

First published on the Flora Mesoamericana Website, 28 Oct. 2011.

48. SIPARUNACEAE

Descripción de la familia por S.S. Renner y G. Hausner.

Evergreen, sometimes sarmentose shrubs, treelets, or trees with spherical oil cells in all parts of the plants. Leaves petiolate, decussate or in whorls of 3, 4, or 6, simple, estipulate, those of a pair occasionally unequal in size, with simple, tufted, stellate, or lepidote hairs, the margins variously serrate, dentate, or entire. Inflorescences axillary or cauliflorous, cymose. Flowers radial, rarely asymmetric, unisexual, plants dioecious or more rarely monoecious; receptacle (floral cup) subglobose or cup-shaped, gynoecium apocarpic; tepals 4-6, rarely 8, generally less than 10 mm, occasionally fused to a rim encircling the floral cup, rarely one tepal much longer than the others or tepals forming a calyptra (outside Mesoamerica), the flower center more or less covered by a membrane (the floral roof or velum) except for a central pore through which stamens or styles emerge; stamens (1-)2-72, dispersed irregularly in the floral cup except in flowers with very few stamens, the filaments lacking appendages, the anthers introrse, with 2 closely adjacent apical pollen sacs opening by a single apically-hinged flap; carpels 3-35, sessile and completely immersed in the receptacle, the ovules solitary, basally attached, anatropous, unitegmic, and crassinucellate. Mature fruiting receptacle fleshy, globose or pear-shaped, smooth, spiny, or tuberculate, in most species splitting open at maturity to expose the drupelets; drupelets with a thin translucent exo- and mesocarp and a stony endocarp, in most dioecious species the drupelets with a red to orange, fleshy, fat-rich appendage, rarely the drupelets lacking an appendage and/or the receptacle not splitting open at maturity. 2 gen., the West African *Glossocalyx* Benth. and the Neotropical *Siparuna* Aubl.

Bibliografía: Renner, S.S. & G. Hausner, *Fl. Ecuador* 59: 1-125 (1997); *Fl. Neotrop.* 95: 1-247 (2005).

1. *Siparuna* Aubl.

Citrosma Ruiz & Pav., *Conuleum* Rich. ex A Rich.

Por S.S. Renner y G. Hausner.

Dioecious or monoecious shrubs, treelets, or trees (to 40 m and to 120 cm in d.b.h.). Leaves decussate or in whorls of 3, 4, or 6, petiolate, sparsely or densely pubescent, the hairs simple, tufted, stellate, stellate-lepidote, or lepidote, the older leaves sometimes glabrous, the margins dentate, serrate, or entire. Inflorescences mono- or dichasial cymes, sometimes bifid or fasciculate, axillary and/or on leafless nodes. Flowers unisexual, pedicellate; receptacle subglobose or cup-shaped, rarely urceolate or flask-shaped, completely enclosing the stamens or carpels, at anthesis the distal parts of the stamens and styles protruding from a variably-sized pore in the center of the floral roof; tepals 4-6(-8), usually small, triangular, rounded, or spatulate, or forming a rim encircling the floral cup, rarely a calyptra (outside Mesoamerica), the floral roof (velum) in female flowers sometimes differentiated into an outer bulge and an inner tube tightly sheathing the styles; stamens usually 5-9, occasionally 1 or up to 72, free, rarely their filaments laterally fused, dispersed irregularly in the floral cup except in flowers with very few stamens, the 2 pollen sacs introrse, closely adjacent, and opening by a single flap, the filaments unappendaged and undifferentiated; carpels 3-35, the styles free, sometimes postgenitally fused, the stigmas papillose and decurrent. Mature fruiting receptacles 1.5-4 cm in diameter, fleshy, globose, smooth, spiny, or with tubercles, rarely almond-shaped or with longitudinal ribs, often crowned by the persistent tepals, when fresh and mature reddish or yellow and with a strong pungent scent, commonly splitting irregularly from the apex and spreading to reveal the drupelets; drupelets fresh with a translucent bluish-gray exo- and mesocarp and a stony endocarp, in most dioecious species drupelets bearing an apical or lateral reddish-orange outgrowth of the style basis ('stylar aril'), rarely the drupelets lacking an appendage and/or the receptacle not splitting open at maturity. Approx. 60 spp. Mexico, Mesoamerica, throughout northern South America to Paraguay, West Indies.

1. Leaf margins entire, lacking even minute teeth; plant/specimen monoecious.

2. Cymes in subsessile clusters, at anthesis to 1.5 cm; stamens 10-18, membranaceous, distally narrow; pedicels of male flowers not elongating during anthesis.

6. *S. guianensis*

2. Cymes 2-7 cm; stamens thick-fleshy, distally not distinctly narrow; pedicels of male flowers more or less elongating during anthesis.

3. Stamens 10-18; pedicels of male flowers gradually elongating during anthesis and becoming up to 2 cm; fruiting receptacles (1-)2-3.5 cm in diameter, smooth, at maturity not splitting open. **2. *S. cristata***

3. Stamens 5-6(-10); pedicels of male flowers becoming up to 7 mm during anthesis; fruiting receptacles 1-2 cm in diameter, with tubercles 1-2 mm, at maturity splitting open. **3. *S. cuspidata***

1. Leaf margins not entire, with more or less distinct teeth, each tooth with a minute terminal water gland (hydathode); plants/populations dioecious, very rarely male plants with a few female flowers or fruits.

4. Young branchlets quadrangular to (longitudinally) 4-ridged; tepals forming an 0.8-1.4 mm broad spreading rim, the rim margin circular or wavy; floral roof densely and persistently stellate-pubescent with short grayish hairs; stamens 12-30; styles 20-30; fruiting receptacles 1.5-2.5 cm in diameter and apically with a deep crateriform depression, surrounded by the persistent tepal rim. **8. *S. pauciflora***

4. Plants not with the above combination of characters.

5. Lower leaf surface glabrous, except for a few simple or bifid hairs on the midrib and the veins; lamina often drying shiny, the margins often crenulate or revolute. **7. *S. laurifolia***

5. Lower leaf surface more or less densely pubescent; lamina not drying shiny, the margins flat.

6. Leaf lamina with mostly simple or bifid hairs, the hairs 1-2 mm; leaf margins always ciliate with hairs up to 3 mm. **5. *S. grandiflora***

6. Leaf lamina with tufted hairs (the rays generally shorter than 1 mm) or stellate-pubescent with short and more or less appressed hairs; leaf margins not ciliate.

7. Tepals at anthesis at least 2 mm (generally 2.5 mm or longer), triangular, basilaterally not fused. **1. S. conica**

7. Tepals up to 1.5 mm, usually forming a shallowly lobed or circular rim.

8. Both leaf surfaces usually densely covered with tufted hairs and velvety covered with tufted hairs and velvety to the touch; the secondary veins often accentuated by a yellow pubescence, the lamina bases lacking mite domatia. **4. S. gesnerioides**

8. Both leaf surfaces more or less densely covered with short and mostly appressed stellate hairs, in Panama the lamina bases sometimes with conspicuous mite domatia. **9. S. thecaphora**

1. Siparuna conica S.S. Renner & Hausner, *Novon* 6: 108 (1996). Holotipo: Ecuador, *Quelal et al.* 685 (QCNE). Illustr.: Renner & Hausner, *Fl. Neotrop.* 95: 191, t. 84 (2005).

Dioecious shrubs or treelets, often with the branches hanging over other trees, 3-8(-15) m, reaching a d.b.h. of 6.5 cm; young branchlets terete or rarely subquadrangular, with scarce stellate hairs, glabrescent, or glabrous. Leaves opposite; petioles (2.5-)3-5(-9) cm; lamina 20-30 × 12-14.5(-17) cm, drying khaki to brown, thin, smooth, brittle, elliptic or obovate, the base truncate, cordate, or rarely almost rounded, the apex acuminate, the tip 0.5-1(-1.5) cm, the upper surface with few stellate hairs on the veins, otherwise subglabrous or glabrous, the lower surface moderately stellate-pubescent, with 9-17 pairs of secondary veins, the veins smooth above, hardly raised below, the margins finely dentate or crenate. Cymes axillary in extant leaves or on leafless nodes,

2-7 cm in the males, 1-3 cm in the females, densely covered with conspicuous golden-brown or grayish stellate hairs, rarely glabrescent, with 15-25 flowers. Fresh flowers greenish-yellow, yellow, or orange-red; male floral cup 2.5-3(-6) × 3.5-7 mm, narrowly obconical, pubescent like the cymes, the tepals 4-6, 2.5-3 mm, triangular, with a few stellate hairs on the adaxial tepal tips, otherwise glabrous, the floral roof glabrous and centrally raised to a thin-walled tube surrounding the pore; stamens 6-7, the 4 outer ones exerted at anthesis and with their tips (pollen sacs) bent backwards; female floral cup similar to the male cups except sometimes more densely pubescent, the acutely triangular tepals 4-5 mm, the floral roof conspicuously acute-conical; carpels 9-14, the styles often fused to a long, thin column. Fruiting receptacle 1.5-2 cm in diameter, globose, stellate-pubescent and crowned by the persistent tepals, when fresh and mature dull red with white spots and with an astringent odor; drupelets 8-14, each with a styler aril. *Primary montane forests and secondary scrub. P (Luteyn & Kennedy 1737, MO). 200-1200 m. (Mesoamerica, Colombia, Ecuador.)*

2. *Siparuna cristata* (Poepp. & Endl.) A. DC., *Prodr.* 16(2): 655 (1868). *Citrosma cristata* Poepp. & Endl., *Nov. Gen. Sp. Pl.* 2: 47 (1838). Lectotipo (designated by Renner & Hausner, 1997): Brazil, *Poeppig 2664* (P). Illustr.: Renner & Hausner, *Fl. Neotrop.* 95: 64-65, t. 25-26 (2005).

Siparuna monogyna Jangoux, *S. obconica* Jangoux, *S. williamsii* J.F. Macbr.

Monoecious treelets or trees, (3-)8-22 m, rarely shrubs, reaching a d.b.h. of 45(-60) cm; young branchlets terete but flattened at the nodes, densely or sparsely covered with appressed stellate-lepidote hairs or silvery scales; trunk straight, round, slender, and unbranched up to half the entire height; bark yellowish or light brown and fairly smooth. Leaves opposite; petioles (0.8-)1.5-5 cm; lamina 18-27(-38) × (7-)9-14 cm, drying grayish- or reddish-brown, stiff-chartaceous to coriaceous, oblong or elliptic, the base obtuse, acute, or shortly attenuate, the apex acuminate, mature leaves with the upper surface glabrous, the lower surface with minute

stellate-lepidote scales along the veins, rarely with large scales on the veins, otherwise glabrous, with 7-13 pairs of secondary veins, more or less flat above, raised below, anastomosing several mm from the margin, the tertiary veins straight, parallel to each other, and densely spaced, the margins entire. Cymes 2.5-7 cm, in the axils of extant leaves, usually with numerous (20-50) flowers, the pedicels 3-7 mm, those of male flowers gradually elongating during anthesis and becoming up to 2 cm, covered with few or many minute scales or silvery stellate-lepidote hairs. Fresh flowers white or yellow; male flowers 1.8-4 × 1.7-3 mm, cup-shaped, the indumentum as on the cymes; tepals thick and semiorbiculate or forming a narrow upright rim, the floral roof a narrow membranaceous rim; stamens 10-18, fleshy and with minute anther flaps, dorsally sometimes with a few stellate hairs; female flowers 2-4 × 3-4 mm, subglobose, the floral roof conical; styles 3-9, often fused to a column. Fruiting receptacle (1-)2-3.5 cm in diameter, pyriform to oblong, fresh and immature light green with brownish spots, mature dark red, drying black with some persistent stellate-lepidote hairs, not splitting open at maturity; drupelets 3-5, lacking a stylar aril. *Non-flooded tropical rain forests*. P (Foster 2969, MO). 300-800 m. (Mesoamerica, Colombia, Venezuela, Guyana, French Guiana, Ecuador, Peru, Brazil.)

3. *Siparuna cuspidata* (Tul.) A. DC., *Prodr.* 16(2): 655 (1868). *Citrosma cuspidata* Tul., *Ann. Sci Nat. Bot. sér 4*, 3: 40 (1855). Lectotipo (designated by Renner & Hausner, 2005): Surinam, *Hostmann 1167* (P!). Illustr.: Renner & Hausner, *Fl. Neotrop.* 95: 76, t. 32 (2005).

Siparuna argyochrysea Perkins, *S. crassiflora* Perkins, *S. lepidiflora* Perkins, *S. ucayaliensis* Perkins.

Monoecious treelets or trees, 3-20(-35) m, reaching a d.b.h. of 40 cm, rarely a shrub; bark gray and smooth; sapwood yellow or tan; young branchlets terete, with silvery peltate scales or stellate-lepidote hairs, glabrescent. Leaves opposite; petioles 0.5-1 cm; lamina 11-21 × 4.5-6(-9) cm, drying grayish-brown or brown, smooth, oblong, the base obtuse or rounded, the apex cuspidate, the tip 1-2 cm, older leaves with the upper surface glabrescent, the lower surface lepidote along the nerves, with 6-8(-9) pairs of secondary veins, impressed above, slightly raised below, anastomosing several mm from the margins, the margins entire. Cymes 2-4 cm,

with 10-15 terminally clustered flowers on somewhat elongate pedicels 3-7 mm, transparent to silvery lepidote. Fresh flowers yellow-cream or reddish; male flowers 1.5-1.7 × 1.1-1.5 mm, cup-shaped, the indumentum as on the cymes; tepals forming an 0.2-0.3 mm high irregularly lobed rim or obsolete, the floral roof a narrow collar, glabrous; stamens 5-6(-10), short, fleshy, containing whitish oil cells; female flowers 1.8-2 × 1.5-2 mm, ovoid to subglobose, with or without minute tepals; carpels 5-9, the styles forming a column. Fruiting receptacle 1-2 cm in diameter, globose, with tubercles 1-2 mm, when fresh and immature yellow, when mature purple and smelling strongly of lemon; drupelets 5-9, lacking a styler aril. *Disturbed areas in tropical rain forests*. CR (Burger & Stolze 5595, MO); P (Liesner 1162, MO). 20-1200 m. (Mesoamerica, Colombia, Venezuela, Guayana, Ecuador, Peru, Brazil, Bolivia.)

4. *Siparuna gesnerioides* (Kunth) A. DC., *Prodr.* 16(2): 646 (1868). *Citrosma gesnerioides* Kunth in Humb., Bonpl. & Kunth, *Nov. Gen. Sp.* 2: 172 (1817). Holotipo: Colombia, *Humboldt y Bonpland s.n.* (P-Bonpl.). Illustr.: Renner & Hausner, *Fl. Neotrop.* 95: 133, t. 58 (2005).

Siparuna austromexicana Lorence, *S. chrysothrix* Perkins, *S. coriacea* Perkins, *S. fosbergii* A.C. Sm., *S. griseoflavescens* Perkins, *S. idroboi* A.C. Sm., *S. paralleloneura* Perkins, *S. patelliformis* Perkins, *S. pectinata* A.C. Sm., *S. scandens* Lorence, *S. tetraceroides* Perkins.

Dioecious shrubs or treelets, 2-10 m and reaching a d.b.h. of 6 cm, sometimes a sprawling vine; branchlets terete, densely pubescent with yellowish or golden tufted hairs. Leaves opposite, sometimes in whorls of three; petioles (0.5-)2-5 cm and densely tomentose; lamina 10-28 × 5-13 cm, above drying brown or olive green, below yellowish-brown, obovate, elliptic, oblanceolate, or lanceolate, the base rounded, cordate, or obtuse, rarely acute, the apex acute or acuminate, the tip to 2 cm, rarely obtuse, both surfaces usually densely pubescent and velvety to the touch, with (8-)10-14 pairs of secondary veins, these flat above, moderately raised below, often accentuated by the yellow pubescence, the margins denticulate or doubly dentate-serrate, drying flat. Cymes 1.5-2(-5) cm, tomentose or more or less densely stellate-pubescent, with 5-20 flowers. Fresh flowers yellow or orange to pink; male floral cup 1.5-2.7 × 1.5-2.6 mm, subglobose or obconical, tomentose or covered with yellowish stellate or tufted hairs, the floral roof distinctly raised, glabrous, rarely with a few stellate hairs, the 4-7 tepals up to 1.4 mm,

broadly rounded, or forming a wavy rim, on the adaxial side glabrous except for a few hairs along the margin; stamens 6(-9), the 4 outer ones exerted at anthesis and with their tips (pollen sacs) bent backwards, rarely their filaments laterally fused; female floral cup 2.5-3.5 × 2-2.7 mm, subglobose, the tepals up to 1.5 mm or fused to a shallowly lobed rim, broadly rounded, the floral roof more or less raised and sheathing the styles; styles 5-8(-13). Fruiting receptacle c. 1 cm in diameter when dry (fresh to 2.5 cm in diameter), globose and crowned by the persistent tepals, when immature green with light spots, when mature red and with a strong lemon smell; drupelets gray or yellowish, each with a red stylar aril. *Forests, cloud forests, fog zone*. Ch (*Breedlove 25101*, MO); CR (*Skutch 3813*, MO); P (*Nee 10702*, MO). 10-2300 m. (Mexico [Guerrero, Oaxaca, Veracruz], Mesoamerica, Colombia, Venezuela.)

5. *Siparuna grandiflora* (Kunth) Perkins, *Bot. Jahrb. Syst.* 28: 658 (1901). *Citrosma grandiflora* Kunth in Humb., Bonpl & Kunth, *Nov. Gen. Sp.* 2: 172 (1817). Holotipo: Colombia, *Humboldt & Bonpland s.n.* = '1692' (P not found). Illustr.: Renner & Hausner, *Fl. Neotrop.* 95: 174, t. 77 (2005).

Siparuna auriculata A. DC., *S. hispida* A. DC., *S. tonduziana* Perkins.

Dioecious shrubs or treelets, 2-10 m, reaching a d.b.h. of 8 cm; young branchlets terete, densely golden-brown pubescent with spreading simple or few-branched hairs 1-3 mm; older branchlets glabrescent, frequently hollow, sometimes occupied by ants. Leaves opposite; petioles 0.5-2(-4) cm; lamina 16-50 × 12-24 cm, often drying grayish or greenish-brown, thin-chartaceous, elliptic to obovate or oblanceolate, the base auriculate, obtuse, rounded, or truncate, sometimes with formicaria or with two or three fimbriate serrations, the apex acuminate, the tip 1-2 cm, the upper surface densely covered with long simple or few-branched hairs (to 2 mm), the lower surface more densely pubescent with few-branched spreading hairs, with 10-15(-23) pairs of secondary veins, these flat above and slightly raised below, the margins crenulate, denticulate, or serrulate, sometimes prominently dentate with acute teeth of unequal length (1-4 mm), and always ciliate with hairs up to 3 mm. Cymes 1-2 cm, typically with 5-15 flowers, borne in leaf axils or cauliflorous on older wood. Fresh flowers creamy-

yellow or white; male floral cup 2-3 × 2.5-3 mm, obconical, pubescent like the branchlets and cymes; tepals 4-6, 1.3-2.5 mm, triangular, with long hairs on the tepal tips, the floral roof moderately raised, glabrous; stamens 5-7, thin; female floral cup 3-4 × 3-4 mm, the tepals 3-4 mm; styles (6-)10-24. Fruiting receptacle 1-1.5 cm in diameter, globose and smooth, rusty tomentose or glabrous, when fresh and mature pink or red with whitish spots and a strong lemon odor, when dried the 8-20 drupelets distinctly protruding; fresh drupelets gray-speckled with a red stylar aril. *In Pacific cloud forests, primary and secondary forests.* G (Jones et al. 3023, F); H (Standley 53095, F); N (Riviere 335, MO); CR (Skutch 3599, MO); P (Knapp et al. 4078, MO). 0-2200 m. (Mexico [Veracruz], Mesoamerica, Colombia, Ecuador, Peru, Bolivia.)

6. *Siparuna guianensis* Aubl., *Hist. Pl. Guiane* 2: 865 (1775). Holotipo: French Guiana, *Aublet s.n.* (BM-30814!). Illustr.: Renner & Hausner, *Fl. Neotrop.* 95: 50, t. 20 (2005).

Citrosma campora Tul., *C. discolor* Poepp. & Endl., *Siparuna archeri* A.C. Sm., *S. arianae* V. Pereira, *S. camporum* (Tul.) A. DC., *S. cavalcantei* Jangoux, *S. discolor* (Poepp. & Endl.) A. DC., *S. duckeana* Jangoux, *S. foetida* Barb. Rodr., *S. itacaiunensis* Jangoux, *S. panamensis* A. DC., *S. savanicola* Jangoux.

Monoecious shrubs or treelets, 5-9(-15) m and reaching a d.b.h. of 20 cm; bark gray and smooth, young branchlets terete but flattened at the nodes, with minute stellate or stellate-lepidote hairs. Leaves opposite, very rarely ternate; petioles 0.5-1.5 cm; lamina 10-22(-33) × 4-10(-16) cm, drying irregularly grayish- to yellowish-brown, rather stiff and parchment-like, oblong to elliptic or lanceolate, the base obtuse, the apex acuminate, the tip 0.5-1 cm, older leaves with a few simple hairs above near the lamina base and on the midrib or glabrous, the lower surface stellate or on the veins lepidote-stellate puberulent, with 9-11 pairs of secondary veins, slightly raised above, more conspicuously so below, the margin entire. Cymes 1-1.5 cm (to 3 cm in fruit), in subsessile clusters, and densely covered with stellate to sublepidote hairs, with 5-15 flowers. Fresh flowers greenish-yellow; male flowers 2-3 × 1.5-2.5 mm, cup-shaped, the indumentum as on the cymes, the 4-6 tepals minute, c. 0.2 mm, broadly triangular, the floral roof barely developed; stamens 10-18, membranaceous, distally narrow; female flowers 1.8-2.5

× 2.5-3 mm, ovoid to subglobose, the tepals as in the male flowers, the floral roof conical; carpels 3-12(-17); exposed styles 5-7, free or forming a column. Fruiting receptacle 1-1.5 cm in diameter, globose, more or less densely covered with stellate hairs, when fresh and mature smelling strongly and often unpleasantly of lemon, greenish-red and splitting open to expose a yellow-orange interior on which the drupelets are displayed; drupelets 4-10, lacking a stylar aril, the exo- and mesocarp fleshy and whitish-gray or orange, soon becoming slimy, the endocarp stony. *In primary and secondary lowland forests.* 10-700 m. N (Proctor et al. 27239, F); CR (Skutch 4311, MO); P (Allen 3654, MO). (Mesoamerica, Colombia, Venezuela, Guyana, Ecuador, Peru, Brazil, Bolivia, Paraguay, Trinidad.)

7. *Siparuna laurifolia* (Kunth) A. DC., *Prodr.* 16(2): 651 (1868). *Citrosma laurifolia* Kunth in Humb., Bonpl. & Kunth, *Nov. Gen. Sp.* 2: 171 (1817). Holotipo: Colombia, *Humboldt & Bonpland s.n.* (P-Bonpl.!). Illustr.: Renner & Hausner, *Fl. Neotrop.* 95: 152, t. 65 (2005).

Siparuna pennellii Perkins, *S. sinuata* A.C. Sm.

Dioecious or rarely monoecious shrubs or treelets, 1.5-8 m and reaching a d.b.h. of 10 cm, often drooping over other vegetation; bark gray and smooth; branchlets terete and with a few simple or few-branched hairs. Leaves in whorls of 3 or rarely 4, sometimes opposite; petioles 1-2.5 cm, occasionally with conspicuous stiff hairs; lamina 7-15(-21) × 3-7(-10) cm, drying light or medium brown, brittle, elliptic to lanceolate, the base obtuse, rarely rounded or acute, occasionally with small mite domatia, the apex acuminate, the drip tip c. 1 cm, the lower surface glabrous except for a few simple or bifid hairs on the veins and midrib, with 7-9(-12) pairs of secondary veins, these slightly raised above, distinctly raised below, the margins often crenulate and revolute. Cymes typically 2-3.5 cm, 3- to 5-branched, deciduously pubescent or glabrous, with (6-)15-20 flowers. Fresh flowers yellow to pale orange; male floral cup 2-3.5(-5) × 2-3.5(-5) mm, obconical to subglobose, the tepals 4-6, to 0.9 mm or sometimes reduced to a narrow rim 0.3-0.5 mm broad, obtusely triangular to rounded, the floral roof broadly conical and distinctly raised, glabrous; stamens 5-6(-8), containing conspicuous yellowish oil cells, sometimes large and distinctly exerted from the floral pore; female floral cup of the same size

and shape, the floral roof with an acutely conical tube sheathing the styles; styles 8-14(-30), usually only a few exerted from the floral pore. Fruiting receptacle to 2 cm in diameter, globose and smooth, when fresh and mature red with whitish or yellow-green spots and very fragrant, the pedicels elongating during maturation and becoming up to 6.5 cm and pendent; drupelets 12-30, distinctly protruding in dried receptacles, the fresh drupelets gray-blue with a red styler aril. *In disturbed sites in forest understory and along roads.* 400-500 m. P (*Bristan 1480*, MO). (Mesoamerica, Colombia, Ecuador.)

This species is only known from one collection from Mesoamerica from the Panamanian Darién. It also occurs throughout Andean Colombia to northern Ecuador at elevations between 350 and 2900 m.

8. *Siparuna pauciflora* (Beurl.) A. DC., *Prodr.* 16(2): 656 (1868). *Citrosma pauciflora* Beurl., *Kongl. Vetensk. Acad. Handl.* 40: 144 (1854). Holotipo: Panama, *Billberg 345/325* (S!).
Illustr.: Renner & Hausner, *Fl. Neotrop.* 95: 95, t. 41 (2005).

Siparuna cauliflora Hemsl.

Dioecious shrubs or treelets, 4-10 m and reaching a d.b.h. of at least 20 cm, sometimes somewhat scandent; branchlets quadrangular to distinctly 4-ridged, finely brown pubescent, the older branchlets glabrous. Leaves opposite; petioles 1.5-6 cm; lamina 15-40 × 7-17 cm, drying rusty brown, chartaceous, obovate to broadly elliptic, the base cuneate or acute, the apex generally acute to short-acuminate, above strigilose with simple or few-branched spreading hairs, below more densely pubescent, with 10-17 pairs of secondary veins, the margins denticulate. Cymes 1-3 cm, axillary or on older leafless nodes, densely pubescent, with 5-15 flowers. Fresh flowers yellow to pale orange; male floral cup 2-3 × 1.5-2.5 mm, semiglobose to broadly obconical, densely pubescent, the tepals forming an 0.8-1.4 mm broad spreading rim, the rim margin circular or wavy, the floral roof barely raised and densely stellate-pubescent with short grayish hairs; stamens 12-30; female floral cup of about the same size and shape as the male, the tepal rim persistent in fruit and then completely circular, the floral roof almost flat to slightly bulging with a short central cylindrical tube sheathing the numerous (20-30) styles.

Fruiting receptacle 1.5-2.5 cm in diameter, globose with a crateriform depression at the apex surrounded by the tepal rim, when mature light yellowish-green to dull white and bursting irregularly to display usually fewer than 10 drupelets; drupelets gray, each with a fleshy, rose-colored styler aril. *Tropical moist forests*. N (Moreno 23397, DUKE); CR (Holm & Iltis 211, MO); P (Liesner 622, MO). 0-1200 m. (Mesoamerica, Colombia.)

9. Siparuna thecaphora (Poepp. & Endl.) A. DC., *Prodr.* 16(2): 657 (1868). *Citrosma thecaphora* Poepp. & Endl., *Nov. Gen. Sp. Pl.* 2: 48 (1838). Lectotipo (designated by Renner & Hausner, 1997): Peru, *Poeppig 2157 B*). Illustr.: Renner & Hausner, *Fl. Neotrop.* 95: 139, t. 60 (2005).

Citrosma andina Tul., *C. chiridota* Tul., *C. lagopus* Tul., *C. riparia* Tul., *C. riparia* var. *sumichrastii* A. DC., *Siparuna andina* (Tul.) A. DC., *S. calignosa* J.F. Macbr., *S. chiridota* (Tul.) A. DC., *S. colimensis* Perkins, *S. cuzcoana* Perkins, *S. dasyantha* Perkins, *S. davillifolia* Perkins, *S. diandra* Duke, *S. domatiata* A.H. Gentry, *S. geniculata* A.C. Sm., *S. gilgiana* Perkins, *S. grisea* Perkins, *S. heteropoda* Perkins, *S. lagopus* (Tul.) A. DC., *S. loretensis* Perkins, *S. macra* Standl., *S. manarae* Steyerm., *S. metensis* A.C. Sm., *S. microphylla* Perkins, *S. nicaraguensis* Hemsl., *S. nigra* Rusby, *S. parviflora* Perkins, *S. pubancura* S.S. Renner & Hausner, *S. riparia* (Tul.) A. DC., *S. sumichrastii* (A. DC.) Perkins, *S. tapatana* A.C. Sm., *S. ternata* Perkins, *S. tetradenia* Perkins, *S. venezuelensis* Perkins, *S. verticillata* S.S. Renner & Hausner.

Dioecious shrubs, sometimes hanging over other shrubs, 1-12 m and reaching a d.b.h. of 10 cm, rarely a 20 m tree with a d.b.h. of up to 20 cm; bark pinkish or dark rufous to chocolate brown; young branchlets terete, more or less pubescent with short appressed or spreading stellate, simple, or bifid hairs, rarely with long spreading hairs (up to 3 mm). Leaves opposite or in whorls of 3; petioles 0.7-3.5(-5) cm; lamina 8-25(-39) × (3-)5-8(-15) cm, drying reddish-brown, grayish-brown, coffee-brown, or green, chartaceous, elliptic to obovate, rarely oblong or lanceolate, the base acute to obtuse, rarely rounded or with 2 or 3 serrations or small triangular appendages at the base, sometimes with conspicuous mite domatia, the apex

acuminate, the tip 0.5-1.5 cm, both surfaces with simple, bifid, or stellate hairs of variable size and thickness, sometimes glabrescent above, with 6-12 pairs of secondary veins, the veins smooth above, slightly raised below, the margins serrulate, occasionally subdentate. Cymes 1-5.5 cm, with 10-20(-30) flowers, the male cymes sometimes fasciculate. Fresh flowers yellow or cream, later orange-red; male floral cup 0.4-2.5 × 0.4-2.5 mm, broadly obconical to subglobose, the tepals 4-6, 0.1-0.6(-1) mm, broadly triangular to lobed, usually forming a shallowly lobed or circular rim, sometimes the tepals obsolete, the floral roof moderately to distinctly raised, glabrous or sparsely covered with minute appressed stellate hairs, glabrescent; stamens 2-5(-9); female floral cup 1.5-2.7 × 2-2.6 mm, broadly obconical to subglobose, the floral roof almost flat to distinctly raised and typically separated by a deep groove from a more or less developed central tube sheathing the styles, the tepals as in the male flowers except to 1.2 mm; styles 5-19, sometimes fused. Fruiting receptacle 1-1.5 cm in diameter, globose and smooth, pubescent or glabrous; drupelets 6-15, distinctly protruding in dried receptacles, when fresh and mature red with pale brown or green spots and a strong lemon smell, the drupelets gray with a bright red styler aril. *Primary and secondary forests, cloud forests.* Ch (*Matuda 2767*, MO); G (*Lundell 16273*, CAS); B (*Schipp 140*, MO); H (*Yuncker 8509*, MO); N (*Walker 420*, DUKE); CR (*Burger & Baker 10063*, MO); P (*Busey 873*, MO). 0-2500 m. (Mexico [Colima, Guerrero, Jalisco, Nayarit, Oaxaca, Veracruz], Colombia, Venezuela, Ecuador, Peru, Bolivia.)

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