lud. 136. 1817.*Darlingtonia brachyloba* DC. Ann. Sci. Nat. 4: 97. 1824.*Darlingtonia glandulosa* DC. Ann. Sci. Nat. 4: 98. 1824.*Darlingtonia intermedia* Torr. Ann. Lyc. N. Y. 2: 191. 1828.*Darlingtonia virgata* Raf. New Fl. 1: 43. 1836.*Desmanthus brachylobus* Benth. Journ. Bot. Hook. 4: 358. 1842.*Desmanthus falcatus* Scheele, Linnaea 21: 455. 1848.*Neptunia virgata* Branner & Coville, Ann. Rep. Geol. Surv. Ark. 1888: 178. 1891.*Acuan glandulosa* Heller, Cat. N. Am. Pl. ed. 2, 106. 1900.*Desmanthus illinoensis glandulosus* Macbride, Contr. Gray Herb. 59: 14. 1919.

Stems ascending or erect, 3-10 dm. long, glabrous, or puberulent above. Stipules filiform, 6-8 mm. long; leaves 6-10 cm. long, the petiole and rachis glabrous or puberulent; petiole

about 1.5 cm. long, or shorter; pinnae 6-14 pairs, with a small oblong or suborbicular gland between them or between the lower pair only; leaflets linear, acute, glabrous or ciliate, 2-3 mm. long, the delicate midvein nearly central; heads several-flowered; peduncles glabrous, in fruit 3-7 cm. long; stamens 5; legumes flat, strongly curved, densely capitate, 1.5-2.5 cm. long, about 5 mm. wide, glabrous.

TYPE LOCALITY: Illinois.

DISTRIBUTION: Ohio to South Dakota, Colorado, Florida, Texas and New Mexico; California.

ILLUSTRATIONS: Vent. Choix *pl.* 27; DeCandolle, *Mem. Leg.* *pl.* 66; Britton & Brown, *Ill. Fl.* ed. 1, *fig.* 2030; ed. 2, *fig.* 2432; Meehan, *Native Flowers and Ferns* 2: *pl.* 7.

33. LEPTOGLOTTIS DC. *Mem. Lég.* 451. 1825.

Schrankia Willd. *Sp. Pl.* 4: 1041. 1806. Not Medic. 1792.

Morongia Britton, *Mem. Torr. Club* 5: 191. 1894.

Perennial herbs, or shrubs, arching, subsucculent, prostrate or procumbent, mostly armed with recurved or reflexed prickles. Leaves bipinnate, usually sensitive; leaflets numerous, small; stipules narrowly linear or setaceous. Flowers small, 4-5-parted, pink or purple, perfect or polygamous, in axillary peduncled globose heads. Stamens usually 8-12, distinct, or united at the very base; anthers all alike. Ovary nearly sessile; ovules several or many. Legume linear, beaked or beakless, subterete, quadrangular or compressed, prickly or rarely unarmed, longitudinally dehiscent or at length 4-valved, several-seeded.

Type species, *Leptoglottis Nuttallii* DC.

A. Venation of the leaflets prominent beneath.

Pinnae mostly 4-6 pairs.

Legume subterete.

Legume distinctly beaked, 6-15 cm. long.

Leaflets cuspidate.

Leaflets obtuse or acutish.

Legume beakless, 3-5 cm. long, densely prickly.

Legume compressed, 2.5-5 cm. long.

Pinnae 1 or 2 pairs, rarely 3 pairs.

Leaflets oblong to obovate, mucronulate.

Leaflets linear, sharply acute.

B. Venation of the leaflets faint or obsolete.

1. Legume compressed.

Legume about 5 mm. wide, glabrous.

Legume subulate-beaked, its valve short-prickly.

Legume scarcely beaked, its valves long-prickly.

Legume 2.5-3 mm. wide, puberulent.

2. Legume subterete or subquadrangular.

a. Prickles of the legume few, or none.

Pinnae 4-6 pairs; legume with distant prickles.

Stem stout, strongly prickly; legume 4 mm. thick.

Stem slender, sparingly prickly; legume 2 mm. thick.

Pinnae 1-3 pairs; legume unarmed, or with very few stout prickles.

Pinnae 1 pair; stem unarmed.

Pinnae 2 or 3 pairs; stem prickly.

b. Legume copiously or distantly prickly.

Stem pilose; leaflets pubescent.

Stem glabrous or puberulent.

Legume nearly beakless, short.

Pinnae 4-6 pairs; legume densely prickly, glabrous.

Pinnae 2 pairs; legume distantly prickly, puberulent.

Legume distinctly beaked.

Legume-beak very slender, about one-fourth as long as the body.

Peduncles very short; legume-prickles slender.

Peduncles long; legume with broad-based prickles.

Leaflets oblong, mucronulate.

Leaflets linear, acute.

Legume-beak shorter.

Leaflets 1-veined or apparently veinless.

Pinnae 4-7 pairs.

Legume 3 mm. thick, densely prickly.

Legume 2 mm. thick, the prickles rather distant.

Pinnae 1-3 pairs.

Leaflets oblong or oblong-obovate, mucronulate.

Stem stout; legume densely prickly.

Stem very slender; legume-prickles rather distant.

Leaflets linear, acute.

1. *L. Nuttallii*.
2. *L. floridana*.
3. *L. hystricina*.
4. *L. mimosoides*.
5. *L. paucijuga*.
6. *L. regiomontana*.
7. *L. Roemeriana*.
8. *L. Reverchonii*.
9. *L. occidentalis*.
10. *L. portoricensis*.
11. *L. Halliana*.
12. *L. subinermis*.
13. *L. diffusa*.
14. *L. distachya*.
15. *L. Chapmanii*.
16. *L. confusa*.
17. *L. leptocarpa*.
18. *L. latidens*.
19. *L. Nelsonii*.
20. *L. microphylla*.
21. *L. angustisiliqua*.
22. *L. quadrivalvis*.
23. *L. potosina*.
24. *L. jaliscensis*.

Leaflets delicately pinnately veined; legume densely prickly. [See also no. 14]

Legume 3 mm. thick, pubescent, scarcely beaked. 25. *L. Palmeri*.

Legume 5-6 mm. thick, glabrous, subulate-beaked. 26. *L. hamata*.

C. Species not grouped.

27. *L. Berlandieri*.

1. *Leptoglottis Nuttallii* DC. Mem. Lég. 451. 1825.

Schrankia uncinata Torrey Gray, Fl. N. Am. 1: 400. 1840. Not Willd. 1806.

Leptoglottis uncinata Rydb. Fl. Neb. 21: 31. 1895.

Stems rather stout, copiously prickly, decumbent, 6-12 dm. long. Stipules 4-6 mm. long; petioles and rachis prickly; pinnae 4-8 pairs; leaflets 8-15 pairs, elliptic, glabrous or sparingly ciliate, chartaceous, 4-8 mm. long, strongly reticulate-veined, the apex cuspidate; peduncles prickly, 3-9 cm. long; legume terete, 5-10 cm. long, 3-4 mm. thick, densely or sometimes rather sparingly prickly.

TYPE LOCALITY: Arkansas Territory.

DISTRIBUTION: Virginia?; South Carolina to Alabama, Illinois, South Dakota, Nebraska and Texas.

ILLUSTRATIONS: Britton and Brown, Ill. Fl. f. 2031; ed. 2, f. 2434.

2. *Leptoglottis floridana* (Chapm.) Small.

Schrankia floridana Chapm. Fl. S. U. S. ed. 2, Suppl. 2: 683. 1892.

Morongia floridana Heller, Cat. N. Am. Pl. 4. 1898.

Glabrous; stem slender or rather stout, 1-3 m. long, or longer, sometimes vine-like, armed with broad-based prickles. Stipules about 2 mm. long; petioles and rachis slender, prickly; petioles 2-3.5 cm. long; pinnae 2-7 pairs, short-stalked; leaflets oblong, linear-oblong or the upper obovate, 3-5 mm. long, obtuse or acute, reticulate-veined; peduncles prickly, 1.5-3 cm. long; legume subterete, 6-15 cm. long, more or less prickly, long-beaked.

TYPE LOCALITY: Southern Florida.

DISTRIBUTION: Central and northern Florida.

3. *Leptoglottis hystricina* Small, sp. nov.

Glabrous; stems rather slender, prickly, 1 m. long or longer. Stipules 4-6 mm. long; petioles and rachis very slender, more or less prickly; pinnae 4 or 5 pairs; leaflets 10-15 pairs, linear-oblong, reticulate-veined on both sides, 4-7 mm. long, obtuse or acutish, apiculate; peduncles prickly, 4-12 cm. long; legume 3-5 cm. long, 4-6 mm. thick, subterete, very densely prickly, beakless.

Texas and Louisiana. Type from Hempstead, Texas, May 1, 1872, *Elihu Hall 170*.

4. *Leptoglottis mimosoides* Small, sp. nov.

Glabrous; stem stout, up to 1 m. long or longer, armed with short prickles. Stipules 4-5 mm. long; petioles and leaf-rachis prickly; petioles 2-3 cm. long; pinnae 5 or 6 pairs; leaflets 7-11 pairs, oblong, 5-8 mm. long, strongly reticulate-veined beneath, obscurely veined above, the apex obtuse, mucronate or acute; peduncles 4-6 cm. long, prickly, much thickened in fruit; legume compressed, more or less prickly, 3-6 cm. long, 5 mm. wide, short-beaked.

Near Fort Worth, Texas, 1912, *Albert Ruth 13*.

5. *Leptoglottis paucijuga* Britton & Rose, sp. nov.

Schrankia uncinata, var. Benth. Trans. Linn. Soc. 30: 442. 1875.

Stems slender, sparingly prickly, glabrous, 2 dm. long or longer. Stipules about 3 mm. long; petioles and rachis very slender, unarmed; petioles about 1.5 cm. long or shorter; pinnae 1-3 pairs; leaflets 5-7 pairs, oblong to obovate, 2-3 mm. long, obtuse, mucronulate, glabrous, or when young puberulent or ciliate, at least those of lower leaves prominently veined beneath; peduncles unarmed, about 2.5 cm. long or shorter; legume quadrangular, 2-3 cm. long, 3-4 mm. thick, prickly, short-beaked, densely puberulent when young, becoming glabrous.

Nuevo León, Tamaulipas, and Coahuila. Type from Monterey, Nuevo León, *Eaton & Edwards*.

6. *Leptoglottis regiomontana* Britton & Rose, sp. nov.

Glabrous throughout, the very slender stems 2-4 dm. long, bearing scattered prickles. Stipules only 1.5-2 mm. long; pinnae 1 or 2 pairs; leaflets 4 or 5 pairs, linear, 4-5 mm. long, sharply acute, glabrous, or more or less ciliate, strongly veined beneath; peduncles 1-2 cm. long, glabrous, unarmed; heads very small.

Bella Vista, Monterey, Nuevo León, 540 m. altitude, May, 1911, *Brother Arsène 6132*.

7. *Leptoglottis Roemeriana* (Scheele) Britton & Rose.

Mimosa Roemeriana Scheele, *Linnaea* 21: 456. 1848.

Schrankia platycarpa A. Gray, *Bost. Journ. Nat. Hist.* 6: 183. 1850.

Morongia Roemeriana Heller, *Contr. Frank. & Marsh. Coll.* 1: 44. 1895.

Schrankia Roemeriana Blankinship, *Rept. Mo. Bot. Gard.* 18: 168. 1907.

Stem slender, prostrate, glabrous or puberulent, about 1 m. long or less, armed with short prickles. Stipules subulate, short; petioles and rachis very slender, sparingly prickly; pinnae 2-4 pairs; leaflets 6-12 pairs, oblong or the upper ones oblong-obovate, glabrous or ciliate, 4-5 mm. long, obtuse, mucronulate, the delicate midvein central; peduncles prickly, 2-4 cm. long; legume compressed, 3-5 cm. long, about 5 mm. wide, densely or loosely prickly, its beak 3-5 mm. long.

TYPE LOCALITY: New Braunfels, Texas.

DISTRIBUTION: Southern Texas.

8. *Leptoglottis Reverchonii* Britton & Rose, sp. nov.

Stem slender, prostrate or ascending, densely puberulent, 3-4 dm. long, copiously short-prickly. Stipules setaceous; leaves 6-8 cm. long, the slender petiole and rachis short-prickly, the petioles 2-3 cm. long; pinnae 3-5 pairs; leaflets 8-13 pairs, linear-oblong, 5-7 cm. long, ciliate, at least when young, cuspidate, the slender midvein excentric; peduncles prickly, 3-6 cm. long; heads many-flowered; legume linear, compressed, densely long-prickly, 3.5-6 cm. long, about 5 mm. wide.

Calcareous prairies, among rocks, Dallas, Texas, May, June, 1877, *J. Reverchon*.

9. *Leptoglottis occidentalis* (Wooton & Standley) Britton & Rose.

Morongia occidentalis Wooton & Standley, *Contr. U. S. Nat. Herb.* 16: 135. 1913.

Stems prostrate, stout, densely puberulent, armed with distant prickles. Stipules about 2 mm. long; petioles and rachis slender, puberulent, sparingly prickly; pinnae 5-7 pairs; leaflets 12-16 pairs, oblong or linear-oblong, acute, 4-5 mm. long, glabrous or ciliate, the nearly central midvein faint; peduncles 2-6 cm. long, sparingly prickly or unarmed; legume 7-9 cm. long, 2-3 mm. wide, compressed, sparingly prickly, puberulent, its beak 5-7 mm. long.

TYPE LOCALITY: Near Nara Visa, New Mexico.

DISTRIBUTION: New Mexico. (Western Texas?).

10. *Leptoglottis portoricensis* (Urban) Britton & Rose.

Schrankia distachya Stahl, *Est.* 3: 136. 1885. *Not Moc. & Sessé*, 1825.

Schrankia portoricensis Urban, *Symb. Ant.* 2: 267. 1900.

Morongia distachya Cook & Collins, *Contr. U. S. Nat. Herb.* 8: 194, *hyponym*, 1903.

Morongia leptoclada Cook & Collins, *loc. cit.*, *hyponym*, 1903.

Morongia portoricensis Britton, *Sci. Surv. P. R. & V. I.* 5: 357. 1924.

A shrub, 2 m. high or less, glabrous or nearly so, the long slender angled branches armed with prickles 1.5-2.5 mm. long. Stipules 6-12 mm. long; leaves 7-12 cm. long; petiole and rachis slender, prickly; pinnae 4-7 pairs, rather distant; leaflets 10-20 pairs, linear, thin, obtuse or acutish, inconspicuously veined, 3-6 mm. long, or the lowest pair shorter; peduncles 1-2 cm. long; legume nearly terete, 8-18 cm. long, 4-5 mm. thick, its subulate beak 1-2 cm. long, its valves armed with few distant prickles.

TYPE LOCALITY: San Ildefonso, near Coamo, Porto Rico.

DISTRIBUTION: Type locality and vicinity.

11. *Leptoglottis Halliana* Britton & Rose, sp. nov.

Glabrous throughout; stem very slender, 6 dm. long or longer, armed with short prickles. Stipules 3-4 mm. long; petioles very slender, prickly, 2-5 cm. long; pinnae 4-6 pairs, filiform-stalked; leaflets 12-16 pairs, linear, membranous, about 2 mm. long, sharply acute, the midvein nearly central; peduncles filiform, naked or sparingly prickly, 2-4 cm. long; heads small; legume subterete, very slender, 12-15 cm. long, about 1.5 mm. thick, armed with a few scattered prickles, its nearly filiform beak 2-3 cm. long.

Sandy hills, Hempstead, Texas, June 1, 1912, *Elihu Hall 171*.

12. *Leptoglottis subinermis* (S. Wats.) Britton & Rose.

Schrankia subinermis S. Wats. Proc. Am. Acad. 17: 350. 1882.

Glabrous, unarmed, except the legume; stem very slender, 3 dm. long or longer. Pinnae 1 pair; petioles about 2.5 cm. long; leaflets 6-10 pairs, oblong, veinless, pubescent, obtuse or mucronulate, about 2 mm. long; peduncles very slender, 1-3 cm. long; legume 5-6 cm. long, glabrous, long-rostrate, unarmed or with a few, chiefly marginal prickles.

TYPE LOCALITY: Mountains north of Monclova, Coahuila.

DISTRIBUTION: Known only from the type locality.

13. *Leptoglottis diffusa* (Rose) Britton & Rose.

Schrankia diffusa Rose, Contr. U. S. Nat. Herb. 1: 327. 1895.

Stem slender, diffuse, puberulent or glabrate, 1-2 m. long, armed with reflexed prickles, the branches pendulous. Stipules narrowly linear-lanceolate, about 3 mm. long; petioles slender, prickly, 2-6 cm. long; pinnae 2 or 3 pairs; leaflets 10-20 pairs, oblong or linear-oblong, 3-6 mm. long, obtuse or mucronulate, glabrous, the delicate midvein nearly central; peduncles slender, unarmed, 1-2.5 cm. long; flowers pink to white; legume terete, 5-10 cm. long, rostrate, glabrous, unarmed, or with a few short distant prickles.

TYPE LOCALITY: Manzanillo, Colima.

DISTRIBUTION: Colima and Sinaloa.

ILLUSTRATION: Rose, loc cit. f. 5.

14. *Leptoglottis distachya* (Moc. & Sessé) Britton & Rose.

Schrankia distachya Moc. & Sessé; DC. Prodr. 2: 443. 1825.

Stem stout, pilose, densely prickly. Stipules about 5 mm. long; pinnae 4 or 5 pairs; petioles and rachis prickly; petioles 4-8 cm. long; leaflets 10-16 pairs, oblong, 6-7 mm. long, obtuse, mucronulate, appressed-pubescent on both sides, delicately pinnately veined; peduncles prickly, 1.5-2 cm. long in fruit; legume subquadrangular, strongly angled, densely prickly, pilose on the angles, about 8 cm. long, 4-5 mm. thick.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Guerrero; Jalisco.

15. *Leptoglottis Chapmanii* Small.

Schrankia angustata brachycarpa Chapm. Fl. S. U. S. ed. 2, 116. 1883. Not *Schrankia brachycarpa* Benth. 1840.

Glabrous; stems slender, 6-10 dm. long, armed with short prickles. Stipules 2-3 mm. long; petioles and leaf-rachis very slender, prickly; petioles about 3 cm. long or shorter; pinnae 3-6 pairs; leaflets 8-12 pairs, linear, obtuse or acutish, 3-4 mm. long, the midvein delicate, otherwise veinless; peduncles prickly, very slender, 2-4 cm. long; legume subterete, densely prickly, 3-6 cm. long, about 4 mm. thick, nearly beakless.

TYPE LOCALITY: Dry pine barrens, Florida.

DISTRIBUTION: Florida to North Carolina and Louisiana.

16. *Leptoglottis confusa* Britton & Rose, sp. nov.

Stem rather stout, much-branched, glabrous, 5 dm. long or longer, prickly. Petioles 1.5-3 cm. long, sparingly prickly; pinnae 2 pairs, short-stalked; leaflets 7-10 pairs, linear-ob-

long, obtuse, acutish, or mucronulate, 3-5 mm. long, the slender midvein nearly central; peduncles prickly, in fruit 2-3 cm. long; legume broadly linear, subterete, glabrous, rather loosely short-prickly, short-pointed, beakless, 2.5 cm. long, 5 mm. wide.

Veracruz, *F. Mueller 4001*.

17. *Leptoglottis leptocarpa* (DC.) Standley, Journ. Wash. Acad. 15:
458. 1925.

Schrankia leptocarpa DC. Prodr. 2: 443. 1825.
?Schrankia trijuga Goyena, Fl. Nic. 1: 379. 1909.

Glabrous; stems slender, straggling or climbing, up to 1 m. long or longer, armed with short prickles. Stipules 3-4 mm. long; petioles and rachis slender, more or less prickly; petioles 2-6 cm. long; pinnae 2 or 3 pairs; leaflets 10-20 pairs, thin, 6-10 mm. long, obscurely veined, the delicate midvein nearly central, the apex obtuse or acutish; peduncles short, 4-15 mm. long; heads small; legume subterete, 7-10 cm. long, about 4 mm. thick, copiously armed with slender prickles.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Hispaniola (according to deCandolle); Martinique; St. Vincent; Nicaragua (?); Costa Rica to Panama, French Guiana, Brazil and Paraguay. Introduced into the Old World tropics (ex Bentham).

ILLUSTRATION: Mart. Fl. Bras. 15²: pl. 99.

18. *Leptoglottis latidens* Small.

Morongia latidens Small, Bull. N. Y. Bot. Gard. 2: 98. 1901.
Schrankia latidens K. Schum. Bot. Jahresb. 29¹: 540. 1903.

Glabrous throughout, light green; stems slender, 3-10 dm. long, armed with distant prickles. Stipules very short; petioles and rachis very slender, sparingly prickly; petioles about 3 cm. long or shorter; pinnae 1 or 2 pairs; leaflets 8-12 pairs, oblong, 3-8 mm. long, very obscurely veined, the apex obtuse but apiculate; fruiting peduncles rather stout, sparingly prickly, about 4 cm. long; legume subterete, 3-7 cm. long, copiously armed with broad-based prickles, the slender beak 1-1.5 cm. long.

TYPE LOCALITY: Kenedy, Carnes County, Texas.

DISTRIBUTION: Known only from the type locality.

19. *Leptoglottis Nelsonii* Britton & Rose, sp. nov.

Slender, herbaceous, 5-7 dm. high, the stems angled, glabrous, prickly. Stipules linear; petioles and rachis prickly; pinnae 2 or 3 pairs; leaflets 10-12 pairs, 4-6 mm. long, acute, the venation obscure; peduncles at first slender, 1-1.5 cm. long, in fruit 3 cm. long, prickly; legume subterete, 7-8 cm. long, long-apiculate, prickly, glabrous.

Sabinas, Coahuila, May 21, 1902, *Nelson 6830*.

20. *Leptoglottis microphylla* (Dryand.) Britton & Rose.

Mimosa Intsia Walt. Fl. Car. 252, 1788. Not L. 1753.
Mimosa microphylla Dryand.; J. E. Smith, Insects Georgia 2: 123. 1797.
Mimosa horridula Michx. Fl. Bor. Am. 2: 254. 1803.
Schrankia uncinata Willd. Sp. Pl. 4: 1043. 1806.
Schrankia angustata Torrey & Gray, Fl. N. Am. 1: 400. 1840.
Schrankia Intsia Trel.; Branner & Coville, Rep. Ark. Geol. Surv. 1888⁴: 178. 1891.
Schrankia horridula Chapm. Fl. S. U. S. ed. 2, Suppl. 2, 683. 1892.
Morongia uncinata Britton, Mem. Torrey Club 5: 191. 1894.
Morongia angustata Britton, Mem. Torrey Club 5: 191. 1894.
Leptoglottis Intsia Rydb. Bot. Surv. Neb. 3: 33. 1894.
Schrankia horridula angularis Chapm. Fl. ed. 3, 127. 1897.
Morongia horridula Heller, Cat. N. Am. Pl. 5. 1898.
Morongia horridula angularis Heller, Cat. N. Am. 5. 1898.
Morongia microphylla Britton; Britton & Brown, Ill. Fl. ed. 2, 2: 334. 1913.

Stems glabrous or puberulent, slender, copiously or sparsely prickly, prostrate or decumbent, 6-12 dm. long. Stipules 3-4 mm. long; petioles and rachis slender, prickly; pinnae 3-8 pairs; leaflets 10-17 pairs, linear-oblong, glabrous, 4-6 mm. long, membranous, inconspicuously

veined, acutish or obtuse; peduncles very slender, prickly, 2-7 cm. long; legume subterete, glabrous or puberulent, rather densely prickly, 6-14 cm. long, about 3 mm. thick, its beak 6-10 mm. long.

TYPE LOCALITY: South Carolina.

DISTRIBUTION: Virginia to Tennessee, Florida, Mississippi and Texas.

ILLUSTRATIONS: J. E. Smith, *Insects Georgia 2: pl. 62*; Vent. Choix, *pl. 28*; Britton & Brown, *Ill. Fl. f. 2032*; ed. 2, *f. 2435*.

21. *Leptoglottis angustisiliqua* Britton & Rose, sp. nov.

Glabrous throughout; stem slender, up to 1 m. long or longer, rather distantly prickly. Stipules 2-4 mm. long; petioles and leaf-rachis very slender, prickly; petioles 2.5-3.5 cm. long; pinnae 3-6 pairs; leaflets 7-16 pairs, linear-oblong, 2.5-3.5 mm. long, inconspicuously veined, obtuse or acutish; peduncles loosely prickly, in fruit 3-5 cm. long; legume subterete, not densely prickly, 6-7 cm. long, only about 2 mm. thick, its slender beak about 7 mm. long.

Pinelands of southern Florida, and in Texas. Type from Brogdon Hammock, Dade County, Florida, June 19, 1915, *Small & Mosier 6349*.

22. *Leptoglottis quadrivalvis* (L.) Britton & Rose.

Mimosa quadrivalvis L. Sp. Pl. 522. 1753.

Schrankia aculeata Willd. Sp. Pl. 4: 1041. 1806.

?*Schrankia mexicana* Raf. New Fl. 1: 43. 1836.

Morongia aculeata Heller, Cat. N. Am. Plants 4. 1898.

Schrankia quadrivalvis Merrill, Philipp. Journ. Sci. Bot. 5: 30. 1910.

Glabrous, vine-like; stem rather stout, up to 8 dm. long or longer, armed with stout prickles. Stipules 2-3 mm. long; petioles very slender, sparingly prickly or unarmed, 2-4 cm. long; pinnae 2 or 3 pairs; leaflets 8-15 pairs, oblong-obovate, 4-6 mm. long, obtuse, rounded or apiculate, the venation obscure; peduncles 6-20 mm. long; legume subterete, glabrous, copiously prickly, 5-7 cm. long, 3-4 mm. thick, its beak 3-5 mm. long.

TYPE LOCALITY: Veracruz.

DISTRIBUTION: Veracruz. Naturalized in the Philippine Islands.

ILLUSTRATIONS: Miller, Fig. Pl. *pl. 182, f. 1*; Rel. Houst. *pl. 25*; Engler & Prantl, *Nat. Pfl. 3: f. 72, C, D, E*.

23. *Leptoglottis potosina* Britton & Rose, sp. nov.

Roots thickened, in clusters; stems herbaceous, diffuse, 2-4 dm. long, slender, angled, pubescent, prickly. Stipules small, linear; petioles slender, prickly; pinnae 2 or 3 pairs; leaflets 6-8 pairs, 3-4 mm. long, puberulent, the veins indistinct; peduncles slender, 2-3 cm. long, prickly; flowers pinkish; legume slender, about 7 cm. long, 2 mm. thick, sparsely prickly, short-beaked, glabrous.

Minas de San Rafael, San Luis Potosí, May, 1911, *Purpus 5177*.

24. *Leptoglottis jaliscensis* (Macbride) Britton & Rose.

Schrankia quadrivalvis jaliscensis Macbride, Contr. Gray Herb. 59: 10. 1919.

Stems slender, about 5 dm. long or longer, glabrous, sparingly armed with small prickles. Stipules 2-3 mm. long; leaves glabrous; petioles and rachis very slender, sparingly prickly; petioles 2-3 cm. long; pinnae 1 or 2 pairs; leaflets 10-20 pairs, linear, sharply acute, about 4 mm. long, ciliate when young, glabrous when older, very obscurely veined; peduncles nearly filiform, puberulent, unarmed, 2-3.5 cm. long; legume subterete, densely prickly, 3-6 cm. long, 4-5 mm. thick, the subulate beak 6-9 mm. long.

TYPE LOCALITY: Near Guadalajara, Jalisco.

DISTRIBUTION: Jalisco.

25. *Leptoglottis Palmeri* Britton & Rose, sp. nov.

Stem rather stout, glabrous, copiously prickly. Leaves up to 10 cm. long or longer, glabrous, the petiole and rachis prickly; petioles up to 4 cm. long or longer; pinnae 3-5 pairs,

slender-stalked; leaflets 10-25 pairs, linear, acute or mucronate, 4-6 mm. long, delicately pinnately veined; peduncles prickly, about 1 cm. long (or longer); heads many-flowered; legumes linear, subterete, rather densely short-prickly, pubescent, pointed but scarcely beaked, 6-7 cm. long, 3.5 mm. thick.

Guadalajara, Jalisco. Type collected July to October, 1886, *Palmer 267*.

26. *Leptoglottis hamata* (H. & B.) Standley, Journ. Wash. Acad. 15: 458. 1925.

Schrankia hamata H. & B.; Willd. Sp. Pl. 4: 1042. 1806.

Stem stout, glabrous, rather densely prickly, climbing. Leaves glabrous; petioles and rachis slender and prickly; petioles 2.4 cm. long; pinnae about 5 pairs; leaflets 10-15 pairs, linear, 6-7 mm. long, membranous, obtuse, mucronulate, delicately reticulate-veined beneath, obscurely veined above; peduncles very short, only 8-12 mm. long, unarmed or prickly, pilose; legume subterete, very densely prickly, 6-10 cm. long, about 5 mm. thick, its beak 7-12 mm. long.

TYPE LOCALITY: Magdalena River, Colombia.

DISTRIBUTION: Panama; Colombia.

27. *Leptoglottis Berlandieri* Britton, sp. nov.

Schrankia aculeata var. (?) Benth. Trans. Linn. Soc. 30: 441.

Glabrous; stem slender, about 4 dm. long, or longer, sparsely armed with small reflexed prickles. Petioles very slender, 3 cm. long or shorter; pinnae 2 or 3 pairs; leaflets 4-7 pairs, oblong, 4-6 mm. long, about 2 mm. wide, faintly 1-nerved, obtuse, apiculate; legume narrowly linear, distantly short-prickly, compressed, 6-7 cm. long, about 3 mm. wide, its beak 4-6 mm. long.

Between Goliad and Bexar, Southern Texas, May, 1834, *Berlandier 2513*.

SCHRANKIA ELATA Mart. & Gal. Bull. Acad. Brux. 10²: 309. 1843.

Stems 5-7 m. high, the twigs 5-angled, villous. Leaves short-petioled, very sensitive; pinnae 5 pairs; leaflets many pairs, oblong, mucronate, appressed-villous; peduncles solitary or in pairs, villous, somewhat prickly.

TYPE LOCALITY: Banks of the Rio Grande in Western Oaxaca.

DISTRIBUTION: Known to us from description only.

34. *MIMOSA* L. Sp. Pl. 516. 1753.

Herbs, shrubs, vines or trees, with 2-pinnate, often sensitive leaves, the small, regular, mostly 4-5-parted, perfect, rarely imperfect, flowers in peduncled heads or spikes. Calyx small, its teeth short; corolla-lobes as many as the calyx-teeth, valvate. Stamens as many as the corolla-lobes or twice as many, distinct, exserted; anthers eglandular. Ovary 1-many-ovuled; style slender. Legume linear to oblong, flat and thin, transversely jointed, wingless, the usually continuous margins at length separating from the joints, rarely reduced to a single joint.

Type species, *Mimosa sensitiva* L.

A. Petiole eglandular.

a. Legume 2-many-jointed.

1. Stamens in all flowers, as many, or twice as many as the corolla-lobes.

Stamens as many as the corolla-lobes.

Pinnae 1 pair; leaflets 1-2 pairs, large.

Pinnae 1-several pairs; leaflets 3-several pairs.

A long prickly vine.

Herbs or shrubs.

Herbaceous or suffruticose.

Herbaceous; pinnae 1-3 pairs.

Leaflets narrow, linear to oblong.

Leaflets broad, elliptic to obovate.

Suffruticose; pinnae 3-5 pairs.

I. SENSITIVAE.

II. CASTAE.

III. PUDICAE.

IV. SKINNERIAE.

- Pinnae approximate.
 Pinnae distant; stem densely bristly.
 Shrubs, definitely woody.
- Pinnae 4-9 pairs; leaflets small; species of Haiti.
- Pinnae 1 or 2 pairs.
 Leaflets 3-6 pairs, elliptic to obovate, 2-3.6 cm. long; unarmed trees or shrubs.
 Leaflets much smaller, mostly more numerous; prickly shrubs.
 Stems very slender, short-prickly; petioles filiform, elongated.
 Stems relatively stout; petioles short, or slender.
- Stamens twice as many as the corolla-lobes.
 Flowers long-spicate or subracemose.
 Legume coiled.
 Legume straight or curved.
 Flowers capitate; heads globose, rarely oblong.
 Legume few-several jointed, the joints broad.
 Herbaceous or suffruticose.
 Corolla many-nerved.
 Corolla nerveless.
 Prostrate herbs.
 Perennial; peduncles greatly elongated.
 Annual; peduncles short.
 Erect or ascending, suffruticose; unarmed.
 Shrubs, trees or vines.
 Vines or clambering shrubs.
 Prickles of the leaf-rachis mostly solitary.
 Leaflets elliptic to obovate, 5-10 mm. wide; legume broad, unarmed.
 Leaflets linear to oblong, narrower, small.
 Leaflets narrowly linear, 1 mm. wide, 3-5 mm. long; legume narrowly linear.
 Leaflets oblong, broader.
 Leaflets pubescent, at least above; prickles large, scattered.
 Leaflets glabrous; prickles small, numerous, approximate; legume broad, naked.
 Prickles of the leaf-rachis mostly paired; species of Cuba and Hispaniola.
 Shrubs or trees.
 Pinnae 1 pair; leaflets obovate, large, 1-2.5 cm. long.
 Pinnae 1-several pairs; leaflets much smaller.
 Pinnae 1 pair; leaflets oblong, 6-12 mm. long; legume densely yellow-setose.
 Pinnae 1-3 pairs; legume not long-setose; leaflets few.
 Legume setose on the valves.
 Legume not setose, glabrous, unarmed, or with prickly margins, unknown in *M. zimapanensis*.
 Pinnae 3-8 pairs.
 Plants copiously glandular-pubescent, the glands long-stalked.
 Glands globose; legume linear, 4-5 mm. wide, unarmed, glandular-pubescent.
 Glands oblong; legume oblong, 8-10 mm. wide, setose and prickly.
 Plants not glandular-pubescent.
 Foliage glabrous, puberulent or strigose.
 Heads in large terminal panicles, small; rachis unarmed.
 Leaflets 15-40 pairs, 1 mm. wide, glabrous; a tree.
- V. POLYDACTYLAE.
 VI. TELEDACTYLAE.
- VII. MORNICOLAE.
- VIII. PSILOCARPAE.
- IX. MICHELIANAE.
 X. XANTIAE.
- XI. SPIROCARPAE.
 XII. DISTACHYAE.
- XIII. SOMNIANTES.
- XIV. STRIGILLOSAE.
 XV. PUSILLAE.
 XVI. FLAVESCENTES.
- XVII. MALACOPHYLLAE.
- XVIII. INVISAE.
- XIX. POLYANCISTRÆ.
- XX. SINALOENSES.
- XXI. FAGARACANTHAE.
- XXII. LEUCAENOIDES.
- XXIII. CHAETOCARPAE.
- XXIV. MONANCISTRÆ.
- XXV. BOREALES.
- XXVI. CALDERONIAE.
- XXVII. CORYNADENIAE.
- XXVIII. BIMUCRONATAE.

- Leaflets 9-11 pairs, 3-5 mm. wide, puberulent; a shrub.
- XXIX. ARGILLOTROPHAE.
- Heads axillary; rachis armed with acicular bristles between the pinnae.
- XXX. DORMIENTES.
- Foliage and peduncles densely villous-tomentose or pubescent.
- Legume 15-20-jointed, the joints narrow; shrubs.
- XXXI. MOLLES.
2. Perfect flowers with as many stamens as corolla-lobes; staminate flowers with twice as many.
- XXXII. PIGRAE.
- b. Legume reduced to a single joint; low herb; stamens 4 or 5.
- XXXIII. TEQUILANAE.
- B. Petiole, at least usually, glanduliferous; woody vines; stamens 8 or 10.
- XXXIV. VIVAE.
- XXXV. WATSONIAE.
- I. SENSITIVAE.
- Branches pubescent.
- Margins of the legume with long, spreading bristles.
- Margins of the legume with short, appressed bristles.
1. *M. panamensis*.
2. *M. albid*.
- Branches glabrous or nearly so.
- Herbs or shrubs.
- Leaflets small, 2.5 cm. long or shorter.
- Unarmed; lower leaflets strigose beneath.
3. *M. sesquijugata*.
- Distantly prickly; all leaflets glabrous or nearly so.
4. *M. manzanilloana*.
- Leaflets 2.5-10 cm. long.
- Legume long-stipitate, glabrous or strigose.
5. *M. Standleyi*.
- Legume strigose, 1-3-jointed.
6. *M. acapulcensis*.
- Legume glabrous, 3-4-jointed.
7. *M. Maxonii*.
- Legume sessile, long-setose.
8. *M. Velloziana*.
- Legume velvety.
9. *M. Goldmannii*.
- Legume glabrous.
- Unarmed tree with small obtuse leaflets.
10. *M. casta*.
- II. CASTAE.
- One species.
- III. PUDICAE.
- Margins of the legume long-setose.
11. *M. pudica*.
- Margins of the legume very short-setose.
12. *M. affinis*.
- IV. SKINNERIAE.
- Valves of the legume glabrous or puberulent.
- Valves unarmed; peduncles long.
13. *M. Skinneri*.
- Valves prickly over the seeds; peduncles short.
14. *M. paucisperma*.
- Valves of the legume densely long-setose.
15. *M. longicom*.
- V. POLYDACTYLAE.
- One species in our area.
16. *M. polydactyla*.
- VI. TELEDACTYLAE.
- One species.
17. *M. teledactyla*.
- VII. MORNICOLAE.
- Unarmed shrub; corolla-lobes nearly as long as the tube.
18. *M. mornicola*.
- Prickly shrub; corolla-lobes much shorter than the tube.
19. *M. Buchii*.
- VIII. PSILOCARPAE.
- Leaflets 5 or 6 pairs, elliptic; legume strigose, 6-8 mm. wide.
20. *M. Deamii*.
- Leaflets 3 pairs, obovate; legume glabrous, 8-10 mm. wide.
21. *M. psilocarpa*.
- IX. MICHELIANAEE.
- One species.
22. *M. Micheliana*.
- X. XANTIAE.
- Leaflets orbicular to elliptic or ovate-oblong.
- Leaflets glabrous, or sparingly puberulent beneath.
23. *M. lactiflua*.
- Leaflets, or some of them, densely pubescent at least beneath.
24. *M. Vasquezii*.
- Leaflets linear to oblong or lanceolate.
- Twigs and peduncles pilose, tomentose, or setulose; leaflets pubescent, at least beneath; flowers pubescent.
25. *M. Conzattii*.
- Leaflets linear-oblong, about 2 mm. wide.
- Leaflets oblong to lanceolate, 2-8 mm. wide.
- Bractlets linear, filiform or clavate, much longer than the buds.
26. *M. Xanti*.
- Bractlets filiform.
27. *M. Langlassei*.
- Bractlets linear, clavate above.
- Bractlets scarcely longer or not longer than the buds.
28. *M. chiaensis*.
- Leaflets 1-veined, pubescent on both sides.
29. *M. tricephala*.
- Leaflets 3-veined, glabrous and lustrous above.

Twigs and peduncles glabrous or puberulent.

Shrubs.

Leaflets 4-7 mm. wide, 1-2 cm. long, pubescent.

Legume unarmed, long-stipitate.

Legume long-setose, sessile.

Leaflets narrower, shorter.

Leaflets appressed-pubescent.

Leaflets glabrous.

Legume glabrous, armed only with few minute prickles; unarmed shrub.

Legume long-setose; prickly shrubs.

Twigs glabrous; legume glabrous.

Twigs strigose; legume puberulent.

A woody vine.

30. *M. mixtecana*.

31. *M. sicyocarpa*.

32. *M. Doylei*.

33. *M. coerulea*.

34. *M. Mellii*.

35. *M. Nelsonii*.

36. *M. oaxacana*.

XI. SPIROCARPAE.

One species.

37. *M. spirocarpa*.

XII. DISTACHYAE.

A. Leaflets elliptic, ovate, orbicular or obovate, not more than twice as long as wide, or scarcely longer.

1. Leaflets one pair.

Leaflets 15-22 mm. long; legume long-stipitate.

Leaflets 6-8 mm. long; legume short-stipitate.

2. Leaflets 2 pairs or more.

Leaflets elliptic to ovate, 3-5 mm. long, densely pubescent on both sides.

Pinnae 4-13 pairs; flowers pubescent.

Legume densely long-setose and prickly.

Legume unarmed.

Legume glabrous.

Legume densely tomentose.

Pinnae 3 or 4 pairs; flowers glabrous.

Leaflets elliptic to obovate, 5-15 mm. long.

Leaflets densely pubescent on both sides, at least when young.

Legume tomentose.

Legume puberulent.

Leaflets glabrous, puberulent or loosely appressed-pubescent.

Legume setose or with prickly margins.

Legume bristly-setose.

Legume puberulent, sometimes sparingly setose, the margins with distant prickles.

Legume unarmed.

Legume and flowers glabrous.

Legume puberulent or tomentose.

Legume linear-oblong, 5-8-jointed; flowers purplish, pubescent.

Legume linear, 7-10-jointed.

B. Leaflets linear or oblong, mostly more than twice as long as wide.

1. Pubescence lepidote.

2. Pubescence not lepidote, or plants glabrous.

Leaflets pubescent, at least beneath.

Prickly shrubs; legume tomentose or puberulent.

Pinnae 15-20 pairs.

Pinnae 12 pairs or fewer.

Prickles very large, flat, yellow when young.

Prickles small, brown or blackish.

Legume tomentose.

Legume puberulent, black-glandular.

Unarmed shrub; legume unknown.

Leaflets glabrous, puberulent or ciliate.

Leaflets 13-40 pairs.

Leaflets 40 pairs or fewer.

Unarmed tree; legume stipitate.

Prickly tree or shrub; twigs and legumes glandular.

Leaflets 13-17 pairs; pinnae 4-8 pairs.

Leaflets delicately pinnately veined; petioles 4-6 cm. long.

Leaflets not pinnately veined; petioles 2-3 cm. long.

Leaflets about 12 pairs or fewer; pinnae few pairs.

Legume narrow, linear or linear-oblong, 3-8 mm. wide.

Legume setose, 6-8 mm. wide.

Legume tomentose or puberulent.

Legume puberulent, about 6 mm. wide; leaflets 8-12 mm. long.

Legume tomentose, about 3 mm. wide; leaflets about 3 mm. long.

Legume broad, oblong, 8-13 mm. wide.

Legume filiform-stipitate.

Legume short-stipitate.

38. *M. Rosei*.

39. *M. paucifoliolata*.

40. *M. Benthami*.

41. *M. Palmeri*.

42. *M. Luisana*.

43. *M. fuertensis*.

44. *M. guatemalensis*.

45. *M. distachya*.

46. *M. Brandegeci*.

47. *M. oligacantha*.

48. *M. laxiflora*.

49. *M. purpurascens*.

50. *M. Ferrisiae*.

51. *M. Schomburgkii*.

52. *M. malacocarpa*.

53. *M. dysocarpa*.

54. *M. Wrightii*.

55. *M. Gomezii*.

56. *M. rhodactyla*.

57. *M. puberula*.

58. *M. tenuiflora*.

59. *M. ionama*.

60. *M. polyanthoides*.

61. *M. setigera*.

62. *M. adenanthroides*.

63. *M. coelocarpa*.

64. *M. stipitata*.

65. *M. polyantha*.

- Legume unknown; pinnae 2 pairs; leaflets 6-9 pairs; spikes short; flowers pubescent.
- One species. XIII. SOMNIANTES. 66. *M. brevispicata*.
- One species. XIV. STRIGILLOSAE. 67. *M. somnians*.
- One species. XV. PUSILLAE. 68. *M. strigillosa*.
- One species. XVI. FLAVESCENTES. 69. *M. pusilla*.
- Stipules lanceolate; heads subglobose; stamens short. 70. *M. flavescens*.
- Stipules ovate; heads ovoid; stamens long. 71. *M. occidentalis*.
- Pubescent. XVII. MALACOPHYLLAE. 72. *M. malacophylla*.
- Glabrous or puberulent. 73. *M. Wooltonii*.
- One species. XVIII. INVISAE. 74. *M. invisae*.
- One species. XIX. POLYANCISTRAS. 75. *M. polyancistra*.
- One species. XX. SINALOENSES. 76. *M. sinaloensis*.
- One species. XXI. FAGARACANTHAE. 77. *M. Leonardii*.
- Leaf-rachis flattened, dilated. 78. *M. domingensis*.
- Leaf-rachis not flattened. 79. *M. Farisii*.
- Plants glabrous or puberulent.
- Leaflets linear to oblong.
- Peduncles filiform, 1-3 cm. long.
- Peduncles only 4-7 mm. long.
- Leaflets ovate to elliptic or obovate.
- Leaves armed only by 1 or 2 prickles at the ends of the rachillas.
- Rachis and rachillas mostly with a pair of prickles at each node. 80. *M. azuensis*.
- Leaflets obovate or orbicular-obovate.
- Leaflets ovate or elliptic-obovate. 81. *M. fagaracantha*.
82. *M. Ekmanii*.
- Twigs, peduncles, calyx, and legume pilose-puberulent; leaflets obovate. 83. *M. pulverulenta*.
- One species. XXII. LEUCAENOIDES. 84. *M. leucaenoides*.
- One species. XXIII. CHAETOCARPAE. 85. *M. chaetocarpa*.
- Heads oblong or subglobose.
- Leaflets 2-4 mm. long, obtuse.
- Leaflets 4-5 mm. long, acute.
- Heads globular.
- Legume prickly or setose.
- Leaves densely tomentose.
- Leaves puberulent.
- Legume short-setose.
- Legume canescent, the margins prickly.
- Legume canescent, wholly unarmed. 86. *M. monancistra*.
87. *M. chihuahuana*.
88. *M. Emoryana*.
89. *M. similis*.
90. *M. depauperata*.
91. *M. calcicola*.
- XXV. BOREALES.
- Prickles stout, solitary; leaflets 1-3-nerved. 92. *M. borealis*.
- Prickles small, sometimes geminate; leaflets nerveless. 93. *M. zinapanensis*.
- One species. XXVI. CALDERONIAE. 94. *M. Calderonii*.
- One species. XXVII. CORYNADENIAE. 95. *M. corynadenia*.
- One species. XXVIII. BIMUCRONATAE. 96. *M. bimucronata*.
- One species. XXIX. ARGILLOTROPHAE. 97. *M. argillotropia*.
- One species. XXX. DORMIENTES. 98. *M. dormiens*.
- One species. XXXI. MOLLES. 99. *M. mollis*.
- Leaflets 2-6 mm. long. 100. *M. Herincquiiana*.
- A shrub; leaflets 5-6 mm. long.
- A tree; leaflets 2-3 mm. long.
- Leaflets 7-12 mm. long.
- Flowers pubescent.
- Flowers glabrous. 101. *M. Ervendbergii*.
102. *M. mexiquilensis*.
- Legume densely long-setose. XXXII. PIGRAE. 103. *M. pigra*.
- Legume sparingly short-setose. 104. *M. Berlandieri*.

XXXIII. TEQUILANAE.

One species. 105. *M. tequilana*.

XXXIV. VIVAE.

One species. 106. *M. viva*.

XXXV. WATSONIAE.

Leaflets 2 or 3 pairs, granular-resiniferous beneath. 107. *M. resinifera*.

Leaflets not granular-resiniferous.

Leaflets several pairs, acute, nearly glabrous above.

Leaflets densely appressed-pubescent beneath. 108. *M. hondurana*.

Leaflets sparingly pilose on the veins beneath. 109. *M. pseudopaniculata*.

Leaflets obtuse or rounded, cuspidate.

Leaflets 1-3 pairs, the upper 3-5 cm. long. 110. *M. Watsonii*.

Leaflets several pairs, smaller.

Leaflets appressed-pubescent. 111. *M. Rekoana*.

Leaflets pilose-pubescent. 112. *M. Recordii*.

1. *Mimosa panamensis* (Benth.) Standley, Contr. U. S. Nat. Herb.
18: 104. 1916.

Mimosa debilis panamensis Benth. Trans. Linn. Soc. 30: 391. 1875.

Herbaceous or suffruticose, the branches slender, setose-hirsute and more or less prickly. Stipules linear, 4 mm. long; pinnae 1 pair; leaflets 2 pairs, with one of the lower pair often much reduced, oblong-obovate, 1-3 cm. long, more or less strigose on both sides; flowers in dense heads; corolla 5-lobed; stamens 5; legume oblong, 10-18 mm. long, 5-6 mm. wide, acute, the valves and margins long-setose.

TYPE LOCALITY: Panama.

DISTRIBUTION: Panama and Costa Rica.

2. *Mimosa albida* H. & B.; Willd. Sp. Pl. 4: 1030. 1806.

Mimosa strigosa Willd. Sp. Pl. 4: 1030. 1806.

Mimosa floribunda Willd. Sp. Pl. 4: 1031. 1806.

Mimosa racemosa Schl. Linnæa 12: 557. 1838.

Mimosa albida floribunda B. L. Robinson, Proc. Am. Acad. 33: 311. 1898.

Mimosa albida strigosa B. L. Robinson, Proc. Am. Acad. 33: 311. 1898.

Mimosa albida euryphylla B. L. Robinson, Proc. Am. Acad. 33: 311. 1898.

Mimosa albida glabrior B. L. Robinson, Proc. Am. Acad. 33: 311. 1898.

A shrub, 1-3 m. high, the twigs pubescent and prickly. Pinnae 1 pair; leaflets 2 pairs, the lower inner one much reduced, the others more or less oblique, lanceolate to oblong, acute or obtuse, usually mucronate, 3-8 cm. long, densely pubescent on both sides, or glabrate above; flowers pinkish, capitate, the heads axillary, or in terminal racemes; peduncles 1-3 cm. long; stamens as many as the corolla-lobes; legume linear-oblong, 1-3 cm. long, 5-7 mm. wide, nearly sessile, the valves strigose, the margins more or less bristly.

TYPE LOCALITY: Peru.

DISTRIBUTION: San Luis Potosí and Tepic to Costa Rica, Peru, Venezuela and Brazil.

ILLUSTRATION: Kunth, Mim. pl. 1.

3. *Mimosa sesquijugata* Donn. Smith, Bot. Gaz. 13: 74. 1888.

Shrubby, unarmed, up to 2.5 dm. high, the twigs glabrous. Stipules linear, strigose, the margins setose; pinnae 1 pair; leaflets 3, oblong-elliptic to obovate, 1.5-2 cm. long, obtuse or acute, subcoriaceous, glabrous and shining above, strongly nerved, setose beneath; peduncles 1-1.5 cm. long, strigillose; flowers purple, 4-parted; stamens 4.

TYPE LOCALITY: Santa Rosa, Guatemala.

DISTRIBUTION: Known only from the type locality.

4. *Mimosa manzanilloana* Rose, Contr. Nat. Herb. 1: 326. 1895.

A shrub, 1.5 m. high, the twigs glabrous, more or less prickly. Pinnae 1 pair; leaflets 2 pairs, but the lower inner one much reduced and sometimes wanting, the others oblong, 2-2.5 cm. long, acute, glabrous above, bearing a few appressed bristles beneath and on the margin; inflorescence a terminal raceme of small heads; stamens 4 or 5; peduncles 1-1.5 cm.

long; legume oblong, 1.5–2.5 cm. long, 6–8 mm. wide, the valves and margin sparingly appressed-setose.

TYPE LOCALITY: Manzanillo, Colima.
DISTRIBUTION: Sinaloa to Guerrero.

5. *Mimosa Standleyi* Macbride, Contr. Gray Herb. 59: 12. 1919.

Mimosa Williamsii Standley, Contr. U. S. Nat. Herb. 18: 105. 1916. Not Rusby, 1912.

Trailing, the branches 2 m. long, glabrous, or sparingly pubescent, unarmed or very sparingly prickly. Petiole 2–5 cm. long, occasionally bearing a prickle; pinnae 1 pair; leaflets 2 pairs, the lower, inner leaflet very small, the others oblong to elliptic, 3–5 cm. long, acute, appressed-pubescent on both sides; peduncles 1–3.5 cm. long; legume 1–2 cm. long, 6–8 mm. wide, long-stipitate, acuminate or apiculate, appressed-hispid, 1–3-jointed.

TYPE LOCALITY: Penenome, Panama.
DISTRIBUTION: Known only from the type locality.

6. *Mimosa acapulcensis* B. L. Robinson, Bot. Gaz. 28: 135. 1899.

A shrub, 1.5–3 m. high, the twigs glabrous, prickly. Pinnae 1 pair; leaflets 3, or, if 4, the lower inner one much reduced, oblong, 3–10 cm. long, glabrous and glaucous, acute, with cartilaginous margins; peduncles 2–3.5 cm. long; flowers in dense heads, rose-colored; stamens as many as the corolla-lobes; legume 2.5–4 cm. long, glabrous, unarmed, long-stipitate, 3–4-jointed, constricted between the joints.

TYPE LOCALITY: Acapulco, Guerrero.
DISTRIBUTION: Known only from the type locality.

7. *Mimosa Maxonii* Standley, Contr. U. S. Nat. Herb.
17: 432. 1914.

A vine, the branches elongated, terete, glabrous, armed with numerous reflexed prickles. Petioles slender, elongated, prickly; pinnae 1 pair; leaflets 2 pairs, the inner leaflet of the lower pair much reduced, the others lanceolate to oblong, 2.5–3.5 cm. long, acuminate, glabrous on both sides, but the margin bearing appressed bristles; peduncles axillary, 1–1.5 cm. long, pubescent; flowers in dense heads, 5-parted; stamens 5; legume oblong, 1.5–2.5 cm. long, acute, velvety, the margin long-setose.

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

8. *Mimosa Velloziana* Mart. Herb. Fl. Bras. 185. 1837.

A climbing shrub, the branches glabrous, prickly. Stipules lanceolate, the margin bristly; petiole 3–4 cm. long, prickly; pinnae 1 pair; leaflets 2 pairs, lanceolate, 3–4 cm. long, except the lower inner one, this much reduced, glabrous above, sparingly setose beneath; peduncles 12–16 mm. long; flowers 4-parted, densely capitate; stamens 4; legume oblong, 2 cm. long or less, 7–9 mm. wide, 1–3-jointed, the margins long-setose, the valves glabrous, nearly or quite unarmed.

TYPE LOCALITY: Brazil.
DISTRIBUTION: Panama to Brazil and Paraguay.
ILLUSTRATIONS: Vell. Fl. Flum. 11: pl. 33; Benth. in Mart. Fl. Bras. 15: pl. 80.

9. *Mimosa Goldmanii* B. L. Robinson, Proc. Am. Acad.
33: 308. 1898.

A small tree, 3–6 m. high, the twigs glabrous. Petioles slender, 1.5–3 cm. long; pinnae 1 pair; leaflets 3, obovate to oblong, 12–18 mm. long, obtuse, mucronate, glabrous on both sides, pale beneath, the margin bearing appressed bristles; peduncles slender, 1.5–2.5 cm. long; flowers in dense heads, purplish white, 4-parted; stamens 4; heads globose, about 12 mm. in diameter.

TYPE LOCALITY: Between Juchitan and Chivela, Oaxaca.
DISTRIBUTION: Known only from the type locality.

10. *Mimosa casta* L. Sp. Pl. 518. 1753.

Mimosa dominicana Desv. Ann. Sci. Nat. 9: 424. 1826.

Somewhat woody at base, the branches vine-like, 2-4 m. long, glabrous, prickly. Petioles 2-6 cm. long, prickly; pinnae 1 pair; leaflets 3 or 4 pairs, oblong or oblong-lanceolate, acute or acuminate, 2-4 cm. long, thin, glabrous or with few, appressed bristles beneath, 3-5-nerved at base, the margin with appressed bristles; peduncles very slender, about 2 cm. long, or shorter; flowers capitate, in small heads, 4-parted; stamens 8; legume oblong, 2-4 cm. long, about 1 cm. wide, glabrous, the margin long-setose.

TYPE LOCALITY: India, according to Linnaeus, but doubtless Brazil.

DISTRIBUTION: Guadeloupe to Trinidad; Panama; Colombia; Brazil.

11. *Mimosa pudica* L. Sp. Pl. 518. 1753.

Herbaceous, or a little woody, loosely pubescent with long hairs or glabrate, 5 dm. high or less, the stems and branches armed with rather stout, curved prickles. Stipules lanceolate, striate, acuminate, 3-6 mm. long; petioles slender, 2-6 cm. long, deflexed when touched; pinnae 1 pair or 2 approximate pairs, 2-6 cm. long; leaflets 15-25 pairs, thin, linear, 6-10 mm. long, 1.5-2 mm. wide, folding when touched, acutish at the apex, obliquely rounded at the base; heads ovoid, axillary; peduncles 1-2 cm. long; calyx minute; petals and stamens 4; stamens pink, fading white; legume linear-oblong, 2-5-jointed, 1-1.5 cm. long, 3 mm. wide, constricted at the joints, the margins armed with slender straight bristles, otherwise glabrous.

TYPE LOCALITY: Brazil.

DISTRIBUTION: Jamaica; Bahamas and Cuba to Trinidad; Veracruz to Panama, French Guiana and Brazil. Naturalized in the Old World tropics.

ILLUSTRATIONS: Plum. Pl. Am. pl. 202; Bot. Reg. pl. 941; Fawcett & Rendle, Fl. Jam. 4^o: f. 42.

12. *Mimosa affinis* B. L. Robinson, Bot. Gaz. 16: 341. 1891.

A delicate, often simple herb, more or less pilose, sometimes prostrate, with branches 2-3 dm. long, the internodes unarmed or sparingly prickly. Stipular prickles, when present, 1-2 mm. long; stipules lanceolate, ciliate; petioles slender, 2-3 cm. long, loosely pilose; pinnae 1 pair; leaflets 8-12 pairs, linear-oblong to oblanceolate, 8-12 mm. long, about 2 mm. wide, pinnately veined, glabrous above, sometimes loosely strigose beneath, acutish, glabrous above, pubescent beneath; flowers capitate; stamens as many as the corolla-lobes; legume oblong, 1-1.5 cm. long, acute, finely pubescent, or glabrous, 2-4-jointed, the margins setose.

TYPE LOCALITY: Mazatlán, Sinaloa.

DISTRIBUTION: Sinaloa to Morelos and Guerrero.

13. *Mimosa Skinneri* Benth. Lond. Journ. Bot. 5: 85. 1846.

Mimosa Pittieri M. Micheli, Bull. Soc. Bot. Belg. 30: 294. 1891.

Mimosa tetraneura Brand. Univ. Calif. Pub. Bot. 6: 52. 1914.

A low, spreading, long-hirsute herb. Infrastipular spines 1-3, straight, shining; stipules lanceolate, 3-nerved on the back, long-ciliate; pinnae 1 or 2 pairs, approximate; leaflets 4-8 pairs, 8-15 mm. long, obliquely obovate to oblong, glabrous above, long-strigose beneath; peduncles axillary, as long as the petioles; flowers capitate, 4- or 5-parted; stamens 4 or 5; legume linear-oblong, stellate-puberulent or glabrous, the margins long-setose.

TYPE LOCALITY: Cuesta of Leone, Guatemala.

DISTRIBUTION: Chiapas to El Salvador.

14. *Mimosa paucisperma* Britton & Rose, sp. nov.

Herbaceous, the slender branches terete, brownish, bearing long white hairs. Infrastipular spines in 2's or 3's, yellow; stipules linear, acute, striate, long-ciliate; petioles 7 mm. long or less, long-ciliate; pinnae 1 pair; leaflets 3 or 4 pairs, ovate to short-oblong, 8-10 mm. long, sometimes acutish, glabrous above, but with long-appressed hairs beneath; peduncles 12 mm. long or less, pilose; flowers few, capitate; stamens 5; legume oblong, 8-15 mm. long, 2-3-seeded, the margin long-setose, the valves glabrous but with 4-6 prorrict prickles at the middle.

Jalisco, Chiapas, September, 1923, *Purpus* 9306.

15. *Mimosa longicoma* Britton & Rose, sp. nov.

Erect, herbaceous, the branches long-pilose. Infrastipular spines often 3, yellow; stipules 7-9 mm. long, linear-lanceolate, acute, hispid on the back; pinnae 2 pairs; leaflets 3-7 pairs, broadly oblong to obovate, 8-10 mm. long, rounded or apiculate, faintly veined, glabrous above, sparingly long-strigose beneath; peduncles axillary, long-pilose, 2-3 cm. long; flowers capitate; legume 1.5 cm. long, about 7 mm. wide, the valves covered with long, white, weak bristles.

Jalisco, Chiapas, September, 1923, *Purpus* 9069.

16. *Mimosa polydactyla* H. & B.; Willd. Sp. Pl. 4: 1033. 1806.

Suffruticose, up to 3 m. high, hirsute to glabrate, often setose, somewhat prickly. Pinnae 3-5 pairs, approximate or palmately clustered; leaflets 30-60 pairs, linear, 4-6 mm. long, about 1 mm. wide, glabrous, the margin appressed-setose; peduncles about 1 cm. long, setose; flowers capitate, 4-parted; stamens 4; legume oblong, 1-1.5 cm. long, about 4 mm. wide, the valves and margin long-setose, few-jointed.

TYPE LOCALITY: Near San Carlos, Colombia.

DISTRIBUTION: Panama to Venezuela and Brazil.

ILLUSTRATION: Kunth, *Mim.* pl. 5.

17. *Mimosa teledactyla* Donn. Smith, Bot. Gaz. 56: 57. 1913.

Suffruticose, the stems about 1 m. long or shorter, densely covered with long, spreading, weak bristles. Leaves large; petiole and rachis with numerous reflexed prickles and a few bristles; pinnae 3 pairs; leaflets 8-10 pairs, oblong, 8-12 mm. long, obtuse, 3-nerved at base, glabrous, the margin appressed-setose; peduncles axillary, setose, 2-3 cm. long; flowers capitate, tetramerous, purple.

TYPE LOCALITY: Santa Rosa, Guatemala.

DISTRIBUTION: Known only from the type locality.

18. *Mimosa mornicola* Urban, Symb. Ant. 7: 228. 1912.

An unarmed shrub, the young branches minutely white-puberulent. Stipules filiform, subulate, 3-9 mm. long; petioles 5-10 mm. long; pinnae 4-9 pairs; leaflets 5-7 pairs, the first pair reduced to minute subulate scales, the other oval or oblong, 4-6 mm. long, 2-6 mm. wide, rounded at apex, obliquely truncate or subcordate at base, glabrous, the midvein prominent beneath; flowers 4-5-parted, glabrate, in panicked, subcylindric heads 3-5 mm. long; calyx 1 mm. long, its short teeth triangular; corolla 1.8 mm. long, its triangular-ovate lobes nearly as long as the tube; stamens 4 or 5.

TYPE LOCALITY: Morne Bonpère, Haiti.

DISTRIBUTION: Known only from the type locality.

19. *Mimosa Buchii* Urban, Repert. Sp. Nov. 22: 89. 1925.

A shrub, 2-3 m. high, armed with small, curved prickles, the young twigs minutely pilose. Stipules linear-subulate, 2-3 mm. long; petiole 6-10 mm. long; rachis prickly; pinnae 4 pairs, the rachilla usually with 3 prickles at the tip; leaflets 5 pairs, obovate or elliptic, 4-6 mm. long, 1.8-3 mm. wide, the apex rounded or emarginate; heads small, globose, racemose; calyx 1 mm. long; corolla rose, 2 mm. long, its 3 or 4 lobes triangular, obtuse, much shorter than the tube; stamens 4 or 5, about 4 mm. long; ovary sparingly pilose.

TYPE LOCALITY: Near Moustique, Haiti.

DISTRIBUTION: Haiti.

20. *Mimosa Deamii* B. L. Robinson, Proc. Am. Acad.

35: 324. 1900.

A small tree, 3 m. high, the twigs strigose, unarmed. Stipules small, thickish; pinnae 1 pair; leaflets 5 or 6 pairs, elliptic, rounded at each end, coriaceous, glabrous above, somewhat

strigose beneath, especially on the midvein, strigose-ciliate, 2.3-3.6 cm. long, 3-4-nerved at base; peduncles axillary, in 2's or 3's, 2.5 cm. long; flowers capitate, rose-colored; calyx ciliate; corolla 4-lobed; stamens 4; legume 3-3.5 cm. long, 6-8 mm. wide, strigose, 3-4-jointed, stipitate, constricted between the joints.

TYPE LOCALITY: Salina Cruz, Oaxaca.

DISTRIBUTION: Known only from the type locality.

21. *Mimosa psilocarpa* B. L. Robinson, Proc. Am. Acad.

35: 325. 1900.

A shrub, the twigs glabrous, unarmed. Petiole 2.3-5.4 cm. long; pinnae 1 pair; leaflets 3 pairs, obovate, oblique at base, 2.8-3.6 cm. long, finely pubescent on both sides, but glabrate in age; peduncles 3 cm. long; flowers capitate; calyx ciliate; corolla 4-toothed; stamens 4; legume 2-3 cm. long, 8-10 mm. wide, glabrous, unarmed, 2-4-jointed, long-stipitate.

TYPE LOCALITY: Between San Carlos and San Bartolo, Oaxaca.

DISTRIBUTION: Known only from the type locality.

22. *Mimosa Micheliana* B. L. Robinson, Proc. Bost. Soc. Nat. Hist.

31: 259. 1904.

A shrub, the branches slender, glabrous, prickly. Petiole slender, often prickly; pinnae 1 pair; leaflets 5-8 pairs, oblong, 10-15 mm. long, acutish, glabrous, but the margin with appressed bristles; inflorescence a terminal lax raceme, more or less leafy below; peduncles slender, 1-2 cm. long; flowers capitate, glabrous; corolla pale pink, 3 mm. long, 4-toothed; stamens 4; ovary glabrous.

TYPE LOCALITY: La Correa, Cuerrero.

DISTRIBUTION: Known only from the type locality.

23. *Mimosa lactiflua* Delile; Benth. in Mart. Fl. Bras. 15²:

311. 1876.

A shrub, 3-4 m. high, the twigs glabrous, somewhat prickly. Pinnae 1 pair; leaflets 3-5 pairs, obliquely ovate to ovate-oblong, 12-20 mm. long, 6-10 mm. wide, glabrous and glaucous, or sparingly puberulent beneath, the margin bearing appressed bristles; peduncles axillary, 1-3.5 cm. long; flowers in dense heads; petals 4; [legume oblong, 1.5-2 cm. long, glabrous, stipitate, acute, 2-4-jointed].

TYPE LOCALITY: Cultivated in Montpellier garden.

DISTRIBUTION: Veracruz (?); Oaxaca (?); Brazil (?). Definitely known to us from description only.

24. *Mimosa Vasquezii* Britton & Rose, sp. nov.

A shrub, the twigs terete, brownish, glabrous, very prickly. Petioles 1-1.5 cm. long, pubescent; pinnae 1 pair; leaflets 3-4 pairs, orbicular to elliptic, 8-12 mm. long, 6-12 mm. wide, densely appressed-pubescent on both sides, becoming glabrate in age, or glabrous and glaucous above, the margin with numerous appressed bristles; heads in short terminal racemes; peduncles 1 cm. or less long, glabrous; calyx and corolla glabrous; stamens 5.

Cerro de la Carbonera, Matatlán, Oaxaca, June, 1906, *C. Conzatti* 1482.

25. *Mimosa Conzattii* Britton & Rose, sp. nov.

A shrub, the twigs densely setose. Petioles short, densely setose and finely pubescent; pinnae 1 pair; leaflets 10-14 pairs, linear-oblong, 8-10 mm. long, about 2 mm. wide, apiculate, appressed-pubescent above, setose and pubescent beneath, the margin with appressed bristles; peduncles 1.5 cm. long, setose; flowers capitate; legume narrowly oblong, 2 cm. long, 5 mm. wide, densely long-setose on the valves and margins, finely pubescent, apiculate, 4-5-jointed.

Cerro San Antonio, Oaxaca, September, 1908, *C. Conzatti* 2239.

26. *Mimosa Xanti* A. Gray, Proc. Am. Acad. 5: 157. 1861.

A shrub, the twigs densely pilose-hispid, distantly armed with stout straight prickles 5-8 mm. long. Pinnae 1 pair; leaflets 4-9 pairs, oblong, acute, 8-15 mm. long, 3-8 mm. wide, appressed-pubescent on both sides, setose beneath, the margin with appressed bristles; peduncles slender, pilose-pubescent, 1.5-3 cm. long; flowers densely capitate, 4-parted; stamens 4; bractlets filiform, much longer than the heads; legume oblong, 2-2.5 cm. long, about 4 mm. wide, finely pubescent, 2-4-jointed, with short bristles on valves and margin.

TYPE LOCALITY: Near Cape San Lucas, Lower California.
DISTRIBUTION: Southern Lower California.

27. *Mimosa Langlassei* M. Micheli, Mém. Soc. Genève 34: 277. 1903.

A shrub or small tree, 3-4 m. high, the twigs glandular, and sparingly prickly. Stipules linear; pinnae 1 pair; leaflets 8-10 pairs, lanceolate, 5-7 mm. long, oblique at base, 1-nerved, softly pubescent above, setose-hispid beneath; flowers capitate; bractlets linear-clavate, ciliate, 3 mm. long; calyx minute, ciliate; corolla 4-5 mm. long, its lobes puberulent; stamens 4, long-exserted; ovary pilose, short-stipitate.

TYPE LOCALITY: At the base of Jorullo, Michoacán.
DISTRIBUTION: Michoacán.
ILLUSTRATION: M. Micheli, loc. cit. pl. 22.

28. *Mimosa chiapensis* Britton, sp. nov.

Woody; branches stout; twigs pilose; prickles stout, flat, distant, 6-8 mm. long. Petioles pilose, 7-10 mm. long; pinnae 1 pair; rachilla pilose; leaflets 7-12 pairs, obliquely oblong-lanceolate, 8-12 mm. long, 2.5-3.5 mm. wide, pubescent on both sides, sparingly setose beneath and on the margins, the apex sharply acute, the base rounded, the midvein excentric; peduncles axillary and in terminal clusters, slender, pilose, about 2 cm. long, or shorter; heads small, globose; bractlets scarcely longer than the buds; flowers 4-parted, pubescent; stamens 4.

River bottom, Monserrate, Chiapas, May, 1925, *Purpus* 10313.

29. *Mimosa tricephala* Cham. & Schl. Linnaea 5: 591. 1830.

A shrub with straight prickles, the branches, petioles and rachis pilose. Petioles 6-12 mm. long; pinnae 1 pair, 5-7.5 cm. long; leaflets 10-15 pairs, obliquely oblong, 10-12 mm. long, 4-6 mm. wide, 2-3-nerved, mucronate, glabrous and shining above, strigose beneath; peduncles 1-3 cm. long; flowers capitate, white, the heads densely many-flowered, sometimes ternate, axillary and forming a terminal raceme.

TYPE LOCALITY: Between Laguna Verde and Actopan, Veracruz.
DISTRIBUTION: Veracruz.

30. *Mimosa mixtecana* Brand. Univ. Calif. Pub. Bot. 3: 379. 1909.

A shrub, 2-3 m. high, the twigs at first slightly pubescent, bearing many short, flattened prickles. Petioles 1-2 cm. long; pinnae 1 pair; leaflets 3-5 pairs, obliquely oblong, 10-16 mm. long, 4-6 mm. wide, pubescent on both sides, or glabrate above, the margin with appressed bristles; peduncles slender, glabrous, 1-3 cm. long; calyx and corolla glabrous, 4- or 5-lobed; stamens 5; legume oblong, 3-4 cm. long, about 9 mm. wide, long-stipitate, acuminate, glabrous, unarmed, few-jointed.

TYPE LOCALITY: San Luis, Puebla.
DISTRIBUTION: Known only from the type locality.

31. *Mimosa sicyocarpa* B. L. Robinson, Proc. Am. Acad. 33: 313. 1898.

A shrub, 1-2 m. high, the twigs puberulent, with a few short prickles. Petioles slender, 5-6 cm. long, often prickly; pinnae 1 pair; leaflets 9-11 pairs, oblong, oblique at base, 2-2.5 cm.

long, 5-7 mm. wide, appressed-pubescent on both sides, pale beneath, 3-nerved at base; peduncles axillary, pubescent, 3-4 cm. long; flowers capitate; legume oblong, 2-3 cm. long, acute, about 7 mm. wide, the valves and margins long-setose, otherwise glabrous.

TYPE LOCALITY: Near San Sebastian, Jalisco.

DISTRIBUTION: Known only from the type locality.

32. *Mimosa Doylei* Britton & Rose, sp. nov.

A shrub, 3-4 m. high, somewhat prickly, the young parts pubescent. Stipules narrow, persistent; petioles 1.5 cm. long or less; pinnae 1 pair; leaflets 15-25 pairs, narrowly oblong to oblanceolate, 10-12 mm. long, about 2 mm. wide, appressed-pubescent on both sides, setose beneath, the margins with appressed bristles; peduncles slender, 2-3 cm. long; flowers capitate; stamens 5; legume 2-4 cm. long, 5-6 mm. wide, long-setose, acuminate, few-jointed.

Chiapas. Type from Los Pinos, December 12, 1906, *C. B. Doyle 56*.

33. *Mimosa caerulea* Rose, Contr. U. S. Nat. Herb. 5: 141. 1897.

A shrub, 1 m. high or less, the twigs at first puberulent, unarmed. Stipules small, linear; pinnae 1 or 2 pairs; leaflets 8-12 pairs, linear-oblong to lanceolate, 10-16 mm. long, 1.5-2 mm. wide, acute, glabrous on both sides, strongly veined, somewhat glaucous above, the margins bearing appressed bristles; peduncles puberulent, often clustered, 2.5 cm. long or less; flowers capitate; corolla 4-toothed; stamens 4, purplish; legume linear-oblong, 3.5-4 cm. long, 5-7 mm. wide, stipitate, acuminate, glabrous, constricted between the joints, sparingly armed with very short marginal bristles.

TYPE LOCALITY: Near Cuernavaca, Morelos.

DISTRIBUTION: Morelos.

34. *Mimosa Mellii* Britton & Rose, sp. nov.

A small tree, up to 5 m. high, the twigs glabrous, prickly, or nearly unarmed. Petioles only 2-3 mm. long; pinnae 1 pair; leaflets 10-15 pairs, linear, 6-8 mm. long, 1-1.5 mm. wide, acute, pale beneath, glabrous, the margin bearing appressed bristles; peduncles glabrous, 1.5-2 cm. long; flowers capitate; legume oblong, 1.5-2 cm. long, about 6 mm. wide, the valves and margins densely long-setose, otherwise glabrous, 2-4-jointed.

Near Chivela, Oaxaca, January, 1927, *C. D. Mell 2*.

35. *Mimosa Nelsonii* B. L. Robinson, Proc. Am. Acad. 33:

314. 1898.

Mimosa lignosa M. Micheli, Mém. Soc. Genève 34: 278. 1903.

A shrub, 1-2 m. high, the twigs puberulent, sometimes prickly. Petiole short; pinnae 1 pair; leaflets 5-11 pairs, broadly oblong, 7-9 mm. long, about 2 mm. wide, rounded at both ends, glabrous above, somewhat setulose beneath, the margin with appressed bristles; peduncles much longer than the petioles; flowers in dense heads, 4-parted; stamens 4; legume oblong, 2 cm. long, about 5 mm. wide, few-jointed, constricted between the joints, puberulent and rather densely setose.

TYPE LOCALITY: Between San Geronimo and La Venta, Oaxaca.

DISTRIBUTION: Oaxaca and Guerrero.

ILLUSTRATION: M. Micheli, loc. cit. *pl. 23*.

36. *Mimosa oaxacana* Britton & Rose, sp. nov.

A slender, woody vine, 3-7 m. long, the branches terete, puberulent. Stipules minute; petioles slender, 1-3 cm. long; pinnae 1 pair; leaflets 10-16 pairs, oblong, 10-15 mm. long, about 3 mm. wide, acute, puberulent on both sides, the margin appressed-setose, pale beneath, not glaucous, strongly veined, the midvein excentric; peduncles axillary, slender, 2-3 cm. long; flowers capitate; calyx and corolla glabrous; flowers 4-parted; stamens 4.

Between Guichocovi and Lagunas, Oaxaca, June 27, 1895, *Nelson 2746*.

37. *Mimosa spirocarpa* Rose, Contr. U. S. Nat. Herb. 3: 316. 1895.

A shrub, 3-6 m. high, velvety-pubescent throughout, the branches armed with distant, small, hooked prickles, or unarmed. Leaves large; pinnae 4 or 5 pairs; leaflets 1 to 3 pairs, obliquely oval, 16-30 mm. long, rounded, obtuse or sometimes acutish; flowers in slender spikes 7.5-12.5 cm. long; stamens 10; legume strongly coiled, puberulent, unarmed, the coil about 1 cm. in diameter or smaller.

TYPE LOCALITY: Culiacan, Sinaloa.
DISTRIBUTION: Sinaloa.
ILLUSTRATION: Rose, loc. cit. pl. 11.

38. *Mimosa Rosei* B. L. Robinson, Proc. Am. Acad. 33: 317. 1898.

An unarmed shrub, glabrous throughout, the twigs striate. Pinnae 3 or 4 pairs; leaflets 1 pair, obovate, subchartaceous, 15-22 mm. long, obtuse, 3- or 4-veined at base; peduncles short; spikes axillary, 6 cm. long; legume linear-oblong, 7 cm. long, 5 mm. wide, 8-jointed, long-stipitate, acuminate; stamens twice as many as the corolla-lobes.

TYPE LOCALITY: Near Bolaños, Jalisco.
DISTRIBUTION: Known only from the type locality.

39. *Mimosa paucifoliolata* M. Micheli, Mém. Soc. Genève 34: 278. 1903.

Mimosa laxiflora zygophylloides B. L. Robinson, Proc. Am. Acad. 33: 317. 1898.

A small tree or shrub, 2-7 m. high, the twigs at first puberulent, but soon glabrate, with or without prickles. Leaves small; pinnae 2-5 pairs; leaflets 1 pair, orbicular, 6-8 mm. broad, strongly veined beneath; flowers 5-parted, glabrous, in slender racemes 2-6 cm. long; stamens 10; legume linear, 3-4 cm. long, about 4 mm. wide, glabrous, rounded at apex, cuneate at base, 5-8-jointed.

TYPE LOCALITY: Las Munitas, Guerrero.
DISTRIBUTION: Colima to Guerrero.
ILLUSTRATION: M. Micheli, loc. cit. pl. 24.

40. *Mimosa Benthamii* Macbride, Contr. Gray Herb. 59: 12. 1919.

Mimosa fasciculata Benth. Lond. Journ. Bot. 5: 88. 1846. Not Benth. 1842.
Acacia fasciculata Kunth. Mim. 75. 1821.

A shrub, the branches angled, tomentose, bearing short, stout prickles. Leaves large; petiole and rachis tomentose, somewhat prickly; pinnae 11-20 pairs; leaflets 8-15 pairs, oblong, 3-4 mm. long, pubescent on both sides; inflorescence a terminal raceme of spikes; spikes densely flowered, 4-6 cm. long; calyx and corolla densely white-pubescent; filaments 10, purple; legume linear, 4-5 cm. long, the valves and margins pubescent and densely long-setose.

TYPE LOCALITY: Guanajuato.
DISTRIBUTION: Guanajuato to Oaxaca.
ILLUSTRATION: Kunth, loc. cit. pl. 23.

41. *Mimosa Palmeri* Rose, Contr. U. S. Nat. Herb. 1: 99. 1891.

A shrub, 3-4 m. high, the branches terete or nearly so, somewhat pubescent, with or without prickles. Leaves large; petiole and rachis somewhat pubescent, unarmed; pinnae 5-13 pairs; leaflets 6-16 pairs, oblong, 3-5 mm. long, appressed-pubescent on both sides; inflorescence terminal, the spikes clustered; spikes 5-10 cm. long, slender; flowers pubescent; calyx minute; stamens 10, pink; legume narrow, 3-4 cm. long, brownish-tomentose, unarmed.

TYPE LOCALITY: Alamos, Sonora.
DISTRIBUTION: Southern Sonora and Sinaloa.

42. *Mimosa luisana* Brand. Zoe 5: 248. 1908.

A shrub, the twigs pubescent, bearing flattened prickles. Stipules 3.5 mm. long; pinnae 4 or 5 pairs; leaflets 4 or 5 pairs, oblong to obovate, 4 mm. long, 1.5-2 mm. wide, pubescent on

both sides; spikes 2-3 cm. long; flowers pubescent; calyx minute, ciliate; corolla 4- or 5-lobed; stamens 8 or 10; legume linear, 3-4 cm. long, 4-5 mm. wide, densely tomentose, sessile, subulate-tipped, unarmed.

TYPE LOCALITY: San Luis, Tultitlanapa, Puebla.
DISTRIBUTION: Puebla.

43. *Mimosa fuertensis* Britton, sp. nov.

Twigs slender, angled, puberulent when young, armed with scattered, small, reflexed prickles. Stipules narrowly linear, 2-3 mm. long; petioles 1-2 cm. long, puberulent, slender, unarmed, or bearing a solitary prickle; rachis puberulent and prickly; pinnae 3 or 4 pairs; leaflets 2-4 pairs, elliptic to obovate, 2-3.5 mm. long, rounded, or minutely apiculate, rather densely pubescent on both sides; spikes racemose, short-peduncled, 2-3.5 cm. long, densely flowered, the flowers glabrous; calyx subtruncate; corolla 5-lobed; stamens 10.

Vicinity of Fuerte, Sinaloa, on dry hills, March 26, 1910, *Rose, Standley & Russell 13522*.

44. *Mimosa guatemalensis* (Hook. & Arn.) Benth. Bot. Voy. Sulph.

89. 1844.

Inga (?) *guatemalensis* Hook. & Arn. Bot. Beechey Voy. 419. 1841.

A shrub, 2 m. high, or higher, the twigs densely tomentose, often with numerous brown prickles, sometimes unarmed. Pinnae 3-6 pairs; leaflets 3-6 pairs, elliptic to obovate, 1-2 cm. long, 4-18 mm. wide, pubescent on both sides; spikes axillary, or in large terminal racemes, densely flowered, 5-7 cm. long; calyx and corolla densely pubescent; flowers 5-parted; stamens 10; legume linear-oblong, 3-5 cm. long, velvety-pubescent, the margin prickly, or unarmed.

TYPE LOCALITY: Tepic.
DISTRIBUTION: Sinaloa to Guatemala.

45. *Mimosa distachya* Cav. Icones 3: 48. 1794.

Acacia distachya DC. Prodr. 2: 456. 1825.

Acacia remota Benth. Lond. Journ. Bot. 5: 88. 1846.

A shrub, the branches angled, prickly or unarmed. Stipules subulate; pinnae 3 or 4 pairs; leaflets 3 or 4 pairs, elliptic to obovate, rounded, 6-10 mm. long, pubescent on both sides, at least when young; flowers in spikes 3-4 cm. long; calyx and corolla 5-lobed, puberulent or glabrate; stamens 10; legume narrowly oblong, puberulent, 2-3 cm. long, 5-7 mm. wide, obtuse, puberulent, unarmed, apiculate, short-stipitate, somewhat constricted between the seeds.

TYPE LOCALITY: Mexico.
DISTRIBUTION: Sinaloa to Puebla.
ILLUSTRATION: Cav. loc. cit. *pl.* 295.

46. *Mimosa Brandegeei* B. L. Robinson, Proc. Am. Acad. 33:

316. 1898.

A low shrub, 2-3 m. high, the twigs terete, pubescent, more or less prickly. Petiole and rachis pubescent, often prickly; pinnae 2-4 pairs; leaflets 2-4 pairs, obovate, 9-15 mm. long, glabrous above, appressed-pubescent beneath; flowers in spikes 3-4 cm. long; legume narrowly oblong, 2.5-4 cm. long, acute, the valves bristly-setose and puberulent; stamens twice as many as the corolla-lobes.

TYPE LOCALITY: San José del Cabo, Lower California.
DISTRIBUTION: Cape region of Lower California; (?) Sinaloa.

47. *Mimosa oligacantha* DC. Prodr. 2: 429. 1825.

A shrub, about 1 m. high, or lower, or with subscaudent branches 2-3 m. long, the twigs puberulent or glabrous, armed with large recurved, solitary prickles. Stipules linear-lanceolate, 3-5 mm. long; petiole 1-2 cm. long; pinnae 3 or 4 pairs, distant; leaflets 2-4 pairs, elliptic to obovate, 5-8 mm. long, 3.5-5 mm. wide, loosely appressed-pubescent, 2-3-nerved and delicately

pinnately veined, the apex obtuse or rounded; spikes mostly axillary, 2-3 cm. long; flowers pubescent; legume narrowly oblong, puberulent, subulate-tipped, 2-5-jointed, sometimes constricted between the joints, short-stipitate, the valves setose or naked, the margins sparingly prickly.

TYPE LOCALITY: Santa Marta, Colombia.

DISTRIBUTION: Cuba; Aruba; Curaçao; Colombia.

48. *Mimosa laxiflora* Benth. Lond. Journ. Bot. 5: 93. 1846.

A low shrub, with few scattered prickles. Pinnae 2-4 pairs; leaflets 3-5 pairs, elliptic or obovate, glabrous, or loosely appressed-pubescent, 7-12 mm. long, obtuse, more or less distinctly 3-nerved; spike-like racemes solitary or in pairs, 2-4 cm. long; flowers glabrous, white, 4-5-parted; stamens 8 or 10; legume oblong, 4-5 cm. long, glabrous, about 8-seeded, stipitate.

TYPE LOCALITY: Sonora Alta, Sonora.

DISTRIBUTION: Southern Arizona to Chihuahua, Sonora and Sinaloa.

49. *Mimosa purpurascens* B. L. Robinson, Proc. Am. Acad. 33: 317. 1898.

A shrub, the twigs puberulent, prickly. Pinnae 2-5 pairs; leaflets 3-6 pairs, oblong, 4-6 mm. long, about twice as long as wide, rounded or apiculate, puberulent; spikes 3-5 cm. long; flowers puberulent, purplish; legume linear-oblong, 3-5 cm. long, 5-6 mm. wide, tomentulose, 5-8-jointed; stamens twice as many as the corolla-lobes.

TYPE LOCALITY: La Paz, Lower California.

DISTRIBUTION: Lower California.

50. *Mimosa Ferrisiae* Britton & Rose; Ferris, Contr. Dudley Herb. 1: 70. 1927.

A shrub, with slender, green branches, glabrous, or at least soon glabrate, sparingly prickly. Stipules linear, 3-4 mm. long, deciduous; pinnae 3 or 4 pairs; leaflets 3 or 4 pairs, orbicular to obovate, rounded at apex, sometimes apiculate, 8-15 mm. long, when young densely appressed-pubescent on both sides, in age glabrate; spikes longer than the leaves, 8-11 cm. long, evenly-flowered; flowers appressed-pubescent; stamens 10, pinkish-white; legume linear, 3-4 cm. long, 5 mm. wide, rounded at base and apex, short-pubescent, 5- to 10-jointed, tipped by the slender persistent style.

TYPE LOCALITY: Near road between penal colony and lighthouse, Maria Madre, Très Marias Islands [Tepic].

DISTRIBUTION: Très Marias Islands; Sinaloa.

ILLUSTRATION: Ferris, loc. cit. pl. 3, f. 4.

51. *Mimosa Schomburgkii* Benth. Journ. Bot. Hook. 2: 133. 1840.

A small tree, the twigs densely lepidote. Leaves often 2 dm. long, the petiole, rachis, and young leaflets densely lepidote; pinnae 7-15 pairs; leaflets 15-20 pairs, oblong, acutish, 4-6 mm. long, 2-3 mm. wide, becoming glabrate in age, the midvein subcentral, prominent beneath; inflorescence a terminal panicle of spikes 3-8 cm. long; peduncles, calyx and corolla lepidote; stamens 10; legume linear-oblong, 5-7.5 cm. long, 7-9 mm. wide, short-stipitate, lepidote.

TYPE LOCALITY: Pirara, British Guiana.

DISTRIBUTION: Honduras; British Guiana.

52. *Mimosa malacocarpa* (B. L. Robinson) Britton & Rose.

Mimosa fasciculata malacocarpa B. L. Robinson, Proc. Am. Acad. 33: 319. 1898.

Mimosa Benthamii malacocarpa Macbride, Contr. Gray Herb. 59: 12. 1919.

A stout shrub or small tree, 3-7 m. high, the twigs tomentose, bearing short prickles. Leaves large, the petiole and rachis tomentose; pinnae about 15-25 pairs; leaflets many pairs, linear-oblong, 3-4 mm. long, about 1 mm. wide, acute, pubescent on both sides; flowers in

elongated spikes; legume linear-oblong, strongly curved, 5-7 cm. long, 4-6 mm. wide, long-acuminate, densely brownish-tomentose, the margin unarmed.

TYPE LOCALITY: Between Amoloc (Puebla) and Sochi (Guerrero).
DISTRIBUTION: Puebla; Guerrero; Jalisco.

53. *Mimosa dysocarpa* Benth.; A. Gray, Pl. Wright. 1: 62. 1852.

A shrub, the twigs angled, brownish villous, very prickly, the prickles stout, light-colored. Pinnae 6-12 pairs; leaflets 7-16 pairs, oblong-linear, acute, pubescent on both sides; spikes 1-2 cm. long; calyx and corolla pubescent; legume 2.5-5 cm. long, about 6 mm. wide, tomentose, more or less constricted between the seeds, the margin prickly; stamens twice as many as the corolla-lobes.

TYPE LOCALITY: Pass of the Limpia, Texas.
DISTRIBUTION: Southern Texas and New Mexico to Arizona and Durango.
ILLUSTRATION: Benth. Trans. Linn. Soc. 30: pl. 66.

54. *Mimosa Wrightii* A. Gray, Pl. Wright. 2: 52. 1853.

A shrub, the twigs angled, pubescent and prickly, the prickles brown. Pinnae 7-10 pairs; leaflets 10-15 pairs, linear or narrowly oblong, 3-4 mm. long, acute, glabrate above, appressed-pubescent beneath; spikes 3-4 cm. long; calyx and corolla pubescent; legume 3-5 cm. long, 5-6 mm. wide, densely tomentose, unarmed; stamens twice as many as the corolla-lobes.

TYPE LOCALITY: Sonoita, Sonora.
DISTRIBUTION: Southern Arizona, Sonora, and Chihuahua.

55. *Mimosa Gomezii* Britton & Rose, sp. nov.

A shrub, the twigs pubescent, more or less prickly. Pinnae 1-5 pairs; leaflets 5-8 pairs, obliquely oblong, 6-8 mm. long, pubescent on both sides, pale beneath, 3-nerved at base; peduncles axillary, sometimes clustered, pubescent; flowers in dense spikes 1-1.5 cm. long; calyx and corolla pubescent, purplish; legume linear, 4-5 cm. long, 5-6 mm. wide, pubescent and glandular, constricted between the seeds, stipitate, long-apiculate, the margins sparingly prickly or unarmed.

Oaxaca. Type from the Valley of Oaxaca, September 20, 1894, *Nelson 1479*.

56. *Mimosa rhododactyla* B. L. Robinson, Proc. Bost. Soc. Nat. Hist. 31: 260. 1904.

A shrub, 3 m. high, the branches terete, yellowish-tomentose, unarmed. Pinnae 6-10 pairs; leaflets 4-14 pairs, obliquely obtuse, 3 mm. long, about 1.5 mm. wide, glabrous above, pubescent beneath; inflorescence a terminal raceme of slender spikes 4 cm. long; calyx and corolla pubescent; stamens 10.

TYPE LOCALITY: Las Higueretas, Michoacán or Guerrero.
DISTRIBUTION: Known only from the type locality.

57. *Mimosa puberula* Benth. Lond. Journ. Bot. 5: 88. 1846.

A tree, the twigs puberulent, unarmed. Stipules subulate, 4-6 mm. long; pinnae 5-10 pairs; leaflets 15-40 pairs, obliquely oblong, thick, 4-5 mm. long, obtuse; spikes 3-5 cm. long; flowers nearly glabrous; corolla 2 mm. long; legume (according to Bentham) oblong, 3 cm. long, 6-8 mm. broad, pubescent, stipitate, 3-5-jointed.

TYPE LOCALITY: Zimapan, Hidalgo.
DISTRIBUTION: Known only from the type locality, and to us from description only.

58. *Mimosa tenuiflora* (Willd.) Poir. in Lam. Encycl. Suppl. 1: 82. 1810.

Acacia tenuiflora Willd. Sp. Pl. 4: 1088. 1806.
Mimosa cabreræ Karst. Fl. Colomb. 2: 63. 1863.

A shrub or small tree, 3-8 m. high, the twigs pubescent and glandular, prickly. Stipules minute; pinnae 6-9 pairs; leaflets 20-40 pairs, linear-oblong, 4-8 mm. long, about 1.5 mm.

wide, more or less glutinous, firm in texture; spikes 5-8 cm. long; calyx puberulent or glabrous; corolla glabrous; stamens 8; legume oblong, 2.5-5 cm. long, about 7 mm. wide, pubescent and glandular, unarmed, cuneate at base, 3-6-jointed, nearly sessile.

TYPE LOCALITY: Caracas, Venezuela.

DISTRIBUTION: Oaxaca; El Salvador; Colombia; Venezuela.

ILLUSTRATION: Karst. loc. cit. *pl.* 132.

59. *Mimosa ionema* B. L. Robinson, Proc. Am. Acad. 36:
473. 1901.

A shrub or small tree, 3-5 m. high, the twigs puberulent, unarmed. Stipules filiform, 8 mm. long; petioles 4-6 mm. long, puberulent; pinnae 4-8 pairs; leaflets about 15 pairs, oblong, 5-6 mm. long, 1.5-2 mm. wide, glabrous or nearly so, delicately pinnately veined; peduncles axillary, slender, often clustered, 2-3 cm. long; spikes slender, 5-6 cm. long; corolla white, or pale yellow, 2.5 mm. long, glabrous; stamens 8 or 10; young legume oblong, 5 cm. long, about 7 mm. wide, glabrous, acute at both ends.

TYPE LOCALITY: Near Cuernavaca, Morelos.

DISTRIBUTION: Morelos and Guerrero.

60. *Mimosa polyanthoides* B. L. Robinson, Proc. Bost. Soc. Nat.
Hist. 31: 260. 1904.

A shrub, 3-5 m. high, the twigs angled, glabrous, with a few, flattened, reflexed prickles. Leaves 1.5 dm. long; petioles 2-3 cm. long; pinnae 4-7 pairs; leaflets 13-17 pairs, oblong, 8 mm. long, obtuse, glabrous; flowers in spikes; legume oblong, 5-6 cm. long, 10-13 mm. wide, long-apiculate, about 8-jointed, long-cuneate at base, stipitate, the valves and margin loosely long-setose.

TYPE LOCALITY: Above Iguala, Guerrero.

DISTRIBUTION: Guerrero.

61. *Mimosa setigera* Britton & Rose, sp. nov.

A low shrub, the twigs terete, glabrous, with few prickles, or none. Pinnae 2-5 pairs; leaflets 4-10 pairs, oblong, 3-5 mm. long, 1.5-2 mm. wide, rounded or acutish, glabrous; flowers in axillary spikes about 5 cm. long; calyx pinkish, 3- or 4-lobed, glabrous; corolla 3- or 4-lobed, glabrous; stamens 6 or 8, about 7 mm. long; legume sessile or nearly so, oblong, 3-4 cm. long, 6-8 mm. wide, short-apiculate, the margin and valves setose, otherwise glabrous.

Rosario, Sinaloa, April 14, 1910, *Rose, Standley & Russell 14553*.

62. *Mimosa adenanthroides* (Mart. & Gal.) Benth. Lond. Journ.
Bot. 5: 88. 1846.

Acacia adenanthroides Mart. & Gal. Bull. Acad. Brux. 10²: 312. 1843.

A shrub, 1-3 m. high, the twigs bearing a few reflexed prickles, glandular-pubescent. Pinnae 4-9 pairs; leaflets 6-10 pairs, oblong or obliquely oval, 6-12 mm. long, 3-nerved, delicately pinnately veined beneath; spikes axillary, 1.5-3.5 cm. long; peduncle and flowers pubescent; corolla white, 2 mm. long; legume linear, 3-4.5 cm. long, about 6 mm. wide, long-apiculate, unarmed, puberulent.

TYPE LOCALITY: Sola and Yolotepeque, Oaxaca.

DISTRIBUTION: Oaxaca.

63. *Mimosa coelocarpa* B. L. Robinson, Proc. Am. Acad. 33:
319. 1898.

A shrub, the twigs puberulent, short-prickly. Stipules setaceous; pinnae 6-8 pairs; leaflets 10-12 pairs, linear-oblong, 3 mm. long, about 1 mm. wide, acute, puberulent, the mid-vein excentric; peduncles axillary, slender, about 1.5 cm. long; spikes 2.5-4 cm. long; flowers

4-parted, puberulent; stamens about 1 cm. long, twice as many as the corolla-lobes; legume linear, 4-5 mm. long, about 3 mm. wide, curved, tomentose, acute, cuneate at base, unarmed, nearly sessile.

TYPE LOCALITY: Topolobampo, Sinaloa.
DISTRIBUTION: Sinaloa.

64. *Mimosa stipitata* B. L. Robinson, Proc. Bost. Soc. Nat. Hist.
31: 261. 1904.

A shrub, 3-5 m. high, the twigs at first pubescent, often purplish, prickly or unarmed. Petioles 1-1.5 cm. long; pinnae 4-7 pairs; leaflets 7-10 pairs, oblong, 5 mm. long, 1.5-2 mm. wide, acutish, glabrous, or ciliate; spikes 2-3 cm. long; flowers white, glabrous; legume oblong, 4-5 cm. long, 1 cm. broad, apiculate, glabrous, with a slender stipe 5-10 mm. long.

TYPE LOCALITY: Near Iguala, Guerrero.
DISTRIBUTION: Guerrero; Puebla; Morelos.

65. *Mimosa polyantha* Benth. Journ. Bot. Hook. 4: 410. 1842.

?*Acacia prosopoides* DC. Prodr. 2: 460. 1825.

Mimosa polyantha levior B. L. Robinson, Proc. Am. Acad. 33: 318. 1898.

A shrub, the twigs pubescent or glabrate, prickly or unarmed. Prickles solitary or in pairs, recurved; pinnae 2-5 pairs, rarely 1 pair; leaflets 5 or 6 pairs, oblong, 3-6 mm. long, 1-1.5 mm. wide, obtuse, puberulent beneath but soon glabrate; spikes 2-4 cm. long; flowers glabrous; legume 3-5 cm. long, 8-10 mm. wide, short-stipitate, 4- or 5-seeded, more or less setose, or unarmed, glabrous.

TYPE LOCALITY: Mexico.
DISTRIBUTION: Sinaloa; Puebla; Oaxaca.

66. *Mimosa brevispicata* Britton, sp. nov.

Twigs very slender, puberulent, angled, armed with large, solitary, recurved prickles. Stipules linear-lanceolate, puberulent, 3-5 mm. long; petiole and rachis puberulent; petiole 1-2 cm. long; pinnae 2 pairs; leaflets 6-9 pairs, linear-oblong, 3-5 mm. long, 1-1.5 mm. wide, obtuse, 1-veined, puberulent when young, becoming glabrous; spikes axillary and in narrow terminal panicles, solitary or 2 or 3 together, 1-2 cm. long, the short peduncles puberulent; flowers puberulent, 4- or 5-parted; stamens 8-10.

Tlacuiloltepec, Puebla, 1909, *Purpus* 3857.

67. *Mimosa somnians* H. & B.; Willd. Sp. Pl. 4: 1036. 1806.

Herbaceous or becoming woody at base, erect or with spreading branches, sometimes nearly 2 m. high, usually bearing many glandular hairs and scattered prickles. Petioles slender, unarmed or prickly, glandular-pubescent or glabrous; pinnae 2-8; leaflets 12-28 pairs, linear-oblong, 2-4 mm. long, glabrous, nearly 1 mm. wide; flowers pink, capitate, 4-parted; stamens 8; corolla striate; legume linear, 4-7 cm. long, 2-3 mm. wide, glandular-pubescent or glabrous, long-stipitate, acute, the margins sparingly short-setose or naked.

TYPE LOCALITY: South America.
DISTRIBUTION: Oaxaca and Veracruz to Panama, Colombia, Bolivia and Paraguay.
ILLUSTRATION: Kunth. *Mim. pl.* 7.

68. *Mimosa strigillosa* Torrey & Gray, Fl. N. Am. 1: 399. 1840.

Perennial, herbaceous, with long prostrate branches, sparingly appressed-pubescent or glabrous, armed with short curved prickles, or unarmed. Stipules ovate; pinnae 4-6 pairs; leaflets 10-15 pairs, linear, 3-6 mm. long, 0.5-1 mm. wide, ciliate; peduncles axillary, longer than the leaves, often much elongated, sometimes 3 dm. long, strigose or setose; flowers in dense oblong or subglobose heads 1-2.5 cm. long; stamens twice as many as the corolla-lobes; legume oblong, 15-20 mm. long, 10-12 mm. wide, setulose, 1-few-jointed, obliquely tipped.

TYPE LOCALITY: Tampa Bay, Florida.
DISTRIBUTION: Southern Georgia to Oklahoma, Florida, Texas, and Tamaulipas.

69. *Mimosa pusilla* Benth. Bot. Voy. Sulph. 90. 1844.

A low herb, with slender spreading branches, sparingly pilose, armed with short, straight distant prickles. Stipules ovate, acuminate, about 2 mm. long, striate; pinnae 1-3 pairs; leaflets 6-15 pairs, oblong-linear, glabrous, sparingly ciliate, 6-8 mm. long, about 1.5 mm. wide, acute or acutish, the midvein nearly central; peduncles axillary, 5-15 mm. long; flowers 4-parted, in small heads; stamens 8; bractlets ciliate; legume oblong, 1 cm. long or less, 1-3-jointed, loosely setose on valves and margin.

TYPE LOCALITY: Realejo, Nicaragua.
DISTRIBUTION: Guerrero; Nicaragua.

70. *Mimosa flavescens* Splitg. in Hoev. & Vries, Tijdschr. 9:
110. 1842.

Mimosa Aeschynomenes Benth. Bot. Voy. Sulph. 89. 1844.
?Mimosa flaviseta Benth. Lond. Journ. Bot. 5: 90. 1846.

Suffruticose, erect or decumbent, about 1.2 m. high, or lower, pilose, sparingly short-prickly or unarmed. Stipules lanceolate, 5-6 mm. long; petiole short, about 1 cm. long, or less; pinnae 2-6 pairs; leaflets 15-30 pairs, linear or linear-oblong, 4-6 mm. long, acutish or obtuse, strongly veined, usually long-ciliate; peduncles axillary, about 2 cm. long, or shorter; heads subglobose; bractlets ciliate; flowers somewhat pubescent, 4-parted; stamens 8, short, about 6 mm. long; legumes densely clustered, linear-oblong, sessile, 8-15 mm. long, about 4 mm. wide, 2- or 3-jointed, densely long-setose.

TYPE LOCALITY: Dutch Guiana.
DISTRIBUTION: Martinique; Grenada; Guerrero to Costa Rica; Colombia to Dutch Guiana.

71. *Mimosa occidentalis* Britton & Rose, sp. nov.

Mimosa camporum B. L. Robinson, Proc. Am. Acad. 33: 330. 1898. Not Benth. 1840.

Suffruticose, loosely or densely pilose; stems rather slender, prostrate or ascending, unarmed, 6 dm. long, or shorter. Stipules ovate, acuminate, 5-7 mm. long; petioles 0.5-3 cm. long; pinnae 4-9 pairs; leaflets 20-30 pairs, linear, 4-6 mm. long, 0.5-1 mm. wide, strongly veined, obtuse, ciliate; peduncles stout, pilose, 2-5 cm. long, axillary, and few together in a terminal cluster; heads ovoid, densely many-flowered, 8-15 mm. long; bractlets long, fimbriate; flowers pubescent, 4-parted; stamens 8, elongated, 8-10 mm. long.

Tepec and Chiapas. Type from near Acajoneta, Tepec, July, 1897, *J. N. Rose 3295*.

72. *Mimosa malacophylla* A. Gray, Journ. Bost. Soc. Nat. Hist.
6: 182. 1850.

A vine-like, pubescent shrub, 3-4.5 m. long, armed with many, short, reflexed prickles. Petiole and rachis short-prickly; pinnae 3-5 pairs; leaflets 3-6 pairs, oval to oblong, or obovate, 7-14 mm. long, acute or obtuse, pubescent on both sides; heads often in terminal racemes; peduncles 1-3 cm. long; flowers capitate, white; corolla pubescent; stamens twice as many as the corolla-lobes; legume oblong, 5-7.5 cm. long, 8-10 mm. wide, glabrous, long-stipitate, several-jointed.

TYPE LOCALITY: Near the Rio Grande, western Texas.
DISTRIBUTION: Texas to Tamaulipas and Nuevo León.

73. *Mimosa Wootonii* Standley, Contr. U. S. Nat. Herb. 23:
364. 1922.

Mimosa malacophylla glabrata Benth. Trans. Linn. Soc. 30: 423. 1875.

A shrub, with clambering branches, glabrous or puberulent, bearing numerous short reflexed prickles. Petioles and rachis prickly; pinnae 3 or 4 pairs; leaflets 4 or 5 pairs, oval to obovate, 8-15 mm. long, 5-10 mm. wide, mostly acute, mucronate, glabrous, shining; heads in a terminal raceme; peduncles 2 cm. long or less, puberulent; flowers capitate; calyx and

corolla glabrous; stamens twice as many as the corolla-lobes; legume broadly linear, unarmed and glabrous, 4-7 cm. long, about 1 cm. wide, several-jointed.

TYPE LOCALITY: Hacienda Buena Vista, Tamaulipas.
DISTRIBUTION: Southern Texas and Tamaulipas.

74. *Mimosa invis* Mart. *Flora* 20: Beibl. 2: 121. 1837.

Schrankia brachycarpa Benth. *Journ. Bot. Hook.* 2: 130. 1840.
Mimosa diplotricha C. Wright; Sauvalle, *Anales Acad. Habana* 5: 405. 1869.
Morongia pilosa Standley, *Contr. U. S. Nat. Herb.* 18: 105. 1916.
Schrankia pilosa Macbride, *Contr. Gray Herb.* 59: 11. 1919.

A woody clambering vine, 1-2 m. long, the branches angled, with numerous, short reflexed prickles, pilose or glabrous. Pinnae 4-8 pairs; petiole and rachis more or less prickly; leaflets many pairs, oblong-linear, 3-5 mm. long, about 1 mm. wide, glabrous on both sides, ciliate; peduncles about 1 cm. long, or shorter; flowers in dense heads; calyx and corolla glabrous; stamens 8, twice as many as the corolla-lobes, purplish; legume linear-oblong, 1-2.5 cm. long, 5-6 mm. wide, short-setose on the valves and margin, more or less pubescent, sessile, 3-5-jointed.

TYPE LOCALITY: Rio de Janeiro, Brazil.
DISTRIBUTION: Jamaica; Cuba; Hispaniola; Trinidad; Tepic and Veracruz to Panama, Colombia and Brazil.
ILLUSTRATION: Benth. in *Mart. Fl. Bras.* 15: pl. 97.

75. *Mimosa polyanctra* Benth. *Trans. Linn. Soc.* 30: 422. 1875.

Mimosa hystriosa Brand. *Univ. Calif. Publ. Bot.* 4: 86. 1910.

A slender, vine-like shrub, the branches pubescent, with numerous reflexed prickles. Stipules linear; petiole and rachis prickly; pinnae 3-7 pairs, with an acicular bristle between them; leaflets 6-8 pairs, oblong, 6-10 mm. long, 2-3 mm. wide, glabrous or puberulent and dark green above, pale and with scanty appressed pubescence beneath; peduncles axillary, filiform, 1-2 cm. long, pubescent; heads oblong; flowers capitate, purple; calyx and corolla pubescent; stamens twice as many as the corolla-lobes; legume linear, 5-6 cm. long, about 7 mm. wide, acuminate, the margins prickly, the valves densely setose and glandular.

TYPE LOCALITY: Mexico.
DISTRIBUTION: Puebla; Oaxaca; Jalisco.

76. *Mimosa sinaloensis* Britton & Rose, sp. nov.

A clambering woody vine, 5-7 m. long or longer, the branches slender, somewhat angled, glabrous, densely armed with short reflexed prickles. Petiole and rachis prickly; pinnae 2-6 pairs, slender; leaflets 5-12 pairs, ovate-oblong, somewhat oblique, acute, glabrous, 4-7 mm. long, 1.5-2 mm. wide; inflorescence axillary or racemose; peduncles 1.5-2.5 cm. long, glabrous, prickly; heads globose; calyx and corolla glabrous; stamens twice the number of the corolla-lobes; ovary pubescent; legume 6-8 cm. long, 8-10 mm. wide, somewhat shining, puberulent, unarmed, apiculate, several-jointed.

Sinaloa. Type from thickets near Mazatlán, April 1, 1910, *Rose, Standley & Russell* 13830.

77. *Mimosa Leonardii* Britton & Rose; Rose & Leonard, *Journ. Wash. Acad.* 17: 256. 1927.

A low shrub, with slender, terete, glabrous branches, bearing short, paired, recurved prickles at the nodes. Petiole and rachis glabrous, flattened; rachis with paired reflexed nodal prickles; pinnae 2-3 pairs, widely separated; leaflets 1-3 pairs, oblong, obscurely 3-veined, 5-8 mm. long, 2-4 mm. wide, thick, glabrous, the apex rounded; peduncles axillary, solitary or in clusters, 8 mm. long, or less, puberulent; flowers glabrous, in small heads, 4-parted, pinkish; stamens 8; legume 4-5 cm. long, short-stipitate, brown, glabrous, 8-10-jointed; seeds orbicular, flat.

TYPE LOCALITY: Vicinity of Ennery, l'Artibonite, Haiti.
DISTRIBUTION: Known only from the type locality.

78. *Mimosa domingensis* (Bert.) Benth. Journ. Bot. Hook. 4:
409. 1842.

Acacia domingensis Bert.; DC. Prodr. 2: 464. 1825.

Mimosa diplacantha Benth. Trans. Linn. Soc. 30: 424. 1875.

A low shrub, the twigs reddish at first, puberulent, but soon glabrate, armed with small curved prickles. Stipules linear, 1-2 mm. long; pinnae 2-5 pairs; rachis with a pair of black recurved prickles at the nodes; leaflets 6-11 pairs, oblong-linear, 3-5 mm. long, 0.5-1 mm. wide, obtuse, glabrous, obscurely 3-nerved; inflorescence axillary or sometimes paniculate; peduncles 1-3 cm. long, reddish, puberulent; flowers capitate; calyx and corolla puberulent, reddish; stamens 8, twice as many as the corolla-lobes, white; legume 3-4 cm. long, 4-5 mm. wide, short-stipitate, apiculate, glabrous, reddish, 5-7-jointed, unstricted.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Santo Domingo.

79. *Mimosa Farisii* Leonard, sp. nov.

Young twigs sparingly prickly; inflorescence and rachis puberulent. Petioles short, about 5 mm. long; stipules filiform, 5-6 mm. long; rachis unarmed or sparingly prickly; rachillas sometimes with a pair of small prickles at the summit; pinnae 6-9 pairs, approximate; leaflets 8-10 pairs, oblong, glabrous, dull, subchartaceous, 1-2-nerved, 4-6 mm. long, 1.5-2.5 mm. wide, rounded at base and apex; flowers capitate, glabrous, 4-parted; heads small, racemose or subsapiculate, the peduncles short; stamens 8.

Scrubby rocky land, Nigua, Santo Domingo, July, 1921, *James A. Faris 447*.

80. *Mimosa azuensis* Britton, sp. nov.

Twigs and leaves glabrous, the twigs armed with small, recurved, paired, or solitary prickles. Petioles 10-18 mm. long; pinnae 3-5 pairs, distant, the rachis with prickles at the nodes, or unarmed, the rachillas usually with one prickle, rarely two, at the summit; leaflets 5-7 pairs, elliptic, chartaceous, 6-9 mm. long, 4-5 mm. wide, 5-nerved and delicately pinnately veined, shining above, dull beneath, the base subcordate, the apex rounded; legume narrowly oblong, 5-6 cm. long, 7-9 mm. wide, 6-8-jointed, glabrous, long-tipped, short-stipitate.

Lower foot-hills, Azua, Santo Domingo, March 17, 1913, *Rose, Fitch & Russell 3994*.

81. *Mimosa fagaracantha* Griseb. Cat. Pl. Cub. 81. 1866.

A shrub, the slender branches angled, glabrous or nearly so, the internodes unarmed. Pinnae 2 or 3 pairs; stipules and stipels with a pair of recurved prickles 1.5-2 mm. long; leaflets 3 or 4 pairs, obovate to elliptic-orbicular, lustrous, 5-nerved, 3.5-4 mm. long, 2.5-3 mm. wide, the base and apex rounded; heads axillary, about 5 mm. in diameter; peduncles 7-10 mm. long, puberulent; flowers glabrous; calyx less than 1 mm. high, shallowly lobed; corolla-lobes 4 or 5, ovate, 1 mm. long, 0.5 mm. wide, acute; stamens twice as many as the corolla-lobes (ex Grisebach); legume oblong, 7 mm. wide, glabrous.

TYPE LOCALITY: Eastern Cuba.

DISTRIBUTION: Known only from the type locality.

82. *Mimosa Ekmanii* Urban, Symb. Ant. 9: 440. 1928.

Scandent, glabrous, the twigs armed with recurved prickles 2-4 mm. long. Stipules filiform, 1-4 mm. long; stipular prickles similar to those of the internodes; petioles 8-17 mm. long; rachis prickly; pinnae 3 or 4 pairs; leaflets 3-7 pairs, ovate, or elliptic-ovate, 2-6 mm. long, 1.5-2.7 mm. wide, entire, the midvein prominent, the lateral veins 1 or 2 or wanting, the base subtruncate, the apex rounded or obtuse; peduncles solitary in the axils, 1-2 cm. long; flowers capitate, lilac; corolla 2 mm. long; legume linear, somewhat curved, glabrous, unarmed, 4-6 mm. long, 6-8 mm. wide, long-stipitate, 6-9-jointed, constricted between the joints or sinuate-margined.

TYPE LOCALITY: Rio Pilato, Sierra de Nipe, Oriente, Cuba.

DISTRIBUTION: Type locality and vicinity.

83. *Mimosa pulverulenta* Urban, Symb. Ant. 9: 439. 1928.

Twigs terete, pilose-puberulent. Stipular prickles recurved, 2-3 mm. long; stipules filiform, 1-2 mm. long; petioles about 1 cm. long; rachis prickly; pinnae 2 or 3 pairs; leaflets 3 pairs, obovate, glabrous, sessile, 6-10 mm. long, 3-5.5 mm. wide, entire or nearly so, 4-5-nerved, the base obtuse, the apex rounded or apiculate; peduncles 8-12 mm. long, solitary or few together in a terminal, short-pilose panicle; flowers capitate; heads about 5 mm. in diameter; bracts pilose; flowers 4-parted; calyx pilose; corolla 2 mm. long; stamens 10; legume linear, nearly straight, pilose-puberulent, unarmed, 3-4 cm. long, about 4 mm. wide, short-stipitate, unstricted, about 7-jointed.

TYPE LOCALITY: United States Naval Station, Guantanamo, Oriente, Cuba.

DISTRIBUTION: Known only from the type locality.

84. *Mimosa leucaenoides* Benth. Lond. Journ. Bot. 5: 89. 1846.

A shrub or small tree, 3-5 m. high, the twigs puberulent, unarmed. Petiole 1 cm. long, puberulent; pinnae 1 pair; leaflets 2-4 pairs, obovate, obtuse, 1-2.5 cm. long, at first puberulent, more or less shining, 3-5-nerved at base, thickish; peduncles axillary, often clustered, 1-1.5 cm. long; flowers capitate, glabrous; stamens twice as many as the corolla-lobes; legume linear, 5-6.5 cm. long, 5-8 mm. wide, puberulent, unarmed, acuminate, several-jointed.

TYPE LOCALITY: Zimapan, Hidalgo.

DISTRIBUTION: Hidalgo and San Luis Potosí.

85. *Mimosa chaetocarpa* Brand. Univ. Calif. Publ. Bot. 10:

182. 1922.

A shrub, either unarmed or prickly, the twigs densely strigose. Stipules lanceolate, 3 mm. long; petioles 5-12 mm. long; pinnae 1 pair; leaflets 10-22 pairs, 6-12 mm. long, 2-3 mm wide, obliquely oblong, appressed-setose beneath, acute, glabrous or pubescent; peduncles axillary, sometimes clustered, 12-15 mm. long, strigose; calyx minute; corolla pubescent, 4 mm. long, 4-lobed; stamens 8; legume oblong, 1.5-2 cm. long, densely clothed with long yellow bristles, 2- or 3-jointed.

TYPE LOCALITY: Near Cameron, Veracruz.

DISTRIBUTION: Veracruz.

86. *Mimosa monancistra* Benth. Pl. Hartw. 12. 1839.

A shrub, 1.5 m. high, or lower, the twigs somewhat angled, puberulent, with solitary infra-stipular prickles. Petiole and rachis puberulent; pinnae 2-4 pairs; leaflets 2-3 pairs, oblong, 2-4 mm. long, obtuse, pubescent on both sides or glabrous above; peduncles 2 cm. long or shorter, pubescent; heads oblong or subglobose; calyx and corolla pubescent; stamens twice as many as the corolla-lobes; legume oblong, more or less curved, 2.5-3 cm. long, 5-6 mm. wide, rather densely setose, several-jointed, the margin long-prickly.

TYPE LOCALITY: Aguas Calientes.

DISTRIBUTION: Aguas Calientes; Michoacan; Tamaulipas; Durango; San Luis Potosí.

87. *Mimosa chihuahuana* Britton & Rose, sp. nov.

A shrub, the twigs densely pubescent and with numerous stout prickles. Stipules linear, pubescent; petiole and rachis pubescent; pinnae 2 or 3 pairs; leaflets 2 or 3 pairs, oblong, acute, 4-5 mm. long, 1 mm. wide, densely silky-pubescent on both sides; peduncles 5-15 mm. long; flowers in oblong heads, pinkish; calyx and corolla pubescent; corolla 5-lobed; stamens 10.

Santa Eulalia Mountains, Chihuahua, May 11, 1899, *Rose & Hough 4214*.

88. *Mimosa Emoryana* Benth. Trans. Linn. Soc. 30: 426. 1875.

A shrub, the twigs densely pubescent and with short prickles. Rachis of the leaf with or without prickles; pinnae 1 or 3 pairs; leaflets 3-5 pairs, oblong, 2-3 mm. long, obtuse,

softly villous on both sides; peduncles axillary, 1.5–2.5 cm. long; flowers in small heads; calyx and corolla pubescent; stamens twice as many as the corolla-lobes; legume 3–3.5 cm. long, 4–6 mm. wide, 3–5-jointed, more or less constricted between the joints, softly pubescent and setose, with prickly margins.

TYPE LOCALITY: Western Texas [Cibolo of the Rio Grande].

DISTRIBUTION: Western Texas.

89. *Mimosa similis* Britton & Rose, sp. nov.

A shrub, the slender twigs canescent-puberulent, armed with short, slightly curved prickles. Leaves only about 1 cm. long, or shorter, the petiole and rachis canescent; stipules filiform, about 2 mm. long; pinnae 1 or 2 pairs; leaflets 2 or 3 pairs, elliptic, rounded, or obtuse, 1.5–2.5 mm. long, puberulent on both sides; peduncles nearly filiform, axillary and in short terminal racemes, puberulent, 5–8 mm. long; heads small, globular, or some of them a little longer than thick; flowers puberulent, 5-parted; stamens 10; legume linear-oblong, 2.5–3 cm. long, 5–6 mm. wide, few-jointed, the valves short-setose, the margins short-prickly.

Minas de San Rafael, San Luis Potosí, May, 1911, *Purpus* 5179.

90. *Mimosa depauperata* Benth. Pl. Hartw. 13. 1839.

Acacia canescens Mart. & Gal. Bull. Acad. Brux. 10²: 314. 1843. Not *M. canescens* Willd. 1806.

A shrub, 6–9 dm. high, the twigs puberulent, armed with solitary curved prickles below the nodes. Pinnae 1 or 2 pairs; leaflets 2 or 3 pairs, ovate-oblong, about 2 mm. long, obtuse, puberulent; peduncles axillary, 0.5–1 mm. long, puberulent; flowers capitate, pubescent, white to light blue; corolla 5-lobed; stamens 10; legume linear, 3–4 cm. long, 4–6 mm. wide, canescent, 5- or 6-jointed, prickly on the margins, constricted between the joints.

TYPE LOCALITY: Near Actopan, Hidalgo.

DISTRIBUTION: Hidalgo; Querétaro.

91. *Mimosa calcicola* B. L. Robinson, Proc. Am. Acad. 33:

325. 1898.

A shrub, about 1 m. high, or lower, the twigs puberulent, bearing a prickle below the nodes. Petioles slender, 5–10 mm. long; pinnae 1–3 pairs; leaflets 2 or 3 pairs, oblong, 2–5 mm. long, obtuse, puberulent; peduncles axillary, slender, about 1.5 cm. long or shorter, puberulent; flowers capitate, white, pubescent; corolla 5-lobed; stamens 10; legume linear, 3–4 cm. long, about 4 mm. wide, 4–6-jointed, finely tomentose, unarmed, scarcely constricted.

TYPE LOCALITY: Tehuacan, Puebla.

DISTRIBUTION: Puebla.

92. *Mimosa borealis* A. Gray, Mem. Am. Acad. II. 4: 39. 1849.

Mimosa fragrans A. Gray, Bost. Journ. Nat. Hist. 6: 182. 1850.

Mimosa borealis texana A. Gray, Pl. Wright. 1: 61. 1852.

Mimosa texana Small, Bull. N. Y. Bot. Gard. 2: 99. 1901.

A prickly shrub, 0.5–2.5 m. high, the slender twigs glabrous or puberulent, the prickles mostly solitary and extra-axillary. Leaves small, slender-petioled, glabrous or puberulent; pinnae 1–3 pairs; leaflets 3–8 pairs, oblong to oval, 2–6 mm. long, 1–3-nerved, obtuse or rounded; peduncles very slender, about 2 cm. long, or shorter; flowers capitate, glabrous; stamens twice as many as the corolla-lobes; legume linear-oblong, 2.5–5 cm. long, 6–8 mm. wide, glabrous, 4–7-seeded, more or less constricted between the seeds, the margins unarmed or prickly.

TYPE LOCALITY: Upper Spring on the Cimarron River, New Mexico.

DISTRIBUTION: Oklahoma to Texas and New Mexico.

93. *Mimosa zimapanensis* Britton.

Mimosa tenuiflora Benth. Lond. Journ. Bot. 5: 92. 1846. Not Poir. 1810.

A shrub, the twigs angled, puberulent, becoming glabrous, bearing small, geminate prickles. Pinnae 1–3 pairs; leaflets 6–8 pairs, obliquely oblong, 4–5 mm. long, obtuse, thickish,

glabrous, nerveless; peduncles solitary or clustered, 1-1.5 cm. long, puberulent; flowers capitate; calyx minute; corolla 3 mm. long, slender, about 4 times as long as the calyx, glabrous, reddish; stamens elongated, twice as many as the corolla-lobes.

TYPE LOCALITY: Zimapan, Hidalgo.

DISTRIBUTION: Known only from the type locality.

94. *Mimosa Calderonii* Britton & Rose, sp. nov.

Shrubby, 1 m. high or lower, the branches glandular-pubescent and armed with straight prickles, the long-stalked glands globular. Petioles and rachis glandular-pubescent and prickly; pinnae 6-9 pairs; leaflets 12-25 pairs, linear-oblong, obtuse, 4-6 mm. long, about 1 mm. wide; peduncles 1-3.5 cm. long, glandular-pubescent; flowers capitate, pink; legume linear, 2-2.5 cm. long, 4-5 mm. wide, stipitate, apiculate, glandular-pubescent.

Chiapas to Costa Rica. Type from El Angel, El Salvador, October, 1923, *S. Calderón 1842*.

95. *Mimosa corynadenia* Britton & Rose, sp. nov.

Procumbent, somewhat woody, 3-5 m. long, the stem and leaves bearing scattered prickles and long glandular hairs, the glands clavate. Stipules ovate, acute; petioles short; pinnae 3-5 pairs; leaflets 6-12 pairs, linear, 4-7 mm. long, about 1 mm. wide, glabrous, acutish; peduncles 1-1.5 cm. long, glandular-pubescent; flowers capitate; calyx minute; corolla 2 mm. long; stamens twice as many as the corolla-lobes; legume oblong, 3-4 cm. long, 8-10 mm. wide, thin, apiculate, long-setose and with long glandular hairs, 5-7-jointed, the margins slender-prickly.

Near Ahuachapan, El Salvador, January, 1922, *Standley 1983A*.

96. *Mimosa bimucronata* (DC.) Kuntze, Rev. Gen. Pl. 198. 1891.

Acacia bimucronata DC. Prodr. 2: 469. 1825.

Mimosa sepiaria Benth. Journ. Bot. Hook. 4: 395. 1842.

Mimosa thyrsoidea Griseb. Fl. Brit. W. Ind. 219. 1860.

A shrub or tree, up to 8 m. high, unarmed or prickly, the twigs and inflorescence puberulent. Pinnae 4-8 pairs; leaflets 15-40 pairs, linear-oblong, 5-10 mm. long, about 1 mm. wide, acute, glabrous; inflorescence panicleate, sometimes 3 dm. long; peduncles 1.5-3 cm. long; flowers capitate, glabrous; corolla 5-lobed; stamens 10; legume 4-5 cm. long, 7-8 mm. wide, unarmed, straight, glabrous, 5-8-jointed.

TYPE LOCALITY: Brazil.

DISTRIBUTION: Naturalized in Jamaica. British Guiana. Brazil.

ILLUSTRATION: Benth. in Mart. Fl. Bras. 15: pl. 91.

97. *Mimosa argillotropha* B. L. Robinson, Proc. Bost. Soc. Nat.

Hist. 31: 257. 1904.

A shrub, with slender puberulent branches, somewhat angled, very prickly. Petiole and rachis puberulent, with many short reflexed prickles; pinnae 4 or 5 pairs; leaflets 9-11 pairs, oblong, or oblong-obovate, 7-9 mm. long, 3-5 mm. wide, puberulent, obtuse, apiculate; flowers in small, panicle heads; corolla 3 mm. long, glabrous, white; stamens 8; ovary glabrous, except the pilose margin.

TYPE LOCALITY: La Correa, Guerrero.

DISTRIBUTION: Known only from the type locality.

98. *Mimosa dormiens* H. & B.; Willd. Sp. Pl. 4: 1035. 1806.

Mimosa intermedia Kunth. Mim. 16. 1819.

A prostrate shrub, forming dense round mats, the branches strigose and with numerous long straight prickles. Stipules ovate, acuminate, long-ciliate; petiole and rachis strigose, bearing acicular prickles between the pinnae; pinnae 3-6 pairs; leaflets 6-20 pairs, oblong, obtuse, 4-8 mm. long, about 1 mm. wide; peduncles axillary, 2 cm. long, or less; flowers capitate,

4-parted; stamens 8; legume obovate, 12 mm. long, 8 mm. wide, obliquely truncate, pubescent and setose, 2-3-jointed.

TYPE LOCALITY: Apure, Venezuela.

DISTRIBUTION: Chiapas to Costa Rica, Venezuela, and Brazil.

ILLUSTRATION: Kunth, loc. cit. *pl. 6*.

99. *Mimosa mollis* Benth. Journ. Bot. Hook. 4: 408. 1842.

A shrub, the twigs loosely soft-pubescent, armed with flattened prickles. Petiole, rachis and leaflets softly pubescent; pinnae 4-8 pairs; leaflets 6-10 pairs, oblong, 5-6 mm. long, acute, densely villous-tomentose; heads globose; flowers capitate; peduncles axillary, often clustered, slender, 3-4 cm. long, villous-tomentose; calyx and corolla pubescent; stamens twice as many as the corolla-lobes.

TYPE LOCALITY: Acatlán, Puebla.

DISTRIBUTION: Puebla.

100. *Mimosa Herincquiana* M. Micheli, Mem. Soc. Genève 34:

276. 1903.

A tree, 5 m. high, the twigs densely brownish-pubescent, unarmed. Stipules linear, tomentose; petioles, rachis and leaflets densely tomentose; pinnae 5-8 pairs; leaflets 7-8 pairs, 2-3 mm. long, acute, 1-1.5 mm. wide; heads globose, in axillary and terminal racemes; peduncles solitary or clustered, 2 cm. long or less, tomentose; calyx and corolla tomentose; stamens 10; ovary puberulent.

TYPE LOCALITY: Cariote del Zopilote, Guerrero.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: M. Micheli, loc. cit. *pl. 21*.

101. *Mimosa Ervendbergii* A. Gray, Proc. Am. Acad. 5: 178. 1861.

A shrub, about 2 m. high, the twigs somewhat angled, densely tomentose, armed with short prickles. Petiole and rachis pubescent, with numerous short reflexed prickles; stipules filiform; pinnae 3-5 pairs; leaflets about 12 pairs, narrowly oblong, 7-10 mm. long, about 2 mm. wide, acute, pubescent on both sides; inflorescence a terminal raceme or panicle of small heads; peduncles slender, 2 cm. long, or shorter, pubescent; flowers 4-parted; corolla pubescent.

TYPE LOCALITY: Wartenberg, near Tamtoyuca, Veracruz.

DISTRIBUTION: Northern Veracruz.

102. *Mimosa mexiquitensis* Britton, sp. nov.

Woody, the twigs, inflorescence, petioles and rachis densely tomentose-pilose. Twigs, petioles and rachis armed with short, recurved prickles; pinnae 3 or 4 pairs; leaflets 8-12 pairs, broadly oblong, 9-13 mm. long, 4-6 mm. wide, acute, pubescent on both sides, becoming glabrate above; peduncles axillary and in terminal racemes, 1-2 cm. long; flowers 4-parted, glabrous; stamens 8.

Finca Mexiquita, Chiapas, September, 1913, *Purpus 6816*.

103. *Mimosa pigra* L. Cent. Pl. 1: 13. 1759.

Mimosa asperata L. Syst. Nat. ed. 10, 1312. 1759.

A shrub, up to 2 m. high, the twigs setose, often pubescent, and more or less prickly. Pinnae 7-15 pairs; rachis setose or pubescent, often bearing many stout prickles, sometimes opposite between the pinnae; leaflets linear, many pairs, 5-8 mm. long, about 1 mm. wide, pubescent on both sides; peduncles 2-5 cm. long; flowers densely capitate, pink; calyx 2 mm. long, ciliate; corolla 4-lobed; stamens 8; legume narrowly oblong, 3-8 cm. long, 10-12 mm. wide, densely hispid, 10-13-jointed, sessile or short-stipitate.

TYPE LOCALITY: Not cited.

DISTRIBUTION: Jamaica; Cuba; Guadeloupe to Trinidad; Sinaloa and Veracruz to Panama, Peru and Brazil. Also in the Old World tropics.

ILLUSTRATIONS: Miller, Fig. Pl. *pl. 182, f. 3*; DC. Mem. Leg. *pl. 63*; Kunth, Mim. *pl. 9*.

104. *Mimosa Berlandieri* A. Gray; Torrey, Mex. Bound. Surv.
61: 1859.

Mimosa asperata Berlandieri B. L. Robinson, Proc. Am. Acad. 33: 331. 1898.

A low shrub, the branches puberulent, little, if at all, setose, bearing a few prickles or unarmed. Rachis of leaf with or without prickles; pinnae 4-6 pairs; leaflets many pairs, linear, pubescent or glabrate, 4-6 mm. long; peduncles slender, setose, 2-4 cm. long; flowers capitate, 4-parted; stamens 8; legume narrowly oblong, 4-5 cm. long, 8-10 mm. wide, sparingly short-setose, 10-20-jointed.

TYPE LOCALITY: Near Matamoras, Tamaulipas.

DISTRIBUTION: Southern Texas to Tamaulipas, San Luis Potosí and Tepic; Nicaragua.

105. *Mimosa tequilana* S. Wats. Proc. Am. Acad. 22: 409. 1887.

Annual, herbaceous, 2-3 dm. high, the branches slender, pilose and more or less prickly. Petiole and rachis pilose; pinnae 1 pair; leaflets 1 or 2 pairs, obovate, 1.5-2.5 cm. long, glabrous above, strigose beneath, long-ciliate; peduncles axillary, 6-8 mm. long; flowers capitate, corolla 3-4-toothed; stamens 4 in perfect flowers, 8 in imperfect ones; legume oblong, acute; 1.5-2 cm. long, about 6 mm. wide, the valves and margin long-setose, otherwise glabrous.

TYPE LOCALITY: Tequila, Jalisco.

DISTRIBUTION: Jalisco.

106. *Mimosa viva* L. Sp. Pl. 517. 1753.

A small prostrate herb, rooting at the nodes, forming dense patches, the very slender stem 8-20 cm. long, glabrous. Stipules ovate, long-ciliate; petioles slender, 1-2 cm. long; pinnae 1 pair, 1-2 cm. long; leaflets 4 pairs, oblong, 3-4 mm. long, 1.5-2 mm. wide, obtuse, glabrous or with a few hairs on the veins or margins; peduncles axillary, slender, 1-3 cm. long, glabrous; heads few-flowered; flowers glabrous; stamens as many as the corolla-lobes, twice as long as the corolla; legume ovate, acute, long-stipitate, 1-jointed, setose, or naked, unarmed.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica and Cuba.

ILLUSTRATION: Sloane, Hist. Jam. pl. 182, f. 7.

107. *Mimosa resinifera* Britton, sp. nov.

A large, woody vine, the branches tomentose and copiously armed with short, reflexed prickles. Petiole and rachis tomentose and prickly, bearing elevated short-cylindric glands; pinnae 2 or 3 pairs, distant; leaflets 2 or 3 pairs, obliquely ovate to obovate, thin, pinnately veined and reticulated, obtuse, glabrous or sparingly appressed-pubescent, resinous-dotted beneath; heads in tomentose, prickly racemes or panicles; peduncles slender, 5-10 mm. long; flowers 4-parted; calyx about 0.5 mm. long; corolla 1.5 mm. long, deeply lobed; stamens 7 or 8, white.

Vicinity of Tela, Atlántida, Honduras, 1928, *Standley 54698*.

108. *Mimosa hondurana* Britton, sp. nov.

A large, woody vine, the twigs, petioles, rachis and inflorescence puberulent and armed with numerous small, deflexed prickles; glands minute, or wanting. Stipules filiform, 5-6 mm. long; petioles 2.5-3.5 cm. long; pinnae 2-4 pairs, distant; leaflets 5-9 pairs, very obliquely ovate or ovate-lanceolate, sharply acute, pinnately veined, glabrous or nearly so above, finely and densely appressed-pubescent beneath, the upper ones 2-3 cm. long, the lower 1-2 cm. long; heads globular, numerous, small, in large panicles; peduncles filiform, solitary or clustered, 5-13 mm. long; flowers (in bud) glabrous.

Lancetilla Valley, Atlántida, Honduras, December, 1927 to March, 1928, *Standley 54073*.

109. *Mimosa pseudopaniculata* Britton, sp. nov.

Twigs, petioles, leaf-rachis and inflorescence short-pubescent, and armed with reflexed prickles 1-2 mm. long, or the inflorescence unarmed. Pinnae about 4 pairs; rachilla bearing

an occasional sessile orbicular gland about 0.5 mm. in diameter; leaflets 4-6 pairs, obliquely ovate to subrhomboid, 3-nerved and pinnately veined, sparingly pilose on the lower parts of the veins beneath, glabrous above or puberulent on the veins, the apex acute, or acutish, the upper ones about 2 cm. long, the lower about 1 cm. long, or shorter; heads small, globose, numerous, in long axillary and terminal panicles; peduncles slender, about 12 mm. long, or shorter; flowers glabrous.

Near Yajalon, Chiapas, November 21, 1895, *E. W. Nelson 3406*.

110. *Mimosa Watsonii* B. L. Robinson, Proc. Am. Acad. 36:
473. 1901.

Woody at base, climbing, the branches terete or nearly so, armed with numerous very short, reflexed prickles and densely tomentose. Petiole and rachis tomentose, prickly, bearing one or more large cup-shaped glands; pinnae 1-3 pairs; leaflets 1-3 pairs, 1.5-5 cm. long, rhombic-orbicular to obovate, pinnately veined, somewhat oblique, glabrous or puberulent above, softly pubescent beneath; heads small and numerous, in large tomentose panicles; peduncles 5-10 mm. long, or shorter; flowers glabrous; corolla 4-lobed; stamens 8; legume 5 cm. long, 7-10 mm. broad, glabrous, unarmed.

TYPE LOCALITY: Eastern portion of Vera Paz and Chicquimula, Guatemala.

DISTRIBUTION: Guatemala; Costa Rica; El Salvador.

111. *Mimosa Rekoana* Britton, sp. nov.

Twigs and inflorescence tomentose and copiously armed with small, reflexed prickles. Stipules lanceolate, 5-6 mm. long; petiole and rachis slender, tomentose; rachis bearing small cylindrical glands; leaflets 4 or 5 pairs, obliquely ovate, elliptic, or obovate, obtuse, mucronate, pinnately veined, very finely appressed-pubescent above, appressed-pubescent beneath, the terminal pair about 2.5 cm. long, the other pairs smaller; heads paniced, numerous, very small; peduncles only about 6 mm. long, or shorter; flowers glabrous; calyx subtruncate; corolla 4- or 5-lobed; stamens 8 or 10.

Oaxaca, 1917, *R. P. Reko 3610*.

112. *Mimosa Recordii* Britton & Rose, sp. nov.

A high-clambering vine, the branches and inflorescence densely pubescent, and with numerous, short, black, reflexed prickles. Petiole and rachis pubescent and prickly, bearing several large, sessile, cup-shaped glands; pinnae 4-6 pairs; leaflets 4-9 pairs, oblong to orbicular, 0.5-2 cm. long, obtuse, or rounded, cuspidate, densely appressed-pubescent on both sides, pinnately veined, dark above, pale beneath; heads globose, small, numerous, in large panicles; peduncles pubescent, 4-8 mm. long; flowers glabrous; calyx nearly truncate; corolla 4- or 5-lobed; stamens 8 or 10.

British Honduras. Type from Middlesex, Stann Creek District, January 19, 1926, *Samuel J. Record*.

SPECIES NOT GROUPED.

113. *Mimosa costaricensis* Benth. Trans. Linn. Soc. 30: 423.
1875.

Shrubby, perhaps climbing, softly brown-tomentose, armed with small, recurved prickles. Stipules subulate, tomentose, 4-8 mm. long; pinnae 4-8 pairs; leaflets 10-15 pairs, broadly obliquely oblong, mucronulate, 6-8 mm. long, pinnately veined, puberulent above, villous beneath, the midvein excentric; flowers capitate, 4-parted, glabrate; heads small, paniced, globular; peduncles 6-10 mm. long; stamens 8 or 10.

TYPE LOCALITY: Aguacate, Costa Rica.

DISTRIBUTION: KNOWN TO US FROM DESCRIPTION ONLY.

SPECIES KNOWN FROM FOLIAGE ONLY.

114. *Mimosa* (?) *moaensis* Britton & Wilson, sp. nov.

A glabrous, prickly vine, rooting at the nodes and forming large mats. Pinnae 1 or 2 pairs; rachis with paired prickles at the nodes; leaflets 5 or 6 pairs, oblong, 3-nerved, 4-7 mm. long, 1.6-3 mm. wide, glabrous, shining above, the base obliquely rounded, the margins entire, the apex rounded.

Moa Bay, east of Rio Moa, Oriente, Cuba, January, 1911, *Shafer 8353*.

115. *Mimosa apleura* Urban, Symb. Ant. 9: 441. 1928.

Climbing, glabrous, the angulate twigs armed with short, recurved, brown or nearly black prickles. Stipules filiform, 2-2.5 mm. long; petioles 5-8 mm. long; pinnae 3-5 pairs; rachis prickly; leaflets 6-9 pairs, sessile, rectangular-oblong, 3.5-6 mm. long, 1.2-1.8 mm. wide, 1-veined, chartaceous, shining above, the base and apex rounded or subtruncate.

TYPE LOCALITY: Near Las Pozas, Pinar del Rio, Cuba.

DISTRIBUTION: Known only from the type locality, and to us only from the description of barren material.

116. *Mimosa* (?) *Margaritae* Rose, sp. nov.

A small shrub, the twigs slender, somewhat prickly, puberulent and bristly, or short, spur-like, and covered with the persistent imbricated stipules. Leaves various, 2-8 cm. long; petiole wanting or up to 4 cm. long, slender, bearing short prickles; pinnae 1 or 2 pairs, 1-6 cm. long; leaflets 3-8 pairs, linear-oblong, 6-8 mm. long, 1-1.5 mm. wide, oblique, usually acute, strongly veined, glabrous, the margin and sometimes the under surface bearing short, rigid, appressed bristles.

Santa Margarita Island, Lower California. Type collected February 28, 1889, by T. S. Brandegee.

MIMOSA TRIJUGA Benth. Journ. Bot. Hook. 4: 398. 1842.

This Brazilian species was recorded by Benthham from Santo Domingo, but the specimen cited by him (Trans. Linn. Soc. 30: 434) proves to be *Neptunia pubescens* (Urban, Symb. Ant. 8: 260); he also recorded it from Panama, in error (Trans. Linn. Soc. 30: 434), after study of a specimen of *Mimosa somnians* collected in Yucatan (Mart. Fl. Bras. 15²: 376), as is shown by specimens preserved in the herbaria of the Royal Gardens, Kew, and at the New York Botanical Garden.

35. *PTEROMIMOSA* Britton, gen. nov.

Prickly shrubs or small trees, with bipinnate, eglandular leaves, the pinnae few pairs, the leaflets oblong to obovate, small. Flowers capitate, glabrous, the heads short-peduncled, axillary or racemose. Calyx 4- or 5-toothed. Corolla 4- or 5-lobed. Stamens 8 or 10. Ovary several-ovuled. Legume flat, oblong, pubescent, several-jointed, the margins softly and narrowly lacerate-winged, at length separating.

Type species, *Mimosa bahamensis* Benth.

Legume sessile or nearly so; leaflets glabrous.
Legume long-stipitate; leaflets pubescent when young.

1. *P. bahamensis*.
2. *P. hemiendyta*.

1. *Pteromimosa bahamensis* (Benth.) Britton.

Mimosa bahamensis Benth. Journ. Bot. Hook. 4: 408. 1842.

A much branched shrub or small tree, 1.5-4 m. high, the branches armed with short curved prickles, the twigs densely brown-tomentulose. Petioles, rachis and peduncles brown-tomentulose, in age glabrate; pinnae 2-4 pairs; leaflets 2-6 pairs, oval to obovate, 2-6 mm. long, glabrous or nearly so from the first, sometimes a little ciliate, rounded at apex; peduncles about 1.5 cm. long, or shorter, axillary or in racemes; flowers capitate; corolla glabrous, 4-lobed; stamens 8, pink; legume oblong, 4-7 cm. long, brown-tomentulose, 6-10-jointed.

TYPE LOCALITY: Bahamas.
DISTRIBUTION: Bahamas.

2. *Pteromimosa hemiendyta* (Rose & Robinson) Britton.

Mimosa hemiendyta Rose & Robinson; Rose, Contr. U. S. Nat. Herb. 8: 32. 1903.

A shrub, 3-6 m. high, with stiff, spreading, terete branches, armed at the nodes with slightly curved prickles, the twigs densely brown-tomentulose. Petioles, rachis and peduncles tomentulose; petioles 3-10 mm. long; pinnae 2-4 pairs; leaflets 4-8 pairs, oblong, obtuse or subtruncate, 6-7 mm. long, 1.3-3 mm. wide, densely pubescent on both sides when young, glabrate in age, pale beneath; peduncles axillary, or sometimes in racemes, 10-12 mm. long; flowers capitate; corolla glabrous, 4-5-lobed; stamens 8 or 10; legume oblong, 4-5 cm. long, 1.2-1.5 cm. wide, reddish-pubescent, long-stipitate.

TYPE LOCALITY: Apogota, Campeche.

DISTRIBUTION: Yucatán to Honduras.

ILLUSTRATION: Rose & Robinson, loc. cit. f. 9, 10.

36. *NEOMIMOSA* Britton & Rose, gen. nov.

Shrubs or small trees, with slender branches, prickly or unarmed. Leaves twice-pinnate; leaflets small, several to many pairs; petioles eglandular. Flowers capitate or spicate. Calyx and corolla small, 5-parted. Stamens 10, or 5, distinct. Legume flat, thin, broad, the nearly membranous valves breaking away from the margins, but not separating into segments.

Type species, *Mimosa eurycarpa* B. L. Robinson.

Flowers capitate.

Leaflets oblong, about 3 mm. wide, pubescent.

Leaflets linear, or linear-oblong, 1.5 mm. wide, or narrower.

Pinnae 15-18 pairs; leaflets puberulent beneath.

Pinnae 6-12 pairs.

Leaflets appressed-pubescent.

Leaflets glabrous, or nearly so.

Valves of the legume echinate.

Valves of the legume unarmed.

Flowers spicate; leaflets glabrous; legume unarmed.

Flowers unknown.

1. *N. leptocarpa*.

2. *N. colimensis*.

3. *N. eurycarpoides*.

4. *N. eurycarpa*.

5. *N. Russellii*.

6. *N. platycarpa*.

7. *N. (?) Donnell-Smithii*.

1. *Neomimosa leptocarpa* (Rose) Britton & Rose.

Mimosa leptocarpa Rose, Contr. U. S. Nat. Herb. 1: 326. 1895.

A straggling shrub, armed with short, recurved prickles, and slightly pubescent. Pinnae 4-6 pairs; leaflets 6-10 pairs, oblong, 6-12 mm. long, about 3 mm. wide, obtuse, apiculate, pubescent; flowers in racemed heads; peduncles 10-12 mm. long; stamens apparently 5; legume oblong, 7.5-10 cm. long, 1.5-2 cm. wide, obtuse, long-stipitate, glabrous, unarmed, shining, the margin sparingly prickly, or unarmed.

TYPE LOCALITY: Manzanillo, Colima.

DISTRIBUTION: Known only from the type locality.

2. *Neomimosa colimensis* (B. L. Robinson) Britton & Rose.

Mimosa colimensis B. L. Robinson, Proc. Bost. Soc. Nat. Hist. 31: 258. 1904.

Branches glabrous, somewhat angled, prickly, the prickles small. Leaves large, up to 2 dm. long; pinnae 15-18 pairs; rachis prickly or unarmed; leaflets 27-32 pairs, linear-oblong, 4 mm. long, acute, puberulent beneath; inflorescence elongated, paniculate; peduncles 1-1.8 cm. long, slender, puberulent; flowers in dense oval-globose heads; calyx and corolla glabrous; stamens 10, slender.

TYPE LOCALITY: Colima.

DISTRIBUTION: Colima.

3. *Neomimosa eurycarpoides* (B. L. Robinson) Britton & Rose.

Mimosa eurycarpoides B. L. Robinson, Proc. Am. Acad. 36: 472. 1901.

A shrub, the twigs glabrous, somewhat angled, sparingly if at all prickly. Leaves large, up to 2 dm. long; pinnae 6-12 pairs; leaflets 20-30 pairs, linear, 3-8 mm. long, about 1.5 mm. wide, acutish, appressed-pubescent; peduncles often in two's or three's, 1.5 cm. long, or shorter,

axillary or in terminal panicles; calyx and corolla glabrous; stamens 8 or 10; legume oblong, stipitate, 8–12 cm. long, 1.5–2 cm. wide, the valves sparingly setose, the margins with a few prickles, or unarmed, the base cuneate.

TYPE LOCALITY: Near Colomas, Sinaloa.
DISTRIBUTION: Sinaloa to Guerrero.

4. *Neomimosa eurycarpa* (B. L. Robinson) Britton & Rose.

Mimosa eurycarpa B. L. Robinson, Proc. Am. Acad. 33: 322. 1898.

A small tree, 4–6 m. high, the twigs glabrous, unarmed. Stipules small, setaceous; pinnae 6–8 pairs; leaflets many pairs, narrowly oblong, 6–8 mm. long, rounded at apex, glabrous or nearly so; heads in terminal racemes; peduncles 10–12 mm. long, glabrous; flowers glabrous; corolla twice as long as the calyx, white; stamens 10; legume lanceolate-oblong, acuminate, 6–7 cm. long, 2 cm. wide, with a long slender stipe, echinate, the margins with a few prickles or none.

TYPE LOCALITY: Between Guichocovi and Lagunas, Oaxaca.
DISTRIBUTION: Oaxaca.

5. *Neomimosa Russellii* Britton & Rose, sp. nov.

A shrub, armed with numerous short, reflexed prickles, the twigs angled, puberulent. Petiole and rachis prickly; pinnae 8–10 pairs; leaflets 10–15 pairs, oblong-linear, oblique at base, 5–6 mm. long; legume elliptic, 6–8 cm. long, 2 cm. broad near the middle, ovate at tip, long-apiculate, cuneate at base, stipitate, the margin sparingly prickly, the valves unarmed; seeds usually 3.

Rosario, Sinaloa, August 4, 1910, *Rose, Standley & Russell 14555*.

6. *Neomimosa platycarpa* (Benth.) Britton & Rose.

Mimosa platycarpa Benth. Trans. Linn. Soc. 30: 417. 1875.

A shrub, the twigs glabrous or when very young slightly pubescent, bearing small, recurved prickles or unarmed. Stipules small, setaceous; pinnae 6–10 pairs; leaflets 15–25 pairs, linear, 3–5 mm. long, obtuse, or acute, glabrous, sometimes ciliate, the midvein central; spikes slender, 2.5 cm. long, loosely flowered; flowers 5-parted; stamens 10; legume stipitate, flat and thin, glabrous, 3–4 cm. long, 2 cm. wide, narrowed at base and apex, the margins prickly, the valves unarmed.

TYPE LOCALITY: Guatemala.
DISTRIBUTION: Guatemala.
ILLUSTRATION: Benth. loc. cit. pl. 66.

7. *Neomimosa* (?) *Donnell-Smithii* Britton & Rose, sp. nov.

A clambering vine, the branches angled, pubescent, and bearing numerous small reflexed prickles. Leaves large, the petiole and rachis pubescent and prickly; pinnae 5–8 pairs; leaflets 15–25 pairs, linear-oblong, 6–8 mm. long, about 1 mm. wide, pubescent on both sides; inflorescence paniculate; peduncles 1–2 cm. long, pubescent; legume oblong, 5–6 cm. long, about 1 cm. wide, puberulent when young, long-stipitate, attenuate at apex, the margins and stipe prickly.

Cubilquit, Guatemala, 1902, *H. von Tuerckheim 8197*.

37. *LOMOPLIS* Raf. Sylva Tell. 118. 1838.

A woody, prickly vine, with bipinnate leaves and small, capitate, white or pinkish flowers in terminal racemes or panicles, the petioles eglandular. Calyx-teeth mostly 3, minute. Petals mostly 3, connate below. Stamens twice as many as the petals, the filaments filiform, the anthers glabrous. Legume oblong, thin, flat, unjointed, its margins armed with hooked prickles and ultimately separating.

Type species, *Lomoplis Ceratonia* Raf.

1. *Lomoplis Ceratonia* (L.) Raf. Sylva Tell. 118. 1838.*Mimosa Ceratonia* L. Sp. Pl. 523. 1753.*Acacia Ceratonia* Willd. Sp. Pl. 4: 1091. 1806.

A glabrous vine, often 6 m. long, trailing or climbing, the angular branches and slender petioles armed with hooked prickles. Stipules subulate, 2-3 mm. long; pinnæ 1-5 pairs, the rachis with small hooked prickles, the petiolules 6-10 mm. long; leaflets 3-5 pairs, obliquely obovate, inequilateral, thin, 3-nerved, 1-2.5 cm. long, rounded at the apex, paler beneath than above; heads in terminal racemes or narrow panicles, often numerous; peduncles prickly, 2 cm. long or less; stamens about 8 mm. long; legume straight or a little curved, 6 cm. long or less, 14-18 mm. wide, glabrous, shining.

TYPE LOCALITY: Tropical America.

DISTRIBUTION: Hispaniola to St. Vincent.

38. *MIMOSOPSIS* Britton & Rose, gen. nov.

Shrubs or small trees, prickly, or rarely unarmed. Leaves twice-pinnate, the rachis often prickly; leaflets small, 1-many pairs; petioles eglandular. Flowers capitate. Calyx and corolla small, 4- or 5-lobed. Stamens 8 or 10. Legume narrow, flattened, the valves continuous, unsegmented, chartaceous, the margins commonly separating at maturity.

Type species, *Mimosa prolifica* S. Wats.

1. Legume not deeply constricted between the seeds.

a. Pinnæ 1 pair.

Leaflets one pair.

Leaflets 2-4 pairs.

b. Pinnæ 2-many pairs.

Legume long-setose and prickly; twigs hispid.

Legume not setose, the margins prickly or unarmed.

Legume 8-10 mm. wide, glabrous, unarmed; leaves glabrous.

Legume narrower, prickly-margined or unarmed.

Leaflets only 1 mm. long.

Leaflets larger.

Leaflets pubescent, or long-ciliate.

Leaflets long-ciliate, pinnately veined; legume 2 cm. long.

Leaflets pubescent; legume longer.

Legume 6-8 mm. wide.

Flowers glabrous.

Flowers pubescent.

Legume 3-5 mm. wide.

Legume densely tomentose.

Legume puberulent or glabrate.

Leaflets glabrous or puberulent.

Leaflets not pinnately veined.

Pinnæ few pairs.

Flowers canescent-pubescent.

Flowers glabrous or nearly so.

Pinnæ 3-6 pairs; legume linear.

Peduncles short, mostly 6-12 mm. long.

Peduncles filiform, 15-20 mm. long.

Pinnæ 1-3 pairs; legume linear-oblong.

Pinnæ 10-16 pairs; legume linear.

Legume unarmed or with few short marginal prickles.

Twigs hispid; leaflets 1-2 mm. long.

Twigs glabrous; leaflets 2-3 mm. long.

Legume prickly-margined.

Legume 6-7 mm. wide.

Legume about 4 mm. wide.

Legume 3 cm. long, short-prickly;

flowers pubescent.

Legume 4-5 cm. long, long-prickly;

flowers glabrous.

Leaflets pinnately veined, strongly or faintly.

Legume linear, 3-4 mm. wide.

Legume glabrous or sparingly pubescent.

Leaflets 3-4 mm. long, acutish or acute.

Leaflets 2 mm. long, obtuse.

Legume densely glandular-viscid.

Legume linear-oblong, 5-6 mm. wide.

2. Legume deeply constricted between the seeds, unarmed.

3. Known only from barren specimen.

1. *M. zygoephylla*.2. *M. Pringlei*.3. *M. Galeottii*.4. *M. rhodocarpa*.5. *M. minutifolia*.6. *M. durangensis*.7. *M. aculeaticarpa*.8. *M. Lemmonii*.9. *M. Purpusii*.10. *M. binucifera*.11. *M. flexuosa*.12. *M. Lindheimeri*.13. *M. filipes*.14. *M. Wherryana*.15. *M. imparilis*.16. *M. desmanthocarpa*.17. *M. orizabensis*.18. *M. moreliensis*.19. *M. chapalensis*.20. *M. prolifica*.21. *M. arida*.22. *M. glutinosa*.23. *M. Grahami*.24. *M. (?) moniliformis*.25. *M. (?) formidabilis*.

1. *Mimosopsis zygophylla* (Benth.) Britton & Rose.

Mimosa zygophylla Benth.; A. Gray, Pl. Wright. 1: 61. 1852.

A shrub, often 1 m. high, or higher, the twigs and leaves glabrous, much-branched, armed with recurved prickles. Petioles somewhat flattened, 5–12 mm. long; pinnae 1 pair; leaflets 1 pair, orbicular to short-oblong, 2–3 mm. long, obtuse, or rounded; peduncles slender, 5–10 mm. long; calyx glabrous; corolla-lobes pubescent at the tip; legume oblong, 1–3 cm. long, 6–7 mm. wide, glabrous, stipitate, the margin with or without prickles.

TYPE LOCALITY: La Vaquoria, near Saltillo, Coahuila.
DISTRIBUTION: Coahuila and Chihuahua to Zacatecas.

2. *Mimosopsis Pringlei* (S. Wats.) Britton & Rose.

Mimosa Pringlei S. Wats. Proc. Am. Acad. 21: 452. 1886.

A low, much-branched shrub, the twigs puberulent, armed with recurved prickles. Pinnae 1 pair; leaflets 2–4 pairs, oblong, 2–3 mm. long, obtuse, oblique, appressed-pubescent; peduncles slender, 10–18 mm. long, puberulent; calyx and corolla puberulent; legume linear, 2–3 cm. long, 5–7 mm. wide, slightly curved, glabrous, the margins prickly or unarmed.

TYPE LOCALITY: Near the City of Chihuahua.
DISTRIBUTION: Chihuahua.

3. *Mimosopsis Galeottii* (Benth.) Britton & Rose.

Acacia hirta Mart. & Gal. Bull. Acad. Brux. 10²: 318. 1843. Not Nutt. 1840.
Mimosa Galeottii Benth. Lond. Journ. Bot. 5: 92. 1846.

A shrub, 3–5 m. high, the twigs hispid, prickly. Leaves short-petioled; rachis setose and puberulent; pinnae 15–25 pairs; leaflets 15–20 pairs, 1–1.5 mm. long, glabrous, ciliate; peduncles axillary and in terminal panicles, setose and puberulent; calyx and corolla puberulent; legume 3–4 cm. long, 6–8 mm. wide, long-setose and prickly, somewhat glandular.

TYPE LOCALITY: Yolotepeque, western Oaxaca.
DISTRIBUTION: Morelos and Oaxaca.

4. *Mimosopsis rhodocarpa* Britton & Rose, sp. nov.

A low shrub, with angled glabrous branches, somewhat prickly. Petioles 1–1.5 cm. long; pinnae 5 or 6 pairs; leaflets 6–10 pairs, oblong, 4–5 mm. long, obtuse, glabrous, thickish; peduncles 1–2 cm. long; flower-buds purplish; calyx and corolla glabrous; ovary white-lanate; legume purplish, 4 cm. long, 8–10 mm. wide, obtuse, unarmed, puberulent, becoming glabrous, eglandular.

Patamban, Michoacán, altitude 1950 to 2400 meters, January, 1903, *Nelson 6550*.

5. *Mimosopsis minutifolia* (Rob. & Greenm.) Britton & Rose.

Mimosa minutifolia Rob. & Greenm. Am. Journ. Sci. III. 50: 150. 1895.

A shrub, armed with straight, stipular, paired prickles 4 mm. long, and solitary, curved ones. Petioles about 2 mm. long; pinnae 15–22 pairs; rachis minutely glandular; leaflets 10–20 pairs, elliptic, 1 mm. long, glabrous above, pruinose beneath, ciliate; peduncles 1 cm. long, pubescent; legume oblong, 2.5–3 cm. long, 6–8 mm. wide, long-apiculate, the valves and margin prickly, or setose.

TYPE LOCALITY: Río Blanco, Jalisco.
DISTRIBUTION: Jalisco.

6. *Mimosopsis durangensis* Britton & Rose, sp. nov.

A shrub, the twigs slender, pilose, prickly. Petiole and rachis pilose, somewhat prickly; pinnae 5–9 pairs; leaflets 5–13 pairs, ovate, 3–4 mm. long, acute, long-ciliate, reticulate-veined; peduncles 1.5 cm. long; legume narrowly oblong, glabrous, 2 cm. long, about 5 mm. wide, the margins short-prickly.

Near Huasemote, Durango, August 15, 1897, *Rose 3491*.

7. *Mimosopsis aculeaticarpa* (Ort.) Britton & Rose.

Mimosa aculeaticarpa Ort. Dec. 134. 1800.

Acacia acanthocarpa Willd. Enum. Hort. Berol. 1057. 1809.

Acacia aculeaticarpa Lag. Elench. Hort. Matr. 1815: 1. 1816.

Mimosa acanthocarpa Benth. Journ. Bot. Hook. 4: 409. 1842.

A prickly shrub, with angled branches, the prickles solitary or in pairs. Stipules linear; pinnae 4-10 pairs; leaflets 6-10 pairs, oblong-linear, 2-4 mm. long, pubescent; peduncles axillary, 1-3 cm. long; flowers glabrous or nearly so; legume linear-oblong, 3-5 cm. long, 6-8 mm. wide, pubescent or puberulent, prickly-margined, curved or straight.

TYPE LOCALITY: Not cited.

DISTRIBUTION: Durango; Jalisco; San Luis Potosí.

8. *Mimosopsis Lemmonii* (A. Gray) Britton & Rose.

Mimosa Lemmonii A. Gray, Proc. Am. Acad. 19: 76. 1883.

Mimosa Endlichii Harms, Repert. Sp. Nov. 18: 93. 1922.

A shrub, the twigs densely pilose, prickly. Stipules linear or oblong; leaves pilose; petiole 0.5-1 cm. long; rachis somewhat prickly; pinnae 4-11 pairs; leaflets 6-15 pairs, oblong, pilose and ciliate; flowers pubescent; legume oblong, 2.5-3 cm. long, 8 mm. wide, obtuse, pubescent, the margins bearing short prickles.

TYPE LOCALITY: Huachuca Mountains, Arizona.

DISTRIBUTION: Southwestern New Mexico and southeastern Arizona to Sonora.

9. *Mimosopsis Purpusii* (Brand.) Britton & Rose.

Mimosa Purpusii Brand. Univ. Calif. Publ. Bot. 3: 379. 1909.

Mimosa Purpusii calliandroides Brand. loc. cit. 1909.

A prickly shrub, erect or with prostrate branches, the twigs, peduncles and leaves densely pubescent. Leaves short-petioled; pinnae 1-4 pairs; leaflets 6-8 pairs, oblong, pubescent, 3 mm. long, acutish or obtuse; peduncles 1-2 cm. long; calyx and corolla densely pubescent; stamens 8-9 mm. long; ovary pubescent, stipitate; legume linear-oblong, 2-2.5 cm. long, 5 mm. wide, velvety-tomentose, the margin bearing short prickles.

TYPE LOCALITY: Cerro de Matzize, Puebla.

DISTRIBUTION: Puebla.

10. *Mimosopsis biuncifera* (Benth.) Britton & Rose.

Mimosa biuncifera Benth. Pl. Hartw. 12. 1839.

Mimosa biuncifera glabrescens A. Gray, Pl. Wright. 2: 51. 1853.

A shrub, about 1 m. high, or lower, the young branches pubescent, angled. Prickles paired, or some of them solitary, broad at base, pubescent; stipules setaceous, pubescent; pinnae 4-10 pairs; leaflets 5-12 pairs, pubescent, linear-oblong, 1.5-3 mm. long; peduncles short, slender, pubescent; calyx and corolla pubescent; legume linear, puberulent or glabrate, curved or nearly straight, 2-3.5 cm. long, 3-4 mm. wide, the margins prickly or unarmed.

TYPE LOCALITY: León, Guanajuato.

DISTRIBUTION: New Mexico and Arizona, to Sonora, Chihuahua, Coahuila and Puebla.

11. *Mimosopsis flexuosa* (Benth.) Britton & Rose.

Mimosa flexuosa Benth.; A. Gray, Pl. Wright. 1: 62. 1852.

Mimosa biuncifera flexuosa B. L. Robinson, Proc. Am. Acad. 33: 327. 1898.

A prickly shrub, sometimes 1 m. high, the twigs puberulent, the prickles paired or solitary, recurved. Pinnae 3-7 pairs (? rarely 10 pairs); leaflets 7-12 pairs, oblong, obtuse, or linear-oblong, glabrous or puberulent, 1.5-2 mm. long; peduncles pubescent, about 1.5 cm. long, or shorter; calyx and corolla densely white-pubescent; legume linear, 2-5 cm. long, 2-3 mm. wide, puberulent or glabrous, the margins prickly or unarmed, more or less constricted between the seeds.

TYPE LOCALITY: Valleys beyond the Limpia, Texas.

DISTRIBUTION: Texas, New Mexico, Arizona, and Sonora.

12. *Mimosopsis Lindheimeri* (A. Gray) Britton & Rose.

Mimosa Lindheimeri A. Gray, Bost. Journ. Nat. Hist. 6: 181. 1850.

Mimosa biuncifera Lindheimeri B. L. Robinson, Proc. Am. Acad. 33: 328. 1898.

A low, prickly shrub, the twigs glabrous or nearly so, the prickles paired or single, recurved. Stipules setaceous; petioles very short; pinnae 3-6 pairs; leaflets 8-12 pairs, oblong, 2-4 mm. long, glabrous or sparingly puberulent; peduncles 6-12 mm. long, puberulent; calyx and corolla glabrous; legume glabrate, linear, 2.5-3.5 cm. long, 4-6 mm. wide, glabrous, the margins sparingly prickly, constricted between the seeds, or unconstricted.

TYPE LOCALITY: New Braunfels, Texas.

DISTRIBUTION: Southern Texas and Coahuila.

13. *Mimosopsis filipes* Britton & Rose, sp. nov.

A low shrub, the twigs slender, reddish, pubescent, or glabrous, the spines recurved, mostly solitary; pinnae 3-6 pairs (? rarely more); leaflets 5-15 pairs, 1.5-2.5 mm. long, rounded or obtuse, glabrous, or sparingly ciliate; peduncles axillary, solitary, or sometimes in clusters of 8-10, slender, 15-20 mm. long, pubescent; flower-buds deep purple, or greenish; calyx and corolla glabrous; legume oblong, 2-3 cm. long, 4-5 mm. wide, glabrous, the margin sparingly prickly.

Puebla and Morelos. Type from near San Luis Tultitlanapa, Puebla, July, 1908, *Purpus 3175*.

14. *Mimosopsis Wherryana* Britton, sp. nov.

A prickly shrub, 6-10 dm. high, with slender, flexuous, glabrous twigs, the prickles mostly solitary, small, recurved. Leaves small, about 1.5 cm. long, or shorter; petiole and rachis puberulent, or short-pubescent; pinnae 1-3 pairs; leaflets 3-6 pairs, oblong, obtuse, or rounded, 1-2 mm. long, puberulent or glabrous; peduncles nearly filiform, axillary, pubescent, 6-15 mm. long; flowers glabrous, or the calyx-teeth ciliate; legume narrowly oblong, glabrate, 2-2.5 cm. long, 5 mm. wide, both margins prickly.

Southern Texas. Type from Arroya del Tiegre, between Roma and Zapata, April 17, 1925, *Small & Wherry 11930*.

15. *Mimosopsis imparilis* (Macbride) Britton & Rose.

Mimosa aculeaticarpa imparilis Macbride, Contr. Gray Herb. 59: 12. 1919.

A shrub, the twigs somewhat angled, short-setose, glandular, prickly at the nodes. Leaves sessile or nearly so; rachis setose; pinnae several pairs; leaflets about 20 pairs, linear, 2 mm. long, or less, narrow, short-ciliate; peduncles 1.5 cm. long, setose; calyx and corolla puberulent; legume linear, 2-3 cm. long, 5-6 mm. wide, apiculate, puberulent and glandular, the margins with scattered prickles, or unarmed.

TYPE LOCALITY: Los Frenos, Michoacán.

DISTRIBUTION: Known only from the type locality.

16. *Mimosopsis desmanthocarpa* (B. L. Robinson) Britton & Rose.

Mimosa acanthocarpa desmanthocarpa B. L. Robinson, Proc. Am. Acad. 36: 472. 1901.

A shrub, the twigs somewhat angled, glabrous, armed with broad, short, curved prickles at the nodes. Petioles about 1 cm. long; pinnae about 12 pairs; leaflets 15-20 pairs, oblong, about 3 mm. long, obtuse, glabrous; peduncles puberulent, 2-3 cm. long; legume linear-oblong, 3 cm. long, 5-6 mm. wide, acute, glandular, unarmed.

TYPE LOCALITY: Between San Cristobal and Teopisca, Chiapas.

DISTRIBUTION: Known only from the type locality.

17. *Mimosopsis orizabensis* Britton, sp. nov.

Young twigs, leaf-rachis and peduncles puberulent, becoming glabrous. Prickles paired or solitary, flattened, recurved; petioles 6-10 mm. long; pinnae 8-13 pairs; leaflets 9-16 pairs,

linear, obtuse, glabrous, 2-3 mm. long, about 0.7 mm. wide, the venation obscure; peduncles axillary, solitary, about 2.5 cm. long, or shorter; flowers glabrous; legume linear-oblong, 3 cm. long or shorter, 6-7 mm. wide, glabrate, more or less constricted, subulate-tipped, the margins sparingly prickly, or unarmed.

Engenio, Campos, Orizaba, 1853, *F. Mueller 996*.

18. *Mimosopsis moreliensis* Britton, sp. nov.

Young twigs, leaf-rachis and peduncles puberulent. Prickles few, short, recurved, paired or solitary; petioles 6-15 mm. long; rachis distantly prickly, or unarmed; pinnae 15-20 pairs; leaflets about 12 pairs, linear, puberulent or glabrate, obtuse, about 2 mm. long and 0.5 mm. wide; peduncles axillary, 1.5-2.5 cm. long; flowers pubescent; young legume linear, puberulent, about 2 cm. long, 3-4 mm. wide, the margins short-prickly.

Cerro de las Nalgas, near Morelia, Michoacán, September 9, 1909, *Brother Arsène 2646*.

19. *Mimosopsis chapalensis* Britton & Rose, sp. nov.

A glabrous, prickly shrub, 2 m. high, the twigs somewhat angled, the prickles flattened, paired or solitary, recurved. Petiole and rachis glabrate; pinnae 10-20 pairs; leaflets 15-20 pairs, linear, about 2 mm. long, obtuse; calyx and corolla glabrous; legume linear, 4-5 cm. long, 3-4 mm. broad, incurved, glabrous, one margin very prickly, the other nearly or quite unarmed.

Lake Chapala, Jalisco, October 19, 1895, *Pringle 6199*.

20. *Mimosopsis prolifica* (S. Wats.) Britton & Rose.

Mimosa prolifica S. Wats. Proc. Am. Acad. 21: 452. 1886.

A stout, erect shrub, 1-2 m. high, the twigs angled, brownish, sparingly pilose and bearing stout prickles. Petiole about 1 cm. long; petiole and rachis prickly, pilose; pinnae 6-9 pairs; leaflets 12-17 pairs, narrowly oblong, acute or acutish, ciliate or glabrous, 3-4 mm. long, faintly reticulate-veined; peduncles axillary, about 2 cm. long; calyx glabrous; corolla 4 mm. long, glabrous, purplish; legume linear, 3-5 cm. long, about 4 mm. wide, glabrous, one margin sparingly prickly.

TYPE LOCALITY: West of Chihuahua City, Chihuahua.

DISTRIBUTION: Chihuahua.

21. *Mimosopsis arida* Britton & Rose, sp. nov.

A prickly shrub, with slender, glabrous, flexuous twigs, the prickles solitary, slightly curved. Petioles about 6 mm. long, or shorter; rachis puberulent; pinnae 5-7 pairs; leaflets 5-10 pairs, oblong, pinnately veined, 2-3 mm. long, glabrous, or minutely puberulent, obtuse; legume linear, glabrous, pointed, 2-3 cm. long, 4 mm. wide.

Santa Fé, Federal District, Mexico, September, 1927, *E. Lyonnet 5*.

22. *Mimosopsis glutinosa* Britton & Rose, sp. nov.

A shrub, the branches somewhat angled, bearing broad nodal prickles. Petioles about 1 cm. long; petiole and rachis puberulent; pinnae 4-10 pairs; leaflets 8-15 pairs, linear, 3-5 mm. long, about 1 mm. wide, acutish, faintly reticulate-veined beneath; legume linear, 3 cm. long, glandular-viscid, about 5 mm. wide, long-tipped, the valves naked, the margins prickly.

Puebla. Type from near San Luis Tultilanapa, July, 1908, *Purpus 3174*.

23. *Mimosopsis Grahmi* (A. Gray) Britton & Rose.

Mimosa Grahmi A. Gray, Pl. Wright. 2: 52. 1853.

A spreading or decumbent shrub, the twigs somewhat angled, glabrous, prickly. Petiole about 1 cm. long; rachis prickly; pinnae 6-8 pairs; leaflets 10-15 pairs, oblong, 4-6 mm. long, acute, glabrous, strongly netted-veined; flowers glabrous, white; legume linear-oblong, glabrous, 1-4 cm. long, 5-6 mm. wide, the margins sparingly prickly or naked.

TYPE LOCALITY: Northern Sonora.

DISTRIBUTION: Southern Arizona to Sonora and Chihuahua.

24. *Mimosopsis* (?) *moniliformis* Britton & Rose, sp. nov.

Acacia (?) Rose, Contr. U. S. Nat. Herb. 1: 99. 1891.

A thorny shrub, 3 m. high, or more, the twigs slender, glabrous. Pinnae 4-8 pairs; leaflets 8-10 pairs, oblong, 4-6 mm. long, glabrous; peduncles 10-12 mm. long; legume 6-8 cm. long, with 6-10 deep, uniform constrictions, but unsegmented, stipitate, long-tipped, glabrous.

Alamos, Sonora, September, 1890, *E. Palmer* 627.

25. *Mimosopsis* (?) *formidabilis* Britton & Rose, sp. nov.

Branches stout, angular, sparingly pubescent. Prickles large, 10-15 mm. long, paired or solitary, flat, broad-based, triangular; petioles and rachis loosely pubescent, prickly; rachillas short-prickly; petiole 5-10 mm. long; pinnae 8-10 pairs; leaflets 8-15 pairs, oblong, 4-6 mm. long, 1.5-2 mm. wide, acute, strongly pinnately veined, pubescent and ciliate.

Near Huejuquilla, Jalisco, August 25, 1897, *J. N. Rose* 4197.

39. *ACANTHOPTERON* Britton, gen. nov.

A shrub, the twigs formidably armed with large, flat, solitary or paired, recurved prickles, the leaves bipinnate, the small numerous leaflets linear. Flowers in axillary, peduncled, solitary or clustered, globose heads, opening as the leaves unfold, or before. Calyx 4-toothed. Corolla 4-lobed. Stamens 7 or 8, distinct. Legume linear to linear-oblong, flat, short-stipitate, unsegmented, with marginal wings deeply irregularly cleft into flat, rigid, spinulose teeth, and ultimately separating.

Type species, *Mimosa lacerata* Rose.

1. *Acanthopteron laceratum* (Rose) Britton.

Mimosa lacerata Rose, Contr. U. S. Nat. Herb. 5: 141. 1897.

A shrub, 1.5-2.5 m. high, the twigs glabrous, the stout prickles 6-10 mm. long. Petioles 1-3 cm. long; pinnae 5-12 pairs; leaflets 15-20 pairs, linear, 2-4 mm. long, puberulent, ciliate, faintly pinnately veined; peduncles very slender, 2 cm. long or less; flowers purple; lobes of the corolla puberulent; legume 3.7-5.7 cm. long, glabrous or puberulent, the valves 6-8 mm. broad, the rigid teeth of the marginal wing triangular to narrowly lanceolate, 6 mm. long or shorter.

TYPE LOCALITY: Piaxtla, Puebla.

DISTRIBUTION: Morelos, Puebla and Oaxaca.

ILLUSTRATION: Rose, loc. cit. f. 5.

40. *HAITIMIMOSA* Britton, gen. nov.

An unarmed shrub or small tree, the leaves phyllodal, linear, 3-nerved, sometimes bearing a pair of very small pinnae at the tip, each pinna with a pair of minute suborbicular leaflets. Heads small, globose, sessile or short-peduncled, in axillary and terminal narrow panicles or spikes. Flowers sessile, 3- or 4-parted. Calyx-lobes valvate. Stamens twice as many as the corolla-lobes. Legume narrow, thin, flat, several-jointed, the margins separating.

Type species, *Mimosa extranea* Benth.

1. *Haitimimosa extranea* (Benth.) Britton.

Mimosa extranea Benth. Trans. Linn. Soc. 30: 433. 1875.

Slender, 2-3 meters high; branches erect or ascending, reddish brown, glabrous, the younger ridged, the ridges extending in 3's from the bases of the phyllodia. Phyllodia linear, 3-6 cm. long, 2-6 mm. broad, obtuse at apex, narrowed at base, coriaceous, dark green, prominently 3-nerved; leaflets, when present, nearly orbicular, about 1 mm. broad; inflorescence puberulent; heads about 8 mm. in diameter at flowering; calyx 0.75 mm. long, the lobes 3 or 4, triangular; corolla 3 mm. long; stamens 6 or 8, 4-5 mm. long; ovary pubescent; legume 3-4 cm.

long, 5-6 mm. wide, 5-8-jointed, slightly constricted at the joints, reddish brown, glabrous, unarmed.

TYPE LOCALITY: Santo Domingo.
DISTRIBUTION: Hispaniola.

IV. ADENANTHEREAE. Stamens 10, distinct or very nearly so, the anthers mostly tipped by glands. Calyx-lobes valvate. Seeds with endosperm.

- Flowers capitate, some of the lower ones barren; perennial herbs, unarmed; legume flat, oblong. 41. NEPTUNIA.
Flowers spicate, capitate or racemose; trees or shrubs.
Upper flowers of the spike perfect, the lower neutral, with elongated stamens; legume indehiscent, contorted. 42. CAILLIEA.
All flowers perfect or some polygamous.
Legume thick, indehiscent, septate between the seeds.
Corolla nearly gamopetalous; flowers sessile; leaflets broad. 43. SOPROPIS.
Petals distinct or slightly united.
Legume spirally coiled. 44. STROMBOCARPA.
Legume straight, or falcate.
Leaflets narrow, opposite; flowers pedicelled. 45. NELTUMA.
Leaflets broad, mostly alternate; flowers sessile. 46. STRYPHINODENDRON.
Legume compressed, 2-valved. 47. ADENANTHERA.

41. NEPTUNIA Lour. Fl. Coch. 653. 1790.

Prostrate, diffuse or floating perennial, unarmed herbs, some a little woody, with bipinnate leaves, and axillary, long-peduncled heads of more or less imperfect and perfect flowers. Calyx campanulate, with 5 short teeth. Petals 5, distinct, or united below the middle. Stamens mostly 10, distinct, exerted, the anthers bearing a stalked gland. Ovary stipitate, several-many-ovuled; style filiform, with a terminal capitate stigma. Legume broadly linear or narrowly oblong, stipitate, flat, commonly recurved, impressed between the ovate transverse seeds, 2-valved, the valves thin-coriaceous.

Type species, *Neptunia oleracea* Lour.

- Barren flowers many, their stamens or staminodes much elongated.
Aquatic; stem floating, spongy, bearing tufts of fibrous roots, usually simple. 1. *N. prostrata*.
Terrestrial; stem ascending or spreading, branched. 2. *N. plena*.
Barren flowers few; stamens much shorter; terrestrial species.
Leaflets linear or linear-oblong.
Legume distinctly stipitate.
Heads small, subglobose to short-oblong, several-flowered; legume 6-8 mm. wide. 3. *N. pubescens*.
Heads large, ellipsoid, many-flowered; legume 8-16 mm. wide. 4. *N. lutea*.
Stipe of the legume very short, not longer than the calyx.
Legume elliptic-orbicular, 1.2-1.8 cm. long. 5. *N. microcarpa*.
Legume oblong, 2.5-3.5 cm. long. 6. *N. Palmeri*.
Leaflets oblong-obovate. 7. *N. mazatlana*.

1. *Neptunia prostrata* (Lam.) Baillon, Bull. Soc. Linn. Paris 1: 356. 1883.

Mimosa prostrata Lam. Encycl. 1: 10. 1783.
Neptunia oleracea Lour. Fl. Coch. 654. 1790.
Mimosa lacustris H. & B. Pl. Aequin. 1: 55. 1806.
Desmanthus lacustris Willd. Sp. Pl. 4: 1044. 1806.

Floating in quiet water, glabrous throughout; stem stout, spongy, simple or little-branched, bearing large tufts of fibrous roots and hollow swellings 1-2 cm. in diameter. Stipules triangular-ovate, membranous, 5-7 mm. long; petioles 4-6 cm. long, glandless; pinnae 2 or 3 pairs, short-stalked; leaflets 8-20 pairs, linear or linear-oblong, 6-13 mm. long, obtuse or mucronulate, the venation obscure; peduncles axillary, solitary, in fruit 1.2-3 dm. long, bearing 1 or 2 ovate or lanceolate bracts; heads subglobose, many-flowered, the flowers white, fading yellow; perfect flowers with a calyx about 2 mm. long, the petals about 4 mm. long, the stamens about 8 mm. long; barren flowers basal, the calyx minute, the petals 2-4 mm. long, the linear staminodes 13-15 mm. long; legume oblong, mucronate, 2-2.5 cm. long, 8-10 mm. wide; seeds about 5 mm. long.

TYPE LOCALITY: India.
DISTRIBUTION: Cuba; Jamaica; Yucatan. Tropical South America. Tropical Asia and Africa.
ILLUSTRATIONS: H. & B. loc. cit. *pl.* 16; Fawcett & Rendle, Fl. Jam. 4: *f.* 40.

2. *Neptunia plena* (L.) Benth. Journ. Bot. Hook. 4: 355. 1841.*Mimosa plena* L. Sp. Pl. 519. 1753.*Desmanthus plenus* Willd. Sp. Pl. 4: 1045. 1806.*Desmanthus punctatus* Willd. Sp. Pl. 4: 1047. 1806.*Desmanthus cosmosus* A. Rich. Ess. Fl. Cub. 475. 1845 (According to Grisebach).

Glabrous, the slender branches prostrate or ascending, 3-6 dm. long. Stipules ovate to lanceolate, thin, oblique, 4-6 mm. long; petioles slender, 1-3.5 cm. long, bearing a depressed gland between the lower pair of pinnae; pinnae 2-4 pairs; leaflets 12-20 pairs, linear, thin, faintly veined, 4-10 mm. long, obtuse; peduncles 6-12 cm. long, usually bearing 1 or 2 cordate bracts at or below the middle; heads ovoid; flowers yellow, the upper ones perfect, the lower staminate, or neutral, with exerted staminodes; legume 2-5 cm. long, about 8 mm. wide, acute or apiculate, thickened on the margins, oblong, the stipe longer than the calyx.

TYPE LOCALITY: Veracruz.

DISTRIBUTION: West Indies; Lower California; Panama. Colombia to French Guiana and Brazil.

3. *Neptunia pubescens* Benth. Journ. Bot. Hook. 4: 356. 1841.*Neptunia floridana* Small, Bull. Torrey Club 25: 138. Mr. 1898.*Neptunia Lindheimeri* B. L. Robinson, Proc. Am. Acad. 33: 333. My. 1898.

Pubescent or glabrate, the slender stems prostrate or ascending, 2-7 dm. long. Stipules lanceolate to ovate-lanceolate, acuminate, 2-3 mm. long; petioles slender, glandless, 1-3 cm. long; pinnae 2-5 pairs; leaflets 15-35 pairs, oblong or linear-oblong, obtuse, acutish or mucronulate, 3-5 mm. long, glabrous, or ciliate, or sometimes puberulent beneath; peduncles slender, 2-5 cm. long; heads globose or short-oblong, about 6 mm. thick, exclusive of the stamens; calyx and bractlets glabrous or ciliolate; calyx about 1.5 mm. long; legume oblong, obtuse or rounded, glabrous, or sparingly puberulent when young, short-stipitate, 2-3.5 cm. long, 6-8 mm. wide.

TYPE LOCALITY: Lima, Peru.

DISTRIBUTION: Florida to Texas; Cuba; Hispaniola; Antigua; Guadeloupe; Martinique; Dominica; Panama. Peru. Paraguay.

4. *Neptunia lutea* (Leavenw.) Benth. Journ. Bot. Hook. 4: 356. 1841.*Acacia lutea* Leavenw. Am. Journ. Sci. 7: 61. 1823.*Neptunia tenuis* Benth. Journ. Bot. Hook. 4: 355. 1841.*Desmanthus luteus* Benth.; Chapm. Fl. S. U. S. ed. 3, 128. 1897.*Neptunia lutea tenuis* B. L. Robinson, Proc. Am. Acad. 33: 332. 1898.

Softly pilose or glabrate; stems prostrate, branched, 0.6-1.5 m. long. Stipules ovate-lanceolate, 2-4 mm. long; petioles slender, glandless, about 3 cm. long or shorter; pinnae 2-5 pairs, short-stalked; leaflets 7-16 pairs, linear-oblong, 3-7 mm. long, obtuse, or rounded and apiculate, ciliate, pubescent or glabrate; peduncles slender, mostly as long as the leaves or longer; heads ellipsoid, many-flowered, the lower barren flowers few; flowers glabrous; calyx about 1 mm. long; corolla 2-3 mm. long; stamens about 8 mm. long; legume broadly oblong, 2.5-4 cm. long, 8-16 mm. wide, puberulent or glabrous, the slender stipe 4-9 mm. long.

TYPE LOCALITY: Prairies of Green County, Alabama.

DISTRIBUTION: Alabama to Oklahoma and Texas.

5. *Neptunia microcarpa* Rose, Contr. U. S. Nat. Herb. 8: 300. 1905.

Glabrous or very sparingly pubescent; stems slender, branched, 3-5 dm. long. Stipules ovate, acuminate, about 5 mm. long; petioles glandless, 1-2 cm. long; pinnae 2-4 pairs, short-stalked; leaflets 5-12 pairs, linear-oblong, 4-5 mm. long, the nearly central midvein prominent beneath; peduncles very slender, sparingly pubescent below, 4-6 cm. long; heads short-oblong, the barren flowers few, or several; calyx-lobes slightly pubescent; calyx about 1 mm. long; corolla greenish, about 2 mm. long; stamens about 7 mm. long; legume elliptic-orbicular,

1.2-1.8 cm. long, 8-10 mm. wide, 2-4-seeded, the stipe about 1 mm. long, not longer than the calyx.

TYPE LOCALITY: Near Guadalajara, Jalisco.

DISTRIBUTION: Known only from the type locality.

6. *Neptunia Palmeri* Britton & Rose, sp. nov.

Glabrous or nearly so; stem slender, about 3 dm. long. Stipules ovate-lanceolate, acuminate, 3-4 mm. long; petioles slender, glandless, 1-2 cm. long; pinnae 2 pairs, nearly sessile; leaflets 13-27 pairs, linear-oblong, obtuse, 3-5 mm. long, glabrous, ciliolate, the mid-vein prominent; peduncles slender, 3-4 cm. long; legume broadly oblong, 2-3.5 cm. long, 10-13 mm. wide, rounded or minutely apiculate, its stipe about 1 mm. long, not longer than the calyx.

Juaraz, Coahuila, September, 1880, *Palmer 300*.

7. *Neptunia mazatlana* Britton & Rose, sp. nov.

Stems several from a woody root, slender, glabrous, spreading, 2-3 dm. long. Stipules ovate, acute or acuminate, 3-5 mm. long; petioles slender, eglandular, about 1.5 cm. long or shorter; pinnae 1-3 pairs, short-stalked; leaflets 3-11 pairs, oblong-obovate, the lower pair about 2 mm. long, the others 3-3.5 mm. long, the apex rounded, the nearly central midvein prominent beneath, the few lateral veins indistinct, the margins long-ciliate; peduncles very slender, 2-3 cm. long, bearing 1 or 2 small lanceolate membranous bracts; heads oblong, several-flowered, about 5 mm. long; bractlets lanceolate, acuminate, 1 mm. long; calyx 1.5 mm. long; young legumes short-stipitate.

Sand hills, vicinity of Mazatlán, Sinaloa, April 4, 1910, *Rose, Standley & Russell 14001*.

42. *CAILLIEA* Guill. & Perr. Fl. Seneg. 239. 1833.

Dichrostachys DC.; Wight & Arn. Prodr. 271. 1834.

Spiny shrubs or small trees, with bipinnate leaves, the small leaflets numerous, the flowers in peduncled, usually drooping spikes, the upper flowers perfect, the lower ones staminate. Flowers sessile. Calyx 5-dentate. Petals 5, valvate, coherent to about the middle. Stamens 10, distinct, those of the upper flowers short, those of the lower elongated; anthers glanduliferous. Legume compressed, much twisted, indehiscent. Seeds obovate, compressed.

Type species, *Cailliea Dichrostachys* Guill. & Perr.

1. *Cailliea glomerata* (Forsk.) Macbride, Contr. Gray Herb.

59: 16. 1919.

Mimosa glomerata Forsk. Fl. Aeg. Arab. 177. 1775.

Mimosa nutans Pers. Syn. Pl. 2: 266. 1806.

Desmanthus trichostachys DC. Prodr. 2: 445. 1825.

Dichrostachys nutans Benth. Journ. Bot. Hook. 4: 353. 1842.

A shrub or a small tree, 4-6 m. high, the twigs, leaf-rachis and peduncles short-pilose or glabrate. Spines stout, 1-2 cm. long; stipules subulate; petioles slender, 1-2 cm. long, usually bearing one or two slender-stipitate glands; pinnae 5-12 pairs, sessile; leaflets 20-30 pairs, linear-oblong, obtuse, 4-6 mm. long, glabrous or ciliolate; peduncles axillary, slender, 4-6 cm. long; spikes 4-5 cm. long, drooping, about one-half of the flowers perfect and yellow, the others staminate and pink; stamens of the staminate flowers 1-1.5 cm. long; legume glabrous, much twisted, 3-5 cm. long, about 1 cm. wide.

TYPE LOCALITY: Egypt.

DISTRIBUTION: Florida; central and western Cuba. Naturalized from tropical Africa.

ILLUSTRATION: DeCandolle, Mem. Leg. pl. 67.

43. *SOPROPIS* Britton & Rose, n. gen.

A loosely branching shrub or small tree, armed with straight stipular spines, the bipinnate leaves with a single pair of pinnae, the small perfect flowers sessile in solitary axillary spikes.

Calyx 5-toothed, campanulate. Corolla nearly gamopetalous, sericeous without, not lanate within. Stamens 10, distinct, long-exserted, the anther bearing a large deciduous gland. Ovary many-ovuled, tomentose, stipitate; style filiform, loosely villous; stigma small, terminal. Legume linear, compressed, septate but not constricted between the seeds, the mesocarp fibrous. Seeds compressed, with endosperm.

Type species, *Prosopis Palmeri* S. Wats.

1. *Prosopis Palmeri* (S. Wats.) Britton & Rose.

Prosopis Palmeri S. Wats. Proc. Am. Acad. 24: 48. 1889.

A shrub, about 1.5 m. high, or a small tree, the slender twigs densely and finely pubescent. Stipular spines acicular, nearly white, 2.5 cm. long, or shorter, pubescent; petiole canescent, 3-4 mm. long, tipped by a subulate appendage; pinnae 2-3 cm. long; leaflets 3-10 pairs, oblong to elliptic, canescent, 3-6 mm. long, rounded, mucronulate, faintly veined; spikes 3-6 cm. long, densely flowered, short-peduncled; flowers fragrant; calyx about 2 mm. long, puberulent; corolla about 4 mm. long, its teeth triangular-lanceolate; filaments and style about 8 mm. long, yellow; legume about 7 cm. long, 1 cm. wide, pointed, glabrous; seeds brown, ellipsoid, 7 mm. long.

TYPE LOCALITY: Mulege, Lower California.

DISTRIBUTION: Lower California.

44. *STROMBOCARPA* (Benth.) Engelm. & Gray, Bost. Journ. Nat.

Hist. 5: 243. 1845.

Prosopis § *Strombocarpa* Benth. Journ. Bot. Hook. 4: 351. 1841.

Trees or shrubs, with spinescent stipules, bipinnate leaves, usually with a small, orbicular, sessile gland between the pinnae, small leaflets, and small spicate or capitate sessile flowers. Calyx 5-toothed. Petals 5, valvate. Stamens 10, distinct, short, the anthers bearing a deciduous gland. Ovules many. Style filiform; stigma terminal, small. Legume elongated, closely spirally coiled, cylindrical, indehiscent. Seeds with endosperm.

Type species, *Acacia strombulifera* Willd.

Flowers capitate; leaflets 1.5-3 mm. long; low shrub.

Flowers spicate; leaflets 6-10 mm. long; tree or large shrub.

1. *S. cinerascens*.

2. *S. odorata*.

1. *Strombocarpa cinerascens* A. Gray, Pl. Wright. 1: 61. 1852.

Mimosa calcarea Buckl. Proc. Acad. Phila. 1861: 453. 1861.

Prosopis cinerascens A. Gray; Benth. Trans. Linn. Soc. 30: 381. 1875.

A low shrub, 2-3 dm. high, much branched, the twigs slender, puberulent when young. Spines acicular, 1-2.5 cm. long, spreading; petioles very short; pinnae 1 pair; rachilla puberulent; leaflets 8-12 pairs, oblong, obtuse or rounded, 1.5-3 mm. long, subcoriaceous, pubescent or glabrous, the venation obscure; peduncles puberulent, 1-2 cm. long; flowers capitate; heads globose, several-flowered; flowers puberulent or glabrous; calyx about 2 mm. long; petals 4-5 mm. long; stamens a little longer than the corolla; legume glabrous, yellow, 2-3 cm. long.

TYPE LOCALITY: Azulfra, Nuevo León.

DISTRIBUTION: Southern Texas; Tamaulipas; Nuevo León.

2. *Strombocarpa odorata* (Torr. & Frém.) A. Gray, Bot. U. S. Expl.

Exp. 475. 1854.

Prosopis odorata Torr. & Frém.; Torr. in Frém. Rep. Calif. 313. 1845.

Prosopis pubescens Benth. Lond. Journ. Bot. 5: 82. 1846.

Strombocarpa pubescens A. Gray, Pl. Wright. 1: 60. 1852.

A tree, 6-10 m. high, or shrubby, the bark separating in thin flakes, the slender twigs glabrous or very nearly so. Spines subulate, 8-20 mm. long; petioles slender, puberulent, about 2 cm. long, or shorter; pinnae 1 or 2 pairs, short-stalked; rachis and rachilla puberulent;

leaflets 5-9 pairs, oblong, obtuse, minutely apiculate, finely puberulent or glabrous, 6-10 mm. long, the venation obscure; peduncles 1-3 cm. long; flowers densely spicate, whitish-puberulent; spikes 3-8 cm. long; calyx about 1 mm. long; petals 3 or 4 times as long as the calyx, tomentose on the inner side; legume tomentulose, yellowish, 3-5 cm. long; seeds obovate, 1.5-2 mm. long.

TYPE LOCALITY: California.

DISTRIBUTION: Western Texas to Utah and southern California, Sonora, Chihuahua, and Lower California.

ILLUSTRATIONS: Frém. Rep. *pl. 1, f. 3*; Sargent, *Silva, pl. 138*; Man. Trees, *f. 456*; ed. 2, *f. 553*; Britton & Shafer, *N. Am. Trees, f. 492*.

45. NELTUMA Raf. *Sylva Tell.* 119. 1838.

Prosopis § *Algarobia* DC. *Prodr.* 2: 446. 1825.

Algarobia (DC.) Benth. *Pl. Hartw.* 13. 1839.

Trees or shrubs, armed with straight stipular spines, or spineless, the leaves bipinnate, usually with a small round sessile gland between each pair of pinnae, the petiole often produced into a short, subulate appendage, the small perfect, short-pedicelled flowers in axillary spike-like racemes. Calyx campanulate, 5-toothed. Petals 5, valvate, lanate within. Stamens 10, distinct or nearly so, the anthers usually bearing a deciduous gland. Ovary many-ovuled, usually villous; style filiform; stigma small, terminal. Legume linear, subterete or somewhat flattened, coriaceous, indehiscent, septate and sometimes constricted between the seeds, the mesocarp spongy. Seeds compressed, with endosperm.

Type species, *Neltuna juliflora* Raf.

Legume unstricted between the seeds, or but slightly constricted.

Leaflets and legume glabrous.

Mature legume not constricted nor impressed between the seeds, or with 1 or few irregular constrictions, 10-16 mm. wide.

Legume more or less constricted or impressed between the seeds.

Legume 10-14 mm. wide.

Leaflets 3-6 mm. long; base of legume long-attenuate.

Leaflets 8-27 mm. long; base of legume not long-attenuate.

Stamens about 4 mm. long; style scarcely longer.

Stamens 5-6 mm. long; style much longer.

Legume 7-10 mm. wide.

Leaflets faintly veined, pale green.

Leaflets strongly veined.

Leaflets 5-7 mm. long, approximate.

Leaflets 15-40 mm. long, mostly distant.

Foliage and legume pubescent.

Legume constricted between the seeds or distinctly undulate (see *N. velutina*).

Leaflets 2-4 cm. long.

Legume undulate.

Legume deeply constricted.

Leaflets about 1 cm. long, or shorter.

Legume 5-7 mm. wide, mostly regularly and deeply constricted.

Legume 8-12 mm. wide, distinctly undulate.

Legume glabrous.

Leaflets 6-12 mm. long; legume 7-9 mm. wide.

Leaflets 2.5-4 mm. long; legume about 12 mm. wide.

Legume glandular-scurfy.

1. *N. juliflora*.

2. *N. attenuata*.

3. *N. occidentalis*.

4. *N. Bakeri*.

5. *N. pallescens*.

6. *N. Palmeri*.

7. *N. glandulosa*.

8. *N. velutina*.

9. *N. neomexicana*.

10. *N. constricta*.

11. *N. articulata*.

12. *N. laevigata*.

13. *N. michoacana*.

14. *N. pazensis*.

1. *Neltuna juliflora* (Sw.) Raf. *Sylva Tell.* 119. 1838.

Mimosa juliflora Sw. *Prodr.* 85. 1788.

Acacia juliflora Willd. *Sp. Pl.* 4: 1076. 1806.

Mimosa salinarum Vahl, *Eclog.* 3: 35. 1807.

Desmanthus salinarum Steud. *Nom. Bot. Phan.* 269. 1821.

Acacia (?) *salinarum* DC. *Prodr.* 2: 456. 1825.

Prosopis juliflora DC. *Prodr.* 2: 447. 1825.

Prosopis domingensis DC. *Prodr.* 2: 447. 1825.

Algarobia juliflora Benth.; Heynhold, *Nom.* 2: 18. 1840.

Prosopis dulcis domingensis Benth. *Journ. Bot. Hook.* 4: 350. 1841.

A tree, up to 13 m. high, but usually smaller, with widely spreading branches, armed with stipular slender straight spines 1-4 cm. long, the smooth bark brown, the slender twigs glabrous or nearly so. Leaves glabrous, or when young sparingly ciliate, 0.7-2 dm. long; petioles 1-4 cm. long; pinnae 1 or 2 pairs, short-stalked; leaflets 12-20 pairs, linear-oblong,

sessile, 7-16 mm. long, strongly few-veined, obtuse or mucronulate; flowers greenish or yellowish, in dense, cylindric, peduncled racemes 5-10 cm. long; calyx about 1 mm. long; petals about 2.5 mm. long, acute, villous within; stamens about 4 mm. long; legume compressed, falcate, 7-20 cm. long, 10-16 mm. wide, not constricted between the seeds, or with one or more irregular constrictions.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Bahamas; Jamaica; Cuba; Hispaniola; Porto Rico; Tortola; St. Croix; Montserrat; Barbados. Venezuela; Colombia and islands adjacent.

ILLUSTRATION: Descourt. Fl. Ant. pl. 550.

2. *Neltuma attenuata* Britton & Rose, sp. nov.

Glabrous, except the slightly pubescent rachis. Stipular spines about 1 cm. long or shorter; petioles about 2 cm. long; pinnae 1 or 2 pairs; leaflets 16-23 pairs, linear-oblong, obtuse, 3-6 mm. long, strongly pinnately veined beneath; peduncles 2-3 cm. long; legume compressed, curved or nearly straight, 12-17 cm. long, 10-12 mm. wide, short-tipped, obliquely impressed and very slightly constricted between the seeds, its base long-cuneate.

Loma Santa Maria, near Morelia, Michoacán, *Brother G. Arsène 8447*.

3. *Neltuma occidentalis* Britton & Rose, sp. nov.

A tree, up to about 10 m. high, the twigs and leaves glabrous. Stipular spines 1-2 cm. long, or wanting; petioles slender, 1-5 cm. long; pinnae 1 or 2 pairs; leaflets 8-12 pairs, linear-oblong, 1-2 cm. long, 3-4 mm. wide, strongly veined, the apex rounded; racemes short-peduncled, 3-6 cm. long; flowers sericeous or glabrous; calyx about 1 mm. long; petals about 2 mm. long; stamens about 4 mm. long; style a little longer than the stamens; legume 10-12 mm. long, compressed, 10 mm. wide, short-tipped, slightly impressed between the seeds but not constricted.

Sinaloa and Sonora. Type from along the sea-shore, Mazatlán, Sinaloa, March 30, 1910, *Rose, Standley & Russell 13720*.

4. *Neltuma Bakeri* Britton & Rose, sp. nov.

A tree, 5-7 m. high, the twigs and leaves glabrous. Stipular spines 1.5 cm. long or shorter; petioles 2-7 cm. long; pinnae 2 pairs; leaflets 8-13 pairs, linear to oblong, strongly veined, 8-18 mm. long, 1.5-5 mm. wide, the apex rounded, retuse or emarginate; racemes slender-peduncled, 5-7 cm. long, the peduncle and rachis pubescent; flowers pubescent; calyx nearly 2 mm. long; petals about 3 mm. long; stamens 5-6 mm. long; style 10-12 mm. long; legume compressed, straight or subfalcate, 12-18 cm. long, 10-12 mm. wide, impressed between the seeds, scarcely constricted, apiculate.

Nicaragua, Panama, and Honduras. Type from Assavadores Island, Nicaragua, *C. F. Baker 188*.

5. *Neltuma paliescens* Britton & Rose, sp. nov.

Twigs and leaves glabrous. Stipular spines stout, 4 cm. long or shorter; petioles 1-2 cm. long; pinnae 1 or 2 pairs; leaflets 7-14 pairs, linear-oblong, 8-16 mm. long, 3-4.5 mm. wide, pale green, faintly veined, the apex rounded, mucronulate; peduncles puberulent, 2-3 cm. long; racemes about 6 cm. long; calyx about 1 mm. long; petals about 3 mm. long; stamens about 5 mm. long; style somewhat longer than the stamens; legume straight or nearly so, 7-15 cm. long, only about 7 mm. wide, impressed and slightly constricted between the seeds.

Cayaco, Michoacán, March, 1903, *Nelson 6961*.

6. *Neltuma Palmeri* Britton & Rose, sp. nov.

Twigs slender, glabrous. Stipular spines about 1 cm. long; leaves glabrous or puberulent, the petioles 1-2.5 cm. long; pinnae 1 or 2 pairs; leaflets 15-25 pairs, linear, 5-7 mm. long, obtuse, strongly pinnately veined; peduncles and rachis puberulent; racemes about 8 cm. long or shorter; calyx about 1.5 mm. long; petals 3-3.5 mm. long; stamens 5-6 mm. long; style a

little longer than the stamens; legume compressed, 8–11 cm. long, about 7 mm. broad, subulate-tipped, impressed and slightly constricted between the seeds, its base obtuse.

Tamaulipas and Veracruz. Type from vicinity of Victoria, Tamaulipas, May 1–June 13, 1907, *E. Palmer 400*

7. *Neltuma glandulosa* (Torrey) Britton & Rose.

Prosopis glandulosa Torrey Ann. Lyc. N. Y. 2: 192. 1827.

Algarobia glandulosa Torrey & Gray, Fl. N. Am. 1: 399. 1840.

Prosopis juliflora glandulosa Cockerell, Bull. N. Mex. Agric. Exp. Station 15: 58. 1895.

A shrub or a tree, up to about 10 m. high, the foliage glabrous or nearly so. Stipular spines stout, 1–3 cm. long, or sometimes wanting; petioles slender, 1.5–4 cm. long; pinnae 1 pair, rarely 2 pairs; leaflets 6–20 pairs, linear or some of them rarely oblong, mostly 1.5–4 cm. long, obtuse or acute, distant or approximate, strongly pinnately veined; peduncles 0.5–2 cm. long, glabrous or puberulent; racemes 4–8 cm. long, the rachis glabrous or puberulent; calyx about 1 mm. long; petals about 4 mm. long; stamens 6–8 mm. long; style longer than the stamens; legume 8–20 cm. long, 8–10 mm. wide, somewhat compressed or subterete, impressed and more or less constricted between the seeds.

TYPE LOCALITY: On the Canadian River.

DISTRIBUTION: Kansas to Texas, California, Veracruz, Yucatán, Nuevo León, Sonora and Lower California; Cuba. Naturalized in Missouri.

ILLUSTRATIONS: Torrey, loc. cit. pl. 2; Frém. Rep. pl. 1, the flowering branches as *Prosopis odorata*; Britton & Shafer, N. Am. Trees f. 490; Britton & Brown, Ill. Fl. ed. 2, f. 2433; Sargent, Silva pl. 136, 137; Man. Trees f. 453, 454; ed. 2, f. 550, 551.

8. *Neltuma velutina* (Wooton) Britton & Rose.

Prosopis velutina Wooton, Bull. Torrey Club 25: 456. 1898.

Prosopis juliflora velutina Sargent, Silva 13: 15. 1902.

A tree, 5–15 m. high, the slender twigs pubescent when young. Stipular spines 1–5 cm. long or shorter, or sometimes wanting; petiole 1–5 cm. long, pubescent; pinnae 1 or 2 pairs; leaflets 12–25 pairs, 6–13 mm. long, pubescent or glabrate, obtuse, pinnately veined; peduncles pubescent, 1–3 cm. long; rachis pubescent; calyx pubescent, about 1 mm. long; petals about 4 times as long as the calyx; stamens about twice as long as the petals; style somewhat longer than the stamens; legume 7–18 cm. long, curved or nearly straight, about 8 mm. wide, somewhat compressed, puberulent, impressed and more or less constricted between the seeds.

TYPE LOCALITY: Arizona [specimen collected by *C. G. Pringle*, April 23, 1881, is here taken as the type].

DISTRIBUTION: Texas to Arizona, southern California, Sonora, Durango and northern Veracruz.

ILLUSTRATIONS: Sargent, Man. Trees f. 455; ed. 2, f. 552; Britton & Shafer, N. Am. Trees f. 491.

9. *Neltuma neomexicana* Britton, sp. nov.

Glabrous; twigs stout, flexuous. Stipular spines about 1 cm. long; petiole 2–2.5 cm. long; pinnae 1 pair; leaflets about 12 pairs, linear, 16–27 mm. long, about 3 mm. wide, obtuse, subcoriaceous; fruiting racemes about 5 cm. long; immature legume linear, nearly straight, 20 cm. long, or shorter, 10–13 mm. wide, undulate, slightly constricted and impressed between the seeds; sharply pointed, its base rounded, its stipe about 1 cm. long.

Dog Springs, Dog Mountains, New Mexico, September 16, 1903, *Edgar A. Mearns 2325*.

10. *Neltuma constricta* (Sargent) Britton & Rose.

Prosopis juliflora constricta Sargent, Trees & Shrubs 2: 249. 1913.

A shrub, 3–4 m. high, with numerous spreading stems. Stipular spines 1–3 cm. long; twigs and leaves glabrous; petioles slender, elongated; pinnae 1 pair, rarely 2 pairs; leaflets 10–15 pairs, narrowly oblong to oblong-ovate, dark green, 2–4 cm. long, 5–10 mm. wide, distinctly veined, the apex acute or rounded, apiculate; peduncles slender; racemes 5–10 cm. long; pedicels 2–3 mm. long; calyx glabrous, about 1 mm. long; petals about 4 mm. long; stamens about twice as long as the petals; style somewhat shorter than the stamens; legume

5-14 cm. long, about 7 mm. wide, slightly compressed, glabrous, deeply constricted between the seeds.

TYPE LOCALITY: Hillsides near Shreveport, Louisiana.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: Sargent, loc. cit. *pl.* 193.

11. *Neltuma articulata* (S. Wats.) Britton & Rose.

Prosopis articulata S. Wats. Proc. Am. Acad. 24: 48. 1889.

A tree, 4-10 m. high, or shrubby, the twigs puberulent or glabrate. Stipular spines 2 cm. long or shorter; leaves puberulent or glabrous; petioles 0.5-3 cm. long; pinnae 1 pair; leaflets 6-20 pairs, linear to oblong, prominently veined, at least beneath, 4-10 mm. long, the apex rounded; peduncles 1-3 cm. long; racemes 2-5 cm. long; calyx glabrous, about 1 mm. long; petals glabrous without, about 3 mm. long; stamens about 5 mm. long; style little longer than the stamens; legume 8-16 cm. long, mostly deeply constricted between the seeds, the joints mostly longer than broad, 5-7 mm. wide.

TYPE LOCALITY: Guaymas, Sonora.

DISTRIBUTION: Sonora; Lower California and islands adjacent.

12. *Neltuma laevigata* (Willd.) Britton & Rose.

Acacia laevigata Willd. Sp. Pl. 4: 1059. 1806.

Mimosa laevigata Poir. in Lam. Encycl. 1: 65. 1810.

Prosopis dulcis Kunth, Mim. 110. 1822.

Algarobia dulcis Benth. Pl. Hartw. 13, 1839.

?*Mimosa rotundata* Sessé & Moc. Pl. Nov. Hisp. 178. 1887.

A large tree, the twigs and leaves glabrous, the stipular spines 1-2.5 cm. long. Petioles 1-3 cm. long; pinnae 1 or 2 pairs; leaflets 15-25 pairs, linear to linear-oblong, obtuse or mucronulate, strongly pinnately veined beneath, pale green, 6-12 mm. long; racemes slender-peduncled, 4-7 cm. long; calyx about 1 mm. long, its teeth ciliolate; petals 3-4 mm. long, acute; stamens a little longer than the style or as long; legume compressed, 10-14 cm. long, 7-9 mm. wide, glabrous, subulate-beaked, undulate, definitely constricted between the seeds.

TYPE LOCALITY: Between Guasintlan and Puente de Istla [Cuernavaca].

DISTRIBUTION: Morelos; San Luis Potosi; Hidalgo; Oaxaca.

ILLUSTRATION: Kunth, Mim. *pl.* 34.

13. *Neltuma michoacana* Britton & Rose, sp. nov.

Glabrous. Stipular spines about 1 cm. long or shorter; petioles slender, 1-2 cm. long; pinnae 1 or 2 pairs; leaflets 20-35 pairs, oblong, 2.5-4 mm. long, obtuse, strongly pinnately veined beneath; peduncles 1.5-4 cm. long; legume compressed, straight or somewhat curved, 8-15 cm. long, about 12 mm. wide, short-tipped, slightly but definitely constricted between the seeds.

Vicinity of Morelia, Michoacán, *Brother C. Arsène 8297*.

14. *Neltuma pazensis* Britton & Rose, sp. nov.

Twigs slender, puberulent when young, armed with stipular spines about 6 mm. long. Petioles about 13 mm. long or shorter; pinnae 1 or 2 pairs; leaflets 10-15 pairs, puberulent, obtuse or rounded, strongly pinnately veined, mostly oblong to elliptic, 5-7 mm. long, but the upper ones obovate or suborbicular and only 2-3 mm. long; peduncles slender, 2-2.5 cm. long; racemes densely flowered, 4-5 cm. long; calyx scarcely 1 mm. long; petals 2.5 mm. long; stamens about twice as long as the petals; style equaling the stamens; immature legume about 2 dm. long and 8-9 mm. wide, narrowed at the base, short-stipitate, glandular-scurfy, undulate.

La Paz, Lower California, June 14, 1897, *J. N. Rose 1324*.

45. *STRYPHODENDRON* Mart. Flora 20: Beibl. 2: 117. 1837.

Unarmed trees, with bipinnate leaves, numerous small and broad, mostly alternate leaflets, the petiole or rachis glanduliferous, the small, mostly perfect flowers in axillary spikes. Flowers 5-parted. Stamens 10, distinct, the anthers tipped by a deciduous gland. Ovary short-stipitate, many-ovuled; style filiform. Legume narrow, compressed, indehiscent, septate, somewhat fleshy.

Type species, *Stryphnodendron Barbatimam* Mart.

1. *Stryphnodendron excelsum* Harms, Repert. Sp. Nov. 19: 64. 1923.

A large tree, with stout densely short-pubescent twigs. Leaves large, the pubescent rachis and petiole 2-2.5 dm. long, bearing large glands; pinnae 9-11 pairs; leaflets 12-18 pairs, obovate or rhombic-obovate, mostly alternate, oblique, 1-2 cm. long, glabrate above, puberulent beneath, the apex rounded, subtruncate or emarginate; spikes puberulent, 10-15 cm. long; calyx minute; petals lanceolate, acute, 2 mm. long; ovary and style glabrous.

TYPE LOCALITY: Rio Honda, Costa Rica.

DISTRIBUTION: Known only from the type locality.

46. *ADENANTHERA* L. Sp. Pl. 384. 1753.

Unarmed trees, with bipinnate leaves and long narrow racemes of small flowers, axillary, or in terminal clusters. Calyx campanulate, 5-toothed. Petals 5, united below the middle or nearly distinct. Stamens 10, distinct, about as long as the corolla; filaments slender; anthers bearing a deciduous gland. Ovary many-ovuled, sessile; style filiform, with a small, terminal stigma. Legume linear, usually curved, compressed, but swollen over the seeds, at length 2-valved, the valves twisting after dehiscence. Seeds thick, suborbicular, compressed, hard and shining, mostly red.

Type species, *Adenantha pavonina* L.

1. *Adenantha pavonina* L. Sp. Pl. 384. 1753.

A tree, up to 15 m. high, glabrous or very nearly so throughout. Leaves large, often 5 dm. long, stout-petioled; pinnae 2-5 pairs; leaflets 11-21, mostly alternate, oblong-elliptic, thin, obtuse at each end, or emarginate, or apiculate, 1.5-4 cm. long, with short petiolules; racemes narrow, erect, 10-18 cm. long; pedicels 1.5-2.5 mm. long; calyx about 1 mm. long; petals acutish, about 3 mm. long; legume somewhat fleshy, 1.5-2.5 dm. long, about 13 mm. wide; seeds red, shining, about 8 mm. broad.

TYPE LOCALITY: India.

DISTRIBUTION: Jamaica; Cuba; Porto Rico; Lesser Antilles. Naturalized from tropical Asia.

ILLUSTRATIONS: Jacq. Fragm. pl. 2; Lam. Encycl. pl. 334.

V. PIPTADENIEAE. Stamens 10, distinct, the anthers mostly tipped by glands. Calyx-lobes valvate. Seeds mostly without endosperm.

Legume not transversely septate; trees or shrubs.

Legume flat or compressed.

Legume readily dehiscent.

Flowers spicate; legume very flat, its valves chartaceous.

Flowers capitate; legume compressed, its valves coriaceous.

Legume tardily dehiscent, coriaceous.

Legume moniliform, deeply constricted between the seeds.

Legume flat, broad, transversely septate into 1-seeded joints; mostly vines.

Stout, unarmed, climbing vines, rarely shrubby; legume chartaceous or woody, very large.

Legume woody; leaves terminating in tendrils; spikes solitary or 2 or 3 together, extra-axillary.

Legume chartaceous; leaves mostly ecirrhiferous; spikes in terminal racemes.

Slender, clambering, prickly, ecirrhiferous vine; legume thin, not very large.

47. PIPTADENIA.

48. NIOPA.

49. GOLDMANIA.

50. PITYROCARPA.

51. ENTADA.

52. ENTADOPSIS.

53. PSEUDOENTADA.

47. *PIPTADENIA* Benth. Journ. Bot. Hook. 4: 334. 1841.

Shrubs or trees, mostly prickly, with bipinnate leaves, often with a sessile gland on the petiole, the small white or greenish flowers spicate. Calyx campanulate, slightly 5-toothed. Petals 5, more or less united. Stamens 10, distinct, exserted, the anthers tipped by a deciduous gland. Ovary several-many-ovuled. Legume flat, linear, 2-valved, not transversely septate, its valves thin. Seeds flat or compressed, mostly without endosperm.

Type species, *Piptadenia latifolia* Benth.

1. *Piptadenia flava* (Spreng.) Benth. Trans. Linn. Soc. 30: 371. 1875.

Acacia flava Spreng.; DC. Prodr. 2: 469. 1825.

Piptadenia leptocarpa Rose, Contr. U. S. Nat. Herb. 1: 325. 1895.

Mimosa buceragenia B. L. Robinson, Proc. Am. Acad. 43: 23. 1907.

A shrub or small tree, 3-5 m. high, the twigs prickly, puberulent when young. Petioles 1-4 cm. long; rachis pubescent or glabrate, sparingly prickly or unarmed; pinnae 8-13 pairs; leaflets 12-25 pairs, linear, glabrous, acute or acutish, 5-10 mm. long, more or less distinctly pinnately veined; spikes axillary and in terminal panicles, 4-8 cm. long; legume broadly linear, 5-9 cm. long, 10-18 mm. wide, its base cuneate.

TYPE LOCALITY: Santa Marta, Colombia.

DISTRIBUTION: Colima to Panama. Colombia, Ecuador, Venezuela and Trinidad.

48. *NIOPA* (Benth. & Hook.) Britton & Rose, Addisonia 12: 37. 1927.

Piptadenia § *Niopa* Benth. & Hook. Gen. Pl. 1: 590. 1865.

Unarmed trees, with gland-bearing petioles, large bipinnate leaves, numerous small and narrow leaflets, and capitate white flowers. Calyx 5-toothed. Petals 5. Stamens 10, the anthers not gland-tipped in the following species. Legume compressed, elongated, more or less constricted between the seeds, but not septate, dehiscent, the valves coriaceous. Seeds large, flat.

Type species, *Mimosa peregrina* L.

1. *Niopa peregrina* (L.) Britton & Rose, Addisonia 12: 37. 1927.

Mimosa peregrina L. Sp. Pl. 520. 1753.

Acacia peregrina Willd. Sp. Pl. 4: 1073. 1806.

Acacia Niopo H.B.K. Nov. Gen. 6: 282. 1824.

Acacia angustiloba DC. Prodr. 2: 470. 1825.

Piptadenia peregrina Benth. Journ. Bot. Hook. 4: 340. 1841.

A tree, 6-20 m. high, the young twigs and leaves puberulent, the mature foliage glabrous or very nearly so, the bark of the trunk suberose-verrucose, nearly black. Pinnae numerous, up to 30 pairs or more, narrow; leaflets numerous, often 25 pairs or more, sessile, linear, 2-4 mm. long, very inconspicuously veined, acutish, approximate; heads usually numerous, globose, about 10 mm. in diameter, on slender puberulent peduncles 1-3 cm. long; flowers white; calyx very small; legume 8-17 cm. long, 10-18 mm. wide; seeds suborbicular, very thin and flat, black, shining, about 10 mm. wide.

TYPE LOCALITY: America.

DISTRIBUTION: Hispaniola; Porto Rico; Dominica; St. Vincent; Grenada. Trinidad; Venezuela; British Guiana; Brazil.

ILLUSTRATION: Addisonia pl. 403.

49. *GOLDMANIA* Rose; M. Micheli, Mém. Soc. Genève 34: 274. 1903.

Unarmed shrubs or trees, with bipinnate leaves, broad leaflets and small perfect flowers in spikes. Calyx small, 5-toothed. Corolla 5-lobed, the lobes valvate. Stamens 10, distinct; anthers gland-tipped. Ovary sessile, densely pubescent; style slender. Legume flattened, broad, somewhat curved, few-seeded, tardily dehiscent, the valves coriaceous. Seeds flattened, gray.

Type species, *Goldmania platycarpa* Rose.

1. *Goldmania platycarpa* Rose; M. Micheli, Mém. Soc. Genève
34: 274. 1903.

Piptadenia platycarpa Macbride, Contr. Gray Herb. 59: 18. 1919.

Goldmania foetida Standley, Contr. U. S. Nat. Herb. 23: 354. excl. syn. 1922.

A shrub or small tree, up to 12 m. high, the twigs at first puberulent but soon glabrate. Stipules minute, caducous; petiole and rachis puberulent, bearing a gland between the pinnae; pinnae 1-3 pairs; leaflets 1 pair or sometimes 2 pairs, suborbicular to cuneate-obovate, 1-3 cm. broad, glabrous or nearly so, pale beneath, pinnately veined; spikes 1-2 cm. long; calyx and corolla puberulent; legume oblong, 6-7 cm. long, 1-1.5 cm. broad, cuneate at base, puberulent; seeds 6-7 mm. broad.

TYPE LOCALITY: Culiacán, Sinaloa.

DISTRIBUTION: Sinaloa to Puebla.

50. *PITYROCARPA* (Benth. & Hook.) Britton & Rose, gen. nov.

Piptadenia § *Pityrocarpa* Benth. & Hook. Gen. Pl. 1: 590; hyponym, 1865; Benth. Trans. Linn. Soc. 30: 371. 1875.

Small trees or shrubs, with a gland-bearing petiole, bipinnate leaves with broad pinnately veined leaflets, the flowers in elongated axillary spikes. Calyx short, 5-toothed. Corolla 5-lobed. Stamens 10, distinct. Anthers gland-tipped. Legume narrow, elongated or compressed, flattened, constricted between the seeds, chartaceous, dry, longitudinally dehiscent. Seeds somewhat flattened.

Type species, *Piptadenia moniliformis* Benth.

1. *Pityrocarpa constricta* (Micheli & Rose) Britton & Rose.

Goldmania constricta Micheli & Rose; M. Micheli, Mém. Soc. Genève 34: 274. 1903.

Piptadenia constricta Macbride, Contr. Gray Herb. 59: 18. 1919.

A tree, 10-12 m. high, unarmed or with a few short spines, the twigs at first densely pubescent. Stipules small, subulate; petiole bearing a large circular gland near the middle; pinnae 3-5 pairs; leaflets 5-9 pairs, very unequal, 6-17 mm. long, rhombic-elliptic to obovate, pubescent on both sides, or glabrate in age; spikes solitary or in pairs, 5-8 cm. long; corolla 2 mm. long, glabrous; legume 10-15 cm. long, 6-8 mm. wide, deeply constricted; seeds oblong, 5 mm. long.

TYPE LOCALITY: Acapulco, Guerrero.

DISTRIBUTION: Sinaloa to El Salvador.

ILLUSTRATION: M. Micheli, loc. cit. pl. 20.

51. *ENTADA* Adans. Fam. Pl. 2: 318. 1763.

High-climbing, unarmed vines, with bipinnate cirriferous leaves, large leaflets, and small, spicate flowers, the spikes extra-axillary, solitary or few together. Calyx 5-toothed. Petals 5, distinct, or coherent at the base. Stamens 10, distinct, slightly exerted, the anthers usually bearing a deciduous gland. Ovary many-ovuled; style filiform, with a small terminal stigma. Legume very large, flattened, transversely jointed within the continuous margins, woody, the joints 1-seeded. Seeds orbicular.

Type species, *Mimosa Entada* L.

1. *Entada gigas* (L.) Fawcett & Rendle, Fl. Jam. 4^o: 124. 1920.

?*Mimosa Entada* L. Sp. Pl. 518. 1753.

Mimosa gigas L. Fl. Jam. 22. 1759.

Mimosa scandens L. Sp. Pl. ed. 2, 1501. 1763.

Acacia scandens Willd. Sp. Pl. 4: 1057. 1806.

Entada gigalobium DC. Prodr. 2: 424. 1825.

Strepsilobus scandens Raf. Sylva Tell. 117. 1838.

Entada scandens Benth. Journ. Bot. Hook. 4: 332. 1841.

Gigalobium scandens Hitchcock, Rep. Mo. Bot. Gard. 4: 82. 1893.

A vine, often 50 m. long, glabrous throughout. Leaves with 1 or 2 pinnae, ending in a slender tendrill, at least when young; leaflets usually 4 or 5 pairs, oblong, 2-8 cm. long, obtuse

or emarginate; spikes solitary or 2 together, elongated; bractlets persistent; calyx 1.5 mm. long; petals oblong, 3-4 mm. long, greenish-yellow; stamens 10, 6-8 mm. long, twisted; legume 1-2 m. long, 8-10 cm. broad, 10-12-seeded; seeds 3-5 cm. in diameter.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica; Cuba; Hispaniola; Martinique; St. Vincent; Honduras to Colombia, Venezuela and Brazil. Old World tropics.

ILLUSTRATIONS: Fawcett & Rendle, loc. cit. f. 38; Tussac, Fl. Ant. 3: pl. 21; Descourt. Fl. Ant. 3: pl. 200.

52. ENTADOPSIS Britton, gen. nov.

Woody vines or shrubs, with bipinnate ecirrhiferous leaves, small leaflets, and small flowers in paniced or racemed spikes. Calyx 5-toothed. Petals 5. Stamens 10, distinct, exserted, the anthers bearing a deciduous gland. Ovary many-ovuled; style slender; stigma terminal, small. Legume linear, flat, coriaceous or chartaceous, transversely jointed, the joints 1-seeded.

Type species, *Mimosa polystachya* L.

Pinnae 2-6 pairs; leaflets 6-8 pairs.
Pinnae 4-6 pairs; leaflets 15-20 pairs.

1. *E. polystachya*.
2. *E. polyphylla*.

1. *Entadopsis polystachya* (L.) Britton.

Mimosa polystachya L. Sp. Pl. 520. 1753.

Mimosa bipinnata Aubl. Pl. Guian. 2: 946. 1775.

Entada polystachya DC. Mém. Leg. 434. 1825.

Entada Plumieri Spreng. Syst. 4: 164. 1827.

A high climbing vine, the branches glabrous. Pinnae 2-6 pairs; leaflets 6-8 pairs, oblong to obovate, 2-4 cm. long, glabrous, or pubescent on the veins beneath, obtuse or emarginate; flowers in dense spikes 8-10 cm. long; spikes numerous, racemose; calyx truncate, glabrous, 0.5 mm. long; petals greenish, about 1 mm. long, glabrous; legume 2-4 dm. long, 5-8 cm. wide, chartaceous, shining, many-seeded; seeds about 1 cm. long.

TYPE LOCALITY: Tropical America.

DISTRIBUTION: Hispaniola; Grenada; Tobago; Trinidad; Sinaloa and Tabasco to Panama, Ecuador, French Guiana and Brazil.

ILLUSTRATIONS: Jacq. Stirp. Am. pl. 183; Plum. Pl. Am. pl. 12; DC. loc. cit. pl. 61, 62.

2. *Entadopsis polyphylla* (Benth.) Britton.

Entada polyphylla Benth. Journ. Bot. Hook. 2: 133. 1840.

A climbing vine, or shrubby, the twigs puberulent. Pinnae 4-6 pairs, short-stalked; leaflets 10-20 pairs, oblong, sessile, 8-20 mm. long, puberulent, obtuse or emarginate; spikes cylindrical, brownish, 4-5 cm. long, about 3 mm. thick, numerous, in terminal racemes; calyx scarcely 0.5 mm. long; petals about twice as long as the calyx; legume coriaceous, 2-3 dm. long, about 6 cm. wide.

TYPE LOCALITY: Rio Quitaro, British Guiana.

DISTRIBUTION: Porto Rico; Guadeloupe; Martinique; St. Vincent. British Guiana; French Guiana; Brazil.

ILLUSTRATION: Benth. in Mart. Fl. Bras. 15: pl. 70.

53. PSEUDOENTADA Britton & Rose, gen. nov.

A high-climbing vine, bearing numerous, short, reflexed prickles. Leaves bipinnate, the petiole and rachis prickly, bearing glands between the pinnae and pairs of leaflets. Inflorescence a large terminal panicle of slender peduncled spikes. Calyx minute, 5-toothed. Petals 5, united near the base. Stamens 10, exserted. Legume flat, the thin valves separating from the margin, transversely jointed, the joints 1-seeded.

Type species, *Inga patens* Hook. & Arn.

1. *Pseudoentada patens* (Hook. & Arn.) Britton & Rose.

Inga patens Hook. & Arn. Bot. Beechey Voy. 419. 1840.

Piptadenia patens Benth. Bot. Voy. Sulph. 89. 1844.

Mimosa gualanensis Robins. & Bart. Proc. Am. Acad. 43: 53. 1907.

Entada patens Standley, Contr. U. S. Nat. Herb. 23: 349. 1922.

An elongated vine, the twigs glabrous or puberulent. Pinnae 2-4 pairs; leaflets 3-6 pairs, orbicular to obovate, 0.5-5 cm. long, obtuse or rounded, glabrous above, sometimes hairy along the midvein beneath; inflorescence 2-3 dm. long, densely pubescent; spikes slender, 4-10 cm. long; flowers yellowish-white, glabrous, about 1.5 mm. long; stamens about twice as long as the corolla; legume 8-13 cm. long, 2-2.5 cm. wide, glabrous.

TYPE LOCALITY: Nicaragua.

DISTRIBUTION: Guerrero to El Salvador.

VI. PARKIEAE. Perfect stamens 5 or 10, the anthers mostly tipped by deciduous glands; staminodia in *Pentaclethra* 5-15. Calyx-lobes imbricated. Corolla-lobes valvate.

One genus in our area.

54. PENTACLETHRA.

54. PENTACLETHRA Benth. Journ. Bot. Hook. 2: 127. 1840.

Trees, with large bipinnate eglandular leaves, the pinnae numerous, the small numerous leaflets linear, subfalcate, the flowers sessile in dense elongated racemose spikes. Calyx 5-lobed. Petals 5, connate below, valvate. Stamens 5; anthers bearing a deciduous gland; staminodes 5, 10 or 15, elongated. Ovary sessile; style filiform; stigma terminal; ovules many. Legume elongated, flat, woody, large, 2-valved, the valves elastically revolute. Seeds compressed, obovate or suborbicular.

Type species, *Pentaclethra filamentosa* Benth.

1. *Pentaclethra macroloba* (Willd.) Kuntze, Rev. Gen. Pl. 201. 1891.

Acacia macroloba Willd. Sp. Pl. 4: 1060. 1806.

Pentaclethra filamentosa Benth. Journ. Bot. Hook. 2: 127. 1840.

A tree, up to 40 m. high, the wood hard, the twigs, leaf-rachis and peduncles ferruginous-puberulent. Leaves 2-4 dm. long; petioles stout, 2-6 cm. long; pinnae 8-20 pairs, nearly sessile; leaflets 20-50 pairs, glabrous or ciliate, 7-12 mm. long, about 1.5 mm. wide, sharply acute; spikes few or several, stout-peduncled; peduncles 1.5-3 cm. long; spikes 1-2 dm. long, the axis stout; calyx about 2 mm. long, its short broad teeth ciliate; corolla 8-12 mm. long, the petals more or less united; stamens exerted, the filaments united at the base and adnate to the base of the corolla; staminodes 5, elongated; legume 2-3 dm. long, 3-4 cm. wide, narrowed below, the woody valves 2-3 mm. thick; seeds obovate, about 4 cm. long.

TYPE LOCALITY: Para, Brazil.

DISTRIBUTION: Guatemala (?); Nicaragua to Panama; St. Vincent; Trinidad. Venezuela; British Guiana; Dutch Guiana.

APPENDIX.

P. 17, in key, *Pithecellobium*, 4th line, for "pod 1 cm. broad or narrower," read 2.5 cm.

P. 18, add, 3a. *Pithecellobium telense* Britton, sp. nov.

A tree, 6-10 m. high, the rather stout twigs pilose. Petioles stout, 2.5 cm. long, or shorter, bearing a large, circular, apical gland; stipular spines 3-4 mm. long; pinnae 1 pair; leaflets 1 pair, chartaceous, obliquely obovate, acutish or obtuse, 3-7 cm. long, dull, glabrous above, somewhat strigose on the veins beneath; flowers appressed-pubescent, in short-peduncled spikes about 2 cm. long or shorter; bractlets triangular-acuminate, 2-3 mm. long; calyx 3 mm. long; corolla about 8 mm. long; stamen-tube greatly elongated, about 2 cm. long; legume

broadly oblong, coriaceous, slightly curved, somewhat compressed, 5-6 cm. long, about 2.5 cm. wide.

Wooded swamp, vicinity of Tela, Atlántida, Honduras, December, 1927-March, 1928, *Standley 53741*.

P. 19, add, 8a. *Pithecellobium Winzerlingii* Britton and Rose, sp. nov.

A tree, 8-10 m. high, the twigs pilose. Stipular spines 6-8 mm. long; pinnae 1 pair; leaflets 1 pair, oblong, 3-6 cm. long, 1.5-2 cm. wide, rounded at apex or sometimes apiculate; peduncles axillary, 2-4 cm. long, pubescent; spikes 3-5 cm. long, loosely flowered; calyx 1 mm. long, pubescent; corolla 5 mm. long, densely appressed-pubescent; stamens about 1.5 cm. long, the sheath slender, long-exserted.

Western part of Orange Walk District, British Honduras, March, 1926, *Winzerling 12*.

P. 24, add, 24a. *Pithecellobium* (?) *maestrense* Urban, Symb. Ant. 9: 433. 1928.

An unarmed tree, the young twigs tomentulose. Stipules wanting; petiole 5-6 cm. long, eglandular; rachis bearing small, short-stipitate glands between the lower pairs of pinnae, and sessile ones between the upper pairs; pinnae 6 or 7 pairs, 6-12 cm. long; leaflets 14-18 pairs, obliquely rectangular, with parallel margins, obtuse at both ends, or the apex rounded and short-apiculate, 12-15 mm. long, 5-6 mm. wide, glabrous, chartaceous, pinnately and reticulate-veined.

TYPE LOCALITY: La Bayamesa, between Rio Oro and Rio Yao, Sierra Maestra, Oriente, Cuba.
DISTRIBUTION: Known to us only from the original description of a barren specimen; probably not a *Pithecellobium*.

P. 26, *Jupunba glauca*, add to Distribution: Cuba (according to Urban).

P. 28, *Jupunba oppositifolia*, add to Distribution: Cuba (according to Urban).

P. 28, add, 15a. *Jupunba pseudo-tamarindus* Britton, sp. nov.

A tree, about 15 m. high, with low buttresses, the trunk about 6 dm. in diameter, the young twigs, petioles and leaf-rachis puberulent. Petiole 2-3 cm. long; glands small, sessile, orbicular, borne just below each pair of pinnae; rachillas puberulent; pinnae 15-20 pairs; leaflets 30-40 pairs, narrowly oblong, glabrous, obtuse or acutish, pinnately few-veined, with the midvein nearly central, 5-7 mm. long, 1.5 mm. wide, the base obliquely obtuse or sub-truncate; fruiting peduncle about 8 cm. long; immature legume coiled, about 6 cm. long, 10-12 mm. wide, glabrous.

Bocas Island, Bocas del Toro, Panama, January-March, 1928, *G. Proctor Cooper 461*.

P. 33, *Ebenopsis flexicaulis*, add to Illustrations: Rose, Expl. Smith. Inst. 1927: f. 87.

P. 39, *Zygia latifolia*, add to Distribution: Cuba.

P. 46, *Albizzia cubana*, add synonym: *Pithecolobium* (?) *Bacona* Urban, Symb. Ant. 9: 434. 1928.

P. 54, add, 9a. *Anneslia yoroensis* Britton, sp. nov.

A glabrous shrub, or a small tree, 2.5-5 m. high. Stipules oblong, obtuse, 3-4 mm. long; petioles 1-3 cm. long; pinnae 1 or 2 pairs; leaflets mostly 1½ pairs, subchartaceous, obliquely ovate or oblong-ovate, acute or acutish, 2.5-4 cm. long, dark green above, paler beneath; peduncles mostly solitary, 1-2 cm. long, bracteolate, bearing 1 or 2 globular heads on filiform stalks 1-2 cm. long; heads several-flowered; flowers glabrous; calyx 1.5 mm. long; corolla 3 mm. long, deeply divided; stamens about 30; filaments white, united near the base, about 7 mm. long.

Wet thicket near Progreso, Yoro, Honduras, January 24, 1928, *Standley 55053*.

P. 60, *Anneslia Magdalenae*, for (Benth.) read (Bert.).

P. 72, add, 96a: *Anneslia lucens* Britton, sp. nov.

A shrub, 1-1.6 m. high, the young twigs and the unfolding leaves densely villous, the twigs rather stout. Stipules ovate, acute, about 5 mm. long, caducous; leaves 10-15 cm. long, the short petiole and the rachis villous; pinnæ 7-9 pairs, very nearly sessile, 3-7 cm. long; rachillas glabrate; leaflets up to 50 pairs, subcoriaceous, shining and glabrous above when mature, appressed-puberulent beneath and faintly pinnately veined, acutish, apiculate, the larger ones linear, about 7 mm. long, the upper ones obliquely oblong, much smaller; "stamens purplish red"; legume densely villous, about 7 mm. long, 14 mm. wide.

Honduras and Guatemala. Type from vicinity of Siguatepeque, Comayagua, Honduras, 1080 to 1400 m. altitude, February 14-27, 1928, *Standley 56397*.

P. 72, add, 98a. *Anneslia Rusbyi* Britton, sp. nov.

Stem strict, 5 dm. high or higher, sulcate, densely tomentulose above. Stipules narrowly lanceolate, acuminate, striate-veined, 5-6 mm. long; leaves 10-17 cm. long; petiole about 2 cm. long, or shorter; pinnæ about 18 pairs, or those of upper leaves fewer, 2.5-3 cm. long; leaflets 25-40 pairs, linear, nearly straight, 4-5 mm. long, about 1 mm. wide, pinnately veined, acute or acutish, glabrous when old, or sparingly ciliate; inflorescence a dense narrow pubescent panicle 1.5 dm. long, its branches very short; flowers very nearly sessile; calyx about 2 mm. long, its triangular-ovate lobes acute; corolla strigose, 7-8 mm. long, its lobes ovate-lanceolate, acute; stamens about 20, the filaments 3-3.5 cm. long, united near the base.

Limon Mountain, Guerrero, July 2, 1910, *H. H. Rusby 22*.

P. 76, *Anneslia enervis*, add synonym: *Calliandra enervis* Urban, *Symb. Ant.* 9: 437. 1928.

P. 76, add, 113a. *Anneslia bullata* (Urban) Britton.

Calliandra bullata Urban, *Symb. Ant.* 9: 437. 1928.

A shrub, the young twigs sparingly pubescent. Stipular spines 1.5-2 mm. long; petioles 1-1.5 mm. long; pinnæ 1 pair; leaflets 1 pair, obovate or obtriangular, 1.5-3.5 mm. long, 1-2.5 mm. wide, coriaceous, glabrous, shining, the apex mostly truncate, the base obtuse, the midvein prominent on both sides, bullate beneath, the lateral veins prominent or obsolete; heads axillary, short-peduncled, 3-5-flowered; flowers sessile; calyx narrowly campanulate, 4-lobed, 1.7 mm. long; corolla 4-lobed, 3 mm. long; stamens about 12 mm. long, united near the base; legume linear-oblong, narrowed below, apiculate, 3 cm. long, 5 mm. wide.

TYPE LOCALITY: Minas de Iberia, Oriente, Cuba.

DISTRIBUTION: Known only from the type locality, and to us from description only.

P. 104, under *Acaciella penicillata*, add synonym:

? *Acacia elegans* Mart. & Gal. *Bull. Acad. Brux.* 10^o: 312. 1843. Not. Schl. 1838.

P. 113, *Senegalia submontana*, type, for *C. Conzatti 25346*, read 2046.

P. 120, *Senegalia tamarindifolia*, add to Distribution: Venezuela.

P. 120, add at end of *Senegalia*:

ACACIA ELEGANS Schl. *Linnaea* 12: 569. 1838.

A small shrub, the twigs and rachis of the leaf pilose, the petiole glandular. Pinnæ 7-9 pairs; leaflets 22-26 pairs, elliptic, 6 mm. long, obtuse, reticulated beneath, glabrous on both sides, appressed-ciliate; flowers capitate, the heads about 12 mm. in diameter, in terminal racemes 1.5 dm. long; calyx and corolla green; stamens yellow, about 6 mm. long.

TYPE LOCALITY: Near Regla, Hidalgo.

DISTRIBUTION: Known only from the type locality, and to us from description only. Perhaps a species of *Senegalia*.

Various specific c
cluded in the Mimosad

Acacia ferox Mart. & Gal.

Acacia lanata Mart. & Gal.

Acacia pubescens Schlecht.

Inga elegans Mart. & Gal.

Inga galibica Duchass. Lin

Inga laevigata Mart. & Gal

Inga nitens Mart. & Gal. B

Inga? sericea Mart. & Gal.

Inga? villosa Mart. & Gal.

Mimosa arcuata Mart. & Gal

Mimosa unijuga Duchass. Li

October 21, 1936

Various specific combinations not accounted for nor included in the Mimosaceae of the N. Am. Fl.

- Acacia ferox Mart. & Gal. Bull. Acad. Roy. Brux. 12: 314. 1843.
Acacia lanata Mart. & Gal. Bull. Acad. Roy. Brux. 12: 315. 1843.
Acacia pubescens Schlecht. Linnaea 12: 565. 1838.
Inga elegans Mart. & Gal. Bull. Acad. Roy. Brux. 12: 321. 1843.
Inga galibica Duchass. Linnaea 23: 747. 1850.
Inga laevigata Mart. & Gal. Bull. Acad. Roy. Brux. 12: 320. 1843.
Inga nitens Mart. & Gal. Bull. Acad. Roy. Brux. 12: 319. 1843.
Inga? sericea Mart. & Gal. Bull. Acad. Roy. Brux. 12: 318. 1843.
Inga? villosa Mart. & Gal. Bull. Acad. Roy. Brux. 12: 319. 1843.
Mimosa arcuata Mart. & Gal. Bull. Acad. Roy. Brux. 12: 310. 1843.
Mimosa unijuga Duchass. Linnaea 23: 744. 1850.

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- 33¹: 1-110. Carduales: Ambrosiaceae, Carduaceae (pars).
- 34¹: 1-80. 34²: 81-180. 34³: 181-288. 34⁴: 289-360. (Carduales:) Car-
duaceae (pars).

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NORTH AMERICAN FLORA

(ROSALES)

✓ **KRAMERIACEAE**

NATHANIEL LORD BRITTON

✓ **CAESALPINIACEAE**

NATHANIEL LORD BRITTON AND JOSEPH NELSON ROSE



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NORTH AMERICAN FLORA is designed to present in one work descriptions of all plants growing, independent of cultivation, in North America, here taken to include Greenland, Central America, the Republic of Panama, and the West Indies, except Trinidad, Tobago, and Curaçao and other islands off the north coast of Venezuela, whose flora is essentially South American.

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The preparation of the work has been referred by the Scientific Directors of the Garden to a committee consisting of Dr. N. L. Britton, Dr. M. A. Howe, and Dr. J. H. Barnhart.

Dr. Frederick V. Coville, of the United States Department of Agriculture; and Professor William Trelease, of the University of Illinois, have consented to act as an advisory committee.

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UNIVERSITY
OF CALIFORNIA
HERBARIUM

Family 22. **KRAMERIACEAE**

By NATHANIEL LORD BRITTON

Shrubs or perennial herbs, mostly pubescent or silky, with alternate, simple and entire, or rarely 3-foliolate leaves, and rather large, irregular flowers, axillary, or in terminal racemes. Peduncles usually bearing 2 opposite, foliaceous bracts. Sepals 4 or 5, unequal. Petals 5, the 3 upper ones long-clawed, distinct or partly united, the 2 others usually much smaller broad, thick, sessile. Stamens 3 or 4 (4 in all North American species), free, or borne on the united claws of the upper petals; anthers 2-celled, the sacs dehiscent by a pore. Ovary 1-celled; ovules 2, collateral, pendulous, anatropous; style cylindric, acute. Fruit globose, indehiscent, spiny, 1-seeded. Seeds with thick cotyledons and no endosperm. The family consists of the following genus only.

1. **KRAMERIA** Loeff.; L. Sp. Pl. ed. 2, 177. 1762.

Dimenops Raf. Atl. Journ. 144. 1832.
Ixina Raf. Atl. Journ. 144, hyponym. 1832.
Stemeiena Raf. Atl. Journ. 144, hyponym. 1832.

Leaves simple.

Leaves definitely petioled; sepals 4; shrubs.

Upper petals connate at the base, their limbs acute or acuminate.

Limbs of the upper petals ovate, acute.

Limbs of the upper petals oblong, acuminate.

Upper petals united to the middle, their limbs dilated, obtuse.

Leaves sessile; sepals 5 or sometimes 4.

1. Upper petals distinct, separate to the base; spines of the fruit barbed at the apex only; shrubs.

Twigs densely short-pilose canescent when young, mostly spiniform when old; leaves sericeous.

Twigs not canescent, slender; leaves pilose or glabrate.

Upper petals nearly as long as the stamens.

Leaves distant, the upper ovate; twigs short-pilose.

Leaves numerous, linear to oblong; twigs long-pilose.

Upper petals only about one-half as long as the stamens; branches strigillose; leaves distant, glabrate.

2. Claws of the upper petals more or less united.

Stem short, rarely elongated, the prostrate branches herbaceous or subherbaceous.

Spines of the fruit not barbed; branches elongated.

Leaves strigose or canescent on both sides.

Leaves all linear, or the lower oblong.

Lower leaves spatulate-oblancheolate.

Leaves glabrous above.

Spines of the fruit barbed above; branches mostly short.

Shrubs, erect, ascending, or prostrate.

Fruit completely glabrous, the spines unbarbed.

Fruit strigose, woolly or tomentose.

Upper petals united only to the middle or below.

Peduncles and outer sepals stipitate-glandular.

Plants eglandular.

Spines of the globose fruit barbed; leaves mostly 6-12 mm. long.

Fruit densely strigose.

Fruit sparingly loosely strigose.

Spines of the globose-ovoid fruit unbarbed; leaves only 2-6 mm. long.

Upper petals united to much above the middle.

Erect or ascending shrub.

Prostrate shrub, with long, very slender branches.

3. Flowers unknown; erect, strigose shrub, the fruit densely tomentose.

Leaves, or most of them, 3-foliolate, petioled.

- 1. *K. Ixina*.
- 2. *K. acuminata*.
- 3. *K. cuspidata*.

4. *K. Grayi*.

- 5. *K. paucifolia*.
- 6. *K. bicolor*.

7. *K. sonorae*.

- 8. *K. lanceolata*.
- 9. *K. spatulata*.
- 10. *K. prostrata*.
- 11. *K. pauciflora*.

12. *K. erecta*.

13. *K. glandulosa*.

- 14. *K. imparata*.
- 15. *K. parvifolia*.

16. *K. ramosissima*.

- 17. *K. revoluta*.
- 18. *K. dichrosepala*.
- 19. *K. interior*.
- 20. *K. cytissoides*.

NOV 15 1930

1. *Krameria Ixina* L. Sp. Pl. ed. 2, 177. 1762.

Krameria Ishamii Millsp. Field Mus. Publ. Bot. 2: 48. 1900.

A shrub, about 1 m. high or less, irregularly branched, the stiff slender branches whitish-tomentose. Leaves narrowly oblong or oblong-lanceolate, 1-2.5 cm. long, tomentose, or tomentulose, the apex spinulose-acuminate, the slender petioles 2-6 mm. long; peduncles very short, mostly not longer than the leaves; sepals 4, ovate, acuminate, silky, about 6 mm. long; lower petals elliptic-obovate, subtruncate, about 3 mm. long; upper petals connate at the base, about 4 mm. long, the claws narrow, the limbs short, ovate, acute; body of the fruit pubescent, 5-6 mm. in diameter, the slender spines 4-6 mm. long, retrorsely barbed above.

TYPE LOCALITY: Cumana (Venezuela).

DISTRIBUTION: Hispaniola; Porto Rico; Mona; St. Thomas; St. Eustatius; Antigua, Grenada, Bonaire; Curaçao; Colombia; Venezuela.

ILLUSTRATIONS: Millsp. loc. cit. *pl.* 59; Tussac, Fl. Ant. 1: *pl.* 15; Hayne, Arnz. 8: *pl.* 13.

2. *Krameria acuminata* Britton, sp. nov.

A much-branched shrub, the slender branches tomentose. Leaves linear to oblong, 1.5-3 cm. long, spinulose-acute, or obtuse, tomentulose, petioled, the upper much smaller; petioles 2-6 mm. long; peduncles very short; sepals 4, silky, elliptic, obtuse, 6-7 mm. long; lower petals obliquely obovate-subcuneate or oblong, 3-4 mm. long; upper petals connate at the base, 5-6 mm. long, the claws narrow, the limbs oblong, acuminate; fruit globose, the tomentose body about 6 mm. in diameter, the acicular spines barbed above.

Tepic and Nayarit; Sinaloa? Type from the vicinity of Acaponeta, Tepic, April 10, 1910, *Rose, Standley & Russell 14355*.

3. *Krameria cuspidata* Presl, Rel. Haenk. 2: 103. 1835.

An erect, much-branched shrub, the branches densely tomentose. Leaves oblong or linear-oblong, petioled, tomentulose, spinulose-cuspidate, the lower 1.5-2 cm. long, 3-7 mm. wide, 3-nerved, the upper much smaller; petioles 4-6 mm. long; peduncles short, mostly not longer than the subtending leaves, densely pilose-tomentose, bracted near the middle; sepals 4, oblong, obtuse, 6-7 mm. long, densely strigose; lower petals suborbicular to elliptic, 2.5 mm. long; upper petals united to near the middle, the obtuse or rounded limbs dilated; fruit globose, the body densely villous, 5-6 mm. in diameter, the acicular spines 3-4 mm. long, short-barbed above.

TYPE LOCALITY: Acapulco, Guerrero.

DISTRIBUTION: Guerrero.

4. *Krameria Grayi* Rose & Painter, Contr. U. S. Nat. Herb. 10: 108. 1906.

Krameria canescens A. Gray, Pl. Wright. 1: 42. 1852. Not Willd. 1825.

A much-branched shrub, 3-6 dm. high, the twigs and peduncles densely canescent. Leaves linear to oblong, sessile, sericeous, acute or obtuse, 6-10 mm. long; peduncles mostly longer than the leaves, about 2 cm. long or shorter, bearing 2 leaf-like bracts at or above the middle; sepals 5, lanceolate, acute or acutish, purple, 9-15 mm. long, canescent; lower petals suborbicular, often tubercled, about 3 mm. in diameter; upper petals spatulate, slender-clawed, distinct, about 6 mm. long; stamens distinct; fruit globose-ovoid, the body densely woolly, 7-8 mm. long, the acicular spines 3-4 mm. long, barbed at the apex.

TYPE LOCALITY: Páridies near Pecos, Texas.

DISTRIBUTION: Texas to Arizona, Nevada, California, Chihuahua, and Lower California.

5. *Krameria paucifolia* Rose, Contr. U. S. Nat. Herb. 10: 108. 1906.

Krameria canescens paucifolia Rose, loc. cit. 1: 66. 1890.

Shrubby, with slender, spreading, pilose or glabrate branches, 3-6 dm. high. Leaves linear to lanceolate or ovate, distant, pilose or strigose, 4-8 mm. long, mostly acute; peduncles

longer than the leaves, 8–16 mm. long, bracted at about the middle; sepals 5, lanceolate, acuminate, pubescent, 8–10 mm. long; lower petals flabellate-orbicular, tubercled, 2.5 mm. long; upper petals distinct, spatulate, acute, 4 mm. long; fruit subglobose, the body about 10 mm. in diameter, densely velutinous, the spines acicular, about 3.5 mm. long, barbed at the top.

TYPE LOCALITY: La Paz, Lower California.

DISTRIBUTION: Southern Lower California; Sonora?

6. *Krameria bicolor* S. Wats. Proc. Am. Acad. 21: 417. 1886.

A shrub, 1–1.7 m. high, the slender twigs densely long-pilose. Leaves linear to oblong, sessile, 8–16 mm. long, acute, pilose above, long-strigose beneath; peduncles axillary, pilose, 1.5 cm. long or shorter, the bracts large, similar to the leaves; sepals 5, oblong, acuminate, unequal, 6–10 mm. long; lower petals tuberculate, suborbicular, about 3 mm. in diameter; upper petals distinct, about as long as the lower, or longer, the limb of the middle one slightly dilated, that of the outer ones expanded; fruit globose, the body about 8 mm. in diameter, densely woolly, the prickles stout, barbed at the apex only.

TYPE LOCALITY: Hacienda San José, Chihuahua.

DISTRIBUTION: Chihuahua.

7. *Krameria sonorae* Britton, sp. nov.

A shrub, the very slender young branches 2–3 dm. long, finely strigillose, or rather densely strigose when young. Leaves scattered, distant, linear, 10 mm. long, or shorter, strigose when very young, glabrate when old, acute; peduncles about 10 mm. long, 2-bracted below the middle; sepals lanceolate, acute, strigose, 7–9 mm. long; lower petals suborbicular, tuberculate, 2.5 mm. broad; upper petals distinct, 3.5 mm. long, only about one-half as long as the distinct stamens; fruit globular, the body densely tomentose, about 9 mm. in diameter, the acicular spines about 4 mm. long, barbed at the apex only.

Guaymas, Sonora, 1887, *E. Palmer 151*.

8. *Krameria lanceolata* Torrey, Ann. Lyc. N. Y. 2: 168. 1827.

Krameria secundiflora Berg, Bot. Zeit. 14: 752. 1856. Not DC. 1824.

Dimenops lanceolata Raf. Atl. Journ. 144. 1832.

Krameria Beyrichii Sporleder; Berg, loc. cit., as synonym. 1856.

Krameria secundiflora angustifolia Chodat, Arch. Sci. Phys. III. 24: 498, hyponym. 1890.

Krameria secundiflora intermedia Chodat, loc. cit., hyponym. 1890.

Krameria secundiflora lanceolata Chodat, loc. cit., hyponym. 1890.

Perennial by a woody root; branches herbaceous, radiately prostrate, or slightly ascending, strigose or canescent, 2–4 dm. long. Leaves linear, or the larger ones oblong, strigose or canescent, acute, or the lower obtuse, sessile, 8–20 mm. long; peduncles axillary, slender, about as long as the leaves, or shorter, the bracts similar to the leaves, borne near the base of the flower or below; sepals 5, purple, strigose, obtuse or acute, 8–13 mm. long; lower petals reniform-orbicular, about 3 mm. broad; upper petals united to about the middle or above it, their limbs reniform-orbicular, usually shorter than the claw; fruit globose, the body woolly, 6–7 mm. in diameter, the subulate, unbarbed spines 2–4 mm. long, sometimes roughened above.

TYPE LOCALITY: On the Canadian [Oklohoma].

DISTRIBUTION: Kansas and Oklahoma to Arkansas, Texas and Arizona.

ILLUSTRATIONS: A. Gray, Gen. pl. 185, 186; Schnitz. Ic. pl. 233, f. 4-7; 16-19; 11-25; Britton & Brown, Ill. Fl. ed. 1. f. 2044; ed. 2. f. 2448.

9. *Krameria spathulata* Small, sp. nov.

Stem short, woody, the slender branches prostrate, herbaceous, pilose, 2–4 dm. long. Leaves sessile, strigose, 1–2 cm. long, the lower ones spatulate-oblancoelate, mostly obtuse, the others narrowly linear, sharply acute; peduncles filiform, mostly longer than the leaves, pilose, foliaceous-bracted above; sepals 5, oblong, acute, strigose, purple, 10–12 mm. long; lower petals subrhombic, truncate, 2.5 mm. long; upper petals 7–8 mm. long, united to above the middle,

their limbs dilated; fruit globose, the body woolly, the subulate spines about 3 mm. long, woolly, roughened but scarcely barbed.

Georgia and Florida. Type from pine-barrens near Eustis, Lake County, Florida, May 12, 1900, *A. H. Curtiss 6612*.

10. *Krameria prostrata* Brand. *Zoe* 5: 200. 1905.

Krameria diffusa Rose & Painter; Rose, *Contr. U. S. Nat. Herb.* 10: 107. 1906.

Branches prostrate, herbaceous, hirsute, slender, 2-4 dm. long. Leaves linear, sessile, distant, 1-2 cm. long, 2-3 mm. wide, sharp-tipped, strigose beneath, glabrous above; inflorescence secund, several-flowered; peduncles 1-2 cm. long, 2-bracted above; sepals 5, oblong, strigose, purple, about 10 mm. long; lower petals flabelliform, smooth, 3 mm. broad; upper petals united to much above the middle, their limbs expanded; fruit globose, the white-sericeous body 6-8 mm. in diameter, the subulate spines about 3 mm. long, or shorter, barbulate above.

TYPE LOCALITY: Cofradia, Sinaloa.

DISTRIBUTION: Sinaloa; Morelos; Guerrero.

11. *Krameria pauciflora* DC. *Prodr.* 1: 341. 1824.

Krameria Ixina Benth. *Pl. Hartw.* 13. 1839. *Not L.* 1762.

Krameria linearis glabrescens Chodat, *Arch. Sci. Phys.* III. 24: 498, hyponym. 1890.

Stem mostly short, woody; branches herbaceous or subherbaceous, prostrate or ascending, strigose or pilose, about 1.5 dm. long, or shorter. Leaves linear to oblong, 6-13 mm. long, sessile, acute or obtuse, strigose on both sides; peduncles about as long as the leaves, or a little longer, 2-bracted above; sepals 5, oblong, obtuse or acutish, 5-8 mm. long; lower petals sub-orbicular, or broader than long, about 2 mm. wide; upper petals about 5 mm. long, their claws united, their limbs expanded; stamens borne on the united claws of the upper petals; fruit globose, densely woolly, about 7 mm. in diameter, the subulate spines short-barbed above.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Chihuahua, Coahuila; San Luis Potosi; Durango; Hidalgo; Oaxaca; Queretaro.

ILLUSTRATION: Moc. & Sessé, *Calq. Dess. Fl. Mex. pl. 44*; Berg, *Char. 559, f. A-Q*.

12. *Krameria erecta* Willd.; R. & S. *Syst. Veg. Mant.* 3: 303. 1827.

Krameria rosmarinifolia Pavon; Chodat, *Arch. Sci. Phys.* III. 24: 499. 1890.

Krameria Palmeri Rose, *Contr. U. S. Nat. Herb.* 1: 304. 1895.

A much-branched, compact shrub, 6-9 dm. high, the very slender twigs and the young leaves strigose. Leaves linear, sessile, 6-15 mm. long, obtuse or acutish, strigose or nearly or quite glabrous when mature; peduncles about as long as the leaves or longer, the bracts small; sepals oblong, obtuse, about 6 mm. long; lower petals broadly obovate, 2 mm. long; upper petals 4-5 mm. long, united below the middle, the limb of the middle one expanded, those of the lateral ones dilated; stamens borne on the claw of the upper petals; fruit globose, entirely glabrous, the body about 8 mm. in diameter, slightly compressed, the subulate spines about 3 mm. long, naked.

TYPE LOCALITY: Not cited.

DISTRIBUTION: Sonora and Sinaloa.

ILLUSTRATION: Rose, *loc. cit. pl. 27*.

13. *Krameria glandulosa* Rose & Painter, *Contr. U. S. Nat. Herb.* 10: 108. 1906.

Krameria parvifolia A. Gray, *Pl. Wright.* 1: 41. 1852. *Not Benth.* 1844.

Krameria parvifolia glandulosa T. Macbride, *Contr. Gray Herb.* II. 56: 52. 1918.

A much-branched shrub, 3-7 dm. high, the slender twigs strigose-canescens. Leaves linear, sessile, obtuse, or acute, appressed-canescens or strigose, 4-12 mm. long; peduncles slender, 6-15 mm. long, appressed-canescens or strigose, stipitate-glandular, the bracts foliaceous, also often glandular; sepals 5, purple, strigose, 6-7 mm. long, obtuse or acute, the outer ones more or less stipitate-glandular; lower petals cuneate-obovate, about 3 mm. long; upper petals 4-5 mm. long, united for nearly one-half their length, the blade of the middle one oblong, acute, those of the lateral ones obliquely ovate; stamens borne on the claw of the upper petals;

fruit globular, the body 6-7 mm. in diameter, rather densely strigose, the acicular spines mostly barbless.

TYPE LOCALITY: El Paso, Texas.

DISTRIBUTION: Texas to New Mexico, Utah, Nevada, Arizona, Sonora and California.

14. *Krameria imparata* (T. Macbride) Britton.

Krameria parvifolia imparata T. Macbride, Contr. Gray Herb. II. 56: 52. 1918.

A low, eglandular, usually much-branched shrub, the twigs appressed-sericeous. Leaves linear, sessile, acute or obtuse, appressed-sericeous, 2-12 mm. long; peduncles slender, sericeous, about 15 mm. long, or shorter, the bracts foliaceous; sepals 5, sericeous, oblong or oblong-lanceolate, obtuse or acute, 6-11 mm. long; lower petals elliptic to cuneate-obovate, subtruncate, 2.5-3 mm. long; upper petals about 4 mm. long, united below into a short claw, the limb of the middle one oblong, those of the lateral ones obliquely ovate, the stamens borne on the claw; fruit densely strigose, the acicular spines strongly barbed nearly throughout.

TYPE LOCALITY: Mountain Springs, California.

DISTRIBUTION: Utah (according to Macbride); Nevada to Arizona, California and Sonora.

15. *Krameria parvifolia* Benth. Bot. Voy. Sulphur 6. 1844.

A much-branched eglandular shrub, the short twigs strigose. Leaves linear, sessile, about 10 mm. long, or shorter, strigose, obtuse or acute; peduncles slender, mostly longer than the leaves, the bracts linear, short; sepals narrowly oblong, 8-10 mm. long, obtusish, sparingly strigose; lower petals truncate, nearly rectangular, smooth, 3 mm. long; upper petals 4-5 mm. long, connate near the base, the claw very short, the limb of the middle one oblong, those of the lateral ones expanded; stamens borne on the claw of the upper petals; fruit subglobose, somewhat compressed, sometimes blunt-pointed, the body about 8 mm. in diameter, rather sparingly strigose, the acicular spines about 3 mm. long, sparingly barbed.

TYPE LOCALITY: Bay of Magdalena, Lower California.

DISTRIBUTION: Southern Lower California.

ILLUSTRATION: Benth. loc. cit. *pl. 1*.

16. *Krameria ramosissima* (A. Gray) S. Wats. Proc. Am. Acad. 17: 326. 1882.

Krameria parvifolia ramosissima A. Gray, Pl. Wright. 1: 42. 1852.

A divaricately branched, eglandular shrub, 3-10 dm. high, the twigs slender, canescent. Leaves linear to linear-lanceolate, 2-6 mm. long, often fascicled in the axils, obtuse or acute, rather densely strigose; peduncles longer than the leaves, about 8 mm. long, or shorter, 2-bracted near the middle; sepals 5, narrow, obtuse, silky, 5-8 mm. long; lower petals broadly cuneate-obovate, subtruncate, 2.5-3 mm. long; upper petals about 5 mm. long, united to about the middle, the limb of the middle one somewhat expanded, that of the lateral ones broad; stamens adnate to the claw of the upper petals; fruit globose-ovoid, the body densely strigose, 6-7 mm. long, the spines subulate, about 3 mm. long, not barbed.

TYPE LOCALITY: Prairies of Live Oak Creek, Texas.

DISTRIBUTION: Southern Texas, Coahuila; Nuevo León.

17. *Krameria revoluta* Berg, Bot. Zeit. Regensb. 14: 751. 1856.

Krameria collina Brand. Univ. Calif. Publ. Bot. 6: 182. 1915.

An ascending or erect shrub, 2-3 dm. high, the slender branches densely hirsute-sericeous or villous. Leaves linear to oblong-lanceolate, acute, densely hirsute-strigose on both sides, sessile, 8-12 mm. long; peduncles axillary, shorter than the leaves, or longer, hirsute, the 2 bracts similar to the leaves; sepals 4 or 5, linear to oblong-lanceolate, 7-9 mm. long; lower petals reniform-orbicular, 2.5 mm. broad; upper petals united to much above the middle, their blades dilated; stamens borne on the claw of the upper petals; fruit globose, the body densely

white-sericeous, 5–6 mm. in diameter, densely armed with brown, slender spines 3–4 mm. long, sparingly barbed above.

TYPE LOCALITY: Between Tehuantepec and the Pacific Ocean, Oaxaca.
DISTRIBUTION: Oaxaca; Chiapas; Veracruz.

18. *Krameria dichrosepala* Donn. Smith, Bot. Gaz. 49: 453. 1910.

A prostrate shrub, the leaves, and the very slender, elongated twigs densely sericeous-strigose, 3–5 dm. long. Leaves linear-lanceolate, sessile, sharply acute, 7–9 mm. long; peduncles axillary, about 8 mm. long, 2-bracted above the middle; sepals 5 (or sometimes 4), oblong, acute, slightly unequal, the outer one gibbous, red, the intermediate ones yellow; lower petals orbicular, 2 mm. broad; upper petals 6 mm. long, yellow, their claws united to above the middle, their limbs subreniform; ovary silky-villous.

TYPE LOCALITY: Gualán, Zacapa, Guatemala.
DISTRIBUTION: Known only from the type locality.

19. *Krameria interior* Rose & Painter; Rose, Contr. U. S. Nat. Herb. 10: 108. 1906.

A much-branched shrub, about 3 dm. high, or higher, the slender, nearly straight twigs densely strigose. Leaves linear, sharply acute, sessile, 1–2 cm. long, strigose on both sides; peduncles hirsute, about as long as the leaves, or shorter, the bracts similar to the leaves; fruit globose, the body 7–8 mm. in diameter, densely tomentose, the subulate-acicular spines about 6 mm. long, barbed above the middle.

TYPE LOCALITY: San Juan Capistravo, Zacatecas.
DISTRIBUTION: Known only from the type locality.

20. *Krameria cytissoides* Cav. Ic. 4: 61. 1797.

Krameria cinerea Schauer, Linnaea 20: 725. 1847.
Krameria Ehrenbergii Gandoger, Bull. Soc. Bot. France 60: 455. 1913.

A shrub, the twigs and leaves densely silky-tomentose. Leaves, or most of them, 3-foliolate; petioles about as long as the leaflets; leaflets oblong to oblong-obovate, acute, or obtuse, apiculate, rarely retuse, 6–14 mm. long; peduncles very short; flowers few, 2–2.5 cm. broad; sepals 5, lanceolate, 10–14 mm. long; petals 5, the 3 upper ones coherent at base, about 6 mm. long, their limbs spatulate, the 2 lower ones suborbicular, about 2.5 mm. long; stamens 4, about 8 mm. long, the 2 inner ones partly connate; body of the fruit densely white-strigose, about 10 mm. in diameter, the spines about 4 mm. long, barbed at the top.

TYPE LOCALITY: Zimapán, Hidalgo.
DISTRIBUTION: Coahuila to Queretaro, Hidalgo and Oaxaca.
ILLUSTRATION: Cav. loc. cit. pl. 390.

DOUBTFUL SPECIES

Krameria secundiflora DC. Prodr. 1: 341. 1824.

"Leaves linear, acute, villous; peduncles longer than the leaves, 2-bracteolate, forming a unilateral raceme."

TYPE LOCALITY: Mexico.
DISTRIBUTION: Definitely known only from the original description, which was based upon a drawing of Moçino and Sessé.

ILLUSTRATION: Moc. & Sessé, Calq. Dess. Fl. Mex. pl. 45.
This illustrates a plant with a habit somewhat similar to that of *Krameria lanceolata* Torr., a species which has been referred to it by authors, and the flower resembles that of a *Krameria*, but the apparently oblique, short-prickly fruit delineated differs widely from that of any *Krameria*; perhaps these objects represent galls.

Krameria pentapetala R. & P. Fl. Per. 1: 62. 1798.

Krameria linearis Poir. in Lam. Encyc. Suppl. 3: 226. 1813.

TYPE LOCALITY: Province of Panatahuara, Peru.
DISTRIBUTION: Peru. Recorded by Berg from New Spain (Ruiz), and cited by Chodat as the older name for *K. pauciflora* DC., but I have not been able to identify it with any Mexican specimen. Berg states that it is distinct from *K. pauciflora*.
ILLUSTRATION: R. & P. loc. cit. pl. 94, f. a.

Family 23. CAESALPINIACEAE

BY NATHANIEL LORD BRITTON AND JOSEPH NELSON ROSE

Herbs, shrubs or trees, with compound or simple, mostly stipulate leaves. Flowers clustered or rarely solitary, irregular or nearly regular, perfect or rarely monoecious, dioecious or polygamous, large or small. Calyx mostly 5-toothed, 5-lobed or 5-parted, or irregularly rupturing. Petals 5, imbricated, the upper one enclosed by the lateral ones in the bud, rarely fewer, or only one, or wanting. Stamens mostly 5-10, numerous in a few genera; filaments distinct or somewhat united; anthers dehiscent longitudinally or by terminal pores or slits. Ovary 1-celled, 1-many-ovuled. Fruit a legume, variously dehiscent, or indehiscent. Seeds with or without endosperm.

Calyx gamopetalous or polypetalous.

Leaves entire, or 2-lobed.

Leaves pinnate, bipinnate or 2-foliolate.

Leaves pinnate or 2-foliolate [See *Gleditsia* and *Asacara*, *Haematoxylon*, and species of *Poincianella* in Tribe 8, Caesalpinieae].

Anthers dorsifixed, versatile, longitudinally dehiscent.

Calyx gamosepalous.

Stamens 5; staminodes 5; legume broad, woody, dehiscent.

Stamens 10; legume narrow, membranous, indehiscent.

Calyx polysepalous.

Ovary 1-few-ovuled, free from the calyx or receptacle.

Stamens diadelphous; legume winged.

Stamens distinct; legume wingless.

Stipe of the 3-many-ovuled ovary adnate to the calyx or receptacle.

Anthers basifixed, opening by terminal pores or slits.

Leaves bipinnate, rarely simply pinnate.

Calyx entire, closed in bud, rupturing in anthesis.

I. BAUHINIEAE.

II. MOREAE.

III. PÖEPPIGIEAE.

IV. PHYLLocarPEAE.

V. CYNOMETREAE.

VI. AMBERSTIEAE.

VII. CASSIEAE.

VIII. CAESALPINIEAE.

IX. TOUNATEAE.

I. BAUHINIEAE. Leaves entire or 2-lobed (rarely 2-foliolate); shrubs or trees. Calyx gamosepalous, its teeth or lobes 5, imbricated. Stamens 1-10; anthers versatile.

Legume winged on one suture; leaves entire; corolla pseudopapilionaceous.

Legume wingless; leaves mostly 2-lobed.

All the 10 stamens antheriferous, or only 5.

Calyx tubular, elongated or short.

Calyx oblong to campanulate.

High-climbing, usually cirrhiferous vines; calyx mostly 5-toothed.

Shrubs or small trees; calyx-limb spathaceous.

Only 1 stamen antheriferous, rarely 3.

Petals narrow; flowers small.

Petals broad; flowers large.

1. CERCIS.

2. BAUHINIA.

3. SCHNELLA.

4. ALVESIA.

5. CASPAREA.

6. CASPAREOPSIS.

1. CERCIS L. Sp. Pl. 374. 1753.

Siliquastrum [Tourn.] Adans. Fam. Pl. 2: 217. 1763.

Unarmed trees or shrubs. Leaves simple, petioled, orbicular to reniform; stipules ovate, thin, caducous. Flowers pink, borne in fascicles and appearing before the leaves. Calyx small, somewhat oblique, campanulate, 5-toothed. Corolla somewhat irregular. Petals 5. Stamens 10, distinct, declined, anthers short, versatile. Legume flat, thin, oblong, several-seeded, indehiscent or tardily dehiscent, the upper suture narrowly ringed.

Type species, *Cercis Siliquastrum* L.

Leaves, or most of them, pointed.

Leaves glabrous or nearly so beneath.

Leaves pilose-pubescent, at least on the veins beneath.

Leaves rounded, obtuse or retuse.

Legume usually broadly oblong, 12-20 mm. wide, somewhat glaucous.

Legume linear-oblong, 10-15 mm. wide.

1. *C. canadensis*.

2. *C. mexicana*.

3. *C. occidentalis*.

4. *C. reniformis*.

1. *Cercis canadensis* L. Sp. Pl. 374. 1753.

Cercis canadensis pubescens Pursh, Fl. Am. Sept. 308. 1814.

Cercis dilatata Greene, Repert. Sp. Nov. 11: 110. 1912.

Cercis ellipsoidea Greene, Repert. Sp. Nov. 11: 110. 1912.

Cercis georgiana Greene, Repert. Sp. Nov. 11: 110. 1912.

Usually a small tree, but sometimes 16 m. high, the twigs glabrous. Leaves cordate or truncate at base, 5–15 cm. broad, short-pointed or obtuse, usually glabrous but sometimes sparingly pubescent beneath; flowers several, in sessile umbels or fascicles; pedicels 8–25 mm. long, slender; corolla pink-purple, about 8 mm. long; legume glabrous, 5–7.5 cm. long, 12 mm. wide.

TYPE LOCALITY: Virginia.

DISTRIBUTION: Ontario to Florida, Michigan, Nebraska, Oklahoma and Texas.

ILLUSTRATIONS: Guimpel, Otto & Hayne, Abb. Holz. pl. 92; Britton & Brown, Ill. Fl. f. 2033; ed. 2, f. 2436; Britton & Shafer, N. Am. Trees, f. 494; Sargent, Man. f. 457; ed. 2, f. 554; Silva N. Am. pl. 133, 134; Bailey, Cycl. Am. Hort. f. 411; Stand. Cycl. Hort. f. 882; Am. Florist 13: 1370.

2. *Cercis mexicana* Rose, sp. nov.

Old branches dark brown, somewhat shining; young branches covered with brown woolly pubescence but early glabrate. Leaves broadly ovate, cordate with a shallow sinus, sharply acute, thickish, pale and pubescent beneath, glabrous and shining above, the petioles at first pubescent; fruiting pedicels 1.5 cm. long; legume narrowly oblong, 4–7 cm. long, cuneate at base.

San Luis Potosí. Type from Minas de San Rafael, June 1911, *C. A. Purpus* 5187.

3. *Cercis occidentalis* Torrey; A. Gray, Bost. Journ. Nat. Hist. 6: 177. 1850.

Cercis californica Torrey; Benth. Pl. Hartw. 361. 1857.

Siliquastrum occidentalis Greene, Man. Bay Region 84. 1894.

Cercis nephrophylla Greene, Repert. Sp. Nov. 11: 111. 1912.

Cercis orbiculata Greene, Repert. Sp. Nov. 11: 111. 1912.

Cercis latissima Greene, Repert. Sp. Nov. 11: 111. 1912.

A shrub, or small tree, glabrous throughout. Leaves orbicular or sometimes broader than long, 5–9 cm. wide, rounded or retuse at apex, cordate at base, the sinus open or sometimes closed; flowers in small sessile umbels or fascicles; pedicels 10–15 mm. long; corolla 8 mm. long, purple; legume broadly oblong, 6–9 cm. long, 12–20 mm. wide.

TYPE LOCALITY: Sacramento, California.

DISTRIBUTION: California to Utah and Arizona.

ILLUSTRATION: Torrey, U. S. Expl. Exp. 17: pl. 3; Jepson, Man. Fl. Pl. Calif. f. 509; Britton & Shafer, N. Am. Trees, f. 496.

4. *Cercis reniformis* Engelm.; S. Wats. Proc. Am. Acad. 17: 348. 1882.

Cercis occidentalis var., A. Gray, Bost. Journ. Nat. Hist. 6: 177. 1850.

Cercis texensis Sargent, Garden & Forest 4: 448. 1891.

Cercis occidentalis texensis S. Wats. Bibl. Index 209. 1878.

Cercis nitida Greene, Repert. Sp. Nov. 11: 110. 1912.

A slender tree, 6–13 m. high. Leaves reniform, 5–7.5 cm. broad, rounded or retuse, green and shining above, glabrous on both sides, or pubescent beneath; flowers in fascicles or short racemes; pedicels 12–15 mm. long; corolla about 12 mm. long; legume 5–10 cm. long, 10–15 mm. wide.

TYPE LOCALITY: Texas.

DISTRIBUTION: Texas to New Mexico and Nuevo León.

ILLUSTRATIONS: Sargent, Man. f. 458; ed. 2, f. 555; I. M. Lewis, Trees Texas, f. 36; Britton & Shafer, N. Am. Trees f. 495.

2. **BAUHINIA** [Plum.] L. Sp. Pl. 374. 1753.*Pauletia* Cav. Ic. 5: 5. 1799.

Shrubs or trees, with broad, more or less deeply 2-lobed, rarely 2-foliolate leaves, caducous stipules, and mostly large flowers in racemes or corymbs, or rarely solitary. Peduncles often 2-flowered. Calyx-tube short or elongated, the limb mostly spathaceous, often completely closed in the bud. Petals 5, somewhat unequal. Perfect stamens 5 or 10; filaments distinct; anthers versatile. Ovary mostly stipitate; style elongated, the stigma terminal. Legume linear, compressed, mostly elastically dehiscent, 2-valved, the valves thin to coriaceous. Seeds ovate to orbicular, compressed.

Type species, *Bauhinia aculeata* L.

Twigs armed with prickles.

Leaves 2-lobed.

Lobes of leaves rounded, or acute.

Calyx 5-12 cm. long; petals linear.

Calyx 3-3.5 cm. long; petals spatulate-obovate.

Lobes of leaves acuminate.

Leaves 2-foliolate.

Unarmed shrubs of trees.

Flowers large, at least larger than the next; sepals distinct after anthesis.

Leaf-lobes acute or acuminate.

Flower-bud 1.5-2.5 cm. long; leaves merely notched.

Flower-bud 3 cm. or more long; leaves 2-lobed.

Leaf-lobes rounded or obtuse.

Flowers small; calyx spathe-like after anthesis.

Lobes of the leaves short, rounded at apex.

Flowers few or solitary; leaves 4-17 mm. long.

Flowers numerous, racemose; leaves 4-7 cm. long.

Lobes of the leaves large, acute.

1. *B. Pauletia*.
2. *B. albiflora*.
3. *B. leptopetala*.
4. *B. bauhinioides*.

5. *B. ligulata*.
6. *B. unguolata*.
7. *B. megalandra*.

8. *B. Andrieuxii*.
9. *B. Seleriana*.
10. *B. Cookii*.

1. **Bauhinia Pauletia** Pers. Syn. Pl. 1: 455. 1805.*Bauhinia spinosa* Poir. in Lam. Encycl. Suppl. 1: 599. 1810.*Bauhinia panamensis* Spreng. Syst. 2: 334. 1825.*Bauhinia chlorantha* Brand. Zoe 5: 200. 1905.*Bauhinia longiflora* Rose, Contr. U. S. Nat. Herb. 10: 97. 1906.

A shrub, or a small tree up to 5 m. high, with long branches, the young twigs villous-pubescent or puberulent, bearing a stout prickly 2-4 mm. long at the base of each petiole. Leaves suborbicular, or a little broader than long, 2-lobed to about one-third their length, rounded or subcordate at the base, 6 cm. long or less, pubescent beneath or nearly glabrous, the lobes rounded, their petioles 1-2 cm. long; flowers racemose at the ends of the twigs, leafy-bracted, 6-10 cm. long; pedicels about 1 cm. long; calyx-tube 1.5-2 cm. long, the limb elongated; petals elongated-linear; perfect stamens 5, about as long as the petals; legume linear, compressed, long-stipitate, velvety, 25 cm. long or less, about 13 mm. wide.

TYPE LOCALITY: Panama.

DISTRIBUTION: Sinaloa to Panama; Porto Rico; Trinidad; Venezuela (acc. to Pittier).

ILLUSTRATION: Cav. Ic. pl. 410 as *B. aculeata*.2. **Bauhinia albiflora** Britton & Rose, sp. nov.

A shrub, 1.5-5 m. high, the prickles 4-6 mm. long, the slender twigs pilose. Petioles pilose, about 1 cm. long or shorter; leaf-blades 2-lobed, 1-3 cm. long, 7-9-nerved, pubescent on the veins above, densely pilose beneath, the lobes rounded or acute; flowers short-racemose, pilose; flower-buds rather stout; calyx 3-3.5 cm. long, its tube about 1 cm. long; petals spatulate-obovate, white, slender-clawed, about 3 cm. long, pinnately veined, the veins ascending; filaments 10, a little shorter than the petals, 5 of them antheriferous; anthers about 6 mm. long; style about as long as the stamens, the stigma subcapitate.

El Salvador. Type from vicinity of Sonsonate, March 18-27, 1922, Standley 22373

3. *Bauhinia leptopetala* DC. Prodr. 2: 513. 1825.

Prickles stout. Leaves suborbicular, a little longer than wide, glabrous, 6 cm. long or less, 2-lobed, the lobes short-acuminate; peduncles axillary, short, 2-flowered; calyx about 5 cm. long; petals linear, acute; stamens 5, much longer than the petals; anthers about 15 mm. long.

TYPE LOCALITY: New Spain.

DISTRIBUTION: Known only from the description and illustration.

ILLUSTRATION: Moc. & Sessé, Calq. Dess. Fl. Mex. *pl.* 223.

4. *Bauhinia bauhinioides* (Mart.) Britton & Rose.

Perlebia bauhinioides Mart. in Spix & Mart. Reise Bras. 1: 555. 1828.

Bauhinia microphylla Vogel, Linnaea 13: 301. 1839.

A much-branched shrub, 2-3 m. high, the prickles about 1 cm. long or shorter, the slender twigs glabrous. Leaves glabrous, 2-foliolate; petioles 6-12 mm. long; leaflets obliquely elliptic-suborbicular, 3-4-nerved, 1.5-3 cm. long, the apex rounded; flowers solitary in the axils or short-racemose, greenish-white; pedicels 1-2 cm. long; calyx finely puberulent, about 3 cm. long, its tube about 1.5 cm. long; petals nearly linear, acute, shorter than the calyx; perfect stamens 5; anthers 8 mm. long; staminoides 5, or wanting; legume 8-15 cm. long, 12-15 mm. wide.

TYPE LOCALITY: Brazil.

DISTRIBUTION: Havana, Cuba; Grenada. Native of Brazil and Paraguay.

5. *Bauhinia ligulata* Pittier, Contr. U. S. Nat. Herb. 20: 112. 1918.

A large tree, 40 m. high, with a trunk 8 dm. in diameter, the twigs glabrate, unarmed. Stipules minute, caducous; petioles 2 cm. long; blade broadly ovate, 4-10 cm. long, cordate at base, notched at apex, glabrous and somewhat shining above, pale and puberulent beneath, 11-13-nerved; inflorescence racemose, often somewhat paniculate; buds 1.5-2.5 cm. long; calyx-lobes 5, narrow, 14 mm. long, distinct after flowering; petals 5, ovate-elliptic, acute, 3 cm. long, with a short claw, lilac, veined with purple; stamens 10, all fertile, glabrous; ovary glabrous, stipitate.

TYPE LOCALITY: Puerto Obaldia, San Blas Coast, Panama.

DISTRIBUTION: Known only from the type locality.

6. *Bauhinia unglata* L. Sp. Pl. 374. 1753.

Pauletia nermis Cav. Ic. 5: 6. 1799.

Bauhinia inermis Pers. Syn. Pl. 1: 455. 1805.

Bauhinia Cavanillei Millsp. Field Mus. Publ. Bot. 1: 364. 1898.

A shrub 2-7 m. high, unarmed, the twigs brown with short, appressed pubescence, but glabrate in age. Petiole much shorter than the blade, 1-2 cm. long; blade elliptic, 6-12 cm. long, 2-lobed, sometimes cleft to the middle, 7-9-nerved, glabrous and shining above, dull and somewhat pubescent beneath, the lobes acute; flowers in elongated terminal racemes; pedicels 0.5-2 cm. long; flower-buds narrow, elongated, 4-5 cm. long, obtuse, brownish; petals narrow, elongated, white; stamens 10, red, slender; ovary long-stipitate, brownish-pubescent; legume narrowly oblong, about 2 dm. long, 8-10 mm. broad, long-stipitate, apiculate, glabrous.

TYPE LOCALITY: America.

DISTRIBUTION: Guerrero to Panama, Colombia, Bolivia and Venezuela.

ILLUSTRATION: Cav. loc. cit. *pl.* 409.

7. *Bauhinia megalandra* Griseb. Fl. Brit. W. Ind. 213. 1860.

A shrub, or a tree up to 10 m. high, the twigs puberulent or glabrous. Petioles 2-4 cm. long; leaves very broadly ovate to suborbicular, 7-15 cm. long, cordate or subtruncate at the base, rather strongly 9-nerved, the nerves puberulent beneath, coarsely reticulate-veined, the lobes rounded or obtuse; flowers solitary, opposite the leaves, or in terminal racemes; pedicels stout, 1-2 cm. long; calyx subcylindric, brown-tomentulose, its tube 3-4 cm. long, and 1 cm. thick, the spatheaceous limb about twice as long as the tube, ultimately splitting into 5 segments;

petals linear, white, about as long as the calyx-limb; stamens elongated; legume linear or linear-oblongate, 1.5-2 dm. long, 2-2.5 cm. wide, its valves coriaceous.

TYPE LOCALITY: St. Kitts.

DISTRIBUTION: St. Kitts; Antigua; St. Vincent. Trinidad and Venezuela.

8. *Bauhinia Andrieuxii* Hemsl. Diag. Pl. Nov. 48. 1880.

A shrub, the very slender branches tuberculate, glabrous, the young twigs and petioles densely puberulent or tomentulose. Stipules minute; petioles filiform, about 15 mm. long, or shorter; leaves suborbicular, or broader than long, small, 4-17 mm. long, subcordate, 9-nerved, submembranous, deeply 2-lobed, glabrous above, puberulent beneath, at least on the nerves, the lobes rounded; flowers solitary or few together; pedicels short; calyx spathaceous, about 18 mm. long; petals broadly elliptic, short-clawed, about 8 mm. long; stamens 10, all perfect, the alternate ones shorter; ovary hirsute; young legume brown-tomentose, linear, short-stipitate.

TYPE LOCALITY: Near Oaxaca.

DISTRIBUTION: Oaxaca.

9. *Bauhinia Seleriana* Harms, Bull. Herb. Boiss. 7: 549. 1899.

A tree, the young twigs densely tomentose, becoming glabrous. Petioles tomentose, about 2 cm. long, or shorter; leaves suborbicular, or broader than long, chartaceous, 4-7 cm. long, 2-lobed, 9-11-nerved, glabrous above, loosely tomentose beneath, the lobes rounded, obtuse, or rarely acutish; racemes tomentose, several-many-flowered, opposite the leaves, 3-8 cm. long; pedicels 4-5 mm. long, tomentose; unopened flowers 10-11 mm. long; calyx spathaceous, densely puberulent; petals oblanceolate, short-clawed, 11-13 mm. long; stamens 10, the alternate ones shorter; ovary puberulent.

TYPE LOCALITY: Quen Santo, Huehuetenango, Guatemala.

DISTRIBUTION: Known only from the type locality.

10. *Bauhinia Cookii* Rose, sp. nov.

A small tree, the old branches brownish, glabrous, the twigs puberulent. Stipules small, scarious, obtuse; petiole slender, 1-3 cm. long; blade 4-9 cm. long, glabrous above, puberulent beneath, deeply 2-lobed, the lobes 3-5 cm. long, acute; flowers in small fascicles; pedicels 5-7 mm. long, jointed near the apex; flower-buds 10 mm. long, puberulent; petals 5, about 10 mm. long, 5-6 mm. wide, obtuse, light sulphur-yellow; stamens 10, about as long as the petals.

Costa Rica. Type from Cuesta de la Vieja, near San Carlos, April 11, 1903, *O. F. Cook & C. B. Doyle*, 41.

3. *SCHNELLA* Raddi, Mem. Soc. Ital. Modena 18: 411. 1820.

Lacara Spreng. Neue Entd. 3: 56. 1822.

Caulotretus Rich.; Spreng. Syst. 4: Cur. Post. 406. 1827.

Binaria Raf. Sylva Tell. 122. 1838.

Unarmed, often high-climbing vines, some species cirriferous, the stems and old branches often flattened. Leaves 2-lobed, or 2-foliolate. Flowers usually small, in simple racemes; bractlets 2, on the pedicels. Calyx oblong to campanulate, nerved, more or less 2-lipped after anthesis. Petals 5. Stamens 10, all fertile; anthers small. Legume broad, sessile or short-stipitate, coriaceous, elastically dehiscent.

Type species, *Schnella macrostachya* Raddi.

Calyx small, about 1 cm. long or shorter; leaves 2-lobed or 2-cleft.

Calyx-teeth manifest, linear to obovate.

Calyx-teeth linear or subulate.

Leaves orbicular, merely notched, the lobes rounded.

Leaves broadly ovate, deeply 2-lobed.

Leaves glabrous and shining above.

Leaves appressed-pubescent on both sides.

1. *S. Storkii*.

2. *S. cumanensis*.

3. *S. Standleyi*.

- Calyx-teeth ovate or obovate.
 Calyx-teeth triangular-ovate; leaf-lobes obtuse or acutish. 4. *S. Herrerae*.
 Calyx-teeth obovate; leaf-lobes with short-acuminate incurved blunt tips. 5. *S. obovata*.
 Calyx subtruncate, its teeth minute; pedicels very short.
 Leaf-lobes acute or obtusish, elongated. 6. *S. splendens*.
 Leaf-lobes mostly acuminate, short, the tips incurved. 7. *S. excisa*.
 Calyx 1.5–2.5 cm. long; leaves 2-foliolate.
 Pedicels 11–16 mm. long. 8. *S. eucosma*.
 Pedicels very short. 9. *S. hymenaeifolia*.

1. *Schnella Storkii* Rose, sp. nov.

A vine with slender tendrils, the twigs terete, densely brown-pubescent. Leaves orbicular, deeply cordate at base, 4–6 cm. in diameter, thick, glabrous and shining above, strongly 11-nerved, brownish-pubescent beneath, notched at apex, the lobes short and rounded; inflorescence a several-flowered, terminal raceme 2–4 cm. long, densely pubescent; bracts linear, 5–7 mm. long, deciduous; pedicels 6–8 mm. long; calyx campanulate, about 5 mm. long, the teeth subulate; petals 5, lanceolate, 10–12 mm. long, acute, villous, one of them spotted; stamens about as long as the calyx; anthers small; ovary short, hairy; style short, glabrous.

Western Panama, July–August, 1923, *H. E. Stork*, 140.

2. *Schnella cumanensis* (H. B. K.) Britton & Rose.

Bauhinia cumanensis H. B. K. Nov. Gen. & Sp. 6: 521. 1824.

Schnella brachystachya Benth. Journ. Bot. Hook. 2: 98. 1840.

Schnella heterophylla Benth.; Griseb. Cat. Pl. Cub. 81. 1866. Not *Bauhinia heterophylla* H. B. K.

A high-climbing vine often many meters long, the twigs pubescent or becoming glabrate. Leaves broadly ovate, deeply lobed, 2–12 cm. long, usually deeply cordate at base, glabrous and shining above, glabrate or appressed-pubescent beneath, the lobes acute, acuminate or obtusish; inflorescence racemose, terminal, several-flowered; bracts linear; calyx-tube about 8 mm. long, pubescent, 10-nerved, its teeth linear, 4–6 mm. long; petals oblanceolate, 16–25 mm. long, rounded at apex, hairy on the back, white, or one of them striped with purple; longer stamens as long as the calyx; ovary densely brown-lanate; style short, glabrous; legume broadly oblong, 6–10 cm. long, 2–2.5 cm. wide, glabrate, short-stipitate, few-seeded.

TYPE LOCALITY: Cumana, Venezuela.

DISTRIBUTION: Cuba; Margarita; Venezuela; recorded from British Guiana and Dutch Guiana. NOTE. *Schnella columbiensis* (Vogel) Benth., a closely related species, was recorded by Hemsley from Coiba Island, Panama. It differs in having the leaf-lobes rounded; it is Columbian in distributions, with Cartagena as type locality and may not be distinct from *Bauhinia glabra* Jacq., from the same locality.

3. *Schnella Standleyi* (Rose) Britton & Rose.

Bauhinia Standleyi Rose, Journ. Wash. Acad. 17: 166. 1927.

A large woody vine with the stem often flattened and 5 cm. or more broad, the twigs densely brown-pubescent, the tendrils slender, hairy. Stipules small, broadly ovate to orbicular, 2 mm. long, caducous; leaves broadly ovate, 3–5 cm. long, 2-lobed, sometimes cleft to below the middle, 7–9-nerved, appressed-pubescent on both sides, the lobes rounded or obtuse; inflorescence terminal, 4–5 cm. long, several-many-flowered, pubescent; bracts linear; pedicels slender, 10 mm. long or less; calyx cup-shaped, 4–5 mm. long, the lower teeth 2–4 mm. long, petals very hairy below, 10–14 mm. long, erect, greenish white, or one with small purple spots; stamens glabrous; legume broadly spatulate, 6–7 cm. long, 2 cm. wide near the top, in age glabrate.

TYPE LOCALITY: Punta Paitilla, Panama.

DISTRIBUTION: Costa Rica; Panama.

4. *Schnella Herrerae* Britton & Rose, sp. nov.

A vine or weak shrub with long slender branches, the twigs and inflorescence brown-pubescent. Leaves nearly orbicular, 5 cm. broad or less, broadly cordate at base, cleft to near the middle, the lobes acutish or obtuse, glabrate above, softly pubescent beneath;

petioles 1-2 cm. long, brownish pubescent; stipules linear to filiform, 6-8 mm. long; inflorescence terminal, 5-10 cm. long, many-flowered; pedicels 8-15 mm. long, ascending; flower-buds ovoid, pointed; calyx densely pubescent, 8 mm. long, its teeth triangular-ovate; petals 1.5-2 cm. long, white (?); stamens glabrous; ovary pubescent.

Oaxaca and Yucatan; British Honduras? Type collected at Casolapam, Oaxaca, November, 1913, *F. Salazar*.

5. *Schnella obovata* (Blake) Britton & Rose.

Bauhinia obovata Blake, Journ. Wash. Acad. 14: 286. 1924.

Twigs puberulent, slender. Leaves broadly ovate to suborbicular, glabrous above, puberulent beneath, subcoriaceous, 4-8 cm. wide, as wide as long or somewhat wider, 2-lobed for about one-third their length, or deeper, the lobes bluntly short-acuminate, incurved; racemes many-flowered, puberulent, about 8 cm. long or shorter; bracts obovate, about 4 mm. long; pedicels 5-9 mm. long; calyx campanulate, densely puberulent, about 10 mm. long; calyx-teeth obovate; petals 12 mm. long, pilose, obovate, clawed; filaments glabrous.

TYPE LOCALITY: Bank of Sambú River, southern Darien, Panama.

DISTRIBUTION: Known only from the type locality.

6. *Schnella splendens* (H. B. K.) Benth. Journ. Bot. Hook. 2:

97. 1840.

Bauhinia splendens H. B. K. Nov. Gen. & Sp. 6: 321. 1824.

A high-climbing, cirrhiferous vine, the twigs puberulent, the older branches flattened. Leaves subcoriaceous, 2-divided nearly to the base, 5-12 cm. long, shallowly cordate, glabrous above, tomentulose beneath, the lobes acute, short-acuminate or obtusish; racemes slender, many-flowered; bracts minute; pedicels 2-3 mm. long; calyx campanulate, 6-8 mm. long, nearly truncate; petals 10-15 mm. long, villous; stamens much shorter than the petals; legume tomentulose, 5-8 cm. long, 1.5-2 cm. wide.

TYPE LOCALITY: Orinoco River.

DISTRIBUTION: Guadeloupe. Venezuela; British Guiana; Brazil.

7. *Schnella excisa* Griseb. Fl. Brit. W. Ind. 214. 1860.

Bauhinia excisa Hemsl. Biol. Centr. Am. 1: 337. 1880.

A vine, 10 meters long or longer, the old stem often much flattened and perforated, the twigs rusty pubescent. Leaves coriaceous, orbicular, 5-20 cm. long, shallowly cordate, glabrous above, rusty-pubescent beneath, 2-lobed at apex, the usually short lobes acute or acuminate, their tips incurved; racemes 1-2 dm. long, many-flowered; pedicels 1-4 mm. long; calyx broadly campanulate, subtruncate, 5-6 mm. long, with 5 minute teeth, brownish-pubescent; petals short-oblong, obtuse, 15 mm. long, villous; ovary sessile, villous; legume 6-7 cm. long, 2-2.5 cm. wide, apiculate.

TYPE LOCALITY: Irais, Trinidad.

DISTRIBUTION: Panama; Trinidad.

8. *Schnella euosma* (Blake) Britton & Rose.

Bauhinia euosma Blake, Journ. Wash. Acad. Sci. 14: 286. 1924.

Climbing on trees, the young branches appressed—pubescent, soon glabrous. Petioles slender, 3-6 cm. long; leaves 2-foliolate, the basal sinus deep and narrow; leaflets semi-ovate, 5-nerved, 5-9 cm. long, overlapping, subchartaceous, glabrous above, sparingly strigose on the veins beneath; flowers in terminal racemes about 6 cm. long, the axis and the pedicels strigose; pedicels 11-16 mm. long, 2-bracteolate; calyx campanulate, 15-nerved, strigose, 2-2.5 cm. long, its subulate teeth 2-3 mm. long; petals densely strigose, white, about 4 cm. long, rounded, short-clawed; stamens about 15 mm. long; legume flat, oblong-obovate, abruptly tipped, about 10 cm. long and 3 cm. wide, sessile, loosely strigose.

TYPE LOCALITY: Matias Hernandez, Panama.

DISTRIBUTION: Known only from the type locality.

9. *Schnella hymenaefolia* (Triana) Britton & Rose.

Bauhinia hymenaefolia Triana; Hems. Diag. Pl. Nov. 48. 1880.

A high-climbing vine, unarmed, at first puberulent. Petiole slender, as long as the blade; leaves bifoliate; leaflets ovate to oblong, oblique, coriaceous, 5-7.5 cm. long, obtuse, glabrate, often shining, 5-nerved; inflorescence racemose, terminal or lateral, few-flowered; pedicels very short; flowers large; calyx broad, 15 mm. long, 15-ribbed, puberulent, its lobes small, ovate-oblong; petals white, 3.5 cm. long, short-clawed, densely pubescent on the back; stamens 10, all free, 5 anther-bearing; anthers hairy; filaments glabrous; ovary sessile, densely hirsute.

TYPE LOCALITY: El Paraiso, Canal Zone, Panama.

DISTRIBUTION: Panama and Colombia. (According to Hemsley.)

4. *ALVESIA* Welw. Apont. 587. 1858.

Unarmed shrubs or small trees, with petioled, 2-lobed leaves, and large flowers. Calyx-tube campanulate, shorter than the spathaceous limb. Petals 5, broad, nearly equal. Stamens 10, all antheriferous, shorter than the petals, the anthers versatile. Legume flat, linear, dehiscent, several-many-seeded.

Type species: *Alvesia bauhinioides* Welw.

1. *Alvesia tomentosa* (L.) Britton & Rose.

Bauhinia tomentosa L. Sp. Pl. 375. 1753.

Alvesia bauhinioides Welw. Apont. 557. 1858.

A shrub, or small tree, 4 m. high or less, with slender branches, the young twigs villous or pubescent. Leaves suborbicular, 2-lobed to about one-third their length, thin, subtruncate or subcordate at the base, 3-6 cm. long, villous beneath, the lobes rounded, the slender, pubescent or villous petioles 1.5-3 cm. long; peduncles opposite the leaves, villous, 1-3-flowered; calyx about 2.5 cm. long, closed in bud, puberulent, cleft in anthesis; petals yellow, with dark red bases, broadly obovate, obtuse, nearly equal, about 5 cm. long; stamens unequal in length; legume linear, 1-1.5 cm. wide, about 10 cm. long, short-stipitate.

TYPE LOCALITY: India.

DISTRIBUTION: Naturalized in Jamaica; Cuba; Porto Rico; Virgin Islands. Widely cultivated in the West Indies. Native of tropical Asia and Africa.

ILLUSTRATION: Bot. Mag. pl. 5560.

5. *CASPAREA* H. B. K. Nov. Gen. & Sp. 6: 317. 1824.

Unarmed trees or shrubs. Leaves broad, 2-lobed, 2-foliolate or rarely entire. Racemes simple, rarely only 1-flowered. Flowers perfect, or sometimes with an imperfect ovary. Flower-bud slender; calyx 5-toothed, spathe-like after anthesis; petals 5, rather large, or only 2 in a few species; stamens 10, 9 or sometimes 8 of them abortive, united at base, 1, rarely 3, perfect and elongated. Ovary stipitate, free from the calyx-tube. Legume flat, 2-valved, several-many-seeded, elastically dehiscent.

Type species, *Bauhinia Pes-caprae* Cav.

A. Fertile stamen only 1.

1. Petals 5.

a. Leaves 2-foliolate or 2-lobed.

Leaves 2-foliolate, small, the leaflets round or obtuse.

Flowers solitary, rarely 2 together.

Leaflets obovate, 5-7 mm. long; petals 1.8-2 cm. long.

Leaflets oblong, 8-15 mm. long; petals 2-3 cm. long.

Petioles 2-4 mm. long.

Petioles 6-10 mm. long.

Racemes 3-6-flowered.

Leaflets 2-5 cm. long.

A densely branched shrub; petal-blade orbicular.

A small tree; petal-blade elliptic.

Leaflets smaller, 1.5-2 cm. long.

Calyx glabrescent; petals about 3 cm. long.

Calyx short-pubescent; petals 1.5-2 cm. long.

Pedicels only 4-6 mm. long; leaflets obliquely obovate.

Pedicels 8-12 mm. long; leaflets flabellate.

1. *C. uniflora*.

2. *C. monantha*.

3. *C. Purpusii*.

4. *C. unguicularis*.

5. *C. Ruyonii*.

6. *C. ramosissima*.

7. *C. congesta*.

8. *C. Jermiana*.

- Leaves 2-lobed or emarginate.
 Lobes of the leaves rounded.
 Leaves very shallowly lobed, or some of them more deeply lobed in No. 12.
 Larger leaves up to 9 cm. long; inflorescence compact. 9. *C. amblyophylla*.
 Leaves about 5 cm. long or shorter; inflorescence loose.
 Leaves cordate or emarginate at base; petals glabrous.
 Legume cuneate at base; species of Yucatan and Cuba. 10. *C. spathacea*.
 Legume narrowed at base; species of Lower California. 11. *C. peninsularis*.
 Leaves subtruncate at base, not cordate; petal-claws pubescent. 12. *C. oaxacana*.
 Leaves lobed mostly to the middle or deeper; petal-claws pubescent.
 Flowers subsolitary; petals 3 cm. long. 13. *C. macranthera*.
 Racemes several-many-flowered.
 Leaves 7-15 cm. long, membranous; petals 3 cm. long. 14. *C. Pringlei*.
 Leaves smaller; petals shorter.
 Leaf-lobes oblong or ovate, about twice as long as wide.
 Leaves coriaceous, finely reticulate-veined. 15. *C. Pes-caprae*.
 Leaves membranous, loosely reticulate-veined. 16. *C. lunarioides*.
 Leaf-lobes elliptic to suborbicular, not much longer than wide.
 Leaves tomentose beneath. 17. *C. subrotundifolia*.
 Leaves glabrous. 18. *C. Lanaria*.
 Lobes of some or of all leaves acute, acuminate or obtuse, not rounded, except in races of *C. divaricata*.
 Petals, or their stipes, pubescent, villous, or tomentose.
 Leaves glabrous, their lobes obtuse.
 Leaves membranous, deeply lobed, the lobes lanceolate, twigs glabrous. 19. *C. jucunda*.
 Leaves coriaceous, shallowly lobed, the lobes ovate; twigs tomentose. 20. *C. retifolia*.
 Leaves pubescent on both sides, the lobes acute. 21. *C. mexicana*.
 Leaves glabrous or nearly so. 22. *C. aurita*.
 Leaf-lobes parallel or nearly so, narrow.
 Leaf-lobes more or less divergent, broad.
 Raceme unilateral; pedicels very short; leaves glabrous; legume 15 cm. long. 23. *C. unilateralis*.
 Raceme not unilateral; pedicels mostly longer.
 Petals purple or red.
 Perfect stamen as long as the petals; leaves 10-15 cm. long, slightly lobed. 24. *C. Rubeleruziana*.
 Perfect stamen much longer than the petals; leaves 5-7 cm. long, rather deeply lobed. 25. *C. Schlechtendaliana*.
 Petals white or pinkish.
 Leaves large, mostly 5-10 cm. long.
 Bracts setaceous, 6-8 mm. long; some leaves subtruncate at apex. 26. *C. confusa*.
 Bracts much smaller; leaves various, but not subtruncate at apex. 27. *C. divaricata*.
 Leaves small, 2-3 cm. long. 28. *C. versicolor*.
 Leaves entire, ovate to oblong-lanceolate. 29. *C. Jenningsii*.
 2. Petals only 2.
 Pedicels about 4 mm. long; calyx about 1.5 cm. long. 30. *C. dipetala*.
 Pedicels 6-15 mm. long; calyx 2-3 cm. long. 31. *C. Deserti*.
 B. Fertile stamens 3.
 Petals long-clawed, leaves entire, or with 2 short lobes, acuminate. 32. *C. pansamalana*.
 Petals sessile; leaves emarginate, the lobes rounded. 33. *C. Coulteri*.
 C. Flowers unknown; leaves very thin, deeply 2-lobed, the lobes abruptly short-acuminate. 34. *C. (?) Calderonii*.

1. *Casparea uniflora* (S. Wats.) Britton & Rose.

Bauhinia uniflora S. Wats. Proc. Am. Acad. 21: 451. 1886.

A large shrub with grayish brown bark, the slender twigs puberulent. Stipules obsolete; petioles very short, 1-2 mm. long; leaflets 2, coriaceous, finely reticulate-veined, obliquely obovate, 5-7 mm. long, rounded or retuse at apex, cuneate at base, 2-nerved, very pale, at first puberulent; flowers solitary, terminal, short-pedicellate; calyx puberulent, about 2 cm.

long; petals 18–20 mm. long, oblong, with a slender, pubescent claw; fertile stamen glabrous, about as long as the petals; ovary tomentose; legume linear, 3–4 cm. long, about 7 mm. wide, narrowed at both ends, densely puberulent, beaked.

TYPE LOCALITY: Near Jamulco, Coahuila.

DISTRIBUTION: Coahuila.

2. *Casparea monantha* Britton & Rose, sp. nov.

A low compact shrub, the twigs rather densely puberulent. Stipules ovate, minute, caducous; petioles 2–4 mm. long, pubescent; leaflets 2, coriaceous, finely reticulate-veined, obliquely oblong, glabrous, 8–15 mm. long, obtuse, or rounded, 2-nerved; flowers solitary or sometimes in pairs; pedicels 2–4 mm. long, pubescent; calyx about 1.8 cm. long, appressed-pubescent; petals 2.5–3 cm. long, the oblong blade about as long as the slender pubescent claw, the fertile stamen glabrous; ovary pubescent.

General Sepeda, Coahuila, August, 1904, *E. Palmer 330*.

3. *Casparea Purpusii* Britton, sp. nov.

A shrub, the very slender twigs, the petioles and inflorescence finely appressed-pubescent. Stipules lanceolate, minute; petioles 6–10 mm. long; leaves 2-foliolate; leaflets obliquely oval, chartaceous, glabrous, strongly reticulate-veined, 2-or-3-nerved, 1–2 cm. long, obtuse or rounded; flowers solitary or 2-together; calyx about 2 cm. long, finely pubescent; petals a little longer than the calyx, the very narrow, short-pubescent claw longer than the oblong limb; perfect stamen nearly as long as the petals, glabrous.

Ixmiquilpán, Hidalgo, August, 1905, *C. A. Purpus 1364*.

4. *Casparea unguicularis* (Benth.) Britton & Rose.

Bauhinia unguicularis Benth.; Hemsl. Diag. Pl. Nov. 49. 1880.

A low, densely branched glabrescent shrub, the branches with short internodes. Petioles 12–14 mm. long; leaves 2-foliolate, glabrous; leaflets oblique, ovate to oblong, usually 3-nerved, scarcely coriaceous, 2.5–5 cm. long; raceme 4–6-flowered; pedicels 6–8 mm. long; calyx about 2 cm. long, puberulent; petals 3 cm. long, with a slender pubescent claw, the blade orbicular; perfect stamen with a long thick filament, the anther glabrous; ovary long-stipitate, pubescent.

TYPE LOCALITY: Zimapán, Hidalgo.

DISTRIBUTION: Known only from the type locality.

5. *Casparea Runyonii* Britton & Rose, sp. nov.

A small tree, about 5 m. high, the twigs puberulent. Stipules minute, ovate, caducous; petiole 8–15 mm. long, pubescent; leaflets 2, glabrous or nearly so, oblong, oblique, 2–3 cm. long, obtuse, 3-or-4-nerved, subcoriaceous; raceme few-flowered, pubescent; bracts ovate; pedicels 4–7 mm. long; calyx about 2.5 cm. long, appressed-pubescent, purplish; petals white, about 4 cm. long, the claw pubescent, the elliptic blade about 8 mm. wide; filament of perfect stamen 1.5–2 cm. long, hairy below, glabrous above, the anther oblong, 7–8 mm. long, hairy on the inside; ovary long-stipitate; young legume linear, long-beaked, sparingly pilose.

On side of mountain near Victoria, Tamaulipas, March 27, 1925, and April 8, 1926, *Robert Runyon 748*.

6. *Casparea ramosissima* (Benth.) Britton & Rose.

Bauhinia ramosissima Benth.; Hemsl. Diag. Pl. Nov. 49. 1880.

A low compact shrub, the young branches appressed-pubescent, Stipules minute, caducous; petiole about 12 mm. long, puberulent; leaflets 2, subcoriaceous, obliquely oblong, glabrous, about 2 cm. long, or shorter, 3-nerved; racemes 3–6-flowered; calyx glabrescent, 16–20 mm. long; petals about 3 cm. long; purplish, the elliptic blade about the length of the slender

pubescent claw; fertile stamen glabrous; ovary long-stipitate, hirsute; legume coriaceous, glabrous, about 7.5 cm. long, long-mucronate.

TYPE LOCALITY: Zimapán, Hidalgo.

DISTRIBUTION: Known only from the type locality.

7. *Casparea congesta* Britton & Rose, sp. nov.

A low compact shrub with pubescent twigs. Petioles slender, 5–10 mm. long, leaflets 2, broadly and obliquely elliptic-obovate, about 18 mm. long or less, chartaceous, 3-nerved, strongly veined on both sides, somewhat pubescent on the veins beneath; flowers 3–5 in a short compact cluster; pedicels 4–6 mm. long; flower-bud oblong, 15 mm. long, pubescent; petals narrowly oblong, about 15 mm. long with a slender claw; ovary glabrous; legume 5–8 cm. long, 10–12 mm. wide, glabrous, stipitate.

Mountains northeast of Monclova, Coahuila, September 1–6, 1880, *E. Palmer 285*.

8. *Casparea Jermyana* Britton, sp. nov.

Twigs, petioles and inflorescence densely short-pubescent. Petioles 5–8 mm. long; leaves 2-foliolate; leaflets flabellate, chartaceous, reticulate-veined, 3-nerved, broadly cuneate at base, rounded, 10–14 mm. long; racemes 3–6-flowered; pedicels 8–15 mm. long; calyx about 1.5 cm. long, short-pubescent; petals about 2 cm. long, the slender claw rather shorter than the oblong limb; perfect stamen shorter than the petals.

Enchanted Rock, Gillespie County, Texas, 1903, *G. Jermy*.

9. *Casparea amblyophylla* (Harms) Britton & Rose.

Bauhinia amblyophylla Harms, Bull. Herb. Boiss. 7: 548. 1899.

A shrub, the twigs, petioles, inflorescence and under surfaces of the leaves brown-tomentose. Petioles 1.5–2.5 cm. long; leaves suborbicular to broadly elliptic, chartaceous, 3–9 cm. long, 7-or-9-nerved, tomentose on both sides when young, the base truncate or shallowly cordate, the apex broadly emarginate, very shallowly 2-lobed, the lobes rounded; racemes short, densely several-many-flowered; calyx tomentose, about 2 cm. long; petals white, lanceolate, clawed; filament of the fertile stamen elongated.

TYPE LOCALITY: Between Tequisistlan and Jalapa, Tehuantepec, Oaxaca.

DISTRIBUTION: Known only from the type locality.

10. *Casparea spathacea* (DC.) Britton & Rose.

Bauhinia spathacea DC. Prodr. 2: 512. 1825.

A shrub with slender twigs. Leaves suborbicular or broader than long, about 5 cm. long, or shorter, glabrous above, pulverulent or short-pubescent beneath, emarginate at base and apex, the short lobes rounded; flowers short-racemose, white; pedicels 8–12 mm. long; petals oblong-lanceolate, long-clawed, glabrous, 1.5–2 cm. long; fertile stamen about as long as the petals or longer; legume linear-oblong, acute, cuneate at base, 6–10 cm. long, 10–15 mm. wide, long-stipitate.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Yucatán; recorded from Oaxaca; Cuba.

ILLUSTRATION: Moc. & Sessé, Calq. Dess. Fl. Mex. pl. 224.

11. *Casparea peninsularis* (Brand.) Britton & Rose.

Bauhinia peninsularis Brand. Univ. Cal. Publ. Bot. 10: 183. 1922.

A shrub, 2–3 m. high, the young branches brownish, yellowish tomentose. Leaves 3–5 cm. long, 3–6 cm. wide, 7-or-9-nerved, glabrous above, loosely tomentose beneath, emarginate at base and apex, the very short lobes rounded; petiole 1.4 cm. long, tomentose; petals white, 2 cm. long, glabrous; legume oblong, glabrous, 5–8 cm. long, 10–18 mm. wide, acute at both ends, its stipe 2.5 cm. long.

TYPE LOCALITY: Pescadero in the Cape region of Lower California.

DISTRIBUTION: Southern Lower California.

12. *Casparea oaxacana* Britton, sp. nov.

Young twigs finely appressed-pubescent, soon glabrous. Young leaves and petioles densely appressed-pubescent; mature leaves glabrous or very nearly so, the slender petiole about 2 cm. or shorter; leaves chartaceous, dull, 7-or-9-nerved, 2-3 cm. long, broader than long, strongly reticulate-veined above, shallowly lobed, or some of them lobed to about the middle, the broad lobes rounded, the base subtruncate; racemes short, densely several-flowered, densely appressed-pubescent; calyx about 12 mm. long; petals nearly 2 cm. long, with a short, oblong blade and a densely pilose long claw.

Between Tequisistlan and Jalapa, Oaxaca, January 9, 1896, *Seler 1687*.

13. *Casparea macranthera* (Benth.) Britton & Rose.

Bauhinia macranthera Benth.; Hems. Diag. Pl. Nov. 49. 1880.

A shrub; branches flexible, pubescent, with short internodes. Leaves suborbicular, 5 cm. in diameter or smaller, subcoriaceous, 9-nerved, 2-lobed to the middle, the lobes rounded; flowers subsolitary, short-pedicelled; calyx pubescent, about 2.5 cm. long; petals 3 cm. long, with a long hairy claw; perfect stamen elongated, the anther pilose; ovary long-brownish-tomentose; legume glabrous, about 12 cm. long.

TYPE LOCALITY: Zimapán, Hidalgo.

DISTRIBUTION: Known only from the type locality.

14. *Casparea Pringlei* (S. Wats.) Britton & Rose.

Bauhinia Pringlei S. Wats. Proc. Am. Acad. 25: 147. 1890.

A shrub, 3-7 m. high, with slender brown branches, puberulent when young. Petiole 2-4 cm. long; leaves orbicular, 7-15 cm. in diameter, cordate at base, 9-nerved, cleft to below the middle, glabrate above, somewhat pubescent beneath, the lobes rounded; racemes 8-15 cm. long, several-many-flowered; pedicels 1 cm. long or less; calyx 16 mm. long, puberulent; petals about 3 cm. long, whitish, with a slender pubescent claw; fertile stamen much shorter than the petals; pistil as long as the petals with a long slender stipe; legume 10-12 cm. long, 10-12 mm. wide, its stipe about 2 cm. long.

TYPE LOCALITY: In the barranca near Guadalajara, Jalisco.

DISTRIBUTION: Jalisco.

15. *Casparea pes-caprae* (Cav.) H. B. K. Nov. Gen. & Sp. 6:
318. 1824.

Bauhinia pes-caprae Cav. Ic. 5: 3. 1799.

A shrub, 3-4 m. high with slender weak branches, the twigs glabrous or glabrate. Stipules small; petiole 1-2 cm. long; leaves glabrous or nearly so, coriaceous, finely reticulated, 7-nerved, 2-6 cm. long, cordate at base, deeply 2-lobed, the oblong lobes rounded; racemes pubescent, many-flowered; pedicels 8-15 mm. long; calyx 12 mm. long, puberulent; petals 2-2.5 cm. long, the blade narrow and much shorter than the long, densely pilose claw; fertile stamen glabrous, about as long as the petals; ovary long-stipitate, densely puberulent; legume 10-12 cm. long, about 1.5 cm. wide, glabrate, its stipe about 2 cm. long.

TYPE LOCALITY: Acapulco, Guerrero.

DISTRIBUTION: Guerrero.

ILLUSTRATION: Cav. loc. cit. *pl. 404*.

16. *Casparea lunarioides* A. Gray, sp. nov.

Bauhinia lunarioides A. Gray; S. Wats. Bibl. Index 205, hyponym, 1878. Standley, Contr. U. S. Nat. Herb. 23: 417. 1920.

A shrub, the young branches appressed-pubescent. Stipules minute; petioles 2-3.5 cm. long; leaves suborbicular in outline, about 6 cm. long, or shorter, membranous, glabrous above, appressed-pubescent and pilose on the veins beneath, 9-or-11-nerved, cordate, deeply 2-lobed,

the lobes ovate-elliptic, somewhat divergent, rounded; racemes short, few-flowered, puberulent; pedicels 4-5 mm. long; calyx appressed-pubescent, 15-18 mm. long; petals narrow, about 2 cm. long, with an elongated pubescent claw; perfect stamen glabrous, about as long as the petals.

Nuevo León. Type from above Monterey, May 27, 1889, *C. G. Pringle 2529*. Collected also by *Eaton & Edwards* at Rinconada, May 25, 1847.

17. *Casparea subrotundifolia* (Cav.) H. B. K.; Jackson, Index Kew. 1: 449. 1895.

Bauhinia subrotundifolia Cav. Ic. 5: 4. 1799.

A shrub or small tree about 3 m. high, the young branches densely pubescent. Petioles slender, 1.5-2.5 cm. long; leaves broader than long, 5 cm. wide or less, 7-nerved, glabrous above, densely tomentose beneath, at least when young, chartaceous, loosely reticulate-veined, cordate or subtruncate at base, 2-lobed, the lobes suborbicular or broadly elliptic, rounded; racemes several-many-flowered, densely pubescent; pedicels about 1 cm. long, or less; calyx 12 mm. long, pubescent; petals narrowly oblong, about 15 mm. long, the slender claw pilose; perfect stamen glabrous, longer than the petals; ovary densely pubescent; legume 6-10 cm. long, 15 mm. wide, slender-stipitate.

TYPE LOCALITY: Vicinity of Acapulco, Guerrero.

DISTRIBUTION: Guerrero; Colima.

ILLUSTRATION: Cav. loc. cit. *pl.* 406.

18. *Casparea Lunaria* (Cav.) H. B. K.; Jackson, Index Kew. 1: 449. 1895.

Bauhinia Lunaria Cav. Ic. 5: 4. 1799.

A shrub, 2-2.5 m. high, much branched. Petiole slender, about 2 cm. long; leaves broader than long, glabrous, 7-nerved, 2-4 cm. long, 2-lobed to about the middle, the lobes broadly elliptic to suborbicular, rounded; racemes short, several-flowered; pedicels 6-8 mm. long; flowers tomentose; petals oblong, the long claw pilose; ovary pubescent; legume about 8 cm. long and 15 mm. wide, slender-stipitate.

TYPE LOCALITY: Vicinity of Acapulco, Guerrero.

DISTRIBUTION: Known only from the type locality and to us from description and illustration only.

ILLUSTRATION: Cav. loc. cit. *pl.* 407.

19. *Casparea jucunda* (Brand.) Britton & Rose.

Bauhinia jucunda Brand. Univ. Cal. Publ. Bot. 7: 326. 1920.

A shrub, with glabrous twigs. Leaves 5.5-7 cm. long, glabrous, somewhat shining, membranous, strongly 5-nerved, reticulate-veined, lobed to the middle or deeper, the lobes lanceolate, obtuse, somewhat spreading; petiole 1-2 cm. long; stipules small, deciduous; raceme rather densely several-many-flowered, puberulent, 5-7 cm. long; pedicels about 10 mm. long, or shorter; calyx about 2 cm. long; petals linear, tomentose, 2.5-3 cm. long, shorter than the perfect stamen; fertile anther hairy; ovary densely tomentose, stipitate; legume 6-8 cm. long, 1 cm. wide, puberulent, somewhat reticulated, long-apiculate.

TYPE LOCALITY: Barranca de Panoaya, Veracruz.

DISTRIBUTION: Veracruz.

20. *Casparea retifolia* (Standley) Britton & Rose.

Bauhinia retifolia Standley, Contr. U. S. Nat. Herb. 23: 416. 1922.

A shrub, the twigs brownish-tomentose. Petiole 1.5-2.5 cm. long; leaves 5.5-9.5 cm. long, cordate at base, 7-nerved, 2-lobed at apex, bright green, coriaceous, strongly reticulated, glabrous, the ovate lobes spreading and obtuse; racemes dense, few-flowered; pedicels short, stout; calyx 2-2.4 cm. long, puberulent; petals 3-4 cm. long, with an oval blade and a slender tomentose claw; ovary densely tomentose, long-stipitate.

TYPE LOCALITY: Rascon, San Luis Potosí.

DISTRIBUTION: Known only from the type locality.

21. *Casparea mexicana* (Vogel) Britton & Rose.

Bauhinia mexicana Vogel, *Linnaea* 13: 299. 1839.

A shrub, the branches somewhat hirsute-pilose. Leaves cordate at base, 5 cm. long, pubescent on both sides, glandular beneath, 7-nerved, lobed for about one-third, the short lobes spreading, acute; petioles 12–18 mm. long, hirsute; raceme hirsute; pedicels somewhat nodding, a little shorter than the calyx; calyx in bud pubescent, 1 cm. long; petals narrowly oblong, tapering below into the narrow pubescent claw; legume 7–8 cm. long, 12 mm. wide, glabrate, stipitate.

TYPE LOCALITY: Near Papantla, Veracruz.

DISTRIBUTION: Known to us from the description only.

22. *Casparea aurita* (Ait.) Griseb. *Fl. Brit. W. Ind.* 213. 1860.

Bauhinia aurita Ait. *Hort. Kew.* 2: 48. 1789.

A shrub, 1–2.5 m. high, the slender twigs and inflorescence tomentulose or short-villous. Stipules ovate to lanceolate, acute, about 1.5 mm. long, caducous; petioles slender, 5–25 mm. long; leaves ovate, submembranous, 2–7 cm. long, cordate or nearly truncate at base, 7-or-9-nerved, finely reticulate-veined, sparingly short-pubescent above, villous beneath, 2-lobed to about the middle, or deeper, the lanceolate lobes obtuse or acutish, parallel, or slightly divergent; racemes short, few-several-flowered; pedicels 8–15 mm. long; calyx 10–12 mm. long, puberulent; petals long-clawed, glabrous, 14–18 mm. long; legume linear, puberulent, slender-beaked, 8–11 cm. long, 10–13 mm. wide, its stipe 1.5–2.5 cm. long.

TYPE LOCALITY: Grown in England from seeds received from Jamaica.

DISTRIBUTION: Jamaica; Hispaniola.

ILLUSTRATION: Mill. *Fig. Pl. pl. 61*; Plum. *Pl. Am. pl. 44, pl. 2*; Fawcett & Rendle, *Fl. Jam.* 4: *pl. 37*.

23. *Casparea unilateralis* (Britten & Baker) Britton & Rose.

Bauhinia unilaterale Britten & Baker, *Journ. Bot.* 35: 233. 1897.

A shrub or small tree, the twigs glabrous or nearly so. Leaves lobed to the middle or below, glabrous, membranous, 5–10 cm. long, longer than broad, 7-nerved, the base rounded or subcordate, the lobes acutish; petiole slender, 2–2.5 cm. long; flowers in a dense unilateral raceme; pedicels 2–6 mm. long; perfect stamen elongated; flower bud cylindric, pubescent; calyx 6–8 mm. long; ovary white tomentose; legume 15 cm. long or longer, 16 mm. broad, glabrous, 12–16-seeded.

TYPE LOCALITY: Veracruz.

DISTRIBUTION: Veracruz.

24. *Casparea Rubeleruziana* (Donn. Smith) Britton & Rose.

Bauhinia Rubeleruziana Donn. Smith, *Bot. Gaz.* 13: 27. 1888.

A tree, 3–5 m. high, the branches brownish-tomentose. Stipules 4 mm. linear, caducous; petioles 1.8–3 cm. long, sometimes with a pair of small, oblong, smooth processes at the base; leaves glabrate above, tomentose beneath, at least along the veins, ovate-oblong, cordate at base, 10–15 cm. long, 9-nerved, 2-lobed or notched at apex, the lobes 0.5–5 cm. long, acute or rounded; racemes densely pubescent, 15–20-flowered; pedicels slender, 1–1.5 cm. long, pubescent; flower-buds pendulous; calyx about 2 cm. long, tomentose; petals linear-lanceolate to spatulate, clawed, about 2 cm. long, ciliate, red; perfect stamen as long as the petals; pistil tomentose, stipitate; legume 15 cm. long, 18–20 mm. wide.

TYPE LOCALITY: Rubeleruz, Guatemala.

DISTRIBUTION: Guatemala.

25. *Casparea Schlechtendaliana* (Mart. & Gal.) Britton & Rose.

Bauhinia Schlechtendaliana Mart. & Gal. Bull. Acad. Brux. 10²: 308. 1843.
Bauhinia Goldmannii Rose, Contr. U. S. Nat. Herb. 10: 97. 1906.

A tree, 6-8 m. high, the twigs, petioles, under surfaces of the leaves and inflorescence pubescent. Perioles 6-10 mm. long; leaves membranous, 5-7 cm. long, dull, loosely reticulate-veined, lobed for about one-third, the lobes triangular, acutish, the base subcordate; racemes rather densely many-flowered; pedicels slender, 1.5-2 cm. long; calyx about 12 mm. long; petals purple, oblong, glabrous, about 2 cm. long, long-clawed; legume 10-12 cm. long, 12-14 mm. wide, reticulate-veined, puberulent, its stipe 10-18 mm. long.

TYPE LOCALITY: Rio de las Vueltas near Oaxaca.
 DISTRIBUTION: Oaxaca and Chiapas.

26. *Casparea confusa* (Rose) Britton & Rose.

Bauhinia confusa Rose, Contr. U. S. Nat. Herb. 10: 97. 1906.

A shrub, about 2 m. high, the twigs densely short-villous, slender. Petioles pubescent, 1-2 cm. long; leaves broadly ovate or suborbicular in outline, membranous, 5-9 cm. long, sparingly pubescent above and on the veins beneath, rather delicately reticulate-veined, the base broadly cordate or subtruncate, the apex of many of them subtruncate, with 2, short, nearly erect, acute lobes; racemes rather densely villous, several-many-flowered; bracts setaceous, 6-8 mm. long; pedicels 8-15 mm. long; calyx 10-12 mm. long; petals oblong, white, glabrous, slender-clawed, about 15 mm. long; perfect stamen glabrous; legume 10-12 cm. long, 10-12 mm. wide, glabrous, its stipe about 2 cm. long.

TYPE LOCALITY: Tamasopa Cañon, San Luis Potosí.
 DISTRIBUTION: San Luis Potosí.

27. *Casparea divaricata* (L.) H. B. K.; Jackson, Index Kew. 1: 449. 1895.

Bauhinia divaricata L. Sp. Pl. 374. 1753.
Bauhinia porrecta Sw. Prodr. 66. 1788.
Bauhinia latifolia Cav. Ic. 5: 4. 1799.
Bauhinia furcata Desv. Ann. Sci. Nat. I. 9: 429. 1826.
Casparea porrecta Griseb. Fl. Brit. W. Ind. 213. 1860.
Bauhinia caribaea Jennings, Ann. Carnegie Mus. 11: 127. 1917.

A shrub, or a tree 5-7 m. high, variously pubescent or glabrate. Stipules 1-3 mm. long; leaves broadly ovate to suborbicular in outline, chartaceous or membranous, 4-12 cm. long, slender-petioled, sometimes broader than long, glabrous, pubescent or densely tomentose beneath, cordate or subtruncate, variously 2-lobed, the lobes acute, obtuse, rounded or acuminate; racemes several-many-flowered, more or less pubescent; pedicels short or slender; bracts small or minute; calyx 12-20 mm. long; petals white or pink, glabrous, 2-2.5 cm. long, oblong, acuminate, slender-clawed; fertile stamen about twice as long as the petals; legume 5-12 cm. long, 9-15 mm. wide, long-stipitate; seeds 5-10.

TYPE LOCALITY: America.
 DISTRIBUTION: Cuba; Jamaica; Cayman Islands; southern Texas; Sinaloa and Tamaulipas to San Luis Potosí, Yucatán, Honduras and Guatemala.
 ILLUSTRATIONS: L. Hort. Cliff, *pl. 15*; Jacq. Hort. Schoenb. *pl. 100*; Bot. Mag. *pl. 1708*; Cav. loc. cit. *pl. 405*; Jennings, loc. cit. *pl. 20*.

28. *Casparea versicolor* (Bertol.) Britton & Rose.

Bauhinia versicolor Bertol. Novi Comm. Bonon. 3: 321. 1839.

A low shrub, the slender twigs pubescent. Leaves cordate, 2-lobed, 9-nerved, small, only 1.5-3 cm. long, pubescent, the lobes ovate, divergent, acute; petioles shorter than the leaves; racemes short, few-flowered, pubescent; bracts shorter than the pedicels; calyx pilose; petals lanceolate, long-clawed, white, turning rose, setaceous-acuminate; fertile stamen very long; legume broadly linear, pubescent, many-seeded.

TYPE LOCALITY: Tamaulipas.
 DISTRIBUTION: Tamaulipas, Veracruz, Oaxaca.
 ILLUSTRATION: Bertol. loc. cit. *pl. 25*.

29. *Casparea Jenningsii* (P. Wilson) Britton & Rose.

Bauhinia Jenningsii P. Wilson, Bull. Torrey Club 43: 463. 1916.

A slender shrub or tree up to 5 m. high, the young branches, inflorescence and legume puberulent. Petiole 1.5–2 cm. long; leaves glabrate, entire, ovate to oblong-ovate, or ovate-lanceolate, subchartaceous, 7–14 cm. long, acute, acuminate or obtuse, 5-nerved, truncate or rounded at base; flowers corymbose; pedicels slender, 2 cm. long, or less; calyx puberulent, scarlet, about 2 cm. long; petals a little longer than the calyx, narrow, glabrous; fertile stamen one, twice as long as the 9 sterile ones; ovary long-stipitate; legume linear-oblong, 5–9 cm. long, 8–15 mm. wide; seeds oblong, 7–8 mm. long.

TYPE LOCALITY: Isle of Pines, Cuba.

DISTRIBUTION: Isle of Pines, Cuba; Yucatán.

30. *Casparea dipetala* (Hemsl.) Britton & Rose.

Bauhinia dipetala Hemsl. Diag. Pl. Mex. 48. 1880.

A shrub, 1.5–2 m. high, the twigs puberulent or glabrous. Stipules minute, ovate, acute; petioles slender, 2–3 cm. long; leaves broadly ovate or suborbicular, cordate, or nearly truncate at base, 7–9-nerved, glabrous on both sides, or pubescent beneath, 5–10 cm. long, 2-lobed, the lobes 1–4 cm. long, rounded; pedicels about 4 mm. long; flower-buds narrow, 1 cm. long or less; calyx about 15 mm. long; petals 2, about 6 mm. long, hairy; fertile filament about 2 cm. long; glabrous; perfect anther 6 mm. long, lanate on the inner side; ovary long-stipitate, hirsute; legume glabrous, shining, coriaceous, 8–15 cm. long, 10–15 mm. wide, its stipe about 2 cm. long.

TYPE LOCALITY: In the Valley of Cordova, Veracruz.

DISTRIBUTION: Veracruz; Cuba.

31. *Casparea Deserti* Britton & Rose, sp. nov.

A shrub, 3–5 m. high, the twigs puberulent or pubescent. Stipules minute, ovate, long-cuspidate; petioles 1–4 cm. long; leaves 2.5–8 cm. long, cordate at base, 9–11-nerved, glabrous above, pubescent beneath, thickish, 2-lobed, the lobes 1–6 cm. long, rounded, pedicels 6–15 mm. long; calyx 2–3 cm. long; petals 2, linear, 2 cm. long, more or less clothed with brown hairs; fertile stamen 4 cm. long, glabrous; perfect anther 10 mm. long, glabrous on both sides; ovary long-stipitate, brown-pubescent; legume 10–18 cm. long, about 1 cm. wide, its stipe 2.5–3.5 cm. long.

Puebla and Oaxaca. Type from near Tehuacán, Puebla, September 8, 1906, *J. N. Rose* 11375.

32. *Casparea pansamalana* (Donn. Smith) Britton & Rose.

Bauhinia pansamalana Donn. Smith, Bot. Gaz. 13: 27. 1888.

A shrub, or tree, 4–5 m. high, glabrous throughout. Stipules minute, caducous; petiole 3–4 cm. long; leaves ovate to broadly elliptic, chartaceous, shining, 7-nerved, 12–22 cm. long, entire or 2-lobed, acuminate; racemes several-many-flowered; pedicels about 15 mm. long; flower-bud linear, obtuse, 2 cm. long; calyx becoming spathe-like and reflexed; petals linear, long-clawed, 2 cm. long; fertile stamens 3, equalling the petals; legume 2–3 dm. long, 2–2.5 cm. broad, glabrous; seeds oval.

TYPE LOCALITY: River banks of the Pansamala, Guatemala.

DISTRIBUTION: Chiapas to Guatemala.

33. *Casparea Coulteri* (F. Macbride) Britton & Rose.

Bauhinia Coulteri F. Macbride, Contr. Gray Herb. 59: 22. 1919.

Bauhinia platypetala Benth.; Hemsl. Diag. Pl. Nov. 49. 1880. Not Burch. 1878.

A shrub, 4–8 dm. high, the twigs brownish-tomentose. Leaves orbicular or sometimes broader than long, cordate at base, 2–6 cm. wide, glabrous above, pubescent beneath, strongly 9-nerved, the short lobes rounded; flowers 2–6, clustered; pedicels short; calyx 1.5 cm. long,

brownish-pubescent; petals sessile, 2-2.5 cm. long, glabrous; stamens glabrous, 3 of them with perfect anthers; ovary brownish-pubescent; legume 10-15 cm. long, 1-1.5 cm. wide, stipitate, pubescent, slender-beaked.

TYPE LOCALITY: Zimapán, Hidalgo.
DISTRIBUTION: Hidalgo; San Luis Potosí.

34. *Casparea* (?) *Calderonii* Rose, sp. nov.

A tree, 4-5 m. high, the very slender twigs glabrous. Petioles slender, elongated, 2-5 cm. long; leaves membranous, very thin, dull, 5-10 cm. long, 9-nerved, glabrous above, pilose on the bases of the nerves beneath, delicately reticulate-veined, cleft to about the middle, the ovate lobes abruptly and bluntly short-acuminate, the base truncate or shallowly cordate; legumes solitary or 2 together, glabrous, reticulate-veined, 6-7 cm. long, 10-13 mm. wide.

San Julián, Sonsonate, El Salvador, 1924, *Salvador Calderón*, 2226.

6. *CASPAREOPSIS* Britton & Rose, gen. nov.

Shrubs or trees, with broad, 2-lobed leaves and large, racemose flowers. Calyx spathaceous, closed in bud, split along one side at flowering time. Petals 5, long-clawed, broad, somewhat unequal. Fertile stamen only 1; anther linear; staminodes short. Style slender, elongated. Legume linear, elongated, flat, the coriaceous valves twisting after dehiscence. Seeds flat.

Type species, *Bauhinia monandra* Kurz.

1. *Caspareopsis monandra* (Kurz) Britton & Rose.

Bauhinia monandra Kurz, Journ. Asiat. Soc. Bengal 42²: 73. 1873.
Bauhinia Kappleri Sagot, Ann. Sci. Nat. VI. 13: 317. 1882.
Bauhinia Krugii Urban, Ber. Deut. Bot. Ges. 3: 83. 1885.

A large shrub or small tree 5-15 m. high, the young twigs pubescent, the bark gray and smooth. Leaves broadly ovate or suborbicular, 8-20 cm. long, rather thick, 2-lobed to about one-third their length, cordate or truncate at the base, pubescent on the veins beneath, glabrous above, the petiole rather stout, 6 cm. long or less; flowers in short, pubescent racemes; calyx about 2 cm. long, tomentose, pointed in bud; petals obovate, 4-5 cm. long, rose-colored, one of them carmine-spotted; fertile stamen about 4 cm. long, the linear anther about 6 mm. long; legume linear, flat, 22 cm. long or less, about 2.5 cm. broad; seeds about 1 cm. long, flat, black and shining.

TYPE LOCALITY: Burma.
DISTRIBUTION: Jamaica, Cuba to St. Thomas and Barbados. French Guiana to Colombia. Naturalized from India.

II. **MOREAE.** Trees with pinnate leaves. Calyx gamosepalous, its lobes imbricated. Stamens 5; anthers dorsifixed, versatile, longitudinally dehiscent; staminodes 5. Legume broad, woody, dehiscent.

One genus in our area.

7. **MORA.**

7. *MORA* Benth. Trans. Linn. Soc. 18: 210. 1839.

Unarmed trees. Leaves large, simply pinnate; leaflets few, large; stipules small, caducous, or wanting. Flowers small, spicate. Calyx with a very short tube and spreading 5-lobed limb. Petals 5, small, equal, imbricate. Stamens 5, opposite the petals, alternating with 5 staminodes. Ovary sessile or nearly so, few-ovuled. Legume flat, coriaceous to woody, 2-valved. Seeds suborbicular, large.

Type species, *Mora excelsa* Benth.

Leaflets 2 pairs.
Leaflets 3-6 pairs.
Leaflets 4-11 cm. long, obtuse or emarginate.
Leaflets 10-25 cm. long, long-acuminate.

1. *M. megistosperma*.
2. *M. Ekmanii*.
3. *M. Abbottii*.

1. *Mora megistosperma* (Pittier) Britton & Rose.

Dimorphandra megistosperma Pittier, Journ. Wash. Acad. 5: 472. 1915.
Dimorphandra oleifera Triana; Hemsl. Biol. Centr. Am. Bot. 1: 342, hyponym. 1880.
Mora oleifera Ducke, Arch. Jard. Rio Janeiro 4: 45, hyponym. 1925.

A tree 15-45 m. high with a trunk 10-15 m. long, and 1 m. in diameter. Leaves estipulate; rachis 5-10 cm. long; leaflets 2 pairs, 10-18 cm. long, 4.5-7 cm. wide, oblong, or oblong-lanceolate, rounded at base, somewhat pointed, glabrous; spike 8-10 cm. long; calyx-lobes glabrous, rounded, 3.5-4 mm. long; petals white, oblong, 6 mm. long; legume glabrous, 25 cm. long, 13 cm. wide; seed 18 cm. long by 12 cm. broad.

TYPE LOCALITY: Near Sumacate along the Treyra River, southern Darién, Panama.

DISTRIBUTION: Panama and northern Colombia.

ILLUSTRATION: Standley, Contr. U. S. Nat. Herb. 27: pl. 35.

2. *Mora Ekmanii* (Urban) Britton & Rose.

Dimorphandra Ekmanii Urban, Repert. Sp. Nov. 24: 4. 1927.

A large tree. Leaves glabrous; petiole 2-6 cm. long; leaflets 4-6 pairs, narrowly oblong to lanceolate, subchartaceous, 4-11 cm. long, 1-2.5 cm. wide, obtuse or emarginate; inflorescence forming a terminal panicle about 2 dm. long, its branches slender, densely flowered; calyx 5-lobed, scarcely 1 mm. long; petals ovate, yellow; legume elliptic, 1-seeded, woody, about 7.5 cm. long.

TYPE LOCALITY: Summit of Morne Baron, Massif du Nord, Haiti.

DISTRIBUTION: Hispaniola.

3. *Mora Abbottii* Rose & Leonard, sp. nov.

"A big forest tree with shaggy bark." Leaves once pinnate; petiole slender, 5-8 cm. long, terete; leaflets 3 pairs, lanceolate, 10-25 cm. long, 3-6 cm. wide, long-acuminate, glabrous; legume 22 cm. long, the valves infolded after dehiscence, glabrous; seeds flattened, 6-7 cm. broad, somewhat coiled.

Collected at Lo Bracito, near San Francisco de Macorís, Pacificador, Santo Domingo, April 14, 1922, W. L. Abbott 2200.

III. POEPPIGIÆ. Trees with pinnate leaves, the leaflets many, small. Calyx gamosepalous. Stamens 10; anthers dorsifixed, longitudinally dehiscent. Legume narrow, membranous, flat, indehiscent.

One genus in our area.

S. POEPPIGIA.

8. POEPPIGIA Presl. Symb. Bot. 1: 15. 1830.

Small unarmed trees, the leaves simply pinnate with many small leaflets. Stipules small, caducous. Flowers small, yellow, in small paniced cymes, the bracts and bractlets small, caducous. Calyx-tube campanulate, the limb 5-lobed, the lobes nearly equal, somewhat imbricated, persistent. Petals 5, imbricated in the bud, nearly equal. Stamens 10, free; filaments glabrous, erect. Ovary stipitate, many-ovuled; stipe adnate to one side of the calyx-tube. Legume elongated, membranous, flat and thin, indehiscent, angled on one side; seeds flat, shining.

Type species, *Poeppigia procera* Presl.

1. *Poeppigia procera* Presl, Symb. Bot. 1: 16, 1830.

Poeppigia excelsa A. Rich. in Sagra, Hist. Cuba 10: 218. 1845.

A tree, 4-5 m. high, the young branches and inflorescence puberulent. Leaves 1-3 dm. long; stipules linear, 5-7 mm. long; leaflets 20 or more pairs, linear-oblong, 1-2 cm. long, glabrate; calyx-lobes ovate, 1-2 mm. long; petals 8-10 mm. long, spatulate, obtuse; filaments slender, shorter than the petals, glabrous, ovary hairy; legume oblong, 4-9 cm. long, 1-1.5 cm. wide, glabrous.

TYPE LOCALITY: Cuba.

DISTRIBUTION: Guerrero to El Salvador and Colombia; Cuba, Brazil.

ILLUSTRATIONS: Sagra, loc. cit. pl. 39 (as *Ramiresia cubensis*); Presl, loc. cit. pl. 8.

IV. **PHYLLOCARPEAE**. Trees with pinnate leaves. Calyx polysepalous. Stamens dialypous; anthers dorsifixed, longitudinally dehiscent. Ovary few-ovuled, free from the calyx or receptacle. Legume winged.

One genus in our area.

9. **PHYLLOCARPUS**.

9. **PHYLLOCARPUS** Ried.; Endl. Gen. Suppl. 2: 97. 1842.

Large unarmed trees. Leaves abruptly simply pinnate; leaflets several pairs, large. Flowers in short racemes, often forming large panicles, unfolding before the leaves. Bracts and bractlets small, caducous. Calyx-tube very short, the 4 lobes imbricated in the bud, thick and leathery. Petals 3. Stamens 10, elongated, united below; ovary stipitate, few-ovuled. Legume oblong, thin, 1-or-2-seeded, indehiscent, winged on one suture.

Type species, *Phyllocarpus Pterocarpus* Ried.

1. **Phyllocarpus septentrionalis** Donn. Smith, Bot. Gaz. 55:

433. 1913.

A tree 20 m. high, the young branches, petioles and leaf-rachis pubescent. Leaves large; stipules falcate, 10-15 mm. long, acuminate; leaflets 4 or 5 pairs, obovate to lanceolate, 2-5 cm. long, acute or obtuse, somewhat pubescent; when mature shining; pedicels glabrous, 11-15 mm. long; bractlets 2, opposite, 2 mm. long; calyx-lobes 9-11 mm. long, glabrous; filaments 3 cm. long, united to the middle; legume 17 cm. long.

TYPE LOCALITY: Near Gualán, Guatemala.

DISTRIBUTION: Guatemala.

V. **CYNOMETREAE**. Trees or shrubs with pinnate or 2-foliolate leaves. Calyx polysepalous. Stamens distinct; anthers dorsifixed, longitudinally dehiscent. Ovary 1-2-ovuled, free from the calyx or receptacle. Legume wingless.

Petals 5.

Stamens glabrous; leaflets eglandular.

Stamens woolly; leaflets black-glandular.

Petals none.

Calyx 5-parted.

Calyx 4-parted.

Aril mostly large, nearly enclosing the seed; leaflets several or many pairs.

Aril very short; leaflets one pair.

10. **CYNOMETRA**.

11. **STAHLIA**.

12. **PRIORIA**.

13. **COPAIVA**.

14. **PSEUDOCOPAIVA**.

10. **CYNOMETRA** L. Sp. Pl. 382. 1753.

Unarmed trees or shrubs, with evenly pinnate, eglandular leaves of 1 pair or a few pairs of oblique leathery leaflets, the small flowers in axillary clusters. Calyx-tube very short, its 3, 4 or 5 segments reflexed, imbricated, at least in the bud. Petals 5, nearly equal, or the lower 1 or 2 smaller than the others. Stamens mostly 10, distinct, the filaments glabrous. Ovary short-stipitate or sessile, not adnate to the receptacle; ovules 2; style filiform; stigma terminal. Legume usually oblique or curved, leathery, swollen or terete, at length 2-valved, or indehiscent. Seeds without endosperm.

Type species, *Cynometra cauliflora* L.

Leaflets large, 4-15 cm. long, narrowed upward, acutish to acuminate.

Leaflets acuminate, the apex mostly blunt or retuse.

Leaflets ovate-lanceolate to elliptic-lanceolate, long-acuminate; West

Indian species.

Leaflets oblong to oblong-lanceolate, short-acuminate; Central American species.

Leaflets up to 5 cm. wide; flowers unknown.

Leaflets up to 3 cm. wide; fruit unknown.

Leaflets acutish, obtuse or retuse; Mexican species.

Pedicels 1-3 mm. long.

Pedicels 8-10 mm. long.

Leaflets small, 1-4.5 cm. long, rounded, retuse or obtuse; West Indian species.

Leaflets ovate to elliptic or oblong; legume ovoid.

Leaflets oblong-obovate; legume obliquely oblong.

1. *C. americana*.

2. *C. hemitomophylla*.

3. *C. retusa*.

4. *C. oaxacana*.

5. *C. colimensis*.

6. *C. cubensis*.

7. *C. portoricensis*.

1. *Cynometra americana* Vogel, *Linnaea* 10: 602. 1836.

A shrub with slender glabrous twigs, the leaves glabrous. Petioles about 1 cm. long or shorter; leaflets 2, obliquely ovate-lanceolate or elliptic-lanceolate, chartaceous, 7-14 cm. long, about 6 cm. wide, or less, narrowed above, rather long-acuminate, the apex blunt, or retuse; fascicles many-flowered; pedicels pilose, 6-12 mm. long; sepals ovate, 3-3.5 mm. long; petals obovate, about 4 mm. long; stamens about 7 mm. long; young legume obliquely elliptic, pubescent, apiculate, about 1.5 cm. long.

TYPE LOCALITY: Port au Prince, Haiti.
DISTRIBUTION: Haiti.

2. *Cynometra hemitomophylla* (Donn. Smith) Rose.

Copaifera hemitomophylla Donn. Smith, *Bot. Gaz.* 27: 332. 1899.

A large, round-topped tree. Leaflets 2, oblong-lanceolate, 10-15 cm. long, 3-5 cm. wide, cuneate at base, glabrous, short-acuminate; petioles stout, 6-8 mm. long; peduncle, in fruit, stout, nearly 1 cm. long; pedicels, in fruit, also stout, about as long as the peduncle; legume ovoid, somewhat compressed, 3-4.5 cm. long, about as broad as long, rounded.

TYPE LOCALITY: Santo Domingo de Golfo Dulce, Costa Rica.
DISTRIBUTION: Known only from the type locality.

3. *Cynometra retusa* Britton & Rose, *Tropical Woods* 7: 5. 1926.

A medium-sized tree, the twigs glabrous. Leaf-buds covered with large ovate, striate bracts; stipules filiform, scarious, 8-10 mm. long, caducous; petiole 4-5 mm. long; leaflets 2, oblong, oblique, short-acuminate, 6-8 cm. long, about 3 cm. wide, retuse, glabrous, shining above; flowers in very short axillary sessile racemes; pedicels 7-9 mm. long, hairy; sepals and petals yellow, about 5 mm. long; stamens 7-8 mm. long; ovary densely lanate.

TYPE LOCALITY: Entre Rios, Lower Motagua River Valley, Guatemala.
DISTRIBUTION: Guatemala; Honduras.

4. *Cynometra oaxacana* Brand. *Univ. Calif. Publ. Bot.* 6: 180. 1915.

A shrub, or small tree 8-10 m. high; the twigs puberulent. Leaflets 2, obliquely elliptic to obovate, 3-6 cm. long, acute, obtuse or retuse, glabrous; inflorescence pilose, scaly-bracted; pedicels 1-3 mm. long; sepals 3-5, ovate, about 3 mm. long; petals 3-5, elliptic, acute, about as long as the sepals; stamens, in the bud, not longer than the petals; ovary pubescent.

TYPE LOCALITY: Cerro de Picacho, Oaxaca.
DISTRIBUTION: Known only from the type locality.

5. *Cynometra colimensis* Britton & Rose, sp. nov.

Twigs slender, glabrous. Leaflets 2, obliquely obovate or elliptic, abruptly acute, glabrous, reticulate-veined, 4-8 cm. long, 2-3.5 cm. wide; inflorescence short-pilose, scaly-bracted; pedicels slender, 8-10 mm. long; sepals ovate, about 3 mm. long; stamens longer than the sepals; young legume obliquely oblong, puberulent and papillose, flattened, about 2 cm. long and 1 cm. wide.

Vicinity of Manzanillo, Colima, December 2, 1925, *Roxana S. Ferris* 6237.

6. *Cynometra cubensis* A. Rich. in Sagra, *Hist. Cuba*, 10: 233. 1845.

A shrub 2 m. high or higher, the young twigs pubescent, the branches gray. Leaflets 2, ovate to elliptic or obovate, 1-4.5 cm. long, glabrous, reticulate-veined, coriaceous, the apex rounded or emarginate, the costa much excentric; flowers in small axillary clusters on a very short peduncle; pedicels 10-12 mm. long, pubescent; sepals 5, oblong, 5-6 mm. long, glabrous; petals 5, about as long as the sepals; stamens 10, much longer than the petals, glabrous; ovary

sessile, hairy, 2-ovuled; style glabrous; legume ovoid, oblique, somewhat rounded, compressed, punctate-scribulate, less than 2 cm. long.

TYPE LOCALITY: Vuelta de Abajo, Cuba.

DISTRIBUTION: Pinar del Rio, Cuba.

ILLUSTRATION: Sagra, loc. cit. *pl.* 41.

7. *Cynometra portoricensis* Krug & Urban; Urban, Symb. Ant. 1: 312. 1899.

A tree, sometimes 15 m. high, densely leafy, the young twigs pilose, the wood tough. Petiole only 2.5 mm. long, or less; stipules none; leaflets 2, obliquely oblong-obovate, sessile, inequilateral, coriaceous, entire, 1.5-4 cm. long, obtuse or emarginate at the apex, pale green; flowers few, in small sessile axillary clusters subtended by ovate-orbicular striate bracts about 2 mm. long; pedicels slender, densely pubescent, 4-6 mm. long; calyx-segments narrowly oblong, about 5 mm. long; petals shorter than the calyx-segments; anthers short-oblong; legume obliquely oblong, 2-3 cm. long, verrucose or at length smooth.

TYPE LOCALITY: Near Rincon, Porto Rico.

DISTRIBUTION: Porto Rico; Hispaniola.

11. *STALHIA* Bello, Anal. Soc. Esp. Hist. Nat. 10: 255. 1881.

A large unarmed tree with alternate evenly pinnate leaves, the leaflets bearing scattered round black glands beneath, and rather large yellow, perfect flowers in terminal and axillary racemes. Calyx of 5, nearly equal, ovate sepals united at the base. Petals 5, nearly equal, papillose, oval-elliptic, the anterior short-clawed. Stamens 10, distinct, with woolly filaments and versatile anthers. Ovary sessile, not adnate to the receptacle, glabrous; ovules 2; style slender; stigma small, terminal. Legume ovoid, coriaceous, indehiscent, or, perhaps, at length 2-valved.

Type species, *Stahlia maritima* Bello.

1. *Stahlia monosperma* (Tul.) Urban, Symb. Ant. 2: 285. 1900.

Caesalpinia monosperma Tul. Arch. Mus. Paris 4: 148. 1844.

Stahlia maritima Bello, Anal. Soc. Esp. Hist. Nat. 10: 255. 1881.

A tree, up to 20 m. high, with glabrous twigs and leaves. Petioles 1-2.5 cm. long; leaflets 6-12, mostly opposite, short-stalked, 5-9 cm. long, ovate to ovate-lanceolate, entire or irregularly crenulate, shining above, dull beneath, acute or short-acuminate at the apex, truncate, obtuse or subcordate at the base; racemes 10-15 cm. long, the rachis, bracts, pedicels and calyx sparingly pilose; pedicels stout, recurved, 4-8 mm. long; sepals ovate, obtuse, about 6 mm. long; petals 10-12 mm. long; stamens deflexed, about as long as the petals; legume 5 cm. long or less, about 2.5 cm. wide and 1 cm. thick, purple, coriaceous, 1-seeded.

TYPE LOCALITY: Porto Rico.

DISTRIBUTION: Porto Rico; Vieques.

ILLUSTRATION: Addisonia *pl.* 401.

12. *PRIORIA* Griseb. Fl. Brit. W. Ind. 215. 1860.

Unarmed trees. Leaves simply pinnate; leaflets 2 pairs or sometimes only 1 pair, pellucid-dotted, coriaceous; stipules small, caducous. Inflorescence of slender, interrupted paniced spikes; bracts minute; bractlets cup-shaped, 2-lobed, subtending the flowers. Calyx-tube very short, disk-like, with 5 orbicular petaloid segments, imbricated in the bud. Petals none. Stamens 10, free, subequal. Ovary sessile or short-stipitate, 2-ovuled. Legume suborbicular, flattened, woody, at length 2-valved. Seed 1, pendulous, flat, large; endosperm none.

Type species, *Prioria copaifera* Griseb.

1. *Prioria copaifera* Griseb. Fl. Brit. W. Ind. 215. 1860.

A tree 12-30 m. high with a spreading top, the trunk 1 m. or more in diameter. Leaflets lanceolate to elliptic, glabrous, 10-16 cm. long, 5-7 cm. wide, rounded or broadly cuneate at

base, the apex acute or acuminate, flowers pale yellow, strong-scented; sepals 2.5 mm. long, their margins minutely ciliate; stamens 5 mm. long; legume 6-10 cm. broad, strongly longitudinally veined.

TYPE LOCALITY: Bachelor's Hall, near Bath, Jamaica.
DISTRIBUTION: Jamaica; Nicaragua; Panama; Colombia.
ILLUSTRATION: Standley, Contr. U. S. Nat. Herb. 27: pl. 34.

13. COPAIVA Jacq. Enum. Pl. Carib. 4, 21. 1760.

Copaifera L. Sp. Pl. ed. 2, 557. 1762.
Copaiba Adans. Fam. Pl. 2: 341. 1763.

Unarmed trees, the leaves pinnate. Leaflets several to many pairs, coriaceous or chartaceous; stipules minute. Inflorescence of paniced interrupted spikes or narrow racemes; bracts small, caducous; bractlets none. Flowers small; calyx-tube short, disk-like, with 4 segments, imbricate or subvalvate in the bud; petals none; stamens 8 or 10, distinct; filaments glabrous; ovary stipitate, 2-ovuled. Legume short, somewhat oblique, compressed or turgid, 2-valved. Seed 1, pendulous; endosperm none; aril mostly large, nearly enclosing the seed.

Type species, *Copaiva officinalis* Jacq.

1. *Copaiva panamensis* Britton, sp. nov.

A tree about 10 m. high, the trunk about 3 dm. in diameter, the foliage glabrous. Leaflets 3 or 4 pairs, obliquely ovate or elliptic-ovate, coriaceous, finely reticulate-veined on both sides, 3-5 cm. long, the base obtuse or rounded, the apex short-acuminate, the midvein prominent beneath; legume compressed-turgid, red, glabrous, orbicular or broadly ellipsoid, 2 cm. broad, about 1 cm. thick; aril obtusely lobed, covering most of the dull, black seed.

Vicinity of Penonome, Panama, February 23-March 22, 1908, R. S. Williams 50.

14. PSEUDOCOPAIVA Britton & Wilson, Tropical Woods 20: 28. 1929.

Trees, with glabrous foliage, the petioled, apparently estipulate leaves of one pair of oblique, coriaceous leaflets. Flowers small, in short axillary racemes; bractlets none. Calyx-tube very short, with 4 oblong valvate segments. Petals none. Stamens 10, distinct; filaments filiform, glabrous; ovary stipitate; style long, slender; stigma minute. Legume short, flat, dehiscent. Seed 1, oblong, black, shining, the aril short, borne at one basal edge of the seed.

Type species, *Copaifera hymenaefolia* Moric.

1. *Pseudocopaiva hymenaefolia* (Moric.) Britton & Wilson, Tropical Woods 20: 28. 1929.

Copaifera hymenaefolia Moric. Mem. Soc. Genève 6: 529. 1833.
Copaiba hymenaefolia Kuntze, Rev. Gen. 172. 1891.

A slender tree, 10 m. high, or higher. Leaflets obliquely ovate or lanceolate, 4-7 cm. long, acuminate, reticulate-veined, shining; racemes shorter than the leaves; sepals glabrous and black-punctate without, densely white-tomentose within; stamens about twice as long as the sepals; ovary a little longer than the stamens, flattened, tapering into the style; stipe of legume 5-6 mm. long, slender; legume strongly flattened, short-oblong to orbicular, 2-2.5 cm. long; seed short-oblong, oblique at base, 1-1.5 cm. long, rounded.

TYPE LOCALITY: Cuba.
DISTRIBUTION: Cuba and Isle of Pines.
ILLUSTRATION: Moric. loc. cit. pl. 1.

VI. AMHERSTIEAE. Trees or shrubs with pinnate rarely 1-foliolate leaves. Calyx polysepalous, the sepals mostly imbricated. Anthers dorsifixed, versatile, longitudinally dehiscent. Stipe of the 3-several-ovuled ovary adnate to the calyx or receptacle.

Bractlets minute or caducous, or none.
Petals none.
Petals 3-5.

15. APALATOA.

- Leaflets only 1 pair.
 Petals clawed; legume rugose, indehiscent. 16. TRACHYLOBIUM.
 Petals sessile; legume smooth.
 Stigma small; legume indehiscent. 17. HYMENAEA.
 Stigma dilated; legume 2-valved. 18. PELTOGYNE.
 Leaflets few-many pairs.
 Leaflets many pairs, narrow; legume turgid, fleshy; flowers racemose. 19. TAMARINDUS.
 Leaflets few pairs, broad; legume flat; flowers in bracted heads. 20. BROWNEOPSIS.
 Bractlets large, mostly persistent.
 Petal only 1, long-clawed. 21. VOUAPA.
 Petals 5, unequal. 22. BROWNEA.

15. *APALATOA* Aubl. Pl. Guian. 1: 382, pl. 147. 1775.

Crudia Schreb. Gen. 282. 1789.

Unarmed trees, the leaves pinnate, the leaflets alternate, the flowers in racemes. Bracts and bractlets small or wanting. Calyx-tube short; sepals 4, imbricate in the bud. Petals none; stamens 8-10, distinct; ovules several, usually 4. Legume short, broad, sessile, woody, flattened, 2-valved. Seeds 1 or 2, very flat, brown or black.

Type species, *Apalatoa spicata* Aubl.

- Leaflets 7-13, West Indian species. 1. *A. antillana*.
 Leaflets 4-8, Central American species.
 Inflorescence elongated; leaflets 6 or fewer, somewhat acuminate; Nicaraguan species. 2. *A. acuminata*.
 Inflorescence short, few-flowered; leaflets 6-8; Salvadorean species. 3. *A. Choussyana*.

1. *Apalatoa antillana* (Urban) Standley, Journ. Wash. Acad. 13: 440. 1923.

Crudia antillana Urban, Symb. Ant. 6: 10. 1909.

A tree 10-16 m. high with drooping or spreading branches. Stipules linear, 7-10 mm. long, caducous; leaflets 7-13, oblong to elliptic, 7-13 cm. long, acuminate, broadly cuneate or obtuse at base, glabrous; rachis loosely short-pubescent or glabrous; racemes many-flowered, 8-10 cm. long; pedicels 2-3 mm. long; bracts and bractlets elliptic, 6-8 mm. long; sepals puberulent, 5-6 mm. long; legume short-oblong, rusty pubescent, becoming glabrate, pointed, 7-10 cm. long; seed kidney-shaped, flattened, 4.5-6 cm. broad, regular.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica, Cuba and Hispaniola.

ILLUSTRATION: Fawcett & Rendle, Fl. Jam. 4: 122, f. 36, d. (as *Crudia spicata*.)

2. *Apalatoa acuminata* (Benth.) Taub. Bot. Centralbl. 47: 394. 1891.

Crudia acuminata Benth. Bot. Voy. Sulph. 89. 1844.

Touchiroa acuminata Kuntze, Rev. Gen. 211. 1891.

A tree, 8-20 m. high. Leaflets 4-6, elliptic to ovate-elliptic, acuminate, rounded at base, glabrous, 5-10 cm. long, 2-3 cm. wide; inflorescence 15 cm. long; pedicels 4 mm. long, thick; legume 6-8 cm. long, 3-4 cm. wide, coriaceous, reddish-villous.

TYPE LOCALITY: Central America, at Realejo, Nicaragua, or about the Gulf of Fonseca.

DISTRIBUTION: Nicaragua.

3. *Apalatoa Choussyana* Standley, Journ. Wash. Acad. 13: 440. 1923.

Crudia Choussyana Standley, Field Mus. Publ. Bot. 4: 213. 1829.

A tree with glabrous foliage. Leaflets 6-8, oblong to lanceolate, shining above, acute or short-acuminate, 3-8 cm. long, the base obtuse, the lateral venation inconspicuous; inflorescence few-flowered, 5-9 cm. long; fruiting pedicels 4-5 mm. long; legume a little longer than wide, 5-7 cm. long, thin, densely fulvous-tomentulose, somewhat rugose, 1-seeded.

TYPE LOCALITY: Finca San Nicolas, El Salvador.

DISTRIBUTION: Known only from the type locality.

16. **TRACHYLOBIUM** Hayne, *Flora* 10: 743. 1827.

Unarmed trees, with 2-foliolate leaves, the leaflets coriaceous, the stipules caducous, the white flowers paniced. Bracts and bractlets concave, small, caducous. Calyx with a turbinate tube and 4, imbricated segments. Petals 5, clawed, imbricated, or the two lower ones scale-like. Stamens 10 distinct, the filaments villous at the base; anthers oblong. Ovary few-ovuled, short-stipitate, the stipe adnate to the calyx-tube; style filiform. Legume coriaceous, rugose or verrucose, indehiscent. Seed without endosperm.

Type species, *Trachylobium Hornemannianum* Hayne.

1. **Trachylobium verrucosum** (Gaertn.) Oliver, *Fl. Trop. Afr.* 2: 311. 1871.

Hymenaea verrucosa Gaertn. *Fruct.* 2: 306. 1791.

A tree, about 10 m. high, or higher, the twigs and leaves glabrous. Leaflets obliquely ovate-elliptic, coriaceous, 4-8 cm. long, dark green and shining above, pale green, dull, and finely reticulate-veined beneath, the apex abruptly acute, the base rounded, the midvein excentric; inflorescence puberulent; panicle large; pedicels about 2 mm. long; calyx sericeous, its segments about 6 mm. long; petals nearly equal, about twice as long as the calyx; legume ellipsoid, obtuse, verrucose and densely puberulent, 3-5 cm. long.

TYPE LOCALITY: Madagascar.

DISTRIBUTION: Naturalized in Camaguay and Oriente, Cuba. Native of Madagascar.

ILLUSTRATION: Gaertn. loc. cit. *pl.* 139, *f.* 7.

17. **HYMENAEA** L. *Sp. Pl.* 1192. 1753.

Large, unarmed resinous trees, with 2-foliolate, petioled, subcoriaceous leaves, the leaflets oblique, and large white flowers in terminal corymbose panicles. Calyx-segments 4, imbricated, the tube narrowly campanulate. Petals 5, slightly unequal, sessile. Stamens 10, distinct, glabrous; anthers longitudinally dehiscent. Ovary short-stipitate, its stipe adnate to the calyx-tube; style filiform; stigma small, terminal. Legume woody, thick, indehiscent. Seeds few, without endosperm, the testa bony.

Type species, *Hymenaea Courbaril* L.

1. **Hymenaea Courbaril** L. *Sp. Pl.* 1192. 1753.

Hymenaea Candolleana H. B. K. *Nov. Gen. & Sp.* 6: 323. 1824.

Inga megacarpa M. E. Jones, *Contr. West. Bot.* 15: 140. 1929.

A tree, up to 20 m. high or higher, the trunk up to 2 m. in diameter, the bark smooth, the stout branches spreading, the twigs and leaves glabrous. Leaflets oblong, to oblong-lanceolate, or oblong-ovate, 4-9 cm. long, very inequilateral, sessile, acute or acuminate; panicles several-many-flowered; pedicels short and stout; calyx-tube (receptacle) about 8 mm. long; the segments oblong, densely puberulent, about 15 mm. long; petals thin, dotted, about as long as the calyx-segments; stamens white, about 3 cm. long; legume oblong, dark-brown, compressed, roughened, 5-10 cm. long, few-several-seeded, the seeds oblong, 2-3 cm. long.

TYPE LOCALITY: Brazil.

DISTRIBUTION: West Indies (except Bahamas); Tepic to Panama; Colombia to Bolivia and French Guiana.

ILLUSTRATIONS: Fawcett & Rendle, *Fl. Jan.* 4: *f.* 35; Gaertn. *Fruct. pl.* 145; Descourt. *Fl. Ant. pl.* 359; Cook & Collins, *Contr. U. S. Nat. Herb.* 8: *pl.* 41; Standley, *Contr. U. S. Nat. Herb.* 27: *pl.* 33; Hayne, *Arzn. Gew.* 11: *pl.* 10; H. B. K. loc. cit. *pl.* 566.

18. **PELTogyNE** Vogel, *Linnaea* 11: 410. 1837.

Unarmed trees, the leaves simply pinnate, the leaflets 1 pair; stipules present or wanting. Inflorescence racemose, the flowers small or of middle size, white. Calyx-tube disk-form, the 4 lobes imbricated in the bud. Petals 5, sessile. Stamens 10, free, glabrous. Ovary short-stipitate or sessile, its stipe adnate to the calyx-tube; stigma dilated. Legume flat, 2-valved. Seed pendulous, thin, orbicular.

Type species, *Peltogyne discolor* Vogel.

1. *Peltogyne purpurea* Pittier, Journ. Wash. Acad. 5: 471. 1915.

A tree up to 25 m. high, with a trunk 6 dm. in diameter, the slender twigs and the leaves glabrous, the leaves deciduous. Stipules ovate, acuminate, caducous; leaflets oblong to elliptic, 5.5-7 cm. long, 2.5-3 cm. wide, finely reticulate-veined, the base rounded, the apex acuminate; legume suborbicular to obovate, reticulate-veined, 3-4 cm. long; seed about 2 cm. long.

TYPE LOCALITY: Punta Patiño, southern Darién, Panama.

DISTRIBUTION: Panama.

19. *TAMARINDUS* L. Sp. Pl. 34. 1753.

An unarmed tree, with evenly pinnate leaves, numerous and small leaflets, the minute stipules caducous and yellow, racemose flowers. Calyx-tube turbinate, its 4 segments imbricated. Petals very unequal, the 3 upper ones large, nearly alike, the 2 lower ones minute, scale-like. Perfect stamens 3, monadelphous; anthers longitudinally dehiscent; staminodia minute. Ovary stipitate, few-many-ovuled, the stipe adnate to the calyx-tube; style long; stigma terminal, subcapitate. Legume linear or linear-oblong, curved, little compressed, indehiscent, the thin epicarp crustaceous, the mesocarp pulpy, the coriaceous endocarp septate beneath the obovate-orbicular seeds. Endosperm none; cotyledons thick.

Type species, *Tamarindus indica* L.

1. *Tamarindus indica* L. Sp. Pl. 34. 1753.

Tamarindus occidentalis Gaertn. Fruct. 2: 310. 1791.

Tamarindus officinalis Hook. Bot. Mag. pl. 4563. 1851.

A large tree, sometimes 20 m. high or higher, with a trunk up to 1.5 m. thick, the bark brown, rough, the branches widely spreading, the young twigs slender, puberulent. Leaves 6-12 cm. long, short-petioled, glabrous or nearly so; leaflets 10-18 pairs, thin, reticulate-veined, oblong, 12-25 mm. long, rounded or retuse at the apex, obliquely obtuse or subtruncate at the base; racemes few-several-flowered, mostly terminal and shorter than the leaves; pedicels slender, 6-10 mm. long; calyx 8-10 mm. long; larger petals a little longer than the sepals; stamens a little longer than the petals; legume 5-15 cm. long, about 2 cm. thick, the epicarp brown, scaly, the flesh acid, the brown, shining seeds about 1 cm. broad.

TYPE LOCALITY: India.

DISTRIBUTION: Florida; West Indies; continental tropical America. Native of India.

ILLUSTRATIONS: Jacq. Sel. Stirp. Am. pl. 10; Hayne, Arzn. Gew. 9: pl. 41; Gaertn. loc. cit. pl. 146; Hook. loc. cit. pl. 4563.

√ 20. *BROWNEOPSIS* Huber, Bol. Mus. Goeldi 4: 565. 1906.

Unarmed trees, with evenly pinnate leaves, the bracteolate flowers in bracted heads. Calyx-tube disk-like, the 4 petaloid segments distinct, or more or less united. Petals 3 or 4, rudimentary and ligulate, or elongate-obovate. Stamens 12-13, the filaments united below into a cleft tube, the oblong anthers subversatile. Ovary stipitate, its stipe adnate to the short calyx-tube; style elongated; stigma capitate. Legume (in the following species) flat, elongated, coriaceous; longitudinally dehiscent, the seeds flattened.

Type species, *Browneopsis ucayalina* Huber.

1. *Browneopsis* (?) *excelsa* Pittier, Contr. U. S. Nat. Herb. 18:

157. 1916.

A tree, reaching 30 m. in height, with a trunk 4.5 dm. in diameter, the bark rather smooth. Leaves glabrous; stipules small, caducous; petiole 4-10 cm. long; leaflets 2 or 3 pairs, ovate, chartaceous, 3-10 cm. long, finely reticulate-veined, the apex long-acuminate, the midvein prominent beneath; inflorescence terminal; flower-clusters 1-5, subtended by many caducous, puberulent, ovate to obovate bracts 2-3.5 cm. long; receptacular tube thick, 8 mm. long; calyx-segments pink, 3 of them elliptic, about 2.5 cm. long, the fourth shorter; petals elongate-obovate, about 3 cm. long; stamens 14 or 15; filaments glabrous, united at the base; ovary

many-ovuled; style 4 cm. long; legume 15–20 cm. long, 3–4 cm. wide, wrinkled and densely brown-puberulent, abruptly bent near the acute apex; seeds 2.5–3 cm. long.

TYPE LOCALITY: Near Garachiné, southern Darién, Panama.

DISTRIBUTION: Darién, Panama.

ILLUSTRATION: Pittier, loc. cit. *pl.* 63.

21. *VOUAPA* Aubl. Pl. Guian. 1: 25, *pl.* 7. 1775.

Outea Aubl. Pl. Guian. 1: 28, *pl.* 9. 1775.

Macrolobium Schreb. Gen. 30. 1789.

Unarmed trees. Leaves pinnate, with 1 to many pairs of leaflets, the stipules foliaceous or scale-like, caducous. Inflorescence racemose, axillary or terminal; bracts small, caducous. Bractlets 2, valvate in the bud, connate below. Calyx-tube short, turbinate or sometimes slender, the 4 segments slender and imbricated in the bud. Petal 1, large, clawed. Perfect stamens 3, long, free; staminodia sometimes 7, or fewer. Legume flattened, 2-valved, orbicular to oblong; seeds 1 or few, flattened, without endosperm.

Type species, *Vouapa biflora* Aubl.

1. *Vouapa Pittieri* Rose, sp. nov.

Leaves 2-foliolate, subsessile; leaflets broadly oblanceolate, 3–3.5 dm. long, sometimes 1 dm. broad, chartaceous, oblique at base, acute or acuminate. Inflorescence lateral, borne on old branches, 3–5 cm. long, on a short peduncle; pedicels 4–6 mm. long, glabrous; involucre 9–11 mm. long, glabrous, of 2 bracts connate to the middle; calyx glabrous; petal 1, about 4 cm. long, thin, with wavy margins; style glabrous; legume oblong, 1.5 dm. long, 5 cm. wide, glabrous; seed oblong, 2 cm. long.

Plain of Sperdi near Puerto Obaldia, San Blas coast, near sea-level, Panama. September, 1911, *H. Pittier* 4355.

22. *BROWNEA* Jacq. Enum. Pl. Carib. 6. 1760.

Hermesias Loefl. Iter 278, hyponym. 1758.

Unarmed shrubs or trees, the leaves simply pinnate; leaflets 1-several pairs, in some species bearing a single sessile gland near the base beneath. Stipules caducous, sometimes long and ribbon-like. Flowers large, in conspicuous heads or short racemes, terminal, axillary, or borne on the trunk or branches, rose or red, white in one species. Bracts often large and colored, caducous. Bractlets colored, more or less connate about the calyx. Calyx-tube campanulate, the segments 4 or 5. Petals 4 or 5, clawed, ovate to oblong, imbricate. Stamens 10 to 15, distinct, or more or less connate up to the middle. Ovary stipitate. Legume oblong, or broadly linear, straight or falcate, flat, 2-valved.

Type species, *Brownea coccinea* Jacq.

Flowers red, borne on the trunk and larger limbs; calyx-segments 4.
Inflorescence terminal or axillary; flowers pink; calyx-segments 5.

1. *B. macrophylla*.

2. *B. Rosa de monte*.

1. *Brownea macrophylla* Linden, Cat. 18: 11. 1863.

A shrub or tree, 3–12 meters high, the young twigs densely villous. Stipules ribbon-like, caducous; petiole short; rachis 2–4 dm. long, glabrate or pubescent; leaflets 3–6 pairs, lanceolate, long-acuminate, glabrous or nearly so, the lower pair about 10 cm. long, the terminal pairs 32 cm. long or less; flowers in large heads borne on the trunk or large branches, the heads 30–50-flowered; outer bracts 2–5 cm. long, the inner 6 cm. long by 2 mm. broad, pinkish white, pubescent without; pedicels 4 mm. long; sheath 3.5–4 cm. long, densely tomentose outside, 2-lipped; calyx-segments 4, united at base; petals 5 cm. long, red, spatulate, tapering into a long slender claw, nearly equal; stamens 10–12 cm. long, united below into a tube 2 cm. long; ovary long-stipitate, densely tomentose.

TYPE LOCALITY: Antioquia, Colombia.

DISTRIBUTION: Panama and Colombia.

ILLUSTRATION: Gard. Chron. 1873: *f.* 149.

2. *Brownea Rosa de monte* Berg. Phil. Trans. Roy. Soc. London 63:
174. 1773.

Brownea Rosa Pers. Syn. Pl. 2: 237. 1807.
Brownea rosea Otto, Allg. Gart. 23: 147. 1855.
Brownea speciosa Rchb.; Griseb. Fl. Brit. W. I. 212. 1860.
Hermesias Rosa Kuntze, Rev. Gen. 191. 1891.
Brownea rosa-montis Pittier, Contr. U. S. Nat. Herb. 18: 156. 1916.

A tree, 3-10 meters high with a trunk up to 2.5 dm. in diameter. Leaflets 1 to 4 pairs, glabrous, oblong, 1-4 dm. long, 4-7 cm. wide, long-cuspidate; inflorescence a large terminal, dense cluster of pink flowers, sessile or nearly so; bracts broadly ovate, pubescent, narrowed toward the apex into a linear tip, about 5 cm. long; pedicels 5 mm. long, pubescent; sheath tubular-campanulate, 2-lipped, 4 cm. long, tomentose; calyx-segments 5, 2.5 cm. long; petals 5, 4-6.5 cm. long; stamens 9-11 cm. long, united at base into a tube 2-2.5 cm. long; legume 12-14 cm. long, about 4 cm. wide, short-stipitate, brown-pubescent.

TYPE LOCALITY: Porto Bello, Panama.

DISTRIBUTION: Panama; St. Vincent?

ILLUSTRATIONS: Berg. loc. cit. pl. 8, 9; Lam. Tahl. Encyc. pl. 575, f. 3.

VII. CASSIEAE. Herbs, shrubs, vines or trees, with pinnate, rarely 2-foliolate leaves. Calyx mostly polysepalous, the sepals imbricate or rarely subvalvate. Stamens 5-10, distinct, the anthers nearly always basifixed and opening by terminal pores or slits.

- A. Petals only 1 or 2, small, or wanting. 23. DIALIUM.
 B. Petals 5.
 1. Legume not elastically dehiscent; funicle mostly long.
 a. Legume terete, subterete, turgid or tetragonal.
 Legume elongated, woody, indehiscent; trees with eglandular leaves. 24. CASSIA.
 Legume membranous or coriaceous. 25. PSEUDOCASSIA.
 Legume coriaceous, tardily dehiscent; leaves eglandular.
 Legume thin-walled; leaves glanduliferous.
 Legume 1-celled, dehiscent along one suture; leaflets only 4, broad; woody plants. 26. CHAMAEFISTULA.
 Legume indehiscent or irregularly bursting; leaflets 6 or more; woody plants. 27. ADIPERA.
 Legume dehiscent along both sutures, very narrow; herbs. 28. EMELISTA.
 b. Legume flat, compressed, 4-winged, or subglobose.
 Legume 4-winged; large shrub; leaves eglandular. 29. HERPETICA.
 Legume not 4-winged. 30. PTEROCASSIA.
 Legume flat, narrowly winged on both sutures, indehiscent; leaves eglandular.
 Legume wingless.
 Legume constricted between the seeds, breaking into 1-seeded joints; leaves glanduliferous.
 Low stellate-pubescent shrub; flowers short-racemose, small. 31. DESMODIACASSIA.
 Tall, pubescent shrub; flowers solitary, or few, large. 32. PHRAGMOCASSIA.
 Legume not constricted.
 Legume short, flat, elliptic, rounded, sometimes crested over the seeds; leaves eglandular. 33. SENNA.
 Legume elongated or short, linear to oblong, not crested.
 Legume narrowly linear, villous, deeply impressed between the seeds; annual herb, the leaves glanduliferous. 34. SERICEOCASSIA.
 Legume glabrous, or sparingly pubescent, flat and long, or turgid and short.
 Leaves much reduced, eglandular, the midvein spinulose-tipped; legume short. 35. XEROCASSIA.
 Foliage normal, the midvein not spinulose-tipped.
 Legume subglobose, indehiscent; leaves eglandular; leaflets 2, narrowly linear; low herb. 36. THARPIA.
 Legume dehiscent on both sutures, or breaking transversely.
 Legume mostly short; sepals narrow; leaves glanduliferous; mostly herbs. 37. EARLEOCASSIA.
 Legume elongated; sepals broad.
 Legume not breaking transversely.
 Leaves eglandular; trees and shrubs.
 Petals strongly color-veined; legume broad. 38. CHAMAESENNA.
 Unarmed trees.

- Prickly, glandular-pubescent shrub, with foliaceous stipules. 39. ECHINOCASSIA.
- Petals not strongly color-veined; legume narrow. 40. COWELLOCASSIA.
- Flowers small, the petals 9 mm. long or shorter; legume short, its valves membranous.
- Flowers much larger; legume elongated, its valves chartaceous or coriaceous. 41. SCIACASSIA.
- Legume-valves thick-coriaceous, tardily dehiscent.
- Legume-valves chartaceous, readily dehiscent. 42. GAUMEROCASSIA.
- Legume (as far as known) broadly linear; leaflets 3-several pairs, large.
- Legume narrowly linear; leaflets 1-3 pairs, small; shrubs. 43. PALMERCASSIA.
- Leaves glanduliferous. Perfect stamens 10; Old World trees. 44. PSILORHEGMA.
- Perfect stamens fewer than 10, usually 7. Leaflets oblong to lanceolate, ovate or obovate. Gland borne near the base of the petiole. 45. DITREMEXA.
- Gland borne between the leaflets or rarely also on the petiole. Sepals large; peduncles very short, axillary, 2-flowered; legume narrow, strongly curved. 46. VOGELCASSIA.
- Sepals small; inflorescence axillary or terminal; legume mostly straight or nearly so. 47. PEIRANISIA.
- Leaflets very narrowly linear, distant; gland borne on the petiole and also, sometimes, between the upper pair of leaflets. 48. LEONOCASSIA.
- Legume coriaceous, indehiscent, at length breaking transversely; trees with eglandular leaves. 49. ISANDRINA.
2. Legume elastically dehiscent; funicle short; herbs and shrubs. 50. CHAMAECRISTA.
- Petals unequal; legume linear; leaves almost always glanduliferous. 51. GRIMALDIA.
- Petals nearly equal; legume oblong; leaves eglandular.

23. DIALIUM L. Mant. 1: 3. 1767.

Arouna Aubl. Pl. Guian. 1: 16. pl. 5. 1775.

Large, unarmed trees, the leaves once-pinnate. Leaflets few, large. Inflorescence paniculate. Flowers small. Calyx-tube short, 5-lobed, the lobes strongly imbricated, petaloid. Petals 1 or 2, minute, or wanting. Stamens 2 or rarely 3, distinct, with short filaments; anthers oblong, erect. Ovary 2-ovuled, sessile or short-stipitate; style short, subulate; stigma terminal. Legume subglobose, or ellipsoid, fleshy, indehiscent, with a hard and fragile exocarp. Seed one, somewhat compressed.

Type species, *Dialium indum* L.

1. *Dialium guianense* (Aubl.) Steud. Nom. Bot. ed. 2. 1: 497. 1840.*Arouna guianensis* Aubl. Pl. Guian. 1: 16. 1775.*Arouna divaricata* Willd. Sp. Pl. 1: 156. 1797.*Dialium divaricatum* Vahl, Enum. 1: 303. 1805.

A tree, 10-30 m. high or higher, the trunk 6-18 cm. in diameter with a much-branched top, glabrous throughout. Leaflets 5-7, opposite or more or less alternate, ovate to lanceolate, acuminate, 3-8 cm. long; inflorescence large, often 2-3 dm. long, many-flowered; pedicels 1-2 mm. long; calyx-segments obtuse, 2.5-3 mm. long; legume 1.5-2.5 cm. long, ellipsoid, short-stipitate.

TYPE LOCALITY: French Guiana.

DISTRIBUTION: Guatemala to Panama, Venezuela, French Guiana and Brazil.

ILLUSTRATIONS: Aubl. loc. cit. pl. 5; Mart. Fl. Bras. 15²: pl. 47.24. *CASSIA* [Tourn.] L. Sp. Pl. 376. 1753.

Trees or shrubs with evenly pinnate eglandular leaves, the flowers racemose. Sepals nearly equal, obtuse. Corolla nearly regular; petals 5, spreading, nearly equal, imbricated, clawed. Stamens usually 10, the 3 lower ones with elongated filaments; anthers of the lower stamens larger than the others. Legume woody, indehiscent, elongated, pendulous, septate. Seeds numerous, transverse.

Type species, *Cassia Fistula* L.

Leaflets 3-8 pairs, widely separated, ovate to lanceolate.

1. *C. Fistula*.

Leaflets mostly many pairs, oblong.

Sepals caescent or tomentulose.

Leaflets mostly obtuse or rounded, pubescent; legume transversely rugose.

2. *C. grandis*.

Leaflets, or some of them retuse; legume smooth.

3. *C. Roxburghii*.

Sepals glabrous or puberulent.

Leaflets obtuse.

4. *C. moschata*.

Leaflets, at least the upper ones, acute.

5. *C. regia*.1. *Cassia Fistula* L. Sp. Pl. 377. 1753.*Cathartocarpus Fistula* Pers. Syn. 1: 459. 1805.*Bactrylobium Fistula* Willd. Enum. Hort. Berol. 440. 1809.

A tree, up to 20 m. tall, the trunk up to 7 dm. in diameter, the twigs glabrous or nearly so. Stipules linear-lanceolate, small, fugacious; leaves often 4 dm. long or longer, the stout petiole 10 cm. long or less; leaflets 4-8 pairs, short-stalked, chartaceous, ovate to ovate-oblong or ovate-lanceolate, 7-20 cm. long, acutish or bluntly acuminate, finely pinnately veined with a prominent midvein, glabrous, bright green and somewhat shining above, paler green beneath; racemes drooping, 3-8 dm. long; pedicels very slender, 2-5 cm. long; sepals oval or oblong, obtuse, puberulent, 6-10 mm. long; petals bright yellow, oblong, obtuse, 2-3 cm. long; legume cylindrical, drooping, terete, nearly black, glabrous, 6 dm. long or less, about 2 cm. thick, pulpy within around the flat horizontal seeds.

TYPE LOCALITY: India.

DISTRIBUTION: Planted nearly throughout the West Indies and continental tropical America, and locally naturalized. Native of tropical Asia.

ILLUSTRATIONS: Tussac, Fl. Ant. 4: pl. 2; Descourt. Fl. Ant. 2: pl. 125; Bentley & Trimen, Med. Pl. pl. 87.

2. *Cassia grandis* L.f. Suppl. 230. 1781.*Cassia brasiliana* Lam. Encyc. 1: 649. 1785.*Cathartocarpus grandis* Pers. Syn. 1: 459. 1805.

A tree, up to 20 m. high, the young twigs pubescent. Stipules very small, linear, fugacious; leaves about 3 dm. long or less, densely finely pubescent all over; petiole 2-6 cm. long; leaflets 8-20 pairs, oblong, nearly sessile, obtuse at both ends, or the upper ones narrowed at the base, 3-5 cm. long; racemes lateral or axillary, drooping, pubescent, 1-2 dm. long; pedicels 1-2 cm. long; sepals ovate-oblong, obtuse, caescent, 6-8 mm. long; petals orbicular, reddish or purplish, about 12 mm. broad; legume compressed-cylindrical, indehiscent, transversely rugose, septate between the seeds, 9 dm. long or less.

TYPE LOCALITY: Surinam.

DISTRIBUTION: Jamaica; Cuba; Hispaniola; Porto Rico; Tobago, Trinidad; Guerrero to Panama, Colombia and Dutch Guiana. Brazil (?).

ILLUSTRATION: Jacq. Fragm. pl. 85, f. 3.

3. *Cassia Roxburghii* DC. Prodr. 2: 489. 1825.

Cassia marginata Roxb. Hort. Beng. 31. 1814. Not Willd. 1809.

Cathartocarpus marginatus G. Don, Gen. Hist. 2: 453. 1832.

A tree, 6 or 7 m. high, the twigs, petioles, rachis and inflorescence tomentose. Leaflets 10-15 pairs, oblong, oblique, retuse, mucronulate, glabrate above, tomentulose beneath, 2-3.5 cm. long; racemes axillary, shorter than the leaves; sepals 5-6 mm. long, tomentulose; petals pink or salmon, about twice as long as the sepals; anthers glabrous; legume 2-3 dm. long, about 2 cm. in diameter, cylindric, smooth, somewhat constricted between the seeds.

TYPE LOCALITY: Coromandel.

DISTRIBUTION: Naturalized in Jamaica, at least formerly. Native of southern Asia.

ILLUSTRATION: Wight, Ill. pl. 83.

4. *Cassia moschata* H.B.K. Nov. Gen. & Sp. 6: 338. 1824.

Cathartocarpus moschatus G. Don, Gen. Hist. 2: 453. 1832.

A tree, 8-13 m. high, the twigs angled, sulcate, glabrous. Stipules triangular, caducous; leaves short-petioled; leaflets 10-18 pairs, oblong, rounded or obtuse at apex, pubescent on both sides, 4-5 cm. long, 12-15 mm. wide; flowers in elongated puberulent racemes; pedicels 10-15 mm. long; sepals obtuse, rounded, reflexed, puberulent or glabrate, 6-7 mm. long, reddish brown; petals 10-15 mm. long, yellow to orange; filaments slender; anthers glabrous; ovary naked or with a few tufts of white hairs; legume cylindric, 3-6 dm. long, terete, nearly 2 cm. in diameter, smooth, its pulp musk-scented.

TYPE LOCALITY: Mompo on the Magdalena River, Colombia.

DISTRIBUTION: Costa Rica to Panama, Colombia, Venezuela and British Guiana; Trinidad. Naturalized in Cuba.

ILLUSTRATION: Hanbury, Trans. Linn. Soc. 24: pl. 26.

5. *Cassia regia* Standley, Contr. U. S. Nat. Herb. 18: 103. 1916.

A tree, the young branches 5-angled, velvety-pubescent. Leaves 3 dm. long or longer; stipules minute, caducous; petiole and rachis of the leaf velvety-pubescent; leaflets about 20 pairs, narrowly oblong, 2.5-6 cm. long, acute, or the lower ones obtuse, 10-16 mm. wide, pale and pubescent beneath, shining and glabrate above; racemes 10-16 cm. long; pedicels 14-18 mm. long; sepals purple, about 7 mm. long; petals 12 mm. long, pale yellow, with purple veins, glabrous; anthers pilose; ovary densely covered with appressed white hairs.

TYPE LOCALITY: El Paraiso, Canal Zone.

DISTRIBUTION: Panama.

25. PSEUDOCASSIA Britton & Rose, gen. nov.

Trees or shrubs; leaves egandular, pinnate, with few or many pairs of leaflets. Inflorescence paniculate or racemose. Sepals nearly equal. Petals 5, large. Perfect stamens 7, the anthers elongate; staminodia 3, 2-lobed. Legume elongated, coriaceous, glabrous, terete, septate, tardily dehiscent. Seeds lenticular, horizontal.

Type species, *Cassia spectabilis* DC.

Leaflets 6-15 pairs, acute or acuminate.

Leaflets only 2-4 pairs.

Leaflets oblong-elliptic, obtuse.

Leaflets lanceolate, acuminate.

1. *P. spectabilis*.

2. *P. petensis*.

3. *P. anisopetala*.

1. *Pseudocassia spectabilis* (DC.) Britton & Rose.

Cassia spectabilis DC. Cat. Hort. Monsp. 90. 1813.

A shrub or tree, 3-7 m. high, the twigs softly pubescent. Leaves 3-4 dm. long; leaflets 6-15 pairs, lanceolate, acuminate or acute, 3-7.5 cm. long, more or less pubescent beneath, glabrous or glabrate above; inflorescence paniculate, 2-3 dm. long; sepals orbicular or nearly so, 5-7 mm. long; petals yellow, 1.5-2.5 cm. long; ovary glabrous, curved; legume 1.5-3 dm. long, about 1 cm. thick, smooth, or somewhat impressed between the seeds.

TYPE LOCALITY: Caracas, Venezuela.

DISTRIBUTION: Jamaica; Cuba; Hispaniola; Tabasco to Panama; Colombia; Venezuela; Tobago; Trinidad.

2. *Pseudocassia petensis* Britton & Rose, sp. nov.

Petioles and inflorescence short-pilose. Leaflets 2 or 3 pairs, oblong-elliptic, membranous, inconspicuously veined, obtuse, about 5 cm. long, or shorter, 1-2 cm. wide, sparingly short-pubescent above, densely tomentulose beneath; racemes several-many-flowered; pedicels nearly filiform, 5-10 mm. long; sepals ovate to elliptic, obtuse, sparingly pubescent or glabrate, 5-6 mm. long; petals about twice as long as the sepals; anthers sparingly pubescent.

Petén, Guatemala, April 8, 1922, *O. F. Cook & R. D. Martin* 193.

3. *Pseudocassia* (?) *anisopetala* (Donn. Smith) Britton & Rose.

Cassia anisopetala Donn. Smith, Bot. Gaz. 37: 209. 1904.

A shrub, the young branches densely pubescent. Stipules at first small, bractlike, but appearing on second year branches as short stout reflexed prickles. Leaves 1-1.5 dm. long; leaflets 4 pairs, rarely 2 or 3 pairs, lanceolate, acuminate, more or less cuneate at base, 3-8 cm. long, 1-3 cm. wide, glabrous and shining above, pubescent beneath; racemes 10-21 cm. long, many-flowered; pedicels slender, 5-6 mm. long; flower-bud somewhat pubescent; outer sepals ciliate, the inner ovate, 5-6 mm. long; petals very unequal, the lower one the largest, 2 cm. long; anthers hairy; ovary glabrous.

TYPE LOCALITY: Cubilquit, Alta Verapaz, Guatemala.

DISTRIBUTION: Guatemala.

26. CHAMAEFISTULA G. Don, Gen. Hist. 2: 451. 1832.

Scolodia Raf. Sylva Tell. 128. 1838.

Shrubs, trees, or woody vines, the leaves glanduliferous, with 2 pairs of broad leaflets, the flowers in axillary or terminal panicles or racemes. Sepals nearly equal or unequal, mostly rounded or obtuse. Petals 5, nearly equal or unequal, mostly yellow. Perfect stamens usually 7; staminodia usually 3; anthers all nearly alike, linear-oblong, opening by terminal pores. Legumes mostly elongated, terete or turgid, dehiscent along the inner suture, somewhat coriaceous, the transverse seeds compressed, the pulp glutinous.

Type species, *Cassia bacillaris* L.f.

A. Leaflets large, mostly 5-15 cm. long; legume mostly elongated.

1. Bracts usually small, mostly caducous.

a. Leaflets obtuse, acute or gradually acuminate.

*. Petals pubescent, puberulent or glabrate.

†. Leaves lustrous; twigs and leaves glabrous or nearly so;

West Indian species.

Leaflets lanceolate to ovate-lanceolate; legume 4-10 cm. long.

Leaflets obliquely ovate; legume 8-18 cm. long.

††. Leaves dull; twigs and leaves pubescent or glabrate.

‡. Legume about 1.5 cm. thick, or less (as far as known).

§. Twigs densely villous or short-pubescent. (See No. 21.)

Pubescence villous.

Pubescence velvety.

Leaflets obtuse or acutish, subchartaceous.

Leaflets acuminate or acute, membranous.

Inflorescence compact; pedicels 8 mm. long or shorter.

Leaflets pubescent on both sides, at least when young; pubescence white.

Leaflets glabrous above, even when young; pubescence yellow.

Inflorescence loose; pedicels filiform, 2-4 cm. long.

§§. Twigs glabrous, sparingly or loosely pubescent or strigose.

|. Legume (as far as known) smooth, not papillose.

Leaflets rounded or obtuse.

Leaf-gland short-ovoid; leaflets chartaceous.

Leaf-gland conic-cylindric; leaflets submembranous.

Leaflets pubescent; plant of eastern Mexico.

Leaflets merely puberulent; plant of Costa Rica.

1. *C. viminea*.

2. *C. antillana*.

3. *C. villosula*.

4. *C. ignota*.

5. *C. Rekoii*.

6. *C. Collinsii*.

7. *C. Maxonii*.

8. *C. sinaloana*.

9. *C. Berlandieri*.

10. *C. Rowleeana*.

- Leaflets acute, acuminate or cuspidate.
 Leaflets gradually long-acuminate, large.
 Leaflets puberulent beneath.
 Leaflets pilose beneath.
- Leaflets acute, short-acuminate or cuspidate.
 Flowers small; petals 7-11 mm. long.
 Leaflets membranous, softly pubescent
 beneath; pedicels spreading or as-
 cending.
- Leaflets subchartaceous, strigillose be-
 neath; pedicels nearly erect.
- Flowers larger; petals 13-22 mm. long.
 Leaflets 4-6 cm. long, acute or short-
 acuminate; pilose beneath.
- Leaflets larger, up to 15 cm. long.
 Leaflets very inequilateral and
 oblique.
- Petals orbicular-obovate to el-
 liptic, 18-22 mm. long.
- Petals elliptic-obovate, 14-16
 mm. long.
- Leaflets moderately or scarcely
 inequilateral and oblique.
- Leaflets chartaceous or sub-
 coriaceous.
- Legume very slender, etoru-
 lose, about 8 mm. broad.
- Legume stout, often toru-
 lose, 10-12 mm. thick.
- Leaflets membranous.
 Inflorescence axillary, stri-
 gose.
- Inflorescence subterminal
 and axillary, densely to-
 mentulose.
- ||. Young legume densely papillose; leaflets glabrate,
 acuminate; flowers small.
- ‡‡. Legume about 2.5 cm. wide; leaflets suborbicular.
- ** Petals densely white-lanate.
- b. Leaflets abruptly acuminate, or long-caudate.
 Leaflets abruptly long-caudate.
 Leaflets abruptly acuminate.
 Leaflets obliquely ovate-elliptic, shining, 5-8 cm. long.
 Leaflets suborbicular to elliptic, dull, the larger 2 dm. long.
2. Bracts oblong to lanceolate, persistent.
 Leaflets glabrous or nearly so, shining.
 Leaflets short-pilose beneath, dull.
- Petals 13-17 mm. long; leaflets chartaceous, pedicels slender;
 bracts 5-8 mm. long.
- Petals 10 mm. long; leaflets submembranous, pedicels filiform;
 bracts 3-4 mm. long.
- B. Leaflets small, 1-3 cm. long, oblong, rounded; legume 3-7 cm. long.
11. *C. gatunensis*.
 12. *C. jagifolia*.
13. *C. densiflora*.
 14. *C. Hayesiana*.
15. *C. subpilosa*.
16. *C. bacillaris*.
 17. *C. nicaraguensis*.
18. *C. Valerioi*.
 19. *C. Williamsii*.
20. *C. membranacea*.
21. *C. anconis*.
22. *C. papillosa*.
 23. *C. fruticosa*.
 24. *C. lanata*.
25. *C. caudata*.
 26. *C. falcinella*.
 27. *C. dariensis*.
28. *C. undulata*.
29. *C. chiaensis*.
30. *C. Standleyi*.
 31. *C. insularis*.

1. *Chamaefistula viminea* (L.) Britton & Rose.

Cassia viminea L. Syst. ed. 10, 1016. 1759.

Cassia melanocarpa Bert.; DC. Prodr. 2: 491. 1825.

Chamaefistula melanocarpa G. Don, Gen. Hist. 2: 451. 1832.

Scolodia viminea Raf. Sylva Tell. 128. 1838.

A trailing shrub, 2-3 m. long, the young branches somewhat angled, puberulent. Stipules setaceous, 5-10 mm. long; leaflets lanceolate to ovate-lanceolate, 3.5-6 cm. long, acuminate, dark green, glabrous and shining above, yellowish green and glabrous or somewhat pubescent beneath; gland linear-cylindric, borne between the lower pair and also sometimes between the upper pair of leaflets; inflorescence usually paniculate; bracts lanceolate, caducous, 12-16 mm. long; sepals 4-6 mm. long; petals puberulent, 12-16 mm. long; legume 4-10 cm. long, black, smooth, about 1.5 cm. thick.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica.

ILLUSTRATION: Sloane, Hist. Jam. pl. 80, f. 6, 7.

2. *Chamaefistula antillana* Britton & Rose; Britton & Wilson, Sci.

Surv. Porto Rico and Virgin Isl. 5: 369. 1924.

Cassia quinqueangulata Urban, Symb. Ant. 4: 272. 1905. Not L. C. Rich. 1792.

A vine, 8 m. long or more, the young twigs and inflorescence appressed-puberulent or glabrate, the branches 5-angled. Leaves 1-2 dm. long; leaflets obliquely ovate, 3-10 cm. long, chartaceous, acute or acuminate at the apex, mostly obtuse at the base, shining above, glabrous on both sides or somewhat pubescent beneath, with a slender gland between each pair; panicles several-many-flowered; pedicels slender, 2 cm. long or less; sepals oblong or ovate, obtuse, puberulent, 4-6 mm. long; petals bright yellow, orbicular-ovate, veiny, 1-2 cm. long; legume linear, turgid when mature, glabrous, 8-18 cm. long, 1-1.5 cm. thick.

TYPE LOCALITY: St. Thomas.

DISTRIBUTION: Hispaniola; Porto Rico; St. Thomas; Tortola.

3. *Chamaefistula villosula* Britton & Rose, sp. nov.

Scandent, the branches slender, straight, densely villous. Stipules narrow, somewhat falcate, 10-12 mm. long; petioles slender, 2-3 cm. long; gland oblong, borne between the lower and sometimes also between the upper pair of leaflets; leaflets elliptic, oblong or ovate, 2-10 cm. long, membranous, or subchartaceous, green and glabrous above, appressed-pubescent beneath; inflorescence of short axillary, few-flowered racemes, the rachis and pedicels villous; bracts 3-5 mm. long, ovate, obtuse, deciduous; pedicels 1-2 cm. long; sepals oblong to obovate, rounded, 6-8 mm. long, appressed-pubescent; petals 10-15 mm. long, pubescent; immature legume pubescent; mature legume glabrous, 2 dm. long, about 1.5 cm. wide and 5 mm. thick, tipped by a stout beak 8 mm. long.

Sinaloa and Jalisco. Type from San Sebastian, Jalisco, January, February, 1927, *Ynes Mexia*, 1523, flowers; 1675, fruit.

4. *Chamaefistula ignota* Britton & Rose, sp. nov.

Branches somewhat zigzag with short internodes, and with dense, short velvety pubescence. Stipules caducous; petioles short, 1-2 cm. long, velvety, strongly grooved above; rachis bearing a large black gland between the lower pair of leaflets; leaflets oblong to elliptic, 2-8 cm. long, subchartaceous, obtuse or acutish, sparingly pubescent above, paler and softly pubescent beneath; inflorescence terminal, rather short and broad, densely paniculate, many-flowered; bracts small, caducous; pedicels slender, 1-2 cm. long; sepals 5-7 mm. long, strongly red-nerved, slightly pubescent; petals 8-9 mm. long; ovary pubescent; legume 6-15 cm. long, about 12 mm. in diameter, glabrous, shining, short-stipitate.

Acapulco, Guerrero, 1895, *E. Palmer* 461.

5. *Chamaefistula Rekoii* Britton & Rose, sp. nov.

A scandent shrub, the twigs, inflorescence and petioles with dense, soft, white, short pubescence. Stipules about 1 cm. long, falcate, glabrous or nearly so; leaflets lanceolate, or ovate, acuminate, 6-10 cm. long, dull green, membranous, pubescent on both sides, densely so beneath when young, becoming glabrate above in age; glands borne between both pairs of leaflets, black, pointed; inflorescence axillary, or becoming paniculate above; racemes few-flowered, much shorter than the leaves; bracts small, ovate, acute; pedicels 4-8 mm. long; sepals suborbicular, 5-6 mm. wide, appressed-pubescent; petals about twice as long as the sepals.

Cerro Espino, Oaxaca, altitude 400 meters, September, 1917, *B. P. Reko* 3410.

6. *Chamaefistula Collinsii* Britton & Rose, sp. nov.

A shrub, 3-5 m. high, the branches angled, and with dense soft, short, yellowish pubescence. Stipules linear, about 1 cm. long, caducous; leaflets ovate to broadly lanceolate, acuminate or acute, 5-12 mm. long, membranous, glabrous above, even from the first, or with a few hairs near the base or on the midrib, densely yellowish appressed-pubescent beneath; rachis bearing a gland between both pairs of leaflets; inflorescence axillary, in very short, few-flowered racemes,

shorter than the subtending petiole; peduncle, bracts, pedicels, and calyx densely yellowish pubescent; bracts ovate, acute; pedicels 3-5 mm. long; sepals oblong, 7 mm. long, rounded. Cerro del Cruz, Tepic, October 1, 1923, *G. N. Collins & J. H. Kempton 22*.

7. *Chamaefistula Maxonii* Britton & Rose, sp. nov.

A shrub or vine, about 3 m. long, the young parts softly short-pubescent. Stipules linear-falcate; petioles 1.5-3 mm. long; glands often borne between both pairs of leaflets, slender, sometimes more than one between the upper pair; leaflets 6-10 cm. long, lanceolate to ovate, membranous, acuminate, green and slightly pubescent above, very pale and softly pubescent beneath; inflorescence axillary, 2-flowered, or paniculate and many-flowered; pedicels 2-4 cm. long, slender; sepals narrowly-oblong, 5-9 mm. long; petals yellow, somewhat pubescent on the outside, 1.5-2 cm. long; ovary lanate-pubescent; legume slender, terete, glabrate, 10-15 cm. long.

Panama. Type from Chiva-Chiva trail above Red Tank, Canal Zone, May 28, 1923, *Maxon & Harvey 6111*.

8. *Chamaefistula sinaloana* Britton & Rose, sp. nov.

Branches slender, flexuous, glabrate, terete. Petiole 2-3 cm. long, sparingly pubescent; rachis sparingly pubescent, bearing a short-ovoid, rounded gland between the lower pair of leaflets; leaflets ovate to elliptic, loosely short-pubescent or glabrate above, rather copiously appressed-pubescent beneath, obtuse or rounded at both ends, sometimes mucronulate, chartaceous, 4-8 cm. long; inflorescence axillary, perhaps also terminal, the axis pubescent; flowering pedicels pubescent; fruiting pedicels rather stout, glabrate, 2-2.5 cm. long; sepals oblong, appressed-pubescent, 5-7 mm. long; petals oblong, 9-10 mm. long; immature legume 7-12 cm. long, about 7 mm. wide, slender, sparingly pubescent, beaked.

Esterio de Escuinapa, Sinaloa, 1926, *J. G. Ortega 6172*.

9. *Chamaefistula Berlandieri* (Benth.) Britton & Rose.

Cassia Berlandieri Benth. Trans. Linn. Soc. 27: 520. 1871.

Branches slender, flexuous, terete, loosely pubescent. Petioles 2-4 cm. long; rachis bearing a conic-cylindric gland between the lower pair of leaflets; leaflets submembranous, ovate to elliptic, 5-10 cm. long, obtuse or rounded, sparingly pubescent or glabrate above, softly pubescent beneath; flowers in short axillary racemes; pedicels very slender, 2-3.5 cm. long; bracts lanceolate, small, caducous; sepals puberulent, 5-8 mm. long; petals oblong, 8-15 mm. long; legume turgid, somewhat curved, 8-12 cm. long, about 14 mm. wide, shining.

TYPE LOCALITY: La Barbara between Tula and Tampico, Tamaulipas.
DISTRIBUTION: Tamaulipas and Veracruz.

10. *Chamaefistula Rowleeana* Britton & Rose, sp. nov.

Twigs very slender, puberulent, flexuous. Petiole slender, puberulent, 1.5-2 cm. long, leaflets ovate to elliptic, strongly inequilateral, submembranous, obtuse or acutish, puberulent on both sides, or glabrous above when old, the upper pair 6-9 cm. long, the lower pair much smaller; gland conic-cylindric, borne between the lower pair of leaflets; inflorescence axillary, few-flowered, densely short-pubescent; pedicels 1-2 cm. long; sepals elliptic, 6-8 mm. long, appressed short-pubescent; petals elliptic-obovate, short-clawed, the larger ones 15 mm. long; anthers, or some of them, appendaged.

Banameto, Costa Rica, May 1918, *W. W. Rowlee & H. E. Rowlee 285*.

11. *Chamaefistula gatunensis* Britton, sp. nov.

A shrub, 2.5 m. high, the branches somewhat angled, puberulent. Petiole stout, 2-4 cm. long; rachis bearing a large gland between the lower pair of leaflets; stipules setaceous, minute; leaflets ovate to elliptic, 7-18 cm. long, long-acuminate, glabrous above, pale and puberulent beneath; inflorescence terminal, paniculate; pedicels slender, 2.5-4 cm. long, short-pubescent;

sepals 5-6 mm. long, obtuse, appressed-pubescent; petals oblong, 2-2.5 cm. long, obtuse, pubescent; ovary densely pubescent; immature legume very slender, short-pubescent, 10-12 cm. long, 2 mm. wide.

Panama. Type from Gatun, November-December 1859, *S. Hayes 548*.

12. *Chamaefistula fagifolia* (Bertol.) Britton & Rose.

Cassia fagifolia Bertol. Nov. Comm. Bonon. 4: 414. 1840.

Branches terete or nearly so, glabrous, or pubescent when young. Petiole stout, 2-3 cm. long; rachis bearing a conic gland between the lower pair of leaflets, or between both pairs; leaflets ovate-oblong, 6-15 cm. long, chartaceous, long-acuminate, glabrous above, pale and short-pilose beneath; inflorescence axillary and terminal, many-flowered, strigose; pedicels slender, 2-4 cm. long; sepals oblong, rounded at apex, 6-7 mm. long, sparingly strigose; petals 20-22 mm. long, broadly elliptic-obovate; ovary with white appressed hairs; legume glabrous, slender, 15-20 cm. long, about 1 cm. thick, short-stipitate.

TYPE LOCALITY: Mar del Sur, Guatemala.

DISTRIBUTION: Guatemala.

13. *Chamaefistula densiflora* (Mart. & Gal.) Britton & Rose.

Cassia densiflora Mart. & Gal. Bull. Acad. Brux. 10²: 304. 1843.

Branches slender, flexuous, glabrous, or sparingly appressed-pubescent. Petiole slender, 2-4 cm. long; rachis bearing an oblong-conic gland between the lower pair of leaflets; leaflets membranous, ovate to oblong or elliptic, acute, or rarely obtuse, 5-12 cm. long, glabrous or sparingly short-pubescent above, rather densely softly pubescent beneath; inflorescence axillary, few-several-flowered, strigose; pedicels 10-25 mm. long; sepals oblong or elliptic, rounded, strigillose, 5-7 mm. long; petals elliptic, 8-11 mm. long; legume slender, sericeous when young.

TYPE LOCALITY: Near the Pacific Ocean, Oaxaca.

DISTRIBUTION: Guerrero to Veracruz, Chiapas and Guatemala.

14. *Chamaefistula Hayesiana* Britton & Rose, sp. nov.

Twigs slender, sparingly strigillose or glabrous, nearly straight, subterete. Petiole rather stout, 1.5-2 cm. long; leaflets subchartaceous, various, sparingly appressed-pubescent, lanceolate to elliptic or obovate, acute, cuspidate or retuse; rachis bearing a cylindric-conic gland between the lower pair of leaflets and sometimes a slender one between the upper pair; inflorescence axillary and terminal, strigose, several-flowered; pedicels slender, nearly erect, 1-2.5 cm. long; sepals appressed-pubescent, 5-8 mm. long; petals oblong-elliptic, 10-11 mm. long.

Gatun, Panama, October 1859, *S. Hayes 572*.

15. *Chamaefistula subpilosa* Britton & Rose, sp. nov.

A shrub, about 2 m. high, the twigs glabrate. Petiole about 1.5 cm. long, or shorter, sparingly strigose; rachis bearing a subconic gland between the lower pair of leaflets; leaflets chartaceous, oblong to elliptic, acute or short-acuminate, glabrous above, pilose beneath, at least on the veins, 4-6 cm. long, or those of upper leaves smaller; inflorescence axillary and terminal, strigose, few-flowered; pedicels slender, 2-3 cm. long; sepals 5-7 mm. long, sparingly strigose; petals orbicular or broadly obovate, 15 mm. long; young legume densely strigose.

Vicinity of Ahuachupán, El Salvador, January 9-27, 1922, *Standley 20022*.

16. *Chamaefistula bacillaris* (L.f.) G. Don, Gen. Syst. 2: 451. 1832.

? *Mimosa nodosa* L., Sp. Pl. 516. 1753.

Cassia bacillaris L.f. Suppl. 231. 1781.

Cathartocarpus Bacillus Pers. Syn. Pl. 1: 459. 1805.

Bactrylobium bacillare Hornem. Hort. Havn. 1: 392. 1813.

A shrub or small tree, 4-6 m. high, or vine-like and up to 7 m. long, the slender twigs puberulent at least when young. Stipules linear, caducous; petiole 2-4 cm. long; rachis bearing an oblong-conic blunt gland between the lower pair of leaflets; leaflets submembranous, ovate to

elliptic or ovate-lanceolate, acute or acuminate, 6–12 cm. long, pale and puberulent beneath, glabrate above, very inequilateral and oblique; inflorescence mostly terminal and paniculate, large; sepals oblong, 7–11 mm. long, appressed-pubescent; petals 18–22 mm. long, orbicular-ovate to elliptic; ovary densely appressed-pubescent; legume subterete, glabrous, 10–27 cm. long, 10–14 mm. thick.

TYPE LOCALITY: Surinam.

DISTRIBUTION: Porto Rico; St. Kitts (?); Tobago; Trinidad; Costa Rica; Panama; Colombia to Dutch Guiana and Brazil.

ILLUSTRATIONS: Jacq. *Fragm. pl. 85. f. 4* (?); Bot. Reg. *pl. 881*; Mart. *Fl. Bras. 15²: pl. 31*; Trans. Linn. Soc. *27: pl. 61*.

17. *Chamaefistula nicaraguensis* Britton, sp. nov.

Twigs rather slender, flexuous, puberulent when young. Petiole rather stout, about 3 cm. long; rachis bearing an ovoid-conic, pointed gland between the lower pair of leaflets; leaflets submembranous, very oblique and inequilateral, 8–15 cm. long, the upper pair obovate, much larger than the ovate lower pair, short-acuminate or acute, glabrous above, puberulent beneath, nearly equally green on both sides; inflorescence terminal, subcorymbose-paniculate, many-flowered, puberulent; pedicels 8–20 mm. long; sepals elliptic, densely puberulent, 8–10 mm. long; petals obovate-elliptic, about 16 mm. long.

Nicaragua, Aug. 24, 1928, *F. C. Englesing 294*.

18. *Chamaefistula Valerioi* Britton & Rose, sp. nov.

A shrub, 3–5 m. high, the stout flexuous twigs at first short-pubescent, becoming glabrous. Petiole stout, 2–2.5 cm. long; rachis bearing an ovoid gland between the lower pair of leaflets or between both pairs; leaflets chartaceous, acute or short-acuminate, broadly ovate to elliptic, glabrous above, pilose on the veins beneath, 5–11 cm. long; inflorescence terminal, corymbose-paniculate, puberulent, many-flowered; pedicels slender, about 3 cm. long, or shorter; sepals elliptic, appressed-pubescent, 6–8 mm. long; petals orbicular-ovate, 14–15 mm. long; legume slender, 15–18 cm. long, about 8 mm. broad, sparingly strigose when young, glabrous when mature.

Costa Rica. Type from vicinity of Tilaxán, Guanacaste, January 10–31, 1926, *Standley & Valerio 44266*. Yucatán?

19. *Chamaefistula Williamsii* Britton, sp. nov.

A shrub, 2.5–5 m. high, the young twigs puberulent, becoming glabrous. Petiole stout, 2–3 cm. long; rachis bearing a short ovoid or ovoid-conic gland between the lower pair of leaflets, or between both pairs; leaflets subcoriaceous, acute or short-acuminate, slightly or moderately inequilateral, 5–11 cm. long, dull and glabrous above, more or less pilose beneath; inflorescence densely puberulent, axillary and terminal, few-several-flowered; pedicels 2 cm. long, or shorter; sepals elliptic, strigose, 5–7 mm. long; petals elliptic-ovate, 15 mm. long; legume turgid, often torulose, glabrous, 7–15 cm. long, 10–12 mm. thick, stout-beaked.

Panama. Type from Penomene, February 23–March 22, 1908, *R. S. Williams 135*.

20. *Chamaefistula membranacea* Britton & Rose, sp. nov.

Twigs slender, sparingly pubescent when young, soon glabrous. Petiole 2–3 cm. long; rachis bearing an ovoid-conic gland between the lower pair of leaflets; leaflets membranous, oblong to elliptic, acute or acutish, 5–10 cm. long, dull and glabrous above, loosely short-pilose beneath, slightly inequilateral; inflorescence axillary, paniculate strigose; pedicels 2–4 cm. long; sepals loosely short-strigose, 5–8 mm. long; petals oblong to suborbicular, about 13 mm. long.

Vicinity of Tonacatepeque, San Salvador, El Salvador, December 30, 31, 1921, *Standley 19430*.

21. *Chamaefistula anconis* Britton & Rose, sp. nov.

A shrub, about 3 m. high, the young twigs tomentulose. Petiole 2–3 cm. long; rachis puberulent, bearing a short, ovoid gland between the lower pair of leaflets; leaflets ovate to elliptic,

nearly membranous, dull, acute or short-acuminate, moderately inequilateral, glabrous above when old, rather densely short-pilose beneath, 5-9 cm. long; inflorescence axillary and forming a several-flowered subterminal panicle, densely tomentulose; pedicels about 2 cm. long, or shorter; sepals oblong-elliptic, 4-6 mm. long; petals 13-16 mm. long, elliptic-obovate; legume 7-16 cm. long, about 1 cm. thick, stout-beaked, glabrous, short-stipitate.

Ancon hill, Canal Zone, Panama. Type collected February 20, 1908, *R. S. Williams* ♀, type, fruiting specimen; *Killip 12055*, October 17, 1922, flowering.

22. *Chamaefistula papillosa* Britton & Rose, sp. nov.

Young branches more or less flexuous, at first sparingly pubescent but soon glabrate, terete. Stipules caducous; leaflets glabrate, membranous, oblong-lanceolate to elliptic, acute or acuminate, 5-10 cm. long; rachis bearing a narrow gland between the lower pair of leaflets; inflorescence axillary and terminal, short-racemose or paniculate, puberulent; bracts small, caducous; sepals oblong or elliptic, obtuse, 6-9 mm. long, puberulent; petals 10-12 mm. long; ovary pubescent with appressed hairs; immature legume slender, 8-15 cm. long, densely papillose, sparingly short-pubescent, sessile.

Oaxaca and Veracruz. Type from near Santo Domingo, Oaxaca, altitude 300 meters, June 12, 1895, *E. W. Nelson 2667*.

23. *Chamaefistula fruticosa* (Mill.) Pittier, Trab. Mus. Com. Venez. 3: 152. 1928.

Cassia fruticosa Mill. Gard. Dict. ed. 8, no. 10. 1768.

A shrub, the branches glabrous, flexuous. Petioles and rachis puberulent; leaflets suborbicular or very broadly elliptic, 7-11 cm. long, glabrous above, loosely short-pubescent beneath, the base rounded or obtuse, the apex abruptly acutish, the midvein nearly central; sepals densely strigose; inflorescence apparently paniculate and many-flowered; legume turgid, about 17 cm. long and 2.5 cm. broad, glabrous, obtuse.

TYPE LOCALITY: Veracruz.

DISTRIBUTION: Veracruz; (?) Panama.

ILLUSTRATION: (?) Rel. Houst. pl. 17.

24. *Chamaefistula lanata* Britton, sp. nov.

Twigs, petioles and inflorescence puberulent. Petioles 2-4 cm. long; glands short, stout, borne between one or both pairs of leaflets; leaflets ovate to oblong-elliptic, subcoriaceous, acute, 5-12 cm. long, light green, glabrous and dull above, rather densely short-pubescent beneath; panicle terminal, rather densely many-flowered, short-peduncled; pedicels about 1.5 cm. long, or shorter; sepals densely strigose, 6-8 mm. long; petals densely white-lanate without, about 18 mm. long.

Mejicanos, El Salvador, August 1, 1922, *Salvador Calderón 1103*.

25. *Chamaefistula caudata* (Standley) Britton & Rose.

Cassia caudata Standley, Contr. U. S. Nat. Herb. 18: 102. 1916.

Branches terete, slender, glabrous. Leaves large, 20 cm. long or less; petiole elongated; leaflets ovate to oblong, 13-21 cm. long, obtuse or rounded at base, tapering abruptly into a caudate tip 1.5-3 cm. long, glabrous on both sides; gland conic, blunt, borne between the lower pair of leaflets; inflorescence axillary, appressed-pubescent, few-several-flowered; bracts linear-subulate, 3 mm. long; pedicels slender, 1.5-2 cm. long; sepals unequal, 4-7 mm. long, obtuse; petals about 20 mm. long; ovary densely appressed-pubescent.

TYPE LOCALITY: Upper Mamoni River, Panama.

DISTRIBUTION: Known only from the type locality.

26. *Chamaefistula falcinella* (Standley) Britton & Rose.

Cassia falcinella Standley, Contr. U. S. Nat. Herb. 18: 102. 1916.

Branches terete or somewhat angled, cinereous-puberulent. Stipules linear, falcate, 10 mm. long; leaflets chartaceous, shining, oblong-ovate, glabrous, 5-8 cm. long, abruptly long-acuminate; glands borne between both pairs of leaflets, narrowly cylindrical, pointed; inflorescence axillary or somewhat paniculate above, puberulent, the racemes small, much shorter than the leaves; bracts linear or linear-lanceolate; sepals oblong-ovate, obtuse, 4 mm. long; petals about 13 mm. long; ovary densely pubescent.

TYPE LOCALITY: Near San Felix, eastern Chiriqui, Panama.

DISTRIBUTION: Known only from the type locality.

27. *Chamaefistula dariensis* Britton & Rose, sp. nov.

A vine-like shrub with zigzag, short-pubescent branches. Petioles 1-2 cm. long; rachis bearing a large obtuse gland between the lower pair of leaflets; leaflets very unequal, broadly elliptic or suborbicular, the upper pair sometimes 2 dm. long, abruptly acuminate, glabrate above, strongly reticulated and short-pubescent beneath, the lower pair much smaller, ovate; inflorescence a terminal, many-flowered, short-pubescent panicle; pedicels about 1.5 cm. long; sepals and petals very pubescent; petals pale yellow, 1.5 cm. long; ovary densely appressed-pubescent.

Forest around Pinogana, southern Darién, Panama, April 1914, Pittier 6579.

28. *Chamaefistula undulata* (Benth.) Pittier, Trab. Mus. Com.

Venez. 3: 151. 1928.

Cassia undulata Benth. Journ. Bot. Hook. 2: 76. 1840.

A shrub or a woody vine, 2-6 m. long; branches slender, somewhat angled, pilose or glabrous. Stipules narrow, lanceolate, sometimes incurved; leaflets lanceolate to oblong-lanceolate, acute or acuminate, 3-10 cm. long, when mature shining and glabrous above, glabrous or puberulent beneath; glands borne between both pairs of leaflets; inflorescence axillary and terminal, several-flowered; bracts large, lanceolate, persistent; sepals appressed-pubescent, 7-8 mm. long; petals 12-14 mm. long; ovary curved, appressed-pubescent; legume 10-18 cm. long, about 1 cm. thick, glabrous.

TYPE LOCALITY: Woods skirting the savannas, British Guiana.

DISTRIBUTION: Yucatán to Honduras, Panama, Colombia and British Guiana; Trinidad.

29. *Chamaefistula chiapensis* Britton & Rose, sp. nov.

Branches stout, slightly flexuous, loosely short-pubescent when young. Stipules lanceolate, long-acuminate, 10-13 mm. long, persistent; petiole 1-2 cm. long; rachis bearing a short gland between the lower leaflets; leaflets ovate to elliptic, chartaceous, 5-13 cm. long, gradually sharply acuminate or acute, somewhat inequilateral, glabrous above, short-pilose beneath; inflorescence broadly paniculate, the racemes subtended by small leaves, rather densely strigose; bracts ovate to lanceolate, 5-8 mm. long, persistent; pedicels slender, strigose, 1.5-3 cm. long; sepals ovate to oblong, sparingly pubescent, ciliate, 6-8 mm. long; petals obovate-elliptic, pubescent, 13-17 mm. long; young legume densely yellowish-strigose.

Between Teneapa and Ajalon, Chiapas, October 13, 1895, E. W. Nelson 3289.

30. *Chamaefistula Standleyi* Britton & Rose, sp. nov.

A tree, about 6 m. high, the twigs and inflorescence short-pubescent. Stipules linear, acuminate, about 12 mm. long; rachis bearing a subconic gland between the lower pair of leaflets; leaflets broadly ovate, submembranous, inequilateral, short-acuminate or acute, glabrate above, loosely pilose beneath, those of lower leaves 10-13 cm. long; inflorescence loosely paniculate, the racemes subtended by small leaves; bracts oblong or oblong-lanceolate, 3-4 mm. long, persistent; pedicels nearly filiform, 1.5-4 cm. long; sepals oblong, sparingly pubescent, 6-7 mm. long; petals elliptic to orbicular-obovate, rounded, pale yellow, 10 mm. long.

Vicinity of San José, Costa Rica, December 4, 1925-February 10, 1926, Standley 41236.

31. *Chamaefistula insularis* Britton & Rose, sp. nov.

Cassia chrysostricha Griseb. Cat. Pl. Cub. 79. 1866. Not Collad. 1816.

A shrub, 1-2 m. high, or vine-like and 2-4 m. long, the branches, petioles and inflorescence softly villous-pubescent. Stipules filiform, 2-3 mm. long; petioles 1.5 cm. long or less; gland between the lower pair of leaflets slender, pointed; leaflets orbicular to oblong, 1-3 cm. long, rounded at apex, or retuse, glabrate above, pubescent beneath; inflorescence axillary, racemose, 3-7 cm. long, few-several-flowered; pedicels 8-12 mm. long; bracts ovate to oblong, 3-5 mm. long; sepals orbicular, 6-8 mm. long, glabrous or nearly so, somewhat ciliate; petals 10-14 mm. long; legume nearly terete, 2-7 cm. long, 10-16 mm. thick, short-stipitate, glabrous, shining.

Cuba and Isle of Pines. Type from Tetas de Camarioca, Matanzas, February 7, 1916, Britton, Britton & Wilson 14012.

27. *ADIPERA* Raf. Sylva Tell. 129. 1838.

Shrubs, the branches sometimes elongated and vine-like, the leaves with 3 or more pairs of leaflets, the rachis bearing 1 or more glands between them, the rather large yellow flowers corymbose or racemose. Sepals 5, unequal. Petals nearly equal. Perfect stamens usually 7; staminodes usually 3; anthers narrowly oblong, mostly unequal in length. Legumes mostly elongated, terete, subterete, or turgid, subcoriaceous or membranous, indehiscent or irregularly bursting. Seeds transverse, compressed.

Type species, *Cassia Herbertiana* Lindl.

Three of the anthers long-beaked; pubescent shrub.

1. *A. indecora*.

None of the anthers long-beaked.

2. *A. laevigata*.

Leaflets long-acuminate; glabrous shrub.

Leaflets rounded, obtuse or acute.

3. *A. Purpusii*.

Leaflets rounded at apex.

Legume compressed-turgid, about 5 cm. long, few-seeded.

Legume subterete, larger, many-seeded.

Branches glabrous or nearly so.

Pedicels 1-3 cm. long.

Pedicels 3-8 mm. long.

Branches densely-pubescent.

4. *A. Stahlii*.

5. *A. bicapsularis*.

6. *A. ovalifolia*.

Leaflets acute or obtuse.

Branches and inflorescence densely tomentose.

Legume 8-12 cm. long; glands between several pairs of leaflets.

Legume about 5 cm. long; gland between the lower pair of leaflets.

Glabrous, or loosely pubescent.

Leaflets broadly elliptic to ovate, not more than twice as long as wide.

7. *A. tomentosa*.

8. *A. mexicana*.

Leaflets oblong to lanceolate, more than twice as long as wide.

Branches and leaves loosely pubescent.

Glabrous shrubs.

Legume long-apiculate by the persistent style; leaflets

pale beneath.

Style deciduous; leaflets about equally green on both

sides.

9. *A. submontana*.

10. *A. Arseniei*.

11. *A. bicolor*.

12. *A. corymbosa*.

1. *Adipera indecora* (H.B.K.) Britton & Rose.

Cassia indecora H.B.K. Nov. Gen. & Sp. 6: 344. 1824.

Chamaefistula indecora G. Don, Gen. Hist. 2: 452. 1832.

Cassia bicapsularis pubescens Benth. Trans. Linn. Soc. 27: 525. 1871.

Cassia manzanilloana Rose, Contr. U. S. Nat. Herb. 1: 325. 1895.

Cassia bicapsularis indecora Urban, Symb. Ant. 2: 268. 1900.

A shrub, 1-4 m. high, the branches and inflorescence usually velvety-pubescent. Leaflets 3-5 pairs, thin, glabrous above, softly pubescent beneath, obovate, 1.5-4.5 cm. long; gland sub-clavate or cylindrical, borne between the lower pair of leaflets; inflorescence usually much longer than the leaves, several-many-flowered; bracts linear, green, pubescent, caducous; pedicels 6-10 mm. long; sepals usually more or less pubescent; three of the anthers beaked; ovary densely pubescent; staminodes long-stalked; legume 8-15 cm. long, about 1 cm. in diameter, terete or nearly so.

TYPE LOCALITY: Caracas, Venezuela.

DISTRIBUTION: Tepic to Panama, Colombia and Brazil, Cuba; Hispaniola; Trinidad; introduced into the Canary Islands.

2. *Adipera laevigata* (Willd.) Britton & Rose; Britton & Wilson, Sci. Surv. Porto Rico and Virgin Isl. 5: 371. 1924.

Cassia laevigata Willd. Enum. 441. 1809.

Cassia elegans H.B.K. Nov. Gen. 6: 342. 1824.

Cassia Herbertiana Lindl. Bot. Reg. pl. 1422. 1831.

Chamaefistula laevigata G. Don, Gen. Hist. 2: 452. 1832.

A shrub, 1-3 m. high, glabrous throughout. Stipules linear, 5-8 mm. long, caducous; leaflets 3 or 4 pairs, ovate to lanceolate, long-acuminate, 3-8 cm. long; glands usually borne between each pair of leaflets, cylindric, pointed; racemes axillary and terminal, long-peduncled, shorter than the leaves; bracts linear-lanceolate, deciduous; pedicels 5-15 mm. long, slender; sepals 6-10 mm. long; petals 12-16 mm. long; four stamens with short filaments, the anthers straight, three with long filaments, these sometimes longer than the somewhat curved beakless anthers; legume short-stipitate, subterete, 6-9 cm. long, about 1 cm. thick, beaked by the permanent style, tardily if at all dehiscent; seeds flattened, ovate, shining, 4-5 mm. long.

TYPE LOCALITY: Not cited.

DISTRIBUTION: Jamaica; Cuba; Porto Rico; Sinaloa to Veracruz, and Guatemala. Colombia to Brazil. Introduced into the Old World tropics.

ILLUSTRATIONS: Collad. Hist. Cass. pl. 5; Lindl. loc. cit.

3. *Adipera Purpusii* (Brand.) Britton & Rose.

Cassia Purpusii Brand. Zoe 5: 234. 1906.

A shrub, 1 m. high, the twigs appressed-pubescent. Stipules linear, 3-4 mm. long, caducous; gland between the lower pair of leaflets linear-cylindric, 2-3 mm. long; leaflets 2 or 3 pairs, 1-2 cm. long, 8-12 mm. wide, rounded; inflorescence paniculate, terminal; peduncles 1-3 cm. long; pedicels 5-10 mm. long; flower buds nodding; sepals oblong, 12 mm. long; petals clawed; perfect stamens 3 long and 4 short; legume 5 cm. long, 12 mm. broad, compressed-turgid, mucronate, stipitate, few-seeded, often constricted between the seeds.

TYPE LOCALITY: Calmali, Lower California.

DISTRIBUTION: Southern Lower California.

4. *Adipera Stahlia* (Urban) Britton & Rose; Britton & Wilson, Sci. Surv. Porto Rico and Virgin Isl. 5: 370. 1924.

Cassia Stahlia Urban, Symb. Ant. 1: 316. 1899.

A shrub, 2-4 meters high, nearly glabrous throughout, or the inflorescence puberulent. Stipules linear-subulate, 1 cm. long or shorter, deciduous; leaflets 3-5 pairs, orbicular to oval or elliptic, 1-3 cm. long, rounded at apex, mucronate, glabrous; gland borne between the lower pair of leaflets, oblong-linear, 2 mm. long; racemes axillary and terminal, several-many-flowered; bracts 6-10 mm. long; pedicels 1-3 cm. long; sepals ovate, 6-7 mm. long; petals 10-13 mm. long, yellow with purple veins; anthers all beakless; ovary linear, glabrous; legume straight, 10-15 cm. long, terete; seeds nearly black, 5-6 mm. long.

TYPE LOCALITY: Between Guayama and Guamani, Porto Rico.

DISTRIBUTION: Porto Rico.

5. *Adipera bicapsularis* (L.) Britton & Rose; Britton & Wilson, Sci. Surv. Porto Rico and Virgin Isl. 5: 370. 1924.

Cassia bicapsularis L. Sp. Pl. 376. 1753.

Cassia sennoides Jacq. Coll. 1: 74. 1786.

Cassia coluteoides Collad. Hist. Cass. 102. 1816.

Senna bicapsularis Roxb. Fl. Ind. 2: 342. 1832.

A shrub, 3.5 m. high or less, glabrous or nearly so throughout. Stipules small, deciduous; leaflets 3-5 pairs; rachis bearing an oblong gland between the lowest pair of leaflets; leaflets 1-4 cm. long, rounded, the upper pair usually obovate, the others oblong to suborbicular; racemes axillary, usually longer than the leaves, few-flowered; bracts caducous, similar to the stipules; pedicels 3-8 mm. long; sepals oblong, 8-12 mm. long, obtuse; petals somewhat longer than the sepals; anthers all beakless; ovary glabrous; legume stipitate, terete or nearly so, 8-15 cm. long,

about 1 cm. thick, dehiscent tardily along the inner suture; seeds brown, shining, horizontal, 5 mm. long.

TYPE LOCALITY: India, according to Linnaeus.

DISTRIBUTION: Bermuda; West Indies; Sinaloa and Tamaulipas to Panama, British Guiana, Bolivia and Paraguay. Adventive in Florida. Introduced into the Old World tropics.

ILLUSTRATIONS: Jacq. Ic. Pl. Rar. *pl. 170*; Collad. Hist. Cass. *pl. 12*.

6. *Adipera ovalifolia* (Mart. & Gal.) Britton & Rose.

Cassia ovalifolia Mart. & Gal. Bull. Acad. Brux. 10: 305. 1843.

Cassia Botteriana Benth. Trans. Linn. Soc. 27: 541. 1871.

A shrub, the branches, inflorescence and petioles softly and densely pubescent. Stipules linear, caducous; leaflets 3 or 4 pairs, glabrous or soon glabrate on both sides, more or less ciliate, orbicular to short-oblong, 1.5–3.5 cm. long, rounded at apex; gland borne between the lower pair of leaflets, club-shaped, obtuse; racemes axillary, mostly longer than the leaves; pedicels very slender, 1–2 cm. long; sepals unequal, obtuse, 6–7 mm. long; petals 10–12 mm. long; stamens 7, four with sessile anthers and three on slender filaments with curved anthers, all beakless; ovary hairy; legume glabrous, terete or nearly so, 5–9 cm. long, stipitate.

TYPE LOCALITY: Mirador, Veracruz.

DISTRIBUTION: Veracruz.

7. *Adipera tomentosa* (L.f.) Britton & Rose.

Cassia tomentosa L.f. Suppl. 231. 1781.

Cassia multiglandulosa Jacq. Ic. Pl. Rar. 1: 8. 1786.

A shrub or small tree, 2–4 m. high, the branches, inflorescence, petioles and rachis yellowish-tomentose. Stipules linear, small, caducous; leaflets 6–8 pairs, lanceolate to oblong, acute or obtuse, mucronate, 1–6 cm. long, glabrate or loosely pubescent above, tomentose beneath; rachis bearing a gland between some or all the pairs of leaflets; inflorescence axillary, or terminal and paniculate; sepals orbicular, obtuse, pubescent, about 9 mm. long; petals 12–15 mm. long; three of the stamens on longer filaments than the others, slightly curved; anthers beakless; ovary densely lanate, tipped by the slender persistent style; legume 8–12 cm. long, compressed-turgid; seeds numerous, shining, 5 mm. long.

TYPE LOCALITY: South America.

DISTRIBUTION: Hidalgo to Guatemala. Colombia to Bolivia, Chile and Argentina.

ILLUSTRATION: Jacq. loc. cit. *pl. 72*.

8. *Adipera mexicana* (Jacq.) Britton & Rose.

Cassia mexicana Jacq. Hort. Schönbr. 2: 41. 1797.

Cassia foetidissima R. & P.; G. Don. Gen. Hist. 2: 41. 1832.

A shrub, 2–5 m. high, much branched, the branches, petioles and rachis tomentose. Stipules small, linear, spreading, caducous; leaflets 3–8 pairs, 8–20 mm. long, oval to oblong, obtuse, glabrous above, somewhat pubescent beneath, ciliate; gland between the lower pair of leaflets cylindrical, black, obtuse; inflorescence paniculate, the racemes few-flowered; bracts small, linear; pedicels elongated; sepals orbicular, obtuse, pubescent; petals 2–3 times as long as the sepals, obtuse; legume about 5 cm. long.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Mexico; Hispaniola.

ILLUSTRATION: Jacq. loc. cit. *pl. 203*.

9. *Adipera submontana* Britton & Rose, sp. nov.

A large shrub, glabrous or loosely pubescent. Stipules linear, 4–8 mm. long, caducous; rachis bearing a large black gland between the lower pair of leaflets and often between the second pair; leaflets 2–4 pairs, broadly elliptic to ovate, 3–6.5 cm. long, obtuse or acute, glabrous, or ciliate near the base; racemes axillary, 5–12 cm. long; bracts linear, 4–5 mm. long, scarious, caducous; pedicels 1–2 cm. long; sepals elliptic to orbicular, unequal, obtuse, the largest about 8 mm. long; petals 12–15 mm. long; stamens 7, three on long, slender filaments; anthers not beaked; legume stipitate, subterete, glabrous, 8–10 cm. long, about 8 mm. thick.

Zacuapam, Veracruz, February, 1924, *C. A. Purpus 109*.

10. *Adipera Arsenei* Britton & Rose, sp. nov.

Branches, rachis and petioles loosely pubescent; glands small, borne between two or more pairs of leaflets; leaflets 4-5 pairs, oblong, 2.5-5.5 cm. long, 1-2 cm. wide, acute or obtuse, thin, pale beneath, more or less pubescent on both sides; legume terete, 7-9 cm. long, 6-8 mm. thick, apiculate, stipitate, sparingly pubescent.

Fort Guadalupe, Puebla, 2,180 meters altitude, September 30, 1906, *Brother G. Arsène*.

11. *Adipera bicolor* Britton & Rose, sp. nov.

A shrub, glabrous throughout, the branches terete, becoming reddish below. Petiole and rachis very slender; glands borne between two or more pairs of leaflets; leaflets 4 pairs, oblong, 2.5-5 cm. long, acute, green above, pale beneath; inflorescence terminal; legume subterete, 7-8 cm. long, about 8 mm. thick, long-apiculate by the persistent style, its stipe 5 mm. long.

Near Durango City, Durango, 1896, *E. Palmer 596a*.

12. *Adipera corymbosa* (Lam.) Britton & Rose.

Cassia corymbosa Lam. Encycl. 1: 644. 1783.

Chamaefistula corymbosa G. Don, Gen. Hist. 2: 451. 1832.

A shrub, 2-3 m. high, glabrous throughout. Stipules caducous; leaflets 2 or 3 pairs, oblong or oblong-lanceolate, 2-5 cm. long, acute, a gland borne between the lower pair of leaflets or sometimes between all the pairs; racemes axillary or sometimes paniculate; sepals very unequal; petals short-oblong, 10-12 mm. long; legume terete, 6-8 cm. long, 7-9 mm. thick, obtuse, short-stipitate; seeds obovoid, brown, shining, 4 mm. long.

TYPE LOCALITY: Buenos Aires, Argentina.

DISTRIBUTION: Adventive or naturalized, Georgia to Tennessee and Louisiana. Native of southern South America.

ILLUSTRATIONS: Bot. Mag. pl. 633; Jacq. Fragm. pl. 101, f. 1.

28. *EMELISTA* Raf. Sylva Tell. 127. 1838.

Herbs, the leaves with few or several pairs of broad leaflets, a gland borne between the lower pair, the rather large flowers axillary, in few-flowered racemes, or solitary. Sepals nerved, obtuse. Petals nearly equal. Perfect stamens 6 or 7; staminodes 3. Legumes narrowly linear, tetragonal or subterete, dehiscent along both sutures. Seeds longitudinal, obliquely quadrate.

Type species, *Cassia obtusifolia* L.

Glabrous or nearly so throughout; leaflets rounded or obtuse.

Stems, petioles and legumes long-pilose; leaflets obtuse or acute.

1. *E. Tora*.

2. *E. pilifera*.

1. *Emelista Tora* (L.) Britton & Rose; Britton & Wilson, Sci.

Surv. Porto Rico and Virgin Isl. 5: 371. 1924.

Cassia Tora L. Sp. Pl. 376. 1753.

Cassia obtusifolia L. Sp. Pl. 377. 1753.

Cassia pentagonia Mill. Gard. Dict. ed. 8, no. 18. 1768.

Cassia Tala Desv. Journ. Bot. 3: 73. 1814.

Cassia humilis Collad. Hist. Cass. 96. 1816.

Diallobus falcatus Raf. Sylva Tell. 128. 1838.

Diallobus uniflorus Raf. loc. cit. 1838.

Annual, glabrous or nearly so, 1 m. high or less. Stipules linear-subulate, 1-1.5 cm. long, deciduous; petioles 1-4 cm. long; rachis bearing a slender gland between the lower pair of leaflets; leaflets 2-4 pairs, obovate, thin, 1.5-5 cm. long, rounded or obtuse, often mucronate, glabrous on both sides or sometimes appressed-pubescent beneath; flowers few in the axils of the leaves; sepals oblong, obtuse, 5-8 mm. long; petals about twice as long as the sepals; legume 2 dm. long, or less, 3-5 mm. thick, strongly curved or nearly straight; seeds compressed, shining, 5 mm. long.

TYPE LOCALITY: India.

DISTRIBUTION: Pennsylvania to Indiana, Missouri, Florida and Texas; West Indies; Mexico and Central America, south to Panama. Colombia to French Guiana, Bolivia and Paraguay. Old World tropics.

ILLUSTRATIONS: Rumph. Herb. Amb. 5: pl. 97, f. 2; Blanco, Fl. Fil. pl. 122; Bol. Est. Exp. Agron. Cuba 22; pl. 6; Britton & Brown, Ill. Fl. f. 2036; ed. 2, f. 2437.

2. *Emelista pilifera* (Vogel) Pittier, Journ. Wash. Acad. 19: 176. 1929.

Cassia pilifera Vogel, Syn. Cass. 23. 1837.
? *Cassia cubensis* Hoffmannsegg, Pfl. Verz. 1: 209. 1824.

Herbaceous or frutescent at base, often simple, 4-6 dm. high, the stem, petioles and inflorescence long-pilose. Stipules linear-filiform; petiole 1-6 cm. long, pilose; rachis bearing very slender elongated glands between each pair of leaflets; leaflets 2 pairs, approximate, ovate to elliptic or obovate, obtuse or acute, membranous, pubescent or glabrate, 2-7 cm. long; peduncles 1-flowered or 2-flowered; sepals unequal, obtuse, 6-10 mm. long; petals 10-20 mm. long; legume 8-16 mm. long, 2-3 mm. wide, more or less curved, long-pilose.

TYPE LOCALITY: Brazil.

DISTRIBUTION: Cuba; Durango to Veracruz and Panama. Colombia to Bolivia, Brazil and Argentina.

29. *HERPETICA* Raf. Sylva Tell. 123. 1838.

A large shrub, the large glandless leaves with broad obtuse leaflets, the showy yellow flowers racemose, terminal or, in the upper axils, large-bracted. Petals nearly alike. Perfect stamens 7. Staminodes 3. Legumes elongated, chartaceous, longitudinally 4-winged, longitudinally dehiscent. Seeds flat, transverse.

Type species, *Cassia alata* L.

1. *Herpetica alata* (L.) Raf. Sylva Tell. 123. 1838.

Cassia alata L. Sp. Pl. 378. 1753.

A shrub, 4 m. high or less, the young foliage puberulent, the branches stout. Leaves 3-10 dm. long; stipules lanceolate, acuminate, 1-2 cm. long; petioles stout, 1.5-4 cm. long; rachis angular, puberulent, flat above; leaflets 6-12 pairs, chartaceous, broadly oblong, 5-17 cm. long, the upper pairs obovate and often much larger than the lower, all obtuse at both ends; racemes large, elongated; pedicels very short; bracts ovate-orbicular, obtuse, 1-1.5 cm. long, caducous; sepals about 1 cm. long; petals obovate, clawed, 2 cm. long or less; legume linear, straight or nearly so, many-septate, 10-15 cm. long, about 1.5 cm. wide, the valves chartaceous, nearly black, shining; seeds parallel with the dissepiments, 4-sided, compressed, brown, about 5 mm. long.

TYPE LOCALITY: South America.

DISTRIBUTION: West Indies (except Bahamas); Guerrero and Yucatan to Panama. Colombia to French Guiana, Bolivia and Paraguay. Old World tropics.

ILLUSTRATIONS: Jacq. Obs. 2: pl. 45, f. 2; Descourt. Fl. Ant. pl. 443; Sloane, Hist. Jam. pl. 175, f. 2; Cook & Collins, Contr. U. S. Nat. Herb. 8: pl. 39.

30. *PTEROCASSIA* Britton & Rose, gen. nov.

Shrubs or small trees, the leaves eglandular, pinnate, with several or many pairs of small leaflets, the stipules small, caducous; inflorescence racemose, axillary or paniculate above. Sepals 5, unequal. Petals yellow, oblong, clawed. Perfect stamens 7; staminodia 3. Ovary glabrous. Legume flat, oblong, winged on both sutures, breaking apart into 1-seeded segments within the continuous, persistent wings. Seeds flattened, orbicular.

Type species, *Cassia Galeottiana* Martens.

Leaflets 3-8 pairs, elliptic to obovate, 5-10 mm. long.

Leaflets 5-16 pairs, oblong to elliptic, 8-20 mm. long.

Leaflets linear-oblong; legume glaucous.

Leaflets oblong to oblong-elliptic; legume not glaucous.

Leaflets rounded or obtuse; legume 16-18 mm. wide.

Leaflets acute or acutish; legume 25 mm. wide.

1. *P. Galeottiana*.

2. *P. Goldmanii*.

3. *P. polyantha*.

4. *P. rubricaulis*.

1. *Pterocassia Galeottiana* (Martens) Britton & Rose.

Cassia Galeottiana Martens, Bull. Acad. Brux. 10: 305. 1843.

A shrub or small tree, 2-4.5 m. high, much branched, the twigs, petioles and peduncles densely villous. Leaves about 5 cm. long, or shorter; leaflets 3-8 pairs, elliptic to obovate,

5–10 mm. long, rounded or retuse, subcoriaceous, glabrous on both sides or villous on the veins beneath; racemes few-several-flowered, 4–6 cm. long; bracts ovate to lanceolate, pubescent, 5–6 mm. long; pedicels slender, 1–1.5 cm. long; sepals ovate to elliptic, the larger about 8 mm. long; petals 9–12 mm. long; legume short-stipitate, 4–9 cm. long, 1.5–2 cm. wide, glabrous, its wings 1.5–3 mm. wide.

TYPE LOCALITY: Tehuacán, Puebla.
DISTRIBUTION: Puebla and Oaxaca.

2. *Pterocassia Goldmanii* (Rose) Britton & Rose.

Cassia Goldmanii Rose, Contr. U. S. Nat. Herb. 10: 98. 1906.

A shrub or small tree, 4–6 m. high, glabrous or nearly so. Leaflets 5–12 pairs, narrowly oblong, 12–16 mm. long, about 3 mm. wide, rounded and mucronulate at apex; fruiting pedicels about 2 cm. long; legume 8–10 cm. long, about 2 cm. wide, glaucous, short-stipitate, its wings 2–3 mm. wide.

TYPE LOCALITY: Southwest of El Potrero, Lower California.
DISTRIBUTION: Lower California.

3. *Pterocassia polyantha* (Moç. & Sessé) Britton & Rose.

Cassia polyantha Moç. & Sessé; Collad. Hist. Cass. 112. 1816.
Cassia Browniana Kunth, Mim. 135. 1819.

A large shrub or small tree, up to 4.5 m. high, the branches and inflorescence glabrous or pubescent. Leaflets 8–15 pairs, oblong, rounded or obtuse, 12–18 mm. long, 4–8 mm. wide, mucronate, glabrous, or pubescent; racemes axillary and terminal, few-flowered; bracts lanceolate, acute, about 3 mm. long; pedicels slender, 1–2 cm. long; larger sepals 5–6 mm. long; petals about twice as long as the larger sepals; legume 10–12 cm. long, 16–18 mm. wide, apiculate or short-tipped, its wings about 2 mm. wide.

TYPE LOCALITY: Mexico.
DISTRIBUTION: Guanajuato and Michoacán to Oaxaca.
ILLUSTRATIONS: Collad. loc. cit. *pl.* 2; Kunth, loc. cit. *pl.* 41.

4. *Pterocassia rubricaulis* Rose, sp. nov.

A branched shrub, glabrous throughout, the branches reddish, somewhat grooved; leaflets 12–15 pairs, oblong, 12–20 mm. long, 5–6 mm. wide, acute or acutish, mucronate; fruiting pedicels 2.5–3.5 cm. long; legume 9–11 cm. long, about 25 mm. wide, rounded at apex, apiculate, its wings about 2 mm. wide.

Vicinity of San Luis Tultitlanapa, southern Puebla, July 22, 1908, *C. A. Purpus* 2657.

31. *DESMODIOCASSIA* Britton & Rose, gen. nov.

A low shrub, densely stellate-pubescent throughout; leaves with a few pairs of broad leaflets, a gland borne between the lower pair and sometimes between other pairs. Inflorescence axillary, short-racemose. Sepals equal, oblong. Petals yellow, strongly veined. Perfect stamens 7, glabrous, three on longer filaments; anthers oblong. Style slender, glabrous. Legume linear, moniliform, many-jointed, the joints 1-seeded, indehiscent.

Type species, *Cassia villosa* Mill.

1. *Desmodiocassia villosa* (Mill.) Britton & Rose.

Cassia villosa Mill. Dict. ed. 8. no. 4. 1768.
Cassia astroides Cham. & Schl. Linnaea 5: 597. 1830.
Chamaefistula astroides G. Don, Gen. Hist. 2: 451. 1832.
Cassia geniculata R. & P.; G. Don, Gen. Hist. 2: 440. 1832.
Cassia articulata Rose, Contr. U. S. Nat. Herb. 12: 266. 1909.

Shrubby, 6 dm. high or higher, branched, the branches terete. Leaves petioled, 7–15 cm. long; stipules wanting, or very early fugacious; leaflets 3–5 pairs, with a gland between the lowest pair, sometimes between two or three pairs, lanceolate or oblong-lanceolate, acuminate at the apex, narrowed or rounded at the base, inequilateral; flowers few or several, in peduncled ax-

illary racemes shorter than the leaves; pedicels slender, 6-10 mm. long; calyx 7-8 mm. long; petals about twice as long as the sepals; legume linear, 5-10 cm. long, compressed.

TYPE LOCALITY: Campeche.

DISTRIBUTION: Campeche; Yucatán; Veracruz; Oaxaca; Lower California; Bahamas.

ILLUSTRATION: Hook. Ic. pl. 1060.

32. PHRAGMOCASSIA Britton & Rose, gen. nov.

A shrub, the leaves pinnate, the rachis glanduliferous between the lower pair of pinnae or the two lower pairs. Inflorescence few-flowered, terminal, the flowers large. Sepals 5, somewhat unequal. Petals 5. Anther-bearing stamens 7. Legume linear, flat, narrow, indehiscent, constricted between the seeds, breaking transversely into 1-seeded joints.

Type species, *Cassia Skinneri* Benth.

1. *Phragmocassia Skinneri* (Benth.) Britton & Rose.

Cassia Skinneri Benth. Trans. Linn. Soc. 27: 542. 1871.

Cassia Nelsonii Rose, Contr. U. S. Nat. Herb. 5: 135. 1897.

Cassia trichoneura Brand. Univ. Cal. Pub. Bot. 6: 179. 1915.

A shrub, 3-4.5 m. high, the young branches densely short-pubescent. Stipules setaceous, 12 mm. long, deciduous; petiole and rachis pubescent; rachis bearing a slender gland between the lower pair of leaflets, rarely also between the second pair; leaflets 4-7 pairs, obovate, or the lower oblong, 2-5 cm. long, rounded at apex, or sometimes retuse, glabrous and shining above, pubescent on the veins beneath; flowers very large, solitary, or few in a terminal cluster; sepals broad, about 8 mm. long or shorter, somewhat unequal, glabrate; petals 2.5-3 cm. long, pubescent without; legume 10-15 cm. long, 8-10 mm. wide, puberulent when young.

TYPE LOCALITY: Guatemala.

DISTRIBUTION: Morelos to Oaxaca, Guatemala and El Salvador.

ILLUSTRATION: Contr. U. S. Nat. Herb. 5: 135, f. 1.

33. SENNA [Tourn.] Mill. Gard. Diet. Abr. ed. 4. 1754.

Herbs or shrubs, the glandular leaves with 3 to 8 pairs of thin leaflets, the flowers in axillary racemes, the membranous bracts caducous. Petals yellow, rather large. Perfect stamens usually 7, with 3 staminodes. Legume thin, flat, short, broad, curved, or straight, obtuse or rounded, dehiscent along both sutures, crested over the seeds or ecristate.

Type species, *Cassia Senna* L.

Leaflets obovate, rounded; legume crested over the seeds, curved; herb.

1. *S. obovata*.

Leaflets lanceolate, acute; legume ecristate, nearly straight; shrub.

2. *S. angustifolia*.

1. *Senna obovata* (Collad.) Batka, Bot. Zeit. 7: 192. 1849.

Cassia obovata Collad. Hist. Cass. 92. 1816.

Glabrous, glaucous, erect, 0.5-1.2 m. high. Stipules lanceolate, 4-6 mm. long, acuminate; leaves 8-15 cm. long; petioles slender, 2-5 cm. long; leaflets 3-7 pairs, obovate or oblong-obovate, 1-4 cm. long, nearly sessile, the apex rounded and mucronulate, the base narrowed; racemes mostly as long as the leaves or longer, several-many-flowered, slender-peduncled; bracts 4-7 mm. long; petals bright yellow, nearly alike, about twice as long as the sepals; legume oblong, very flat, rounded at both ends, 3-6 cm. long, about 1.5 cm. wide, strongly curved.

TYPE LOCALITY: Egypt.

DISTRIBUTION: Jamaica; Hispaniola; St. Thomas; St. Martin; St. Eustatius. Aruba; Bonaire; Venezuela. Native of the Old World tropics.

ILLUSTRATION: Collad. loc. cit. pl. 15, f. A.

2. *Senna angustifolia* (Vahl) Batka, Bot. Zeit. 7: 193. 1849.

Cassia angustifolia Vahl, Symb. 1: 29. 1790.

A low shrub, glabrous or nearly so throughout. Stipules subulate, about 4 mm. long; leaves about 15 cm. long or shorter; leaflets 4-8 pairs, lanceolate, acute or acuminate, glabrous,

subsessile, 2.5–5 cm. long; racemes mostly longer than the leaves, usually many-flowered; long-peduncled; bracts about 4 mm. long; petals longer than the sepals; legume elliptic, rounded at both ends, straight or nearly so, 3–5 cm. long, 1.5–1.8 cm. wide, ecristate.

TYPE LOCALITY: Arabia.

DISTRIBUTION: Adventive in Haiti (according to Urban). Native of tropical Africa.

ILLUSTRATION: Batka, Mon. Senna *pl.* 2.

34. SERICEOCASSIA Britton, nov. gen.

A low annual herb, the leaves glanduliferous, with 2–5 pairs of broad, thin leaflets, the stipules linear. Peduncles axillary, 1–few-flowered. Flowers small. Stamens 7; staminodes 3. Legume narrowly linear, its margins continuous, the valves deeply impressed between the seeds and ultimately transversely dehiscent. Seeds short, oblong, truncate.

Type species, *Cassia uniflora* Mill.



1. *Sericocassia uniflora* (Mill.) Britton.

Cassia uniflora Mill. Dict. Gard. ed. 8. no. 5. 1768.

Cassia ornithopoides Lam. Encyc. 1: 644. 1785.

Cassia sericea Swartz, Fl. Ind. Occ. 724. 1788.

Cassia sensitiva Jacq. Coll. 2: 362. 1788.

Cassia ciliata Hoffm.; DC. Prodr. 2: 493. 1825.

Cassia monantha DC. Prodr. 2: 506. 1825.

Appressed-villous with brownish long hairs, simple or branched, 3–10 dm. high. Stipules narrowly linear, 5–20 mm. long; leaves 6–15 cm. long, petioled, bearing long-stalked glands between one or more of the pairs of leaflets; leaflets 2–4 pairs, thin, nearly sessile, oblong to obovate, 2–5 cm. long, rounded or acutish and mucronate at the apex, rounded or narrowed at the base, glabrate above, appressed-silky beneath; peduncles as long as the petioles or shorter; sepals rounded, about 6 mm. long; petals about twice as long as the sepals; legume 2.5–5 cm. long, about 4 mm. wide, compressed.

TYPE LOCALITY: Campeche.

DISTRIBUTION: Jamaica; Bahamas; Cuba; Hispaniola; Sonora and San Luis Potosi to El Salvador. Venezuela. Galapagos.

ILLUSTRATIONS: Jacq. Ic. Pl. Rar. *pl.* 459; Mart. Fl. Bras. 15^o: *pl.* 35, *f.* 1.

35. XEROCASSIA Britton & Rose, gen. nov.

A desert shrub, with fleshy, eglandular, stipulate leaves, the leaflets few and small, the rachis terminating in a straight terminal spine. Flowers borne in terminal racemes or narrow panicles. Sepals 5, elliptic, nearly equal. Petals 5, oblong, cuneate, nearly alike. Perfect stamens 7, the filaments short, the anthers nearly alike, staminodes 3, narrow. Legume linear-oblong, short, turgid, tardily, if at all dehiscent, not impressed between the seeds.

Type species, *Cassia armata* S. Wats.

1. *Xerocassia armata* (S. Wats.) Britton & Rose.

Cassia armata S. Wats. Proc. Am. Acad. 11: 136. 1876.

A much branched shrub, the branches striate, glabrous, or sparingly pubescent above, pale green. Leaves about 6 cm. long, or shorter; leaflets 2 or 3 distant pairs, ovate to suborbicular, 2–6 mm. long, obtuse or acute, pubescent or glabrate; inflorescence 5–10 cm. long, several-flowered; pedicels slender, glabrous or sparingly pubescent, 1–2 cm. long; sepals 5–6 mm. long; petals 8–12 mm. long; legume linear, turgid, subulate-tipped, glabrous or sparingly pubescent, spinulose-tipped, 2–3.5 cm. long, about 6 mm. wide.

TYPE LOCALITY: Mountains between Fort Mohave and Cajon Pass, California.

DISTRIBUTION: Southern California, western Nevada and Arizona.

36. THARPIA Britton & Rose, gen. nov.

A low, tufted herb, with a slender woody caudex, narrow persistent stipules, the eglandular leaves with a single pair of very narrow, subcoriaceous leaflets, the petiole tipped by a slender

cup. Peduncles axillary, 1-flowered. Sepals 5, narrowly oblong, nearly equal. Petals 5, nearly equal. Perfect stamens 7; staminodes 3. Legume globose-ellipsoid, sessile, swollen, membranous, indehiscent. Seeds few, suborbicular, compressed.

Type species, *Cassia pumilio* A. Gray.

1. *Tharpia pumilio* (A. Gray) Britton & Rose.

Cassia pumilio A. Gray, Bost. Journ. Nat. Hist. 6: 180. 1850.

Short-caulescent, 3–10 cm. high, strigulose. Leaves numerous; stipules linear, green, 4–10 mm. long; petiole slender, 1–2 cm. long, tipped by a subulate cusp 4–5 mm. long; leaflets linear to narrowly lanceolate, glabrous or ciliate, 1–4.5 cm. long, 1.5–5 mm. wide, cuspidate; peduncles axillary, 3–7 cm. long, one-flowered; pedicel bracteolate at base, 10–15 mm. long; flower-bud nodding; sepals 7–10 mm. long, obtuse, nerved; petals pale yellow, strongly veined, a little longer than the sepals; legume inflated, 10–15 mm. long, 8–10 mm. in diameter, densely puberulent; seeds 4–5 mm. broad.

TYPE LOCALITY: On the Llano and Perdenales, Texas.

DISTRIBUTION: Texas and New Mexico to Coahuila and San Luis Potosí.

37. *EARLEOCASSIA* Britton, gen. nov.

Perennial herbs, or low shrubs, the leaves with one pair or several pairs of leaflets, the stipules linear, a gland borne between the lower pair of leaflets or sometimes between more than one pair. Inflorescence axillary, racemose, few-several-flowered. Sepals narrow, nearly equal. Petals nearly equal, yellow, distinctly veined. Perfect stamens 7; staminodes 3. Legume short-oblong to linear, sessile, turgid or subterete, membranous, dehiscent on both sutures.

Type species, *Cassia Roemeriana* Scheele.

Leaflets 1 pair.

Leaflets lanceolate.

Leaflets oblong to elliptic or suborbicular.

Legume more or less curved, spreading; style very short, one-sided.

Legume nearly straight, usually erect; style slender, nearly central.

Leaflets 2–several pairs.

Legume oblong or linear-oblong, about 6 cm. long, or shorter.

Legume oblong, about 2 cm. long, or shorter.

Branches long-pilose.

Branches villous or glabrate.

Legume only 10–12 mm. long; leaflets 2 or 3 pairs.

Legume 15–25 mm. long; leaflets 3–6 pairs.

Legume linear or oblong, 3–6 cm. long.

Leaflets 4–8 pairs; glands borne between 2 or more pairs;

racemes several-many-flowered.

Leaflets 2–4 pairs; gland borne between the lower pair; racemes

1-several-flowered.

Pubescence of stem and branches villous or pilose.

Pubescence of stem and branches densely velvety or short-

villous.

Legume densely long-villous; leaflets up to 4.5 cm. long.

Legume sparingly pubescent; leaflets 1–3 cm. long.

Legume elongated-linear, 7–8 cm. long; stems and petioles long-pilose.

1. *E. Roemeriana*.

2. *E. bauhinoides*.

3. *E. durangensis*.

4. *E. Vogeliana*.

5. *E. demissa*.

6. *E. crotalarioides*.

7. *E. Lindheimeriana*.

8. *E. arida*.

9. *E. confinis*.

10. *E. Covessii*.

11. *E. argentea*.

1. *Earleocassia Roemeriana* (Scheele) Britton.

Cassia Roemeriana Scheele, Linnaea 21: 457. 1848.

Herbaceous; stem erect, 3–5 dm. high, simple or branched, somewhat angled, puberulent. Stipules linear, persistent; petiole shorter than the leaflets; leaflets 1 pair, lanceolate, 3–6 cm. long, 12 mm. wide or less, acute or acutish, more or less appressed-pubescent on both sides; gland between the leaflets narrow; inflorescence longer than the leaves, 2–5-flowered; sepals sparingly pubescent, 6–7 mm. long; petals about twice as long as the sepals; ovary pubescent; legume narrowly oblong, compressed, 2–3 cm. long, 5–6 mm. wide, short-tipped, sparingly pubescent.

TYPE LOCALITY: On the Guadalupe River, Texas.

DISTRIBUTION: Oklahoma, Texas, and New Mexico to Nuevo León and Coahuila.

2. *Earleocassia bauhinioides* (A. Gray) Britton.

Cassia bauhinioides A. Gray, Bost. Journ. Nat. Hist. 6: 180. 1850.

Herbaceous, more or less branched at base, somewhat spreading, softly short-pubescent, 1-3 dm. high. Stipules linear, persistent, 3-6 mm. long; leaflets 1 pair, oblong, 1-4.5 cm. long, obtuse, or rounded, softly pubescent on both sides; gland between the leaflets narrow, elongated; peduncles 1-2-flowered; sepals thin, oblong, pubescent, 6-8 mm. long; petals 18 mm. long or shorter; ovary densely pubescent; style glabrous; legume compressed, curved, 2-3.2 cm. long, 5-7 mm. wide, long-pubescent, obliquely short-tipped.

TYPE LOCALITY: On the Río Grande, Texas.

DISTRIBUTION: Texas, New Mexico, and Arizona to Zacatecas and Hidalgo.

3. *Earleocassia durangensis* (Rose) Britton.

Cassia durangensis Rose, Contr. U. S. Nat. Herb. 10: 98. 1906.

Herbaceous, the stems often branched above, 2-4 dm. high, densely velvety-pubescent and sometimes long-pilose. Stipules linear, persistent; leaflets 1 pair, broadly oblong to suborbicular, 3-5 cm. long, densely soft-pubescent on both sides; gland slender; peduncles longer than the leaves, 1-5-flowered; sepals densely pilose, about 7 mm. long; petals 12-15 mm. long; legume compressed, 3-3.5 cm. long, about 7 mm. wide, densely pubescent, straight, tipped by a slender terminal, at length deciduous style.

TYPE LOCALITY: Near city of Durango, Durango.

DISTRIBUTION: Southern Texas to Durango.

4. *Earleocassia Vogeliana* (Schlecht.) Britton.

Cassia Vogeliana Schlecht. Linnaea 12: 342. 1838.

Herbaceous, perennial, the stems and branches long-pilose. Stipules linear-filiform, persistent, 1-2 cm. long; leaflets 2-4 pairs, oblong to elliptic, 2.5 cm. long or less, obtuse or acutish, mucronate, glabrate, appressed-pubescent beneath; gland borne between two or more pairs of leaflets, about 4 mm. long, subulate-filiform; racemes borne in the upper leaf axils, few-flowered; pedicels pilose, about 1.5 cm. long, or shorter; sepals pilose; petals 12-15 mm. long, nearly twice as long as the sepals; legume 1-2 cm. long, about 6 mm. broad, pilose or becoming naked, blunt or apiculate.

TYPE LOCALITY: Regla, Hidalgo.

DISTRIBUTION: Coahuila; San Luis Potosí; Hidalgo.

5. *Earleocassia demissa* (Rose) Britton.

Cassia demissa Rose, Contr. U. S. Nat. Herb. 10: 97. 1906.

Herbaceous, or somewhat woody below, low, often trailing, much branched, pubescent. Stipules linear-filiform, 12-18 mm. long; leaflets 2 pairs, rarely 3 pairs, oblong, 10-15 mm. long, mucronate, strigose-pubescent; gland nearly filiform, about 3 mm. long, borne between the lower pair of leaflets; peduncle as long as or longer than the leaves, 2- or 3-flowered; legume 10-12 mm. long, 6 mm. wide, minutely tipped.

TYPE LOCALITY: Near Carneros Pass, Coahuila.

DISTRIBUTION: Known only from the type locality.

6. *Earleocassia crotolarioides* (Kunth) Britton.

Cassia crotolarioides Kunth, Mim. 132. 1819.

Chamaefistula crotolarioides G. Don, Gen. Hist. 2: 452. 1832.

Cassia apiculata Mart. & Gal. Bull. Acad. Brux. 10: 304. 1843.

Suffrutescent, more or less branched, 2-4 dm. high, the branches, petioles and peduncles loosely or densely pubescent. Stipules setaceous, 4-7 mm. long; leaflets 3-5 pairs, oblong, obtuse or acute, 1.5-3 cm. long, glabrous or pubescent above, pubescent at least on the veins beneath; glands very slender, about 3 mm. long, borne between the 2 or 3 lower pairs of leaflets; peduncles 3-7-flowered; pedicels about 1 cm. long, or shorter; sepals obtuse, about 8 mm. long,

pubescent; petals 10–15 mm. long; style short-subulate; legume short-oblong, swollen, 1.5–2.5 cm. long, 6–7 mm. wide, loosely pubescent, apiculate.

TYPE LOCALITY: Near Guanajuato, Guanajuato.

DISTRIBUTION: San Luis Potosí to Puebla.

ILLUSTRATION: Kunth, *Mim.* *pl.* 40.

7. *Earleocassia Lindheimeriana* (Scheele) Britton.

Cassia Lindheimeriana Scheele, *Linnaea* 21: 457. 1848.

Herbaceous, erect, 5–20 dm. high, simple, or little branched, densely softly pubescent. Stipules linear, deciduous; leaflets 4–8 pairs, 1.5–4.5 cm. long, oblong to elliptic, acute, or obtuse, pubescent on both sides; glands borne between 2 or more pairs of leaflets, narrow, elongated, pubescent; inflorescence axillary or panicle above; racemes 10–15 cm. long, several-many-flowered; sepals pubescent, about 7 mm. long; petals 12–15 mm. long; ovary densely pubescent; legume straight or curved, compressed, apiculate, 4–5 cm. long, 6–8 mm. wide, sparingly pubescent.

TYPE LOCALITY: Near New Braunfels, Texas.

DISTRIBUTION: Texas to Arizona, Chihuahua and Tamaulipas.

8. *Earleocassia arida* (Rose) Britton.

Cassia arida Rose, *Contr. U. S. Nat. Herb.* 10: 97. 1906.

Herbaceous, or suffrutescent, sometimes much branched at base, about 4 dm. high, or lower, the branches, petioles and rachis loosely villous or pilose. Petiole slender, 3–4 cm. long; leaflets 2–4 pairs, oblong, or elliptic, 1–3.5 cm. long, pubescent on both sides, or glabrate above, obtuse, or rounded, mucronate; gland between the lower pair of leaflets long and slender; peduncles 4–9 cm. long, 1–few-flowered; sepals pubescent, 6–8 mm. long; petals nearly twice as long as the sepals; legume 3–4 cm. long, about 6 mm. wide, straight or somewhat curved, short-tipped, long-pubescent.

TYPE LOCALITY: Higuierillas, Querétaro.

DISTRIBUTION: Querétaro to Puebla and Oaxaca.

9. *Earleocassia confinis* (Greene) Britton.

Cassia confinis Greene, *Pittonia* 3: 225. 1897.

Suffrutescent, 6–10 dm. high, canescently villous throughout. Stipules linear, short; leaflets 2 pairs, rarely 3 pairs, broadly elliptic to suborbicular, 2–4.5 cm. long, mucronate; gland between the lower pair of leaflets elongated, pubescent; peduncles 5–10 cm. long, several-flowered; pedicels about 1.5 cm. long or shorter; sepals about 7 mm. long; petals nearly twice as long as the sepals; legume turgid, oblong, densely villous, 2.5–3 cm. long, subulate-tipped.

TYPE LOCALITY: Los Angeles Bay, Lower California.

DISTRIBUTION: Lower California.

10. *Earleocassia Covesii* (A. Gray) Britton.

Cassia Covesii A. Gray, *Proc. Am. Acad.* 7: 399. 1868.

Herbaceous, somewhat woody at base, 3–6 dm. high, velvety-pubescent throughout. Stipules linear, caducous; leaflets 2 or 3 pairs, oblong, or elliptic, 1–3 cm. long, apiculate; gland between the lower pair of leaflets narrow, elongated, pubescent; peduncles slender, mostly longer than the leaves, few-several-flowered; pedicels slender, 1–1.5 cm. long; sepals densely pubescent, 6–7 mm. long; petals 10–15 mm. long; legume 2–3.5 cm. long, 5–6 mm. wide, compressed, rather sparingly pubescent, subulate-tipped.

TYPE LOCALITY: Camp Grant and south to Prescott, Arizona.

DISTRIBUTION: Arizona, Nevada and California to Sonora and Sinaloa.

11. *Earleocassia argentea* (H.B.K.) Britton.*Cassia argentea* H.B.K. Nov. Gen. 6: 358. 1824.*Cassia longicoma* Greenman, Proc. Am. Acad. 39: 79. 1903.

A much-branched shrub, 10–12 dm. high, the branches and petioles densely pubescent and long-pilose. Leaflets 3 pairs, elliptic, rounded or obtuse on both ends, mucronate, sparingly pubescent above, densely appressed-pubescent beneath, the upper ones about 3 cm. long, the lower ones smaller; gland narrowly oblong, long-stalked, borne between the lower pair of leaflets; peduncles slender, long-pilose, 5–7 cm. long, few-flowered, pedicels pilose, 1–1.5 cm. long; sepals pilose, 6–8 mm. long; petals 10–12 mm. long; legume linear, turgid, glabrate, 7–8 cm. long, about 6 mm. wide.

TYPE LOCALITY: On the banks of the Mescala, Guerrero.

DISTRIBUTION: Guerrero; Morelos.

38. *CHAMAESENNA* Raf.; Pittier, Arb. & Arb. Legum.

130. 1928.

Unarmed trees or shrubs, with pinnate, eglandular leaves, and mostly large axillary or terminal, racemose or paniced flowers. Stipules mostly small. Sepals 5. Petals 5, often strongly purple-veined, much larger than the sepals. Stamens 8–10, 6 or 7 of them with perfect anthers, the 3 lower ones sterile, rudimentary. Legume flat, broad, dehiscent. Seeds numerous.

Type species, *Chamaesenna reticulata* (Willd.) Pittier.

Seeds nearly linear, not elevated; foliage and inflorescence villous.

Seeds short, distinctly elevated; plants glabrous throughout.

Fruit and seeds unknown.

1. *C. reticulata*.2. *C. nicaraguensis*.3. *C. ? Gundlachii*.1. *Chamaesenna reticulata* (Willd.) Pittier, Arb. & Arb. Legum.

130. 1928.

Cassia reticulata Willd. Enum. 443. 1809.*Cassia Tarantac* H.B.K. Nov. Gen. & Sp. 6: 348. 1824.*Cassia dumetorum* Bert.; DC. Prodr. 2: 499. 1825.

A shrub or a small tree, 4–7 m. high, the young branches, petioles, leaf-rachis and inflorescence short-villous. Stipules lanceolate, acuminate, about 1 cm. long or shorter, more or less persistent. Leaflets 8–12 pairs, broadly oblong or the upper ones obovate, 7–10 cm. long, 2.5–5 cm. wide, obtuse, retuse or acutish, often mucronate, pinnately veined, glabrous or glabrate above, densely pubescent beneath; flowers long-racemose in the upper axils; bracts large, obtuse, caducous; pedicels 4–5 mm. long; sepals obtuse, 10–12 mm. long; petals elegantly veined, a little longer than the sepals; legume broadly linear, 7–15 cm. long, 12–15 mm. wide, glabrous or sparingly pubescent, transversely veined; seeds linear, not elevated.

TYPE LOCALITY: Para, Brazil.

DISTRIBUTION: Guatemala to Panama, Colombia, Bolivia and Brazil; Trinidad.

2. *Chamaesenna nicaraguensis* (Benth.) Britton & Rose.*Cassia nicaraguensis* Benth. Trans. Linn. Soc. 27: 552. 1871.*Cassia Seleriana* Harms, Bull. Herb. Boiss. 7: 551. 1899.

A shrub, or a small tree, 4 or 5 m. high, glabrous throughout. Stipules deciduous; (ex Bentham) "reniform-falcate, sometimes 2.5 cm. long, long-acuminate"; leaflets 5–20 pairs, oblong to lanceolate, acute or obtuse, subchartaceous, 4–8 cm. long, 1.3–2.5 cm. wide, delicately pinnately and reticulate-veined; flowers racemose in the upper axils; pedicels 1–2 cm. long; bracts oblong to obovate, 1–1.5 cm. long, caducous; sepals elliptic, rounded, venose, 1–1.5 cm. long; petals elegantly veined, a little longer than the sepals; legume broadly linear, margined, apiculate, shining, 7–12 cm. long, 10–16 mm. wide, transversely veined, the short seeds distinctly elevated.

TYPE LOCALITY: Nicaragua.

DISTRIBUTION: Michoacan and Chiapas to Guatemala and Panama.

SPECIES PERHAPS OF THIS GENUS.

Cassia Gundlachii Urban, *Repert. Sp. Nov.* 15: 309. 1918.

Twigs and inflorescence puberulent. Stipules subulate, 1.5 mm. long, deciduous. Leaves eglandular; leaflets 5-10 pairs, chartaceous, ovate to lanceolate, rounded at base, acuminate, 2.5-4.5 cm. long, glabrous and shining above, finely appressed-pubescent beneath; inflorescence subcorymbose, axillary and terminal; pedicels very slender, 1-2 cm. long; sepals very unequal, the interior ones orbicular, 8-9 mm. long, the exterior oval, 3-3.5 mm. long; petals 9-15 mm. long, 11-13 mm. wide; larger anthers 6 mm. long; ovary curved, glabrous.

TYPE LOCALITY: Oriente, Cuba.

DISTRIBUTION: Northern Oriente, Cuba.

39. ECHINOCASSIA Britton & Rose, *gen. nov.*

A shrub, the branches, petioles, leaf-rachis and peduncles armed with short, recurved prickles, the peduncles, pedicels and bracts densely glandular-pubescent, the leaf-rachis sparingly glandular-pubescent, but eglandular. Stipules large, cordate. Leaflets large, spinulose-tipped. Flowers in axillary and terminal racemes. Sepals 5. Petals 5. Stamens 7; filaments short; two lower anthers much larger than the others; staminodes 3. Legume flat, broad, smooth, margined, stipitate, longitudinally dehiscent, the numerous obovate seeds transverse, not elevated.

Type species, *Cassia aculeata* Pohl.

1. Echinocassia aculeata (Pohl) Britton & Rose.

Cassia aculeata Pohl; Benth. in *Mart. Fl. Bras.* 15²: 128. 1870.
Chamaesenna aculeata Pittier, *Arb. & Arb. Legum.* 131. 1928.

A branching shrub, 2-3 m. high, the glandular pubescence short, spreading. Stipules broadly ovate, deeply cordate, strongly veined, spinulose-mucronate, 2.5-5 cm. long; leaflets 10-14 pairs, obliquely oblong to lanceolate, acute or obtuse, glabrous, subchartaceous, 3-5 cm. long, the terminal spinule 2-3 mm. long; racemes several-many-flowered; bracts membranous, obovate, 1-2 cm. long, caducous; pedicels stout, 1-1.5 cm. long; sepals ovate, obtuse, about 1 cm. long; petals color-veined, a little longer than the sepals; legume broadly linear, 7-10 cm. long, 1.5-2 cm. wide; seeds 5-6 mm. long.

TYPE LOCALITY: Near Curralinho, Goyaz, Brazil.

DISTRIBUTION: Cuba. Venezuela to Bolivia, Brazil and Paraguay.

ILLUSTRATION: *Mart. Fl. Bras. loc. cit. pl. 39.*

40. COWELLOCASSIA Britton, *gen. nov.*

Trees, with pinnate, eglandular leaves, small subulate stipules, the leaflets several pairs, narrowly lanceolate, the small flowers racemose or paniculate. Sepals unequal, rounded. Petals suborbicular, nearly equal. Stamens 10, 7 of them perfect, with large fertile anthers, 3 of them small and infertile, with rudimentary anthers. Legume linear, flat, septate between the seeds, promptly longitudinally dehiscent, few-several-seeded, its valves membranous.

Type species, *Cassia scleroxyla* Britton.

Leaflets very delicately reticulate-veined; legume 6-7 mm. wide; petals 6-7 mm. long.

Leaflets strongly reticulate-veined; legume 8-10 mm. wide; petals 9 mm. long.

1. *C. scleroxyla*.

2. *C. domingensis*.

1. Cowellocassia scleroxyla Britton.

Cassia scleroxyla Britton, *Bull. Torrey Club* 43: 458. 1916.

Slender tree, 8 m. high, the bark smooth, the wood very hard, the twigs pubescent. Leaves 8-10 cm. long; petiole and rachis sparingly appressed-pubescent; leaflets 6-8 pairs, linear-lanceolate, chartaceous, 2-4 cm. long, acute or acuminate, mucronate, rounded or narrowed at base, glabrous above, delicately reticulate-veined, pale green and sparingly pubescent beneath; pedi-

cels appressed-short-pubescent, about 10 mm. long; larger sepals 4-5 mm. long, ciliate; petals 6-7 mm. long; legume glabrous, 3-4.5 cm. long, 6-7 mm. wide.

TYPE LOCALITY: Berreco near Daiquiri, Oriente, Cuba.

DISTRIBUTION: Known only from the type locality.

2. *Cowellocassia domingensis* (Spreng.) Britton.

Cassia domingensis Spreng. Neue Entd. 3: 55. 1822.

A small tree, the twigs glabrous or nearly so. Leaves 10-15 cm. long; rachis and petiolules sparingly pubescent; leaflets 6-8 pairs, narrowly lanceolate, 4-5 cm. long, strongly reticulate-veined, apiculate, rounded at base, glabrous above, glabrous, or sparingly pubescent on the midvein beneath; inflorescence short or elongated, sometimes 3 dm. long; pedicels 6-8 mm. long, appressed-short-pubescent; larger sepals 7 mm. long; petals about 9 mm. long; legume 5-7.5 cm. long, 8-10 mm. wide, shining.

TYPE LOCALITY: Hispaniola.

DISTRIBUTION: Hispaniola; Cuba.

41. *Sciacassia* Britton, gen. nov.

Trees with large pinnate, eglandular leaves and rather large paniced flowers. Sepals 5, Petals 5, inconspicuously veined. Anther-bearing stamens mostly 7. Legume coriaceous, linear, flat, narrow, mostly tardily dehiscent, not impressed between the seeds. Natives of the Old World' tropics, much planted for shade.

Type species, *Cassia siamea* Lam.

1. *Sciacassia siamea* (Lam.) Britton.

Cassia siamea Lam. Encyc. 1: 648. 1785.

Cassia florida Vahl, Symb. 3: 57. 1794.

Cassia gigantea Bert.; DC. Prodr. 2: 492. 1825.

Cassia arborea Macfad. Fl. Jam. 1: 343. 1837.

A tree, 8-12 m. high, the young twigs and the inflorescence puberulent. Stipules very small, caducous; petioles short; leaflets 6-14 pairs, oblong to oblong-lanceolate, obtuse or emarginate, mucronate, 3-7 cm. long, 1-2 cm. wide, chartaceous, glabrous above, glabrous or minutely puberulent beneath, finely reticulate-veined; racemes corymbose-paniculate, several-many-flowered; bractlets 5-6 mm. long; pedicels about 3 cm. long, or shorter; sepals suborbicular, puberulent, 6-7 mm. long; petals clawed, bright yellow, 12-16 mm. long; legume linear, thick-coriaceous, 2-2.5 dm. long, 1-1.5 cm. wide, puberulent or glabrate, tipped, its margins thickened.

TYPE LOCALITY: Siam.

DISTRIBUTION: Widely planted for shade in the West Indies and tropical continental America, locally naturalized. Native of the East Indies.

42. *Gaumerocassia* Britton, gen. nov.

Shrubs or trees, with pinnate, eglandular leaves, small, mostly caducous stipules, and large, yellow, racemose flowers. Sepals 5, unequal. Petals 5, mostly very unequal. Perfect stamens 7, their anthers unequal; staminodia mostly 3. Legume broadly linear, flat, chartaceous, readily longitudinally dehiscent, several-many-seeded.

Type species, *Cassia Peralteana* H.B.K.

Leaflets 1-3 cm. long, rounded or obtuse at apex.

Leaflets densely pubescent on both sides; legume pubescent.

Leaflets 3-5 pairs; sepals 6-10 mm. long.

Leaflets 6-10 pairs; sepals 3-6 mm. long.

Leaflets puberulent above, canescent-pubescent beneath; legume glabrous.

Leaflets larger, mostly 3-6 cm. long, acute or obtuse, glabrous above.

1. *G. Andrieuxii*.

2. *G. Liebmannii*.

3. *G. Peralteana*.

4. *G. Ekmaniana*.

1. *Gaumerocassia Andrieuxii* (Benth.) Britton.

Cassia Andrieuxii Benth. Trans. Linn. Soc. 27: 548. 1871.

Cassia fulva Brand. Zoe 5: 233. 1906.

A shrub, the twigs, petioles, rachis and inflorescence densely tomentose. Stipules small, caducous; leaflets 3-5 pairs, obovate to ovate-oblong, 1-2.5 cm. long, obtuse or rounded at apex,

velvety pubescent above, white-tomentose beneath; racemes densely several-flowered; pedicels slender, 1-2.5 cm. long, pubescent; sepals pubescent, unequal, 6-10 mm. long; petals unequal, 8-16 mm. long; legume broadly linear, straight, 8-10 cm. long, 8-12 mm. broad, rounded or acute at apex, short-stipitate, pubescent or hirsute.

TYPE LOCALITY: Oaxaca.

DISTRIBUTION: Oaxaca and Puebla.

2. *Gaumerocassia Liebmannii* (Benth.) Britton.

Cassia Liebmannii Benth. Trans. Linn. Soc. 27: 549. 1871.

Branches, petioles, rachis and inflorescence softly reddish-pubescent. Leaves 15-20 cm. long; leaflets 6-10 pairs, oval to oblong, 2-3 cm. long, rounded at apex, oblique at base, velvety pubescent above, canescent to villous beneath; racemes lax-flowered, shorter than the leaves; bracts lanceolate, somewhat persistent; pedicels 12-18 mm. long; sepals thickish, 3-6 mm. long, brownish tomentose; petals twice as long as the sepals; legume pubescent.

TYPE LOCALITY: Oaxaca.

DISTRIBUTION: Known only from the type locality, Santiago Estate, near the sea, Oaxaca.

3. *Gaumerocassia Peralteana* (H.B.K.) Britton.

Cassia Peralteana H.B.K. Nov. Gen. & Sp. 6: 356. 1824.

A tree or shrub, the young branches and petioles tomentose-hirsute. Leaflets 3-5 pairs, 1-3 cm. long, oblong, rounded at both ends, puberulent or becoming glabrate above, pubescent beneath; flowers numerous in short-compact racemes; pedicels slender, 6-12 mm. long; sepals ovate-oblong to suborbicular, 6-9 mm. long, obtuse; petals very unequal, the two lower ones about twice as long as the calyx; ovary glabrous; legume linear, flat, 8-10 cm. long, 8-10 mm. wide, reticulate-veined, glabrous, short-stipitate.

TYPE LOCALITY: Campeche.

DISTRIBUTION: Campeche; Yucatán.

4. *Gaumerocassia Ekmaniana* (Urban) Britton.

Cassia Ekmaniana Urban, Symb. Ant. 9: 442. 1928.

A tree, 10 m. high or higher, the twigs, petioles and inflorescence rather densely short-pubescent. Leaflets 5-7 pairs, broadly oblong to elliptic, 2-6 cm. long, 0.7-2 cm. wide, acute, or obtuse, glabrous above, short-pubescent on the midvein beneath; inflorescence a short, many-flowered raceme; bracts lanceolate, 4-6 mm. long, caducous; pedicels slender, 1.5-2.5 cm. long; sepals unequal, broadly ovate to obovate, 3-5 mm. long; petals unequal, 9-15 mm. long; legume broadly linear, 8-12 cm. long, 9-12 mm. broad, glabrous, stipitate.

TYPE LOCALITY: Between Remates and Gayales, Pinar del Rio, Cuba.

DISTRIBUTION: Pinar del Rio, Cuba; Yucatán.

43. PALMROCASSIA Britton, gen. nov.

Shrubs, much branched, the short twigs often stiff, with small, alternate or fascicled, eglandular leaves of 1-5 pairs of small leaflets. Stipules filiform or minute, persistent or caducous. Sepals very unequal, obtuse. Petals large, yellow, somewhat unequal. Perfect stamens usually 7. Legume narrowly linear, elongated, chartaceous, dchiscent along both sutures, many-seeded.

Type species, *Cassia Wislizenii* A. Gray.

- | | |
|---|---------------------------|
| Leaflets usually 1 pair, suborbicular-obovate; twigs densely villous. | 1. <i>P. unijuga</i> . |
| Leaflets 2-5 pairs; twigs glabrous or villous. | 2. <i>P. villosa</i> . |
| Twigs and leaves villous; leaflets 3-5 mm. long, elliptic-orbicular, aristulate. | 3. <i>P. Pringlei</i> . |
| Twigs and leaves glabrous or villous; leaflets 5-15 mm. long, oblong to obovate, apiculate. | 4. <i>P. Wislizenii</i> . |
| Legume up to 2 dm. long, 7-8 mm. wide. | 5. <i>P. Painterii</i> . |
| Legume shorter. | |
| Stipules filiform-setaceous, long-persistent; leaflets 2 or 3 pairs, 4-9 mm. long, strongly veined. | |
| Stipules minute, caducous; leaflets 3-5 pairs, 6-15 mm. long, not strongly veined. | |

1. *Palmerocassia unijuga* (Rose) Britton.

Cassia unijuga Rose, Contr. U. S. Nat. Herb. 5: 195. 1899.

A shrub, 3–10 dm. high, the young branches densely villous. Stipules filiform, 4–6 mm. long, persistent; petioles only 1–3 mm. long; leaflets 1 pair (rarely 2 pairs), 6–10 mm. long, orbicular or obovate, rounded or somewhat cuneate at base, the apex rounded, retuse or subtruncate, both surfaces appressed-pubescent; inflorescence racemose, axillary, few-flowered; pedicels 8–12 mm. long; sepals oblong to orbicular, unequal, 8–12 mm. long; petals 1.5–2 cm. long; legume 1–1.3 dm. long, 6 mm. wide, stipitate, glabrous.

TYPE LOCALITY: Tehuacán, Puebla.
DISTRIBUTION: Puebla.

2. *Palmerocassia villosa* Britton, sp. nov.

Twigs very slender, densely villous. Stipules setaceous, villous, about 3 mm. long; leaves very small, only 1–1.5 cm. long; leaflets 2 pairs, elliptic-orbicular to orbicular-obovate, chartaceous, 3–5 mm. long, sparingly pubescent above, villous-strigose beneath, aristulate; fruiting pedicels 1.5–2 cm. long; legume linear, glabrous, apiculate, stipitate, 7–12 cm. long, 6–7 mm. wide, impressed between the seeds.

Mapimi, Durango, October 21–23, 1898, *E. Palmer* 518.

3. *Palmerocassia Pringlei* (Rose) Britton.

Cassia Pringlei Rose, Contr. U. S. Nat. Herb. 5: 194. 1899.
Cassia morelensis Greenman, Proc. Amer. Acad. 39: 79. 1903.

A shrub, 2.5–4 m. high, the stiff twigs glabrous, sparingly pubescent, or villous. Stipules minute; leaves alternate or fascicled, glabrous or sparingly pubescent; leaflets 2–4 pairs, short-oblong to obovate or orbicular, 5–10 mm. long, obtuse, apiculate; inflorescence axillary or terminal, longer than the subtending leaves, few-flowered; sepals ovate to orbicular, 5–10 mm. long; petals 2–2.5 cm. long; legume up to 2 dm. long, 7–8 mm. wide, glabrous, short-stipitate, reticulate-veined.

TYPE LOCALITY: Tomellin, Oaxaca.
DISTRIBUTION: Morelos, Colima, Puebla, and Oaxaca.

4. *Palmerocassia Wislizenii* (A. Gray) Britton.

Cassia Wislizenii A. Gray, Pl. Wright. 1: 60. 1852.

A much-branched shrub, 1.5–3 m. high, with short somewhat stiff branches, the young twigs appressed-pubescent or glabrate. Leaflets 2 or 3 pairs, obovate, rounded or retuse at apex, apiculate, glabrous or nearly so, 4–9 mm. long; stipules filiform-setaceous, 2–5 mm. long, long-persistent; racemes few-flowered; sepals oblong to suborbicular, 6–9 mm. long; petals about 2.5 cm. long; legume 6–12 cm. long, 5–6 mm. wide, glabrous, somewhat impressed between the seeds.

TYPE LOCALITY: Carizal and Ojo Caliente south of El Paso, in Chihuahua.
DISTRIBUTION: Southern Texas and New Mexico, Sonora and Chihuahua.

5. *Palmerocassia Painteri* Britton.

A low shrub, the young branches with scanty appressed pubescence, becoming glabrate. Stipules minute, caducous; leaflets 3–5 pairs, 6–15 mm. long, glabrous above, glabrous or with some appressed pubescence beneath, oblong to obovate, obtuse or acutish, apiculate; racemes few-flowered; sepals oblong to orbicular, glabrous or nearly so, 8–10 mm. long; petals 1–2 cm. long; legume 14–16 cm. long, 7–8 mm. wide, glabrous, usually rounded at apex, apiculate.

Tamaulipas, San Luis Potosí, Zacatecas and Querétaro. Type from Higuerrillas, Querétaro, August 23, 1905, *Rose Painter* & *Russell* 9807.

44. *PSILORHEGMA* (Benth.) Britton & Rose, gen. nov.

Asiatic and Australasian trees or shrubs, the leaves glanduliferous, the mostly large flowers in axillary or terminal racemes or corymbs, the stipules small, narrow, caducous. Sepals and petals 5. Perfect stamens 10; filaments short; anthers all alike or the lower slightly larger than the upper. Legume flat, linear, coriaceous or subcoriaceous, elongated, tardily dehiscent, many-seeded, stipitate.

Type species, *Cassia planisiliqua* L.

Larger leaflets 6–10 cm. long, acute or obtuse; rachis-glands short, stout.
Larger leaflets 3–5 cm. long, rounded; rachis-glands slender.

1. *P. planisiliqua*.
2. *P. suffruticosa*.

1. *Psilorhegma planisiliqua* (L.) Britton & Rose.

Cassia planisiliqua L. Sp. Pl. 377. 1753.
Cassia glauca Lam. Encyc. 1: 647. 1785.

A tree or sometimes shrubby, the young twigs minutely appressed-pubescent, soon glabrous. Stipules linear, acuminate, about 1 cm. long; petioles 2–4 cm. long, loosely pubescent or glabrous; rachis loosely pubescent or glabrous, bearing a short, stout clavate gland between one or more pairs of leaflets; leaflets oblong, elliptic, or ovate, acute, delicately pinnately and reticulate-veined, nearly glabrous, glaucous beneath, 5–10 cm. long; peduncles mostly axillary, 6–10 cm. long; flowers subcorymbose; pedicels 2–3 cm. long; sepals ovate or elliptic, rounded, unequal, about 1 cm. long, or shorter; petals 2–3 cm. long; legume 8–20 cm. long, 10–15 mm. wide, glabrous.

TYPE LOCALITY: Tropical America (in error).

DISTRIBUTION: Naturalized in Jamaica; widely planted in the West Indies. Native of tropical Asia and Australasia.

2. *Psilorhegma suffruticosa* (König) Britton.

Cassia suffruticosa König; Roth, Nov. Pl. Sp. 213. 1821.
Cassia glauca suffruticosa Hook. Fl. Brit. India 2: 265. 1878.

A shrub, or small tree, with slender, appressed-pubescent twigs. Stipules narrowly linear, 8–15 mm. long; petioles 2–3 cm. long; rachis appressed-pubescent, bearing a slender gland between one or two of the lower pairs of leaflets; leaflets oblong or elliptic, obtuse or rounded, delicately pinnately and reticulate-veined, pale beneath, 3–5 cm. long; peduncles 2–5 cm. long; flowers subcorymbose; pedicels about 2 cm. long, or shorter; sepals elliptic, about 7 mm. long; petals 1.5–2 cm. long; legume 6–10 cm. long, 8–13 mm. wide, glabrous or sparingly pubescent.

TYPE LOCALITY: East Indies.

DISTRIBUTION: Naturalized in Florida. Native of tropical Asia and Australasia.

45. *DITREMEXA* Raf. Sylva Tell. 127. 1838.

Herbs, shrubs or small trees, the leaves pinnate, the petiole bearing a gland near the base, the leaflets ovate to lanceolate or oblong. Flowers in axillary racemes or in terminal panicles. Sepals obtuse. Petals nearly equal. Perfect stamens usually 7, the anthers beakless; stamens usually 3. Legume flat, narrow, elongated, rarely compressed-turgid, dehiscent, the valves coriaceous or chartaceous. Seeds transverse or oblique.

Type species, *Cassia occidentalis* L.

Legume very narrow, usually greatly elongated, 1–3 dm. long, 2–6 mm. wide; seeds oblique.

Leaflets ovate, or ovate-lanceolate.

Leaflets lanceolate, long-acuminate.

Legume shorter and mostly wider; seeds transverse.

Legume densely hirsute.

Legume glabrous or sparingly pubescent.

Legume flat.

Leaflets 4–7 pairs, ovate or ovate-lanceolate, rarely lanceolate.

Petiolar gland globose.

Petiolar gland conic-cylindric.

Leaflets 6–9 pairs, oblong or lanceolate to elliptic.

Petiolar gland short, oblong or clavate.

Leaflets oblong to elliptic, obtuse or acutish.

1. *D. leptocarpa*.

2. *D. glaberrima*.

3. *D. hirsuta*.

4. *D. occidentalis*.

5. *D. confusa*.

- Seed-divisions of the legume about as wide as long; petiolar gland clavate. 6. *D. marilandica*.
 Seed-divisions much shorter than wide; gland ovoid to oblong. 7. *D. Medsgeri*.
 Leaflets lanceolate, acuminate. 8. *D. Nashii*.
 Petiolar gland conic-cylindric; leaflets lanceolate, acuminate. 9. *D. ligustrina*.
 Legume compressed-turgid; petiolar gland globose. 10. *D. Sophera*.

1. *Ditremexa leptocarpa* (Benth.) Britton & Rose.

Cassia leptocarpa Benth. *Linnaea* 22: 528. 1849.

Cassia leptocarpa hirsuta Benth. *Trans. Linn. Soc.* 27: 531. 1871.

Glabrous, pubescent, or hirsute, perennial, 0.5–2 m. high. Stipules linear, 6–9 mm. long, caducous; leaflets 4–7 pairs, ovate, or ovate-lanceolate, acuminate at the apex, rounded or narrowed at the base, 3–10 cm. long; petiole bearing a subglobose or oblong gland near the base; racemes axillary and terminal, several-many-flowered; pedicels 1–3 cm. long; sepals broad, elliptic to suborbicular, rounded, 6–8 mm. long; petals about twice as long as the sepals; legume narrowly linear, 0.7–3 dm. long, 3–5 mm. wide, loosely pubescent, or glabrous.

TYPE LOCALITY: Zapativa, Brazil.

DISTRIBUTION: Cuba; Tepic to Veracruz and El Salvador. Colombia to Brazil and Paraguay.

2. *Ditremexa glaberrima* (M. E. Jones) Britton & Rose.

Cassia leptocarpa glaberrima M. E. Jones, *Contr. West. Bot.* 12: 7. 1908.

Perennial; stem glabrous or puberulent, sometimes branched, about 1 m. high, or lower. Stipules linear, 5–6 mm. long, caducous; petiole bearing an ovoid or oblong short gland near the base; leaflets 4–7 pairs, lanceolate or oblong-lanceolate, acuminate, 2–6 cm. long, 1–1.5 cm. wide, glabrous on both sides, or puberulent beneath; racemes short, few-flowered, axillary, and in a terminal panicle; pedicels 1–3 cm. long; sepals oblong to elliptic, rounded, 7–10 mm. long; petals 10–13 mm. long; legume linear, 12–25 cm. long, 5–6 mm. wide, glabrous or nearly so.

TYPE LOCALITY: Mountains of Arizona.

DISTRIBUTION: New Mexico and Arizona to Sinaloa and San Luis Potosí.

3. *Ditremexa hirsuta* (L.) Britton & Rose; Britton & Wilson, *Sci. Surv. Porto Rico and Virgin Isl.* 5: 372. 1924.

Cassia hirsuta L. *Sp. Pl.* 378. 1753.

(?) *Cassia caracasana* Jacq. *Hort. Schoenbr.* 3: 11. 1798.

Hirsute, 1.5 m. high or less, perennial. Stipules linear, deciduous; petioles 3–8 cm. long, bearing a stout gland near the base; leaflets 3–5 pairs, ovate to ovate-lanceolate, acute or acuminate, 4–7 cm. long; flowers in short axillary racemes; peduncle shorter than the subtending petiole; bracts short, deciduous; sepals oblong, obtuse, 7–9 mm. long, hirsute; petals twice as long as the sepals; legume linear, densely hirsute, somewhat curved, 8–15 cm. long, 5–7 mm. wide; seeds transverse.

TYPE LOCALITY: America.

DISTRIBUTION: Jamaica; Por to Rico; Guadeloupe; Martinique; St. Vincent; Tobago; Trinidad. El Salvador. Colombia to Dutch Guiana, Ecuador and Brazil.

ILLUSTRATION: *Mart. Fl. Bras.* 15: *pl.* 34.

4. *Ditremexa occidentalis* (L.) Britton & Rose; Britton & Wilson, *Sci. Surv. Porto Rico and Virgin Isl.* 5: 372. 1924.

Cassia falcata L. *Sp. Pl.* 377. 1753.

Cassia occidentalis L. *Sp. Pl.* 377. 1753.

Cassia frutescens Mill. *Gard. Dict.* ed. 8, no. 2. 1768.

Cassia longisiliqua L. *f. Suppl.* 230. 1781.

Cassia caroliniana Walt. *Fl. Car.* 134. 1788.

Cassia lineata Michx. *Fl. Bor. Am.* 1: 261. 1803.

Cassia ciliata Raf. *Fl. Ludov.* 100. 1817.

Senna occidentalis Link. *Handb.* 2: 140. 1831.

Annual or perennial, erect, 2 m. high or less, glabrous or nearly so. Stipules linear-lanceolate, acuminate, 4–6 mm. long, caducous; petiole 3–5 cm. long, bearing a large sessile globose

gland near the base; leaflets 4-6 pairs, ovate to ovate-lanceolate (rarely lanceolate), acute or acuminate, 3-7 cm. long; inflorescence racemose, axillary; few-flowered; bracts lanceolate, acuminate, caducous, 1-1.5 cm. long; sepals 6-9 mm. long; petals twice as long as the sepals; legume linear, flat, somewhat curved, 6-12 cm. long, 6-9 mm. wide, with thickened margins; seeds compressed, brown, dull, 4 mm. long, transverse.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Virginia to Indiana, Missouri, Florida and Texas, south to Panama; West Indies. Colombia to French Guiana, Bolivia and Paraguay. Old World tropics.

ILLUSTRATIONS: Bot. Reg. *pl.* 83; Descourt. Fl. Ant. *pl.* 135; Britton & Brown, III. Fl. f. 2038; ed. 2, f. 240; Audubon Birds Am. *pl.* 135.

NOTE. A remarkable specimen from the herbarium of Dr. A. W. Chapman, collected at Appalachicola, Florida, and indicated by him as this species, has simple, petioled, broadly ovate, rounded leaves 4-7 cm. long, the single flower with three pistils.

5. *Ditremexa confusa* Britton, sp. nov.

Cassia longisiliqua DC. Prodr. 2: 497. 1825. Not L.f. 1781.

Cassia ligustrina Jaegeriana Urban, Symb. Ant. 5: 360. 1908.

Cassia ligustrina Eggersiana Urban, loc. cit. 1908.

A shrub, or a small tree, 1-3.3 m. high, glabrous throughout. Stipules caducous; leaflets 4-7 pairs, ovate, or the upper ones lanceolate, acuminate, inequilateral, 3-7 cm. long, 1.5-2.3 cm. wide; gland conic-cylindric, borne near the base of the petiole; racemes short, few-flowered, mostly in a short, terminal, corymbose panicle; pedicels 1-1.5 cm. long; sepals suborbicular to oblong, obtuse, about 9 mm. long or shorter; petals nearly twice as long as the sepals; legume linear, glabrous, little curved, flat, about 10 cm. long, 7 mm. wide, tipped by the persistent style; impressed between the transverse seeds.

Hispaniola and Cuba. Type from between Higüey and Gato, Santo Domingo, December 6, 1909, N. Taylor 430.

6. *Ditremexa marilandica* (L.) Britton & Rose.

Cassia marilandica L. Sp. Pl. 378. 1753.

Cassia acuminata Moench, Meth. 273. 1794.

Cassia reflexa Saisb. Prodr. 326. 1796.

Perennial, glabrous or sparingly pubescent, 1-3 m. high. Stipules linear-subulate, caducous; petiole bearing a clavate gland near the base; leaflets 6-10 pairs, oblong to oblong-lanceolate, obtuse or acutish, mucronate, ciliate, 2-5 cm. long, 6-16 mm. wide; racemes axillary, and in a terminal panicle; pedicels 1-2 cm. long; sepals ovate to oblong, obtuse, 6-8 mm. long; petals 10-12 mm. long; legume linear, long-pubescent when young, sparingly pubescent when mature, slightly curved, 7-12 cm. long, 5-7 mm. wide, impressed and septate between the seeds, the seed-cavities about as wide as long; seeds suborbicular.

TYPE LOCALITY: Maryland.

DISTRIBUTION: Massachusetts to Indiana, North Carolina and Tennessee.

ILLUSTRATIONS: Britton & Brown, III. Fl. f. 2037; ed. 2, f. 2438; Shafer, *Torreyia* 4: 180, f. 1; Barton, Elem. Bot. *pl.* 17; Schkuhr, Handb. *pl.* 113; W. Barton, Mat. Med. *pl.* 12; Bigel. Am. Med. Bot. 2: *pl.* 39; Raf. Med. Fl. 1: f. 18.

7. *Ditremexa Medsgeri* (Shafer) Britton & Rose.

Cassia Medsgeri Shafer, *Torreyia* 4: 179. 1904.

Perennial, glabrous or very nearly so throughout, about 2 m. high or lower. Stipules linear-lanceolate, caducous; petiolar gland ovoid-conic to oblong or cylindrical; leaflets 4-8 pairs, oblong to elliptic, acutish or obtuse, mucronate, 3-6 cm. long, 1-2 cm. wide; racemes axillary or also in a terminal panicle; pedicels 1-1.8 cm. long; sepals obtuse, 5-8 mm. long; petals 9-11 mm. long; legume linear, usually strongly curved, glabrous or sparingly short-pubescent, 6-10 cm. long, 8-11 mm. wide, impressed and septate between the seeds, the segments much shorter than wide; seeds obovoid.

TYPE LOCALITY: Westmoreland County, Pennsylvania.

DISTRIBUTION: Pennsylvania to Iowa, Georgia, Kansas and Texas.

ILLUSTRATIONS: Shafer, loc. cit. 180, f. 2; Britton & Brown, III. Fl. ed. 2, f. 2439.

8. *Ditremexa Nashii* Britton & Rose, sp. nov.

Perhaps herbaceous, 4 dm. high, or higher; branches terete or nearly so, glabrous. Stipules caducous; petiole glabrous, bearing at its base a large sessile, ovoid-globular, black gland; leaflets 6-8 pairs, lanceolate, acuminate, mucronate, 2.5-4 cm. long, 9-12 mm. wide, glabrous or with a few scattered hairs along the margin and on the petiolules; inflorescence terminal, paniculate, glabrous or with a few scattered hairs, the racemes short, few-flowered; bracts small, linear-caducous; sepals elliptic, rounded, somewhat unequal, 6-8 mm. long, purplish, glabrous, or ciliolate; petals oblong, cuneate at base, with colored veins; anthers dark purple; ovary hairy; style glabrous.

Swamp near Eustis, Lake County, Florida, August 16-25, 1894, *George V. Nash 1720*.

9. *Ditremexa ligustrina* (L.) Britton & Rose; Britton & Wilson,
Sci. Surv. Porto Rico and Virgin Isl. 5: 372. 1924.

Cassia ligustrina L. Sp. Pl. 378. 1753.

Cassia occidentalis glabra Stahl, Est. Puerto Rico 3: 112. 1885. Not DC. 1825.

Suffrutescent or herbaceous, 0.6-2 m. high, glabrous or very nearly so throughout. Stipules linear, 6-7 mm. long; gland conic-cylindric, usually borne near the base of the petiole; leaflets 4-8 pairs, lanceolate to oblong-lanceolate, acute or acuminate, often ciliolate, 2-6 cm. long, 8-16 mm. wide, inequilateral; racemes short, mostly in a terminal corymbose panicle; pedicels 1-2 cm. long; sepals obtuse, 6-10 mm. long; petals 12-16 mm. long; legume flat or the valves slightly convex, glabrous, 7-12 cm. long, 6-8 mm. wide, somewhat curved; seeds transverse, flattened.

TYPE LOCALITY: Bahamas.

DISTRIBUTION: Florida; Bahamas; Jamaica; Cuba; Hispaniola; Cayman Islands. Introduced into Bermuda and Porto Rico.

ILLUSTRATIONS: Bot. Reg. pl. 109; Bot. Mag. pl. 1829; Dill. Hort. Elth. pl. 259, excl. f. 11 and 12.

10. *Ditremexa Sophera* (L.) Britton & Rose; Britton & Wilson,
Sci. Surv. Porto Rico and Virgin Isl. 5: 372. 1924.

Cassia Sophera L. Sp. Pl. 379. 1753.

Senna Sophera Roxb. Fl. Ind. 2: 347. 1832.

Cassia proboscidea Pollard, Bull. Torr. Club 23: 281. 1896.

Suffrutescent, 2 m. high or less, nearly glabrous throughout, the branches slender. Stipules ovate to lanceolate, acuminate, 10-15 mm. long, caducous; petiole 1-3 cm. long, bearing a large round black gland near its base; leaflets 5-10 pairs, lanceolate to ovate or oblong-lanceolate, acute or acuminate; flowers in short axillary and terminal racemes; bracts oblong, often obtuse, 10-15 mm. long, caducous; pedicels 8-15 mm. long; sepals about 8 mm. long; petals twice as long as the sepals; legume linear, straight, turgid, 5-10 cm. long, 7-9 mm. broad, pointed, glabrous; seeds dull brown, 4-5 mm. long.

TYPE LOCALITY: India.

DISTRIBUTION: Bahamas; Anegada; Jamaica; Cuba; Hispaniola; St. Thomas to Trinidad. Veracruz. Panama. Curaçao. Colombia. Venezuela. Old World tropics.

46. *VOGELOCASSIA* Britton, gen. nov.

Herbs, sometimes suffrutescent, the leaves usually with 3 pairs of obovate or elliptic, large leaflets, a slender gland borne between the lower pair; the linear stipules persistent, the large flowers axillary, borne 1-3 together on very short peduncles, the pedicels long and slender. Sepals 5, large, yellow, unequal. Petals 5, much longer than the sepals. Perfect stamens 7; anthers of 2 or 3 of the lower ones beaked. Legume linear, narrow, flat, strongly curved.

Type species, *Cassia leiophylla* Vogel.

Leaflets rounded, acutish, or obtuse; branches glabrate or pubescent.
Leaflets sharply acute; branches hirsute.

1. *V. leiophylla*.
2. *V. cobanensis*.

1. *Vogelocassia leiophylla* (Vogel) Britton.*Cassia leiophylla* Vogel, Syn. Cass. 25. 1837.*Cassia humilis* Mart. & Gal. Bull. Acad. Brux. 10: 307. 1843. Not Collad. 1816.*Cassia leiophylla pubescens* Benth. Trans. Linn. Soc. 27: 542. 1871.

Glabrate or pubescent, 5–10 dm. high. Stipules 12–16 mm. long, persistent; leaflets obovate, 2–6 cm. long, rounded, acutish, or obtuse, often mucronate; gland borne between the lower pair of leaflets, narrow, elongated; inflorescence axillary, often of 2 flowers on a very short peduncle, or above somewhat paniculate; pedicels slender, 2–5 cm. long; sepals very unequal, obtuse, about 8 mm. long or shorter; petals 1.5–2 cm. long; the 3 lower anthers stout-beaked; legume curved, 10–12 cm. long, 3–6 mm. broad, tipped; seeds turgid, 3–3.5 mm. long.

TYPE LOCALITY: Brazil.

DISTRIBUTION: Veracruz to Panama, Peru and Brazil.

2. *Vogelocassia cobanensis* Britton, sp. nov.

Hirsute, 3–4 dm. high. Stipules 1–2 cm. long, persistent; rachis bearing a narrow gland between the lower pair of leaflets; leaflets 3 pairs, obovate to short-oblong, 5 cm. long or less, sharply acute, pubescent on both sides; peduncle short, 1–3-flowered; pedicels slender, 3–4 cm. long; flowers large, 4.5–5 cm. broad when fully expanded; sepals obtuse, about 10 mm. long or shorter; 3 lower anthers 10–12 mm. long, curved, stout-beaked; legume 6–9 cm. long, 4–5 mm. broad, curved, tapering at base, attenuate at apex; seeds brown, turgid, 3.5–4 mm. long.

Coban, Alta Verapaz, Guatemala, December 1907, *H. von Turckheim* 2056.47. *PEIRANISIA* Raf. Sylva Tell. 127. 1838.*Panisia* Raf. Sylva Tell. 128. 1838.

Trees or shrubs, with few, several or many pairs of mostly membranous leaflets, and with one or more glands on the rachis, the yellow flowers slender-pedicelled. Petals usually large. Perfect stamens usually 7, two or three of the lower ones beaked, or all beakless; staminodes usually 3. Legume flattened, elongated, dehiscent along both sutures, tipped or pointed, the valves chartaceous, usually impressed between the transverse seeds, their margins thickened.

Type species, *Cassia aversifolia* Hook.

I. Two of three of the anthers long-beaked (as far as known).

A. Leaflets oblong to elliptic, linear or obovate, obtuse, rounded or acute.

Leaflets oblong to obovate.

Gland subcylindric, oblong, or clavate.

Leaflets 3—several pairs.

Peduncles 2-flowered, or some of them 1-flowered or rarely 3-flowered.

Leaflets mostly 1–5 cm. long.

Legume narrow, 3.5–6 mm. wide.

Legume 5–6 mm. wide; plants glabrous; pubescent or villous.

Legume 6–15 cm. long; leaflets mostly 4–10 pairs.

Legume 4–7 cm. long; leaflets up to 16 pairs.

Leaflets membranous, rounded or obtuse.

Leaflets chartaceous, acute.

Legume only 3.5 mm. wide; densely villous shrub; leaflets subtruncate or retuse.

Legume broader, 8–10 mm. wide.

Glabrous or nearly so throughout; glands short, stout.

Leaflets rounded; legume short-stipitate.

Leaflets acutish or obtuse; legume long-stipitate.

Twigs, petioles or inflorescence villous or strigose.

Stipules lanceolate.

Stipules setaceous.

Leaflets 5–8 pairs, pubescent beneath.

Leaflets 10–12 pairs, glabrous.

Leaflets only 4–10 mm. long.

Leaflets up to 15 pairs.

Leaflets only 3 or 4 pairs.

Leaflets papillose-puberulent above, strigose beneath.

Leaflets glabrate, ciliolate.

1. *P. biflora*.2. *P. crista*.3. *P. haitiensis*.4. *P. Deamii*.5. *P. inaguensis*.6. *P. Palmeri*.7. *P. benitoensis*.8. *P. jamaicensis*.9. *P. Quiedondilla*.10. *P. polyphylla*.11. *P. yucatanensis*.12. *P. Gaumeri*.

- Racemes mostly 3-10-flowered, or inflorescence paniculate.
 Leaflets glabrous, or slightly pubescent beneath, oblong.
 Leaflets obtuse or rounded.
 Twigs appressed-pubescent; glands borne on the rachis and also at the bases of the pedicels.
 Twigs villous; inflorescence eglandular; sepals densely hirsutulous. 13. *P. oxyadena*.
 Leaflets acute or acutish. 14. *P. Shaferi*.
 Leaflets densely strigose beneath, narrowly obovate. 15. *P. robiniaefolia*.
 Leaflets only 2 or 3 pairs, elliptic. 16. *P. longirostrata*.
 Leaflets 2-4.5 cm. long; legume 4 mm. wide. 17. *P. Holwayana*.
 Leaflets 3-7.5 cm. long; legume 6 mm. wide. 18. *P. salvadorensis*.
 Gland subglobose to ovoid, blunt or rounded. 19. *P. Filchiana*.
 Pedicels 1-flowered or 2-flowered; leaflets oblong. 20. *P. clarendonensis*.
 Inflorescence paniculate; leaflets mostly elliptic. 21. *P. angustisiliqua*.
 Densely puberulent or short-pubescent.
 Glabrous or nearly so.
 Leaflets very many, small, linear. 22. *P. foliolosa*.
 Leaves only about 5 cm. long; plant glabrous or nearly so.
 Leaves much longer. 23. *P. Doylei*.
 Branches glabrous or puberulent; legume about 15 mm. wide. 24. *P. Williamsii*.
 Branches long-pilose; legume 4-5 mm. wide.
 B. Leaflets ovate to lanceolate, mostly acute or acuminate; legume much elongated.
 Leaflets lanceolate. 25. *P. Tonduzii*.
 Leaflets ovate. 26. *P. (?) verbenensis*.
 II. None of the anthers long-beaked.
 Leaflets oblong to elliptic, obtuse, retuse, rounded or acute.
 Leaflets 3-8 pairs, oblong to elliptic; racemes mostly shorter than the leaves.
 Leaflets puberulent or glabrate beneath.
 Leaflets rounded, or retuse. 27. *P. scopulorum*.
 Leaflets 1.5-3 cm. long, retuse; legume 6-8 mm. wide. 28. *P. guatemalensis*.
 Leaflets 3-5 cm. long, obtuse or slightly retuse; legume 12 mm. wide. 29. *P. bahamensis*.
 Leaflets acute, obtuse, or mucronate; inflorescence corymbose-paniculate. 30. *P. simulans*.
 Leaflets strigose or pilose beneath. 31. *P. chiapensis*.
 Leaflets oblong, acute or acutish. 32. *P. Botteriana*.
 Leaflets broadly elliptic to suborbicular, rounded. 33. *P. Orcuttii*.
 Leaflets 3 pairs, obovate-oblong; racemes as long as the leaves or longer. 34. *P. turquinae*.
 Leaflets lanceolate, sharply acute.
 Petals 8-10 mm. long; legume 3-4 mm. wide; gland very slender.
 Petals 14 mm. long; legume 6-7 mm. wide; gland oblong, stout.

1. *Peirania biflora* (L.) Pittier, Arb. & Arb. Legum. 128. 1928.

- Cassia biflora* L. Sp. Pl. 378. 1753.
Cassia tenuissima L. Sp. Pl. 378. 1753.
Cassia pallida Vahl, Eclog. 3: 12. 1807.
Cassia geminiflora Moç. & Sessé; Collad. Hist. Cass. 103. 1816.
Cassia nemerosa H.B.K. Nov. Gen. & Sp. 6: 353. 1824.
Cassia acapulcensis H.B.K. Nov. Gen. & Sp. 6: 353. 1824.
Cassia semperflorens DC. Cat. Hort. Monsp. 90. 1813.
Cassia biflora semperflorens DC. Prodr. 2: 496. 1825.
Panisia biflora Raf. Sylva Tell. 129. 1838.
Cassia biflora angustisiliqua Griseb. Fl. Brit. W. Ind. 208. 1860.

A glabrous or pubescent shrub or small tree about 4 m. high or less. Stipules subulate or setaceous, deciduous; gland subcylindric or clavate, borne between the lower pair of leaflets; leaflets 4-10 pairs, oblong to obovate or oblanceolate, 1-3 cm. long, membranous, obtuse or rounded, mucronulate, rarely acutish; peduncles axillary, 1-3-flowered, mostly 2-flowered; pedicels filiform, 8-20 mm. long; sepals obtuse or rounded, 4-8 mm. long; petals two or three times as long as the larger sepals; legume narrowly linear, submembranous, glabrous or pubescent, 6-15 cm. long, 5-6 mm. wide, impressed between the seeds.

TYPE LOCALITY: India [in error].

DISTRIBUTION: Bahamas; Cuba; Hispaniola; Jamaica (acc. to Fawcett & Rendle); Grenada; Sinaloa and Chihuahua to Panama, Columbia and Venezuela. Recorded from Florida, apparently erroneously. Trinidad (acc. to Grisebach).

ILLUSTRATION: Collad. loc. cit. pl. 3.

2. *Peirania crista* (Jacq.) Britton & Rose.

Cassia crista Jacq. Ic. Pl. Rar. 1: 8. 1786.

Cassia frondosa Ait. Hort. Kew 2: 53. 1789.

Cassia crista oligophylla Urban, Arkiv Bot. 22: A, No. 8, 33. 1929.

A shrub, 1-2 m. high, the young branches glabrous or pubescent. Stipules setaceous, deciduous; rachis bearing a club-shaped, elongated gland between the lower pair of leaflets; leaflets 4-16 pairs, thin, oblong, rounded at apex, 8-20 mm. long, glabrous on both sides or somewhat pubescent beneath; peduncles slender, axillary, 1-2.5 cm. long, mostly 3-flowered; pedicels slender; sepals nearly orbicular, 5-6 mm. long; petals 2-2.5 cm. long; ovary white-pubescent; legume 4-7 cm. long, about 6 mm. broad, sparingly pubescent, blunt.

TYPE LOCALITY: Florida [in error].

DISTRIBUTION: Hispaniola.

ILLUSTRATION: Jacq. loc. cit. *pl.* 74.

3. *Peirania haitiensis* Britton, sp. nov.

A shrub, about 1 m. high, the slender branches slightly flexuous and sparingly pubescent. Stipules setaceous, 4-7 mm. long; glands narrowly clavate, very slender, 3 mm. long, borne between the lowest pair of leaflets; leaflets 6-12 pairs, chartaceous, oblong, acute, dull, glabrous above, sparingly pubescent on the veins beneath, ciliate, 1-2 cm. long, about 5 mm. wide, the midvein prominent, the lateral venation obscure; peduncles axillary, 1-1.5 cm. long, very slender, 2-flowered; pedicels very slender, about as long as the peduncles; sepals suborbicular, rounded, the larger 5-6 mm. long; petals 1.5-2 cm. long; legume linear, long-stipitate, sparingly pubescent, 3-9 cm. long, about 6 mm. wide.

Haiti. Type from vicinity of Ennery, l'Artibonite, at about 400 m. altitude, January 13, 1906, *E. C. Leonard 8799*.

4. *Peirania Deamii* Britton, sp. nov.

A shrub, about 2 m. high, the twigs and petioles rather densely villous. Stipules setaceous, 2-3 mm. long; gland narrowly oblong-clavate, about 2.5 mm. long, borne between the lower pair of leaflets; leaves only about 3 cm. long; leaflets 2-4 pairs, 8-15 mm. long, sub-chartaceous, obovate to elliptic, papillose-pubescent on both sides, the apex rounded, retuse or subtruncate; peduncles mostly 2-flowered, villous, 1.5-2 cm. long; pedicels villous, about as long as the peduncles; petals elliptic to suborbicular, very unequal, glabrate, the larger about 9 mm. long; petals broad, 2-3 cm. long; legume very narrowly linear, 12 cm. long, only 3.5 mm. wide, minutely tipped, stipitate, sparingly pubescent, impressed between the seeds.

Gualán, Guatemala, January 14, 1905, *Charles C. Deam 291*.

5. *Peirania inaguensis* Britton, sp. nov.

A glabrous shrub, 1.5-2.5 m. high, the twigs slender. Stipules setaceous, 2-3 mm. long, caducous; glands oblong, blunt, stout-stipitate, borne between the lower pair, or the two or three lower pairs of leaflets; leaflets 4-8 pairs, submembranous, oblong to elliptic and obovate, rather strongly pinnately veined, rounded, 8-25 mm. long; peduncles axillary, very slender, 4 cm. long or shorter; pedicels very slender, 2-3 cm. long, 2- or 3-flowered; sepals orbicular to obovate-elliptic, 6-8 mm. long; petals about 1.5 cm. long; legume broadly linear, slightly curved, or straight, shining, 6-9 cm. long, 8-10 mm. wide, short-tipped, stipitate, impressed between the seeds.

Inagua Island, Bahamas. Type from Salt Pond Hill, October 12, 1904, *Nash & Taylor 971*.

6. *Peirania Palmeri* Britton, sp. nov.

Nearly glabrous, the branches slender, sparingly pubescent above. Stipules only about 1.5 mm. long; leaves about 8 cm. or shorter, glabrous, or the petiole and rachis sparingly pubescent; gland short-clavate, borne between the lower pair of leaflets, and also more slender ones on the inflorescence at the base of the pedicels; leaflets 3-5 pairs distant, membranous, rather faintly pinnately veined, 1-2.5 cm. long, obtuse or acutish; peduncles axillary, slender, 1-3-flow-

ered, 1-2 cm. long; pedicels slender, about as long as the peduncles; sepals suborbicular, rounded, about 8 mm. long; petals about twice as long as the larger sepals; legume rather broadly linear, sparingly short-pubescent, shining, 10-12 cm. long, about 8 mm. wide, slender-stipitate, impressed between the seeds, the apex rounded.

Vicinity of Acapulco, Guerrero, October 1894 to March 1895, *E. Palmer 260*.

7. *Peirania benitoensis* (Britton & Wilson) Britton & Rose.

Cassia benitoensis Britton & Wilson, Mem. Torrey Club 16: 66. 1920.

A shrub, 1-3 m. high, the young branches, petioles and rachis strigose-pubescent. Stipules lanceolate, acuminate, 6-7 mm. long; leaflets 5 or 6 pairs, oblong to elliptic, 1.5-2.4 cm. long, rounded and mucronulate at apex, rounded and oblique at base, somewhat ciliate; gland borne between the lower pair of leaflets, slender, subclavate, 2 mm. long; legume 14 cm. long, 8 mm. wide, glabrous, acute, aristate.

TYPE LOCALITY: Camp San Benito, Oriente, Cuba.

DISTRIBUTION: Known only from the type locality.

8. *Peirania jamaicensis* Britton, sp. nov.

A shrub, about 4 m. high, or lower, the twigs densely villous. Stipules setaceous, villous, 5-8 mm. long, deciduous; gland narrowly oblong, pointed, about 1.5 mm. long, borne between the lower pair of leaflets; leaves 6-12 cm. long, the petiole and rachis villous or glabrate; leaflets 5-8 pairs, membranous, acutish, obtuse or rounded, 1.5-4 cm. long, glabrous above, somewhat strigose on the veins beneath; peduncles axillary, villous, 2-3 cm. long, 2-flowered or 1-flowered; sepals elliptic to suborbicular, rounded, about 9 mm. long or shorter; petals 1.5-2 cm. long; legume rather broadly linear, 10 cm. long, about 8 mm. wide, sparingly pubescent, short-stipitate, obtuse, apiculate.

Jamaica. Type from below Flamsted, about 900 m. altitude, October, 20, 1905, *Harris 9031*.

9. *Peirania Quiedondilla* (M. Micheli) Britton & Rose.

Cassia Quiedondilla M. Micheli, Mém. Soc. Phys. Genève 34: 272. 1903.

A shrub, the twigs glabrescent. Stipules setaceous, caducous; petiole 2-2.5 cm. long, bearing an oblong pointed gland between the lower pair of leaflets; leaflets 10-12 pairs, oblong, acutish or obtuse, 2-3 cm. long, glabrous; peduncles pilose, axillary, 2-flowered; pedicels about as long as the peduncles; sepals glabrous, rounded, the larger ones about 7 mm. long; petals 1.5-2 cm. long; ovary densely tomentose; legume 8-10 cm. long, 1 cm. wide, puberulent.

TYPE LOCALITY: Los Fresnos, Guerrero.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATION: M. Micheli, loc. cit. *pl. 19*.

10. *Peirania polyphylla* (Jacq.) Britton & Rose; Britton & Wilson,

Sci. Surv. Porto Rico & Virgin Ids. 5: 373. 1924.

Cassia polyphylla Jacq. Coll. 4: 104. 1790.

Usually a shrub 3 m. high or less, or a tree up to 4 m., but recorded as sometimes becoming a tree up to 15 m. high, the young twigs and petioles loosely pubescent or glabrous, the branches slender. Leaves 2-6 cm. long, nearly sessile, fasciated at the nodes; stipules subulate, 2-3 mm. long; leaflets 5-15 pairs, nearly sessile, obovate, oblong-obovate, or oblong, 4-10 mm. long, obtuse, retuse or mucronulate, somewhat pubescent or glabrous; gland narrowly oblong, pointed, borne between the lower pair of leaflets, or wanting; peduncles slender, shorter than the leaves, 1-2-flowered; sepals oval, unequal, obtuse; petals about 1.5 cm. long; legume linear, nearly straight, 8-15 cm. long, 6-8 mm. wide, stipitate, short-tipped, impressed between the seeds, shining.

TYPE LOCALITY: Porto Rico.

DISTRIBUTION: Hispaniola; Porto Rico; St. Thomas; St. Croix; Anegada.

ILLUSTRATIONS: Jacq. Ic. Pl. Rar. *pl. 460*; Britton, *Addisonia pl. 2*.

11. *Peirania yucatanensis* Britton & Rose, sp. nov.

A shrub, the slender twigs, petioles and rachis short-villous. Stipules setaceous, villous, only 1 or 2 mm. long; leaves only about 2 cm. long; leaflets 3 or 4 pairs, elliptic to obovate, rounded or retuse, subchartaceous, papillose above, strigose beneath, 5-9 mm. long; gland narrowly clavate, 1.5-2 mm. long, borne between the lower pair of leaflets; peduncles axillary, apparently 1-flowered, sparingly short-villous, 1-1.5 cm. long; legume narrowly linear, 6-8 cm. long, about 5 mm. wide, sparingly strigose, apiculate, slender-stipitate, impressed between the seeds.

Yucatán, 1917-1921, *G. F. Gaumer & Sons 24066*.

12. *Peirania Gaumeri* Britton & Rose, sp. nov.

A low shrub, perhaps 1 m. high, the slender twigs glabrous. Stipules subulate, 2-4 mm. long, persistent; leaves 1-4 cm. long, the short petioles glabrate; leaflets 3 or 4 pairs, orbicular to short-oblong, obtuse or retuse, sometimes mucronate, 4-10 mm. long, glabrous on both sides, or very sparingly pubescent beneath; gland very slender, subclavate, borne between the lower pair of leaflets; flowers borne in the upper axils; peduncles apparently 1-flowered, slender, about 12 mm. long; sepals rounded or obtuse, unequal, 5-8 mm. long; petals 1-1.5 cm. long.

Yucatán, *G. F. Gaumer 391*.

13. *Peirania oxyadena* (DC.) Britton & Rose.

Cassia oxyadena DC. Prodr. 2: 495. 1825.

Cassia fulgens Macfad. Fl. Jam. 1: 342. 1837.

A shrubby tree, 3-5 m. high, the young branches, petioles and inflorescence appressed-pubescent. Stipules pubescent; leaves about 8 cm. long; leaflets 6-10 pairs, oblong or oblong-obovate, 1.5-2.5 cm. long, rounded or obtuse, mucronulate, glabrous above, sparingly pubescent on the midvein beneath; an ovoid to subclavate gland between the lowest pair and sometimes the two lower pairs; similar glands are borne on the inflorescence at the bases of the pedicels; racemes 3-6-flowered, somewhat longer than the leaves; pedicels 1-2 cm. long; sepals unequal, rounded; petals large; legume linear, stipitate, glabrous, 6-9 cm. long, 8-9 mm. wide, impressed between the seeds.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica.

14. *Peirania Shaferi* (Britton & Wilson) Britton & Rose.

Cassia Shaferi Britton & Wilson, Bull. Torrey Club 43: 459. 1916.

A shrub, about 1 m. high, the twigs, petioles and inflorescence villous-hirsutulous. Stipules narrowly oblong-lanceolate, 6-7 mm. long, acuminate, caducous; petiole bearing a slender gland, 1.5-2 mm. long, between the lower pair of leaflets; leaflets 4-6 pairs, oblong, 1.5-3 cm. long, rounded and mucronate at apex, hirsutulous beneath; sepals suborbicular, densely hirsutulous, 4-5 mm. long; petals strongly veined, about twice as long as the sepals; legume about 11 cm. long and 9 mm. broad, subulate-tipped, slightly curved; seeds 3.5-4.5 mm. long.

TYPE LOCALITY: Loma Mensura, Oriente, Cuba.

DISTRIBUTION: Northern Oriente, Cuba.

15. *Peirania robiniaefolia* (Benth.) Britton & Rose.

Cassia biflora Griseb. Cat. Pl. Cub. 79, hyponym. 1866. Not L. 1753.

Cassia robiniaefolia Benth. Trans. Linn. Soc. 27: 545. 1871.

A shrub, or a tree, 6-7 m. high, the young branches, inflorescence and petioles glabrate or pubescent. Stipules setaceous, 6-8 mm. long, deciduous; glands slender, elongated, borne between all or nearly all the pairs of leaflets; leaflets 6-10 pairs, oblong, 3-6 cm. long, acute, apiculate, membranous, glabrous; racemes axillary, 4-10-flowered; pedicels 1.5-3 cm. long; bracts minute, caducous; sepals rounded, unequal, 3-6 mm. long; petals 1.5-2.5 cm. long; legume narrowly linear, 7.5-15 cm. long, 5-6 mm. wide, glabrous, impressed between the seeds.

TYPE LOCALITY: Cuba.

DISTRIBUTION: Oriente, Cuba.

16. *Peirania longirostrata* Britton & Rose, sp. nov.

Branches, petioles and rachis densely short-villous. Stipules filiform, 8–12 mm. long, caducous; leaflets 6–10 pairs, 1–2 cm. long, most of them narrowly obovate, rounded or obtuse, broadly cuneate at base, green and slightly hairy above, pale and densely strigose beneath; gland between the lower pair of leaflets oblong-clavate; inflorescence paniculate; bracts filiform, caducous; pedicels slender, villous, 1–1.5 cm. long; sepals orbicular, 6–7 mm. in diameter, glabrous or nearly so; petals yellow, 13–14 mm. long; anthers of the 2 or 3 longer stamens tapering into a very slender abrupt beak 3 mm. long; ovary densely white-lanate; legume 8–12 cm. long, 5–6 mm. wide, somewhat pubescent, stipitate, apiculate.

Veracruz and Guatemala. Type from Solola, Guatemala, January 27, 1915, *E. W. D. Holway* 134.

17. *Peirania Holwayana* (Rose) Britton & Rose.

Cassia Holwayana Rose, Contr. U. S. Nat. Herb. 8: 301. 1905.

Cassia multiflora Mart. & Gal. Bull. Acad. Brux. 10²: 307. 1843. Not Vogel, 1837.

A shrub, 1–4 m. high, glabrous throughout, the young branches somewhat angled. Stipules linear, caducous; leaflets 2 or 3 pairs, elliptic to broadly oblong, or oblong-obovate, 2–4.5 cm. long, obtuse or rounded, reticulate-veined beneath, an elongated, clavate gland on the rachis between the lower pair; peduncles axillary, solitary or in fascicles, mostly 2-flowered, 1–2 cm. long; pedicels spreading, slender, 1.5–2 cm. long; flowers very large, 4–5 cm. broad; sepals elliptic or bicular, unequal, glabrous or ciliate, 5–9 mm. long; ovary densely appressed-pubescent; legume narrowly linear, 8–12 mm. long, about 4 mm. wide, slightly pubescent.

TYPE LOCALITY: Capulalpán, Oaxaca.

DISTRIBUTION: Oaxaca to Guatemala.

18. *Peirania salvadorensis* Britton, sp. nov.

A glabrous shrub, 1–2.6 m. high. Stipules caducous; leaflets 2 or 3 pairs, broadly elliptic, 3–7.5 cm. long, obtuse or rounded, loosely reticulate-veined, the rachis bearing a slender gland between the lower pair; inflorescence axillary, paniculate; pedicels slender; sepals suborbicular, rounded, 6–8 mm. long, ciliate; petals about 2 cm. long; ovary sparingly appressed-pubescent; legume narrowly linear, about 12 cm. long, 6 mm. wide, loosely short-pubescent, beaked, short-stipitate.

El Salvador. Type from San Francisco, 1929, *Salvador Calderón*.

19. *Peirania Fitchiana* Britton & Rose, sp. nov.

A glabrous shrub, the twigs slender. Stipules setaceous, 2–4 mm. long; leaves about 7 cm. long; gland ovoid, blunt, about 1.5 mm. long, borne between the lower pair of leaflets; leaflets 6–10 pairs, membranous, oblong, 0.8–20 mm. long, acute or the lower obtuse, very obscurely veined above, pinnately veined beneath; peduncles axillary, 2-flowered, about 1.5 cm. long; pedicels nearly as long as the peduncles; sepals suborbicular, the larger ones about 6 mm. in diameter; petals about 1.5 cm. long; two of the anthers beaked.

Hills above river, Santo Domingo City, Santo Domingo, March 9–10, 1913, *Rose, Fitch and Russell* 3795a.

20. *Peirania clarendonensis* (Britton) Britton & Rose.

Cassia clarendonensis Britton, Bull. Torrey Club 42: 388. 1915.

A shrub, 1–1.2 m. high, puberulent or short-pubescent throughout. Stipules linear-lanceolate, about 3 mm. long; leaflets 10–15 pairs, elliptic or the uppermost oblong, 1–2 cm. long, mucronate, a short, ovoid blunt gland between the lowest pair; racemes 2–6-flowered, axillary, corymbose-paniculate above; sepals nearly equal, 5–9 mm. long; petals 9–14 mm. long; legume narrowly linear, 7–10 cm. long, 5–6 mm. wide, impressed between the puberulent seeds.

TYPE LOCALITY: Iverness, Clarendon, Jamaica.

DISTRIBUTION: Known only from the type locality.

21. *Peirania angustisiliqua* (Lam.) Britton & Rose.

Cassia angustisiliqua Lam. Encycl. 1: 649. 1785.

Cassia Berteriana Balb.; DC. Prodr. 2: 496. 1825.

A shrub, about 1 m. high, the branches puberulent or nearly glabrous. Stipules setaceous, deciduous; gland subglobose, blunt, borne between the lower pair of leaflets, or on the petiole; leaflets 3-4 pairs, oblong, 8-22 mm. long, obtuse or acute, mucronate, glabrous on both sides; racemes few-flowered, much shorter than the leaves; petals 1.5-2 cm. long; sepals obtuse; legume narrowly linear, 7-12 cm. long, 5-6 mm. wide, stipitate, glabrate.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Hispaniola.

ILLUSTRATION: Plumier, Pl. Am. pl. 78, f. 2.

22. *Peirania foliolosa* (Benth.) Britton & Rose.

Cassia foliolosa Benth. Trans. Linn. Soc. 27: 544. 1871.

Probably a shrub, glabrous or nearly so throughout. Leaves about 5 cm. long; leaflets 20-30 pairs, linear-oblong, glabrous, obtuse, sessile, 8-12 mm. long, thickish, 1-nerved; gland between the lower pair of leaflets long, pointed; stipules rigid, setaceous, somewhat persistent; peduncles axillary, 2-flowered; three lower anthers larger than the others, beaked; young legume flat, appressed-pubescent.

TYPE LOCALITY: Guatemala.

DISTRIBUTION: Guatemala.

23. *Peirania Doylei* Britton & Rose, sp. nov.

A tree, 6-7 m. high, young branches, inflorescence and rachis of leaves puberulent; gland between the lower pair of leaflets narrowly oblong; leaflets 50 or more pairs, linear, 10-15 mm. long, 1-2 mm. wide, apiculate, glabrous above, pale and nearly glabrous beneath; racemes few-flowered, axillary or terminal and paniculate; pedicels 2 cm. long or less; sepals orbicular, 4-5 mm. long; petals 12-15 mm. long; three of the anthers long-beaked; legume broadly linear, 12-15 cm. long, about 1.5 cm. wide, thin, glabrous, short-stipitate, shining, impressed between the seeds.

Chiapas and Veracruz. Type from Pichucaleo, Chiapas, June 19, 1907, *C. B. Doyle 259*.

24. *Peirania Williamsii* Britton & Rose, sp. nov.

A shrub about 3 m. high, the young branches long-pilose and densely puberulent, the long hairs sometimes deciduous. Leaves narrow, 10-15 cm. long; stipules 6-8 mm. long, narrow, acuminate, caducous; leaflets 40-60 pairs, linear, 8-12 mm. long, obtuse, glabrous, a slender clavate gland between the lower pair or pairs of leaflets and narrow linear glands between the upper pairs, sometimes between all of them; inflorescence axillary, few-flowered, sometimes, apparently, reduced to a single flower; peduncles 1.5-3 cm. long; pedicels 1.5-2.5 cm. long; flowers 3.5-4 cm. broad; petals yellow; three of the longer anthers stout-beaked; legume narrowly linear, 12-14 cm. long, 4 mm. wide, glabrate, stipitate, short-tipped, impressed between the seeds.

Costa Rica and Panama. Type from Bismark, above Penonome, Panama, March 18, 1908, *R. S. Williams 567*.

25. *Peirania Tonduzii* (Standley) Britton & Rose.

Cassia Tonduzii Standley, Contr. U. S. Nat. Herb. 20: 215. 1919.

A tree or shrub, the young branches angled, brownish pubescent. Stipules subulate, deciduous; glands between most or all the pairs of leaflets long, slender, clavate, sometimes 3 mm. long; leaflets 4 or 5 pairs, lanceolate, acuminate, 2-9 cm. long, shining and glabrate above, strongly nerved and somewhat pubescent beneath; inflorescence paniculate; pedicels slender, often 2 cm. long; sepals orbicular, the outer one 5 mm. long, the inner 8-10 mm. long; petals very unequal, the larger 2.5 cm. long; perfect stamens 7, the larger ones with curved

anthers 1 cm. long, each terminated by a slender beak 5-6 mm. long; ovary densely appressed-pilose; legume 16-18 cm. long, 5-6 mm. wide, glabrate, long-stipitate, its valves flat, thin.

TYPE LOCALITY: Along the Rio Tiliari, Costa Rica.
DISTRIBUTION: Chiapas and Costa Rica.

26. *Peirania* (?) *verbenensis* Britton, sp. nov.

A tree, 6-9 m. high, the slender twigs, the petioles and rachis sparingly pubescent. Leaflets 3 or 4 pairs, submembranous, ovate to elliptic, glabrous above, sparingly pubescent beneath, acute or obtuse, 1.5-5 cm. long; glands slender-clavate, about 3 mm. long, borne between one or more of the pairs of leaflets; peduncle axillary, very slender; immature legume linear, elongated, flat, sparingly pubescent, short-stipitate, 18 cm. long, 8 mm. wide, its apex rounded, apiculate.

La Verbena, San José, Costa Rica, about 1200 m. altitude, January 29, 1924, *Standley 32215*.

27. *Peirania scopulorum* Britton & Rose, sp. nov.

A shrub, the young branches densely soft-pubescent, in age glabrate. Leaves 5-12 cm. long; stipules linear, 10 mm. long, caducous; petiole 1-2 cm. long; rachis bearing a large oblong gland between the lower pair of leaflets; leaflets 5-7 pairs, broadly oblong, 1.5-3 cm. long, retuse, glabrous above, sparingly pubescent beneath; racemes axillary, 8-10 cm. long; pedicels 15 mm. long or less; sepals somewhat unequal, the larger 5 mm. long; petals 1 cm. long or less; anthers not beaked; legume glabrous, 5 cm. long, 6-8 mm. broad, cuneate at base.

On rock, Cerro Baxtla, Puebla, August, 1907, *C. A. Purpus 2661*.

28. *Peirania guatemalensis* (Donn. Smith) Britton & Rose.

Cassia guatemalensis Donn. Smith, Bot. Gaz. 23: 6. 1897.

A shrub, more or less pubescent throughout. Leaves often 3 dm. long; stipules linear, 6 mm. long; rachis bearing glands between the 2 lower pairs of leaflets; leaflets 4-8 pairs, oblong, 3-5 cm. long, obtuse, pubescent on the margins and under side of midrib; inflorescence racemose, axillary, about as long as the leaves, many-flowered; pedicels about as long as the flowers, in fruit 15-20 mm. long; sepals pubescent, suborbicular, 4-6 mm. long; petals obovate, 6-8 mm. long; anthers beakless; legume flat, slightly curved, 8 cm. long, 12 mm. wide.

TYPE LOCALITY: Buena Vista, Santa Rosa, Guatemala.
DISTRIBUTION: Guatemala and Costa Rica.

29. *Peirania bahamensis* (Mill.) Britton & Rose.

Cassia bahamensis Mill. Gard. Dict. ed. 8, no. 9. 1768.
Cassia biflora Chapm. Fl. S. States 114. 1860. Not L. 1753.
Cassia angustiloba Chapm. loc. cit. 1860. Not Lam. 1785.
Cassia bahamensis latifolia Benth. Trans. Linn. Soc. 27: 541. 1871.

A shrub, 1-3 m. high, the branches and twigs glabrous. Stipules linear, caducous; gland short-ovoid or subglobose, borne between the lower pair of leaflets or, exceptionally, on the petiole; leaflets 3-5 pairs, oblong to oblong-lanceolate or elliptic, acute or obtuse, mucronate, 2.5-6 cm. long, glabrous above, sparingly pubescent at the base of the midrib beneath; inflorescence corymbose-paniculate; pedicels slender, 8-20 mm. long; petals 10-15 mm. long; anthers all beakless; legume 7-10 cm. long, 4-8 mm. wide.

TYPE LOCALITY: Bahama Islands.
DISTRIBUTION: Florida; Bahamas; Cuba.

30. *Peirania simulans* Britton & Rose, sp. nov.

?*Cassia mexicana grandiflora* Benth. Trans. Linn. Soc. 27: 530. 1871.

Stem 4 dm. high, or higher, apparently suffrutescent, pubescent, at least above. Stipules lanceolate, acute; glands large, pointed, borne between the lower pair of leaflets, or about at the middle of the petiole (perhaps through the falling off of the lower pair of leaflets); leaflets 5-8

pairs, oblong, 4–6 cm. long, acute, apiculate, glabrate above, densely strigose beneath; racemes axillary, or above forming panicles; peduncles elongated, 5–10 cm. long; pedicels 10–15 mm. long, pubescent; sepals oblong, obtuse, 10–14 mm. long, the outer ones at first hairy, becoming glabrate; petals about 2 cm. long; anthers slender, beakless; legume linear, compressed, tapering at both ends, 6–7 cm. long, 5–6 mm. wide, sparingly pubescent.

Veracruz and Chiapas. Type from between Teneapa and Yajalon, Chiapas, October 13, 1895, *E. W. Nelson 3266*.

31. *Peirania chiapensis* (Standley) Britton & Rose.

Cassia chiapensis Standley, *Contr. U. S. Nat. Herb.* 20: 215. 1919.

An erect shrub, the branches stout, terete, densely pilose. Stipules lanceolate-linear, 11–15 mm. long, early deciduous; rachis bearing slender clavate glands between all or most of the pairs of leaflets; leaflets 3–6 pairs, orbicular to short-oblong, 1.5–4 cm. long, rounded at apex, glabrous above, densely pilose beneath; inflorescence racemose, longer than the leaves, many-flowered; peduncle stout, 4–10 cm. long, pilose; pedicels 6–13 mm. long; sepals 3.5 mm. long; petals 5–7 mm. long; anthers not beaked; ovary densely pilose; legume 5 cm. long, 7 mm. wide, glabrate, long-stipitate.

TYPE LOCALITY: Teopisca, Chiapas.

DISTRIBUTION: Chiapas.

32. *Peirania Botteriana* (Benth.) Britton & Rose.

Cassia Botteriana Benth. *Trans. Linn. Soc.* 27: 541. 1871.

Branches pubescent. Stipules caducous; leaflets 3 pairs, obovate-oblong, glabrate, membranous, 2–4 cm. long, the rachis bearing a gland between the lower pair; racemes axillary, many-flowered, as long as the leaves, or longer; sepals about 6 mm. long; petals about 12 mm. long, finely veined; anthers all beakless; legume linear, flat, 7–10 cm. long, 6–8 mm. wide, rather thick.

TYPE LOCALITY: Mount Orizaba, Veracruz.

DISTRIBUTION: Known only from the type locality.

33. *Peirania Orcuttii* Britton & Rose, sp. nov.

Stem glabrate or puberulent, 3 dm. high or higher. Stipules linear, 6–8 mm. long, persistent; gland slender, elongated, 2.5 mm. long, brownish, borne between the lower pair of leaflets; leaflets 4 or 5 pairs, narrowly lanceolate, 1.5–2.5 cm. long, 5–7 mm. wide, acute or acuminate, appressed-pubescent on both sides, or becoming glabrate above; inflorescence racemose, axillary, longer than the subtending leaf, several-flowered; bracts lanceolate, acute, deciduous; pedicels slender, about 1 cm. long; sepals oblong, 6 mm. long, obtuse; petals 8–10 mm. long; none of the anthers beaked; legume flat, about 10 cm. long, 3–4 mm. wide, glabrous.

Near Sanderson, Texas, June 26, 1924, *C. R. Orcutt 653*.

34. *Peirania turquinae* Britton, sp. nov.

A shrub, the twigs, leaves and inflorescence nearly glabrous. Leaves about 8 cm. long, short-petioled, the petiole and rachis with a few scattered hairs; glands narrowly oblong, pointed, borne on the petiole below the lower pair of leaflets and on the rachis between the two upper pairs; leaflets 6–8 pairs, lanceolate, chartaceous, 1.5–3 cm. long, sharply acute or short-acuminate, glabrous on both sides, or with a few scattered hairs on the prominent midvein beneath, the lateral venation obscure; racemes terminal or in the upper axils, several-flowered; bracts oblong-lanceolate, acutish, 8–9 mm. long; pedicels 1–2 cm. long; sepals elliptic-orbicular, nearly 1 cm. long; petals pale yellow, strongly veined, about 14 mm. long; ovary loosely pilose; anthers all beakless; legume linear, tipped, short-stipitate, nearly glabrous, 10–14 cm. long, 6–7 mm. wide, slightly impressed between the seeds.

Slopes, First and Main Peaks, Pico Turquino, Oriente, October 12–14, 1924, *G. C. Bucher 78*.

SPECIES PERHAPS OF THIS GENUS.

Cassia xiphoidea Bertol. Novi Com. Bonon. 4: 415. 1840.

Pilose, the stem terete. Leaflets 6 or 7 pairs, oblong, obtuse, a subulate gland borne between the two or three lower pairs; racemes axillary, simple, few-flowered, nodding, much shorter than the leaves; flowers rather large, yellow; legume narrowly linear, compressed, acute, subfalcate, thick-margined, about 7.5 cm. long and 4 mm. wide, xiphoid-torulose.

TYPE LOCALITY: Volcan de Pacaya, Guatemala.

DISTRIBUTION: Known to us from description only.

Cassia Marimari Aubl. Pl. Guian. 1: 382. 1775.

Cassia galegifolia L. Syst. ed. 10, 1017 [in part]. 1759.

A glabrous tree. Leaflets 5 pairs, ovate, sessile, acute at both ends, venose, the veins parallel; flowers geminate on the branches of the inflorescence, large, pedicelled, the petals veinless; legume linear, flat, glabrous, transversely sulcate, articulate; seeds oblique, ovate.

TYPE LOCALITY: Caribbean.

DISTRIBUTION: Known to us only from description and illustration.

ILLUSTRATION: Plumier, Pl. Am. pl. 78, f. 1.

48. **LEONOCASSIA** Britton, gen. nov.

An erect shrub, the pinnate leaves with several distant pairs of very narrowly linear leaflets, bearing a very slender gland on the petiole below the lower pair, and sometimes a similar gland between the upper pair. Inflorescence axillary, or corymbose-paniculate above. Sepals 5, broad. Petals 5, unequal. Perfect stamens 7, the anthers all beakless. Staminodes 3. Legume narrow, flat, elongated, dehiscent along both sutures not impressed between the seeds.

Type species, *Cassia stenophylla* Benth.

1. **Leonocassia stenophylla** (Benth.) Britton.

Cassia stenophylla Benth. Trans. Linn. Soc. 27: 535. 1871.

Cassia decipiens Griseb. Mem. Am. Acad. II 8: 179. 1860. Not Desv. 1814.

A glabrous shrub, about 1 m. high, the branches slender, somewhat angled. Stipules green, narrowly linear to filiform, 8–15 mm. long; glands slender, cylindrical-clavate, or oblong and short; leaflets 5–10 pairs, 3–7 cm. long, 1–2 mm. wide, the midvein prominent beneath, the lateral venation faint; racemes few-flowered, peduncled in the upper axils and corymbose-paniculate; pedicels filiform, 1–2 cm. long; sepals 8–10 mm. long, obtuse; petals 10–14 mm. long; legume 10–12 cm. long, 4–6 mm. wide, freely dehiscent.

TYPE LOCALITY: Nouvelle Sophie, Oriente, Cuba.

DISTRIBUTION: Oriente, Cuba.

49. **ISANDRINA** Raf. Sylva Tell. 126. 1838.

Trees or shrubs, the glandless leaves with few pairs of broad leaflets, the flowers axillary or lateral, racemose or corymbose-paniculate. Sepals 5, broad, unequal. Petals 5, nearly alike. Perfect stamens 7, with 3 staminodes. Legume flattened, linear, elongated, drooping, coriaceous, indehiscent, at length breaking transversely, the margins somewhat thickened. Seeds flattened.

Type species, *Cassia emarginata* L.

Leaflets ovate to oblong, elliptic or obovate.

Inflorescence short-racemose, or subcorymbose, few-several-flowered; leaflets

obtuse, retuse or acutish.

Leaflets rounded or obtuse at base.

Leaflets, at least the upper pair, cuneate at base.

Inflorescence long-racemose, many-flowered; leaflets acute or acuminate.

Leaflets pale green beneath.

Leaflets yellow-tomentose beneath.

Leaflets lanceolate, long-acuminate.

1. *I. emarginata*.

2. *I. Maxonii*.

3. *I. nulans*.

4. *I. xanthophylla*.

5. *I. acapulcana*.

COMPLETED VOLUME

9: i-iv, 1-542. (Agaricales:) Polyporaceae (pars), Boletaceae, Agaricaceae (pars). Complete in 7 parts.

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- 23¹: 1-76. 23²: 77-136. 23³: 137-194. (Rosales:) Mimosaceae.
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- 33¹: 1-110. Carduales: Ambrosiaceae, Carduaceae (pars).
- 34¹: 1-80. 34²: 81-180. 34³: 181-288. 34⁴: 289-360. (Carduales): Carduaceae (pars).

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VOLUME 23

PART 5

NORTH AMERICAN FLORA

(ROSALES)

✓ CAESALPINIACEAE (Conclusio)
NATHANIEL LORD BRITTON AND JOSEPH NELSON ROSE



PUBLISHED BY
THE NEW YORK BOTANICAL GARDEN
DECEMBER 6, 1930

ANNOUNCEMENT

NORTH AMERICAN FLORA is designed to present in one work descriptions of all plants growing, independent of cultivation, in North America, here taken to include Greenland, Central America, the Republic of Panama, and the West Indies, except Trinidad, Tobago, and Curaçao and other islands off the north coast of Venezuela, whose flora is essentially South American.

The work will be published in parts at irregular intervals, by the New York Botanical Garden, through the aid of the income of the David Lydig Fund bequeathed by Charles P. Daly.

It is planned to issue parts as rapidly as they can be prepared, the extent of the work making it possible to commence publication at any number of points. The completed work will form a series of volumes with the following sequence:

- Volume 1. Myxomycetes, Schizophyta.
- Volumes 2 to 10. Fungi.
- Volumes 11 to 13. Algae.
- Volumes 14 and 15. Bryophyta.
- Volume 16. Pteridophyta and Gymnospermae.
- Volumes 17 to 19. Monocotyledones
- Volumes 20 to 34. Dicotyledones.

The preparation of the work has been referred by the Scientific Directors of the Garden to a committee consisting of Dr. N. L. Britton, Dr. M. A. Howe, and Dr. J. H. Barnhart.

Dr. Frederick V. Coville, of the United States Department of Agriculture; and Professor William Trelease, of the University of Illinois, have consented to act as an advisory committee.

Each author will be wholly responsible for his own contributions, being restricted only by the general style adopted for the work, which must vary somewhat in the treatment of diverse groups.

The subscription price is fixed at \$1.50 for each part; it is expected that four or more parts will be required for each volume. A limited number of separate parts will be sold at \$2.00 each. Address:

THE NEW YORK BOTANICAL GARDEN
BRONX PARK
NEW YORK CITY

1. *Isandrina emarginata* (L.) Britton & Rose; Britton & Wilson,
 Sci. Surv. Porto Rico & Virgin Ids. 5: 374. 1924.

Cassia emarginata L. Sp. Pl. 376. 1753.
Cassia arborescens Mill. Gard. Diet. ed. 8, no. 15. 1768.
Cassia atomaria L. Mant. 68. 1767.
Cassia elliptica H.B.K. Nov. Gen. & Sp. 6: 356. 1824.
Isandrina arborescens Raf. Sylva Tell. 126. 1838.
Cassia emarginata subunijuga Robinson & Bartlett, Proc. Am. Acad. 43: 53. 1907.

A tree, 7-20 m. high, or sometimes shrubby; the twigs densely pubescent. Stipules about 3 mm. long, setaceous; leaflets 2-5 pairs, oblong-orbicular to oval, 2-10 cm. long, rounded, retuse, obtuse or acutish at apex, rounded or obtuse at the base, puberulent or glabrous above, softly pubescent beneath; racemes short, few-several-flowered, lateral; sepals 5-7 mm. long; petals 2-3 times as long as the sepals; legume 1.5-3.5 dm. long, 8-12 mm. wide, straight or nearly so, glabrous, its margins sometimes undulate.

TYPE LOCALITY: Caribbean [Jamaica].
 DISTRIBUTION: Jamaica; Cuba; Hispaniola; Porto Rico; Guadeloupe; Sonora and Tamaulipas to Costa Rica, Colombia and Venezuela.
 ILLUSTRATION: Sloane, Hist. Jam. pl. 180, f. 1-4.

2. *Isandrina Maxonii* Britton & Rose, sp. nov.

A tree, 5-12 m. high, the young twigs short-tomentose. Stipules setaceous, about 3 mm. long; leaflets 2 or 3 pairs, obovate or elliptic, 4-11 cm. long, dark green and puberulent above, pale green and loosely pubescent beneath, the apex rounded or retuse, the base, at least of the upper pair, cuneate, the pinnate venation prominent; fruiting peduncle about 3 cm. long or shorter; fruiting pedicels about 2 cm. long; legume 2-3 dm. long, about 9 mm. wide, glabrous, short-stipitate, reticulate-veined, slightly impressed between the seeds.

Nicaragua. Type from Tamagasta Peninsula, west of Managua, June 25, 1923, *Maxon, Harvey & Valentine 7313*.

3. *Isandrina nutans* (Collad.) Britton & Rose.

Cassia nutans Collad. Hist. Cass. 113. 1816.

Twigs, petioles, rachis and inflorescence short-villous. Leaflets 4 or 5 pairs, elliptic or ovate-elliptic, acute, or obtuse, 3-13 cm. long, sparingly short-pubescent or glabrous above, pubescent, at least on the veins beneath; racemes axillary, many-flowered, drooping, sometimes 3.5 dm. long, usually shorter; bractlets linear-lanceolate, 3-4 mm. long, villous, deciduous; pedicels 8-15 mm. long; sepals 5-7 mm. long, rounded or obtuse, sparingly pubescent; petals about twice as long as the sepals; legume 1.5-3.5 dm. long, 9-12 mm. wide, glabrous, reticulate-veined.

TYPE LOCALITY: Mexico.
 DISTRIBUTION: Sinaloa; Colima.
 ILLUSTRATION: Collad. loc. cit. pl. 4.

4. *Isandrina* (?) *xanthophylla* Britton & Rose, sp. nov.

Young twigs, petioles, rachis and inflorescence densely yellowish tomentose, becoming glabrate. Branches and petioles slender; stipules caducous; leaflets 3 pairs, ovate to ovate-lanceolate, membranous, rounded at base, acuminate, or acute at apex, 6-8 cm. long, dark green and glabrate above, densely yellowish-pubescent beneath; racemes axillary, slender, 1-1.5 dm. long; bractlets densely pubescent; flower-buds globular, glabrous; sepals glabrous, 4-5 mm. long; petals 7-10 mm. long; anthers pilose.

Casillas, Department of Santa Rosa, Guatemala, May, 1893, *Heyde & Lux 4471*.

5. *Isandrina acapulcana* Britton & Rose, sp. nov.

Young twigs, petioles and rachis rather densely short-villous. Leaflets 4 or 5 pairs, chartaceous, lanceolate, long-acuminate, 4-9 cm. long, 1.5-2.7 cm. wide, light green, glabrate above, appressed-pubescent beneath, the base narrowed or obtuse; legume 1.8-3 dm. long, 10-12 mm. wide, glabrous, reticulate-veined, stout-tipped.

Vicinity of Acapulco, Guerrero, October, 1894-March, 1895, *E. Palmer 478*.

DEC 6 - 1930

50. CHAMAECRISTA Moench, Meth. 272. 1794.

Hepheireca Raf. Sylva Tell. 126. 1838.
Disterepta Raf. Sylva Tell. 126. 1838.
Dialanthera Raf. Sylva Tell. 127. 1838.
Nizitella Raf. Sylva Tell. 128. 1838.
Ophiocaulon Raf. Sylva Tell. 129. 1838.
Tagera Raf. Sylva Tell. 129. 1838.
Chamaecrista Raf. Sylva Tell. 127. 1838.

Herbs or low shrubs, rarely small trees, with, nearly always, glanduliferous leaves, often sensitive to the touch, small leaflets, mostly persistent, strongly nerved stipules, and yellow flowers in small, axillary clusters, or solitary in or above the axils. Sepals 5, mostly acuminate. Corolla irregular, the petals unequal, one of the five larger than the others. Stamens 5-10, all usually with perfect anthers opening by terminal pores. Legumes linear, rarely oblong, flat, more or less elastically dehiscent, the valves twisting.

Type species, *Cassia Chamaecrista* L. (*Chamaecrista nictitans* Moench).

- Sepals rigid, delicately many-nerved.
 Leaflets 1 pair. I. DIPHYLLAE.
 Leaflets 2 pairs. II. UNIFLORAE.
- Sepals not rigid, not delicately many-veined.
 Costa of some or all of the leaflets marginal. III. TRISTICULAE.
 Costa subcentral or excentric.
- Legume oblong, 1-4-seeded; prostrate herb; leaflets 2 or 3 pairs; obcuneate. IV. TAGERAE.
- Legume (as far as known) linear, nearly always several-seeded; herbs or shrubs; leaflets various.
- Prostrate or ascending slender herbs with filiform-peduncled flowers.
- Leaflets 1 pair, obovate; stipules cordate; leaves glandless. V. ROTUNDFOLIAE.
 Leaflets 3-7 pairs; stipules lanceolate. VI. PILOSAE.
- Herbaceous or shrubby, rarely prostrate.
- Flowers pedicelled; legume several-seeded.
- Shrubs, with coriaceous or subcoriaceous leaves (see *C. niqueroensis*).
- Leaflets 15-50 pairs; stipules usually very large; stem flexuous. VII. FLEXUOSAE.
- Leaflets mostly fewer; stipules small; stem not flexuous.
- West Indian shrubs, mostly tall and large-flowered. VIII. LINEATAE.
 Mexican shrubs or small trees; flowers mostly smaller.
- Leaflets elliptic to obovate or oblanceolate; midvein central or somewhat excentric. IX. GREGGIAE.
 Leaflets linear to oblong-obovate; midvein excentric or nearly marginal. X. CHIAPENSES.
- Shrubs or herbs with membranous or chartaceous leaves.
- Shrubs or perennial herbs.
- Flowers large, mostly 2-4 cm. broad.
- Perennial herbs, Texan, Mexican and Floridian. XI. DEERINGIANAE.
 Shrubs, West Indian and Mexican.
- Veins of the leaflets many, closely approximate (obscure in *C. Covellii*).
- Veins of the leaflets relatively few and distant.
- Flowers small, mostly less than 1.5 cm. broad.
- Leaflets 3-13 pairs, 3-8 mm. long; small or slender West Indian species.
- Leaflets mostly larger and more numerous; stems stout or slender.
- Annual herbs (*C. Simpsonii* sometimes perennial). XV. PATELLARIAE.
 Flowers sessile, or very nearly so; legume 1- or 2-seeded. XVII. TABASCENTES.
- Only one species. I. DIPHYLLAE. 1. *C. diphylla*.
- II. UNIFLORAE. 2. *C. brevipes*.
- Leaflets about 2 cm. long; pedicels very short; legume oblong, long-pilose. 3. *C. madrensis*.
- Leaflets about 1 cm. long; pedicels 1 cm. long, or longer; legume linear, short-pubescent. III. TRISTICULAE.
- Flowers large; petals 15-25 mm. long; calyx 10-15 mm. long; Mexican species.
- Stem densely long-pilose. 4. *C. jalapensis*.
- Stem hirsute, glabrate, or sparingly pilose. 5. *C. rufa*.
- Flowers long-pedicelled. 6. *C. chamaecristoides*.
- Flowers short-pedicelled.

- Flowers small; petals about 12 mm. long or shorter; calyx 6-10 mm. long;
West Indian species.
- Costa of leaflets of some leaves marginal, of others very excentric. 7. *C. enneriana*.
- Costa of leaflets of all leaves marginal.
- Petiolar glands small, subsessile.
- Leaflets sparingly pubescent or glabrous. 8. *C. strigillosa*.
- Leaflets densely short-pubescent. 9. *C. adenosperma*.
- Petiolar glands stalked.
- Leaflets 1.5-2 mm. wide; gland stout-stalked.
- Legume glabrous, or nearly so. 10. *C. pedicellaris*.
- Legume short-pilose. 11. *C. Buchii*.
- Leaflets only 1 mm. wide; gland slender-stalked. 12. *C. haitiensis*.
- IV. TAGERAE.
- Only one species. 13. *C. Tagera*.
- V. ROTUNDIFOLIAE.
- Only one species in our area. 14. *C. rotundifolia*.
- VI. PILOSAE.
- Stem and branches long-pilose.
- Petiolar gland wanting or minute; petals 5-7 mm. long. 15. *C. pilosa*.
- Petiolar gland long-stalked; petals 7-9 mm. long. 16. *C. delicata*.
- Stem and branches puberulent or glabrate; petiolar gland slender-stalked. 17. *C. serpens*.
- VII. FLEXUOSAE.
- Only one species. 18. *C. flexuosa*.
- VIII. LINEATAE.
- Leaflets densely pubescent or puberulent (see *C. granulata*).
- Leaflets 2-8 pairs.
- Leaflets 2 or 3 pairs, aristate at apex. 19. *C. Hioramii*.
- Leaflets 3-8 pairs, mucronate or mucronulate.
- Petiolar gland sessile.
- Perennial; legume 4-4.5 cm. long. 20. *C. keyensis*.
- Much-branched shrub; legume 2-2.7 cm. long. 21. *C. clarensis*.
- Petiolar gland stalked. 22. *C. grammica*.
- Leaflets 12-15 pairs, pubescent, at least above; gland sessile or subsessile. 23. *C. selleana*.
- Leaflets glabrous, or nearly so.
- Leaflets only 1 or 2 pairs, orbicular-obovate, papery in texture. 24. *C. niqueroensis*.
- Leaflets 1-several pairs, coriaceous or subcoriaceous.
- Leaflets dull, or faintly shining.
- Leaflets obovate or oblanceolate, or some of them oblong in
C. lineata.
- Leaflets 2-7 pairs, obovate, 5-10 mm. long, mostly emarginate, or orbiculate; gland stalked. 25. *C. obcordata*.
- Leaflets 3-11 pairs, 7-15 mm. long.
- Petiolar gland sessile or subsessile. 26. *C. lineata*.
- Petiolar gland stalked. 27. *C. granulata*.
- Leaflets oblong or linear-oblong.
- Leaflets linear-oblong, 2-4 mm. wide. 28. *C. pinetorum*.
- Leaflets oblong, 6-8 mm. wide. 29. *C. jamaicensis*.
- Leaflets distinctly shining above.
- Leaflets 2 pairs, few-veined, obovate-oblong. 30. *C. arduinervis*.
- Leaflets 1-several pairs, several-many-nerved.
- Leaflets 1.5 cm. long or shorter.
- Legume 7-7.5 mm. wide. 31. *C. calohiana*.
- Legume 4-6 mm. wide.
- Leaflets callous-margined.
- Leaflets ciliate; gland large. 32. *C. portoricensis*.
- Leaflets ciliate; gland small, stalked. 33. *C. Tuerckheimii*.
- Leaflets not callous-margined. 34. *C. Leonardae*.
- Leaflets 1.5-3 cm. long.
- Leaflets oblong-elliptic, acute. 35. *C. caribaea*.
- Leaflets ovate to obovate, obtuse, retuse or mucronate.
- Leaflets 1-3 pairs, obovate, mostly retuse.
- Petioles 2-6 mm. long, the gland solitary. 36. *C. inaguensis*.
- Petioles 6-10 mm. long; glands often 2. 37. *C. tortuensis*.
- Leaflets 4-9 pairs, ovate to ovate-oblong, mostly obtuse. 38. *C. lucayana*.
- IX. GREGGIAE.
- Leaflets glabrous, or nearly so; midvein central; low shrubs.
- Leaflets irregularly pinnately veined. 39. *C. Greggii*.
- Leaflets 3- or 4-veined from the base, pinnately veined toward the apex.
- Leaflets about 7 mm. long or shorter, elliptic to obovate. 40. *C. MacDougaliana*.
- Leaflets 8-13 mm. long, oblanceolate. 41. *C. polosina*.
- Leaflets puberulent, several-nerved from the base; midvein excentric; small tree. 42. *C. Pinoi*.
- X. CHIAPENSES.
- Costa of leaflets about one-third excentric.
- Petiolar gland long-stalked; petals about 1 cm. long. 43. *C. mazatlensis*.
- Petiolar gland subsessile; petals nearly 1.5 cm. long.

- Foliage pale green; branches and sepals puberulent.
 Foliage bright green; branches and sepals pilose.
 Costa of leaflets nearly marginal.
 Gland short-stipitate; leaflets strongly veined; pedicels about 2 cm. long.
 Gland long-stipitate; leaflets faintly veined; pedicels up to 4 cm. long.
- XI. DEERINGIANAE.
- Petiolar gland sessile.
 Leaflets glabrous, pinnately many-veined, the costa somewhat excentric.
 Leaflets pubescent, 3- or 4-veined from base, the costa very excentric.
 Petiolar gland stalked.
 Pedicels short, about 1.5 cm. long or less.
 Leaflets glabrous, but ciliate; gland long-stalked.
 Leaflets pubescent; gland short-stalked.
 Pedicels long, nearly filiform, 1.5-4 cm. long.
 Sepals long-pilose.
 Sepals glabrous, or appressed-pubescent.
 Legume narrowly linear, 4 mm. wide.
 Legume broadly linear, 5 mm. wide, narrowed at both ends.
- XII. GLANDULOSAE.
- Very slender, diffuse or prostrate shrub; legume 2-2.5 mm. wide; leaf-glands 1-3.
 Stout shrubs; legume broader.
 Glands 1-several, stout and long-stalked.
 Venation of the leaflets apparent.
 Venation wholly obscured by dense pubescence.
 Gland usually only 1, slender-stalked, short-stalked, or sessile.
 Leaflets mostly linear to oblong; gland stalked.
 Leaflets obovate or oblong; gland sessile, or subsessile or short-stalked.
- XIII. YUCATANAE.
- Tall plants, leaves 5-9 cm. long.
 Leaflets broadly oblong, 5-6 mm. wide.
 Leaflets linear, 1.5-3 mm. wide.
 Leaflets appressed-pubescent beneath.
 Low pubescent plant; leaves 2.5 cm. long, or shorter.
- XIV. PYGMAEAE.
- Prostrate; leaflets 4-9 pairs.
 Branches and petioles pubescent.
 Branches and petioles glabrous.
 Erect or ascending; leaflets 13 pairs or fewer.
 Petals 4-8 mm. long.
 Midvein of the leaflets very excentric; Cuban species.
 Petiolar gland subsessile, the short stalk stout.
 Petiolar gland slender-stalked.
 Midvein of the leaflets about one-third excentric; species of Porto Rico.
 Petals 3-5 mm. long; plant villous; legume 2-3 cm. long; gland short-stalked; Cuban species.
- XV. PATELLARIAE.
- A. Petiolar gland definitely stalked, or elevated, or obconic.
 Petiolar gland slender-stalked (see *C. Chamaecrista*).
 Tall, suffruticose species.
 Leaflets glabrous, sometimes ciliate.
 Leaflets densely appressed-pubescent.
 Low, herbaceous, perhaps sometimes annual.
 Legume about 3 mm. wide.
 Legume 4-5 mm. wide.
 Petiolar gland short-stalked or subsessile (see *C. nicoyana*).
 Leaflets densely appressed-pubescent or pilose, at least when young.
 Petiolar gland 0.5-1 mm. broad.
 Pedicels very short; costa of leaflets very excentric.
 Pedicels about 1 cm. long; costa somewhat excentric.
 Petiolar gland only 0.2 mm. broad, subcylindric.
 Leaflets glabrous or sparingly pubescent, or ciliate.
 Leaflets only 4-6 mm. long, long-ciliate.
 Leaflets larger.
 Stems and leaves glabrous, or very nearly so.
 Low, slender plant of Hispaniola.
 Tall, or large plants of Cuba and Mexico.
 Petiolar gland obconic, subsessile.
 Leaflets eciliate.
 Leaflets closely ciliate.
 Petiolar gland short-stalked, broad.
 Legume glabrate.
 Young legume long-villous.
41. *C. Ortogae*.
 45. *C. Mexiae*.
 46. *C. chiaensis*.
 47. *C. alamosensis*.
 48. *C. Deeringiana*.
 49. *C. texana*.
 50. *C. aristellata*.
 51. *C. Ferrisiae*.
 52. *C. Palmeri*.
 53. *C. Goldmantii*.
 54. *C. Wrightii*.
 55. *C. mirabilis*.
 56. *C. glandulosa*.
 57. *C. Cowellii*.
 58. *C. Swartzii*.
 59. *C. polyadena*.
 60. *C. yucataana*.
 61. *C. Seleri*.
 62. *C. chiriquensis*.
 63. *C. cruziana*.
 64. *C. pygmaea*.
 65. *C. diffusissima*.
 66. *C. savannarium*.
 67. *C. Koigi*.
 68. *C. exunguis*.
 69. *C. micrantha*.
 70. *C. stenocarpa*.
 71. *C. Reko*.
 72. *C. Chamaecrista*.
 73. *C. Wilsonii*.
 74. *C. villosissima*.
 75. *C. Tondusii*.
 76. *C. fenixensis*.
 77. *C. comayaguana*.
 78. *C. brachycarpa*.
 79. *C. glaberrima*.
 80. *C. Nelsonii*.
 81. *C. Roivrosana*.
 82. *C. longicoma*.

- Stems or branches pubescent or pilose, at least above.
 Legume loosely long-villous.
 Stem or branches long-pilose.
 Erect; leaflets eciliate. 83. *C. confusa*.
 Prostrate, or diffuse; leaflets long-ciliate. 84. *C. nicoyana*.
 Stem and branches sparingly pubescent. 85. *C. fasciata*.
 Legume appressed-pubescent or puberulent.
 Costa of leaflets excentric; legume appressed-pubescent or glabrate.
 Leaflets membranous; petiolar gland large, obconic.
 Leaflets 2-2.5 mm. wide; legume appressed-pubescent. 86. *C. stenocaroides*.
 Leaflets 1-1.5 mm. wide; legume glabrate. 87. *C. salvadorensis*.
 Leaflets subchartaceous, strongly veined; gland small, subsessile.
 Costa subcentral; legume puberulent. 88. *C. Conzattii*.
 89. *C. smaragdina*.
 B. Petiolar gland sessile, depressed.
 Petiolar gland oblong, 2-2.5 mm. long. 90. *C. Browniana*.
 Petiolar gland orbicular, much smaller.
 Plant densely pubescent or hirsute. 91. *C. patellaria*.
 Plant glabrate, or somewhat villous.
 Leaflets 10-15 mm. long.
 Costa of leaflets near the upper margin; sepals about 4 mm. long. 92. *C. martinicensis*.
 Costa moderately excentric; sepals longer.
 Petals 5-7 mm. long. 93. *C. Aeschynomene*.
 Petals 8-10 mm. long. 94. *C. Dussii*.
 Leaflets 5-7 mm. long. 95. *C. simplex*.
 Plant tall, simple or few-branched; leaves 4-8 cm. long. 96. *C. Brandegeei*.
 Plant low, branching; leaves only 2.5 cm. long or shorter.

XVI. FASCICULATAE.

- Corolla large, about 1.5-4 cm. broad; stamens 10; petiolar gland sessile or nearly so.
 Petiolar gland large, depressed; leaflets 10-25 pairs. 97. *C. brachiata*.
 Petiolar gland somewhat elevated, or depressed, smaller; leaflets mostly fewer.
 Leaflets glabrous or puberulent.
 Anthers purple; petiolar gland minute, 0.2 mm. wide or less; leaflets 3-9 pairs. 98. *C. rostrata*.
 Anthers yellow (rarely purplish); petiolar gland 0.5-1.5 mm. wide; leaflets mostly more numerous, 6-18 pairs.
 Stems and pedicels pubescent with incurved hairs; legume appressed-pubescent. 99. *C. fasciculata*.
 Stems and pedicels pilose; legume villous or pilose.
 Erect; leaflets 15-20 mm. long; corolla mostly 3-4 cm. wide. 100. *C. robusta*.
 Diffuse; leaflets 8-12 mm. long; corolla about 2.5 cm. wide. 101. *C. depressa*.
 Leaflets puberulent with incurved hairs.
 Anthers yellow; plants spreading.
 Legumes and pedicels puberulent with incurved hairs. 102. *C. mississippiensis*.
 Legumes and pedicels pilose. 103. *C. littoralis*.
 Anthers purple; plants erect. 104. *C. puberula*.
 Corolla small, about 1 cm. broad, or less; stamens 5-9; petiolar gland stalked or subsessile.
 Leaflets long-ciliate; legume 3-4 mm. wide. 105. *C. leptadenia*.
 Leaflets eciliate; legume 4-6 mm. wide.
 Petiolar gland much broader than its stalk.
 Leaflets glabrous; legume appressed-pubescent.
 Leaflets 9-18 pairs, 2-4 mm. wide. 106. *C. procumbens*.
 Leaflets up to 26 pairs, 1-2 mm. wide. 107. *C. multipinnata*.
 Leaflets pubescent; legume hirsute. 108. *C. Mohrii*.
 Petiolar gland little broader than its stalk.
 Stems erect, hirsute; leaflets 15-27 pairs. 109. *C. aspera*.
 Stems diffuse, hirsute above; leaflets 9-18 pairs. 110. *C. Simpsonsii*.

XVII. TABASCOENSES.

- One species. 111. *C. tabascoensis*.

1. *Chamaecrista diphylla* (L.) Greene, *Pittonia* 4: 28. 1899.

Cassia diphylla L. Sp. Pl. 376. 1753.

Herbaceous, perennial, glabrous, or the petioles and stipules ciliate, prostrate or erect and much branched, about 1 m. high, or lower. Stipules lanceolate, cordate, 5-8 mm. long, acuminate, striate-nerved, and subulate-tipped, longer than the petiole; petiolar glands 1 or 2, sessile or stalked; leaflets 1 pair, obliquely obovate, rounded, 0.6-3 cm. long, flabellate-nerved;

pedicels longer than the leaves, filiform, solitary; sepals scarious, finely many-nerved, 6–10 mm. long; petals about as long as the sepals; legume linear, long-pubescent, 3–6 cm. long, 3–6 mm. wide.

TYPE LOCALITY: India [in error].

DISTRIBUTION: Cuba; Hispaniola; Porto Rico; St. Kitts and St. Vincent (acc. to Grisebach); Veracruz and Tabasco to Panama, French Guiana and Brazil.

ILLUSTRATION: Cav. Ic. pl. 600.

2. *Chamaecrista brevipes* (DC.) Greene, Pittonia 4: 31. 1899.

Cassia brevipes DC.; Collad. Hist. Cass. 119. 1816.

A shrub, 0.3–1.5 m. high, much branched, the twigs and petioles pilose-tomentose. Stipules ovate to ovate-lanceolate, acute, cordate, many-nerved, 4–6 mm. long; petiolar gland flat or concave, sessile, about 1 mm. long or smaller; leaflets 2 pairs, oblong, glabrous or puberulent, coriaceous, 1–2 cm. long, strongly several-nerved, the pinnate venation narrowly ascending, the apex obtuse or acutish; pedicels short, little longer than the petioles; bractlets ovate; sepals oblong-lanceolate, acute or acuminate, or the outer ones obtuse, 6–8 mm. long, glabrous; petals about as long as the sepals, or longer; legume oblong, densely appressed-villous, about 2 cm. long, 5–6 mm. wide, short-tipped.

TYPE LOCALITY: "Panamaide."

DISTRIBUTION: Costa Rica; Panama; Venezuela; British Guiana.

ILLUSTRATION: Collad. loc. cit. pl. 9, A.

3. *Chamaecrista madrensis* Rose, sp. nov.

A shrub, the short twigs densely appressed-pubescent with short hairs. Stipules ovate to ovate-lanceolate, 2–5 mm. long, acute or acuminate, cordate, strongly many-nerved, short-ciliate, puberulent; petiole stout, pubescent, shorter than the stipules; leaflets 2 approximate pairs, subcoriaceous, oblong-oblongate, 5–8 mm. long, 2–3 mm. wide, obtuse or acutish, strongly 5–7-nerved and pinnately veined, ciliate, the venation nearly parallel; legume linear, setulose-pubescent, 1.2–2.5 cm. long, 4–5 mm. wide.

Between Aguacate and Dolores, Tepic, August 6, 1897, *J. N. Rose 2023*.

4. *Chamaecrista jalapensis* Britton, sp. nov.

Cassia tristicula Schl. & Cham. Linnaea 5: 599. 1830. Not H.B.K. 1824.

Suffrutescent, apparently erect, sparingly branched, about 3 dm. high, or higher, the stem, leaf-rachis, pedicels and sepals long-pilose. Stipules obliquely lanceolate, long-acuminate, ciliate, 6–10 mm. long; petiole short, pilose, bearing a large, stout-stalked gland; leaflets 15–28 pairs, linear, membranous, glabrous, or loosely appressed-pubescent beneath, 8–13 mm. long, about 1.5 mm. wide, the costa marginal; pedicels 1–3, extra-axillary, bracted at base, very slender, 2-bracteolate above; sepals lanceolate, acuminate, 10–13 mm. long; petals a little longer than the sepals; legume 5–6 cm. long, 5 mm. wide, sparingly villous.

Veracruz. Type from sandy fields, Jalapa, May 10, 1900, *Pringle 8337*.

5. *Chamaecrista rufa* (Mart. & Gal.) Britton & Rose.

Cassia rufa Mart. & Gal. Bull. Acad. Brux. 10: 306. 1843.

Perennial; stem slender, erect or ascending, branched, reddish-hirsute or glabrate, 3 dm. high or higher. Stipules narrowly lanceolate, long-acuminate, ciliate, strongly few-nerved, 10–16 mm. long; petiolar gland obconic, stalked, 0.5–0.9 mm. broad; leaflets 20–35 pairs, linear to linear-oblong, obliquely aristate, sparingly pubescent or glabrous, 8–12 mm. long or the upper ones shorter, 1–1.5 mm. wide, pinnately veined, the costa marginal; pedicels filiform, hirsute, 1–1.5 cm. long; bractlets lanceolate; sepals lanceolate, acuminate, sparingly appressed-pubescent, 10–13 mm. long; petals about as long as the sepals; legume linear-oblong, pilose.

TYPE LOCALITY: Mirador, Veracruz.

DISTRIBUTION: Veracruz.

6. *Chamaecrista chamaecristoides* (Collad.) Greene, *Pittonia* 4: 29.
1899.

Cassia Chamaecrista Mill. Gard. Dict. ed. 8, no. 17. 1768. Not L. 1753.

Cassia chamaecristoides Collad. Hist. Cass. 134. 1816.

Cassia cinerea Cham. & Schlecht. *Linnaea* 5: 599. 1830.

Chamaecrista cinerea Pollard; A. Heller, Cat. N. A. Pl. ed. 2, 5. 1900.

A shrub, with slender prostrate branches 2 m. long or shorter, the twigs short-strigose, canescent. Stipules lanceolate, acuminate, few-nerved, 5-7 mm. long; petiolar gland short-stalked, or subsessile, about 0.4 mm. in diameter; leaflets 8-20 pairs, linear, subfalcate, strigose or glabrous, acute, usually 4-7 mm. long, the upper ones shorter, the costa marginal; pedicels 6-12 mm. long; sepals lanceolate, sparingly appressed-pubescent, 10-13 mm. long, nerveless; petals unequal, 1.5-2.5 cm. long; legume linear, glabrate, 5-7 cm. long, 5-6 mm. wide, short-tipped, glabrate.

TYPE LOCALITY: Veracruz.

DISTRIBUTION: Veracruz and Tamaulipas.

7. *Chamaecrista enneriana* Britton, sp. nov.

Herbaceous, perennial, 3-5 dm. high, the branches, petioles and leaf-rachis densely hirsute. Stipules lanceolate, acuminate, several-nerved, 5-6 mm. long; petiole 4-6 mm. long, bearing a long-stalked gland about 0.5 mm. in diameter, and sometimes also a similar, sessile one; leaflets 15-22 pairs, linear, 6-8 mm. long, 1.5 mm. wide, or the uppermost oblong and shorter, short-pubescent on both sides, apiculate, the costa very much excentric, or essentially marginal; pedicels pilose, filiform, 2 cm. long, or shorter; lanceolate-bracteolate below the calyx; sepals hirsute, lanceolate, about 8 mm. long; petals 10-12 mm. long.

Vicinity of Ennerly, l'Artibonite, Haïti, February 23, 1926, E. C. Leonard 10041.

8. *Chamaecrista strigillosa* (Benth.) Britton, Bull. Torrey Club
44: 12. 1917.

Cassia strigillosa Benth. Trans. Linn. Soc. 27: 581. 1871.

Perennial, suffruticose; stems prostrate or ascending, densely puberulent, 1-3 dm. long. Stipules narrowly lanceolate, long-acuminate, few-nerved, 4-6 mm. long; petiolar gland subsessile, about 0.2 mm. broad; leaflets 6-14 pairs, linear, subfalcate, glabrous when mature, 4-6 mm. long, 1-1.5 mm. wide, strongly pinnately veined, the costa marginal, the apex obliquely mucronate; pedicels filiform, sparingly pubescent, about 1.5 cm. long, lanceolate-bracteolate above; sepals ovate-lanceolate, short-acuminate, sparingly strigillose, 6-7 mm. long; larger petals a little longer than the sepals; legume 2-3 cm. long, about 3.5 mm. wide.

TYPE LOCALITY: Cuba.

DISTRIBUTION: Cuba and Hispaniola.

9. *Chamaecrista adenosperma* (Urban) Britton, Bull. Torrey
Club. 44: 12. 1917.

Cassia adenosperma Urban, Symb. Ant. 5: 362. 1908.

A shrub, about 3 dm. high, the twigs short-pilose. Stipules ovate-lanceolate, long-acuminate, 3-4 mm. long, persistent; petiolar gland short-stipitate or subsessile, scutellate; leaflets 10-16 pairs, chartaceous, linear, 2-6 mm. long, about 1 mm. wide, short-pubescent on both sides, the apex obtuse or acutish, the midvein nearly marginal; pedicels 1-2.5 cm. long, bracteolate above the middle; sepals lanceolate, short-pubescent, 7 mm. long; petals obovate, unequal, about 10 mm. long; legume linear, short-pilose, 2-3.5 cm. long, 4-4.5 mm. wide, 5-11-seeded; seeds impressed-glandular.

TYPE LOCALITY: Sierra del Palo Quemado, Santo Domingo.

DISTRIBUTION: Known only from the type locality.

10. *Chamaecrista pedicellaris* (DC.) Britton, Bull. Torrey Club

44: 12. 1917.

Cassia pedicellaris DC. Prodr. 2: 504. 1825.

A low shrub, with prostrate or ascending branches 2-3 dm. long, the twigs strigose. Stipules lanceolate-subulate, long-acuminate, few-veined, 4-6 mm. long; petiolar gland stalked, about 0.5 mm. in diameter, or smaller; leaflets 10-20 pairs, linear, subfalcate, glabrous or nearly so, 5-8 mm. long, or the upper shorter, about 1.5 mm. wide, the apex obliquely apiculate, the costa marginal; pedicels very slender, strigose, about 1 cm. long or shorter; bractlets lanceolate; sepals lanceolate, acute or acuminate, 6-10 mm. long; petals about as long as the sepals or somewhat longer; legume linear, glabrous, about 4 cm. long and 4 mm. wide, short-tipped.

TYPE LOCALITY: Santo Domingo.
DISTRIBUTION: Hispaniola; Cuba.

11. *Chamaecrista Buchii* (Urban) Britton, Bull. Torrey Club

44: 12. 1917.

Cassia Buchii Urban, Symb. Ant. 5: 361. 1908.

A shrub, 3-6 dm. high, the twigs appressed-pubescent. Stipules lanceolate-subulate, acuminate, several-nerved, 2-6 mm. long; petiolar glands 1 or 2, stout-stalked, 0.5-0.7 mm. broad; leaflets 9-15 pairs, linear, 5-12 mm. long, 1.5-2 mm. wide, chartaceous, glabrous, or the margin minutely pilose, mucronate, the costa nearly or quite marginal; pedicels 2-3.5 cm. long, subulate-bracteolate above; sepals lanceolate or oblong-lanceolate, 8-9 mm. long; petals very unequal, obovate to nearly orbicular, 10-12 mm. long; legume linear, 3-4 cm. long, about 4 mm. wide, short-pilose.

TYPE LOCALITY: Near Gonaïves, Haïti.
DISTRIBUTION: Haïti.

12. *Chamaecrista haitiensis* Britton, sp. nov.

Shrubby, low, with slender, appressed-pubescent, prostrate or ascending branches 3-4 dm. long. Stipules triangular-lanceolate, ciliate, long-acuminate, 4-5 mm. long; petiole about 2 mm. long, bearing 1 or 2 long-stalked glands; leaflets 8-21 pairs, narrowly linear, acute, aristulate, glabrous-ciliolate, about 1 mm. wide, the middle ones 8-12 mm. long, the upper and lower shorter, the costa marginal; pedicels filiform, puberulent, bracteolate above, about 2 cm. long; sepals lanceolate, sparingly pubescent, about 8 mm. long; petals about 12 mm. long.

Hills above Riviere Froide, Haïti, March 5, 1925, *Gerrit S. Miller, Jr.*

13. *Chamaecrista Tagera* (L.) Standley, Contr. U. S. Nat. Herb.

18: 104. 1916.

Cassia Tagera L. Sp. Pl. 376. 1753.*Cassia ciliaris* Collad. Hist. Cass. 98. 1816.*Cassia Kunthiana* Cham. & Schlecht. Linnaea 5: 598. 1830.*Tagera filiformis* Raf. Sylva Tell. 129. 1838.

Herbaceous, or slightly woody; branches prostrate, slender, glabrous or pubescent, sometimes nearly 1 m. long, usually shorter. Leaves small, only 1-1.5 cm. long; stipules ovate-lanceolate, cordate, subhyaline, acuminate, 4-10 mm. long; petiolar gland stipitate, about 0.3 mm. in diameter; leaflets 2 or 3 pairs, obcuneate, chartaceous, glabrous, or sparingly ciliate, 2-4-nerved, reticulate-veined, obtuse, apiculate, 5-10 mm. long, the costa excentric; pedicels filiform, 6-12 mm. long, setaceous-bracteolate near the middle; sepals ovate, acute, 2-2.5 mm. long; petals scarcely longer than the calyx; stamens 4 or 5; legume oblong, 1-4-seeded, short-strigose, 12 mm. long or shorter, 3-4 mm. wide, short-tipped.

TYPE LOCALITY: India [in error].
DISTRIBUTION: Veracruz to Panama, Bolivia and Brazil.

14. *Chamaecrista rotundifolia* (Pers.) Greene, Pittonia 4: 31. 1899.

Cassia rotundifolia Pers. Syn. 1: 456. 1805.
Cassia bifoliata DC.; Collad. Hist. Cass. 120. 1816.
Cassia fabaginifolia H.B.K. Nov. Gen. & Sp. 6: 363. 1824.

Perennial; herbaceous; somewhat woody below; branches slender, glabrate, pubescent, or pilose, prostrate or ascending, 2-6 dm. long. Stipules ovate, cordate, strongly several-nerved, acuminate, glabrous, 4-12 mm. long; petiole eglandular, pubescent; leaflets 1 pair, obliquely elliptic-obovate, membranous, glabrous, or the margin ciliate, 0.6-3 cm. long, 4- or 5-nerved and pinnately veined, the apex rounded, the costa excentric; pedicels filiform, 1-2.5 cm. long, the bractlets linear-subulate; sepals lanceolate, sparingly pubescent, about 4 mm. long; petals slightly longer than the sepals; legume linear, 1.5-3 cm. long, about 4 mm. wide, short-tipped, puberulent.

TYPE LOCALITY: South America.

DISTRIBUTION: Jamaica; Cuba; Sinaloa to Jalisco; Costa Rica; adventive in Florida. Also in Venezuela and Brazil.

ILLUSTRATION: Collad. loc. cit. pl. 9, B.

15. *Chamaecrista pilosa* (L.) Greene, Pittonia 4: 28. 1899.

Cassia pilosa L. Syst. ed. 10, 1017. 1759.
Cassia Milleri Collad. Hist. Cass. 132. 1816.
Disterepia pilosa Raf. Sylva Tell. 126. 1838.
Chamaecrista macropoda Standley, Contr. U. S. Nat. Herb. 17: 431. 1914.

Suffrutescent, the pilose branches straggling, ascending, or spreading, sometimes about 1 m. long, usually shorter. Stipules ovate-lanceolate, long-acuminate, strongly several-nerved, membranous, 6-13 mm. long, subcordate, ciliate; petiolar gland small, short-stalked or wanting; leaflets 2-5 pairs, oblong, or oblong-obovate, membranous, 0.5-2.5 cm. long, 3-7 mm. wide, obtuse, cuspidate or mucronate, glabrous or sparingly pubescent, ciliate, rather strongly pinnately veined, the costa excentric; pedicels filiform, 2-4 cm. long, mostly longer than the leaves; bractlets narrowly lanceolate; sepals lanceolate, sparingly pubescent, 4-5 mm. long; petals 5-7 mm. long; legume linear, pubescent or glabrate, very short-tipped, 2-4 cm. long, 3-4 mm. wide.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica; Cuba; Guatemala to El Salvador. Colombia; Venezuela.

16. *Chamaecrista delicata* Rose, sp. nov.

Prostrate or ascending, about 6 dm. long; branches slender, long-pilose. Stipules linear-lanceolate, acuminate, 5-7 mm. long; petiole short, bearing a slender-stalked, flat, circular gland about 0.3 mm. broad; leaflets 7-9 pairs, submembranous, glabrous or minutely puberulent, oblong, aristulate, 6-10 mm. long, 2-3 mm. wide, the costa excentric; pedicels filiform, spreading, glabrate, 3-4 cm. long; sepals lanceolate, long-pilose, 6-7 mm. long; petals obovate, 7-9 mm. long.

Cerro Pedregosa, Ocote [Michoacán or Guerrero], 550 m. altitude, October 29, 1898, E. Langlassé 544.

17. *Chamaecrista serpens* (L.) Greene, Pittonia 4: 29. 1899.

Cassia serpens L. Syst. ed. 10, 1018. 1759.
Ophiocaulon serpens Raf. Sylva Tell. 129. 1838.

Stems slightly woody, very slender, prostrate, glabrous or puberulent, 1-4 dm. long. Leaves about 3 cm. long or shorter; stipules lanceolate, acuminate, few-nerved, 4-6 mm. long, petiolar gland small, filiform-stalked; leaflets 4-9 pairs, narrowly oblong-oblancoolate, membranous, glabrous, 4-8 mm. long, obtuse, mucronate, few-nerved, the costa much excentric; pedicels filiform, 1-2.5 cm. long; bractlets linear-lanceolate; sepals broadly lanceolate, acute, 4-5 mm. long, petals as long as the sepals or somewhat longer; legume linear, sparingly pubescent, 1.5-2.5 cm. long, about 3 mm. wide, very short-tipped.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica; Cuba; Mexico (acc. to Bentham); Guatemala; Colombia; Venezuela; Brazil.

18. *Chamaecrista flexuosa* (L.) Greene, *Pittonia* 4: 27. 1899.*Cassia flexuosa* L. Sp. Pl. 379. 1753.*Chamaecrista amplistipulata* Rose, *Contr. U. S. Nat. Herb.* 12: 267. 1909.*Cassia picachensis* Brand. *Univ. Calif. Publ. Bot.* 6: 180. 1915.

Shrubby; stems erect, ascending or trailing, flexuous, glabrous, puberulent, rarely pubescent, slender, about 6 dm. long, or shorter. Stipules ovate or ovate-lanceolate, acute or acuminate, semicordate, strongly several-nerved, 4-16 mm. long; petiole bearing 1 or 2 sessile, orbicular glands; leaflets 15-50 pairs, linear, coriaceous, glabrous, or rarely pubescent, obtuse or acutish, 2-4-nerved, 4-8 mm. long; pedicels 1-2.5 cm. long, minutely bracteolate above, glabrous, rarely pilose; sepals membranous, glabrous or pubescent, acute, 8-10 mm. long; larger petals 14-17 mm. long; legume linear, 3-6 cm. long, about 5 mm. wide, glabrous or finely pubescent.

TYPE LOCALITY: Brazil.

DISTRIBUTION: Cuba; Jalisco and Oaxaca to Panama, Colombia, Dutch Guiana, Brazil, Bolivia and Paraguay.

ILLUSTRATION: Breyn, *Exot. Pl. Cent. pl.* 23.19. *Chamaecrista Hioramii* Britton, sp. nov.*Cassia arduinervis brevipila* Urban, *Symb. Ant.* 9: 444. 1928.

A much-branched shrub, 3-5 dm. high, the slender twigs, the leaves, calyx and pedicels densely short-pubescent. Stipules lanceolate, strongly nerved, 2-3 mm. long; petiole short, bearing a short, stout gland, or glandless; leaflets 2 or 3 pairs (occasionally 1 pair), coriaceous, obliquely oblong-ob lanceolate, or the upper pair obovate, strongly veined, acute or acutish, aristate, 8-12 mm. long, the costa excentric; pedicels bracteolate above, about 1 cm. long; sepals acuminate, about 4 mm. long; petals a little longer than the sepals.

Southern Oriente, Cuba. Type from Boca del Guantanamo, June 23, 1921, *Brother Hioram* 4868.

20. *Chamaecrista keyensis* Pennell, *Bull. Torrey Club* 44: 344.

1917.

Suffruticose, perennial; stems spreading or ascending, rather slender, villous-pubescent, 1-8 dm. long. Stipules lanceolate, acuminate, 4-5 mm. long, few-nerved; petiolar gland sessile, depressed, saucer-shaped; leaflets 4-7 pairs, oblanceolate, mucronate, subcoriaceous, densely pubescent, 7-10 mm. long; pedicels slender, 1.5-2 cm. long, pubescent; sepals lanceolate, acuminate, pubescent, 8-9 mm. long; petals 9-10 mm. long; legume linear, 4-4.5 cm. long, 4-5 mm. wide, puberulent.

TYPE LOCALITY: Big Pine Key, Monroe County, Florida.

DISTRIBUTION: Known only from Big Pine Key and No Name Key, Florida.

21. *Chamaecrista clarensis* Britton, sp. nov.

A much-branched shrub, about 1 m. high or higher, the slender twigs, the leaves, and the pedicels, densely appressed-puberulent. Stipules lanceolate, acuminate, about 2 mm. long; petiolar gland depressed, nearly flat, sessile; leaflets 2 or 3 pairs, coriaceous, densely puberulent, cuneate-obovate or oblanceolate, 8-12 mm. long, subtruncate, rounded or emarginate, apiculate, strongly veined, the costa a little excentric; pedicels slender, about 1 cm. long, or shorter, bracteolate above; sepals narrowly lanceolate, acuminate, loosely appressed-puberulent, about 8 mm. long; petals about 9 mm. long; legume narrowly linear, loosely short-pubescent, apiculate, 2-2.7 cm. long, about 3.5 mm. wide.

Province of Santa Clara, Cuba. Type from sand dunes, Punta Colorado, Cienfuegos Bay, March 18, 1910, *Britton & Wilson* 5648.

22. *Chamaecrista grammica* (Spreng.) Pollard, Field Mus. Publ. Bot.
2: 47. 1900.

Cassia grammica Spreng. Neue Entd. 3: 55. 1822.

Cassia lineata brachyloba Griseb. Mem. Am. Acad. II 8: 179. 1860.

Suffrutescent or shrubby, densely pubescent, 0.6 dm. high, or lower. Stipules lanceolate, acuminate, about 5 mm. long; petiolar gland solitary, stalked; leaflets 3-8 pairs, oblong to obovate, 6-12 mm. long, 3-6 mm. wide, acutish or obtuse, mucronate, their margins slightly thickened; pedicels nearly as long as the leaves, or shorter; sepals lanceolate, pilose, about 8 mm. long; petals nearly twice as long as the sepals; legume linear, pubescent, about 3 cm. long and 3-4 mm. wide.

TYPE LOCALITY: Maritime regions, Cuba and Hispaniola.

DISTRIBUTION: Cuba; Hispaniola; Porto Rico; Little St. James Island, St. Jan; Water Island, St. Thomas.

23. *Chamaecrista selleana* (Urban) Britton.

Cassia selleana Urban, Repert. Sp. Nov. 15: 311. 1918.

A shrub, 2-2.7 m. high, the twigs densely villous. Stipules lanceolate-setaceous, 5-nerved, 4-7 mm. long. Petiolar gland sessile or subsessile, about 0.4 mm. in diameter; rachis villous; leaflets 12-15 pairs, coriaceous, oblong, obtuse, mucronate, 6-9 mm. long, 2-3 mm. wide, pubescent, at least above, pinnately veined, the costa nearly central; pedicels 1-1.5 cm. long, villous, subulate-bracteolate above; sepals lanceolate or oblong-lanceolate, 7-10 mm. long, acute or acuminate, sparingly pubescent; larger petal about 14 mm. in diameter, the others obovate, 12-14 mm. long; ovary villous.

TYPE LOCALITY: Morne de la Selle, Haiti.

DISTRIBUTION: Haiti.

24. *Chamaecrista niqueroensis* (Urban & Ekman) Britton.

Cassia niqueroensis Urban & Ekman; Urban, Repert. Sp. Nov. 22: 355. 1926.

A shrub, the branches appressed-pubescent, the internodes short. Stipules lanceolate, acuminate, 5-nerved, 2-2.5 mm. long; petiole 3 mm. long, bearing a sessile, oval gland 0.7 mm. long; leaflets 1 pair, rarely 2 pairs, glabrous, obovate or orbicular-obovate, subchartaceous, rounded, 1-1.7 cm. long, 0.7-1.2 cm. wide, the midvein excentric; flowers solitary, or 2 together, superaxillary; pedicels 1-1.5 cm. long, subulate-bracteolate above; sepals ovate-lanceolate, about 8 mm. long, acute, membranous; petals suborbicular or obovate, 10-12 mm. long; legume linear, about 3.5 cm. long and 4.5 mm. wide, appressed-pubescent, about 12-seeded.

TYPE LOCALITY: Peninsula of Cabo Cruz, near Niquero, Oriente, Cuba.

DISTRIBUTION: Known only from the type locality.

25. *Chamaecrista obcordata* (Sw.) Britton, Bull. Torrey Club 44: 6.
1917.

Cassia obcordata Sw.; Wikst. Sv. Vet. Akad. Handl. 1825: 429. 1826.

A low, branched shrub, the twigs densely short-pubescent. Stipules ovate, acute, about 1 mm. long; leaves 1-2.5 cm. long, the petiolar gland with a short, stout stalk; leaflets 2-7 pairs, obovate or oblong-obovate, glabrous, or sparingly short-pubescent on the midvein beneath, emarginate, obtuse or obcordate, subcoriaceous, strongly pinnately several-veined, faintly shining or dull, 5-10 mm. long; pedicels filiform, solitary, 1-2 cm. long, 2-bracteolate at about the middle; sepals lanceolate, acuminate, about 5 mm. long; petals 10-12 mm. long; legume linear, about 2.5 cm. long, pubescent.

TYPE LOCALITY: St. Bart's.

DISTRIBUTION: St. Bart's; St. Martin.

26. *Chamaecrista lineata* (Sw.) Greene, Pittonia 4: 31. 1909.

Cassia lineata Sw. Prodr. 66. 1788.

A shrub, 2-10 dm. high, usually much branched, the twigs finely pubescent, or glabrous. Stipules lanceolate, acuminate, as long as the petioles, or shorter; petioles 3-8 mm. long, bear-

ing a sessile or nearly sessile gland; leaflets 3-11 pairs, narrowly oblong to oblanceolate or obovate, coriaceous, 6-20 mm. long, 2-7 mm. wide, dull, glabrous or nearly so, rounded and mucronulate at the apex, rather strongly pinnately veined; pedicels solitary, filiform, 1-2.5 cm. long, bracteolate above; sepals lanceolate, acuminate, 7-10 mm. long; petals obovate, somewhat longer than the sepals; legume linear, pubescent, 2.5-6 cm. long, 5-6 mm. wide.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica; Bahamas; Cuba; Isle of Pines; Hispaniola.

27. *Chamaecrista granulata* (Urban) Britton, Ann. Mo. Bot. Gard.
2: 41. 1915.

Cassia portoricensis granulata Urban, Symb. Ant. 1: 318. 1899.

Chamaecrista portoricensis granulata Cook & Collins, Contr. U. S. Nat. Herb. 8: 113. 1903.

Cassia granulata F. Macbride, Contr. Gray Herb. 59: 26. 1919.

Shrubby, often much branched, about 1 m. high or lower, the branches short-pubescent. Stipules lanceolate, acuminate, 3-5 mm. long; petiolar gland solitary, stalked; leaflets 4-7 pairs, subcoriaceous, oblong to obovate, dull, puberulent or glabrate, 6-12 mm. long, obtuse, mucronate, their margins not thickened; pedicels shorter than the leaves; sepals lanceolate, acuminate, 7-8 mm. long; petals about twice as long as the sepals; legume linear, loosely pubescent, 3-5 cm. long, 4-5 mm. wide.

TYPE LOCALITY: Near Salinas de Cabo Rojo, Porto Rico.

DISTRIBUTION: Southwestern Porto Rico; Mona; Cayo Muertos.

28. *Chamaecrista pinetorum* Britton, Bull. Torrey Club 44: 7. 1917.

Cassia pinetorum Urban, Repert. Sp. Nov. 15: 311. 1918.

Cassia pinetorum Picardae Urban, loc. cit. 1918.

Shrubby, 4 dm. high, or higher, the branches slender, densely appressed-pubescent with brownish hairs. Stipules linear-lanceolate, striate, long-acuminate, 4-6 mm. long; leaves 3-5 cm. long, the rachis appressed-pubescent; leaflets 9 pairs or fewer, subcoriaceous, linear to linear-oblong, 10-15 mm. long, 2-4 mm. wide, glabrous on both sides, dull, acute and cuspidate at the apex, obliquely rounded at the base, closely pinnately veined, the prominent costa nearly central; petiolar gland slender-stalked; pedicels filiform, appressed-pubescent, 2-bracteolate, about 3 cm. long; sepals lanceolate, acuminate, 10-12 mm. long; petals obovate, somewhat shorter than the sepals or as long; ovary appressed-pubescent.

TYPE LOCALITY: Near Constanza, Santo Domingo.

DISTRIBUTION: Hispaniola.

29. *Chamaecrista jamaicensis* Britton, Bull. Torrey Club 42: 515.
1915.

Cassia polyadura Fawcett & Rendle, Fl. Jam. 4²: 113. 1920. Not DC. 1824.

A shrub, up to 1.3 m. high, the slender branches appressed-pubescent. Stipules lance-subulate, acuminate, striate, 2-4 mm. long; petioles 6 mm. long or less, bearing a long-stalked or nearly cylindrical gland 1-1.5 mm. long near the lowest pair of leaflets; rachis pubescent, sometimes bearing glands between the leaflets; leaflets 4-8 pairs, dull, coriaceous, sessile, glabrous, oblong, or the upper pair oblong-obovate, 13-22 mm. long, 8 mm. wide or less, prominently many-veined, obtuse and mucronate at the apex, rounded at the base; pedicels pubescent, shorter than the leaves; sepals lanceolate, acuminate, about 1 cm. long, broadly scarious-margined; petals about as long as the sepals; legume obliquely linear, 3-4 cm. long, about 6 mm. wide, pubescent with scattered hairs.

TYPE LOCALITY: South slope of Long Mountain, Jamaica.

DISTRIBUTION: Southern side of Jamaica.

30. *Chamaecrista arduinervis* (Urban) Britton.

Cassia arduinervis Urban, Repert. Sp. Nov. 15: 310. 1918.

Twigs short-pubescent. Stipules lanceolate, acuminate, about 3 mm. long; petiole about 2 mm. long, bearing a small, sessile gland; leaflets 2 pairs, obovate or elliptic, coriaceous,

shining, 6–10 mm. long, 2–4 mm. wide, the apex truncate or obtuse, pungently mucronate; pedicels 1–1.5 cm. long, short-pilose, subulate-bracteolate above; sepals lanceolate, 6–7 mm. long; petals obovate, 9–11 mm. long; legume linear, 3.5 cm. long, 3.7 mm. wide, short-pilose.

TYPE LOCALITY: Cuba.

DISTRIBUTION: Bed of the Yateras River, Oriente, Cuba.

31. *Chamaecrista cahosiana* (Urban) Britton.

Cassia cahosiana Urban, Arkiv Bot. 22A⁸: 33. 1929.

A shrub, 1.5–2 m. high, the twigs pilose and short-pubescent. Stipules triangular-linear, acuminate, striate, 4–5 mm. long; petioles 3–5 mm. long; gland orbicular, long-stipitate; leaves 5–6 cm. long, the rachis sparingly pilose; leaflets 14–20 pairs, broadly linear, glabrous, chartaceous, 8–12 mm. long, strongly 8–12-veined on each side of the midvein, the apex rounded and mucronate; flowers solitary, or 2 together; pedicels 12–15 mm. long, pilose, bracteolate above the middle; sepals ovate-lanceolate, acuminate, 9–10 mm. long; petals 13–15 mm. long; legume broadly linear, sparingly pilose, 4–5 cm. long, 7–7.5 mm. wide.

TYPE LOCALITY: Massif des Cahos, near Belladere, Haiti.

DISTRIBUTION: Known only from the type locality.

32. *Chamaecrista portoricensis* (Urban) Cook & Collins, Contr. U. S. Nat. Herb. 8: 113. 1903.

Cassia portoricensis Urban, Symb. Ant. 1: 317. 1899.

Cassia portoricensis callosa Urban, loc. cit. 1899.

Chamaecrista portoricensis callosa Cook & Collins, loc. cit. 1903.

Shrubby, usually much branched, about 1 m. high or lower, the branches short-pubescent. Stipules lanceolate, long-acuminate, 3–8 mm. long; petiolar gland solitary, stout-stipitate; leaflets 3–11 pairs, coriaceous, oblong or oblong-obovate, 6–15 mm. long, glabrous, shining, callous-margined, mucronate, strongly veined; pedicels 1- or 2-flowered, shorter than the leaves; sepals lanceolate to ovate-lanceolate, 6–8 mm. long, acuminate; petals 10–15 mm. long; legume linear, short-pilose, 6 cm. long or less, 4–6 mm. wide.

TYPE LOCALITY: Near Guayanilla, Porto Rico.

DISTRIBUTION: Southern and western Porto Rico.

33. *Chamaecrista Tuerckheimii* Britton, Bull. Torrey Club 44: 8. 1917.

Cassia Tuerckheimii Urban, Symb. Ant. 8: 271. 1920.

Shrubby, with a deep woody root; stems slender, villous-pubescent, 8–10 cm. long. Stipules obliquely ovate-lanceolate, acuminate, striate, 2–3 mm. long; leaves 2–2.5 cm. long, the rachis villous-pubescent; leaflets 6 or 7 pairs, linear-oblong to oblong-oblancoate, 6–8 mm. long, about 2 mm. wide, ciliate, shining, rounded or subtruncate and mucronulate at the apex, obliquely rounded at the base, pinnately veined with the prominent costa somewhat excentric, the petiolar gland short-stalked; pedicels slender, villous, about 2 cm. long; sepals lanceolate, acuminate, villous, 7–8 mm. long; petals obovate, about twice as long as the sepals; legume linear, narrowed at both ends, nearly glabrous, 1.8 cm. long.

TYPE LOCALITY: Near Maniel de Ocoa, Santo Domingo.

DISTRIBUTION: Hispaniola.

34. *Chamaecrista Leonardae* Britton, sp. nov.

A low shrub, the slender twigs strigose. Stipules lanceolate, long-acuminate, striate, 6–8 mm. long; petioles 2–4 mm. long; gland orbicular, nearly sessile, about 0.5 mm. in diameter, its short stalk stout; leaves 2–4 cm. long, the rachis sparingly strigose; leaflets 6–11 pairs, narrowly oblong-lanceolate, coriaceous, shining above, glabrous, strongly veined, 6–10 mm. long, the midvein excentric, the acute apex mucronulate; pedicels solitary, or 2 together, filiform, bracteolate above the middle, 1.5–2 cm. long; sepals lanceolate, glabrate, 6–8 mm. long; petals 10–13 mm. long; legume linear, glabrous when mature, about 2.5 cm. long, 4 mm. wide.

Moustique Mountains, vicinity of Bassin Bleu, Haiti, April, 1929, *Emery C. Leonard & Genevieve M. Leonard 14982*.

35. *Chamaecrista caribaea* (Northrop) Britton, Bull. Torrey Club
44: 8. 1917.

Cassia caribaea Northrop, Mem. Torrey Club 12: 39. 1902.

A branched shrub, 1 m. high, or lower, the twigs sparingly appressed-pubescent, or glabrate. Stipules lanceolate-subulate, about 4 mm. long; petiolar gland, when present, nearly cylindrical; leaflets 2-4 pairs, coriaceous, glabrous, shining, oblong to narrowly elliptic or oblong-lanceolate, acute, mucronate, strongly veined, 1.5-2.5 cm. long; pedicels 1 or 2, glabrous, very slender, 2-3 cm. long; sepals pilose on the back, about 1 cm. long; petals about twice as long as the sepals; egume linear, sparingly short-pubescent, 3-5.5 cm. long, 5-7 mm. wide.

TYPE LOCALITY: Fresh Creek, Andros, Bahamas.

DISTRIBUTION: Bahamas.

ILLUSTRATION: Northrop, loc. cit. pl. 6.

36. *Chamaecrista inaguensis* Britton, Bull. Torrey Club 44: 8. 1917.

Cassia inaguensis Britton, Bull. N. Y. Bot. Gard. 3: 443. 1905.

A much-branched shrub, 6-12 dm. high, the twigs pubescent. Stipules lanceolate-subulate, 2-4 mm. long, persistent; petiolar gland solitary, stipitate; leaflets 1 or 2 pairs, glabrous, subcoriaceous, rigid, shining, oblong to obovate, strongly finely many-veined, 1.5-3 cm. long, 5-13 mm. wide, the apex rounded or emarginate, the base narrowed; pedicels filiform, sparingly pubescent, 2-4 cm. long; sepals lanceolate, pubescent, at least at the base, 1 cm. long, or shorter; petals about 1.5 cm. long; young legume densely pubescent; mature legume linear, sparingly pubescent, 5-7 cm. long, 5 mm. wide.

TYPE LOCALITY: Inagua, Bahamas.

DISTRIBUTION: Southern Bahamas.

37. *Chamaecrista tortuensis* (Urban & Ekman) Britton.

Cassia tortuensis Urban & Ekman; Urban, Arkiv Bot. 21A: 91. 1927.

A shrub, about 1.5 m. high, the twigs puberulent. Stipules lanceolate, acuminate, 2-3 mm. long; petiolar glands 1 or 2, orbicular, stipitate; leaflets 1-3 pairs, chartaceous, shining, glabrous, obovate, 2-3 cm. long, 8-20 mm. wide, rounded, truncate or emarginate, the numerous veins parallel; pedicels 1 or 2, 3.5-4.5 cm. long in fruit; sepals ovate-lanceolate, acuminate, sparingly appressed-pilose, 10-11 mm. long; petals about 13 mm. long; legume linear, 4.5-6 cm. long, 5-6 mm. wide, sparingly appressed-pubescent; seeds 11-14.

TYPE LOCALITY: Tortuga Island, Haiti.

DISTRIBUTION: Known only from the type locality.

38. *Chamaecrista lucayana* Britton, Bull. Torrey Club 44: 8. 1917.

Cassia lucayana Britton, Bull. N. Y. Bot. Gard. 4: 138. 1906.

A shrub, 1.5 m. high, or lower, much branched, the twigs densely pubescent. Stipules lanceolate-subulate, 3-4 mm. long; petiolar gland solitary, short-stipitate, stout, flat-topped; leaflets 4-9 pairs, coriaceous, glabrous, shining, minutely papillate, ovate to ovate-oblong, 1-2 cm. long, 4-12 mm. wide, the base obliquely subcordate, the apex obtuse or acutish, cuspidate, the venation closely parallel; pedicels 1 or 2, pubescent, 3-4 cm. long; legume linear, glabrous or with few scattered hairs, 4-5 cm. long, 5-7 mm. wide.

TYPE LOCALITY: Cay north of Wide Opening, Exuma Chain, Bahamas.

DISTRIBUTION: Northern and eastern Bahamas.

39. *Chamaecrista Greggii* (A. Gray) Pollard; A. Heller, Cat. N. A.
Pl. ed. 2, 5. 1900.

Cassia Greggii A. Gray, Pl. Wright. 1: 59. 1852.

A low shrub, with short, whitish-puberulent twigs. Stipules linear-subulate, 1-2 mm. long; petiolar gland about 0.2 mm. broad, sessile, turbinate; leaflets 3-5 pairs, coriaceous, glabrous, shining, strongly irregularly pinnately reticulate-veined, oblong, or the upper pair oblong-

obovate, 5-10 mm. long, the apex obtuse or rounded, mucronulate; pedicels nearly filiform, puberulent, 1-2 cm. long, subulate-bracteolate; sepals ovate, puberulent, obtuse or acutish, 5-7 mm. long; petals obovate, the longer ones 10-14 mm. long; legume linear, long-acuminate, 3-4 cm. long, 4-6 mm. wide, glabrate.

TYPE LOCALITY: Near Rinconada, Monterey, Nuevo León.

DISTRIBUTION: Nuevo León; Tamaulipas.

40. *Chamaecrista MacDougaliana* Rose.

Cassia MacDougaliana Rose, Contr. U. S. Nat. Herb. 12: 267. 1909.

A small, compact shrub, 3-6 dm. high, the twigs short-pubescent. Stipules lanceolate, or ovate-lanceolate, acuminate, about 2 mm. long; petiolar gland short-stipitate; leaflets 2-4 pairs, elliptic to oblong-obovate, coriaceous, 6-7 mm. long, 2-4 mm. wide, acute, obtuse or subtruncate, aristulate, glabrous above, sparingly pubescent beneath, the costa nearly central, the pinnate venation ascending; pedicels very slender, 1-2 cm. long, puberulent; sepals membranous, ovate, obtuse, 3-5 mm. long; petals very unequal, the larger ones 10-14 mm. long; legume linear, 2.5-3 cm. long, about 3 mm. wide, glabrate.

TYPE LOCALITY: Tehuacán, Puebla.

DISTRIBUTION: Puebla.

41. *Chamaecrista potosina* Britton & Rose, sp. nov.

A low shrub, the slender twigs puberulent. Stipules lanceolate-subulate, 1-2 mm. long; petiolar gland subsessile, about 0.3 mm. broad, borne near the lower leaflets; leaflets 2 pairs, oblanceolate, coriaceous, obtuse, glabrous, mucronulate, 8-13 mm. long, strongly 3- or 4-nerved from the base and pinnately veined with the veins ascending, the costa central; pedicels slender, bracteolate near the middle, 2.5 cm. long or shorter; sepals ovate, obtuse; legume broadly linear, acuminate, glabrous, 3-4 cm. long, 6-8 mm. wide.

Minas de San Rafael, San Luis Potosí, May, 1911, *Purpus* 4832.

42. *Chamaecrista Pinoi* Britton & Rose, sp. nov.

A small tree, 3.5-4 m. high, the slender twigs short-pubescent. Stipules linear-lanceolate, long-acuminate, few-veined, 3-5 mm. long; glands minute, subsessile, borne on the rachis between the leaflets; leaflets 5-7 pairs, elliptic, oblong or the upper ones obovate, 6-11 mm. long, subcoriaceous, puberulent, obtuse, apiculate, several-nerved from the base and pinnately veined, the venation ascending, the costa excentric; pedicels pilose, about 1.5 cm. long; sepals ovate-lanceolate, pilose, about 7 mm. long; petals longer than the sepals.

Between Jalisco and Tuxtla Gutierrez, Chiapas, 1923, *Purpus* 9384.

43. *Chamaecrista mazatlensis* Rose, sp. nov.

Suffrutescent, with very slender, purplish prostrate or ascending, loosely short-pubescent branches up to about 5 dm. long. Stipules linear-lanceolate, acuminate, 3-5 mm. long; leaflets 4-7 pairs, oblong, 4-9 mm. long, obtuse, apiculate, glabrous, strongly veined, the midvein about one-third excentric; petiole short, bearing a long-stalked, flat gland about 0.2 mm. broad; pedicels very slender, about 1.5 cm. long; sepals lanceolate, glabrate, 7-9 mm. long; petals about 10 mm. long.

Vicinity of Mazatlán, Sinaloa, March 31, 1910, *Rose, Standley & Russell* 13824.

44. *Chamaecrista Ortegae* Britton, sp. nov.

Perennial, with slender, prostrate or diffuse puberulent branches 1-2 dm. long. Stipules narrowly lanceolate, ciliolate, acuminate, about 3 mm. long; petiole 2-4 mm. long, bearing a small, short-stalked or subsessile gland; rachilla puberulent; leaflets 5-7 pairs, pale green, subcoriaceous, linear-oblong to oblong-obovate, glabrous, minutely ciliolate, obtuse, minutely apiculate, 4-8 mm. long, strongly veined, the costa about one-third excentric; pedicels filiform, puberulent, bracteolate above, 2-2.5 cm. long; sepals lanceolate, acuminate, puberulent, 6-8

mm. long; petals nearly 1.5 cm. long; legume linear, 3 cm. long, 3.5 mm. wide, short-tipped, puberulent.

Capule, Mazatlán, Sinaloa, 200 m. altitude, 1925, *J. G. Ortega 6088*.

45. *Chamaecrista Mexiae* Britton, sp. nov.

Suffrutescent, with slender, pubescent and pilose branches up to 3 dm. long. Stipules lanceolate, long-ciliate, 5-6 mm. long; petiole short, bearing a subsessile gland; rachilla long-pilose; leaflets 7-10 pairs, bright green, subcoriaceous, oblong, glabrous but ciliolate, obtuse, or acutish, apiculate or aristulate, 6-8 mm. long, strongly veined, the costa about one-third eccentric; pedicels filiform, pubescent, bracteolate above, 1.5-2 cm. long; sepals lanceolate, about 7 mm. long, sparingly long-pilose; petals nearly 1.5 cm. long; young legume narrowly linear, pubescent and villous, 2.3 cm. long, 2 mm. wide, short-tipped.

Between Yxtlán and Barranca del Oro, 1480 m. altitude, Nayarit, September 27, 1926, *Ynes Mexia 790*.

46. *Chamaecrista chiapensis* Britton & Rose, sp. nov.

A low shrub, the very slender branches prostrate or ascending, short-pubescent, about 2 dm. long, or shorter. Stipules lanceolate, long-acuminate, strongly few-veined, 2.5-3.5 mm. long; petiolar gland orbicular, stout-stipitate, about 0.2 mm. in diameter; leaflets 5-7 pairs, obliquely linear-oblong, glabrous, aristulate, subcoriaceous, 3-6 mm. long, 1-1.5 mm. wide, strongly veined, the midvein nearly marginal; pedicels solitary, filiform, 1.5-2 cm. long, sparingly pubescent; sepals lanceolate, acuminate, sparingly long-pubescent, 6-7 mm. long; lower petal about 15 mm. long, the others much narrower, about 10 mm. long.

Rocky soil, Monserrate, Chiapas, May, 1925, *Purpus 10592*.

47. *Chamaecrista alamosensis* Britton & Rose, sp. nov.

Shrubby, branched, about 4 dm. high, the very slender branches puberulent when young, becoming glabrous. Stipules linear, acuminate, glabrous, 4-5 mm. long; petiole short, bearing a long-stalked, subcapitate gland about 0.2 mm. broad; leaflets 5-10 pairs, subcoriaceous, rather faintly veined, linear to oblong, aristulate, glabrous, 6-9 mm. long, the midvein very eccentric; pedicels very slender, up to 4 cm. long; legume linear, nearly 2 cm. long, about 2 mm. wide, sparingly loosely pubescent.

Sierra de Alamos, Sonora, March 18, 1910, *Rose, Standley & Russell 13046*.

48. *Chamaecrista Deeringiana* Small & Pennell; Pennell, Bull.

Torrey Club 44: 345. 1917.

Perennial, with a long woody rhizome; stem slender, 3-6 dm. high, purple or purplish, glabrous, or puberulent above. Stipules lanceolate, long-acuminate, strongly few-veined, 7-10 mm. long; petiolar gland sessile, discoid, 1-1.5 mm. broad; leaflets 10-20 pairs, linear, 1-2 cm. long, 2-3 mm. wide, glabrous, subchartaceous, shining, acute, mucronate, closely pinnately many-veined with venation ascending, the costa eccentric; pedicels 1-2 cm. long, filiform, lanceolate-bracteolate above; sepals lanceolate, acuminate, 10-12 mm. long, glabrous or puberulent; petals 14-18 mm. long; legume linear, 6-8.5 cm. long, about 5 mm. wide, sparingly puberulent or glabrous.

TYPE LOCALITY: Silver Palm, Dade County, Florida.

DISTRIBUTION: Southern Florida.

ILLUSTRATION: Small, *Addisonia pl. 121*.

49. *Chamaecrista texana* (Buckl.) Pennell, Bull. Torrey Club 44: 343.

1917.

Cassia texana Buckl. Proc. Acad. Phila. 1861: 452. 1862.

Cassia procumbens Pollard, Bull. Torrey Club 22: 516. 1895. Not L. 1753.

Perennial, the rhizome woody; stems ascending, slender, puberulent, 2-4 dm. long. Stipules triangular-ovate, cordate, acute, puberulent, faintly veined, 2-4 mm. long; petiolar gland

sessile, minute, often wanting; leaflets 10-16 pairs, narrowly oblong to elliptic-lanceolate, 6-8 mm. long, about 1 mm. wide, rather strongly 3-4-nerved, acutish, pubescent, the costa very excentric; pedicels nearly filiform, puberulent, 2.5-5 cm. long; sepals ovate, acute, puberulent, 7-8 mm. long; petals 10-13 mm. long; legume linear, 3-4 cm. long, about 5 mm. wide, finely appressed-pubescent.

TYPE LOCALITY: Bastrop County, Texas.

DISTRIBUTION: Southern Texas.

ILLUSTRATION: Pollard, loc. cit. *pl.* 252, *f.* 8.

50. *Chamaecrista aristellata* Pennell, Bull. Torrey Club 44: 342.
1917.

Perennial, herbaceous; stem about 4 dm. tall, puberulent and loosely pilose. Stipules lanceolate, acuminate, several-nerved, ciliate, 4-5 mm. long; petiolar gland discoid, slender-stalked; leaflets 6-8 pairs, broadly linear to oblanceolate, 10-15 mm. long, 2 mm. wide, obliquely mucronulate, glabrous but ciliate, rather strongly several-nerved; pedicels puberulent, 7-13 mm. long; bractlets linear-lanceolate; sepals lanceolate, puberulent, about 10 mm. long; petals about as long as the sepals; legume 3-4 cm. long, 3-4 mm. wide, loosely strigose.

TYPE LOCALITY: Rio de Medina, Texas.

DISTRIBUTION: Texas.

51. *Chamaecrista Ferrisiae* Britton, sp. nov.

Branches decumbent, woody, spreading, forming mats 1 m. in diameter, the twigs pubescent with curled hairs. Stipules narrowly lanceolate, acuminate, pubescent, ciliate, 4-6 mm. long; petiolar gland short-stalked, about 0.5 mm. broad; leaflets 10-15 pairs, broad; leaflets 10-15 pairs, linear, aristulate, sparingly pubescent above, rather densely pubescent beneath; pedicels bracteolate above, 1-1.5 cm. long; sepals densely pubescent, about 7 mm. long; petals about twice as long as the sepals; legume narrowly linear, 3.5-4.5 cm. long, about 3.5 mm. wide, loosely short-pubescent.

Forty miles north of Edinburg on road to Falfurias, Texas, August 7, 1921, *Roxana S. Ferris & Carl D. Duncan 3202*.

52. *Chamaecrista Palmeri* (S. Wats.) Greene, Pittonia 3: 242.
1897.

Cassia Palmeri S. Wats. Proc. Am. Acad. 22: 408. 1887.

Perennial, with a stout woody caudex; stems slender, loosely or densely pilose, 2-4 dm. long. Stipules linear-lanceolate, acuminate, few-nerved, 5-8 mm. long; petiolar gland small, stalked; leaflets 6-10 pairs, oblong, chartaceous, apiculate, 6-10 mm. long, glabrous, sometimes ciliate, strongly pinnately veined, the midvein excentric; pedicels slender, glabrate or pilose, 2-3 cm. long; sepals lanceolate, pilose, 8-10 mm. long; petals 12-15 mm. long; legume linear, .5-4 cm. long, sparingly appressed-pubescent.

TYPE LOCALITY: Rio Blanco, Jalisco.

DISTRIBUTION: Jalisco; Durango.

53. *Chamaecrista Goldmanii* Britton & Rose, sp. nov.

Perennial, branched, the branches slender, rather densely puberulent, about 3 dm. long or shorter. Stipules narrowly lanceolate, long-acuminate, strongly nerved, 4-6 mm. long; petiolar gland short-stalked, about 0.3 mm. broad; rachis long-pilose; leaflets 5-12 pairs, sub-chartaceous, narrowly oblong, or the upper oblong-obovate, 6-8 mm. long, aristulate, long-ciliate and sparingly pilose, or glabrate and ciliate, strongly veined, the costa nearly central; pedicels nearly filiform, 1-2 cm. long, bracteolate above, puberulent; sepals lanceolate, loosely pubescent, 6-8 mm. long; petals 10-13 mm. long; legume linear, about 5 cm. long, 4 mm. wide, loosely short-pubescent.

Chihuahua and Durango. Type from Parral, Chihuahua, September 19, 1898, *E. A. Goldman 98*.

54. *Chamaecrista Wrightii* (A. Gray) Wootton & Standley, Contr.
U. S. Nat. Herb. 19: 335. 1915.

Cassia Wrightii A. Gray, Pl. Wright. 2: 50. 1853.

Perennial; stems 3-4 dm. high, puberulent in lines. Stipules lanceolate, acuminate, glabrous, sometimes ciliate, 3-4 mm. long; petiolar gland long-stalked, discoid, about 0.2 mm. in diameter; leaflets 6-8 pairs, oblong, oblique, glabrous, subchartaceous, rounded or obtuse, mucronulate, 8-10 mm. long, about 2 mm. wide, faintly few-veined, the costa excentric; pedicels 3-4 cm. long, sparingly puberulent; sepals ovate, acute, about 7 mm. long, glabrous; petals 10-12 mm. long; legume broadly linear, 3-4 cm. long, 5 mm. wide, short-tipped, appressed-puberulent.

TYPE LOCALITY: Hillsides on the Sonoita, near Deserted Rancho, Sonora.
DISTRIBUTION: Southern Arizona and northeastern Sonora.

55. *Chamaecrista mirabilis* Pollard, Proc. Biol. Soc. Wash. 15: 19.
1902.

Cassia mirabilis Urban, Symb. Ant. 4: 276. 1905.

Shrubby or suffrutescent, low, prostrate, diffuse, rarely ascending, the stems 3-6 dm. long, glabrous, or finely pubescent, the branches slender. Stipules linear-subulate, 3-6 mm. long; petiolar glands 1-3, discoid, stalked; leaflets 3-17 pairs, linear, cuspidate, 4-6 mm. long, the midvein nearly central; pedicels mostly solitary, sometimes as long as the smaller leaves, nearly filiform; sepals thin, 6-9 mm. long; petals longer than the sepals, one of them much longer than the others; legume linear, sparingly pubescent, 2-2.5 cm. long, 2-2.5 mm. wide.

TYPE LOCALITY: Rio Piedras, Porto Rico.
DISTRIBUTION: Northern coastal plain of Porto Rico.
ILLUSTRATION: Britton, Addisonia pl. 335.

56. *Chamaecrista glandulosa* (L.) Greene, Pittonia 4: 28. 1899.

Cassia glandulosa L. Syst. ed. 10, 1017. 1759.

Cassia virgata Sw. Prodr. 66. 1788.

Cassia stricta Schrank, Pl. Rar. Hort. Monac. pl. 34. 1819.

Hepteteirca glandulosa Raf. Sylva Tell. 127. 1838.

Dialanthera glandulosa Raf. Sylva Tell. 127. 1838.

Chamaecrista virgata Greene, Pittonia 4: 31. 1899.

A shrub, 6-10 dm. high, the twigs glabrate or puberulent. Stipules lanceolate, long-acuminate, 5-8 mm. long; leaves about 9 cm. long or shorter, bearing a long-stalked gland 0.4-0.6 mm. broad on the petiole and usually others on the rachis between the leaflets; leaflets 8-16 pairs, linear to oblong, subchartaceous, glabrous, or sparingly pubescent beneath when young, obtuse or acutish, mucronate, 1-2 cm. long, or the upper ones smaller, 2.5-4 mm. wide, closely pinnately many-veined, the costa nearly central; pedicels 5-15 mm. long; bractlets lanceolate; sepals lanceolate, 8 or 9 mm. long, sparingly appressed-pubescent; larger petals 10-13 mm. long; legume linear, 3-4 cm. long, about 4 mm. wide, sparingly finely pubescent.

TYPE LOCALITY: Jamaica.
DISTRIBUTION: Jamaica.
ILLUSTRATION: Bot. Mag. pl. 3435; (?) Schrank, loc. cit.

57. *Chamaecrista Cowellii* Britton, sp. nov.

Shrubby, the slender twigs densely short-pubescent. Stipules lanceolate, acuminate, pubescent, 6-7 mm. long; leaves 5-6 cm. long, the rachis densely pubescent, sometimes bearing large, stout-stalked glands between the upper pairs of leaflets; petiolar gland about 1 mm. in diameter, obconic, rather long-stalked; leaflets 7-15 pairs, oblong, obtuse, aristulate, membranous, 6-14 mm. long, the venation almost wholly obscured by the dense, appressed pubescence; pedicels pilose, about 1 cm. long, 2-bracteolate near the top; sepals lanceolate, long-acuminate, pilose, 7-9 mm. long; petals 10-14 mm. long.

Between Corozal and Pedro Miguel, Panama, March 14, 1905, J. F. Cowell 406.

58. *Chamaecrista Swartzii* (Wikst.) Britton, Bull. Torrey Club 44: 9.
1917.

Cassia Swartzii Wikst. Sv. Vet. Akad. Handl. 1825: 430. 1826.
Chamaecrista complexa Pollard, Field Mus. Publ. Bot. 2: 47. 1900.

Shrubby or suffrutescent, erect or ascending, 0.5–1.5 m. high, the slender branches more or less pubescent. Stipules triangular-lanceolate, long-acuminate, 4–8 mm. long; petiolar gland solitary (rarely 2), stalked, the stalk sometimes elongated; leaflets 13–25 pairs, linear, linear-oblong or the upper oblong-obovate, 8–12 mm. long, obtuse, cuspidate, thin, glabrous or sparingly pubescent; pedicels 1–3, mostly longer than the petioles; sepals 10–12 mm. long; petals about twice as long as the sepals, one of them much larger than the others; legume linear, loosely puberulent or glabrate, 4–6 cm. long, 3–5 mm. wide.

TYPE LOCALITY: St. Bart's.

DISTRIBUTION: Hispaniola (acc. to Urban); Porto Rico to Tortola, St. Bart's and Grenada.

ILLUSTRATION: Britton, *Addisonia pl. III*.

59. *Chamaecrista polyadena* (DC.) Britton, Bull. Torrey Club 44: 10.
1917.

Cassia polyadena DC. Mém. Soc. Genève 2^e: 132. 1824.

Shrubby, 1–2 m. high, erect, usually branched, the branches glabrous or finely pubescent. Stipules narrowly lanceolate, acuminate, 5–9 mm. long; leaflets 6–20 pairs, oblong, or the upper pairs oblong-obovate, subchartaceous, glabrous, pinnately many-veined, 10–18 mm. long, the apex rounded or emarginate, mucronulate, the petiole bearing 1–4 orbicular, sessile or short-stalked, obconic glands; pedicels solitary, or 2 or 3 together, 1–2 cm. long, 2-bracteolate above the middle; sepals lanceolate, glabrate, about 10 mm. long; petals 12–15 mm. long; legume linear, sparingly appressed-pubescent, 2.5–4 cm. long, 4–5 mm. wide.

TYPE LOCALITY: Guadeloupe.

DISTRIBUTION: Guadeloupe; Dominica; Martinique; Barbados.

60. *Chamaecrista yucatanica* Britton & Rose, sp. nov.

Suffrutescent, little branched, the stems densely pilose-pubescent, 3–5 dm. long, apparently erect. Stipules linear-attenuate, few-nerved, pilose, 9–13 mm. long; petiolar gland stout-stalked, about 0.5 mm. broad; rachis short-pilose; leaflets 10–12 pairs, broadly oblong, membranous, nearly equally green and short-pubescent on both sides, 12–17 mm. long, 5–6 mm. wide, rather strongly veined, aristate, the midvein a little excentric; pedicels filiform, long-bracteolate above, short-pilose; sepals lanceolate, pilose, about 12 mm. long; petals a little longer than the sepals.

Buena Vista Xbac, Yucatán, *G. F. Gaumer 1113*.

61. *Chamaecrista Seleri* Rose, sp. nov.

Shrubby, or suffrutescent, the branches slender, pubescent, about 4 dm. long. Stipules lanceolate, acuminate, ciliate, 6–9 mm. long; petiolar gland long-stalked, about 0.6 mm. broad; leaflets 10–20 pairs, linear, 10–15 mm. long, 1.5–3 mm. wide, glabrous, sparingly ciliolate, aristate or aristulate, the costa slightly excentric; pedicels 1–1.5 cm. long, loosely pubescent, bracteolate above, the bractlets lanceolate; sepals lanceolate, long-acuminate, pilose, 9–10 mm. long; petals about 12 mm. long; legume linear, about 3 cm. long and 4 mm. wide, loosely short-pubescent.

Guatemala. Type from Barranca del Rio de las Vacas, Salida de Isabel, October 15, 1896, *C. & E. Seler 2286*.

62. *Chamaecrista chiriquensis* Britton & Rose, sp. nov.

Suffrutescent, branched, the branches about 3 dm. long, or longer, pubescent and pilose. Stipules narrowly lanceolate, long-acuminate, several-nerved, ciliate, 9–11 mm. long; petiolar gland long-stalked, about 0.5 mm. broad; leaflets 15–30 pairs, most of them narrowly linear, 15–18 mm. long, 1.5–2 mm. wide, membranous, faintly veined, aristate, glabrous, or nearly so

above, appressed-pubescent beneath, the costa a little excentric; upper leaflets oblong, much shorter; pedicels very slender, pilose, lanceolate-bracteolate above, about 1.5 cm. long or shorter; sepals long-strigose, acuminate, 9–10 mm. long; petals very unequal, the larger ones obovate, about 14 mm. long, the smaller ones much narrower, about 8 mm. long.

Vicinity of San Felix, eastern Chiriqui, Panama, January, 1912, *Pittier 5216*.

63. *Chamaecrista cruziana* Britton & Rose, sp. nov.

Shrubby, with short, pilose or glabrate branches, the hairs curved. Stipules ovate to ovate-lanceolate, acute or short-acuminate, few-nerved, pubescent and ciliate, 2–3 mm. long; leaves only 2.5 cm. long, or shorter; petiolar gland 0.4–0.6 mm. broad, short-stalked; leaflets 4–8 pairs, the larger ones obliquely oblong, approximate, obtuse, aristate, 4–5 mm. long, the upper obovate, much smaller, loosely pubescent or glabrate above, densely or sparingly pubescent beneath, the venation obscure, the costa excentric; pedicels pilose, rather stout, about 8 mm. long, lanceolate-bracteolate above; sepals lanceolate, villous, 6–8 mm. long; petals 10–12 mm. long.

Vicinity of Pueblo Viejo, Veracruz, 2 kilometers south of Tampico, June 1, 2, 1910 *E. Palmer 534*.

64. *Chamaecrista pygmaea* (DC.) Britton, Bull. Torrey Club
44: 10. 1917.

Cassia pygmaea DC. Mém. Soc. Genève 2^e: 131. 1824.

Prostrate, the branches and petioles pubescent. Leaflets 4–6 pairs, linear, mucronate; petiolar gland short-stalked; pedicels axillary, solitary, longer than the leaves, 2-bracteolate above the middle; flowers about 8 mm. broad; legume subpubescent, about 2 cm. long.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Known only from the type locality, and to us only from description.

65. *Chamaecrista diffusissima* Britton, sp. nov.

Diffusely branched from a deep, woody root, the very slender branches glabrous, 1–1.5 cm. long, the twigs nearly filiform. Stipules lanceolate, acuminate, long-ciliate, 2–3 mm. long; leaves only 5–13 mm. long, the rachis glabrous, the small orbicular petiolar gland short-stalked; leaflets 4–9 pairs, linear to oblong, membranous, apiculate, pinnately few-veined with the midvein very excentric, glabrous, or sparingly long-ciliate, 2.5–4 mm. long; pedicels solitary, filiform, glabrous, 2-bracteolate near the top, about 1 cm. long; sepals lanceolate, acuminate, glabrous, 3–4 mm. long; legume linear, glabrous, about 2 mm. long, 3–3.5 mm. wide.

Pinar, near Las Yeguas, San Diego de los Baños, Pinar del Rio, Cuba, August 18, 1914, *Brother León 4394*.

66. *Chamaecrista savannarum* Britton, Bull. Torrey Club 43:
463. 1916.

Cassia savannarum Urban, Repert. Sp. Nov. 15: 312. 1918.

Stems several from a deep woody root, slender, ascending or erect, short-pubescent, or glabrate, 2–4 dm. high, simple or little branched. Stipules lanceolate or ovate-lanceolate, 2–4 mm. long, acuminate, strongly veined; leaves 2.5 cm. long or less, the rachis pubescent; petioles 2–4 mm. long, bearing a scutellate, sessile or very short-stalked gland; leaflets 3–13 pairs, appressed-pubescent or glabrate, oblong or linear-oblong, 3–7 mm. long, somewhat oblique, aristulate, the midvein very excentric; peduncles slender or nearly filiform, 8–20 mm. long; sepals lanceolate, acuminate, slightly pubescent, 4–5 mm. long; petals 7–8 mm. long; legume linear, sparingly pubescent, 3–4 cm. long, 4 mm. wide.

TYPE LOCALITY: Near Siguanea, Isle of Pines, Cuba.

DISTRIBUTION: Isle of Pines and Pinar del Rio, Cuba.

67. *Chamaecrista Roigii* Britton, sp. nov.

Stems, or branches, very slender, short-pilose, about 2 dm. long, or shorter. Stipules lanceolate, sparingly pilose, 4-6 mm. long; leaves 1.5-2 cm. long, the rachis pilose; petiolar gland orbicular, stalked; leaflets 8-10 pairs, narrowly oblong, membranous, sparingly pilose, apiculate, 3-5 mm. long, pinnately few-veined, the midvein very excentric; pedicels filiform, villous, solitary, 2-bracteolate near the base, 12-18 mm. long; sepals lanceolate, acuminate, 4-5 mm. long; petals 5-7 mm. long; legume linear, short-pubescent, about 2.5 cm. long, 4 mm. wide, short-tipped, the base oblique.

Cerro de Cabras, Pinar del Rio, Cuba, June 27, 1929, *J. T. Roig*.

68. *Chamaecrista exunguis* (Urban) Britton.

Cassia exunguis Urban, Repert. Sp. Nov. 15: 312. 1918.

A low shrub, 2-4 dm. high, the twigs puberulent. Stipules lanceolate or ovate-lanceolate, acuminate, 3-4 mm. long; petiolar gland suborbicular, subsessile, 0.2-0.4 mm. broad; petiole 2-3 mm. long; rachis 1-1.5 cm. long; leaflets 6-8 pairs, linear to oblong, 4-7 mm. long, 1-1.5 mm. wide, setaceous-mucronate, glabrous or pilose, the midvein one-third excentric; flowers 1 or 2 on pedicels 6-9 mm. long; sepals 4.5-5.5 mm. long, short-acuminate; petals very unequal, not clawed, the larger ones suborbicular, about 6 mm. long, 5-6 mm. wide; legume 2-2.5 cm. long, about 4 mm. wide, short-pilose or becoming glabrous, 5-8-seeded.

TYPE LOCALITY: Between Aibonito and Coamo, Porto Rico.

DISTRIBUTION: Known only from the type locality.

69. *Chamaecrista micrantha* Britton, Bull. Torrey Club 43:

463. 1916.

Stems several from a woody root, ascending or suberect, few-branched or simple, slender, villous, 2-3 dm. long. Stipules lanceolate-acuminate, 2.5-4 mm. long; leaves 8-18 mm. long; petiolar gland short-stalked; rachis villous; leaflets 10-24, oblong, villous, 3-3.5 mm. long, mucronulate, the midvein very excentric; peduncles very slender, villous, 6-15 mm. long; sepals lanceolate, acute, villous, about 4 mm. long; petals rounded, 5 mm. long; legume linear, finely pubescent, 2-3 cm. long, 3-4 mm. wide.

TYPE LOCALITY: Near San Pedro, Isle of Pines, Cuba.

DISTRIBUTION: Isle of Pines and Pinar del Rio, Cuba.

70. *Chamaecrista stenocarpa* (Vogel) Standley, Contr. U. S. Nat.

Herb. 18: 104. 1916.

Cassia stenocarpa Vogel, Syn. Cass. 68. 1837.

Cassia Broughtonii Fawcett & Rendle, Journ. Bot. 55: 37. 1917.

Chamaecrista riparia Britton, Bull. Torrey Club 44: 11, in part. 1917. Not *Cassia riparia* H.B.K. 1824.

Suffruticose, or herbaceous and perennial; stem erect, rather stout, 1-2 m. high, pilose, usually little-branched. Stipules narrowly lanceolate, long-acuminate, 10-14 mm. long; petiolar gland orbicular, obconic, long-stipitate, about 0.6 mm. broad; leaflets 10-26 pairs, linear or linear-oblong, membranous, mucronate or aristate, glabrous or nearly so, often ciliate, 8-18 mm. long, 2-2.5 mm. wide, the midvein excentric; flowers solitary, or 2 or 3 together; pedicels 4-8 mm. long; sepals lanceolate, acute, 6-8 mm. long; petals about 8 mm. long, or shorter; legume linear, 2.5-5 cm. long, about 4 mm. wide, loosely villous.

TYPE LOCALITY: Brazil.

DISTRIBUTION: Jamaica; Cuba; Hispaniola; Bonaire; Sinaloa and Veracruz to Yucatán, Panama, Colombia, Venezuela and Brazil.

71. *Chamaecrista Rekoii* Britton & Rose, sp. nov.

Suffruticose; stems densely villous, about 3 dm. high, or higher. Stipules narrowly lanceolate, long-acuminate, strongly few-veined, ciliate, 6-7 mm. long; petiolar gland obconic, long-stalked, about 0.5 mm. broad; leaflets 10-25 pairs, membranous, linear-oblong, densely appressed-pubescent, obtuse or rounded, mucronate, 7-10 mm. long, or the upper ones shorter,

2 mm. wide, faintly pinnately veined, the costa somewhat excentric; pedicels short; bractlets lanceolate; sepals lanceolate, acuminate, densely villous, about 8 mm. long; larger petals about 10 mm. long.

Cerro Espino, Oaxaca, 600 m. altitude, September, 1917, *B. P. Reko 3608*.

72. *Chamaecrista Chamaecrista* (L.) Britton, Bull. Torrey Club 44:
12. 1917.

Cassia Chamaecrista L. Sp. Pl. 379. 1753.
Chamaecrista nictitans Moench, Meth. 272. 1794.
Cassia diffusa DC. Mém. Soc. Genève 2: 130. 1824.
Xamaecrista triflora Raf. Sylva Tell. 127. 1838.
Cassia leptadenia jaliscense Greenman, Proc. Am. Acad. 41: 239. 1905.
Chamaecrista diffusa Britton, Ann. Mo. Bot. Gard. 2: 41. 1915.

Herbaceous or slightly woody, low, diffusely branched, rarely erect, the slender, pubescent or glabrous branches prostrate or ascending, 1-3 dm. long. Stipules lanceolate, acuminate, 3-6 mm. long; petiolar gland small, slender- or short-stalked; leaflets 5-16 pairs, linear, pubescent or glabrate, mucronate, 5-7 mm. long; pedicels not longer than the petioles; sepals lanceolate, 3-4 mm. long; petals slightly longer than the sepals; stamens 5-7; legume linear, loosely pubescent or glabrate, 1.5-3 cm. long, about 3 mm. wide.

TYPE LOCALITY: Curaçao.

DISTRIBUTION: Jamaica; Bahamas; Cuba to St. Jan, St. Kitts and Grenada; Veracruz; Jalisco; Chiapas.

ILLUSTRATIONS: Breyh, Exot. Pl. Cent. pl. 24; Schrank, Pl. Rar. Hort. Monac. pl. 33.

73. *Chamaecrista Wilsonii* Britton & Rose, sp. nov.

Herbaceous, or slightly woody below, branched, erect, or ascending, about 3 dm. high, or lower, the branches slender, loosely pilose. Stipules lanceolate, attenuate-acuminate, ciliate, strongly several-nerved, 4-8 mm. long; petiolar gland orbicular, long-stalked; leaflets 6-13 pairs, linear-oblong, or the upper ones oblong-obovate, membranous, obtuse, aristate, glabrous, ciliate, 8-12 mm. long, 1.5-2.5 mm. wide, rather strongly nerved, the midvein excentric; pedicels solitary, pilose, 4-6 mm. long; sepals lanceolate, acuminate, sparingly pubescent, 6-9 mm. long; petals little longer than the sepals; legume linear, 3-5 cm. long, about 5 mm. wide, short-tipped, sparingly loosely pubescent.

Honduras. Type from shore of Laguna Quemada, March 3, 1903, *Percy Wilson 634*.

74. *Chamaecrista villosissima* Britton & Rose, sp. nov.

Perennial, or suffrutescent; branched, 3 dm. high or higher, the branches rather stout densely villous. Stipules linear-lanceolate, attenuate, few-veined, 6-9 mm. long; petiolar gland broadly obconic, subsessile, about 1 mm. in diameter; leaflets 8-16 pairs, narrowly oblong, nearly membranous, obtuse, aristate, 8-16 mm. long, about 3 mm. wide, glabrate above, densely appressed-hirsute beneath, the midvein excentric; pedicels very short; bractlets lanceolate, acuminate; sepals lanceolate, acuminate, densely hirsute, 6-7 mm. long; petals little longer than the sepals; immature legume linear, about 3 mm. long and 4 mm. wide, densely hirsute, apiculate.

Table land about Ocuilapa, Chiapas, August 21, 1895, *E. W. Nelson 3014*.

75. *Chamaecrista Tonduzii* Britton & Rose, sp. nov.

Suffrutescent, erect, little branched, or simple, about 6 dm. high, or lower, the stem loosely pilose. Stipules lanceolate, pilose, 4-7 mm. long; leaves 3-5 cm. long, the rachis pilose, the petiolar gland short-stalked, obconic, orbicular, 0.5-0.7 mm. broad; leaflets 10-16 pairs, linear-oblong, 8-12 mm. long, or the upper ones obovate and smaller, long-strigose beneath, glabrate above, ciliate, pinnately several-nerved, the midvein nearly central, the apex obtuse, aristellate; pedicels 7-10 mm. long; sepals lanceolate, acuminate, strigose, 7-8 mm. long; petals 9-11 mm. long; legume linear, pilose, 4-5 cm. long, about 4 mm. wide.

Guatemala. Type collected July, 1921, *A. Tonduz 649*.

76. *Chamaecrista fenixensis* Britton & Rose, sp. nov.

Suffruticose, branched, ascending, 2-3 dm. high, the slender branches long-pilose. Stipules lanceolate, long-acuminate, pilose, 4-6 mm. long; petiolar gland stalked, subcylindric, about 0.2 mm. broad, orbicular; leaflets 5-10 pairs, membranous, mucronate or aristulate, 4-7 mm. long, about 1.5 mm. wide, glabrate above, long-pilose beneath, long-ciliate, the midvein excentric; bracts lanceolate; pedicels pilose, 6-10 mm. long; sepals broadly lanceolate, acute or short-acuminate, pilose, 5-6 mm. long; petals obovate, somewhat unequal, the larger one a little longer than the sepals; legume linear, appressed-pubescent, 2.5-3 cm. long, about 3.5 mm. wide, short-tipped.

Rocky localities, Fenix, Chiapas, April, 1925, *Purpus 10553*.

77. *Chamaecrista comayaguana* Britton & Rose, sp. nov.

Herbaceous, or somewhat woody, procumbent, the slender stems pubescent. Stipules linear-lanceolate, long-acuminate, 6-8 mm. long; petiolar gland orbicular, obconic, short-stalked, about 0.5 mm. in diameter; leaflets 8-16 pairs, oblong, chartaceous, obtuse, mucronate, 4-6 mm. long, about 1.5 mm. wide, glabrous, often long-ciliate, strongly veined, the midvein excentric; rachis long-pilose; pedicels solitary, slender, pilose, 5-8 mm. long; sepals lanceolate, pilose, acuminate, about 5 mm. long; petals about as long as the sepals; legume linear, 2-4 cm. long, 3 mm. wide, short-tipped, loosely short-pubescent.

Pine forest, vicinity of Siguatepigue, Comayagua, Honduras, February 14-27, 1928, *Standley 56253*.

78. *Chamaecrista brachycarpa* (Urban) Britton & Rose.

Cassia brachycarpa Urban, Repert. Sp. Nov. 15: 312. 1918.

Perennial, much-branched below, the slender branches procumbent or ascending, 1.5-2.5 dm. long, loosely short-pubescent. Stipules lanceolate, acuminate, 6-9 mm. long; petiolar gland short-stalked, orbicular, about 0.5 mm. broad; leaflets 11-15 pairs, membranous, linear, obtuse, aristulate, glabrous or pubescent, 8-12 mm. long, 0.8-1.5 mm. wide, the midvein excentric; pedicels solitary, or 2 or 3 together, 5-8 mm. long; bractlets linear-lanceolate; sepals oblong-lanceolate, acuminate, 6-7 mm. long; larger petals 7-8 mm. long; legume linear, 2-2.5 cm. long, 4 mm. wide, loosely pilose.

TYPE LOCALITY: Near Constanza, Santo Domingo.

DISTRIBUTION: Santo Domingo.

79. *Chamaecrista glaberrima* Britton, sp. nov.

Erect, 9 dm. high or lower, shrubby, the stems and leaves glabrous or nearly so, the branches rather slender. Stipules ovate to lanceolate, acute or acuminate, strongly veined, 7 mm. long, or shorter; petiolar gland obconic, sessile or subsessile, 0.6-0.8 mm. broad; leaflets 15-30 pairs, linear, aristate, few-veined, 8-12 mm. long, about 1.5 mm. wide, the midvein excentric; flowers solitary or 2 together on pedicels 4 mm. long or shorter; sepals about 7 mm. long, acuminate; petals a little longer than the sepals; legume linear, short-beaked, 3-4 cm. long, 4-5 mm. wide, glabrous, or sparingly long-pilose.

Cuba. Type from Triscornia, Havana, April 5, 1905, *H. A. Van Hermann 805*.

80. *Chamaecrista Nelsonii* Britton & Rose, sp. nov.

Perennial; stems simple, erect, slender, glabrous below, sparingly strigillose near the top, 4-5 dm. high, slender. Stipules lanceolate, slenderly long-acuminate, several-veined, glabrous, 6-8 mm. long; petiolar gland obconic, subsessile, about 1 mm. in diameter; leaflets 12-22 pairs, linear, acutish, sharply mucronate, glabrous on both sides, closely ciliolate, 8-12 mm. long, 1.5-2 mm. wide, faintly veined, the costa excentric; pedicels very short; bractlets ovate-lanceolate; sepals lanceolate, acuminate, glabrous, about 8 mm. long; petals somewhat longer than the sepals.

Between Niletpec and Zanatepec, Oaxaca, July 15, 1895, *E. W. Nelson 2805*.

81. *Chamaecrista Rovirosana* Britton, sp. nov.

Stems slender, glabrous, or when young sparingly pubescent, 4 dm. high, or higher. Stipules lanceolate, long-acuminate, 6-9 mm. long; petiolar gland orbicular, short-stalked, broadly obconic, 1 mm. in diameter; leaflets 15-30 pairs, linear, glabrous, long-aristate, few-veined, 12 mm. long or shorter, 1.5-2 mm. wide, the midvein excentric; pedicels solitary, 4-6 mm. long; sepals about 7 mm. long, glabrous; petals somewhat longer than the sepals; legume linear, 4-5 cm. long, 4-5 mm. wide, short-tipped, with a few long, scattered hairs.

River bank, Ribera de Yxtacomitan, Tabasco, August 27, 1888, *J. N. Rovirosa* 253.

82. *Chamaecrista longicoma* Britton & Rose, sp. nov.

Shrubby; branches glabrous, up to 3 dm. long. Stipules narrowly lanceolate, long-acuminate, few-nerved, ciliate, 8-11 mm. long; petiolar gland subsessile, or short-stalked, 0.4-0.5 mm. in diameter; leaflets 15-30 pairs, linear, acute, glabrous on both sides, sparingly long-ciliate, aristate, 15 mm. long, or shorter, pinnately few-veined, the costa excentric; pedicels short, about 1 cm. long, or shorter; bractlets lanceolate, 3-4 mm. long; sepals lanceolate, acuminate, ciliate, about 8 mm. long; petals somewhat longer than the sepals; young legume long-villous.

Rio Florido, Sinaloa, *M. P. Dehesa* 1505.

83. *Chamaecrista confusa* Britton, sp. nov.

Chamaecrista riparia Britton & Millspaugh, Bahama Flora 169. 1920. Not *Cassia riparia* H.B.K. 1824.

Erect, herbaceous but slightly woody, 2-5 dm. high, the ascending branches and the leaf-rachis long-villous. Stipules lanceolate or linear-lanceolate, striate-veined, 4-10 mm. long; petioles villous, mostly shorter than the stipules; gland circular, rather stout-stalked; leaves 2-6 cm. long; leaflets 6-25 pairs, linear, 6-12 mm. long, aristate, glabrous, or nearly so, faintly pinnately veined, the midvein excentric; pedicels solitary, shorter than the petioles; sepals lanceolate, villous, about 5 mm. long; larger petals 7-8 mm. long; legume linear, loosely villous, 1.5-3 cm. long, 3-4 mm. wide.

Bahamas and Grand Cayman. Type from pinelands, Harold Road, New Providence, Bahamas, September 1, 1904, *Britton & Brace* 427.

84. *Chamaecrista nicoyana* Britton, sp. nov.

Herbaceous, perennial, the branches slender, pilose and pubescent, prostrate or ascending, 10-15 cm. long. Stipules narrowly linear, long-acuminate, 3-4 mm. long; petiole short, bearing an obconic, stalked gland about 0.3 mm. broad; leaflets 7-13 pairs, linear, obtuse or acutish, aristellate, 6-8 mm. long, about 1.5 mm. wide, puberulent and strongly veined beneath, long-ciliate, otherwise glabrate, the costa excentric; legume only 1.5-2 cm. long, 3 mm. wide, long-villous.

Near Nicoya, Costa Rica, December, 1899, *Tonduz* 13556.

85. *Chamaecrista fasciata* Britton, Bull. Torrey Club 37: 352. 1910.

Cassia fasciata Fawcett & Rendle, Fl. Jam. 4: 115. 1920.

Herbaceous, the stems slender, erect, little-branched, 5-10 dm. high, pubescent with long curled hairs. Leaves 9 cm. long or less; leaflets 10-22 pairs, linear-lanceolate, rounded at the base, acute and aristulate at the apex, strongly veined, ciliolate, 10-12 mm. long, 1.5-2 mm. wide; stipules lanceolate-attenuate, 8-10 mm. long; gland scutellate, sessile, 0.5 mm. wide; pedicels a little shorter than the petioles, villous; sepals lanceolate, acuminate, villous, about one half as long as the petals; flowers 1.5 cm. broad; legume linear, 4-5 cm. long, 5-6 mm. wide, obliquely short-beaked, loosely villous, sometimes black-banded over the spaces between the seeds and along both margins.

TYPE LOCALITY: Between Bath and Cuna-Cuna Gap, Jamaica.
DISTRIBUTION: Jamaica; Cuba.

86. *Chamaecrista stenocarpoides* Britton, sp. nov.

Perennial, or suffrutescent; stems erect or ascending, branched, 3-6 dm. high, the branches pilose. Stipules narrowly lanceolate, ciliate, few-veined, long-acuminate, 6-9 mm. long; petiolar gland obconic, sessile or short-stalked, 0.4-0.6 mm. in diameter; leaflets 10-20 pairs, linear, membranous, ciliate, glabrous or sparingly pubescent, 7-12 mm. long, 2-2.5 mm. wide, obtuse, aristate, pinnately several-veined, the midvein excentric; pedicels solitary, pilose, 1-1.5 cm. long, 2-bracteolate near the top; sepals lanceolate, acuminate, appressed-pubescent, 6-7 mm. long; petals about 10 mm. long; legume linear, 3-5.5 cm. long, about 4 mm. wide, appressed-pubescent.

Guatemala and Costa Rica. Type from vicinity of San Sebastián, San José, Costa Rica, February 1, 1924, *Standley 32701*.

87. *Chamaecrista salvadorensis* Britton, sp. nov.

Herbaceous, erect, branched, 6-9 dm. high, the slender branches loosely long-pilose. Stipules lanceolate, long-acuminate, striate, 4-6 mm. long; leaves 3-4 cm. long, the rachis long, pilose; petiolar gland orbicular, short-stalked, about 0.7 mm. broad; leaflets 9-16 pairs, linear-10-12 mm. long, 1-1.5 mm. wide, membranous, aristellate, long-ciliate or glabrous, faintly few-veined, the midvein excentric; fruiting pedicels about 1 cm. long, pilose; legume linear, apiculate, 2.5-3.5 cm. long, 3 mm. wide, bearing few distant, appressed hairs.

Vicinity of Ahuachapán, El Salvador, January 9-27, 1922, *Standley 19819*.

88. *Chamaecrista Conzattii* Britton & Rose, sp. nov.

Perennial, several-branched at or near the base, slender, loosely pilose, ascending, 2.5 dm. long, or shorter. Stipules linear-lanceolate, long-acuminate, ciliate, 4-6 mm. long; petiolar gland subsessile, slightly elevated, about 0.2 mm. in diameter; leaflets 4-12 pairs, subchartaceous, oblong to oblanceolate or obovate, rounded or subemarginate, mucronulate, 5-8 mm. long, strongly pinnately veined, the costa somewhat excentric; pedicels loosely pilose, 7-10 mm. long; bractlets narrowly linear-lanceolate; sepals lanceolate, acuminate, loosely villous, about 7 mm. long; petals a little longer than the sepals; legume narrowly linear, 2.5-4 cm. long, about 4 mm. wide, shortly appressed-pubescent.

Cerro San Antonio, 1600 m. altitude, Oaxaca, September 8, 1921, *C. Conzatti 4228*.

89. *Chamaecrista smaragdina* (Macfad.) Britton.

Cassia smaragdina Macfad. Fl. Jam. 1: 347. 1837.

Stem puberulent. Leaves 2-4 cm. long; stipules lanceolate, acuminate, 6-10 mm. long; petiolar gland subsessile, cupulate; leaflets 8-15 pairs, linear-oblong, 6-10 mm. long, 2 mm. wide, glabrous above, puberulent or glabrate beneath, ciliolate, obtuse, mucronate, pinnately veined, the venation ascending, the costa subcentral; pedicels 1-4, extra-axillary, 3-8 mm. long; bractlets ovate, acuminate; sepals 7-8.5 mm. long; larger petals 9-10 mm. long, the smaller about as long as the sepals; legume puberulent, 3-3.5 cm. long.

TYPE LOCALITY: Mountain districts of Jamaica.

DISTRIBUTION: High mountains of Jamaica; Hispaniola (according to Fawcett & Rendle).

90. *Chamaecrista Browniana* Britton & Rose, sp. nov.

Herbaceous, stout, unbranched, erect, 8-10 dm. high, the stem densely pubescent. Stipules lanceolate, acuminate, strongly nerved, ciliate or pubescent, acuminate, 1-1.5 cm. long; petioles 5-9 mm. long, pubescent, the gland oblong, sessile, scutellate, 2-2.5 mm. long; leaves 10-13 cm. long, the rachis pubescent; leaflets 25-40 pairs, oblong, glabrous, chartaceous, 10-14 mm. long, acutish, apiculate, strongly pinnately many-veined, the midvein excentric; pedicels often 2 together, pubescent, about 10 mm. long, or shorter; sepals lanceolate, acuminate, strigose, 6-8 mm. long; petals about 10 mm. long; legume linear, 3-4 cm. long, about 4 mm. wide, densely pilose.

El Salvador and Colombia. Type from between Quetame and Susumuco, Cundinamarca, Colombia, August 24, 1917, *Pennell 1351*; Cerro de San Jacinto, El Salvador, August, 1922, *Calderon 1066*.

91. *Chamaecrista patellaria* (DC.) Greene, *Pittonia* 4: 32. 1899.

Cassia patellaria DC.; Collad. Hist. Cass. 125. 1816.

Herbaceous, perennial, somewhat woody below; stem simple, or little-branched, densely pubescent, or hirsute, 3-9 dm. high. Stipules lanceolate, acuminate, ciliate, 8-12 mm. long; petiolar gland orbicular, sessile, about 1 mm. broad; rachis hirsute or villous; leaflets 10-25 pairs, linear or linear-oblong, pubescent on both sides or glabrate above, aristulate, 8-15 mm. long, 1.5-3 mm. wide; pedicels 1-4 together, about 8 mm. long or shorter; bractlets lanceolate; sepals lanceolate, hirsute, 5-6 mm. long; petals unequal, about as long as the sepals; legume linear, 2.5-3.5 cm. long, about 4 mm. wide, villous, 6-10-seeded.

TYPE LOCALITY: Cayenne.

DISTRIBUTION: Jamaica; Cuba; Isle of Pines; Porto Rico; Tobago; Trinidad; Veracruz to Panama, Colombia, Bolivia, French Guiana and Brazil.

ILLUSTRATION: Collad. loc. cit. *pl.* 16.

92. *Chamaecrista martinicensis* (Urban) Britton & Rose.

Cassia martinicensis Urban, *Repert. Sp. Nov.* 15: 313. 1918.

Stems short-villous, the internodes short. Stipules lanceolate, acuminate, 7-8 mm. long; petiolar gland oval, sessile, about 1 mm. long; rachis short-pilose; leaflets linear, acute, aristulate, thin, short-pilose on both sides, about 12 mm. long, 1.2-1.7 mm. wide, the midvein near the upper margin; pedicels about 4 mm. long; bractlets linear-lanceolate; sepals oblong-lanceolate, acuminate, 3.5-4 mm. long; petals unequal, about as long as the sepals; immature legume about 3 cm. long, 3.5 mm. wide, puberulent, about 10-seeded.

TYPE LOCALITY: Martinique.

DISTRIBUTION: Known only from the type locality and to us from description only.

93. *Chamaecrista Aeschinomene* (DC.) Greene, *Pittonia* 4: 32. 1899.

Cassia Aeschinomene DC.; Collad. Hist. Cass. 127. 1816.

Chamaecrista Millspaughii Pollard, *Field Mus. Publ. Bot.* 2: 47. 1900.

Cassia mimosoides Aeschinomene Benth, *Trans. Linn. Soc.* 27: 579. 1871.

Herbaceous, slightly woody, branched or nearly simple, about 1 m. high, or lower, the branches pubescent or glabrous. Stipules lanceolate or linear-lanceolate, long-acuminate, 6-12 mm. long; petiolar gland solitary, large, scutellate, sessile; leaflets 7-25 pairs, linear, thin, glabrous or slightly pubescent, 8-15 mm. long, acute or obtuse, mucronate; the midvein excentric; pedicels very short, the bractlets linear-lanceolate; sepals lanceolate, acute or acuminate, glabrous or pubescent, 5-7 mm. long; petals a little longer than the sepals; stamens 5-7; legume linear, 3-5 cm. long, 2.5-4 mm. wide, pubescent or glabrate.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Jamaica; Cuba; Hispaniola; Porto Rico.

ILLUSTRATION: Collad. loc. cit. *pl.* 17.

94. *Chamaecrista Dussii* Britton, *Bull. Torrey Club* 44: 9. 1917.

Perennial, villous-pubescent, erect, simple, 5-9 dm. high, somewhat woody. Stipules narrowly lanceolate, strongly striate, 10-12 mm. long; leaves 5-7 cm. long; petiolar gland close to the lowest leaflets, scutelliform, sessile, slightly concave, nearly 1 mm. in diameter; leaflets about 17 pairs, linear, pubescent on both sides, 10-18 mm. long, 2-3 mm. wide, obtuse, mucronate, inequilateral, the costa excentric, the lateral veins few and distant; pedicels 4-6 mm. long; sepals lanceolate, acuminate, pubescent, about 7 mm. long; petals obovate, 8-10 mm. long; legume linear, slightly curved, villous-pubescent, obliquely short-tipped, 3 cm. long, 5 mm. wide.

TYPE LOCALITY: Trou-Vaillant, Parnasse, Martinique.

DISTRIBUTION: Guadeloupe and Martinique.

95. *Chamaecrista simplex* Standley, Contr. U. S. Nat. Herb. 18: 103.
1916.

Stem slender, erect, rather densely short-pubescent, simple or with few erect branches, about 9 dm. high, or lower, the plant sometimes flowering as an annual. Stipules linear-lanceolate, attenuate, aristate, ciliolate, 10–15 mm. long; petiole short, the glands 1 or 2, sessile, scutellate, about 0.7 mm. broad; leaflets 15–25 pairs, linear-oblong, 5–8 mm. long, about 1.5 mm. wide, subcoriaceous, glabrous, sometimes ciliolate, mucronate, strongly veined, the midvein excentric; pedicels 2–4 mm. long; sepals lanceolate, 5–6 mm. long, acuminate, petals a little longer than the sepals; legume linear, 3–4 cm. long, about 4 mm. wide, hirsute, short-tipped.

TYPE LOCALITY: Sabana de Dormisolo, near Chepo, Panama.
DISTRIBUTION: Panama and Colombia.

96. *Chamaecrista Brandegeei* Rose, sp. nov.

Herbaceous, or perhaps suffrutescent, with very slender, puberulent branches 2–3 dm. long. Stipules lanceolate, 2–3 mm. long; petiolar gland flat, sessile, about 0.4 mm. broad; leaves only 2.5 cm. long or less; leaflets 7–13 pairs, approximate, membranous, acutish, apiculate, puberulent and ciliolate, the midvein very excentric or nearly marginal, the larger ones linear, 4–5 mm. long, 1.5 mm. wide, the upper ones obovate, much smaller; pedicels nearly filiform, about 1 cm. long; sepals lanceolate, acuminate, about 5 mm. long; petals unequal, the larger ones about 7 mm. long; young legume narrowly linear, 2 cm. long, 2 mm. wide, appressed-pubescent with short hairs.

Altata, Sinaloa, September 2, 1901, *T. S. Brandegee*.

97. *Chamaecrista brachiata* Pollard, Proc. Biol. Soc. Wash. 15: 20.
1902.

Annual, glabrous, or sparingly short-pubescent above, 6–12 dm. high. Stipules lanceolate, acuminate, eciliate, 5–8 mm. long; petiolar glands 1–3, sessile, orbicular, 1–2.5 mm. broad; leaflets 25 pairs or fewer, linear-lanceolate, acute or mucronate, glabrous, 10–20 mm. long, 2–3 mm. wide, the venation obscure; pedicels 1–4, glabrous or sparingly puberulent, 1–2 cm. long; sepals lanceolate, 10–12 mm. long; petals 10–18 mm. long, the anterior one slightly largest; stamens 10, unequal; legume linear, sparingly appressed-pubescent, 6–8 cm. long, about 5 mm. wide.

TYPE LOCALITY: Miami, Dade County, Florida.
DISTRIBUTION: Florida; Alabama (?).

98. *Chamaecrista rostrata* Wootton & Standley, Contr. U. S. Nat. Herb.
16: 135. 1913.

Annual. Stem finely puberulent, erect, branched, 1–3 dm. high. Stipules lanceolate, long-acuminate, 4–6 mm. long, glabrous or nearly so; petiolar gland solitary, sessile, slightly cupulate, only 0.2 mm. broad or less; leaflets 5–9 pairs, oblong, obtuse or mucronulate, glabrous, ciliolate, faintly nerved, 7–12 mm. long, 2–3 mm. wide; bractlets lanceolate, 2–3 mm. long; pedicels puberulent, 7–10 mm. long; sepals ovate, acuminate, puberulent along the midvein, 7–10 mm. long; petals 10–15 mm. long, the anterior one the largest; stamens 10, unequal; anthers purple; legume linear, short-beaked, 3–4.5 cm. long, 4–5 mm. wide, appressed-puberulent.

TYPE LOCALITY: Logan, New Mexico.
DISTRIBUTION: Kansas to Texas and New Mexico.

99. *Chamaecrista fasciculata* (Michx.) Greene,* *Pittonia* 3: 242. 1897.

Cassia fasciculata Michx. Fl. Bor. Am. 1: 262. 1803.
Cassia Chamaecrista Walt. Fl. Car. 136. 1788. Not L. 1753.
Chamaecrista bellula Pollard, Proc. Biol. Soc. Wash. 15: 19. 1902.
Chamaecrista camporum Greene, *Pittonia* 5: 108. 1903.

Annual, erect, branched, 3-9 dm. high, the stem and branches puberulent in lines. Stipules narrowly linear, attenuate, ciliate, 5-10 mm. long; petiolar gland solitary, sessile or nearly so, orbicular or oval, 1.5 mm. broad or less; leaflets 6-15 pairs, linear-oblong, ciliolate, glabrous or rarely puberulent, mucronate, distinctly nerved, 1-2 cm. long, 2-5 mm. wide; pedicels 1-6, puberulent, 1-2 cm. long; sepals lanceolate, 9-12 mm. long, pubescent along the midvein; petals 10-17 mm. long; stamens 10, unequal; legume linear, puberulent or glabrate, 4-5 cm. long, about 5 mm. wide.

TYPE LOCALITY: Pennsylvania and Virginia.
 DISTRIBUTION: Massachusetts to Florida, Ohio, South Dakota, Kansas and Texas.
 ILLUSTRATIONS: Britton & Brown, Ill. Fl. f. 2035 (as *Cassia Chamaecrista*); ed. 2, f. 2442; Meehan, Native Flowers and Ferns II. 1: pl. 43; Pollard, Bull. Torrey Club 22: pl. 252, f. 5 (as *Cassia Chamaecrista*).

100. *Chamaecrista robusta* Pollard; A. Heller, Cat. N. A. Pl. ed. 2, 5. 1900.

Cassia Chamaecrista robusta Pollard, Bull. Torrey Club 21: 218. 1894.
Cassia robusta Pollard, Bull. Torrey Club 24: 150. 1897.

Annual, erect, branched, hirsute, stout, 1.5 m. high or less. Stipules lanceolate, long-acuminate, 10-15 mm. long; petiolar gland sessile or subsessile; leaflets 9-18 pairs, narrowly oblong, 1-2 cm. long, 3-6 mm. wide, mucronate, glabrous, or nearly so, sometimes ciliate; pedicels 1 or several, 1.5-2.5 cm. long, hirsute; sepals hirsute on the back, 10-12 mm. long; stamens 10; petals 1.5-2 cm. long; legume linear, hirsute, 5-7 cm. long, 6-7 mm. wide.

TYPE LOCALITY: Mountains of Kentucky.
 DISTRIBUTION: Kentucky to Florida, Ohio, Arkansas and Louisiana.

101. *Chamaecrista depressa* (Pollard) Greene, *Pittonia* 3: 242. 1897.

Cassia depressa Pollard, Bull. Torrey Club 22: 515. 1895.

Annual; stem slender, 3 dm. high or less, strigose, diffusely branched, the branches spreading or ascending. Stipules linear-lanceolate, long-acuminate, 3-16 mm. long, glabrous; petiolar gland sessile, depressed, 1 mm. broad or less; leaflets 6-10 pairs, linear-oblong, mucronate, glabrous, 8-12 mm. long, 2-3 mm. wide; pedicels 1-3, hirsute and with incurved hairs; sepals 8-10 mm. long, hirsute along the midvein; petals about 1.5 cm. long and about as broad as long; stamens 10; legume linear, 3-3.5 cm. long, about 4 mm. wide, strigose, the margins hirsute.

TYPE LOCALITY: River Junction, Gadsden County, Florida.
 DISTRIBUTION: Northwestern Florida.
 ILLUSTRATIONS: Pollard, loc. cit. pl. 251, pl. 252, f. 6.

102. *Chamaecrista mississippiensis* Pollard; A. Heller, Cat. N. A. Pl. ed. 2, 5. 1900.

Cassia mississippiensis Pollard, Bull. Torrey Club 21: 219. 1894.
Chamaecrista Tracyi Pollard, Proc. Biol. Soc. Wash. 15: 21. 1902.

Annual; stem slender, erect or ascending, 6 dm. high or lower, sometimes diffusely branched, finely puberulent. Stipules lanceolate, long-attenuate, glabrous but ciliate, 4-7 mm. long; petiolar gland sessile, saucer-shaped, 0.5-0.6 mm. broad; leaflets 6-15 pairs, 5-12 mm. long, 2-3 mm. wide, elliptic-lanceolate, acutish or mucronate, puberulent, faintly veined; pedicels 1-3, puberulent, 6-15 mm. long; sepals linear-lanceolate, long-acuminate, puberulent, 5-10

* *Lapsus calami fascicularis*.

mm. long; petals 8–15 mm. long; stamens 10; anthers yellow; legume linear, 3–5 cm. long, about 5 mm. wide, puberulent.

TYPE LOCALITY: Ocean Springs, Mississippi.

DISTRIBUTION: Alabama to Texas.

ILLUSTRATION: Pollard, Bull. Torrey Club 22: pl. 252, f. 7.

103. *Chamaecrista littoralis* Pollard, Proc. Biol. Soc. Wash. 15: 20.
1902.

Annual; stem loosely hirsute, stout, erect, 4–8 dm. high. Stipules lanceolate, acuminate, 6 or 7 mm. long, glabrous or ciliate; petiolar gland sessile, or nearly so, depressed or obconic, orbicular, about 0.5 mm. broad; leaflets about 12 pairs or fewer, elliptic-lanceolate, puberulent, 7–15 mm. long, about 3 mm. wide, acutish, faintly veined; pedicels 10–15 mm. long, pilose; sepals about 10 mm. long, narrowly lanceolate, acuminate; petals 10–15 mm. long; stamens 10; anthers yellow; legume linear, about 5 cm. long and 5 mm. wide, pilose.

TYPE LOCALITY: Breton Island, Louisiana.

DISTRIBUTION: Florida to Texas.

104. *Chamaecrista puberula* Greene, Pittonia 5: 134. 1903.

Annual; stem puberulent, erect, 4–8 dm. high. Stipules lanceolate, acuminate, 4–5 mm. long, ciliate; petiolar gland short-stalked or sessile, disk-like, 0.5–1 mm. broad; leaflets 10–15 pairs, linear-lanceolate, 10–18 mm. long, 2–4 mm. wide, acute or mucronate, puberulent, ciliate, the midvein prominent, the lateral venation indistinct; pedicels 1–3, puberulent, 5–20 mm. long; sepals 6–8 mm. long, ovate-lanceolate, acute, pubescent; petals 10–15 mm. long; stamens 10; anthers purple; legume linear, 5–6 cm. long, 4–5 mm. wide, appressed-puberulent.

TYPE LOCALITY: Galveston Island, Texas.

DISTRIBUTION: Southern Texas.

105. *Chamaecrista leptadenia* (Greenman) Cockerell, Muhlenbergia
4: 68. 1908.

Cassia leptadenia Greenman, Proc. Am. Acad. 41: 238. 1905.

Cassia leptadenia mensalis Greenman, loc. cit. 1905.

Annual; stem slender, erect, 1–5 dm. high, simple or little branched, puberulent. Stipules narrowly lanceolate, long-acuminate, strongly ciliate, 5–7 mm. long; petiolar gland discoid, stalked, 0.2–0.3 mm. broad; leaflets 12–16 pairs, linear-oblong, acutish and mucronate, strongly ciliate, obscurely veined, 8–12 mm. long, 1–2 mm. wide; pedicels puberulent, 3–5 mm. long; sepals lanceolate, acuminate, 4 or 5 mm. long, hirsute; petals unequal, 3–6 mm. long; stamens 5–8; legume linear, puberulent, 3–4 cm. long, 3–4 mm. wide.

TYPE LOCALITY: East of El Paso, Texas.

DISTRIBUTION: Western Texas to Arizona, Querétaro and Sinaloa.

106. *Chamaecrista procumbens* (L.) Greene, Pittonia 4: 28. 1899.

Cassia nictitans L. Sp. Pl. 380. 1753. Not *Chamaecrista nictitans* Moench. 1794.

Cassia procumbens L. Sp. Pl. 380. 1753.

Nictitella amena Raf. Sylva Tell. 128. 1838.

Cassia Chamaecrista nictitans Kuntze, Rev. Gen. Sp. 169. 1891.

Chamaecrista nictitans commixta Pollard & Maxon, Proc. Biol. Soc. Wash. 14: 163. 1901.

Cassia nictitans commixta Millsp. West Va. Geol. Surv. 5: 283. 1913.

Annual, usually erect, branched, puberulent, 1–4 dm. high. Stipules lanceolate, acuminate, ciliate, 5–8 mm. long; petiolar gland discoid, stalked, 0.8 mm. broad, or smaller; leaflets 9–18 pairs, linear-oblong, obtuse, mucronate, glabrous, ciliate, 7–15 mm. long, 2–4 mm. wide, faintly nerved; pedicels 1–3, puberulent, 2–4 mm. long; sepals lanceolate, acuminate, 3 or 4 mm. long, puberulent; petals 3–8 mm. long, unequal; stamens 5; anthers pinkish; legume 2.5–4 cm. long, 4–6 mm. wide, appressed-pubescent.

TYPE LOCALITY: India [in error]; actually Philadelphia, Pennsylvania.

DISTRIBUTION: Maine to Georgia, Ohio, Kansas, Oklahoma and Texas.

ILLUSTRATIONS: Britton & Brown, Ill. Fl. f. 2034; ed. 2, f. 2441; Pollard, Bull. Torrey Club 22: pl. 252, f. 1; Meehan, Native Flowers and Ferns II. 2: pl. 34.

107. *Chamaecrista multipinnata* (Pollard) Greene, *Pittonia* 3: 243. 1897.

Cassia multipinnata Pollard, Bull. Torrey Club 22: 515. 1895.
Cassia multipinnata Nashii Pollard, loc. cit. 1895.

Annual, erect, or diffuse, usually branched, about 4 dm. high, or lower, the branches short-pubescent. Stipules narrowly lanceolate, long-acuminate; petiolar gland sessile, discoid, 0.3–0.5 mm. in diameter; leaflets 10–26 pairs, narrowly linear, glabrous, cuspidate or aristulate, 8–13 mm. long, 1–2 mm. wide; pedicels 2–3 mm. long; sepals lanceolate, acuminate, sparingly pubescent, about 4 mm. long; larger petal 5–7 mm. long; stamens 5; legume 2–2.5 cm. long, 3–4 mm. wide, appressed-pubescent.

TYPE LOCALITY: Near Jacksonville, Florida.
 DISTRIBUTION: South Carolina to Florida and Louisiana.
 ILLUSTRATION: Pollard, Bull. Torrey Club 22: pl. 250.

108. *Chamaecrista Mohrii* (Pollard) Small.

Cassia aspera Mohrii Pollard, Bull. Torrey Club 24: 151. 1897.
Chamaecrista aspera Mohrii Pollard; A. Heller, Cat. N. Am. Pl. ed. 2, 5. 1900.

Annual; stem densely puberulent or pubescent, erect, 3–5 dm. high. Stipules lanceolate, acuminate, ciliate, 8–10 mm. long; petiolar gland discoid, stalked; leaflets 18–23 pairs, linear-oblong, 9–12 mm. long, about 2 mm. wide, strongly mucronate, pubescent, rather indistinctly veined; pedicels pubescent, 2–4 mm. long; sepals lanceolate, acuminate, hirsute-pubescent; petals 4–8 mm. long, unequal; stamens 5; legume linear, 3–4 cm. long, about 5 mm. wide, hirsute.

TYPE LOCALITY: Mobile, Alabama.
 DISTRIBUTION: Georgia to Louisiana and Arkansas.

109. *Chamaecrista aspera* (Muhl.) Greene, *Pittonia* 3: 243. 1897.

Cassia aspera Muhl.; Ell. Bot. S. C. & Ga. 1: 474. 1821.
Nictitella aspera Raf. Sylva Tell. 128. 1838.

Annual; stem branched, erect, strigose-hirsute, and puberulent with shorter hairs, 3–7 dm. high. Stipules lanceolate, long-acuminate, ciliate, 7–11 mm. long; petiolar gland stalked, truncate, small, only 0.4 mm. broad or less; leaflets 15–27 pairs, linear-oblong, 8–15 mm. long, 1.5–2 mm. wide, mucronate, glabrous and ciliate, obscurely veined; pedicels 1–3, puberulent, 3–4 mm. long; sepals lanceolate, acuminate, strigose-hirsute along the midvein, 3–5 mm. long; petals unequal, 3–7 mm. long; stamens 7–9; legume linear, 1.5–2.5 mm. long, 4–5 mm. wide, hirsute.

TYPE LOCALITY: Eding's Island, near Beaufort, South Carolina.
 DISTRIBUTION: South Carolina to Florida; Cuba.
 ILLUSTRATION: Pollard, Bull. Torrey Club 22: pl. 252, f. 2.

110. *Chamaecrista Simpsoni* Pollard; A. Heller, Cat. N. A. Pl. ed. 2, 5. 1900.

Cassia Simpsoni Pollard, Bull. Torrey Club 21: 221. 1894.

Suffruticose, perennial, or sometimes flowering as an annual, much branched, the stem and branches long-hirsute and puberulent, up to 2 dm. long, spreading. Stipules linear-lanceolate, subulate-acuminate, 6–10 mm. long; petiolar gland solitary, stipitate, about 0.2 mm. broad; leaflets 8–19 pairs, linear, cuspidate, 5–10 mm. long, glabrous or nearly so, the midvein excentric; flowers mostly solitary; pedicels 2–3 mm. long; sepals lanceolate, acuminate, 5–6 mm. long; petals 5–7 mm. long; legume linear, hirsute, about 2 cm. long, 4–5 mm. wide.

TYPE LOCALITY: Big Pine Key, Florida.
 DISTRIBUTION: Southern Florida and Florida Keys.
 ILLUSTRATION: Pollard, Bull. Torrey Club 22: pl. 252, f. 4.

111. *Chamaecrista tabascoensis* Britton & Rose, sp. nov.

Shrubby; branches slender, finely appressed-pubescent. Stipules lanceolate, acuminate, 5-6 mm. long; petioles 2-4 mm. long, bearing a short-stalked, obconic gland about 0.6 mm. broad; rachis glabrate; leaflets 8-16 pairs, linear, 4-7 mm. long, nearly membranous, obtusish, aristate, glabrous, but ciliolate, the costa much excentric; flowers extra-axillary, sessile or nearly so, subtended by stipule-like bracts; sepals narrowly lanceolate, acuminate, glabrous, about 5 mm. long; petals narrowly obovate, four of them about 7 mm. long, the fifth much smaller; stamens 10, all antheriferous; legume narrowly oblong, 1-1.5 cm. long, about 4 mm. wide, 2-seeded and constricted between the seeds, or obovate and 1-seeded, long-pilose, longitudinally dehiscent, the valves apparently unelastical.

Santa Anita, Tabasco, February 5, 1890, *J. N. Rovirosa 709*.

51. *GRIMALDIA* Schrank, Bot. Zeit. Regensb. 4: 184. 1805.

Annual or perennial herbs, or shrubs, often much branched; petiolar glands wanting, at least in our species; leaflets 2 pairs; stipules small. Inflorescence simple or branched, terminal or in the axils of the upper leaves, more or less setose and glutinose; pedicels 2-bracteolate. Sepals 5, obtuse or acute. Petals 5, somewhat unequal. Stamens 5-10; anthers linear, white-villous along the sutures, dehiscing by 2 terminal pores. Legume mostly oblong, more or less hispid, elastically 2-valved. Seeds on a short funiculus, black, shining, turgid.

Type species, *Grimaldia opifera* Schrank.

Annual; stamens 5-7.

Perennial, somewhat woody; stamens 9 or 10.

1. *G. Absus*.

Leaflets glabrous on both sides.

Branches prostrate or decumbent, elongated; leaflets rounded or obtuse; legume long-hirsute.

2. *G. hispidula*.
3. *G. enneandra*.

Low shrub; leaflets mostly emarginate; legume short-hirsute.

Leaflets pubescent or setulose at least beneath.

4. *G. punctulata*.

Leaflets acute or apiculate; erect shrub.

Leaflets obtuse, rounded or emarginate, sometimes mucronulate.

5. *G. Deamii*.

Petioles filiform, 4 cm. long or less; sepals slightly pubescent; large shrub.

Petioles slender, shorter; sepals hirsute.

Erect shrub; legume densely short-pubescent.

6. *G. Standleyi*.

Prostrate, decumbent or procumbent; legume long-hirsute.

Flower-bud pointed; sepals acute.

7. *G. confusa*.

Flower-bud obtuse or rounded; sepals obtuse.

Prostrate, up to 1 m. long; leaflets strongly veined, 5-15 mm. long.

8. *G. Killipii*.

Decumbent, or prostrate; leaflets inconspicuously veined, 1-3 cm. long.

9. *G. decora*.

1. *Grimaldia Absus* (L.) Britton & Rose.

Cassia Absus L. Sp. Pl. 376. 1752.

Grimaldia opifera Schrank, Bot. Zeit. Regensb. 4: 187. 1805.

Senna Absus Roxb. Fl. Ind. ed. 2: 2: 340. 1832.

Annual, 2-6 dm. high, much branched, viscid-glandular. Leaflets elliptic, obtuse, glabrous above, puberulent beneath, 2-3 cm. long; petioles very slender, 1-3 cm. long; petals 5-7 mm. long; stamens usually 5, sometimes 7; legume linear, 2.5-4 cm. long, 3-6 mm. wide, long-hispid; seeds obovate, 3.5-4 mm. long.

TYPE LOCALITY: India.

DISTRIBUTION: Jamaica; Grenada; Bonaire; Sinaloa to Jalisco and Veracruz. Venezuela; Bolivia; Paraguay. Native of the Old World tropics.

ILLUSTRATION: Jacq. f. Eclog. pl. 53; Nees, Pl. Offic. 2: pl. 350.

2. *Grimaldia hispidula* (Vahl) Britton & Rose.

Cassia procumbens Mill. Gard. Dict. ed. 8, no. 20. 1768. Not L. 1753.

Cassia hispidula Vahl. Eclog. 3: 10. 1807.

Cassia tetraphylla Collad. Hist. Cass. 130. 1816. Not Desv. 1814.

Cassia pauciflora H.B.K. Nov. Gen. & Sp. 6: 360. 1824.

Stems woody at base, much branched, the branches slender, prostrate or decumbent, 4-6 dm. long with numerous spreading viscid hairs. Petioles slender, setose; leaflets orbicular to

oblong or obovate, 1–2.2 cm. long, rounded or obtuse, glabrous on both sides, rarely sparingly ciliate; inflorescence usually terminal, several-flowered; pedicels spreading; sepals acute, setose, 8–10 mm. long; petals yellow, 1.5–2 cm. long, rounded, tapering below into a slender claw; stamens 10; legume 4–5 cm. long, 5–7 mm. wide, long-hirsute; seeds oblong, black, pitted, 5 mm. long.

TYPE LOCALITY: South America.

DISTRIBUTION: Cuba; Trinidad; Veracruz to Panama, Venezuela and Brazil.

ILLUSTRATION: Mart. Fl. Bras. 15²: pl. 35, f. 2.

3. *Grimaldia enneandra* (Brand.) Britton & Rose.

Cassia enneandra Brand. Univ. Calif. Publ. Bot. 6: 179. 1915.

A small shrub, the old brown or black branches more or less wrinkled, the twigs short, viscid, hirsute. Petioles filiform, viscid-hirsute; leaflets very close together, glabrous on both sides, broadly elliptic to suborbicular, 7–12 mm. long, rounded or retuse; flower-bud subglobose; sepals strigose, obtuse, 4–5 mm. long; petals 10–12 mm. long; legume 3 cm. long, 5 mm. wide, 5-seeded, short-hirsute.

TYPE LOCALITY: Cerro de Picacho, Oaxaca.

DISTRIBUTION: Known only from the type locality.

4. *Grimaldia punctulata* (H. & A.) Britton & Rose.

Cassia punctulata H. & A. Bot. Beech. Voy. 420. 1840.

A shrub, about 1 m. high, the slender branches reddish-pubescent and hirsute, the stipules minute, spreading. Leaflets oblong to oblanceolate, 3 cm. long, or less, broadly cuneate at base, abruptly acute, mucronate or apiculate, glabrate above, appressed-pubescent and sometimes setulose beneath; flowers axillary and solitary or in terminal racemes; pedicels pubescent, 1–3 cm. long; flower-bud ellipsoid, obtuse, loosely hirsute; sepals obtuse, 8–9 mm. long; petals 12–13 mm. long; legume 3 cm. long, 6–8 mm. wide, short-pubescent.

TYPE LOCALITY: Tepic.

DISTRIBUTION: Sinaloa; Tepic; Guerrero; Jalisco.

5. *Grimaldia Deamii* Britton & Rose, sp. nov.

A shrub, about 2 m. high, the old branches brownish, the twigs pubescent and glandular. Stipules lanceolate, about 1 mm. long, appressed; petioles filiform, 2–4 cm. long; leaflets obovate, obtuse or retuse, 2 cm. long or less, glabrous or soon glabrate above, pubescent and white-pilose beneath along the midvein; inflorescence a several-flowered terminal raceme; pedicels 1–2.5 cm. long; flower-bud subglobose, rounded; sepals obtuse, slightly pubescent, 8–9 mm. long; petals 12–15 mm. long; legume 2.5–3.5 cm. long, 5–7 mm. wide, short-pubescent and setulose.

Guatemala and Chiapas. Type from Fiscal, Guatemala, June 1, 1909, *Charles C. Deam 6109*.

6. *Grimaldia Standleyi* Britton & Rose, sp. nov.

A shrub, 1 m. high or lower, the stem and branches densely glandular-pubescent, the stipules minute, caducous. Leaflets orbicular to short-oblong or elliptic, 1–3 cm. long, 10–17 mm. wide, or the upper smaller, obtuse or retuse, often mucronate, densely short-pubescent and strigillose on both sides; inflorescence a short terminal raceme; pedicels 10–15 mm. long, hispid-glandular; flower-bud ellipsoid, rounded; sepals hirsute, about 6 mm. long; petals 7–9 mm. long; legume 2 cm. long, 6–7 mm. wide, densely short-pubescent.

Dry hills near Acaponeta, Tepic, April 10, 1910, *Rose, Standley & Russell 14356*.

7. *Grimaldia confusa* Britton & Rose, sp. nov.

Procumbent or diffuse from a thick woody base, the branches 3–4 dm. long, glandular-pubescent. Stipules minute; leaflets thickish, orbicular to oblong or obovate, 7–20 mm. long, obtuse or retuse, pubescent on both sides and somewhat glandular, ciliate; racemes about 1 dm.

long, or shorter; pedicels 1-1.5 cm. long, spreading; flower-buds pointed, pubescent; sepals oblong, acute, 8-10 mm. long; petals drying reddish, 1-1.5 cm. long; legume linear-oblong, 4-5 cm. long, 5-8 mm. wide, shining, hirsute.

Oaxaca and Chiapas. Type from near the city of Oaxaca, June, 1899, *Rose & Hough 4654*.

8. *Grimaldia Killipii* (Rose) Britton & Rose.

Cassia Killipii Rose, Journ. Wash. Acad. 17: 167. 1927.

Prostrate, with long slender branches, often 1 m. long, with short pubescence interspersed with spreading hairs and more or less glutinose. Stipules minute; leaflets orbicular to oblong, 5-15 mm. long, rounded at apex, glabrous or nearly so above, pubescent beneath, strongly veined; flowers axillary and solitary or in small terminal panicles; flower-bud obtuse, densely long-hirsute; sepals 8-9 mm. long, obtuse; petals 11-13 mm. long; ovary densely setose; legume hirsute, 2.5 cm. long, 5 mm. wide.

TYPE LOCALITY: Tapia, Panama.

DISTRIBUTION: Panama.

9. *Grimaldia decora* Britton & Rose, sp. nov.

Decumbent or prostrate, the slender branches 3-5 dm. long, softly pubescent. Stipules 2-3 mm. long; leaflets oblong or elliptic, 1-3 cm. long, obtuse, often mucronulate, pubescent on both sides, venation inconspicuous; racemes terminal, 1-2 dm. long, glandular-pubescent; pedicels spreading, glandular-pubescent, 1-2 cm. long; flower-bud rounded, densely hirsute; sepals 8-9 mm. long; petals 10-15 mm. long; legume oblong, 3-3.5 cm. long, about 8 mm. broad, hirsute.

Sinaloa, Guerrero and Oaxaca. Type from vicinity of Acapulco, Guerrero, October 1894-March 1895, *Palmer 501*.

VIII. CAESALPINIEAE. Trees, shrubs, vines or herbs with bipinnate leaves, or some leaves simply pinnate in *Gleditsia* and *Asacara*, or all leaves simply pinnate in *Haematoxylon* and a few species of *Poincianella*. Sepals or calyx-lobes 5. Stamens mostly 10, the anthers versatile.

A. Flowers dioecious or polygamous; trees.

Calyx-tube short.

Legume coriaceous or chartaceous, flattened.

Ovary tomentose; legume broadly linear, long, several-many-seeded, indehiscent.

Ovary glabrous; legume obliquely oval, short, 1-2-seeded, at length dehiscent.

Legume subterete, fleshy, indehiscent.

Calyx-tube long; legume woody.

B. Flowers perfect.

1. Ovary adnate to the calyx-tube; trees.

2. Ovary free from the calyx-tube.

a. Stigma not peltate, but sometimes expanded.

* Leaf-rachis very short, spine-tipped; legume torulose.

** Leaf-rachis mostly elongated, not spine-tipped.

† Calyx-segments valvate, or induplicate-valvate, or subimbricate.

Legume woody, very large; unarmed tree with large scarlet flowers.

Legume not woody; small trees, shrubs or herbs with small flowers.

Trees or shrubs; legume obliquely veined (except in *Cercidiopsis*).

Legume swollen, moniliform; twigs spinescent; foliage much reduced.

Legume flat or compressed.

Twigs mostly armed with short nodal spines; seeds with endosperm.

Unarmed trees; seeds without endosperm.

Herbs, or small depressed shrubs; legume not obliquely veined; pedicels not jointed.

Leaflets linear to oblong, mostly 1-veined.

Legume oblong to linear, chartaceous.

Legume broadly oblong, membranous.

Leaflets ovate-orbicular, strongly palmately veined.

52. GLEDITSIA.

53. ASACARA.

54. ARCOA.

55. GYMNOCLADUS.

56. SCHIZOLOBIUM.

57. PARKINSONIA.

58. DELONIX.

59. CERCIDIOPSIS.

60. CERCIDIUM.

61. CONZATTIA.

62. LARREA.

63. MOPARIA.

64. SCHIRAMMIA.

- †† Calyx-segments imbricated.
 Legume splitting at the middle of the valves.
 Legume dehiscent along the sutures, or indehiscent.
 Legume indehiscent.
- Lower calyx-segment entire or erose.
 Calyx-segments nearly alike; unarmed trees. 65. HAEMATONYLON.
 Lower segment cucullate; prickly plants. 66. LIBIDIBIA.
 Legume oblong, fleshy, several-seeded; a tree. 67. NICARAGO.
 Legume oval-orbicular, woody, 1-seeded; a long vine. 68. TICANTO.
- Lower calyx-segment fimbriate or lacerate.
 Legume turgid or subterete, torulose; prickly tree. 69. RUSSELLODENDRON.
 Legume flat or compressed, not torulose. Legume compressed; prickly trees or shrubs. 70. TARA.
 Legume very flat; unarmed trees or shrubs. Legume linear-oblong, few-seeded. 71. BRASILETTIA.
 Legume short-oval, 1-seeded, long-stipitate. 72. GUAYMASIA.
- Legume dehiscent.
 Seeds flat or compressed; legume flat, unarmed.
 Flowers not deflexed; trees, shrubs or rarely herbs.
- Lower calyx-segment cucullate; prickly, rarely unarmed, trees or shrubs.
 Stamens greatly elongated; petals large, conspicuous. 73. POINCIANA.
 Stamens mostly short; petals small. 74. CAESALPINIA.
 Calyx-segments nearly alike, the lower one not cucullate; unarmed, rarely prickly, plants. 75. ERYTHROSTEMON.
 Stamens greatly elongated. Stamens mostly short, not more than about twice as long as the petals. 76. POINCIANELLA.
 Flowers deflexed; prickly vines or trees. 77. BIANCAEA.
 Seeds subglobose; legume compressed, mostly prickly; prickly vines, or rarely unarmed. 78. GUILANDINA.
 b. Stigma peltate; unarmed trees; legume flat. 79. PELTOPHORUM.

52. GLEDITSIA L. Sp. Pl. 1056. 1753.

Gleditschia Clayton; Scop. *Introd.* 295. 1777.
Melilobus Mitchell; Raf. *Sylva Tell.* 121. 1838.
Caesalpinioides Kuntze, *Rev. Gen.* 166. 1891.

Usually thorny, large trees, the thorns on the trunk and older branches often large. Leaves once or twice pinnate, with many leaflets, the stipules small. Flowers greenish, small, polygamous, in axillary, slender drooping racemes. Calyx campanulate, with 3-5 small lobes. Petals 3-5, sessile. Stamens 3-10, free. Ovary sessile, tomentose, with several to many ovules. Legume broadly linear, flat, indehiscent, several-many-seeded. Seeds elliptic to orbicular, flat.

Type species, *Gleditsia triacanthos* L.

Legume 0.7-4 dm. long, with pulp between the seeds.
 Legume 1-1.7 dm. long, without pulp between the seeds.

1. *G. triacanthos*.
 2. *G. texana*.

1. *Gleditsia triacanthos* L. Sp. Pl. 1056. 1753.

Gleditsia spinosa Marsh, *Arbust. Am.* 54. 1785.
Gleditsia meliloba Walt, *Fl. Car.* 254. 1788.
Gleditsia elegans Salisb, *Prodr.* 323. 1796.
Gleditsia triacanthos brachycarpus Michx, *Fl. Bor. Am.* 2: 257. 1803.
Gleditsia ferox Desf. *Hist. Arb.* 2: 247. 1809.
Gleditsia polysperma Stokes, *Bot. Mat. Med.* 1: 228. 1812.
Gleditsia brachycarpa Pursh, *Fl. Am.* Sept. 221. 1814.
Gleditsia heterophylla Raf. *Fl. Ludov.* 99. 1817.
Melilobus heterophylla Raf. *Sylva Tell.* 121. 1838.
Caesalpinioides triacanthum Kuntze, *Rev. Gen.* 167. 1891.

A tree, up to about 50 m. high, with a trunk 2 m. in diameter, usually armed with many branching or simple thorns. Leaves 1-2-pinnate; leaflets oblong-lanceolate to oval, obtuse, 1.5-3 cm. long, crenulate; racemes 7-12 cm. long, those of pistillate trees longer than those of staminate; calyx-lobes 4-5 mm. long, the petals a little longer; legume 0.7-4 dm. long,

2.5–3.5 cm. wide, more or less twisted in age, pubescent or glabrate, sweet-pulpy within, edible; seeds numerous or few, about 8 mm. long.

TYPE LOCALITY: Virginia.

DISTRIBUTION: Ontario to Michigan, Georgia and Texas.

ILLUSTRATIONS: Lam. Tab. Encyc. pl. 857, f. 1; Smith, Insects Georgia pl. 85; Sargent, Silva pl. 125, 126; Man. f. 460; ed. 2, f. 557; Bailey, Cycl. Am. Hort. f. 917; Schkuhr, Handb. pl. 356; Guimpel, Otto & Hayne, Abb. Holz. pl. 132; Nouv. Duh. 4: pl. 25; Michx. f. Hist. Arb. Am. 3: pl. 10; Watson, Dendr. Brit. pl. 138; Audubon, Birds pl. 42, 146, 150; Stand. Cycl. Hort. f. 1652; Britton & Brown, Ill. Fl. f. 2041; ed. 2, f. 2445; Britton & Shafer, N. Am. Trees f. 499.

2. *Gleditsia texana* Sarg. Bot. Gaz. 31: 1. 1901.

A tree, sometimes 40 m. high, with a trunk 8 dm in diameter. Leaves 1-2-pinnate, when twice pinnate with 6 or 7 pinnae; leaflets oblong to oblong-lanceolate, obtuse or acute, somewhat pubescent when young, 1.5–3 cm. long, crenulate; staminate racemes 8–10 cm. long; calyx pubescent, with ovate, acute lobes; petals puberulent; legume linear-oblong, 10–17 cm. long, 2.5–3 cm. broad, straight, dry, not pulpy between the seeds; seeds oval, flattened, shining, chestnut-brown, about 1 cm. long.

TYPE LOCALITY: Near Brazonia, Texas.

DISTRIBUTION: Known only from the type locality.

ILLUSTRATIONS: Sarg. Man. f. 461; ed. 2, f. 558; Britton & Shafer, N. Am. Trees f. 498.

53. *ASACARA* Raf. Sylva Tell. 121. 1838.

A large tree, the branches usually armed with simple or few-branched thorns. Leaves 1-2-pinnate, with numerous leaflets. Flowers small, in slender, long racemes. Calyx-tube short, pubescent, the 3–5 lobes acute. Petals 3–5. Stamens 6–10, free. Ovary glabrous, stipitate, 1- or 2-ovuled. Legume obliquely ovate or oval, flat, long-stipitate, chartaceous, 1- or 2-seeded, wrinkled, at length dehiscent, without pulp, transversely several-many-fissured in drying. Seeds flat, suborbicular.

Type species, *Gleditsia monosperma* Walt.

1. *Asacara aquatica* (Marsh.) Raf. Sylva Tell. 121. 1838.

Gleditsia inermis Mill. Gard. Dict. ed. 8, no. 2. 1768. Not L. 1759.

Gleditsia aquatica Marsh. Arbust. Am. 54. 1785.

Gleditsia carolinensis Lam. Encyc. 2: 465. 1786.

Gleditsia monosperma Walt. Fl. Car. 254. 1788.

Gleditsia triacanthos aquatica Castiglioni, Viag. Stati Unit 2: 249. 1790.

Gleditsia triacantha Gaertn. Fruct. 2: 311. 1791.

Caesalpinoides monospermum Kuntze, Rev. Gen. 167. 1891.

A tree, up to 20 m. high, with a trunk 6–8 dm. in diameter. Thorns sometimes more than 1 dm. long; leaves once pinnate or when twice pinnate with 3 or 4 pairs of pinnae; leaflets ovate-oblong to lanceolate, 2–5 cm. long, obtuse or acutish, glabrous, crenate; racemes drooping, elongated, sometimes 2 dm. long; calyx-lobes and petals 2 mm. long; legume glabrous, 2–4 cm. long, tapering into an elongated stipe.

TYPE LOCALITY: Carolina.

DISTRIBUTION: Southern Indiana to Missouri, Florida and Texas.

ILLUSTRATIONS: Gaertn. loc. cit. pl. 146, f. 3; Michx. f. Hist. Arb. Am. 3: pl. 11; Lam. Tab.

Encyc. pl. 857; Britton & Brown, Ill. Fl. f. 2042; ed. 2, f. 2446; Britton & Shafer, N. Am. Trees f. 497;

Sarg. Silva pl. 127, 128; Man. f. 462; ed. 2, f. 559; Deam, Trees Ind. ed. 3, pl. 107; Catesby, Nat.

Hist. Car. 1: pl. 43.

54. *ARCOA* Urban, Repert. Sp. Nov. 19: 4. 1923.

A tree, with dimorphic branches, the bipinnate glandular leaves clustered on short, lateral, spur-like branchlets, the numerous, small, oblong leaflets opposite. Flowers small, polygamous or dioecious, yellow, sessile in clustered spikes, also on spur-like branchlets, bracteolate. Hypanthium very short; sepals 5. Petals 5 or 6, oblong, all alike, imbricated. Stamens 12, short, the versatile anthers about as long as the filaments. Ovary narrowly oblong, 1-celled; stigma broad, sessile, subpeltate. Fruit oblong, subterete, fleshy, indehiscent, 1–6 seeded. Seeds obovate, the endosperm fleshy.

Type species, *Arcoa gonavensis* Urban.

1. *Arcoa gonavensis* Urban, *Repert. Sp. Nov.* 19: 6. 1923.

A large tree, the twigs rather stout, bearing spur-like branchlets about 2 cm. long or shorter. Leaves 5-12 cm. long, the slender petiole and rachis puberulent, or glabrate; pinnae 5-11, subsessile; leaflets 9-22 pairs, subcoriaceous, dull, about 4-12 mm. long, 1-2.5 mm. wide, glabrate, sparingly pinnately veined, the apex rounded or obtuse, sometimes minutely mucronulate, the base obliquely rounded, the petiolule flat, orbicular; spikes 3-7 cm. long, many-flowered; bractlets suborbicular, about 1 mm. long; sepals orbicular-ovate, about 2 mm. wide; petals rounded or obtuse at apex, 4-6 mm. long; filaments about 3 mm. long; ovary densely tomentulose; legume 2-3 cm. long, 1.5-2 cm. in diameter, rounded, densely tomentulose.

TYPE LOCALITY: Near Etroite, Gonave Island, Haiti.

DISTRIBUTION: Haiti and Gonave Island.

55. *GYMNOCLADUS* Lam. *Encyc.* 1: 733. 1785.

Large unarmed trees, the leaves twice pinnate, the white dioecious and polygamous flowers in large terminal racemes. Calyx tubular, 10-ribbed, 5-lobed, the lobes narrow, nearly equal. Petals 4 or 5, oblong or oval, nearly equal, imbricated in the bud; stamens 10, distinct, shorter than the petals, inserted with them at the top of the calyx-tube; filaments pubescent; anthers longitudinally dehiscent. Ovary many-ovuled; style straight. Legume oblong, thick, large, coriaceous, pulpy between the large seeds, 2-valved, the seeds with endosperm.

Type species, *Gymnocladus canadensis* Lam.

1. *Gymnocladus dioica* (L.) Koch, *Dendr.* 1: 5. 1869.

Guilandina dioica L. *Sp. Pl.* 381. 1753.

Gymnocladus canadensis Lam. *Encyc.* 1: 733. 1785.

Hyperanthera dioica Vahl, *Symb.* 1: 31. 1790.

A tree, up to 30 m. high or higher, with a trunk up to 1 m. in diameter, the bark rough. Leaves large; pinnae 5-9, odd or even; leaflets usually 7-15, but sometimes only 1 on the lowest pinnae, ovate, acute or acuminate, 2.5-7.5 cm. long, glabrous, or pubescent on the veins beneath, ciliate; racemes elongated, many-flowered, those of pistillate trees longer than those of staminate; pedicels of pistillate flowers 1.5-2.5 cm. long, those of staminate flowers shorter; calyx-tube about 1.5 cm. long; petals about as long as the calyx-lobes; legume brown, 1-2.5 dm. long, about 5 cm. wide; seeds somewhat flattened, 1.5-2 cm. broad, dark brown to black.

TYPE LOCALITY: Canada.

DISTRIBUTION: Ontario to South Dakota, Tennessee and Oklahoma.

ILLUSTRATIONS: Baill. *Hist. Pl.* 2: f. 52, 53; Lam. *Tab. Encyc. pl.* 823; Michx. *Fl. Bor. Am.* pl. 51; Michx. *f. Hist. Arb. Am.* 2: pl. 23; Reichenb. *Mag. Bot.* pl. 40; Britton & Brown, *Ill. Fl. f.* 2043; ed. 2, f. 2447; Britton & Shafer, *N. Am. Trees f.* 500; Sarg. *Man. f.* 459; ed. 2, f. 556; Silva *pl.* 123, 124; *Rev. Hort.* 1897: f. 149; Bailey, *Cycl. Am. Hort. f.* 1008; *Stand. Cycl. Hort. f.* 1771; Deam, *Trees Ind. pl.* 108.

56. *SCHIZOLOBIUM* Vogel, *Linnaea* 11: 399. 1837.

A large unarmed tree, the leaves large, bipinnate, the leaflets many pairs. Inflorescence axillary, racemose or forming an elongated terminal panicle of many large yellow perfect flowers. Calyx small with a short turbinate tube and five nearly equal imbricated lobes longer than the tube, reflexed in age. Petals 5, nearly equal, imbricated. Stamens 10, free, somewhat declined; anthers all alike. Ovary stipitate, adnate to the tube of the calyx; style filiform, acutish; stigma minute, terminal. Legume flat, broadly spatulate, coriaceous, 2-valved, tardily dehiscent, 1-seeded. Seed large, oblong, flat, with endosperm.

Type species, *Schizolobium excelsum* Vogel.

1. *Schizolobium Parahyba* (Vell.) Blake, *Contr. U. S. Nat. Herb.* 20: 240. 1919.

Cassia Parahyba Vell. *Fl. Flum.* 168. 1790.

Schizolobium excelsum Vogel, *Linnaea* 11: 399. 1837.

Caesalpinia Parahyba Allem. *Trab. Soc. Vell.* 1: 56. 1852.

Schizolobium Kellermanni Pittier, *Contr. U. S. Nat. Herb.* 18: 232. 1917.

A tree, up to 40 meters high, the twigs and inflorescence glabrous or nearly so. Leaves 6 dm. long or more; pinnae 15-20 pairs; leaflets 10-25 pairs, oblong, 2-4 cm. long, obtuse, gla-

brous above, appressed-pubescent beneath; racemes 2-5 dm. long, many-flowered; pedicels 6-10 mm. long, jointed near the middle; calyx-lobes 6-8 mm. long; petals 1.5-2 cm. long; stamens shorter than the petals, the filaments villous below; legume 8-12 cm. long, 3-5 cm. wide above the middle, long-cuneate towards the base, glabrous, rugose.

TYPE LOCALITY: Near Rio de Janeiro, Brazil.

DISTRIBUTION: Veracruz to Panama. Brazil.

ILLUSTRATIONS: Vell. Fl. Flum. Ic. 4: *pl.* 71; Mart. Fl. Bras. 15²: *pl.* 24.

57. PARKINSONIA L. Sp. Pl. 375. 1753.

A spiny shrub or small tree, with nearly sessile bipinnate leaves, the common rachis very short and spinulose-tipped, the 1 or 2 pairs of pinnae elongated, with several-many small leaflets, the showy yellow flowers in racemes. Calyx-tube short, the 5 narrow segments nearly equal. Petals 5, spreading, nearly equal. Stamens 10, distinct; filaments villous at the base; anthers all alike, versatile, the sacs longitudinally dehiscent. Ovary short-stipitate, many-ovuled; style nearly filiform; stigma small and terminal. Legume linear, coriaceous, torulose, striate-veined, 2-valved. Seeds oblong, longitudinally placed, hard; endosperm horny; cotyledons flat.

Type species, *Parkinsonia aculeata* L.

1. *Parkinsonia aculeata* L. Sp. Pl. 375. 1753.

A shrub, or a tree up to about 9 m. high, with brown bark slightly fissured into small plates, and slender, spreading or drooping branches, the young twigs pubescent, the spines 3 cm. long or less. Pinnae 1 or 2 pairs, appearing like sessile pinnate leaves, 2-4 dm. long, the rachis flat, narrowly winged, bearing 10-25 pairs of short-petioluled linear to obovate leaflets 1.5-8 mm. long, or sometimes without leaflets; racemes few-several-flowered, as long as the leaves or shorter; pedicels very slender, 0.5-2 cm. long; calyx 6-8 mm. long; petals about twice as long as the calyx; stamens about one-half as long as the petals; legumes drooping, linear-cylindric, 5-15 cm. long, much constricted between the seeds, which are about 1 cm. long.

TYPE LOCALITY: Tropical America.

DISTRIBUTION: Florida to Texas; Chihuahua and Sonora to Panama; Bahamas; West Indies; South America.

ILLUSTRATIONS: Jacq. Sel. Stirp. Am. *pl.* 80; Mart. Fl. Bras. 15²: *pl.* 26; Sarg. Silva *pl.* 131; Man. f. 463; ed. 2, f. 560; Britton & Shafer, N. Am. Trees f. 501.

58. DELONIX Raf. Fl. Tell. 2: 92. 1836.

Unarmed trees, with evenly bipinnate, stipulate leaves of numerous small leaflets, and large showy, orange to scarlet flowers in terminal or axillary corymbose racemes. Calyx deeply 5-lobed, the nearly equal lobes valvate. Petals 5, long-clawed, the blade nearly orbicular. Stamens 10, declined; filaments distinct; anthers longitudinally dehiscent. Ovary sessile, many-ovuled; style slender or short; stigma truncate, ciliolate. Legume broadly linear, flat, woody, 2-valved, nearly solid between the oblong, transverse seeds. Endosperm present; cotyledons thick.

Type species, *Poinciana regia* Bojer.

1. *Delonix regia* (Bojer) Raf. Fl. Tell. 2: 92. 1836.

Poinciana regia Bojer; Hook. Bot. Mag. *pl.* 2884. 1829.

A widely branched tree, reaching a maximum height of about 12 m. with a trunk up to 9 dm. in diameter, flanged at the base, the thin bark gray-brown, the twigs somewhat pubescent. Leaves 3-5 dm. long; petiole stout, reddish or yellow, 7-12 cm. long; pinnae 10-25 pairs, short-stalked, 8-15 cm. long, the rachis pubescent; leaflets 20-40 pairs, oblong, puberulent on both sides, 4-10 mm. long, inequilateral, rounded at both ends; pedicels stout, 4-8 cm. long; petals spreading and reflexed, 5-7 cm. long, orange to scarlet and mottled; stamens shorter than the petals; legume 4-6 dm. long, 5-7 cm. wide, dark brown.

TYPE LOCALITY: Madagascar.

DISTRIBUTION: Naturalized in Porto Rico, St. Croix and St. Thomas. Native of Madagascar. Widely planted for ornament in tropical and subtropical regions.

ILLUSTRATIONS: Hook. loc. cit.; Reichenb. Fl. Exot. *pl.* 318.

59. *CERCIDIOPSIS* Britton & Rose, gen. nov.

A small tree or shrub, much branched, the twigs spine-tipped, but without lateral spines, the alternate bipinnate leaves small, deciduous, sessile, the pinnae a single pair, the rachis very short or none, the yellow flowers short-racemose. Calyx-tube short, campanulate, the 5 segments valvate, nearly equal. Petals 5, spreading, one of them suborbicular, long-clawed, the others obovate, short-clawed; stamens 10, distinct, villous below; anthers versatile, oblong, all alike, the sacs longitudinally dehiscent. Ovary few-several-ovuled, short-stipitate; style filiform; stigma terminal, minute. Legume elongated, swollen, moniliform, strongly veined, subcoriaceous, apparently not 2-valved. Seeds ellipsoid, hard, the endosperm horny.

Type species, *Parkinsonia microphylla* Torr.

1. *Cercidiopsis microphylla* (Torrey) Britton & Rose.

Parkinsonia microphylla Torrey, Pacif. R. R. Rep. 4: 82. 1857.

Cercidium microphyllum Rose & Johnston; I. M. Johnston, Contr. Gray Herb. 70: 66. 1924.

A tree, 4-7.5 m. high, or shrubby, the dark yellow bark nearly smooth, the stiff twigs pubescent when young, soon glabrous. Pinnae of the leaves 2-3 cm. long; leaflets 4-6 pairs, ovate or oblong, 2 mm. long, pubescent when young; racemes few-flowered, lateral, nearly sessile; pedicels very slender, 6-10 mm. long; calyx-segments reflexed; petals obovate, about 5 mm. long, spreading; stamens somewhat longer than the petals; ovary pubescent; legume 5-8 cm. long, stipitate, 1-3-seeded, deeply constricted; seeds brown, 8-10 mm. long.

TYPE LOCALITY: "Banks of the Colorado and on the Williams River."

DISTRIBUTION: Arizona, Sonora, and Lower California.

ILLUSTRATIONS: Sarg. *Silva pl.* 132; Man. f. 464; ed. 2, f. 561; Britton & Shafer, N. Am. Trees f. 502.

60. *CERCIDIUM* L. Tulasne, Arch. Mus. Paris 4: 133. 1844.

Rhetinophloeum Karst. Fl. Columb. 2: 25. pl. 113. 1862.

Trees or shrubs, the younger branches usually armed with short, straight spines. Leaves bipinnate, often fugacious, the pinnae 1 or 2 pairs, the leaflets small. Inflorescence racemose, axillary. Flowers small or medium-size, yellow. Calyx-segments 5, valvate, the short tube campanulate. Petals 5, somewhat unequal. Stamens 10; filaments pilose below; anthers alike, versatile. Ovary few-ovuled; style slender; stigma terminal. Legume compressed or flat, oblong or linear-oblong, obliquely veined, longitudinally dehiscent, the valves subcoriaceous. Seeds 1 or few, compressed, with endosperm.

Type species, *Cercidium spinosum* L. Tulasne.

Legume 5-6 mm. wide; ovary densely silky-strigose

Legume broader, 8-15 mm. wide; ovary glabrous, or strigose.

Branches densely and softly short-pubescent.

Unarmed tree; ovary strigose.

Twigs armed with spines; ovary glabrous.

Leaflets 2 or 3 pairs, 6-12 mm. long.

Leaflets mostly 4-6 pairs, 2-4 mm. long.

Branches glabrous or puberulent.

Legume compressed, 10-15 mm. wide, 4-5 mm. thick; leaflets 2-4 pairs.

Legume nearly flat, thinner and mostly narrower.

Leaflets 2-4 pairs, usually 3 pairs.

Leaflets mostly more numerous.

Leaflets mostly 5 pairs, glabrous, 3-5 mm. long; legume up to 9 cm. long.

Leaflets up to 8 pairs, 5-8 mm. long, pubescent; legume 4-8 cm. long.

1. *C. texanum*.

2. *C. molle*.

3. *C. peninsulare*.

4. *C. sonora*.

5. *C. Torreyanum*.

6. *C. floridum*.

7. *C. Goldmanii*.

8. *C. praecox*.

1. *Cercidium texanum* A. Gray, Pl. Wright. 1: 58. 1852.

Parkinsonia texana S. Wats. Proc. Am. Acad. 11: 136. 1876.

A shrub, about 2 m. high or lower, the slender, stiff, flexuous, cinereous-puberulent branches armed with straight spines 3-6 mm. long. Pinnae 1 pair, rarely 2 pairs, short; leaflets 1 or 2 pairs, oblong or oblong-obovate, retuse or obtuse, puberulent, 4-6 mm. long; flowers solitary or few together; pedicels 4-7 mm. long, strigose; calyx 5-6 mm. long, strigose, its lobes broadly

lanceolate, acutish; petals 8-10 mm. long, obovate; legume narrowly linear, finely strigose, 2.5-5 cm. long, 5-6 mm. wide; seeds oblong, 5-7 mm. long.

TYPE LOCALITY: Elm Creek, Texas.
DISTRIBUTION: Southwestern Texas.

2. *Cercidium molle* I. M. Johnston, Proc. Calif. Acad. IV. 12: 1038.
1924.

A tree, 6 m. high, unarmed, the slender, pale, drooping, young branches densely short-pubescent. Petiole short; pinnae 1 pair, the rachis 1-4 cm. long; leaflets 4-6 pairs, oblong, truncate, sparingly pubescent, or glabrous, 6-10 mm. long, 2.5-4.5 mm. wide; racemes 3-7-flowered; pedicels very slender, pubescent, 6-10 mm. long; calyx about 8 mm. long, its lobes narrowly oblong, pubescent; petals 10-13 mm. long, the lower one long-clawed; ovary strigose; legume flat, glabrous or sparingly pubescent, attenuate at both ends, 4-9 cm. long, about 8 mm. wide, 1-seeded, or 2-4-seeded and constricted between the seeds.

TYPE LOCALITY: Agua Verde Bay, Lower California.
DISTRIBUTION: Known only from the type locality.

3. *Cercidium peninsulare* Rose, Contr. U. S. Nat.
Herb. 8: 301. 1905.

A small tree, 3.5-5 m. high, the twigs densely short-pubescent, light green, armed with short, straight spines. Petiole 2-5 mm. long; pinnae 1 pair, the rachis about 1 cm. long, or shorter; leaflets 2 or 3 pairs, oblong to elliptic, rounded or retuse, pubescent, at least beneath, 6-12 mm. long, 2-4 mm. wide; racemes 2-5-flowered; pedicels 6-10 mm. long, pubescent when young, in fruiting, glabrous; calyx glabrate, 5-6 mm. long; petals about twice as long as the calyx; ovary glabrous; legume oblong, or linear-oblong, glabrous, narrowed at both ends, 2.5-4.5 cm. long, 8-11 mm. wide, 1-seeded, or 2-seeded and somewhat constricted between the seeds, about 5 mm. thick.

TYPE LOCALITY: La Paz, Lower California.
DISTRIBUTION: Mainland of southern Lower California and Carmen Island.

4. *Cercidium sonorae* Rose & Johnston; I. M. Johnston, Contr.
Gray Herb. 70: 66. 1924.

A tree, the slender, finely pubescent, divaricate branches armed with spines 5-15 mm. long. Petiole about 6 mm. long, or shorter; pinnae 1 or 2 pairs; rachis 1-3 cm. long; leaflets mostly 4-6 pairs, sometimes 2 pairs, oblong, rounded, 2-4 mm. long, 1.5-2 mm. wide, pubescent on both sides; racemes very short, corymbiform, few-flowered; pedicels densely pubescent, 6-10 mm. long; calyx short-pubescent, about 6 mm. long; legume compressed, 4-7 cm. long, 7-8 mm. wide, 4 mm. thick, narrowed between the oblong seeds.

TYPE LOCALITY: Vicinity of Guaymas, Sonora.
DISTRIBUTION: Sonora.

5. *Cercidium Torreyanum* (S. Wats.) Sarg. Garden & Forest 2:
388. 1889.

Parkinsonia Torreyana S. Wats. Proc. Am. Acad. 11: 135. 1876.
Cercidium floridum Torrey, Pacif. R. R. Rep. 5: 360. 1858. Not Benth. 1852.

A tree, 5-9 m. high, with a trunk diameter up to about 5 dm., the slender, yellowish-green, glabrous, somewhat glaucous branches armed with spines, 6-10 mm. long, or some branches unarmed. Leaves glabrous when mature, glaucous; petiole 5-10 mm. long; pinnae 1 pair; leaflets 2-4 pairs, usually 3 pairs, oblong, obtuse, 4-8 mm. long; racemes several-flowered, glabrous, 5-12 cm. long; pedicels 6-16 mm. long; calyx 6-7 mm. long, its lobes lanceolate; petals obovate, longer than the calyx; ovary glabrate; legume oblong or linear-oblong, glabrous, 5-10 cm. long, 9-15 mm. wide, 4-5 mm. thick, 1-8-seeded, sometimes narrowed between the seeds.

TYPE LOCALITY: On the Colorado River.
DISTRIBUTION: Southern Arizona and California to Sonora and Lower California.
ILLUSTRATIONS: Sarg. *Silva pl.* 130; Britton & Shafer, *N. Am. Trees f.* 504; Torrey, loc. cit. *pl.* 3.

6. *Cercidium floridum* Benth.; A. Gray, Pl.
Wright. 1: 58. 1852.

Parkinsonia florida S. Wats. Proc. Am. Acad. 11: 135. 1876.
Cercidium macrum I. M. Johnston, Contr. Gray Herb. 70: 64. 1924.

A small tree, about 6 m. high, or lower, the trunk up to 2.5 dm. in diameter, the glabrous or puberulent branches armed with spines 6–10 mm. long, or sometimes longer. Petiole 4–7 mm. long, sparingly pubescent, or glabrous; pinnae 1 pair; rachis 4–12 mm. long; leaflets 2–4 pairs, usually 3 pairs, oblong to obovate, rounded or retuse, sparingly strigose or glabrous, 4–6 mm. long, 2–3.5 mm. wide; racemes short, corymbiform, 3–6-flowered; pedicels 6–10 mm. long, glabrous, or sparingly pubescent; calyx glabrous, 5–6 mm. long; petals about 10 mm. long; ovary glabrous; legume flat, oblong or linear-oblong, 3–6 mm. long, 8–11 mm. wide, about 2 mm. thick, sometimes a little narrowed between the seeds.

TYPE LOCALITY: Northern Mexico.

DISTRIBUTION: Texas to Tamaulipas and Nuevo León.

ILLUSTRATIONS: Sarg. Silva *pl.* 129; Britton & Shafer, N. Am. Trees *f.* 503.

7. *Cercidium Goldmanii* Rose, Contr. U. S. Nat.
Herb. 8: 301. 1905.

A tree, 7–12 m. high, the glabrate, rather stout branches armed with spines about 10 mm. long, or shorter. Petiole about 5 mm. long; pinnae 1 or 2 pairs, the rachis sparingly short-pubescent; leaflets 3–5 pairs, oblong, rounded, 3–5 mm. long, glabrous on both sides; racemes short, few-flowered; pedicels 5–8 mm. long, pubescent; calyx sparingly puberulent when young, soon glabrous, about 5 mm. long; petals about twice as long as the calyx; ovary glabrate; legume linear-oblong, flat and thin, glabrous, 5–9 cm. long, 8–10 mm. wide, its base narrowly cuneate.

TYPE LOCALITY: San Geronimo, Oaxaca.

DISTRIBUTION: Known only from the type locality.

8. *Cercidium praecox* (R. & P.) Harms, Bot. Jahrb. 42: 91. 1908.

Caesalpinia praecox R. & P.; H. & A. Bot. Misc. 3: 208. 1832.
Cercidium spinosum L. Tulasne, Arch. Mus. Paris 4: 134. 1844.
Rhedinophloeum viride Karst. Fl. Columb. 2: 25. 1862.
Cercidium viride Karst. Bot. Jahrb. 8: 346. 1887.
Cercidium plurifoliolatum M. Micheli, Mém. Soc. Genève 34: 269. 1902.
Cercidium unijugum Rose, Contr. U. S. Nat. Herb. 8: 301. 1905.

A tree, 5–9 m. high, the bark green, the branches glabrous, or nearly so, armed with spines 0.5–2 cm. long. Petiole 5–12 mm. long, glabrate or pubescent; pinnae 1 or 2 pairs; leaflets 5–8 pairs, oblong or oblong-obovate, obtuse or retuse, 5–8 mm. long, pilose-pubescent, at least beneath; racemes short, few-several-flowered; pedicels pubescent, 6–9 mm. long; calyx 6 mm. long, its lobes ovate or ovate-lanceolate; larger petals 8–15 mm. long; ovary glabrous; legume flat, thin, oblong or linear-oblong, glabrous, 5–8 cm. long, 8–10 mm. wide, 1-seeded or 2-seeded, the base narrowed or cuneate.

TYPE LOCALITY: Peru.

DISTRIBUTION: Hispaniola; Sonora and Lower California to Guerrero and Veracruz; Curaçao; Colombia; Ecuador; Peru; Venezuela; Margarita.

ILLUSTRATIONS: M. Micheli, loc. cit. *pl.* 18; Karst. loc. cit. *pl.* 113.

61. *CONZATTIA* Rose, Contr. U. S. Nat. Herb. 12: 407. 1909.

Unarmed shrubs, or trees with bipinnate leaves, the leaflets small, oblong, numerous, the rather small, perfect, yellow flowers in long axillary racemes. Calyx-tube short, campanulate, the 5–8 lobes valvate, or very slightly imbricated. Petals 5, equal. Stamens 10–13, the filaments pubescent below. Ovary tomentose. Legume broadly linear, flat, obliquely veined, narrowed at both ends, narrowly winged on both sutures, readily dehiscent (as far as known). Seeds few, oblong, compressed, exalbuminous.

Type species, *Conzattia arborea* Rose.

Mature leaflets glabrous or glabrate on both sides.

Leaflets pubescent on both sides, densely so when young.

Pinnae 5–10 pairs; leaflets 10–18 pairs.

Pinnae 3 or 4 pairs; leaflets about 9 pairs.

1. *C. arborea*.

2. *C. multiflora*.

3. *C. sericea*.

1. *Conzattia arborea* Rose, Contr. U. S. Nat.
Herb. 12: 408. 1909.

A shrub, or a tree 5-8 m. high, the trunk up to about 3 dm. in diameter, the twigs glabrous. Stipules minute; leaves 2-3 dm. long; pinnae 10-15 pairs; leaflets 7-22 pairs, 8-15 mm. long, 2.5-4 mm. wide, obtuse, mucronulate, glabrous on both sides, or puberulent beneath when young; racemes 6-12 cm. long, long-peduncled, glabrous, many-flowered; pedicels 6-7 mm. long, jointed near the top; calyx glabrous, about 6 mm. long; petals 7-8 mm. long, obovate; legume 8-15 cm. long, 10-15 mm. wide, narrowly winged, glabrous.

TYPE LOCALITY: Near Tehuacán, Puebla.

DISTRIBUTION: Puebla; Oaxaca.

ILLUSTRATION: Rose, loc. cit. *pl.* 59.

2. *Conzattia multiflora* (B. L. Robinson) Standley, Contr. U. S. Nat.
Herb. 23¹: 427. 1922.

Caesalpinia multiflora B. L. Robinson, Proc. Am. Acad. 27: 167. 1892.

A medium-sized tree, the twigs and petioles short-pubescent. Leaves 1-2 dm. long; pinnae 5-10 pairs; leaflets 10-18 pairs, 8-12 mm. long, 3-4 mm. wide, obtuse, mucronulate, finely appressed-pubescent on both sides; racemes short-peduncled, 10-15 cm. long, glabrous; pedicels 8-10 mm. long, jointed above the middle; calyx about 6 mm. long; petals 8-10 mm. long.

TYPE LOCALITY: Monte León Pass, Michoacán.

DISTRIBUTION: Known only from the type locality.

3. *Conzattia sericea* Standley, Contr. U. S. Nat.
Herb. 23¹: 428. 1922.

A tree, 10-15 m. high, the trunk 5-7.5 dm. in diameter, the twigs puberulent. Pinnae 3 or 4 pairs; leaflets about 9 pairs, 10-12 mm. long, about 4 mm. wide, silky-pubescent on both sides, obtuse, apiculate; racemes glabrous, up to 2.5 dm. long; pedicels 6-9 mm. long, jointed above the middle; calyx about 5 mm. long; petals 7 mm. long.

TYPE LOCALITY: Río de Tamazula, Imala, Culiacan, Sinaloa.

DISTRIBUTION: Known only from the type locality.

62. *LARREA* Ortega, Dec. 15. *pl.* 2. 1797.

Hoffmanseggia Cav. Ic. 4: 63. 1798.

Pomaria Cav. Ic. 5: 1. *pl.* 402. 1799.

Unarmed, perennial herbs or low shrubs, usually much branched, pubescent or glabrous, often glandular, some species with black sessile glands. Leaves twice pinnate. Stipules small, caducous or deciduous. Leaflets several pairs, small. Inflorescence usually a simple raceme, the pedicels not jointed. Calyx-tube short, its lobes valvate or subimbricate, narrow, persistent. Petals 5, yellow. Stamens 10, distinct, the anthers uniform, longitudinally dehiscent. Ovary subsessile. Legume small, flat, straight or curved, elastically dehiscent, its valves chartaceous. Seeds few, or several, without endosperm.

Type species, *Larrea glauca* Ortega.

A. Leaflets not black-glandular-dotted.

Legume lunate.

Shrubs, 4-12 dm. high; racemes long, several-many-flowered.

Branches and inflorescence puberulent; terminal pinnae much longer than the lateral ones.

Branches and inflorescence glabrous; terminal and lateral pinnae nearly equal.

Suffrutescent or herbaceous, 1-3 dm. high; racemes short, few-flowered.

Legume narrowly lunate; pedicels 1-2 mm. long; branches pubescent.

Legume broadly lunate; pedicels 3-4 mm. long.

Branches glabrous.

Branches finely pubescent.

Legume straight, curved or falcate; herbaceous species.

1. *L. microphylla*.

2. *L. intricata*.

3. *L. peninsularis*.

4. *L. Drummondii*.

5. *L. texensis*.

- Petals with long, densely glandular claws; legume falcate.
 Petals short-clawed, sparingly glandular or eglandular.
 Legume strongly falcate, curved into part of a circle; plant eglandular.
 Legume slightly falcate, or straight.
 Eglandular, or a few sessile glands on the linear-oblong, nearly straight legume.
 At least the inflorescence glandular.
 Legume falcate, densely glandular.
 Legume straight or slightly curved.
 Plants villous all over; legume finely pubescent.
 Plants glabrous or glabrate.
 Legume linear to oblong.
 Legume slightly curved, the valves bearing slender processes.
 Legume straight.
 Legume linear-oblong.
 Legume 3-4 cm. long, glabrous, short-stipitate-glandular.
 Legume only 2 cm. long, pubescent or puberulent.
 Leaflets 2-3 mm. long; legume long-stipitate-glandular.
 Leaflets 5-8 mm. long; legume nearly eglandular.
 Legume broadly oblong.
 Legume lanolate, a little incurved, pubescent, hardly glandular.
6. *L. densiflora*.
 7. *L. drepanocarpa*.
 8. *L. Watsonii*.
 9. *L. oxycarpa*.
 10. *L. villosa*.
 11. *L. hidalgensis*.
 12. *L. arida*.
 13. *L. polosina*.
 14. *L. pueblana*.
 15. *L. platycarpa*.
 16. *L. gladiata*.
- B. Leaflets black-glandular-dotted beneath.**
 Shrubs, 0.5-2 m. high.
 Branches appressed-pubescent, puberulent, or canescent.
 Leaflets 6-8 pairs; branches glandular; legume oval-oblong.
 Leaflets 3 or 4 pairs; branches eglandular; legume lunate.
 Branches villous; legume lunate; leaflets 3 or 4 pairs.
 Herbaceous, or suffrutescent, mostly lower.
 Legume oblong, oval or subrhombic.
 Pinnae 3-7; leaflets 2-5 pairs; legume obliquely oblong or oval.
 Legume obliquely oblong, its valves copiously black-glandular-dotted; leaflets pubescent.
 Herbaceous; legume 2-2.5 cm. long, 8 mm. wide, with many marginal processes.
 Suffrutescent; legume 1.5 mm. long, 6 mm. wide, without marginal processes.
 Legume oval, its valves bearing only a few black glands; leaflets glabrate.
 Pinnae 11-21; leaflets 5-8 pairs; legume subrhombic.
 Legume lunate or falcate.
 Legume falcate; branches and petioles short-villous.
 Legume lunate; branches and petioles puberulent or canescent.
 Leaves and branches canescent, pale.
 Leaves and branches green, glabrous or puberulent.
 Species not grouped.
17. *L. glandulosa*.
 18. *L. fruticosa*.
 19. *L. melanosticta*.
 20. *L. Parryi*.
 21. *L. Wootonii*.
 22. *L. brachycarpa*.
 23. *L. multijuga*.
 24. *L. canescens*.
 25. *L. Jamesii*.
 26. *L. montana*.
 27. *L. humilis*.

1. *Larrea microphylla* (Torrey) Britton.

Hoffmanseggia microphylla Torrey, Bot. Mex. Bound. Surv. 58. 1859.

Caesalpinia virgata Fisher, Bot. Gaz. 18: 123. 1893.

A virgate shrub, up to 12 dm. high, the branches and racemes velvety-puberulent. Stipules ovate, acuminate, 3-4 mm. long; pinnae 3, the terminal one much longer than the lateral ones; lateral pinnae with 4-9 pairs of leaflets; terminal pinna with 7-13 pairs of leaflets; leaflets 2-3 mm. long, pubescent; racemes 1-6 dm. long, many-flowered; bracts lanceolate, pubescent, glandular on the margin, caducous; pedicels 3-7 mm. long; calyx pubescent, the lobes subimbricate, spreading or reflexed in age; petals not much longer than the sepals; vexillum eglandular; stamens pubescent; legume narrowly lunate, about 2 cm. long and 7 mm. wide, acute at both ends, pubescent and glandular.

TYPE LOCALITY: Colorado Desert, California.

DISTRIBUTION: Southern Arizona and California to Sonora and Lower California.

2. *Larrea intricata* (Brand.) Britton.

- Hoffmanseggia intricata* Brand. Proc. Calif. Acad. II. 2: 151. 1889.
Hoffmanseggia microphylla glabra S. Wats. Proc. Am. Acad. 24: 47, hyponym. 1889.
Hoffmanseggia glabra E. M. Fisher, Contr. U. S. Nat. Herb. 1: 147. 1892.
Hoffmanseggia glabra intricata E. M. Fisher, loc. cit. 1892.
Caesalpinia intricata E. M. Fisher, Bot. Gaz. 18: 123. 1893.
Caesalpinia intricata glabra E. M. Fisher, Bot. Gaz. 18: 123. 1893.

A shrub, 4-5 dm. high, intricately branched, the branches and inflorescence glabrous, the tips of the twigs becoming spinescent. Pinnae 3, nearly equal; leaflets 8-10 pairs, about 2 mm. long, glabrous; racemes 5-15 cm. long, stiff, several-many-flowered; bracts small, glabrous but ciliate, caducous; pedicels 2-4 mm. long, glabrous, sometimes with a few stipitate glands; calyx glabrous, its lobes subimbricate in the bud, narrow, ciliate, sometimes glandular on the margins; style glabrous; legume narrowly lunate, 1.5-2 cm. long, 6-7 mm. wide, with a cuneate base, densely glandular.

TYPE LOCALITY: El Campo Aleman, Lower California.
 DISTRIBUTION: Lower California.

3. *Larrea peninsularis* Britton, sp. nov.

Woody at base, herbaceous above, 2-3 dm. high, with numerous short slender interlocking sparingly pilose branches. Stipules small, ovate, acute; rachis of leaves pilose and bearing a few stipitate glands; pinnae 3, about equal; leaflets 3-6 pairs, 3-4 mm. long, somewhat pubescent, crowded and gland-tipped; racemes few-flowered, 4-5 cm. long; pedicels 1-2 mm. long, reflexed in fruit; calyx-lobes ovate, acute, 2-3 mm. long, ciliate; filaments pubescent; legume narrowly lunate, about 1.5 cm. long, 4-5 mm. wide, apiculate, puberulent, delicately veined.

Cucopa Mountains, Lower California, April 4, 1905, D. T. MacDougal 114.

4. *Larrea Drummondii* (T. & G.) Britton.

- Hoffmanseggia Drummondii* T. & G. Fl. N. Am. 1: 393. 1840.
Caesalpinia Drummondii E. M. Fisher, Bot. Gaz. 18: 123. 1893.

Suffrutescent, much branched, 1.5-2 dm. high, the slender branches glabrous, with a few scattered stipitate glands. Stipules ovate, entire or denticulate; pinnae 3, subdigitate; leaflets 4-6 pairs, elliptic, obtuse or retuse, 2-4 mm. long; calyx-lobes linear, glabrous or long-ciliate, 4 mm. long; racemes few-flowered; pedicels 3-4 mm. long; petals nearly sessile, the upper one broadest and glandular at base; filaments glandular below; legume lunate-ovate, glabrous, 2-seeded, 1-2 cm. long.

TYPE LOCALITY: Texas.
 DISTRIBUTION: Texas.

5. *Larrea texensis* (E. M. Fisher) Britton.

- Hoffmanseggia texensis* E. M. Fisher, Contr. U. S. Nat. Herb. 1: 147. 1892.
Caesalpinia texensis ["texana"] E. M. Fisher, Bot. Gaz. 18: 123. 1893.

Suffrutescent, 2 dm. high, intricately branched, the slender branches gray, finely pubescent, sparingly glandular. Leaves 10-18 mm. long; pinnae 3; leaflets 3-5 pairs, minute; peduncles 2-4 cm. long; racemes 2-5-flowered; filaments pubescent, eglandular; style slender; legume lunate, 1.5 cm. long, glabrous.

TYPE LOCALITY: On the Nueces River, Texas.
 DISTRIBUTION: Known only from the type locality.

6. *Larrea densiflora* (Benth.) Britton.

- Hoffmanseggia densiflora* Benth.; A. Gray, Pl. Wright. 1: 55. 1852.
Hoffmanseggia stricta Benth.; A. Gray, Pl. Wright. 1: 56. 1852.
Hoffmanseggia stricta demissa Benth.; A. Gray, Pl. Wright. 1: 56. 1852.
Hoffmanseggia falcaria stricta E. M. Fisher, Contr. U. S. Nat. Herb. 1: 144. 1892.
Hoffmanseggia falcaria Rusbyi E. M. Fisher, Contr. U. S. Nat. Herb. 1: 145. 1892.
Hoffmanseggia falcaria demissa E. M. Fisher, Contr. U. S. Nat. Herb. 1: 145. 1892.
Hoffmanseggia falcaria capitata E. M. Fisher, Contr. U. S. Nat. Herb. 1: 145. 1892.
Hoffmanseggia falcaria Pringlei E. M. Fisher, Contr. U. S. Nat. Herb. 1: 145. 1892.

- Caesalpinia falcaria stricta* E. M. Fisher, Bot. Gaz. 18: 122. 1893.
Caesalpinia falcaria densiflora E. M. Fisher, Bot. Gaz. 18: 122. 1893.
Caesalpinia falcaria Rusbyi E. M. Fisher, Bot. Gaz. 18: 122. 1893.
Caesalpinia falcaria Pringlei E. M. Fisher, Bot. Gaz. 18: 122. 1893.
Caesalpinia falcaria capitata E. M. Fisher, Bot. Gaz. 18: 122. 1893.

An herbaceous perennial, often with subterranean tubers; stems 1-3 dm. high, or lower, more or less diffuse, puberulent or glabrate. Stipules ovate, scarious; petiole and rachis often glandular; pinnae 5-11; leaflets 5-11 pairs, oblong, glabrous or puberulent, 3-8 mm. long, obtuse; inflorescence terminal, glandular, usually pubescent, 2 dm. long, few-many-flowered; bracts caducous; pedicels 2-5 mm. long; calyx-lobes 6-7 mm. long, oblong, pubescent and glandular; petals 10-12 mm. long, with long glandular claws; stamens shorter than the petals, glandular; legume falcate, apiculate, 2-4 cm. long, 5-8 mm. wide, more or less glandular, at least on the margins, glabrous or puberulent, reticulate-veined, several-seeded.

TYPE LOCALITY: Valley of the Pecos, Texas.

DISTRIBUTION: Kansas to Texas, California, Querétaro, Durango and Lower California.

7. *Larrea drepanocarpa* (A. Gray) Britton.

- Hoffmanseggia drepanocarpa* A. Gray, Pl. Wright. 1: 58. 1852.
Caesalpinia drepanocarpa E. M. Fisher, Bot. Gaz. 18: 122. 1893.

Perennial, herbaceous with a woody root, glandless throughout, the stems finely pubescent, usually caespitose, about 2 dm. high, or lower, slender. Stipules ovate, acute; petiole and rachis finely pubescent; pinnae 7-11; leaflets 4-10 pairs, oblong, pubescent; racemes longer than the leaves, slender, few-flowered; pedicels 2-5 mm. long; calyx-lobes linear, pubescent, 5-8 mm. long, persistent; petals slightly longer than the calyx, short-clawed; style subclavate; legume puberulent, reticulate-veined, 3-4 cm. long, strongly falcate, curved into part of a circle, rounded or obtuse at both ends, 6-11-seeded.

TYPE LOCALITY: Near El Paso, Texas.

DISTRIBUTION: Western Texas to Colorado, Arizona and Chihuahua.

8. *Larrea Watsonii* (E. M. Fisher) Britton.

- Caesalpinia Watsonii* E. M. Fisher, Bot. Gaz. 18: 122. 1893.
Hoffmanseggia Watsonii Rose, Contr. U. S. Nat. Herb. 10: 98. 1906.
Hoffmanseggia gracilis S. Wats. Proc. Am. Acad. 17: 347. 1882. Not Hook. & Arn. 1833.

Perennial, herbaceous, with a deep woody root; the stems, leaves and inflorescence eglandular. Stems slender, 5-16 cm. high, puberulent; stipules ovate, acute; leaflets 5-8 pairs, oblong, nearly glabrous, 4 mm. long; racemes loosely few-flowered; calyx-lobes finely puberulent, about 5 mm. long, obtuse; petals broad, short-clawed, not much longer than the calyx-lobes; legume linear-oblong, straight or nearly so, acute, 1.5-2.5 cm. long, 4-5 mm. wide, puberulent, 6-9-seeded, glandless, or with a few sessile glands.

TYPE LOCALITY: Sierra Madre, south of Saltillo, Coahuila.

DISTRIBUTION: Coahuila and Hidalgo.

9. *Larrea oxycarpa* (Benth.) Britton.

- Hoffmanseggia oxycarpa* Benth.; A. Gray, Pl. Wright. 1: 55. 1852.
Caesalpinia oxycarpa E. M. Fisher, Bot. Gaz. 18: 122. 1893.

Perennial, herbaceous, with a woody root, low, more or less diffuse, the branches 1-2 dm. long, rather densely villous, interspersed with stipitate glands. Stipules ovate, entire, scarious; petiole and rachis villous and more or less glandular; pinnae 7-13; leaflets 5-9 pairs, oblong, glabrous, 3-5 mm. long; raceme 6-15 cm. long, few-several-flowered; bracts ovate, pubescent, glandular, caducous; pedicels 1-3 mm. long; calyx-lobes obtuse, glandular; petals elliptic, short-clawed, nearly or quite glandless; legume falcate, acute or apiculate, about 3 cm. long, 6-8 mm. wide, pubescent and bearing many stipitate glands, 4-6-seeded.

TYPE LOCALITY: Calcareous hills and high prairies of the San Felipe and Live Oak Creeks, Texas.
 DISTRIBUTION: Southern Texas, Nuevo León and Coahuila.

10. *Larrea villosa* Britton, sp. nov.

Diminutive, herbaceous, the stem only about 2 cm. high, the leaves about 8 cm. long, the petioles, stipules, rachis and inflorescence villous and sparingly stipitate-glandular. Stipules ovate, acuminate; pinnæ 7-11; leaflets 5 or 6 pairs, oblong, sparingly villous, ciliate, 2-3 mm. long, obtuse or retuse, tipped by a short-stipitate gland; peduncle about as long as the leaves; raceme about as long as the peduncle, several-flowered; pedicels stipitate-glandular, 3-4 mm. long; calyx-lobes linear, villous and stipitate-glandular, 4 mm. long; petals narrowly obovate, eglandular, short-clawed, 5-6 mm. long; immature legume straight, narrowly oblong, densely short-pubescent, 16 mm. long, 4 mm. wide, apiculate, with a few short-stipitate glands on the margin.

Mountain slopes, Ixmiquilipán, Hidalgo, July 1905, *C. A. Purpus 1369a*.

11. *Larrea hidalgensis* Britton, sp. nov.

Diminutive, herbaceous, the stems only about 6 cm. long, or shorter, glabrous, sparingly stipitate-glandular. Stipules ovate, acute; petioles, rachis and inflorescence glabrous, stipitate-glandular; pinnæ 7-9; leaflets 5-7 pairs, oblong, obtuse, glabrous, 2.5-4 mm. long; peduncles shorter than the leaves or longer; raceme several-flowered; pedicels densely stipitate-glandular, 3-6 mm. long; calyx-lobes linear-oblong, glabrous, sparingly glandular, about 4 mm. long; petals obovate, short-clawed, sparingly stipitate-glandular below, 5-7 mm. long; legume linear, slightly falcate, 3 cm. long, 5 mm. wide, acute, glabrous, strongly reticulate-veined, bearing numerous slender processes on the valves, the margin eglandular.

Ixmiquilipán, Hidalgo. Type collected July 1905, *C. A. Purpus 1369*.

12. *Larrea arida* (Rose) Britton.

Hoffmanseggia arida Rose, Contr. U. S. Nat. Herb. 10: 98. 1906.

Stem diffuse, 1.5-2 dm. long, herbaceous, but sometimes woody at base, glabrous, sparingly short-stipitate-glandular. Stipules ovate, acute; petioles slender, bearing a few stipitate glands or eglandular; pinnæ 7-13; leaflets 4-8 pairs, oblong, 3-4 mm. long, glabrous; racemes erect or ascending, 1-2 dm. long, bearing many stipitate glands; bracts ovate, acuminate, ciliate; pedicels 4-7 mm. long, glandular; calyx-lobes acute, glandular, ciliate; legume linear-oblong, straight, 3-4 cm. long, 6 mm. wide, acute, glabrous, bearing numerous short-stipitate glands, strongly reticulate-veined.

TYPE LOCALITY: Deserts of Querétaro.

DISTRIBUTION: Querétaro.

ILLUSTRATION: Rose, loc. cit. *pl. 29*.

13. *Larrea potosina* Britton, sp. nov.

Stem only about 6 cm. high. Stipules ovate, acute or acuminate; petioles, rachis and inflorescence loosely pubescent and stipitate-glandular; pinnæ 9-13 pairs; leaflets 13-17 pairs, glabrous, nerveless, 2-3 mm. long; raceme several-flowered; pedicels 3-4 mm. long; calyx-tube obconic, the lobes narrowly oblong, sparingly pubescent and stipitate-glandular, about 4 mm. long; petals obovate, short-clawed, a little longer than the calyx; legume linear-oblong, about 2 cm. long, 4 mm. wide, obtuse, apiculate, short-appressed-pubescent, sparingly long-stipitate-glandular, reticulate-veined.

Dry, calcareous soil, Villar, San Luis Potosí, August 15, 1890, *C. G. Pringle 7367*.

14. *Larrea pueblana* Britton, sp. nov.

Stems very short. Stipules ovate-lanceolate, acuminate, pubescent; petioles, rachis and inflorescence short-pilose and stipitate-glandular; pinnæ 5-11; leaflets 5-8 pairs, oblong, obtuse, glabrous or ciliate, 5-8 mm. long, minutely subpapillose; peduncle about as long as the leaves, or shorter; raceme few-flowered; pedicels 4-6 mm. long, stipitate-glandular; calyx pilose and stipitate-glandular, its lobes about 4 mm. long; petals about 5 mm. long;

legume linear, straight, about 2 cm. long, 4-6 mm. wide, short-pubescent and strongly reticulate-veined, nearly eglandular.

Cerro de Coatepe, Puebla, near Oaxaca, August 1908, *C. A. Purpus 3220*.

15. *Larrea platycarpa* (Benth.) Britton.

Hoffmanseggia platycarpa Benth.; A. Gray, Pl. Wright. 1: 57. 1852.

Caesalpinia platycarpa E. M. Fisher, Bot. Gaz. 18: 122. 1893.

Stipules ovate, acute; pinnae 8-13; leaflets oblong, nerveless and glandless; calyx-lobes acute, hairy and glandular; petals ovate, scarcely clawed; legume broadly oblong, pubescent, hardly glandular.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Known only from the type locality, and to us from a photograph only.

16. *Larrea gladiata* (Benth.) Britton.

Hoffmanseggia gladiata Benth.; A. Gray, Pl. Wright. 1: 57. 1852.

Caesalpinia gladiata E. M. Fisher, Bot. Gaz. 18: 122. 1893.

Stipules ovate, acute; pinnae 7-13; leaflets oblong, without nerves or glands; calyx-lobes acute, hirsute and glandular; petals oblong, with very short claws; legume lanceolate, slightly incurved, hirtellous and sparingly glandular.

TYPE LOCALITY: Zimiapán, Hidalgo.

DISTRIBUTION: Known only from the type locality, and to us from a photograph only.

17. *Larrea glandulosa* (Cav.) Britton.

Pomaria glandulosa Cav. Ic. 5: 2. 1799.

Hoffmanseggia glandulosa T. & G. Fl. N. Am. 1: 392. 1840. Not Willd. 1837.

A shrub, 2 m. high or lower, the branches purple, puberulent and black-glandular. Stipules pinnatifid, caducous; pinnae 8 or 9; leaflets 6-8 pairs, oblong, 5-8 mm long, glabrous above, black-glandular-dotted and slightly hairy beneath; inflorescence glandular, 2 dm. long or shorter, many-flowered; bracts lanceolate, caducous; pedicels about 4 mm. long; calyx-lobes glandular; petals ovate; legume black-glandular-dotted, puberulent, about 2 cm. long, acute, oval-oblong.

TYPE LOCALITY: Querétaro.

DISTRIBUTION: Querétaro.

ILLUSTRATIONS: Cav. loc. cit. *pl. 402*; G. Don, Gen. Hist. 2: 434. *f. 56*.

18. *Larrea fruticosa* (S. Wats.) Britton.

Hoffmanseggia fruticosa S. Wats. Proc. Am. Acad. 21: 451. 1886.

Caesalpinia fruticosa E. M. Fisher, Bot. Gaz. 18: 123. 1893.

Shrubby, 1.8 m. high or less, the branches, foliage, and inflorescence canescent. Stipules lacinate; leaves small, about 2 cm. long, with 3 or 5 pinnae; leaflets 3 or 4 pairs, oblong, obtuse, 2-4 mm. long, black-glandular-dotted beneath; raceme terminal, short-peduncled, 5 cm. long; bracts lacinate; pedicels 5 mm. long, slender; calyx about 5 mm. long; legume lunate, 2.5 cm. long, finely appressed-pubescent, dotted with small black sessile glands, acute at both ends.

TYPE LOCALITY: Jimulco, Coahuila.

DISTRIBUTION: Coahuila.

19. *Larrea melanosticta* (Schauer) Britton.

Pomaria melanosticta Schauer, Linnaea 20: 748. 1847.

Hoffmanseggia melanosticta A. Gray, Pl. Wright. 1: 54. 1852.

Hoffmanseggia melanosticta Greggii E. M. Fisher, Contr. U. S. Nat. Herb. 1: 149. 1892.

Caesalpinia melanosticta E. M. Fisher, Bot. Gaz. 18: 123. 1893.

Caesalpinia melanosticta Greggii E. M. Fisher, Bot. Gaz. 18: 123. 1893.

A shrub, 4-6 dm. high, much branched, the branches villous, and with sessile black glands. Stipules purplish, pinnatifid, 6-8 mm. long, caducous; pinnae 5 or 7; leaflets 3 or 4 pairs, 4-8 mm. long, orbicular to elliptic, pubescent on both sides, black-glandular-dotted beneath;

racemes 1-2 dm. long, pubescent, several-many-flowered; bracts pinnatifid, purplish, caducous; pedicels 2-4 mm. long; calyx 5-6 mm. long, the lobes oblong, obtuse, pubescent and covered with black sessile glands; petals a little longer than the sepals, dark yellow to reddish; legume 2-2.5 cm. long, lunate, acute, the valves black-glandular and with stipitate, reddish stellate hairs.

TYPE LOCALITY: Zimapan, Hidalgo.

DISTRIBUTION: Southern Texas to Coahuila, Nuevo León, Hidalgo and Querétaro.

20. *Larrea Parryi* (E. M. Fisher) Britton.

Hoffmanseggia melanosticta Parryi E. M. Fisher, Contr. U. S. Nat. Herb. 1: 149. 1892.

Caesalpinia melanosticta Parryi E. M. Fisher, Bot. Gaz. 18: 123. 1893.

Stems slender, herbaceous, perhaps a little woody at base, 3-4 dm. high, villous. Stipules pinnatifid, 2-3 mm. long; petiole and rachis villous; pinnae 3-5; leaflets 2 or 3 pairs, short-oblong, 5-9 mm. long, pubescent on both sides, black-glandular-dotted beneath; raceme 8-15 cm. long, about 10-flowered; pedicels 3-4 mm. long; calyx about 8 mm. long, pubescent and covered with black sessile glands; petals a little longer than the calyx; ovary stellate-pubescent, with stipitate hairs and sessile glands; legume obliquely oblong, 2.5 cm. long, about 8 mm. wide, 3- or 4-seeded, copiously glandular-dotted, appressed-pubescent, its margins bearing slender ciliate processes.

TYPE LOCALITY: Below Cañon of San Carlos on the Rio Grande.

DISTRIBUTION: Known only from the type locality, in western Texas.

21. *Larrea Wootonii* Britton, sp. nov.

Suffrutescent, branched, about 4 dm. high, the branches, petioles, rachis and inflorescence densely short-pubescent and with black, sessile glands. Stipules nearly filiform, pubescent, about 5 mm. long; pinnae 5; leaflets 4 or 5 pairs, oblong-elliptic, 5-6.5 mm. long, pubescent on both sides, copiously black-glandular-dotted beneath; racemes 6-9 cm. long, several-flowered; fruiting pedicels 5-7 mm. long; flower-buds pubescent and black-glandular; legume obliquely oblong, about 1.5 cm. long and 6 mm. wide, densely short-pubescent and black-glandular-dotted, without marginal processes.

Chamal, Tamaulipas, June 25, 1919, E. O. Wooton.

22. *Larrea brachycarpa* (A. Gray) Britton.

Hoffmanseggia brachycarpa A. Gray, Pl. Wright. 1: 55. 1852.

Caesalpinia brachycarpa E. M. Fisher, Bot. Gaz. 18: 123. 1893.

Herbaceous, with a woody rootstock, branching at base and above, 1-3 dm. long, the branches sparingly pubescent, usually glandless. Stipules obovate, denticulate, caducous; pinnae 5 or 7; leaflets 3-5 pairs, elliptic, 3-6 mm. long, glabrous or nearly so, with many sessile black glands beneath; racemes 1 dm. long or less, 6-12-flowered; bracts obovate-oblong, 3-4 mm. long, lacerate, caducous; pedicels 3-5 mm. long; calyx 5-6 mm. long, pubescent, the lobes linear-lanceolate, glandular; petals a little longer than the calyx-lobes; stamens shorter than the calyx; legume oval to short-oblong, 12-20 mm. long, acute or cuspidate, puberulent or short-pubescent and sparingly black-glandular, 2-seeded, the margin with short processes.

TYPE LOCALITY: New Mexico, in error for southwestern Texas.

DISTRIBUTION: Southwestern Texas.

23. *Larrea multijuga* (S. Wats.) Britton.

Hoffmanseggia multijuga S. Wats. Proc. Am. Acad. 21: 451. 1886.

Caesalpinia multijuga E. M. Fisher, Bot. Gaz. 18: 193. 1893.

Rather stout, herbaceous, 6-10 dm. high, the branches, petioles, rachis and inflorescence bearing black subsessile glands. Stipules narrow, entire, caducous; pinnae 11-21; leaflets 5-8 pairs, oblong, 8 mm. long, obtuse, glabrous, black-glandular-dotted beneath; racemes axillary, 1.5-2.5 dm. long, many-flowered; bracts ovate, long-acuminate, black-dotted, caducous; pedicels 6-8 mm. long; calyx 8 mm. long, the lobes narrow, acute, densely covered with

black glands; petals about as long as the calyx; legume oblong, subrhombic, acute at each end, copiously black-glandular-dotted and with a few branched hairs, 2-2.5 cm. long, 11-12 mm. wide, 2-seeded.

TYPE LOCALITY: Chihuahua.

DISTRIBUTION: Rocky hills, Chihuahua.

24. *Larrea canescens* (E. M. Fisher) Britton.

Hoffmanseggia canescens E. M. Fisher, Contr. U. S. Nat. Herb. 1: 149. 1892.

Caesalpinia canescens E. M. Fisher, Bot. Gaz. 18: 123. 1893.

Herbaceous, or a little woody below, short-villous, 3-4 dm. high. Stipules linear, 4-5 mm. long, pinnatifid, caducous; pinnae 5-9; leaflets 4-7 pairs, oblong, 5-9 mm. long, canescent, black-glandular-dotted beneath; racemes 2-3 dm. long, 10-20-flowered; bracts linear, caducous; pedicels 2-4 mm. long, usually reflexed; calyx-lobes linear-lanceolate, pubescent, with many sessile black glands; petals 8 mm. long, a little longer than the calyx; legume oblong-falcate, 3-4 cm. long, about 7 mm. wide, more or less incurved, stellate-pubescent and black-glandular, and with setose processes.

TYPE LOCALITY: Saltillo, Coahuila.

DISTRIBUTION: Coahuila; San Luis Potosí.

25. *Larrea Jamesii* (T. & G.) Britton.

Hoffmanseggia Jamesii T. & G. Fl. N. Am. 1: 393. 1840.

Pomaria Jamesii Walp. Rep. 1: 811. 1842.

Hoffmanseggia Jamesii Popenoensis E. M. Fisher, Contr. U. S. Nat. Herb. 1: 150. 1892.

Caesalpinia Jamesii E. M. Fisher, Bot. Gaz. 18: 123. 1893.

Herbaceous or suffrutescent, with a woody spindle-shaped root 1-4 dm. long; stems 2-4 dm. high, appressed-canescent and glandular. Stipules linear, entire, 2-3 mm. long, caducous; pinnae 5-7; leaflets 4-10 pairs, ovate to short-oblong, 4-5 mm. long, canescent or glabrate above, canescent and black-glandular-dotted beneath; racemes lateral, 5-10 cm. long, 5-15-flowered; calyx-lobes linear-lanceolate, acute, pubescent and black-glandular; petals glandular, a little longer than the calyx; stamens shorter than the calyx; legume 2-2.5 cm. long, lunate, 2- or 3-seeded, cuneate at base, acute, black-dotted and with tufts of stellate hairs.

TYPE LOCALITY: Sources of the Canadian River [New Mexico].

DISTRIBUTION: Kansas to Texas, Colorado, Arizona, and California.

26. *Larrea montana* Britton, sp. nov.

Herbaceous, 4-6 dm. high, more or less branched, the branches, petioles, rachis, and inflorescence glabrate or puberulent, and bearing many small sessile black glands. Stipules 6-8 mm. long, pinnatifid, caducous; pinnae 8-13; leaflets 6-10 pairs, oblong, 5-8 mm. long, obtuse or acutish, glabrous or nearly so, black-glandular-dotted beneath; racemes terminal, elongated, much longer than the leaves, 1-2 dm. long, many-flowered; pedicels about 5 mm. long; calyx 5-6 mm. long, black-glandular; legume lunate, 2-2.5 cm. long, about 9 mm. wide, acute, densely covered with black sessile glands, and sprinkled with stellate hairs.

Jalisco and Zacatecas. Type from between Huejuguilla and Mesquintec, Jalisco, August 25, 1897, *J. N. Rose 2575*.

27. *Larrea humilis* (Mart. & Gal.) Britton.

Pomaria humilis Mart. & Gal. Bull. Acad. Brux. 10: 303. 1843.

Hoffmanseggia humilis Hemsl. Biol. Centr. Am. Bot. 1: 326. 1880.

A low shrub. Stipules ovate-lanceolate, acuminate, entire; petioles, peduncle and calyx glandular-pilose; leaflets about 6 pairs, elliptic, mucronulate, pilose beneath; raceme axillary, many-flowered, a little shorter than the leaves, the flowers and fruit deflexed; legume oval-elliptic, flat, pilose, apiculate.

TYPE LOCALITY: Calcareous mountains north of Tehuacan, Puebla.

DISTRIBUTION: Known only from type locality and to us from description only.

63. **MOPARIA** Britton & Rose, gen. nov.

A densely pubescent, eglandular, unarmed perennial herb, with creeping woody rootstocks, bipinnate leaves of few pinnae, the leaflets small, veinless, the large flowers in short, terminal racemes, the pedicels not jointed, the narrow bracts caducous. Calyx-tube short, the lobes 5, narrow. Petals 5, narrowly obovate, short-clawed, eglandular. Stamens 10; filaments distinct. Ovary subsessile. Legume ovate to broadly oblong, few-seeded, its valves nearly membranous.

Type species, *Caesalpinia repens* Eastwood.

1. **Moparia repens** (Eastwood) Britton & Rose.

Caesalpinia repens Eastwood, *Zoe* 4: 116. 1893.

Hoffmanseggia repens Cockerell, *Muhlenbergia* 4: 68. 1908.

Caespitose, 9–13 cm. high. Stipules ovate, scarious; pinnae 5–7, approximate, 1–2 cm. long; leaflets 4–7 pairs, oblong, obtuse, appressed-pubescent, 5–7 mm. long; inflorescence longer than the leaves, few-flowered; pedicels 2–6 mm. long; calyx-lobes narrowly oblong-lanceolate, pubescent, about 8 mm. long; petals 8–12 mm. long, tapering into a short claw; stamens about as long as the petals; legume puberulent, 2–3.5 cm. long, 1–1.5 cm. broad, scarcely oblique, strongly irregularly transversely veined.

TYPE LOCALITY: Court House Wash, near Moab, southeastern Utah.

DISTRIBUTION: Southern Utah.

ILLUSTRATION: Eastwood, loc. cit. *pl.* 26.

64. **SCHRAMMIA** Britton & Rose, gen. nov.

A low, branched shrub, with bipinnate leaves, the few pinnae with few or several small, strongly veined, black-glandular-dotted leaflets, the terminal pinna much longer than the lateral ones. Racemes terminal, elongated, loosely several-many-flowered, the pedicels not jointed, the small, denticulate bracts caducous. Calyx-tube very short; lobes 5, broad, reflexed, deciduous. Petals 5, elliptic to narrowly obovate, short-clawed, glandular. Stamens 10, the filaments filiform, pilose. Style slender; stigma slightly dilated. Legume obliquely elliptic, short-tipped, chartaceous, black-glandular-dotted and with marginal short-stalked glands, elastically dehiscent.

Type species, *Hoffmanseggia caudata* A. Gray.

1. **Schrammia caudata** (A. Gray) Britton & Rose.

Hoffmanseggia caudata A. Gray, *Bost. Journ. Nat. Hist.* 6: 179. 1850.

Caesalpinia caudata E. M. Fisher, *Bot. Gaz.* 18: 123. 1893.

Stems slender, glabrous, 3–5 dm. high, the branches bearing a few black glands. Leaves glabrous; pinnae 3–9, the lateral pairs distant, 2–4 cm. long, of few pairs of leaflets, the terminal pinna 4–6 cm. long, with 9–11 pairs; leaflets broadly ovate, subcordate, chartaceous, 2.5–6 mm. long, acute, glabrous, sparingly black-glandular-dotted, strongly palmately and pinnately few-veined and sparingly reticulated; racemes 2 dm. long, or shorter, glabrous, black-dotted; bracts ovate, membranous, 2 mm. long; pedicels spreading or ascending, glandular, 4–6 mm. long; calyx densely appressed-puberulent and glandular, 6–7 mm. long; petals about twice as long as the calyx; legume 2–4 cm. long, 10–17 mm. wide.

TYPE LOCALITY: Between the Nueces and the Rio Grande, Texas.

DISTRIBUTION: Southwestern Texas and New Mexico.

65. **HAEMATOXYLON** L. Sp. Pl. 384. 1753.

Glabrous, thorny or unarmed trees or shrubs, with red or yellow wood, evenly pinnate leaves, the leaflets mostly obcordate, the stipules persistent or deciduous, the showy yellow, minutely bracted flowers in loose, axillary racemes. Calyx-tube very short, its 5 segments imbricated, somewhat unequal. Petals 5, oblong, spreading, somewhat unequal. Stamens 10, distinct; filaments pilose at the base; anthers all alike. Ovary short-stipitate, 2–3-ovuled; style filiform; stigma terminal, small. Legume flat, membranous, oblong, linear or lanceolate,

not dehiscence along the sutures, but splitting through the middle of the valves. Seeds transverse, oblong; endosperm none; cotyledons 2-lobed.

Type species, *Haematoxylon campechianum* L.

Racemes elongated, many-flowered; pedicels short.
Racemes short, few-flowered; pedicels long.

1. *H. campechianum*.
2. *H. boreale*.

1. *Haematoxylon campechianum* L. Sp. Pl. 384. 1753.

A tree, up to about 8 m. high, or sometimes shrubby, with spreading branches, the trunk rigid, the bark smooth and light gray, the twigs slender, Thorns 5-15 mm. long; leaves petioled, 5-10 cm. long; leaflets 2-4 pairs, chartaceous, cuneate-obovate, 1-3 cm. long, finely many-veined, usually rather deeply emarginate, shining above; racemes several-many-flowered, narrow and elongated, short-peduncled, 2-5 cm. long; pedicels filiform, spreading, 4-6 mm. long; stamens about as long as the narrowly obovate petals; petals 5-7 mm. long; legume oblong, delicately veined, 2-5 cm. long, 8-12 mm. wide, very thin, often pointed at both ends.

TYPE LOCALITY: Campeche.

DISTRIBUTION: West Indies; Yucatán; Campeche to Honduras.

ILLUSTRATIONS: Lam. Ill. pl. 340; Tussac. Fl. Ant. 4: pl. 36; Descourt. Fl. Ant. pl. 73.

2. *Haematoxylon boreale* S. Wats. Proc. Am.

Acad. 21: 426. 1886.

A shrub or tree, 4-6 m. high, the twigs often zigzag and thorny, the thorns 2 cm. long or shorter. Leaves short-petioled; leaflets mostly 3 pairs, obovate-cuneate, chartaceous, pinnately many-veined, usually emarginate or orbiculate, 0.5-2.5 cm. long; racemes short-peduncled, few-several-flowered, broad and short; pedicels filiform, spreading, 10-20 mm. long; stamens nearly as long as the obovate petals; petals 6-8 mm. long; legume linear to oblong, thin, veiny, 2-6 cm. long, 8-10 mm. wide, obtuse or acutish.

TYPE LOCALITY: Hacienda San Miguel, Chihuahua.

DISTRIBUTION: Chihuahua and Sonora to Veracruz and Nicaragua.

66. *LIBIDIBIA* Schlecht. Linnaea 5: 192. 1830.

Unarmed trees, with unevenly bipinnate leaves, the leaflets small and numerous, the small, bractless, yellow flowers in axillary and terminal racemes or panicles. Calyx with a turbinate tube and 5 recurved, nearly equal or unequal segments. Petals 5, about as long as the calyx, one of them reflexed. Stamens 10, somewhat longer than the petals; anthers all alike. Stigma terminal. Legume oblong, twisted, curled or straight, several-seeded, indehiscent. Seeds oblong, compressed-turgid, smooth.

Type species, *Poinciana coriaria* Jacq.

Leaflets many pairs, 5-9 mm. long; legume twisted.
Leaflets 3 or 4 pairs, 10-18 mm. long; legume straight.

1. *L. coriaria*.
2. *L. sclerocarpa*.

1. *Libidibia coriaria* (Jacq.) Schlecht. Linnaea 5: 193. 1830.

Poinciana coriaria Jacq. Sel. Stirp. Am. 123. 1763.

Caesalpinia coriaria Willd. Sp. Pl. 2: 532. 1799.

Caesalpinia thomaea Spreng. Syst. 2: 343. 1825.

A tree, up to 10 m. high, with spreading, crooked branches, the slender brown twigs glabrous or puberulent. Leaves 1-2 dm. long; petioles and rachis tomentulose; pinnae 4-10 pairs and a terminal one, short-stalked; leaflets 12-28 pairs, 4-8 mm. long, linear-oblong, obtuse at the apex, subcordate or truncate at the base, glabrous and dull on both sides, usually with one or more black dots beneath; flower-clusters shorter than the leaves; pedicels glabrous, 2-4 mm. long; calyx about 5 mm. long; petals spatulate; legume 3-6 cm. long, 1-2 cm. wide, twisted; seeds 6-7 mm. long.

TYPE LOCALITY: Curaçao.

DISTRIBUTION: Jamaica; Hispaniola; Porto Rico; St. Thomas to Montserrat; Curaçao; Bonaire; Aruba; Sinaloa to Panama; Colombia and Venezuela.

ILLUSTRATIONS: Jacq. Sel. Stirp. Am. pl. 175, f. 36; ed. pict. pl. 260, f. 33.

2. *Libidibia sclerocarpa* (Standley) Britton & Rose.

Caesalpinia sclerocarpa Standley, Contr. U. S. Nat. Herb. 20: 214. 1919.

A tree, 10-14 m. high, the slender twigs glabrous. Pinnae 2 pairs and an odd one; leaflets 3 or 4 pairs, glabrous, elliptic or oblong, 10-18 mm. long, membranous, rounded or retuse at apex, obtuse at base; inflorescence racemose, compact, 4-7 cm. long; pedicels 2-3 mm. long; calyx fulvous-puberulent, the tube 3-4 mm. broad, the lobes unequal; petals about 7 mm. long; filaments villous below; legume woody, 3.5-8 cm. long, rounded at both ends, glabrous, nearly black, short-beaked, short-stipitate, straight.

TYPE LOCALITY: Between San Geronimo and La Venta, Oaxaca.

DISTRIBUTION: Sinaloa to Jalisco and Oaxaca.

67. *NICARAGO* Britton & Rose, gen. nov.

A prickly shrub or tree, the prickles sometimes few or wanting on some branches, the bipinnate leaves with few large and broad leaflets, the yellow flowers in terminal racemes or narrow panicles. Calyx-segments imbricated, the lower one cucullate, entire or erose. Petals 5, a little longer than the calyx. Stamens 10; anthers all alike. Legume compressed, oblong, straight, fleshy, several-seeded, indehiscent.

Type species, *Caesalpinia vesicaria* L.

1. *Nicarago vesicaria* (L.) Britton & Rose.

Caesalpinia vesicaria L. Sp. Pl. 381. 1753.

Poinciana bijugata Jacq. Enum. 20. 1760.

Poinciana bijuga L. Sp. Pl. ed. 2, 544. 1762.

Caesalpinia bijuga Sw. Obs. 166. 1791.

Acacia Bancroftiana Bert.; Colla. Hort. Ripul. 1. 1824.

A much-branched shrub or tree, up to about 7 m. high, the twigs and leaves glabrous, armed with few prickles 4-8 mm. long, or unarmed. Leaves 1-2.5 dm. long; pinnae 2 or 3 pairs, stalked; leaflets 1-3 pairs, obliquely cuneate-ovate, subcoriaceous, 1-4 cm. long, subtruncate or emarginate at the apex, narrowed or obtuse at the base, dark green and shining above, pale and rather dull beneath; racemes simple or compound, mostly as long as the leaves or longer; pedicels slender, 6-9 mm. long; calyx 8-9 mm. long; petals a little longer than the calyx; stamens about as long as the petals, the filaments densely villous; legume 4-6 cm. long, 12-20 mm. wide, about 4 mm. thick, pubescent when young, becoming glabrous; seeds few, orbicular, shining, brown.

TYPE LOCALITY: Tropical America [Jamaica].

DISTRIBUTION: Yucatán; Bahamas; Jamaica; Cuba; Hispaniola. Reported from Curaçao.

ILLUSTRATION: Sloane, Hist. Jam. *pl.* 181, *f.* 2, 3.

68. *TICANTO* Adans; Medic. Theod. 51. 1786.

An elongated, glabrous, woody vine, the abruptly bipinnate leaves armed with recurved prickles, the rather small yellow flowers racemose, the leaflets few and large. Calyx-tube short, the 5 segments much imbricated, the lower one cucullate, partly enclosing the others in bud. Petals 5, obovate, similar. Stamens 10, declined, short, all alike; filaments villous below. Legume obliquely oval-orbicular, hard, compressed, woody, indehiscent, 1-seeded. Seed compressed.

Type species, *Guilandina Nuga* L.

1. *Ticanto Nuga* (L.) Medic. Theod. 52. 1786.

Guilandina Nuga L. Sp. Pl. ed. 2, 546. 1762.

Caesalpinia Nuga Ait. Hort. Kew. ed. 2, 3: 32. 1811.

Stems slender, climbing or trailing, sometimes 20 m. long or longer, the branches flexuous. Leaves large, up to 3 or 4 dm. long, the rachis armed with small prickles; pinnae 4-8, distant; leaflets 4-6, ovate to oblong, subchartaceous, acute or obtuse, 2.5-5 cm. long, reticulate-veined; racemes axillary and in terminal panicles, many-flowered, 10-20 cm. long; pedicels 6-8 mm. long, spreading or ascending, jointed under the flower; calyx-lobes about 6 mm. long; petals a

little longer than the calyx-lobes; stamens somewhat longer than the petals; legume 4-5 cm. long, short-beaked, short-stipitate.

TYPE LOCALITY: Amboina.

DISTRIBUTION: Naturalized in southern Florida after cultivation. Native of the East Indies and Australia.

ILLUSTRATION: Rumph. Herb. Amb. 5: pl. 50.

69. RUSSELLODENDRON Britton & Rose, gen. nov.

A prickly tree or shrub, with bipinnate leaves, broad and rather small leaflets, the large yellow flowers in elongated racemes. Calyx-segments unequal, imbricated, the lower one hooded, lacerate or fimbriate. Petals 5, somewhat irregular, clawed. Stamens 10; anthers oblong. Stigma capitate. Legume turgid or subterete, broadly linear, torulose, indehiscent, several-seeded. Seeds turgid, smooth.

Type species, *Caesalpinia Cacalaco* H & B..

1. *Russelodendron Cacalaco* (H. & B.) Britton & Rose.

Caesalpinia Cacalaco H. & B. Pl. Aequin. 2: 173. 1817.
Couleria mexicana DC. Prodr. 2: 481. 1825.

A shrub or a large tree, the branches bearing stout, broad-based prickles, usually glabrous. Leaves large, the rachis often prickly; pinnae 2-5 pairs; leaflets elliptic to obovate or suborbicular, glabrous, short-stalked, subchartaceous, 1-2.5 cm. long, rounded or retuse; racemes 1-3 dm. long, glabrous or puberulent, many-flowered; lower petals yellow, about 1 cm. long, the upper one red or blotched with red; legume 10-15 cm. long, 8-10 mm. thick, constricted between the seeds, brownish, puberulent or at length glabrous; seeds about 8 mm. broad.

TYPE LOCALITY: Between Chilpancingo and Zumpango, Guerrero.

DISTRIBUTION: Sinaloa to Puebla and Oaxaca.

ILLUSTRATION: H. & B. loc. cit. pl. 137.

70. TARA Molina, Sagg. Chili ed. 2, 153. 1810.

Prickly trees or shrubs, the leaves evenly bipinnate, the leaflets mostly large. Stipules wanting. Flowers in elongated racemes. Calyx-tube short, the segments imbricated, the 4 upper nearly equal, the lower one large, cucullate, fimbriate or lacerate. Petals orbicular, spreading, yellow. Stamens 10. Style filiform. Legume compressed, coriaceous, indehiscent, several-seeded. Seeds flattened.

Type species, *Tara tinctoria* Molina.

1. *Tara spinosa* (Molina) Britton & Rose.

Poinciana spinosa Molina, Sagg. Chili 158. 1782.
Caesalpinia pectinata Cav. Descr. 467. 1802.
Tara tinctoria Molina, Sagg. Chile ed. 2, 153. 1810.
Couleria tinctoria H.B.K. Nov. Gen. & Sp. 6: 331. 1824.
Caesalpinia spinosa Kuntze, Rev. Gen. 3²: 54. 1898.

A tree or large shrub, the prickles short, the twigs, petioles, rachis and racemes puberulent. Leaves 3-4 dm. long; pinnae 2-4 pairs; leaflets 4-7 pairs, oblong, 2-4 cm. long, rounded or retuse, glabrate, sessile, oblique at base; racemes 1-2 dm. long, densely many-flowered; pedicels 5-12 mm. long, jointed toward the top; flowers about 1 cm. broad; legume 8-12 cm. long, 2-2.5 cm. wide, glabrous when mature; seeds 8-10 mm. in diameter.

TYPE LOCALITY: Lima, Peru.

DISTRIBUTION: Cuba, Colombia and Venezuela to Peru, Chile and Bolivia.

ILLUSTRATIONS: H.B.K. loc. cit. pl. 568, 569; Feuill. Journ. Obs. pl. 39.

71. BRASILETTIA (DC.) Kuntze, Rev. Gen. 164. 1891.

Caesalpinia § *Brasilettia* DC. Prodr. 2: 481. 1825.

Trees or shrubs, unarmed. Leaves large, twice pinnate; leaflets few or several, large; stipules wanting. Inflorescence racemose, axillary or terminal. Calyx-tube short, the 4 upper segments nearly equal, the lower one elongated, cucullate, and glandular-lacerate. Petals

yellow, nearly equal, tapering into a claw. Stamens 10, about as long as the petals. Style filiform; stigma small, not peltate. Legume indehiscent, oblong, flat and thin, wingless. Seeds few, flattened.

Type species, "*Caesalpinia brasiliensis* L." [*Robinia violacea* Mill.]

Legume glabrous, or puberulent when young, or pubescent only on the margins.

Stipe of the legume slender, 8-13 mm. long.

Stipe of the legume short, stout, about 4 mm. long, or shorter.

Leaflets ovate to elliptic or oblong-lanceolate, 2.5-6 cm. long.

Foliage sparsely pubescent; legume elliptic, 7-9 cm. long.

Foliage glabrous; legume oblong, 7-14 cm. long.

Leaflets oblong, 2-4 cm. long.

Leaflets narrowed at base, glabrous or nearly so; rachis glabrate.

Leaflets rounded or obtuse at base, pubescent beneath; rachis tomentose.

Legume densely velvety-pubescent.

Legume 4-7 cm. long, its stipe 4-6 mm. long; leaf-rachis tomentose.

Legume 10-15 cm. long, its stipe 10-15 mm. long.

Leaf-rachis and leaflets densely tomentose.

Leaf-rachis and leaflets densely pilose.

1. *B. violacea*.

2. *B. platyloba*.

3. *B. glabra*.

4. *B. blasiana*.

5. *B. pubescens*.

6. *B. Pringlei*.

7. *B. velutina*.

8. *B. pilosa*.

1. *Brasilettia violacea* (Mill.) Britton & Rose.

Robinia violacea Mill. Gard. Dict. ed. 8, no. 8. 1768.

Caesalpinia brasiliensis Sw. Obs. 166. 1791. Not L. 1753.

Peltophorum Linnaei Benth. Journ. Bot. Hook. 2: 75. 1840.

Brasilettia brasiliensis Kuntze, Rev. Gen. 164. 1891.

Caesalpinia cubensis Greenm. Trans. Acad. St. Louis 7: 416. 1897.

Peltophorum brasiliense Urban, Symb. Ant. 2: 285. 1900.

? *Peltophorum Linnaei managuensis* Goyena, Fl. Nicar. 1: 365. 1909.

A tree, 5-27 m. high, with a trunk 2-13 dm. in diameter, the branches pubescent when young, but soon glabrate. Pinnae 2-4 pairs; leaflets 6-8 pairs, shining and glabrous or puberulent above, dull and glabrous or pubescent beneath, elliptic to oblong or ovate, 2-5 cm. long, obtuse or acute; racemes 10-15 cm. long; petals 6-7 mm. long, 4 of them short-clawed; stamens shorter than the petals; legume glabrous, on the margins pubescent, 6-10 cm. long, 2.5-3 cm. broad, rounded at apex, the stipe 8-13 mm. long.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica; Cuba; Yucatán.

ILLUSTRATIONS: Sloane, Hist. Jam. pl. 231, f. 3, 4; Fawcett & Rendle, Fl. Jam. 4: f. 31; Greenm. loc. cit. pl. 32.

2. *Brasilettia platyloba* (S. Wats.) Britton & Rose.

Caesalpinia (?) *platyloba* S. Wats. Proc. Am. Acad. 21: 425. 1886.

A tree, 4 m. high or less, the twigs puberulent, the young leaves densely pubescent. Pinnae 2-4 pairs; rachis loosely pilose or glabrous; leaflets 5-7 pairs, elliptic to oblong or ovate, obtuse, or acutish, 2-5 cm. long, sparingly pubescent; racemes about 5 cm. long; fruiting pedicels 12-15 mm. long; legume elliptic, 7-9 cm. long, 3-4 cm. wide, glabrous, 3-5-seeded, the stipe 1-2 mm. long.

TYPE LOCALITY: Hacienda San Miguel, near Batopilas, Chihuahua.

DISTRIBUTION: Chihuahua and Sinaloa.

3. *Brasilettia glabra* Britton & Rose, sp. nov.

A tree, with glabrous or puberulent twigs. Pinnae 3 or 4 pairs; leaflets 4-6 pairs, glabrous on both sides, oblong-lanceolate to ovate, 3-6 cm. long, acutish or obtuse, shining above, dull beneath; fruiting raceme stout, glabrous, the stout pedicels about 1 cm. long; legume 7-14 cm. long, about 3 cm. wide, glabrous, faintly shining, its stout stipe 2-3 mm. long.

Colima (and Guerrero?). Type from Colima, January 9 to February 6, 1891, *E. Palmer* 1010.

4. *Brasilettia blasiana* (M. E. Jones) Britton.

Caesalpinia blasiana M. E. Jones, Contr. West. Bot. 15: 141. 1929.

A shrub, with short, slender twigs densely puberulent when young, soon glabrous. Rachis and petiole sparingly short-pubescent; pinnae 2 or 3 pairs; leaflets 4-6 pairs, oblong, 1.5-2.5 cm.

long, 1-1.5 cm. wide, glabrous above, sparingly pubescent on the midvein beneath, the base narrowed, the apex rounded or obtuse, the petioles short but distinct; fruiting raceme short-pubescent, the pedicels 1.5-2 cm. long; legume 6-9 cm. long, 3-4 cm. wide, nearly glabrous when mature, its stout stipe about 4 mm. long.

TYPE LOCALITY: San Blas, Sinaloa.

DISTRIBUTION: Known only from the type locality.

5. *Brasilettia pubescens* Britton, sp. nov.

Twigs densely puberulent; petioles and rachis densely short-pilose; pinnae 2 or 3 pairs; leaflets 5-7 pairs, oblong, 2-4 cm. long, obtuse, rounded or acutish at the apex, obtuse or rounded at the base, pubescent on both sides or glabrate above, nearly sessile; young inflorescence densely puberulent, about 12 cm. long; pedicels 8-15 mm. long; calyx densely puberulent, the lacerate, lower lobe about 14 mm. long; legume oblong to elliptic, puberulent or glabrous, 7-11 cm. long, 3-4 cm. wide.

Sinaloa and Chihuahua. Type from vicinity of Guadalupe, Sinaloa, April 18, 1910, *Rose, Standley & Russell 14763*.

6. *Brasilettia Pringlei* Britton & Rose, sp. nov.

A tree, 5-7 m. high, much branched, the twigs softly pubescent when young but glabrate in age. Pinnae 2 or 3 pairs; leaflets 4-6 pairs, oblong, 3-5 cm. long, obtuse, glabrous above except along the midvein, softly and densely pubescent beneath; inflorescence a short axillary raceme, very pubescent; legume elliptic, 4-7 cm. long, 2-2.5 cm. wide, softly pubescent, rounded at apex, narrowed at base into a slender stipe 4-6 mm. long.

San Luis Potosí. Type from limestone hills, Las Palmas, July 8, 1896, *C. G. Pringle 6356*.

7. *Brasilettia velutina* Britton & Rose, sp. nov.

A small tree, the twigs, petioles, rachis and young leaflets densely short-pubescent. Pinnae 2-4 pairs; leaflets 5-7 pairs, oblong to elliptic, obtuse, 2-5 cm. long; legume oblong, 10-15 cm. long, 2.5-3 cm. wide, velvety-pubescent, its slender stipe 10-15 mm. long.

Oaxaca; Guatemala. Type from El Rancho, Jalapa, Guatemala, January 12, 1908, *W. A. Kellerman 7044*.

8. *Brasilettia pilosa* Britton & Rose, sp. nov.

Leaf-rachis loosely pilose. Pinnae 2 or 3 pairs, ovate to elliptic, obtuse or acutish, 3-6 cm. long, sparingly pubescent above, pilose beneath; fruiting pedicels about 1.5 cm. long; legume 10-12 cm. long, 2-3.5 cm. wide, densely velvety-pubescent, the stout stipe 10-13 mm. long.

Sinaloa. Type from Ymala, September 25 to October 8, 1891, *E. Palmer 1682*.

72. GUAYMASIA Britton & Rose, gen. nov.

A low shrub, the leaves with few, stalked pinnae and few broad leaflets, the flowers racemose. Lower calyx-lobe elongated, cucullate, lacerate, the others much shorter, fimbriate. Petals narrow, shorter than the lower calyx-lobe. Stamens 10 (or 12 ?), a little shorter than the petals, the filaments pilose, the anthers versatile. Ovary 1- or few-ovuled; style short. Legume suborbicular to broadly oval, flat, apiculate, 1- or 2-seeded, slender-stipitate, apparently indehiscent. Seeds flat, orbicular.

Type species, *Caesalpinia gracilis* Benth.

1. *Guaymasia pumila* Britton & Rose.

Caesalpinia gracilis Benth.; Hemsl. Diag. Pl. Nov. 9. 1878. Not Miquel. 1855.

Branches slender, the twigs purplish, puberulent but soon glabrous. Petioles 1-4 cm. long; pinnae 2 or 3 pairs; leaflets 2-4 pairs, suborbicular, 6-15 mm. long, becoming chartaceous, glabrous; racemes glabrous, few-flowered; pedicels slender, 1-1.5 cm. long; calyx pubescent, its lower lobe about 12 mm. long, narrowly oblong, the others 6-7 mm. long; petals

bright yellow, narrowly obovate, about 8 mm. long; legume 3-4 cm. long, nearly as wide as long, glabrous, eglandular, the stipe about 6 mm. long.

TYPE LOCALITY: Sonora Alta, Sonora.

DISTRIBUTION: Sonora.

73. POINCIANA L. Sp. Pl. 380. 1753.

A shrub or small tree, sometimes prickly, with evenly bipinnate leaves, and orange or yellow, showy flowers in panicles or racemes, the bracts early deciduous or none. Calyx-tube short, the 5 lobes imbricated, unequal, the lowest one the largest, cucullate. Petals 5, large, long-clawed, unequal. Stamens 10, distinct, long-exserted; anthers longitudinally dehiscent. Ovary sessile, several-ovuled; style slender; stigma small, terminal. Legume linear or linear-oblong, flat, 2-valved. Seeds transverse; endosperm none.

Type species, *Poinciana pulcherrima* L.

1. *Poinciana pulcherrima* L. Sp. Pl. 380. 1753.

Caesalpinia pulcherrima Sw. Obs. 166. 1791.

A glabrous shrub or small tree, up to about 5 m. high, the branches prickly. Leaves 3 dm. long or less, unarmed, the petiole and lower part of the rachis stout, the upper part of the rachis very slender; pinnae 3-9 pairs, short-stalked; leaflets 5-12 pairs, thin, very short-stalked, oblong to oblong-obovate, bright green above, pale beneath, 1-2 cm. long, 7-10 mm. wide, rounded or subtruncate and mucronulate at the apex, obtuse at the base; racemes large, terminal and axillary; pedicels slender, 5-8 cm. long; lower cucullate calyx-lobe about 1.5 cm. long; petals orange or yellow, 1.5-2.5 cm. long; stamens 5-6 cm. long; legume flat, broadly linear, 12 cm. long or less, 14-18 mm. wide, somewhat oblique, pointed at both ends, its valves subcoriaceous, glabrous, twisting after dehiscence; seeds compressed.

TYPE LOCALITY: India.

DISTRIBUTION: All tropical regions, where it is widely cultivated, and naturalized, its origin unknown.

ILLUSTRATIONS: Bot. Mag. pl. 995; Maund, Botanist pl. 151; Vell. Fl. Flum. Ic. 4: pl. 90.

74. CAESALPINIA L. Sp. Pl. 380. 1753.

Prickly or unarmed shrubs or trees, usually eglandular, with evenly bipinnate leaves and racemose flowers, the bracts commonly early deciduous or none. Pedicels jointed. Calyx-tube mostly short, the segments or lobes imbricated, the lower one usually cucullate, partly enclosing the others in the bud. Petals 5, small, imbricated, eglandular, more or less unequal, mostly yellow or red. Stamens 10, declined, exserted; anthers all alike, longitudinally dehiscent. Ovary sessile, or stipitate. Legume chartaceous or coriaceous, flat or compressed, elastically dehiscent. Seeds transverse; endosperm none.

Type species, *Caesalpinia brasiliensis* L.

Leaflets pinnately and reticulate-veined.

Petioles 2-10 mm. long; pinnae 1 or 2 pairs.

Leaflets 3-6 pairs; petioles 5-10 mm. long.

Prickly; pedicels 2-3.5 cm. long; calyx-tube obconic.

Unarmed, or nearly so; pedicels 1-2.5 cm. long; calyx-tube semi-globose.

Leaflets 1-3 pairs; petiole 2 mm. long.

Petioles mostly 1.5-3 cm. long; pinnae 2-7 pairs.

Branches prickly.

Pinnae 5-7 pairs; pedicels 5-7 mm. long; large tree; flowers violet.

Pinnae 2-4 pairs; pedicels longer; shrubs or small trees.

Flowers white or whitish; pedicels 9-12 mm. long.

Flowers yellow or greenish-yellow; pedicels 10-25 mm. long.

Plants nearly or quite unarmed.

Leaflets strongly reticulate-veined; legume 6-9 cm. long.

Leaflets finely reticulate-veined; legume 10-13 cm. long.

Lateral venation of the leaflets none, or obscure.

Leaves slender-petioled; pinnae 2-6 pairs.

Stamens about 10 mm. long.

Stamens 20-25 mm. long.

Pedicels 10-13 mm. long; flowers red.

Pedicels 15-20 mm. long; flowers yellow.

Leaves sessile, or very nearly so; pinnae 1 pair.

1. *C. domingensis*.

2. *C. aracantha*.

3. *C. monensis*.

4. *C. barahonensis*.

5. *C. brasiliensis*.

6. *C. bahamensis*.

7. *C. reticulata*.

8. *C. secundiflora*.

9. *C. pauciflora*.

10. *C. Buchii*.

11. *C. Rosei*.

12. *C. sessilifolia*.

1. *Caesalpinia domingensis* Urban, Symb. Ant. 2: 279. 1900.

Glabrous, the branches terete, prickly, the prickles 3-8 mm. long. Leaves unarmed, with 1 or 2 pairs of pinnae; petiole 5-10 mm. long; leaflets 3-5 pairs, narrowly obovate, emarginate, 8-15 mm. long, strongly reticulate-veined on both sides, minutely glandular-punctate beneath; racemes terminal, many-flowered; pedicels 2-3.5 cm. long, jointed near the top; calyx-tube obovate; petals yellowish-granular, truncate, shorter than the calyx.

TYPE LOCALITY: Santo Domingo.
DISTRIBUTION: Hispaniola.

2. *Caesalpinia anacantha* Urban, Arkiv Bot. 20^b: 11. 1926.

A glabrous shrub, unarmed or nearly so. Petioles 5-10 mm. long; pinnae 1 or 2 pairs; leaflets 4-6 pairs, obovate to elliptic, obtuse, rounded or emarginate, 10-17 mm. long, finely reticulate-veined; raceme terminal, up to 2 dm. long, many-flowered; pedicels 1-2 cm. long, jointed near the top; calyx-tube semi-globose, 4 mm. long; petals nearly rectangular, truncate, shorter than the calyx.

TYPE LOCALITY: Trou d'Eau, Morne à Cabrits, Haïti.
DISTRIBUTION: Haïti.

3. *Caesalpinia monensis* Britton; Britton & Wilson, Sci. Surv. Porto Rico & Virgin Ids. 5: 377. 1924.

A branched shrub, about 2 m. high, the twigs rather copiously armed with paired straight stipular prickles 5-9 mm. long. Leaves unarmed; petioles only about 2 mm. long; pinnae a single pair; petiolules longer than the petioles; leaflets 1-3 pairs, 5-8 mm. long, elliptic to obovate-elliptic, chartaceous, glabrous, emarginate, pinnately few-veined; racemes terminal, 8-16-flowered; pedicels secund, very slender, curved, 2-3 cm. long, jointed near the top, glabrous; flowers greenish yellow; calyx-tube broadly campanulate, 5 mm. long, the lower segment about 8 mm. long, and twice as long as the others; petals shorter than the calyx-segments; filaments pubescent, nearly twice as long as the lower calyx-segment.

TYPE LOCALITY: Mona Island.
DISTRIBUTION: Known only from the type locality.

4. *Caesalpinia barahonensis* Urban, Symb. Ant. 7: 509. 1913.

A tree, 20 m. high, the branches armed with curved prickles 2-3 mm. long, the twigs, petioles, and rachis sparingly pubescent. Leaves 2-2.5 dm. long; petiole stout, 1.5-3.5 cm. long; pinnae 5-7 pairs; leaflets 8-20, alternate, obovate to short-oblong, 1-2.2 cm. long, rounded at apex, glabrous on both sides, delicately reticulate-veined; inflorescence a terminal raceme, 15-23 cm. long, many-flowered; bracts 5-6 mm. long, ovate, caducous; pedicels jointed at the top, 5-7 mm. long; flowers violet; calyx-tube 4 mm. long, the lower lobe 10-12 mm. long; petals about 4 mm. long; stamens 20-25 mm. long; ovary short-stipitate.

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

5. *Caesalpinia brasiliensis* L. Sp. Pl. 380. 1753.

A glabrous shrub or tree, up to 7 m. high, the branches very prickly, the nearly straight prickles about 2 mm. long. Petiole 1.5-2.5 cm. long; pinnae 2 or 3 pairs; leaflets 3-4 pairs, ovate to elliptic or obovate, 2-3 cm. long, rounded, subtruncate or emarginate, chartaceous, reticulate-veined; inflorescence one or more terminal racemes; pedicels slender, jointed near the top, 9-12 mm. long; stamens twice as long as the largest calyx-lobe or longer; flowers white or greenish; legume narrow, 7-8 cm. long, about 15 mm. wide.

TYPE LOCALITY: Hotte Roche, Haïti.
DISTRIBUTION: Type locality and vicinity.
ILLUSTRATION: Plumier, Pl. Am. pl. 68.

6. *Caesalpinia bahamensis* Lam. *Encycl.* 1: 461. 1785.

Caesalpinia Rugeliana Urban, *Symb. Ant.* 2: 277. 1900.

A prickly shrub or small tree, up to about 4 m. high, the twigs glabrous or pubescent. Leaves 8–25 cm. long, the rachis sometimes prickly; pinnae 2–4 pairs; leaflets 3–6 pairs, obovate to oblong or elliptic, 1–4 cm. long, emarginate or rounded at apex, narrowed or obtuse at base; inflorescence elongated, glabrous or pubescent; bractlets 2–3 mm. long, caducous; pedicels 1–2.5 cm. long, jointed near the top; calyx about 9 mm. long, puberulent; petals yellowish green; stamens 2 or 3 times as long as the calyx, bearing brown scurfy scales below; egume oblong, 5–7 cm. long, about 1 cm. wide, glabrous, stipitate, acuminate.

TYPE LOCALITY: Bahamas.

DISTRIBUTION: Bahamas; Cuba; Isle of Pines.

ILLUSTRATION: Catesby, *Nat. Hist. Car.* 2: *pl.* 51.

7. *Caesalpinia reticulata* Britton, *Bull. N. Y. Bot. Gard.* 4: 118. 1906.

A shrub or small tree, 2–4 m. high, unarmed, or the trunk bearing a few prickles near the base, the twigs puberulent. Petioles 1.5–3 cm. long; pinnae 2 or 3 pairs; leaflets 2–6 pairs, oval to obovate, more or less oblique, 1.5–5 cm. long, glabrous, strongly reticulate-veined, shining above, rounded, truncate, or retuse at apex; racemes 1.5–2 dm. long, many-flowered, glabrous; pedicels 1–2 cm. long jointed near the top; flowers yellowish white; legume oblong, 6–9 cm. long, 1.5 cm. wide, stipitate.

TYPE LOCALITY: Inagua, Bahamas.

DISTRIBUTION: Eastern and southern Bahamas.

8. *Caesalpinia secundiflora* Urban, *Arkiv Bot.* 21A⁵: 92. 1927.

An unarmed shrub, the twigs short-pilose. Stipules lanceolate, about 1 mm. long; petioles 2 cm. long or shorter; leaves 10–12 cm. long, the pinnae 3 or 4 pairs; leaflets 4–6 pairs, obovate, subchartaceous, subtruncate or emarginate, 2–3 cm. long, 1–1.5 cm. wide, or the lower ones much smaller, shining above, dull and finely reticulate-veined beneath, the lateral veins 6–8; inflorescence terminal, many-flowered, the flowers secund; bracts 1.5 mm. long, deciduous; pedicels about 12 mm. long, jointed near the top; calyx-tube broadly campanulate, glabrous, 4 mm. long; petals yellow, shorter than the calyx-segments; longer stamens 27 mm. long; legume glabrous, short-stipitate, 10–13 cm. long, 14–18 mm. wide.

TYPE LOCALITY: Coquillages, Tortuga Island, Haïti.

DISTRIBUTION: Known only from the type locality.

9. *Caesalpinia pauciflora* (Griseb.) C. Wright; *Souv. Anal. Acad. Habana* 5: 404. 1869.

Libidibia pauciflora Griseb. *Cat. Pl. Cub.* 78. 1866.

Poinciana pauciflora Small, *Flora SE. U. S.* 591. 1903.

A slender prickly shrub, 1–2 m. high, glabrous throughout, the older stems armed with broad, corky-based prickles about 1 cm. long. Leaves 3–7 cm. long; pinnae 2–6 pairs; leaflets 4–6 pairs, oblong to orbicular, 6–12 mm. long, membranous, 1-veined, obtuse or retuse; pedicels 1–2.5 cm. long, jointed near the top; outer sepal 4 or 5 mm. long; petals 6–7 mm. long; stamens 8–10 mm. long, hairy below; legume obliquely oblong, 2–3.5 cm. long, 8–10 mm. wide, obliquely finely reticulate-veined, short-stipitate.

TYPE LOCALITY: Cuba.

DISTRIBUTION: Cuba, Hispaniola, and Keys of Florida.

10. *Caesalpinia Buchii* Urban, *Symb. Ant.* 7: 510. 1913.

A shrub or tree, 2–8 m. high, the branches prickly, glabrous. Pinnae 4–6 pairs; leaflets 4–7 pairs, obovate to oval, 5–10 mm. long, emarginate, glabrous, the midvein rather prominent, the lateral venation very obscure or none; racemes terminal, 5–10 cm. long; pedicels 5–10 mm. long, jointed near the top; flowers red; outer sepal 7–8 mm. long, glandular-punctate, ciliate;

petals about 12 mm. long; stamens about 2 cm. long; ovary stipitate, 4-ovuled; legume oblong-linear, 5 cm. long, 10-11 mm. wide, short-beaked, glabrous.

TYPE LOCALITY: Between Gonaives and Grasmorne, Haiti.
DISTRIBUTION: Haiti.

11. *Caesalpinia Rosei* Urban, Repert. Sp. Nov. 15: 314. 1918.

A prickly, glabrous shrub, 2-3 m. high, with weak branches. Leaves 1-1.5 dm. long; pinnae 5-6; leaflets 4-6 pairs, membranous, oblong, 8-13 mm. long, truncate or emarginate at apex, pale beneath, the midvein rather prominent, the lateral venation obscure; raceme 8-15 cm. long, loosely several-flowered; pedicels slender, jointed near the top, 1.5-2 cm. long; lower sepal 10-12 mm. long; petals yellow, a little longer than the calyx; filaments 2.5 cm. long.

TYPE LOCALITY: Azua, Santo Domingo.
DISTRIBUTION: Known only from the type locality.

12. *Caesalpinia sessilifolia* S. Wats. Proc. Am. Acad. 21: 450. 1886.

Poinciana sessiliflora Rose, Contr. U. S. Nat. Herb. 13: 303. 1911.

A prickly, glabrous shrub, 1-1.5 m. high; branches brown or reddish brown, somewhat glaucous. Leaves sessile or nearly so with a single pair of pinnae; leaflets 2 or 3 pairs, orbicular to elliptic, 7-12 mm. long, rounded or retuse at apex; raceme terminal, more or less prickly, 5-10 cm. long; pedicels 5-8 mm. long, jointed beneath the flower; larger sepal 8-10 mm. long, the petals about as long; stamens a little longer than the petals, hairy below; legume oblong to elliptic, 2-2.5 cm. long, 10-12 mm. wide, acute or acuminate, glabrous.

TYPE LOCALITY: Bolsón de Mapimi, Coahuila.
DISTRIBUTION: Coahuila; Durango.

EXCLUDED SPECIES.

CAESALPINIA GLABRATA H.B.K. Nov. Gen. & Sp. 6: 326. 1824.

Originally from northern Peru, between Caxamarca and Magdalena. It was credited to Mexico by Hemsley.

75. *ERYTHROSTEMON* Link, Klotsch & Otto, Ic. Pl. 97. pl. 39. 1843.

An unarmed shrub or small tree, glandular throughout. Leaves large, twice pinnate, the pinnae with numerous small leaflets, the stipules ovate to orbicular, the margins toothed or lacerate. Inflorescence terminal; bracts deciduous, large, serrate; pedicels elongated. Flowers very large; calyx-tube small, turbinate, oblique at the mouth, the lobes nearly equals serrate. Petals 5, spreading. Stamens 10, several times longer than the petals; anther, versatile. Ovary sessile; style very long. Legume flat, glandular, 2-valved, the valves thin, elastic.

Type species, *Poinciana Gilliesii* Hook.

1. *Erythrostemon Gilliesii* (Hook.) Link, Klotsch & Otto, Ic. Pl. 97. 1843.

Poinciana Gilliesii Hook. Bot. Misc. 1: 129. 1829.
Caesalpinia Gilliesii Wallich; Hook. Bot. Misc. 1: 129, as synonym. 1829.
Caesalpinia macrantha Delile, Ind. Sem. Hort. Monsp. 1838: 3. 1838.

A shrub, or a tree, 10 m. high or lower. Leaves 1-3 dm. long; pinnae 7-15; leaflets 7-10, oblong, 5-8 mm. long, glabrous, with a row of black glands on the under side near the margin; inflorescence 1-3 dm. long; pedicels 2-3 cm. long; calyx-lobes oblong, thin, pubescent, 2 cm. long; petals obovate, about 3 cm. long, pale yellow; filaments bright red, 10-12 cm. long; legume 6-8 cm. long, obliquely oblong-oblancoleate

TYPE LOCALITY: Near Río Cuarto, Argentina.
DISTRIBUTION: Texas, New Mexico and Arizona, naturalized after cultivation. Native of Argentina and Chile.
ILLUSTRATIONS: Link, Klotsch & Otto, loc. cit. pl. 39; Sweet, Brit. Fl. Gard. pl. 311; Hook. Bot. Misc. pl. 34; Bot. Mag. pl. 4006.

- Leaflets ovate to oblong, obovate or suborbicular, nearly equilateral, the midvein nearly central.
- Leaflets rather sparingly glandular beneath; legume (as far as known) eglandular.
- Leaflets 1-2.5 cm. long, 5-13 mm. wide; pinnae 5 or 7. Foliage glabrous; leaflets coriaceous, subglaucous beneath, shining above.
- Leaf-rachis and pedicels short-pubescent; leaflets chartaceous or membranous, green on both sides.
- Leaflets rounded or subtruncate at the base. Leaflets obliquely narrowed at the base.
- Leaflets 5-12 mm. long; shining above.
- Leaflets coriaceous, oblong; pinnae 5-9.
- Leaflets membranous or chartaceous, elliptic to obovate or suborbicular; pinnae 9-19.
- Leaflets linear-oblong, copiously black-glandular-dotted beneath; legume 5-6 cm. long, copiously black-glandular.
- b. Leaflets with marginal glands only, few and small; legume 3 cm. long, bearing large, sessile black glands.
- B. Leaves simply pinnate; leaflets black-dotted beneath.
- Leaflets 2-4 pairs; petals 17 mm. long.
- Leaflets 4-9 pairs; petals 8-12 mm. long.
- Leaflets oblong, strongly reticulate-veined; racemes short.
- Leaflets ovate or elliptic, delicately reticulate-veined; racemes elongated.
- B. Inflorescence pseudolateral, on short young twigs; ovary 2-ovuled; leaflets epunctate.
2. Prickly shrub of Hispaniola; leaflets with marginal black glands.
23. *P. subglaucula*.
24. *P. Hornei*.
25. *P. Clementis*.
26. *P. myabensis*.
27. *P. pellucida*.
28. *P. Ortegae*.
29. *P. melanadenia*.
30. *P. pinnata*.
31. *P. oblongifolia*.
32. *P. savannarum*.
33. *P. nipensis*.
34. *P. glandulosa*.

1. *Poincianella exostemma* (DC.) Britton & Rose.

Caesalpinia exostemma DC. Prodr. 2: 483. 1825.

? *Poinciana compressa* Sessé & Mocino; G. Don. Gen. Hist. 2: 433. 1832.

? *Caesalpinia compressa* D. Dietr. Syn. Pl. 2: 1494. 1840.

A shrub or tree, glabrous throughout. Pinnae 3 or 4 pairs; leaflets 3 or 4 pairs, ovate, about 1.5 cm. long, obtuse; racemes about 15-flowered; pedicels about 1 cm. long, jointed near the top; calyx and stamens reddish; calyx-segments ovate-elliptic, obtuse, well imbricated, about 7 mm. long; petals suborbicular, somewhat longer than the calyx; filaments declined, slender, about 2.5 cm. long, about twice as long as the petals, hairy throughout, not glandular; legume 8-12 cm. long, 1.5-2 cm. broad, acute, puberulent.

TYPE LOCALITY: Mexico.

DISTRIBUTION: Southern Mexico and Guatemala.

ILLUSTRATION: Mocino & Sessé, Calq. Dess. Fl. Mex. pl. 218.

2. *Poincianella affinis* (Hemsl.) Britton & Rose.

Caesalpinia affinis Hemsl. Diag. Pl. Nov. 8. 1878.

A shrub or tree, up to 4 m. high, the twigs, petioles and rachis short-pilose. Pinnae 2-4 pairs; leaflets 4-6 pairs, oblong to obovate, 1.5-2.5 cm. long, obtuse, softly pubescent, at least beneath; racemes glabrous, 7-12 cm. long; pedicels 1-1.6 cm. long, jointed near the top; calyx glabrous, about 12 mm. long, its lobes about as long as the tube, elliptic, obtuse; petals obovate to suborbicular, 13-17 mm. long, reddish, narrowed at base; filaments about twice as long as the petals, declined, curved, somewhat hairy; ovary pubescent; legume oblong, 6-8 cm. long, puberulent.

TYPE LOCALITY: Guatemala.

DISTRIBUTION: Guatemala.

3. *Poincianella Konzattii* (Rose) Britton & Rose.

Poinciana Konzattii Rose, Contr. U. S. Nat. Herb. 13: 303. 1911.

A shrub or a tree, 5-7 m. high, the twigs and foliage glabrous. Pinnae 3-5; leaflets 4 or 6 pairs, oblong to obovate, 1.5-2.5 cm. long, obtuse; racemes several-many-flowered, densely puberulent; pedicels 10-15 mm. long, jointed above the middle; calyx about 13 mm. long, densely puberulent, its lobes oblong, obtuse; petals obovate, eglandular, reddish yellow, about

twice as long as the calyx-lobes; stamens long-exserted, 2.5–3 cm. long; legume oblong, somewhat curved, 5–9 cm. long, puberulent, eglandular; seeds flat, about 8 mm. broad.

TYPE LOCALITY: Tehuantepec, Oaxaca.

DISTRIBUTION: Oaxaca to Nicaragua and El Salvador.

4. *Poincianella laxa* (Benth.) Britton & Rose.

Caesalpinia laxa Benth. Pl. Hartw. 60. 1840.

A shrub, 1 m. high or higher, the twigs and young petioles pilose, the plant otherwise glabrous. Pinnae 6–9; leaflets 6–9 pairs, 6–8 mm. long, oval to elliptic, obtuse or retuse at both ends; raceme terminal; calyx colored; corolla about half as long as the stamens; filaments hairy at base, the inner ones glanduliferous above the middle.

TYPE LOCALITY: Tejomulco, Oaxaca.

DISTRIBUTION: Definitely known only from the type locality.

5. *Poincianella Recordii* Britton & Rose.

Caesalpinia Recordii Britton & Rose, Tropical Woods 7: 6. 1926.

A shrub or small tree, the twigs, petioles, rachis and inflorescence pubescent. Pinnae 2–5 pairs; leaflets 2–6 pairs, oblong, obtuse, chartaceous, glabrous above, pale and softly pubescent beneath, eglandular; racemes 2.5–3.5 dm. long, many-flowered; bracts ovate, acuminate, pubescent, 4–6 mm. long, caducous; pedicels 15–20 mm. long, jointed near the middle; calyx 7–8 mm. long, densely puberulent, the lobes elliptic, obtuse, about 8 mm. long; petals about 10 mm. long, purplish with yellow margins, the outer ones covered with sessile glands; stamens only a little longer than the petals, densely long-lanate below; ovary densely pubescent; legume obliquely oblong, acute, sessile, finely pubescent, 6–10 cm. long, 2–2.5 cm. wide, both margins outcurved.

TYPE LOCALITY: British Honduras.

DISTRIBUTION: Known only from the type locality.

6. *Poincianella acapulcensis* (Standley) Britton & Rose.

Caesalpinia acapulcensis Standley, Contr. U. S. Nat. Herb. 20: 213. 1919.

A shrub or small tree with terete brown branches, the twigs densely stipitate-glandular when young. Leaves glabrous; petioles 2–3 cm. long, sparingly glandular; pinnae either odd or even, 2 or 3 pairs; leaflets 1 or 2 pairs, oval to suborbicular, 2–4 cm. long, chartaceous, reticulate-veined, obtuse or rounded at apex, somewhat oblique, glabrous; inflorescence racemose or racemose-paniculate, densely stipitate-glandular; pedicels 5–11 mm. long; calyx densely glandular, its lobes nearly alike, elliptic, 6 mm. long; petals obovate, 8–10 mm. long; stamens a little longer than the petals; legume obliquely oblong, acute, sessile, 6.5–7.5 cm. long, minutely pilose, eglandular, about 1.5 cm. wide.

TYPE LOCALITY: Acapulco, Guerrero.

DISTRIBUTION: Known only from the type locality.

7. *Poincianella caladenia* (Standley) Britton & Rose.

Caesalpinia caladenia Standley, Contr. U. S. Nat. Herb. 20: 214. 1919.

A shrub or small tree, the twigs and leaves glabrous or nearly so, sometimes stipitate-glandular. Petioles 1–3 cm. long; pinnae 5–9; leaflets 2–4 pairs, oblong to obovate, reticulate-veined, 1–2.6 cm. long, glabrous; racemes usually densely stipitate-glandular, many-flowered; pedicels 6–16 mm. long, jointed near the top; calyx pilose, its lobes 6–8 mm. long; petals obovate, 10–12 mm. long; stamens as long as or a little longer than the petals; legume oblong, scarcely pointed, 4.5–6.5 cm. long, 1.2–1.6 cm. wide, velvety and dotted with sessile glands.

TYPE LOCALITY: Minas Nuevas, Sonora.

DISTRIBUTION: Sonora to Colima.

8. *Poincianella Standleyi* Britton & Rose, sp. nov.

A shrub with grayish branches, the young twigs short-pilose. Petioles very slender, 2-3 cm. long, sometimes bearing stipitate glands; pinnae 5-9; leaflets 2 or 3 pairs, oblong to obovate, obtuse, submembranous, pinnately veined, glabrous, or pubescent on the veins, 8-12 mm. long; racemes several-many-flowered; pedicels 8-15 mm. long, slender, jointed near the top; calyx puberulent, its lobes nearly alike, about 8 mm. long; petals obovate to suborbicular, about 10 mm. long, clawed, stipitate-glandular below; stamens somewhat longer than the petals; legume velvety-pubescent, eglandular, obliquely oblong, 4-7 cm. long, 1.5-2 cm. wide; seeds elliptic, 9-10 mm. long.

Tepic, Nayarit, and Sinaloa. Type from Acaponeta, Tepic, April 9, 1910, *Rose, Standley & Russell 14190*.

9. *Poincianella tampicoana* Britton & Rose, sp. nov.

A tree or shrub, the young twigs, petioles and rachis short-pilose or glabrate. Petioles 1.5-2.5 cm. long; pinnae 3 pairs; leaflets 3-5 pairs, oblong, obtuse, submembranous, 1.5-2.5 cm. long, pinnately veined, glabrous above, pubescent, or glabrate beneath; racemes short, puberulent, few-flowered; pedicels 1-2 cm. long, jointed near the top; calyx finely puberulent, its lobes very broadly elliptic, rounded, nearly alike, 10-11 mm. long; petals broadly obovate, clawed, 12-13 mm. long, eglandular, or one of them with a few sessile glands near the base; filaments somewhat longer than the petals; legume scythe-shaped, 6-8 cm. long, about 2 cm. wide, densely short-pubescent, eglandular.

Vicinity of Pueblo Viejo, Veracruz, near Tampico, June 1, 1910, *E. Palmer 556*.

10. *Poincianella yucatanensis* (Greenman) Britton & Rose.

Caesalpinia yucatanensis Greenman, Field Mus. Publ. Bot. 2: 252. 1907.

A tree, 3-5 m. high, or shrubby, the young twigs puberulent. Petioles 2-6 cm. long; pinnae 4-7; leaflets 2-4 pairs, elliptic to oblong, 2-3.5 cm. long, rounded at apex, reticulate-veined, glabrous; racemes 5-15 cm. long, densely velutinous; pedicels 1.5-2 cm. long, jointed a short distance below the flower; calyx-lobes broadly oblong, about 8 mm. long, obtuse, velutinous; petals oblong to oblong-obovate, about 15 mm. long, clawed, glandular below; stamens about as long as the petals; legume oblong, somewhat curved, sessile, 6-12 cm. long, 2-2.5 cm. wide, short-pubescent and very short-stipitate-glandular.

TYPE LOCALITY: Izamál, Yucatán.

DISTRIBUTION: Yucatán.

11. *Poincianella mexicana* (A. Gray) Britton & Rose.

Caesalpinia mexicana A. Gray, Proc. Am. Acad. 5: 157. 1862.

Poinciana mexicana Rose, Contr. U. S. Nat. Herb. 13: 303. 1911.

A small tree, sometimes 10 m. high, the twigs, foliage and inflorescence glabrous. Stipules small, ovate, scarious, with lacerate margin (at least in very young plants), caducous; petioles 2-6 cm. long; pinnae 5-9; leaflets 4 or 5 pairs, submembranous, orbicular to oblong, 10-22 mm. long, rounded, reticulate-veined; racemes many-flowered, usually terminal, 1-3 dm. long; pedicels slender, 10-22 mm. long, jointed near the top; calyx-segments oblong, 6-10 mm. long; petals obovate, 9-12 mm. long, their claws stipitate-glandular; stamens (sometimes 5 or 6) about as long as the petals; ovary puberulent; legume oblong, 5-6 cm. long, pubescent or glabrate, usually dotted with sessile glands at least toward the base.

TYPE LOCALITY: Nuevo León.

DISTRIBUTION: Southern Texas to Chihuahua, Tamaulipas and San Luis Potosí.

12. *Poincianella Robinsoniana* Britton & Rose, sp. nov.

Caesalpinia mexicana pubescens Rob. & Greenm. Proc. Am. Acad. 29: 386. 1894.

A shrub with grayish glabrous twigs. Petioles slender, glabrous, purplish, 2-4 mm. long; pinnae 3 or 5; leaflets 2 or 3 pairs, elliptic or oval, rounded, 12-30 mm. long, pubescent on both

sides, delicately reticulate-veined, pale beneath; racemes 1-1.5 dm. long, glabrous; pedicels slender, 5-8 mm. long, glabrous, jointed near the top; calyx-lobes oblong, glabrous, about 7 mm. long, one or more of them bearing marginal glands; petals obovate, about 10 mm. long, their claws sparingly glandular; stamens about as long as the petals; ovary velvety; legume obliquely oblong, 5-6 cm. long, 14-16 mm. wide, glabrate, eglandular.

TYPE LOCALITY: Zapotlán, Jalisco.

DISTRIBUTION: Known only from the type locality.

13. *Poicniana Nelsonii* Britton & Rose, sp. nov.

A slender shrub, glabrous throughout. Leaves about 1 dm. long with widely separated, 4-7 pinnae; petioles very slender, 2.5-6 cm. long; leaflets oblong to obovate, 1-2 cm. long, glabrous, acute, or apiculate, reticulate-veined; racemes 0.6-2 dm. long; pedicels slender, 10-15 mm. long, jointed at the top; calyx-lobes oblong, rounded, 5-6 mm. long; petals about 9 mm. long, broadly obovate to suborbicular, their claws stipitate-glandular, the upper one bearing many sessile glands; stamens a little longer than the petals; ovary velvety; legume obliquely oblong, 5 cm. long, 1.5 cm. wide, short-pubescent, eglandular.

Between Copala and Juchitango, Oaxaca, February 9, 1905, E. W. Nelson 2303.

14. *Poicniana californica* (A. Gray) Britton & Rose.

Caesalpinia mexicana californica A. Gray, Proc. Am. Acad. 5: 157. 1861.

Poicniana californica Rose, Contr. U. S. Nat. Herb. 13: 303. 1911.

Caesalpinia californica Standley, Contr. U. S. Nat. Herb. 23: 426. 1922.

A shrub with glabrous branches, foliage and inflorescence. Petioles 1.5-3 cm. long; pinnae 2 or 3 pairs; leaflets usually 4 pairs, oblong to broadly oval, 6-18 mm. long, obtuse or retuse, the midvein rather prominent, the lateral venation obscure; racemes often elongated, 1-3.5 cm. long; pedicels slender, 8-12 mm. long, jointed near the base; calyx-segments oblong, 5-6 mm. long, glabrate, ciliate; petals obovate, about 8 mm. long, bearing many sessile glands; stamens not much longer than the petals; legume oblong-lunate, puberulent, eglandular, 4-5 cm. long, 10-15 mm. wide, apiculate.

TYPE LOCALITY: Near Cape San Lucas, Lower California.

DISTRIBUTION: Southern Lower California.

15. *Poicniana pannosa* (Brand.) Britton & Rose.

Caesalpinia pannosa Brand. Proc. Calif. Acad. II. 2: 150. 1889.

Poicniana pannosa Rose, Contr. U. S. Nat. Herb. 13: 303. 1911.

A shrub, 1-2 m. high, the slender branches glabrous or nearly so. Petioles 1-3 cm. long; pinnae 3-5; leaflets 2 or 3 pairs, oblong to obovate, retuse, entire, 3-12 mm. long, the lateral venation none, or obscure; racemes several-many-flowered; bracts ovate, acuminate; pedicels slender, 8-15 mm. long, jointed below the middle, short-stipitate-glandular, or some of them eglandular; calyx-tube mostly short-stipitate-glandular, its lobes oblong, all similar, 5-6 mm. long, obtuse, pubescent or ciliate but not glandular; petals obovate, about 7 mm. long, dotted with sessile glands; stamens about 10 mm. long; ovary densely glandular; legume oblong, sublunate, 3 cm. long, 12-15 mm. wide, glabrous or puberulent, copiously black-glandular-dotted.

TYPE LOCALITY: San Jorge, Lower California.

DISTRIBUTION: Lower California.

16. *Poicniana placida* (Brand.) Britton & Rose.

Caesalpinia placida Brand. Proc. Calif. Acad. II. 3: 131. 1891.

Poicniana placida Rose, Contr. U. S. Nat. Herb. 13: 303. 1911.

A shrub, 1-2 m. high, dark brown, the twigs glabrous. Leaves 2-3 cm. long; petiole, rachis and inflorescence stipitate-glandular; pinnae 3; leaflets 4-6 pairs, oblong, obtuse, 7 mm. long, subpapillose, crenulate; raceme 6-12 cm. long with 10-15 flowers; pedicels 1.5 cm. long or less, jointed above the middle; calyx-lobes 6 mm. long, ovate, obtuse, dark red, glandular, all similar; petals longer than the calyx, glandular below; stamens 10, shorter than the

petals; ovary densely covered with sessile or short-stalked glands; legume about 4 cm. long, 1 cm. broad, oblong, falcate, bearing numerous reddish stipitate glands, minutely beaked.

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

17. *Poincianella Palmeri* (S. Wats.) Britton & Rose.

Caesalpinia Palmeri S. Wats. Proc. Am. Acad. 24: 47. 1889.

A shrub, 1.5–4.5 m. high, the twigs and foliage glabrous. Petioles slender, about 2 cm. long, or shorter; pinnae 3–9; leaflets 2 or 3 pairs, oblong to elliptic, obtuse, 5–8 mm. long, the lateral venation wholly obscure; racemes few-flowered, short, nearly sessile, eglandular; pedicels puberulent or short-pubescent, 8–15 mm. long, jointed near the top; calyx densely puberulent or short-pubescent, its lobes all nearly alike, rather broadly oblong, 6–7 mm. long; petals obovate to suborbicular, 9–11 mm. long, clawed, stipitate-glandular below, one of them also dotted with subsessile glands; stamens 10–12 mm. long; legume sublunate, 3–5 cm. long, 10–15 mm. wide, apiculate, pubescent, black-glandular-dotted.

TYPE LOCALITY: Guaymas. Sonora.
DISTRIBUTION: Sonora and Sinaloa.

18. *Poincianella arida* Britton & Rose, sp. nov.

A shrub, 1–2 m. high, the slender twigs glabrous, the petioles and rachis loosely short-pilose. Petioles very slender, 2–2.5 cm. long; pinnae 3–7; leaflets 2 or 3 pairs, oblong to elliptic, glabrate above, pubescent beneath, 5–10 mm. long, membranous, sparingly and delicately pinnately veined; inflorescence 1-few-flowered, densely pilose; pedicels only 4–6 mm. long, jointed under the flower; bracts oblong, 3–4 mm. long, deciduous; calyx-segments oblong, 6–8 mm. long, pilose, glandular-margined, well imbricated; petals obovate to suborbicular, about as long as the calyx-segments or a little shorter, short-clawed, densely glandular below the middle; stamens apparently somewhat shorter than the petals.

Rocky hillside, vicinity of Hermosillo, Sonora, March 7, 1910, *Rose, Standley & Russell 12508*.

19. *Poincianella phyllanthoides* (Standley) Britton & Rose.

Caesalpinia phyllanthoides Standley, Contr. U. S. Nat. Herb. 23: 425. 1922.

A shrub, 3–4 dm. high, the slender branches brown, glabrous. Leaves 5–9 cm. long, twice pinnate, glabrous; petioles filiform, 1.5–3 cm. long; pinnae 7–9, filiform-stalked; leaflets 2–3 pairs, orbicular to oval, pinnately veined, 3–7 mm. long, glabrous; racemes terminal, puberulent, few-flowered; pedicels puberulent and somewhat glandular; calyx-lobes oblong, about equal, 7 mm. long, puberulent and glandular, the margins bearing stipitate glands; petals obovate, 7–8 mm. long, their claws sparingly stipitate-glandular; stamens somewhat declined, about as long as the petals; legume flat, oval-suborbicular, 2.5 cm. long, glabrous except a few scattered dark sessile glands, elastically dehiscent; seeds 1 or 2.

TYPE LOCALITY: Hacienda Buena Vista, Tamaulipas.
DISTRIBUTION: Known only from the type locality.

20. *Poincianella eriostachys* (Benth.) Britton & Rose.

Caesalpinia eriostachys Benth. Bot. Voy. Sulph. 88. 1844.
Schicobolium Covilleannum Pittier, Contr. U. S. Nat. Herb. 18: 231. 1917.

A shrub or small tree, 6–18 m. high, the foliage and inflorescence stellate-pubescent; pinnae 11–17; leaflets 15–23, alternate or subopposite, orbicular to short-oblong, 5–15 mm. long, obtuse, very oblique at base, pubescent or glabrate, black-dotted beneath; inflorescence an elongated several many-flowered raceme, densely stellate-pubescent; pedicels 6–15 mm. long; calyx 10–15 cm. long, its lobes densely brown-stellate-tomentose without, softly velvety within; petals bright yellow, about 1.5 cm. long; filaments about as long as the petals, hairy and glandular; ovary velvety-pubescent; legume oblong, coriaceous, 10–12 cm. long, 2 cm. broad, glabrous, straight or somewhat curved.

TYPE LOCALITY: Costa Rica.
DISTRIBUTION: Sinaloa to Oaxaca and Panama; Cuba.

21. *Poincianella Gaumeri* (Greenman) Britton & Rose.

Caesalpinia Gaumeri Greenman, Field Mus. Publ. Bot. 2: 330. 1912.

A tree, up to 20 m. high, unarmed, the twigs glabrous. Stipules thin, obovate, 4-8 mm. long, caducous; petioles and rachis glabrous or puberulent; pinnae 4-9; leaflets 5-9, opposite or alternate, obliquely oblong to obovate, 1-3 cm. long, reticulate-veined, glabrous, or pubescent on the veins and black-dotted beneath, the midvein excentric; racemes 1-1.5 dm. long, glabrous or puberulent; pedicels slender, 8-14 mm. long, jointed above the middle; calyx-lobes oblong, 5-8 mm. long, glandular-dotted; petals clawed, glandular, 10-12 mm. long; stamens about as long as the petals; filaments pubescent and glandular; ovary densely glandular and sparsely pilose; legume broadly oblong, slightly oblique, about 8 cm. long and 2 cm. wide, acuminate, glabrous, eglandular, reticulated.

TYPE LOCALITY: Progreso, Yucatán.

DISTRIBUTION: Yucatán; British Honduras.

22. *Poincianella guanensis* Britton, sp. nov.

Twigs slender, glabrous. Petioles 2-2.5 cm. long; leaf-rachis short-pilose; pinnae 5 or 7; leaflets obliquely oval to obovate, chartaceous, reticulate-veined, 1-2 cm. long, rounded or obtuse, black-glandular-dotted beneath, glabrous or ciliolate, the midvein excentric; racemes many-flowered, about 2 dm. long; pedicels about 12 mm. long or shorter, jointed above the middle; calyx densely puberulent, its oblong lobes about 5 mm. long, black-glandular-dotted; petals narrowly obovate, clawed, glandular-dotted, 10-11 mm. long; stamens somewhat shorter than the petals, the filaments glandular; legume oblong-sublunate, smooth, 7 cm. long, 2 cm. wide, apiculate.

Remates de Guane, Pinar del Rio, Cuba, April 1926, *A. Fors; Juan T. Roig 3965.*

23. *Poincianella subglauca* (Britton) Britton & Rose.

Caesalpinia subglauca Britton, Mem. Torrey Club 16: 66. 1920.

A shrub, 2.5 m. high, the twigs glabrous. Leaves bipinnate; petiole 1-1.5 cm. long; pinnae 5-7, the rachis loosely pubescent; leaflets 9-15, alternate, sessile, coriaceous, glabrous, oblong-ovate to suborbicular, 1-2.5 cm. long, 5-13 mm. wide, long, strongly reticulate-veined, pale, subglaucescent, and sparingly black-dotted beneath, rounded or emarginate at apex, mostly rounded or subtruncate at base, shining above; fruiting pedicels stout, 2 cm. long; legume flat, puberulent, obliquely oblong, 3-5 cm. long, about 1.5 cm. wide, beaked, eglandular.

TYPE LOCALITY: Near Santiago, Oriente, Cuba.

DISTRIBUTION: Known only from the type locality.

24. *Poincianella Hornei* (Britton) Britton & Rose.

Caesalpinia Hornei Britton, Mem. Torrey Club 16: 67. 1920.

A shrub, the twigs, petioles and rachis of leaves pubescent with short incurved hairs. Leaves twice pinnate; petioles slender, about 1.5 cm. long; pinnae 5-7; leaflets 7-11, alternate, broadly oblong to ovate-oblong, 1.5-2.5 cm. long, rounded and emarginate at apex, rounded or subtruncate at base, sessile, reticulate-veined on both sides, black-dotted beneath, glabrous; inflorescence racemose; flowering pedicels erect, or ascending, slender, pubescent, 1-2 cm. long; calyx-lobes nearly alike, oblong, black-glandular-punctate, 5.5-7 mm. long; very young legume puberulent, long-tipped; petals 10-12 mm. long, 8-10 mm. broad, with short, glandular claws, four of them obovate, nearly alike, the fifth reniform-orbicular; stamens about as long as the petals.

TYPE LOCALITY: Ciego de Avila, Camaguey, Cuba.

DISTRIBUTION: Known only from the type locality.

25. *Poincianella Clementis* Britton, sp. nov.

Twigs, petioles, rachis and inflorescence short-pubescent. Petiole 1-1.5 cm. long; pinnae 5; leaflets 8-11, those of lateral pinnae alternate, of the terminal pinna opposite, chartaceous,

oblong to elliptic, reticulate-veined, 1-2 cm. long, glabrous, shining above, black-glandular-dotted and dull beneath, the oblique base narrowed; racemes terminal, several-flowered; pedicels very slender, 10-13 mm. long, jointed at the top; calyx densely short-pubescent, its lobes nearly alike, oblong, black-glandular-dotted, about 6 mm. long; petals broadly obovate to suborbicular, 12-14 mm. long, their claws glandular; stamens about as long as the petals.

Cuba. Type from coastal thicket, Reuté, Santiago, Oriente, July 1919, *Brother Clement* 135.

26. *Poincianella myabensis* (Britton) Britton & Rose.

Libidibia pauciflora puberula Griseb. Cat. Pl. Cub. 79. 1866.

Caesalpinia myabensis Britton, Mem. Torrey Club 16: 66. 1920.

Shrub, 1.3 m. high, with slender gray branches, densely short-pubescent when young. Leaves twice pinnate, the petiole and rachis densely short-pubescent; petiole 1-1.5 cm. long; pinnae 5-9, 3-5 cm. long; leaflets 7-18, alternate or opposite, sessile, coriaceous, dark-green, pubescent and shining above, pale, pubescent on the midvein, and black-dotted beneath, oblong, 6-12 mm. long, strongly pinnately veined; racemes several-many-flowered, short-pubescent, 1-2 dm. long; pedicels pubescent, 1-2.5 cm. long; calyx-lobes oblong, about 7 mm. long; petals obovate, subtruncate, somewhat oblique, about 17 mm. long; filaments shorter than the petals; legume obliquely oblong, 3-5 cm. long, 1-1.5 cm. wide, subulate-tipped, sessile, puberulent; seeds oblique, 9-10 mm. long.

TYPE LOCALITY: Between Holguin and Myabe, Oriente, Cuba.

DISTRIBUTION: Oriente and Camaguey, Cuba.

27. *Poincianella pellucida* (Vogel) Britton & Rose.

Caesalpinia pellucida Vogel, Linnæa 10: 601. 1836.

A shrub or tree, the slender twigs and inflorescence puberulent or short-pubescent. Leaves twice pinnate, the petiole and rachis pubescent; pinnae 9-19; leaflets 13-17, alternate or opposite, orbicular to obovate, oblique at base, chartaceous, pubescent when young, but soon glabrate, shining above, black-dotted beneath, 5-10 mm. long, perhaps sometimes larger; racemes several-flowered; pedicels 10-15 mm. long, jointed near the top; calyx pubescent and glandular, 6-7 mm. long, its oblong lobes nearly alike; petals 12-16 mm. long; stamens about as long as the petals; legume oblong to elliptic, 4-6 cm. long, 12-16 mm. wide, sessile, mucronate, or subulate-tipped, puberulent; seeds few, flat, rounded, 7-9 mm. long.

TYPE LOCALITY: Hispaniola.

DISTRIBUTION: Hispaniola.

28. *Poincianella Ortegae* (Standley) Britton & Rose.

Caesalpinia Ortegae Standley, Journ. Wash. Acad. 13: 6. 1923.

Stems 1.5-2 m. high, the branches, petioles and inflorescence densely black-stipitate-glandular. Leaves 1-1.5 dm. long, twice pinnate; pinnae 5-9; leaflets 8 or 9 pairs, narrowly oblong, 8-12 mm. long, oblong, glabrous above, pubescent and with numerous sessile black glands beneath; inflorescence racemose, many-flowered; pedicels 6-8 mm. long; flower-bud oblong; calyx about 7 mm. long, its lobes all similar, somewhat imbricated, the lower one somewhat longer than the others; petals glabrous, about 8 mm. long; stamens shorter than the petals, somewhat deflexed; legume scythe-shaped, 5-6 cm. long, 10-12 mm. broad, acute, densely black-glandular, elastically dehiscent; seeds black, flat, broadly obovate, 7 mm. long.

TYPE LOCALITY: Sinaloa.

DISTRIBUTION: Known only from the type locality.

29. *Poincianella melanadenia* (Rose) Britton & Rose.

Poinciana melanadenia Rose, Contr. U. S. Nat. Herb. 13: 303. 1911.

Caesalpinia melanadenia Standley, Contr. U. S. Nat. Herb. 23: 425. 1922.

A low bushy shrub, its branches short, nearly black. Petioles nearly filiform, 1-2 cm. long; pinnae 3; petiole and rachis stipitate-glandular and sparingly pilose; leaflets 4-6, oblong, 5-8

mm. long, obtuse, pubescent or glabrate, with sessile black glands along the margin, the lateral venation very obscure; inflorescence a short raceme, with 1 to 15 flowers; pedicels 6-8 mm. long, bearing stipitate glands, jointed above the middle; stamens a little longer than the petals, hairy at base; legume 3 cm. long, scythe-shaped, pubescent, and bearing large sessile black glands.

TYPE LOCALITY: Tehuacán, Puebla.

DISTRIBUTION: Puebla.

30. *Poincianella pinnata* (Griseb.) Britton & Rose.

Libidibia pinnata Griseb. Cat. Pl. Cub. 79. 1866.

Caesalpinia pinnata C. Wright; Sauv. Anal. Acad. Habana 5: 404. 1869.

A shrub, 2-3 m. high, glabrous throughout. Leaves 5-7 cm. long, once pinnate; petiole about 1 cm. long, or shorter; leaflets 2-4 pairs, ovate to suborbicular or elliptic, 1.5-4 cm. long, sometimes about as wide as long, subcoriaceous, strongly reticulate-veined, bright green above, pale green, dull, and sparingly glandular-dotted beneath, the apex retuse or rounded; racemes loosely several-flowered; pedicels very slender, 1.5-2 cm. long, jointed at the apex; calyx-tube narrowed, the lobes oblong, about 7 mm. long, nearly alike, glandular-dotted; lateral petals obovate, about 17 cm. long; stamens shorter than the petals; legume oblong, acute, sessile, about 4 cm. long and 12 mm. wide, densely short-stipitate-glandular.

TYPE LOCALITY: Eastern Cuba.

DISTRIBUTION: Oriente, Cuba.

31. *Poincianella oblongifolia* (Urban) Britton & Rose.

Caesalpinia oblongifolia Urban, Symb. Ant. 2: 281. 1900.

A shrub or small tree, 2-3 m. high, the branches and rachis of the leaves sparingly short-pubescent or glabrate. Leaves once pinnate; petioles 1-2 cm. long; leaflets 4-9 pairs, opposite, coriaceous, strongly reticulate-veined, oblong, truncate or retuse, 1.5-3 cm. long, glabrous, sometimes ciliate, shining above, paler and black-dotted beneath, the margin entire or crenulate; racemes few-many-flowered, 5-10 cm. long, axillary and in terminal panicles; pedicels slender, 1-2 cm. long, jointed near the top; calyx-segments oblong, about 6 mm. long, velvety-pubescent within, black-glandular-dotted; petals 10 mm. long, short-clawed, glandular below, four of them obovate, the fifth suborbicular; stamens shorter than the petals, glandular below; ovary softly pubescent; legume oblong, 4-6 cm. long, 10-15 mm. wide, glabrous, eglandular, few-seeded; seeds obovate, 8 mm. broad, yellowish brown.

TYPE LOCALITY: Cuba.

DISTRIBUTION: Santa Clara and Oriente, Cuba.

32. *Poincianella savannarum* Britton & Wilson, sp. nov.

A low shrub, 3-6 dm. high, the twigs, foliage and inflorescence glabrous. Leaves once pinnate; petioles 1-2 cm. long; leaflets 4-9 pairs, elliptic or oblong to ovate, coriaceous, 1.5-5 cm. long, green and shining above, pale and black-glandular-dotted beneath, delicately veined, obtuse, rounded or retuse; racemes terminal, loosely several-flowered, up to 1.5 dm. long; pedicels nearly filiform, ascending, 2 cm. long, or shorter; sepals oblong, nearly alike, glandular-dotted, 7 mm. long, white-lanate within; petals glandular below, short-clawed, 10-12 mm. long, four of them obovate, the other one reniform; stamens about as long as the petals.

Savannas, Santa Clara, Cuba. Type from Sancti Spiritus, July 20, 1915, *Brothers León & Roca 7835*.

33. *Poincianella nipensis* (Urban) Britton.

Caesalpinia nipensis Urban, Symb. Ant. 9: 444. 1928.

An unarmed, glabrous shrub, without stipules, the leaves bipinnate. Petioles 2-15 mm. long; pinnae 2 or 3 pairs; leaflets 3-5 pairs, obovate, 1-3 cm. long, 7-20 mm. wide, epunctate, shining above, prominently reticulate-veined, subchartaceous, the base obtuse, the apex rounded to emarginate; inflorescence 2-5 cm. long, pseudolateral on short branches; pedicels 10-28 mm.

long, jointed near the top; calyx-lobes oval-elliptic, rounded, 6 mm. long; petals subobliquely obtriangular, truncate, minutely pilose, 10 mm. long, 8 mm. wide above; filaments 7-9 mm. long; ovary glabrous, 2-ovuled.

TYPE LOCALITY: Sierra de Nipe, Oriente, Cuba.
DISTRIBUTION: Type locality and vicinity.

34. *Poincianella glandulosa* (Bertero) Britton & Rose.

Caesalpinia glandulosa Bertero; DC. Prodr. 2: 482. 1825.

A shrub, 6-10 dm. high, the branches short-prickly. Pinnae 3 pairs; leaflets 5 or 6 pairs, oval, 3-7 mm. long, 1-veined, glabrous, bearing a few black sessile glands on the margin; racemes few-flowered, densely puberulent; pedicels about 1 cm. long, jointed near the top; calyx densely puberulent, the segments 5-6 mm. long, bearing a few short-stipitate marginal glands; petals a little longer than the sepals; stamens short-exserted; legume linear-oblong, 5 cm. long, 1.4 cm. wide, densely short-pubescent and sparingly short-stipitate-glandular.

TYPE LOCALITY: Santo Domingo.
DISTRIBUTION: Hispaniola.

77. *BIANCAEA* Todaro, Nuovi Gen. 21. 1860.

Prickly woody vines, or shrubs, rarely small trees, with bipinnate leaves, and racemose deflexed, yellow or yellowish flowers. Calyx-tube broadly urceolate, the 5 segments petaloid, deciduous. Petals 5, short-clawed, longer than the calyx-segments. Stamens 10; filaments densely woolly below, a little longer than the petals. Ovary sessile; style slender; stigma subtruncate. Legume flat, unarmed, oblong or falcate, few-seeded, tardily dehiscent or indehiscent. Seeds with thick cotyledons.

Type species, *Biancaea scandens* Todaro.

1. *Biancaea sepiaria* (Roxb.) Todaro, Hort. Bot. Panorm. 4. 1876.

Caesalpinia sepiaria Roxb. Hort. Beng. 32. 1814.
Biancaea scandens Todaro, Nuovi Gen. 22. 1860.

A much-branched, very prickly, vine-like shrub 3 m. high, or less, the young twigs and foliage puberulent. Petiole stout, tapering into the rachis, which is very slender above; stipules half-sagittate; early deciduous; leaves 1-5 dm. long; pinnae 4-10 pairs, short-stalked; leaflets 7-12 pairs, thin, oblong, rather dark green above, pale green beneath, 8-20 mm. long, rounded or retuse at the apex, obtuse at the base, very short-stalked; racemes axillary and terminal, puberulent, usually many-flowered; flowers deflexed at anthesis; pedicels 1.5-3 cm. long; calyx about 1.5 cm. long, puberulent; petals suborbicular, about 1.5 cm. broad; filaments about as long as the petals; filaments densely woolly below; legume oblong, compressed, glabrous, unarmed, 5-8 cm. long, 2-2.5 cm. wide, abruptly long-beaked, 6-8-seeded; seeds oblong-ovoid, black and variegated, nearly 1 cm. long, 5-6 mm. thick.

TYPE LOCALITY: Bengal, India.
DISTRIBUTION: Jamaica; Cuba to Grenada. Native of the East Indies.
ILLUSTRATIONS: Wight, Ic. Pl. Ind. Or. pl. 37.

78. *GUILANDINA* L. Sp. Pl. 381. 1753.

Woody vines, or vine-like shrubs, the stems and branches mostly armed with stout recurved prickles. Leaves large, petioled, bipinnate, the leaflets often punctate. Flowers rather large, yellow, racemose or paniculate, the narrow bracts deciduous. Calyx-lobes 5, imbricated, longer than the tube. Petals 5, nearly alike, short-clawed, spreading. Stamens 10, the filaments pubescent below, the anthers longitudinally dehiscent. Legume oval or elliptic, not much longer than wide, subcoriaceous, compressed, usually prickly, splitting along the sutures. Seeds hard, globose or ovoid, yellow, gray, brown or black, smooth, or rarely striate, scarcely flattened.

Type species, *Guilandina Bonduc* L.

A. Shrubs or short vines.

Stipules foliaceous (rarely wanting); bracts reflexed; seeds gray.
 Stipules subulate or wanting; bracts (as far as known) mostly erect or spreading; seeds (as far as known) yellow to orange, gray, brown, or black.

Leaflets 3-8 cm. long, bluntly short-acuminate; bracts erect; seeds yellow, 1.5-2.5 cm. long.

Leaflets 0.5-3.5 cm. long, obtuse, acute or emarginate.

Leaflets glaucous beneath, at least when young, emarginate; bracts erect or ascending; seeds yellow.

Leaflets not glaucous.

Leaflets olive-green to brown, at least when dry, coriaceous; bracts erect or spreading.

Leaflets light green.

Legume wholly unarmed, or with very short distant prickles in no. 6.

Leaflets pilose on the midvein beneath; leaf-rachis prickly.

Legume subtruncate.

Legume rounded.

Leaflets glabrous or merely puberulent; leaf-rachis unarmed.

Legume prickly, at least on the margins.

Seeds yellow to orange or brown.

Legume with a few marginal prickles only; branches unarmed; seeds very dark brown; leaflets suborbicular.

Legume more or less prickly all over; branches mostly prickly; mature seeds brown to yellow or orange.

Leaflets oblong to ovate, about twice as long as wide.

Leaflets ovate to oval; pedicels 6-12 mm. long; seeds yellow.

Leaflets oblong to ovate-oblong; pedicels 3-5 mm. long; seeds brown.

Leaflets suborbicular to elliptic.

Leaflets large, 1.5-3 cm. long.

Seeds orange to yellow.

Legume copiously long-prickly.

Legume sparingly short-prickly.

Seeds brownish to yellow-gray or fading white.

Leaflets only 0.5-1 cm. long.

Seeds black; leaflets oval to ovate.

1. *G. crista*.

2. *G. Bonduc*.

3. *G. glaucophylla*.

4. *G. Wrightiana*.

5. *G. caymanensis*.

6. *G. socorroensis*.

7. *G. culebrae*.

8. *G. portoricensis*.

9. *G. intermedia*.

10. *G. antiguensis*.

11. *G. ovalifolia*.

12. *G. ciliata*.

13. *G. divergens*.

14. *G. sphaerosperma*.

15. *G. melanosperma*.

B. High-climbing mountain vines.

Species of Costa Rica; leaflets acuminate.

Species of Haiti; leaflets rounded or emarginate.

16. *G. urophylla*.

17. *G. Barkeriana*.

1. *Guilandina crista* (L.) Small, Fl. SE. U. S. 591. 1903.

Caesalpinia crista L. Sp. Pl. 380. 1753.

Guilandina Bonducella L. Sp. Pl. ed. 2. 545. 1762.

Caesalpinia Bonducella Fleming, As. Res. 11: 159. 1810.

Guilandina Bonduc minus DC. Prodr. 2: 480. 1825.

A vine, up to 6 m. long, trailing or climbing, the twigs and leaves armed with hooked prickles, the twigs also more or less bristly. Stipules usually foliaceous, thin, usually incised, persistent, sometimes 5 cm. broad, rarely wanting; leaves 3-8 dm. long, more or less pubescent; pinnae 4-8 pairs; leaflets 4-8 pairs, oblong to ovate-oblong or elliptic, rather thin, 2.5-7 cm. long, obtuse, retuse or short-acuminate and often mucronate at the apex, rounded or subcordate at the base; racemes axillary, pubescent, many-flowered, sometimes 3 dm. long; bracts linear-acuminate, reflexed or spreading, 1-1.5 cm. long, deciduous; pedicels 1 cm. long or less; calyx 7-9 mm. long; petals oblong-ovate, about 1 cm. long; legume 5-10 cm. long, 6 cm. wide or less, usually densely prickly; seeds gray, shining, obovoid-oval, slightly compressed, 2-2.5 cm. long, about 1.5 cm. wide.

TYPE LOCALITY: Ceylon.

DISTRIBUTION: Coastal sands and sand-dunes, Florida; Bermuda; West Indies; Sinaloa, Lower California and Tamauipilas to Panama, Colombia and Brazil; Old World tropics.

ILLUSTRATIONS: Lam. Tabl. Encyc. pl. 336; Gaertn. Fruct. pl. 148; Martius, Fl. Bras. 15: pl. 21; Descourt. Fl. Ant. pl. 90; Britton, Fl. Berm. f. 194; Fawcett & Rendle, Fl. Jam. 4: f. 32.

2. *Guilandina Bonduc* L. Sp. Pl. 545. 1753.

Caesalpinia Bonduc Roxb. Hort. Beng. 32. 1814.

A trailing or climbing vine, armed with hooked prickles. Stipules none; leaves often 6 dm. long, stout-petioled; pinnae 3-6 pairs; leaflets 4-8 pairs, ovate to elliptic-ovate, 4-8 cm. long, acute or short-acuminate at the apex, rounded or obtuse at the base, subcoriaceous, somewhat shining above, glabrous or very nearly so when old; racemes 3 dm. long or less, many-flowered; bracts linear-lanceolate, erect, early deciduous; pedicels 4-8 mm. long; calyx about 6 mm. long; petals 1.5 cm. long or less; legume 6-12 cm. long, about one-half longer than wide, rather loosely prickly; seeds bright yellow, 1.5-2.5 cm. long.

TYPE LOCALITY: India.

DISTRIBUTION: Florida; Bahamas; Cuba; Jamaica; Porto Rico; Central America. Tropical Asia.

3. *Guilandina glaucophylla* (Urban) Britton & Rose.

Caesalpinia glaucophylla Urban, Symb. Ant. 2: 274. 1900.

Branches and leaves prickly; stipules subulate, about 1 mm. long, aculeate. Leaves prickly, the rachis tomentulose; pinnae 5-9 pairs; leaflets 4-6 pairs, ovate to oval, or narrowly obovate, nearly equilateral, 1.5-3.5 cm. long, membranous, pale or glaucous and minutely pilose beneath, glabrous above, the apex obtuse or rounded and emarginate, the base obtuse or cuneate; racemes tomentulose, many-flowered, 7 cm. long or longer; pedicels 10-15 mm. long; calyx about 10 mm. long; petals a little longer than the calyx-segments; legume elliptic, 5-7 cm. long, loosely prickly, short-beaked; seeds globular, light yellow, 1-1.5 cm. in diameter.

TYPE LOCALITY: Cieneguita, Santa Clara, Cuba.

DISTRIBUTION: Santa Clara, Cuba.

4. *Guilandina Wrightiana* (Urban) Britton & Rose.

Caesalpinia Wrightiana Urban, Symb. Ant. 2: 274. 1900.

Vine-like, about 3 m. long, the branches sparingly prickly, the branches, leaf-rachis and inflorescence finely puberulent; stipules minute or wanting; pinnae about 7 pairs, distant, curved; prickles of the pinnules or some of them, one straight, one recurved; leaflets 4 or 5 pairs, ovate or oval, equilateral, 2-3 cm. long, subcoriaceous, brownish when dry, the apex obtuse, rounded, or minutely emarginate, the base obtuse or rounded, nearly glabrous on both sides; racemes many-flowered, long-peduncled, 10-15 cm. long; pedicels tomentose, 2-6 mm. long; calyx tomentose, 6-7 mm. long; petals yellow, about as long as the calyx-segments.

TYPE LOCALITY: Eastern Cuba.

DISTRIBUTION: Oriente, Cuba.

5. *Guilandina caymanensis* (Millsp.) Britton & Rose.

Caesalpinia caymanensis Millsp. Field Mus. Publ. Bot. 2: 49. 1900.

A shrub, about 2 m. high, the stem and branches unarmed, the branches white-hairy. Stipules (?); pinnae 6 pairs, the rachilla with a pair of recurved prickles at each leaflet; leaflets 7 pairs, elliptic, or ovate-oval, membranous, nearly equilateral, 2-3 cm. long, yellow-green, ciliate, pilose on the midvein beneath, the apex obtuse or acute, cuspidate, the oblique base rounded; legume oval, subtruncate, puberulent, unarmed, 7 cm. long, about 4 cm. wide, the straight erect beak about 1 cm. long; seeds gray, about 2 cm. long, horizontally striate.

TYPE LOCALITY: Near Georgetown, Grand Cayman Island.

DISTRIBUTION: Definitely known only from the type locality; Jamaica ?

6. *Guilandina socorroensis* Britton & Rose, sp. nov.

Branches slender, unarmed, finely pubescent. Stipules foliaceous, obovate, membranous, about 1 cm. long; pinnules 4 or 5 pairs, distant, the rachis with a pair of recurved prickles at the bases of some of the pairs; leaflets elliptic to ovate or the upper ones obovate, inequilateral, pale green, subchartaceous, pilose on the midvein beneath, the apex acute or obtuse, cuspidate; legume obliquely elliptic, rounded, pubescent, armed with few stout distant prickles, 8 cm.

long, nearly 5 cm. wide, the divergent beak about 1 cm. long; seeds subglobose, about 2 cm. in diameter.

Socorro Island, Colima, 1903, *F. E. Barkew* 207.

7. *Guilandina culebrae* Britton & Wilson, sp. nov.

Unarmed throughout, the branches, leaf-rachis and inflorescence finely pubescent. Stipules minute or wanting; pinnules 7 pairs, approximate; leaflets 6 or 7 pairs, elliptic or the upper pair elliptic-obovate, subchartaceous, light green, glabrous, or minutely puberulent on the mid-vein beneath, inequilateral, the apex rounded or slightly emarginate, cuspidate, the base obliquely obtuse; racemes long-peduncled, many-flowered, 6-9 cm. long; pedicels 3-5 mm. long, tomentulose; calyx tomentulose, 8 mm. long; petals about as long as the calyx-segments; legume obliquely oval, puberulent, unarmed, 7 cm. long, 4 cm. broad, the nearly horizontal more or less curved beak 1-2 cm. long; seeds orange-yellow, globose, 1.7 cm. in diameter, faintly horizontally striate.

Coast of Culebra Island, Porto Rico, March 3-12, 1908, *Britton & Wheeler* 79.

8. *Guilandina portoricensis* Britton & Wilson, *Sci. Surv. Porto Rico & Virgin Ids.* 5: 380. 1924.

Stems unarmed, up to 6 m. long, the twigs puberulent. Stipules none; leaves about 1.5 dm. long, the rachis puberulent; pinnae 3-5 pairs, bearing a few short prickles; leaflets 3-5 pairs, oval-orbicular, 1-2 cm. long, chartaceous, inequilateral, light green, dull, glabrous, rounded or emarginate at the apex, rounded at the base; legume 5-6 cm. long, about 4 cm. wide, unarmed or with a few short marginal prickles; seeds dark brown to nearly black, 1.5-2 cm. long, shining, smooth, not horizontally striate.

TYPE LOCALITY: Salinas de Guanica, Porto Rico.

DISTRIBUTION: Known only from the type locality.

9. *Guilandina intermedia* (Urban) Britton & Rose.

Caesalpinia intermedia Urban, *Symb. Ant.* 2: 274. 1900.

Vine-like; stipules obsolete or wanting. Leaflets oval or ovate, or the upper pairs obovate, chartaceous, 1.8-2.5 cm. long, glabrous and shining above, short-pilose beneath, the apex and base obtuse; bracts erect; pedicels 6-12 mm. long; calyx 8-9 mm. long; legume obliquely ovate, 6 cm. long, sparsely prickly; seeds yellow.

TYPE LOCALITY: Cuba.

DISTRIBUTION: Cuba.

10. *Guilandina antiguensis* Britton & Rose, sp. nov.

A vine or shrub, the branches, petioles and leaf-rachis and rachillas densely tomentulose and armed with short recurved prickles. Stipules obsolete or wanting; pinnae 5-7 pairs, rather distant; leaflets 5-7 pairs, oblong to ovate-oblong, membranous, 1.5-3 cm. long, loosely pubescent on both sides, slightly inequilateral, the apex obtuse, or acutish, the base obliquely rounded; racemes 6-8 cm. long, many-flowered, tomentose, on greatly elongated peduncles sometimes as long as the leaves; pedicels 3-5 mm. long; calyx about 8 mm. long; petals obovate; legume elliptic-orbicular, 6 cm. long, rounded at both ends, loosely short-prickly, puberulent, the beak nearly erect, about 1 cm. long; seeds globular, light brown, 1.5 cm. in diameter, faintly horizontally striate.

St. John, Antigua, February 1913, *Rose, Fitch & Russell* 3265.

11. *Guilandina ovalifolia* (Urban) Britton, *Bull. N. Y. Bot. Gard.* 4: 118. 1905.

Caesalpinia ovalifolia Urban, *Symb. Ant.* 2: 273. 1900.

Caesalpinia lucida Urban, *Symb. Ant.* 2: 275. 1900.

Climbing, 4 m. long or longer, the young branches prickly, puberulent. Leaves 2-3 dm. long, the rachis puberulent; leaflets 5-8 pairs, oval or elliptic, glabrous or nearly so, shining,

rounded at the apex, rounded to narrowed at the base, their terminal mucro often 2 mm. long; racemes densely puberulent, solitary or in pairs, 1.5-2 dm. long; bracts narrowly lanceolate, attenuate-acuminate, 8 mm. long, spreading; pedicels 1-1.5 cm. long; calyx-lobes oblong, obtuse, densely tomentulose, 6-7 mm. long, 1.5-2 mm. wide, soon reflexed; petals bright yellow, about as long as the sepals, oblong to oblong-spatulate, obtuse; legume obliquely obovate, 6-8 cm. long, 4 cm. wide, 2 cm. thick, shining, armed with numerous rather distant yellow stiff bristles 6 mm. long or less, its sharp stout beak about 1 cm. long; seeds globular, yellow-brown to orange, shining, 1.6 cm. in diameter.

TYPE LOCALITY: Near Nassau, New Providence, Bahamas.
DISTRIBUTION: Florida; Bahamas; Cuba ?

12. *Guilandina ciliata* Berg.; Wickstr. Sv. Vet. Akad. Handl.
1825²: 431. 1825.

Caesalpinia Grisebachiana Kuntze, Rev. Gen. 166. 1891.
Guilandina Grisebachiana Krug & Urban; Duss. Fl. Ant. Franc. 229. 1897.
Caesalpinia ciliata Urban, Symb. Ant. 2: 275. 1900.

Vine-like, the branches, petioles, leaf-rachis and inflorescence tomentulose, the branches and petioles more or less prickly. Stipules obsolete or wanting; pinnae 5-8 pairs; rachis and rachillas prickly; leaflets 4-8 pairs, oval to suborbicular, inequilateral, 1.5-3 cm. long, subchartaceous, glabrate, paler green beneath than above, the apex rounded or emarginate, the base obliquely obtuse, rounded or subtruncate; racemes tomentose, slender-peduncled, many-flowered, 7 cm. long, or longer; pedicels 3-7 mm. long; calyx 7 or 8 mm. long; legume obliquely short-oval, 5-8 cm. long, sparingly prickly, the nearly straight beak about 1 cm. long; seeds yellow to orange, horizontally striate, subglobose, 1.5-2 cm. in diameter.

TYPE LOCALITY: St. Barts.
DISTRIBUTION: Hispaniola; St. Barts; St. Martin; Saba; Guadeloupe; Martinique (?); Antigua (?); Curaçao.

13. *Guilandina divergens* (Urban) Britton, Ann. Mo. Bot.
Gard. 2: 41. 1915.

Caesalpinia divergens Urban, Symb. Ant. 2: 271. 1900.

Prickly, or sometimes unarmed, usually much branched, up to 4 m. long or longer, the young twigs and leaf-rachises puberulent. Stipules only 1-3 mm. long or wanting; leaves 1.5-2.5 dm. long; pinnae 4-7 pairs; leaflets 5-7 pairs, broadly oval, suborbicular, or oval-obovate, 1.5-3 cm. long, chartaceous, inequilateral, rounded or emarginate at the apex, obtuse, rounded, or the upper ones narrowed at the base, shining above, dull beneath, puberulent on the veins but otherwise glabrous; racemes peduncled, as long as the leaves or shorter, the rachis, pedicels and calyx puberulent; bracts linear-lanceolate, erect or with spreading or recurved tips, about 8 mm. long; sepals 7-8 mm. long; petals yellow, about as long as the calyx; legume 6-7 cm. long, about 5 cm. wide, loosely prickly; seeds brownish-yellow or grayish-yellow, fading whitish, 1.5-2.5 cm. long, horizontally striate.

TYPE LOCALITY: St. Thomas.
DISTRIBUTION: Mona; Cayo Muertos, Porto Rico; Culebra; Virgin Islands; Hispaniola.

14. *Guilandina sphaerosperma* (Urban & Ekman) Britton.

Caesalpinia sphaerosperma Urban & Ekman; Urban, Arkiv Bot. 22²: 38. 1929.

A scandent shrub, the twigs and leaves armed with slightly curved prickles about 4 mm. long or shorter, and pilose-puberulent. Stipules 1.5 mm. long, or wanting; leaves 6-8 cm. long; pinnae 3-6 pairs; leaflets 3-5 pairs, obovate to orbicular, 0.5-1 cm. wide, glabrous, chartaceous, shining above, rounded, subtruncate or emarginate; racemes 5-7 cm. long, 10-15-flowered, puberulent; pedicels 4-12 mm. long; sepals 7-8 mm. long; petals 7-8 mm. long; legume about 3 cm. long and 2 cm. broad, densely prickly; seeds yellow-brown, globose, about 12 mm. in diameter.

TYPE LOCALITY: Mole St. Nicholas, Haiti.
DISTRIBUTION: Haiti.

15. *Guilandina melanosperma* Eggers, Bull. U. S. Nat. Mus. 13: 46. 1879.

Caesalpinia melanosperma Urban, Symb. Ant. 2: 276. 1900.

A vine-like shrub, with long branches, the twigs densely puberulent, armed with scattered, short recurved prickles. Stipules none; leaves 2 dm. long or longer, the rachis densely puberulent, prickly; pinnae about 4 pairs; leaflets 5-7 pairs, ovate, inequilateral, nearly glabrous, 2 cm. long or less, shining above, obtuse or rounded, the base subtruncate; racemes several-many-flowered, shorter than the leaves, densely puberulent; bracts subulate, erect or ascending, about 4 mm. long; petals yellow, about 8 mm. long; legume 6 cm. long, 4 cm. wide, the sides smooth, the margins sparingly prickly; seeds nearly black, shining, about 2 cm. long and 1.5 cm. broad.

TYPE LOCALITY: St. Croix.

DISTRIBUTION: Mona; St. Croix; Tortola.

16. *Guilandina urophylla* (Donn. Smith) Britton & Rose.

Caesalpinia bonducella urophylla Donn. Smith, Bot. Gaz. 57: 418. 1914.

Climbing high in trees. Leaves 3-5 dm. long, the petiole and rachis bearing small reflexed prickles; pinnae 6 pairs; leaflets 6 or 7 pairs, lanceolate-oblong, 6-8.5 cm. long, acuminate, glabrous and shining above, glabrous except on the midvein beneath; inflorescence racemose, 2-3 dm. long; bracts linear, soon spreading, 5 mm. long; pedicels 8-10 mm. long, jointed below the calyx; calyx brownish-pubescent, 8-10 mm. long, oblique at base; petals orange-yellow.

TYPE LOCALITY: Near San Ramos, Costa Rica.

DISTRIBUTION: Mountains of Costa Rica.

17. *Guilandina Barkeriana* (Urban & Ekman) Britton.

Caesalpinia Barkeriana Urban & Ekman; Urban, Arkiv Bot. 22²: 38. 1929.

High-climbing, up to 10 m. long, the twigs, petioles and rachis armed with curved prickles 1.5-4 mm. long, and short-pubescent. Stipules linear-lanceolate, 2-3 mm. long; leaves large, up to 3 dm. long; pinnae 8-10 pairs; leaflets 6 or 7 pairs, ovate, or the upper obovate, 1-3 cm. long, rounded, subtruncate, or emarginate, reticulate-veined, shining, membranous, glabrous when old; legume prickly; seeds brown-black, globose, 15 mm. in diameter.

TYPE LOCALITY: Messif de la Selle, Haïti.

DISTRIBUTION: Known definitely only from the type locality, and to me from description only. Cuba (?).

EXCLUDED SPECIES.

GUILANDINA GLABRA Mill. Gard. Dict. ed. 8, no. 3. 1768.

Described as an unarmed tree of large size, with bipinnate leaves, the ovate, acute leaflets alternate.

TYPE LOCALITY: Campeche.

DISTRIBUTION: Known to us from description only.

79. *PELTOPHORUM* [Vogel] Walp. Rep. 1: 811. 1842.

Unarmed trees, the leaves twice pinnate, the leaflets numerous, small. Stipules small, caducous. Flowers yellow, in terminal paniced racemes. Calyx-tube short, its segments nearly equal, imbricated. Petals 5, imbricated in the bud, spreading, nearly equal. Stamens 10, distinct, declined; filaments filiform; anthers all alike. Style filiform, glabrous; stigma enlarged, peltate. Legume indehiscent, oblong, narrowed at both ends, winged on the margins. Seeds 1-4, flat; endosperm wanting.

Type species, *Peltophorum Vogelianum* Walp.

Pedicels slender, 12-20 mm. long; leaflets 5-10 mm. long.
Pedicels short, 4-5 mm. long; leaflets 4-7 mm. long.

1. *P. adnatum*.

2. *P. Berteroanum*.

1. *Peltophorum adnatum* Griseb. Fl. Brit. W. Ind. 206. 1860.

Caesalpinia adnata Maza, Dicc. Bot. 84. 1889.
Brasilettia adnata Kuntze, Rev. Gen. 164. 1891.

A tree, 12-50 m. high, the young branches, petioles, rachis, and inflorescence brownish-tomentose or villous. Leaves 1-3 dm. long with 12 pairs of pinnae; leaflets 12-36 pairs, linear-oblong, coriaceous, glabrous and shining above, tomentose beneath, 5-10 mm. long, obtuse, truncate; panicles many-flowered, 3 dm. long, or shorter; pedicels slender, 12-20 mm. long; calyx-segments 5-6 mm. long; petals obovate, orbicular, 7-10 mm. long; stamens shorter than the petals; bracts caducous; legume 4-5 cm. long, 12-15 mm. wide at the middle, the wings about 3 mm. wide, glabrate, short-stipitate.

TYPE LOCALITY: Bahamas.

DISTRIBUTION: Bahamas, Cuba and Isle of Pines.

2. *Peltophorum Berteroanum* Urban, Symb. Ant. 2: 286. 1900.

A tall tree, the young branches, petioles, rachis, and inflorescence brownish-puberulent. Leaves with 7-10 pairs of pinnae; leaflets 14-20 pairs, linear-oblong, chartaceous, 4-7 mm. long, 1-2.5 mm. wide, glabrate above, puberulent beneath, obtuse; racemes paniced or corymbose; pedicels 4-5 mm. long; calyx-segments 5-6 mm. long; bracts linear, nearly as long as the pedicels, deciduous; legume 6-6.5 cm. long, 1.5 cm. wide, stipitate, pilose-puberulent.

TYPE LOCALITY: Santo Domingo.

DISTRIBUTION: Southern Hispaniola.

IX. TOUNATEAE. Trees or shrubs with pinnate or 1-foliolate leaves. Stamens many, or in some genera only 9-13; anthers longitudinally dehiscent. Calyx closed in bud, irregularly rupturing. Petals 1, 5, or wanting.

Stamens many, equal, or of two different lengths.

Legume subterete or turgid, tardily dehiscent.

Legume flat, very broad, elastically dehiscent.

Stamens 9-13.

Leaves pinnate; petal 1.

Leaves 1-foliolate; petals 5.

80. TOUNATEA.

81. FAIRCHILDIA.

82. CASHALIA.

83. ZOLLERNIA.

80. TOUNATEA Aubl. Pl. Guian. 1: 549. pl. 218. 1775.

Possiva Aubl. Pl. Guian. 2: 934. pl. 355. 1775.

Rittera Schreb. Gen. 364. 1789.

Hoelzelia Neck. Elem. 3: 62. 1790.

Swarzia Schreb. Gen. 518, hyponym, 1791. Not Hedw. 1787.

Riveria H.B.K. Nov. Gen. & Sp. 7: 266. pl. 659². 1825.

Dithyria Benth.; Hook. Journ. Bot. 2: 89. 1840.

Trees or shrubs with pinnate, 3-foliolate or 1-foliolate leaves. Flower-buds globular or ellipsoid, the calyx closed, breaking often irregularly. Petal 1, large or small, or sometimes with 2 additional much reduced ones, or wanting in some species. Stamens numerous, equal, or of two lengths. Legume oblong or ellipsoid, terete or nearly so, tardily longitudinally dehiscent, 1-few-seeded, often beaked, its valves sometimes rolling inward. Seeds kidney-shaped, partly covered by a large aril.

Type species, *Tounatea guianensis* Aubl.

A. Petal 1, broad (as far as known); inflorescence few-flowered.

1. Petal much longer than the calyx and stamens many (as far as known).

a. Leaflet only 1.

Petiole terete, wingless.

Leaflet elliptic, obtuse or acute.

Leaflet oblong-lanceolate to elliptic, acuminate.

Petiole or rachis winged or margined.

Twigs glabrous or nearly so; stipe of legume short; leaflets chartaceous or subcoriaceous.

Leaflet 5-13 cm. long; legume 2-5 cm. long.

Leaflet ovate-elliptic.

Petioles stout, 5 mm. long; legume 5 cm. long, constricted between the seeds.

Petioles slender, 5-12 mm. long; legume 2-3 cm. long, not constricted.

1. *T. simplex*.

2. *T. jamaicensis*.

3. *T. penomenensis*.

- Inflorescence and calyx glabrous.
 Inflorescence and calyx finely pubescent.
 Leaflet elongated, oblong-lanceolate.
 Leaflet up to 18 cm. long.
 Leaflet acuminate; legume 15-18 mm. thick.
 Legume 3 cm. long, subulate-beaked.
 Legume up to 5 cm. long, short-beaked.
 Leaflet acute or obtuse; legume 8-10 mm. thick.
 Petiole 8-15 mm. long, flattened and margined;
 leaflet submembranous.
 Petiole only 4-5 mm. long, scutellate above;
 leaflet chartaceous.
 Twigs densely short-pubescent; stipe of legume elongated;
 leaflet submembranous.
- b.* Leaflets 3-7, or on some leaves only 1.
 Leaflets coriaceous or subcoriaceous.
 Leaflets elliptic, up to 17 cm. long.
 Leaflets oblong-lanceolate, 4.5-9 cm. long.
 Leaflets membranous.
 Rachis broadly winged, the wing reticulate-veined.
 Rachis narrowly winged.
 Rachis-wing reticulate-veined; leaflets ovate-elliptic,
 abruptly acuminate.
 Rachis-wing veinless or indistinctly veined.
 Leaflets 1-3, elliptic.
 Leaflets obtuse or narrowed at base; pedicels 5-10
 mm. long.
 Leaflets cuneate at base; pedicels 10-20 mm. long.
 Leaflets 5-7, oblong-lanceolate, long-acuminate.
2. Petal little, if any, longer than the calyx; stamens relatively few.
B. Petals none (unknown in *T. ? nicaraguensis*); inflorescence several-many-flowered.
 Leaflets 3-5, up to 20 cm. long, glabrous.
 Leaflets 7-15, 5-10 cm. long.
 Twigs and inflorescence pubescent; legume oblique, beaked.
 Foliage glabrous; legume straight, apiculate.
4. *T. ochracea*.
 5. *T. Pittieri*.
 6. *T. macrosperma*.
 7. *T. hondurensis*.
 8. *T. gatunensis*.
 9. *T. Williamsii*.
 10. *T. Hayesii*.
 11. *T. costaricensis*.
 12. *T. subcoriacea*.
 13. *T. trifolia*.
 14. *T. guatemalensis*.
 15. *T. Johnsonii*.
 16. *T. darienensis*.
 17. *T. cuneata*.
 18. *T. Standleyi*.
 19. *T. arborescens*.
 20. *T. caribaea*.
 21. *T. cubensis*.
 22. *T. (?) nicaraguensis*.

1. *Touatea simplex* (Sw.) Taubert, Bot. Centralb. 47: 391. 1891.

Possira simplex Sw. Prodr. 82. 1788.
Ritiera simplex Vahl, Symb. 2: 60. 1791.
Swartzia simplicifolia Willd. Sp. Pl. 2: 1219. 1800.
Swartzia simplex Spreng. Syst. 2: 567. 1825.

A tree, 6-18 m. high, glabrous throughout. Leaflet 1, elliptic, obtuse or acute, 8-14 cm. long; petiole 2-5 mm. long, terete; stipules linear, 4-5 mm. long, caducous; racemes axillary, 2-4-flowered; pedicels slender, 2-2.5 cm. long; flower-bud subglobose, the calyx 10-15 mm. long, bursting into 2-4 irregular parts; petal about 4 cm. in diameter; stamens numerous, 8-12 much longer than the others; ovary stipitate; legume oblong, 1-3-seeded, sometimes constricted between the seeds; seeds 2 cm. long, arillate.

TYPE LOCALITY: Caribbean Islands.

DISTRIBUTION: Dominica; Martinique, Bequia, St. Vincent.

2. *Touatea jamaicensis* (Urban) Britton.

Swartzia simplex jamaicensis Urban, Symb. Ant. 5: 364. 1908.

A tree, up to about 6 m. high, glabrous throughout. Stipules linear, about 3 mm. long, caducous; leaves 1-foliolate; petioles terete, 3-5 mm. long; leaflet subchartaceous, oblong-lanceolate to elliptic, 8-14 cm. long, rather long-acuminate; racemes 2-4-flowered; flower-bud globose, about 8 mm. in diameter; calyx splitting into 3 or 4 elliptic segments about 8 mm. long; petal about 3 cm. broad; stamens many, about 10 of them much longer than the others; legume 2.5-5 cm. long, beaked.

TYPE LOCALITY: Jamaica.

DISTRIBUTION: Jamaica.

ILLUSTRATION: Fawcett & Rendle, Fl. Jam. 4: f. 30, A, C, D.

3. *Touatea penomenensis* Britton, sp. nov.

A tree, about 10 m. high, the twigs, leaves, old inflorescence and fruit glabrous. Leaves 1-foliolate; petiole short, about 5 mm. long, short-winged above; leaflets ovate-elliptic, cori-

ceous, 5–10 cm. long, bluntly short-acuminate or obtuse at the apex, rounded at the base; inflorescence few-several-flowered; fruiting pedicels 6–12 mm. long; legume 4–5 cm. long, about 1.5 cm. thick, rather short-beaked, 2-seeded, constricted between the seeds, the stipe about 1 cm. long.

Vicinity of Penomene, Panama, February 23–March 22, 1908, *R. S. Williams 396*.

4. *Toumatea ochracea* (DC.) Britton.

Swartzia ochracea DC. Mém. Lég. 405. 1825.

Swartzia simplex continentalis Urban, Symb. Ant. 5: 364. 1908.

A small tree, about 4 m. high, glabrous or nearly so throughout. Leaflet 1, elliptic to oblong-lanceolate, acute or short-acuminate, 6–13 cm. long, chartaceous; petiole 5–12 mm. long, narrowly winged; stipules filiform, 4–7 mm. long, deciduous; inflorescence few-flowered; pedicels slender, 1–2.5 cm. long; petal 2.5–3.5 cm. broad; stamens numerous, about 10 of them longer than the others; ovary glabrous, long-stipitate; legume oblong, narrowed or rounded at base, beaked, 2–3 cm. long, terete or nearly so, 1- or 2-seeded.

TYPE LOCALITY: Acapulco, Guerrero.

DISTRIBUTION: Colima; Guerrero; Guatemala; Costa Rica (according to Urban).

ILLUSTRATION: DC. loc. cit. *pl. 58*.

5. *Toumatea Pittieri* Britton, sp. nov.

Swartzia simplex Pittier, Journ. Wash. Acad. 11: 157, in part. 1921. Not Spreng. 1825.

A small tree, the twigs and leaves glabrous. Leaves 1-foliolate; petioles 5–8 mm. long, flattened and narrowly margined, sometimes shallowly auricled above; leaflet chartaceous, elliptic to elliptic-ovate, glabrous, reticulate-veined, 5–9 cm. long, acute or acutish; raceme 3–5-flowered, rather densely puberulent; pedicels rather stout, puberulent, 8–12 mm. long; flower-buds globose; calyx splitting into 3 segments about 9 mm. long, and 3 about 5 mm. long; stamens many, all alike, short; petal 1, orbicular, 2 cm. broad; legume oblong or ellipsoid, glabrous, 2.5–3 cm. long, about 1.5 cm. in diameter, 1- or 2-seeded, straight, short-beaked, its stipe 6–10 mm. long.

Panama. Type from Canal Zone, January 6, 1911, *Pittier 2256*.

6. *Toumatea macrosperma* (Bertol.) Britton & Rose.

Swartzia macrosperma Bertol. Mem. Accad. Bologna 11: 202. 1861.

Twigs slender, glabrous. Leaves unifoliolate; petiole narrowly winged above, 8–12 mm. long, the wing obsagittate; leaflet elongated-oblong, 10 cm. long, bluntly acuminate, coriaceous, glabrous; racemes few-flowered; fruiting pedicels about 1 cm. long; legume long-stipitate, ovoid to oblong, 16–25 mm. long, long-beaked, 1- or 2-seeded; seeds reniform, with a large aril.

TYPE LOCALITY: On the Volcano d'Acqua, Guatemala.

DISTRIBUTION: Guatemala.

ILLUSTRATION: Bertol. loc. cit. *pl. 14*.

7. *Toumatea hondurensis* Britton, sp. nov.

A tree, 5 or 6 m. high, glabrous throughout. Leaves 1-foliolate; petiole 5–7 mm. long, channeled and narrowly winged; leaflet elliptic to oblong-elliptic, bluntly rather long-acuminate, 10–18 cm. long, 4–7 cm. wide, chartaceous, shining; inflorescence 1–few-flowered; fruiting pedicels 15 mm. long; legume ellipsoid, 3 cm. long, 1.5 cm. thick, subulate-beaked, its stipe 13 mm. long.

Lancetilla Valley, near Tela, Atlantida, Honduras, December 6, 1927–March 20, 1928, *Standley 54899*.

8. *Toumatea gatunensis* Britton, sp. nov.

Twigs and inflorescence glabrous, at least when old. Leaves 1-foliolate; petiole 7–8 mm. long, flattened and margined, very narrowly winged, the wing obsagittate; leaflet elliptic, subchartaceous, short-acuminate, glabrous, reticulate-veined, 15–18 cm. long, 6–8 cm. wide;

inflorescence short-stalked, few-flowered; fruiting pedicels stout, 9–15 mm. long; legume oblong, subterete, hard, short-beaked, 3.5–5 cm. long, 15–18 mm. thick, its stipe about 10 mm. long.

Gatun, Panama, November 1859, *S. Hayes 567*.

9. *Touatea Williamsii* Britton, sp. nov.

Swartzia simplex Pittier, Journ. Wash. Acad. 11: 157, in part. 1921. Not Spreng. 1825.

Twigs slender, glabrous. Leaves 1-foliolate; petiole slender, 8–15 mm. long, flattened above and margined, very narrowly winged; leaflet elliptic or oblong-elliptic, glabrous, about 15 cm. long, or shorter, 4–8 cm. wide, submembranous, reticulate-veined, acute or obtuse; inflorescence few-flowered, glabrous, at least when old; pedicels 1–2 cm. long; legume fusiform, narrowed at both ends, beaked, 2.5–3 cm. long, about 8 mm. thick, its margins strongly inrolled after dehiscence, the stipe 5–7 mm. long.

Vicinity of Marraganti, Panama, April 3–9, 1908, *R. S. Williams 995*.

10. *Touatea Hayesii* Britton, sp. nov.

Twigs glabrate. Leaves 1-foliolate; petioles stout, short, only 4–5 mm. long, short-winged above, the wing scutellate; leaflet elliptic, chartaceous, glabrous, 8–17 cm. long, 4–9 cm. wide, the apex bluntly acute or obtuse, the base obtuse or rounded; inflorescence few-flowered, in fruit glabrous; fruiting pedicels 1–1.5 cm. long; legume slender, short-beaked, 3–3.5 cm. long, apparently about 8 mm. in diameter, its valves strongly inrolled after dehiscence.

Near Gatun, Panama, January 1860, *S. Hayes 453*.

11. *Touatea costaricensis* Britton, sp. nov.

A large shrub, the slender twigs and petioles densely short-pubescent. Leaves 1-foliolate; petiole only 3 mm. long, short-winged above; leaflet submembranous, elliptic, reticulate-veined, long-acuminate, 7–10 cm. long, glabrous above, pilose on the midvein beneath; inflorescence few-flowered, glabrous; pedicels slender, 2–2.5 cm. long; immature legume narrowly oblong, glabrous, somewhat compressed, 3–5 cm. long, 10–12 mm. wide, narrowed at both ends, slender-beaked, its slender stipe 2 cm. long.

Vicinity of Tilarán, Guanacaste, Costa Rica, January 10–31, 1926, *Standley and Valerio 44407*.

12. *Touatea subcoriacea* Britton, sp. nov.

A tree, up to about 10 m. high, the twigs and leaves glabrous, at least when old. Leaves 1–3-foliolate; rachis or petiole narrowly winged, at least above, the wing auricled above; petiole of unifoliolate leaves about 4 mm. long; rachis of 3-foliolate leaves about 12 mm. long; leaflets subcoriaceous, broadly elliptic or ovate-elliptic, 8–17 cm. long, or some of them smaller; inflorescence few-flowered; fruiting pedicels 10–15 mm. long; legume ellipsoid to oblong, 2.5–5 cm. long, 12–20 mm. in diameter, 1- or 2-seeded, subulate-beaked, nearly straight, sometimes constricted between the seeds, its stipe 7–9 mm. long.

Vicinity of Penomene, Panama, February 23–March 22, 1908, *R. S. Williams 61*.

13. *Touatea trifolia* (Pittier) Britton & Rose.

Swartzia trifolia Pittier, Journ. Wash. Acad. 11: 158. 1921.

A small tree, 4–5 m. high, glabrous throughout, the twigs slender, dark red and smooth. Leaflets 3, rarely 5, oblong-lanceolate, 4.5–9 cm. long, short-acuminate, coriaceous, shining; rachis narrowly winged; fruiting pedicels 1 cm. long; legume 3.5 cm. long, pointed, 1-seeded, with a stipe 8 mm. long; seed 2.5 cm. long, brown, shining.

TYPE LOCALITY: Savanna of La Tortuga between El Boquete and Caldera, Panama.
DISTRIBUTION: Known only from the type locality.

14. *Touatea guatemalensis* (Donn. Smith) Britton & Rose.

Swartzia myrtifolia guatemalensis Donn. Smith, Bot. Gaz. 33: 251. 1902.

Swartzia guatemalensis Pittier, Journ. Wash. Acad. 11: 159. 1921.

A small tree with slender, minutely appressed-pubescent twigs. Leaflets 1 or 3, glabrous or nearly so, lanceolate to ovate-lanceolate, submembranous, long-acuminate, 3.5–16 cm. long, the rachis and petiolules broadly winged, the wing semiobcordate, 4–7 mm. broad near the top, narrowed downward, reticulate-veined; inflorescence 2–5-flowered, appressed-pubescent; pedicels slender, 12–15 mm. long; buds ellipsoid; calyx nearly 10 mm. long, splitting into 3 irregular segments; petal 10 mm. long, 22 mm. broad; stamens numerous, 8 longer than the others; ovary long-stipitate, 6–8-ovuled.

TYPE LOCALITY: Cubilquit, Alta Verapaz, Guatemala.

DISTRIBUTION: Known only from the type locality.

15. *Touatea Johnsonii* Britton, sp. nov.

Twigs slender, densely appressed-pubescent. Leaves 3-foliolate; rachis narrowly winged, the wing obsagittate, sparingly reticulate-veined; leaflets ovate to elliptic, subchartaceous, glabrous, finely reticulate-veined, bluntly and rather abruptly short-acuminate, the terminal one 6–9 cm. long, the lateral ones smaller; inflorescence sparingly pubescent, few-flowered; pedicels short, slender, 6–9 mm. long; flower-buds globose, about 8 mm. in diameter.

Yucatán or Tabasco, collected many years ago, *E. P. Johnson 116*.

16. *Touatea darienensis* (Pittier) Britton & Rose.

Swartzia darienensis Pittier, Journ. Wash. Acad. 11: 159. 1921.

A small tree, 6–8 m. high, with a short trunk, the spreading top often with pendant branches, the twigs and leaves glabrous. Stipules linear, 4–6 mm. long; leaflets 1 or 3, subchartaceous, elliptic, 7–13 cm. long, bluntly short-acuminate or obtuse, delicately reticulate-veined; rachis flattened, margined or narrowly winged, the wing obsagittate above; inflorescence 3–5-flowered, appressed-pubescent; pedicels 5–10 mm. long; calyx splitting into 3 or 4 segments about 1 cm. long; petal about 3 cm. broad; stamens numerous, the longer ones 4–9; ovary long-stipitate, 8-ovuled.

TYPE LOCALITY: Warner Hill near Gorgona, Canal Zone, Panama.

DISTRIBUTION: Canal Zone, Panama; Honduras (according to Standley).

17. *Touatea cuneata* Britton, sp. nov.

Swartzia myrtifolia Pittier, Journ. Wash. Acad. 11: 158, in part. 1891. Not J. E. Smith. 1819.

A small tree, the slender twigs glabrous or very nearly so. Leaves 3-foliolate, or the upper ones 1-foliolate; petiole 1–1.5 cm. long, very narrowly winged; rachis somewhat longer than the petiole, very narrowly winged, the wing obsagittate, faintly reticulate-veined; leaflets elliptic, membranous, glabrous, abruptly and bluntly short-acuminate or obtuse at the apex, cuneate at the base, the terminal one 10–15 cm. long, the lateral ones much smaller; racemes about 4-flowered; pedicels 10–20 mm. long; calyx about 7 mm. long, splitting into 3 oblong segments; stamens numerous, all nearly the same length and about as long as the calyx.

Vicinity of La Palma, southern Darien, Panama, June 1914, *Pittier 6676*.

18. *Touatea Standleyi* Britton & Rose, sp. nov.

A shrub, or a tree 5–6 m. high, the branches very slender, the twigs, petioles, rachis and inflorescence puberulent, or short-pubescent. Leaves pinnate; rachis narrowly winged between the leaflets, the wing obsagittate; leaflets 5–7, oblong to oblong-lanceolate, submembranous, reticulate-veined, glabrous on both sides or pubescent on the veins beneath, long-acuminate, 4–10 cm. long, or the lower pair ovate, acute, 2–3 cm. long; pedicels about 15 mm. long; legume oblong, about 5 cm. long and 1.8 cm. in diameter, straight, 2- or 3-seeded, puberulent on the suture, its puberulent stipe 13 mm. long.

Vicinity of Puerto Barrios, Izabel, Guatemala, June 2–6, 1922, *Standley 25069*.

19. *Toumatea arborescens* (Aubl.) Britton, Bull.
Torrey Club 16: 325. 1889.

Possira arborescens Aubl. Pl. Guian. 2: 934. 1775.
Possira triphylla Sw. Prodr. 82. 1788.
Ritiera triphylla Sw. Fl. Ind. Occ. 937. 1800.
Swartzia triphylla Willd. Sp. Pl. 2: 1220. 1800.
Swartzia parviflora DC. Mem. Leg. 403. 1825.
Swartzia arborescens Pittier, Journ. Wash. Acad. 11: 157. 1921.

A tree, up to about 10 m. high, the slender twigs pubescent. Stipules setaceous; leaves 3-foliolate or some of them 1-foliolate, the rachis narrowly winged; leaflets ovate to elliptic or oblong-lanceolate, subchartaceous, glabrous, shining above, bluntly acuminate, 6–10 cm. long, reticulate-veined; inflorescence few-flowered, glabrous or sparingly pubescent; pedicels nearly filiform, 1–2 cm. long; flower-buds subglobose, about 4 mm. in diameter; calyx splitting into 3 elliptic segments about 3 mm. long; petal orbicular, about 4 mm. broad; stamens about 20, all alike, somewhat longer than the petals; legume obliquely ovoid, long-pointed, 4–5 cm. long, short-stipitate.

TYPE LOCALITY: Near the source of the Galibi River, French Guiana.

DISTRIBUTION: Taboga Island, Panama (according to Hemsley); French Guiana; Brazil.

ILLUSTRATIONS: Aubl. loc. cit. pl. 355; DC. loc. cit. pl. 60.

20. *Toumatea caribaea* (Griseb.) Taub. Bot. Centr. 47: 390. 1891.

Swartzia caribaea Griseb. Fl. Br. W. Ind. 212. 1860.
Toumatea caribaea Kuntze. Rev. Gen. 211. 1891.

A shrub, the twigs and leaves glabrous. Leaves pinnate; rachis terete; leaflets usually 5, sometimes 3, submembranous, elliptic-oblong, 9–20 cm. long, 5–7 cm. wide, acuminate, shining above; racemes elongated, nodding, puberulent, many-flowered; pedicels 6–8 mm. long; calyx glabrescent, breaking into 3 or 4 irregular segments; petals none; ovary ovoid, puberulent, 4–6 mm. long, about as long as the inflexed stipe; style 1 mm. long, hooked; legume oblong, 5 cm. long, 1- or 2-seeded; seeds 12 mm. long, with a very pale aril.

TYPE LOCALITY: Dominica.

DISTRIBUTION: Dominica, Guadeloupe, and Santa Lucia.

21. *Toumatea cubensis* Britton & Wilson, Bull. Torrey
Club 53: 460. 1926.

A small tree, the twigs, petioles and rachis puberulent or short-pubescent, sometimes densely so. Leaves odd-pinnate, 1.5–2.6 dm. long; rachis very narrowly winged; leaflets 11–15, oblong to elliptic-lanceolate, oblanceolate or the lower ones ovate, 4–9.5 cm. long, 2–3 cm. wide, finely pubescent when young, glabrate when old, acute or acuminate, finely reticulate-veined; racemes lateral on the branches, numerous, short-pubescent, many-flowered, 5–7 cm. long; pedicels 3–5 mm. long; flower-buds ellipsoid, about 6 mm. long; calyx parting into 3 oval, obtuse segments 5–6 mm. long; stamens about 20, all alike, slightly longer than the calyx-segments; petals none; legume ellipsoid, oblique, subterete, coriaceous, rugulose, 3–4.5 cm. long, short-beaked, 1-seeded.

TYPE LOCALITY: Valley of San Juan, Pinar del Rio, Cuba.

DISTRIBUTION: Pinar del Rio, Cuba.

22. *Toumatea* (?) *nicaraguensis* Britton & Rose, sp. nov.

A shrub, with grayish smooth branches. Leaves pinnate, 10–15 cm. long; leaflets 7–9, oblong-lanceolate, 6–10 cm. long, acuminate, green and shining above, very pale beneath; rachis flattened, narrowly winged; inflorescence few-flowered; pedicels 2–3 cm. long; legume about 3 cm. long, stipitate, apiculate.

Nicaragua, C. Wright, in connection with the U. S. North Pacific Exploring Expedition, 1853–56.

EXCLUDED SPECIES.

TOUNATEA MYRTIFOLIA (J. E. Smith) Taub. Bot. Centr. 47: 392. 1891.
Swartzia myrtifolia J. E. Smith in Rees, Cycl. 34: no. 5. 1819.

Leaflets 3 or 5, oblong-lanceolate, 2.5-3 cm. long, the rachis margined. Stipules mostly lanceolate, leafy; stamens very numerous, polyadelphous, as long as the calyx, scarcely as long as the orbicular, white or yellowish petal.

TYPE LOCALITY: Caracas, Venezuela.

DISTRIBUTION: Known to us from the description only. The species has been reported from Guatemala and Panama, apparently in error.

81. FAIRCHILDIA Britton & Rose, gen. nov.

A tree, with deciduous, odd-pinnate leaves, the 5 leaflets large. Inflorescence an elongated many-flowered raceme; flower-buds globular, the calyx breaking open irregularly. Petal 1, large; stamens numerous, all about the same length, but 6-10 opposite the standard erect and somewhat stouter than the others. Legume large, broad, flat, woody, splitting first along the ventral suture, the valves thick and somewhat elastic. Seeds several, large, flattened, discarillate.

Type species, *Swartzia panamensis* Benth.

1. *Fairchildia panamensis* (Benth.) Britton & Rose.

Swartzia panamensis Benth. in Mart. Fl. Bras. 15: 38. 1870.

Swartzia pinnata Seem. Bot. Voy. Herald 113. 1853.

Tounatea panamensis Taub. Bot. Centralbl. 47: 392. 1891.

A medium-sized tree, glabrous or the young parts puberulent. Leaves large; stipules small, caducous; rachis terete; leaflets oblong to lanceolate, 7-18 cm. long, long-acuminate; inflorescence a slender elongated many-flowered raceme, often 4 dm. long; pedicels stout, 1-15 mm. long; sepals orbicular, coriaceous, about 1 cm. broad; petal 2-3 cm. broad, yellow, the margin denticulate; legume stipitate, elliptic, 2-2.5 dm. long, about 1 dm. wide, stout-beaked, 2-valved; seeds flattened, oval, 6-8 cm. in diameter.

TYPE LOCALITY: Panama.

DISTRIBUTION: Panama; Honduras.

82. CASHALIA Standley, Journ. Wash. Acad. 13: 440. 1923.

An unarmed tree, the leaves odd-pinnate. Stipules minute, caducous. Leaflets many, alternate. Inflorescence racemose, elongated, many-flowered; bracts and bractlets caducous. Calyx-tube broadly campanulate, the limb 5-lobed, somewhat 2-lipped. Petal 1, obovate, tapering into a claw. Stamens 10, free, with slender filaments; anthers dehiscent by longitudinal slits. Ovary short-stipitate, 2-ovuled. Legume ovoid, 1- or 2-seeded, coriaceous, subterete, 2-valved. Seeds large, exarillate.

Type species, *Cashalia cuscatlanica* Standley.

1. *Cashalia cuscatlanica* Standley, Journ. Wash. Acad. 13: 441. 1923.

A very large tree, the young branches and petioles densely brown-pilose with stiff spreading hairs. Leaves 20-35 cm. long; leaflets 11-13, oblong, acuminate, 9-23 cm. long, glabrous above, pilose beneath; inflorescence 3 dm. long or shorter; flowering pedicels 2-3 mm. long; calyx about 8 mm. long, densely brown-tomentose; petal 18 mm. long, 15 mm. broad, tomentose without, glabrous within; stamens 15 mm. long; legume 6-10 cm. long, densely tomentulose; seeds 3-4 cm. long.

TYPE LOCALITY: On the Finca Colima, Sierra de Apaneca, Ahuachapán, El Salvador.

DISTRIBUTION: El Salvador.

83. **ZOLLERNIA** Maxim. & Nees, Nov. Act. Nat.
Cur. 13²: XIII. 1827.

Unarmed trees or shrubs, with short-petioled, 1-foliolate leaves, mostly persistent stipules, and rather small flowers in terminal, panicked racemes. Calyx-tube disk-like, the limb entire and closed until anthesis, then irregularly rupturing. Petals 5, imbricated. Stamens 9-13, the filaments short, distinct, the uniform anthers longitudinally dehiscent. Ovary several-ovuled; style short; stigma oblique. Legume thick, ovoid or globose, 2-valved, 1-few-seeded. Seeds compressed, without endosperm.

Type species, *Zollernia splendens* Nees.

1. **Zollernia Tango** Standley, Trop. Woods 19: 6. 1929.

A large tree, glabrous throughout, the twigs slender, angled. Stipules linear-oblong, 2-3 mm. long, rigid, obtuse; leaves oblong to elliptic-oblong, subcoriaceous, reticulate-veined, acuminate, distantly serrate, 5-17 cm. long, 1.5-6 cm. wide; legume globose, smooth, 2-3 cm. in diameter, 1-seeded; seed ellipsoid, 1.5-2 cm. long.

TYPE LOCALITY: Lancotilla Valley, near Tela, Atlantida, Honduras.

DISTRIBUTION: Honduras and British Honduras.

COMPLETED VOLUME

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- 6¹: 1-84. Phyllostictales: Phyllostictaceae (pars).
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- 10¹: 1-76. 10²: 77-144. 10³: 145-226. 10⁴: 227-276. (Agaricales:) Agaricaceae (pars).
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- 24¹: 1-64. 24²: 65-136. 24³: 137-200. 24⁴: 201-250. 24⁵: 251-314. 24⁶: 315-378. 24⁷: 379-462. (Rosales:) Fabaceae (pars).
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- 33¹: 1-110. Carduales: Ambrosiaceae, Carduaceae (pars).
- 34¹: 1-80. 34²: 81-180. 34³: 181-288. 34⁴: 289-360. (Carduales): Carduaceae (pars).

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