134. OCHNACEAE

Family description and key to genera by C. Whitefoord.

Trees, shrubs or herbs. Leaves alternate, simple or very rarely compound, often dentate or serrulate, usually chartaceous to coriaceous, occasionally membranous, rarely fleshy, usually petiolate. Stipules caducous or more or less persistent. Inflorescences of solitary or clustered flowers in leaf axils, or in axillary or terminal thyrses, racemes or panicles; rachis sometimes bearing stipule-like scales at the base, above the base and at branching points, the scales sometimes persistent; often pedunculate; pedicels usually articulated, sometimes bracteolate. Flowers bisexual. Sepals (2)5(-10), free or rarely shortly united, usually imbricate in bud, persistent or deciduous. Petals (4-)5(-12), free, contorted, soon deciduous. Staminodes often present; fertile stamens 5 or 10-many; anthers basifixed, dehiscing by longitudinal slits or by apical pores. Ovary superior, entire or more or less deeply lobed, 1-10(-15)-locular; carpels 2-5, rarely 10-15; ovules 1-2 or numerous; styles persistent or deciduous or absent. Fruits sometimes a cluster of 1-seeded drupelets borne on an enlarged torus, sometimes a capsule, nut or berry. Seeds sometimes winged. 37 genera. Mexico, Mesoamerica, tropical and subtropical South America, West Indies, Africa, S.W. Arabia, India, Malaysia, N.E. Australia.

Ochna mossambicensis Klotsch has been collected in the Jardin Botánico La Laguna, El Salvador (Berendsohn WB0001, BM). This native of eastern districts of Kenya, Tanganyika and northern Mozambique is a bushy shrub or small tree with coriaceous obovate leaves and dense clusters of quite large, yellow flowers on short lateral side shoots.

1. Herbs or subshrubs; petals white, pale pink, mauve, rarely yellow; staminodes present.
   1. Sauvagesia

1. Trees or shrubs; petals yellow; staminodes absent.
   2. Large trees; styles absent; seeds winged.
   3. Cespedesia
   2. Shrubs or small trees; styles present; seeds unwinged.
3. Leaves with the main veins evident, arcuate-ascending, spaced at the midrib, crowded towards the margin; styles gynobasic; fruit of 5-6 carpels, drupelets borne on an enlarged torus.

2. Ouratea

3. Leaves with crowded, parallel undifferentiated venation, at right angles to the midrib; styles terminal; fruit of 2-3 (in Mesoamerica, otherwise 2-5) carpels, capsular.

4. Elvasia

1. Sauvagesia L.

By C. Whitefoord.

Herbs or subshrubs, annual or perennial, erect or decumbent, usually branched, glabrous. Leaves simple, ovate to obovate or lanceolate-elliptic, sessile to shortly petiolate, chartaceous to membranous; venation pinnate, often conspicuous; margins finely toothed, the teeth glandular and usually well spaced. Stipules fimbriate, the fimbriae sometimes glandular. Inflorescences either terminal or subterminal, racemes or axillary clusters, or occasionally the flowers solitary. Pedicels articulated near the base. Sepals 5, free, equal, persistent in fruit. Petals 5, white to pale pink or mauve or rarely yellow. Outer staminodes usually numerous, in 1-3 whorls, filamentous, unequal, usually capitate, occasionally absent; inner staminodes 5, scale-like, or tongue-like or petaloid, much longer than the outer. Stamens 5, in 1 whorl, slightly shorter than the inner staminodes; anthers dehiscing by longitudinal slits, smooth. Stamens and staminodes persistent in fruit. Ovary wholly 1-locular or 3-locular at the base, entire; style 1; stigma undifferentiated. Capsules with numerous seeds, ovoid, septicidal, 3-valved, brownish, coriaceous; seeds c. 1 mm, ovoid or globose, unwinged. 32 spp. Mexico, Mesoamerica, tropical South America, West Indies, tropical Africa, Malaysia.


1. Flowers in a raceme.
2. Subshrubs to 1 m; capsule 6-7 mm; style persistent.
   1. *S. elata*
2. Herbs to 5 cm; capsule c. 4 mm; style deciduous.
   3. *S. paucielata*
1. Flowers in axillary or subterminal clusters, occasionally solitary.

3. Perennial herbs.

4. Flowers nodding; inner staminodes petaloid.  
   2a. *S. erecta* subsp. *erecta*

4. Flowers usually erect or patent; inner staminodes absent, or scale- or tongue-like, not petaloid.  
   2b. *S. erecta* subsp. *brownei*

3. Annual herbs.

5. Stipules with glandular fimbriae.  
   4. *S. pulchella*

5. Stipules with eglandular fimbriae.  
   5. *S. tenella*


Subshrubs to 1 m, erect or decumbent, single- or several-stemmed, with a few ascending branches. Leaves 3.5-10.5(-12) × 1-2.5 cm, narrowly to broadly lanceolate, subsessile, membranous to chartaceous; venation scarcely raised on both surfaces; base attenuate; margins very slightly thickened; apex acuminate. Stipules 7-10 mm, usually linear, or occasionally ovate, with numerous prominent parallel veins terminating in 15-20 long and short crowded fimbriae often bearing stalked glands basally. Inflorescences to 13 cm, terminal or terminating upper axillary shoots, racemose, borne above the uppermost leaves, rarely 1-2-branched near the base, the flowers in 2-15 clusters of 2-6(-10), or occasionally solitary; pedicels to 6.5 mm, patent or ascending; bracteoles linear, fimbriate. Sepals 4.5-6 mm, ovate to ovate-lanceolate; veins prominent, some terminating in short bristles at the apex. Petals 5-6 mm, white, obovate, the apex acute or rounded or occasionally emarginate. Outer staminodes 2-2.5 mm, capititate; inner staminodes c. 4 mm, oblong. Anthers c. 2 mm, oblong, subsessile. Ovary c. 2 mm; style persistent. Capsules 6-7 mm, minutely verrucose. *Beside streams.* H (Gentry et al. 7557, MO); N (Rueda et al. 1828, MO); CR (Davidse y Herrera 31445, MO); P (von Wedel 2029, MO). 0-50 m. (Mesoamerica, Venezuela, Guayanas, Brazil.)


Perennial herbs 4-60(-80) cm, often woody at the base, trailing, ascending or erect, sometimes single-stemmed but usually bushy, with straggling branches. Leaves 1-2.5(-5.6) × 0.2-0.7(-1.3) cm, narrowly lanceolate to lanceolate-elliptic, shortly petiolate, membranous to chartaceous; venation prominent above, scarcely raised beneath; base attenuate; margins strongly thickened beneath; apex acute. Stipules to 5.5 mm, linear to subulate, with prominent parallel veins terminating in 15-27 long crowded fimbriae which sometimes bear small stalked glands basally. Flowers axillary, in numerous clusters of 2-3, or solitary; pedicels to 20 mm, arcuate; bracteoles linear to ovate, fimbriate. Sepals 4-7 mm, lanceolate; veins immersed; a few terminating in apical bristles. Petals 4-7 mm, broadly obovate, the apex rounded, entire. Outer staminodes 1-2 mm, subulate to reniform-capitate; inner staminodes 2-3.5 mm, oblanceolate. Anthers c. 2 mm, oblong; filaments c. 0.5 mm. Ovary to 1.5 mm; style persistent. Capsules c. 5 mm, smooth. A widespread weed of savannas and mountains. T - P. 0-1200(-1800) m. (S. Mexico to Argentina, West Indies, tropical Africa, Madagascar.)

2a. Sauvagesia erecta subsp. erecta.

Internodes (0.3-)0.8-1.5(-2) cm. Leaves lanceolate-elliptic. Pedicels c. 2 cm, arcuate. Flowers nodding; petals white, pale pink, mauve or occasionally yellow; outer staminodes numerous, 1-2 mm; inner staminodes 2-3.5 mm, erect, oblanceolate, petaloid. Outer staminodes, filaments and ovary usually stained purple. Open grassy places. T (Davidse y Davidse 9374, MO); Ch (Breedlove 28101, MO); Y (Johnson s.n. in Herb. Hance 5053, BM); B (Schipp 649, BM); G (Contreras 3060, F); H (Nelson y Romero 4155, MO); N (Bunting y Licht 493, US); CR (Skutch 2440, US); P (Hammel 3664, MO). 0-1200(-1800) m. (Mexico, Mesoamerica, Colombia, Venezuela, Guayanas, Ecuador, Peru, Bolivia, Brazil, Paraguay, Argentina, Antillas, Africa.)

Internodes 0.3-0.5(-1) cm. Leaves lanceolate-elliptic or usually very narrowly lanceolate. Pedicels c. 5 mm, usually ascending, rarely arcuate. Flowers erect or patent, rarely nodding; petals white, rarely pink or mauve; outer staminodes numerous or often absent; inner staminodes absent, tongue-like or scale-like, never petaloid. Filaments and ovary greenish-white, rarely stained purple. Savannas. B (Whitefoord 2616, BM); H (Nelson y Vargas 5148, BM); N (Stevens 7680, MO). 0-100 m. (Mesoamerica, Jamaica, Cuba.)


Perennial herbs 3-5 cm, with 1 or several stems, sometimes branched, decumbent. Leaves 3.0-5.5 × 0.8-1.2 cm, lanceolate-elliptic, subsessile, membranous to chartaceous; venation scarcely raised on both surfaces; base cuneate; margins thickened; apex acuminate and mucronulate. Stipules 3-6 mm, linear to narrowly lanceolate, with numerous prominent parallel veins, terminating in 30-35 long and short, crowded fimbriae sometimes bearing usually sessile glands basally. Inflorescences 2-4 cm, terminal or subterminal or terminating axillary shoots, racemose; flowers in 2-3 clusters of 2-3, or solitary; pedicels 4-5 mm, ascending; bracteoles narrowly elliptic, toothed or fimbriate. Sepals 4.5-6 mm, broadly ovate; veins prominent, some terminating in apical bristles. Petals c. 5 mm, white, obovate, the apex sometimes toothed. Outer staminodes numerous, 1-1.5 mm, capitate; inner staminodes c. 3 mm, narrowly oblong. Anthers c. 2 mm, oblong; filaments c. 0.5 mm. Ovary c. 1 mm; style deciduous. Capsules c. 4 mm, minutely gland-dotted. River banks, seashores, cliffs, swamps. P (Blackwell et al. 2695, MO). 0-10 m. (Endemic.)


Annual herbs 5-16 cm, slender, erect, usually with short, crowded ascending branches at or above the middle of the stem. Leaves 5-18 × 2-4 mm, elliptic, subsessile, membranous; venation scarcely raised on both surfaces; base attenuate; margins strongly thickened beneath; apex acute. Stipules 4-6 mm, lanceolate, arcuate; venation immersed, terminating in 15-18 well-spaced fimbriae, each with a prominent gland at 1/3-1/2 of its length and often geniculate. Flowers subterminal and axillary, solitary or in 1-many clusters of 2-3(-4) in the axils of the upper leaves; pedicels 3-5 mm, erect or patent; bracteoles lanceolate, fimbriate. Sepals 2-3 mm,
lanceolate; venation immersed, sometimes aristate. Petals 1.8 mm, white or pink, elliptic or obovate, rounded at the apex, entire. Outer staminodes absent; inner staminodes c. 1.5 mm, oblong. Anthers c. 0.4 mm, ovate; filaments c. 0.5 mm. Ovary to 1.5 mm; style deciduous. Capsules 4-5 mm, smooth. Savannas, forested slopes, open hillsides, cliffs. Ch (Breedlove 38611, MO); G (Standley 77107, F); H (Nelson et al. 0119, MO); ES (Standley 20416, US); N (Stevens 4114, MO); CR (Brenes 17282, F); P (Folsom y Collins 6870, MO). 0-1500 m. (S. Mexico, Mesoamerica, Colombia, Venezuela, Guyana, Surinam.)


Annual herbs 1.5-10(-19) cm, slender, erect, 1-stemmed, sometimes branched and bushy, fleshy, often with reddish stems. Leaves 3-9 × 1.5-2.5 mm, elliptic to oblanceolate, sessile, membranous or slightly fleshy; venation immersed; base cuneate; margins scarcely thickened; apex acute, often aristate. Stipules 1-3 mm, linear to oblong; veins immersed, terminating in 5-7 well spaced eglandular fimbriae. Inflorescences subterminal and axillary; flowers solitary or in 1-many clusters of 2-3 in the upper axils; pedicels to 8 mm, erect or ascending; bracteoles linear to lanceolate, aristate. Sepals 3-4 mm, lanceolate, aristate; veins immersed. Petals 3.5-4 mm, pink or occasionally white, obovate, the apex rounded. Outer staminodes absent; inner staminodes oblong, rounded or retuse at the apex, slightly shorter than the stamens. Anthers c. 1 mm, oblong, filaments c. 0.5 mm. Ovary c. 0.5 mm; style persistent. Capsules 2-2.5 mm, smooth. Savannas, open swampy places. Ch (Breedlove 52634, MO); B (Whitefoord 2336, BM); H (Saunders 773, BM); N (Molina R. 14829, F); CR (Brenes 3671, F); P (Lewis et al. 745, MO). 0-1000 m. (S. Mexico, Mesoamerica, Guayanas, Bolivia, Brazil.)

2. Ouratea Aubl.

Ouratella Tiegh., Stenouratea Tiegh.

By C. Whitefoord.

Shrubs or small trees, erect or sometimes scrambling, glabrous. Leaves simple, elliptic, oblong, obovate, ovate-lanceolate or oblanceolate, membranous to coriaceous, petiolate or sometimes subsessile; venation usually eucamptodromous, the major secondary veins usually arcuate-ascending, usually well-spaced at the mid-rib and crowded near the margin, or occasionally the
major secondary veins penniparallel; margins sometimes subentire, usually toothed towards the apex, the teeth often glandular. Stipules lacking fimbriae, eglandular. Inflorescences usually terminal, sometimes subterminal or axillary, paniculate or racemose, thyrsoid; rachis usually flattened, sometimes terete, sometimes bearing stipule-like scales clustered basally, or paired above the base, and at the lower branching points, or singular and subtending the peduncles, usually caducous, occasionally persisting. Flowers solitary or clustered, often pedunculate, pedicellate, the pedicels articulated at the base, often lengthening and thickening in fruit. Sepals usually 5, unequal and imbricate or occasionally 2, equal, free, or when 5 sometimes partially fused and apparently 3, unequal, usually deciduous after the petals. Petals 5, yellow, often clawed. Staminodes absent. Stamens 10, in a single whorl (derived from 2 whorls), caducous, the anthers rugose, dehiscing by apical pores. Ovary 1-locular, deeply lobed; carpels 5-6 (in Mesoamerica); styles 5-6 (in Mesoamerica), united, gynobasic; stigmas undifferentiated. Drupelets usually 1-3 by abortion, 1-seeded, black or metallic green and often glossy when ripe, sessile on the enlarged fleshy, purplish-red torus; seeds 7-15 × 5-10 mm, subglobose or ovoid, unwinged. C. 150 spp. Mexico to South America, West Indies.

Asian and African species formerly included in *Ouratea* are now considered to be *Gomphia* spp., which differ from the American species mainly in having connate stipules and persistent sepals (Kanis, 1968).


1. Largest leaf blades more than 23 cm.
2. Leaves chartaceous, dull above; sepals 2.
3. Leaves 6.5-13.5 cm wide, oblanceolate, cordate or subauriculate at the base, the margins serrulate towards the apex.

1. *O. crassinervia*

3. Leaves 3-6.5 cm wide, narrowly lanceolate, cuneate at the base, the margins subentire or widely and bluntly toothed towards the apex.

20. *O. tristis*

2. Leaves coriaceous to subcoriaceous, usually glossy above; sepals 2, 3 or 5.
4. Leaves with most secondary veins raised or only slightly immersed above.
5. Leaf blades mostly less than 30 cm, glossy on the upper surface; sepals 5, 5-7 mm.
6. Inflorescences usually pyramidal, the branches stout and well-spaced; leaves often glossy on both surfaces, thinly coriaceous.  
4. *O. insulae*

6. Inflorescences usually cylindrical, the branches slender and crowded; leaves usually glossy above, coriaceous.  
8. *O. lucens*

5. Leaf blades mostly more than 30 cm, dull or with a dull sheen on both surfaces; sepals 3(-5), 10-13 mm.

7. Leaves minutely rugulose, thickly coriaceous, red-brown with a dull sheen, the tertiary venation impressed on both surfaces; torus subglobose, rough and wrinkled.  
7. *O. knappiae*

7. Leaves not rugulose, coriaceous, dull glaucous brown, the tertiary venation scarcely raised on both surfaces; torus obovoid, smooth.  
21. *O. valerioi*

4. Leaves with most secondary veins impressed or sulcate above.

8. Leaves broadly or narrowly auriculate at the base.

9. Sepals 5; torus 5-10 mm.  
19. *O. theophrasta*

9. Sepals 2; torus 10-15 mm.  
18. *O. sulcatinervia*

8. Leaves cuneate or rounded at the base.

10. Leaves with the secondary veins regularly spaced, penniparallel.  
16. *O. rinconensis*

10. Leaves with the secondary veins irregularly spaced, crowded towards the margins.

11. Leaf blades to 24 cm, rounded at the base; inflorescences c. 24 cm.  
3. *O. flexipedicellata*

11. Leaf blades to 32 cm, cuneate at the base; inflorescences 5-15 cm.

12. Inflorescences 5-7 cm, many branched; leaves broadly elliptic to oblong, shiny adaxially; Costa Rica and Panama.  
12. *O. osaensis*

12. Inflorescences c. 15 cm, unbranched; leaves narrowly oblong to lanceolate, dull on both surfaces; Guatemala.  
13. *O. podogyna*

1. Largest leaf blades to 23 cm.

13. Leaf blades mostly less than 11 cm.

14. Inflorescences 1-3.5 cm, axillary, the flowers crowded; leaves deciduous.  
9. *O. mexicana*

14. Inflorescences (2-)5-10(-23) cm, terminal or axillary, the flowers usually not crowded; leaves persistent.

15. Leaves very variable, often oblanceolate, usually toothed, sometimes falcately toothed towards the apex; stipule-like scales often crowded at the base of new growth or inflorescences, often persistent.  
8. *O. lucens*
15. Leaves mostly elliptic or oblong, the margins subentire to crenate, occasionally obscurely toothed; stipule-like scales not crowded or persistent.
17. Inflorescence axis stout; leaves coriaceous, shiny on both surfaces.  
17. Inflorescence axis slender; leaves chartaceous or membranous, not markedly shiny on both surfaces, sometimes shiny adaxially.  
18. Leaves with the tertiary venation not crowded, irregular; leaf apex long acuminate; S. Mexico.  
6. O. jurgensenii  
18. Leaves with the tertiary venation crowded, nearly parallel; leaf apex acute to shortly acuminate; Costa Rica and Panama.  
19. Leaves lanceolate to elliptic; secondary veins 5-10 mm apart.  
19. Leaves broadly elliptic to oblong; secondary veins 10-20 cm apart.  
13. Leaf blades mostly 12-23 cm.  
20. Leaves rugulose, the tertiary venation impressed above.  
21. Major secondary veins of leaves c. 15 mm apart, clearly evident beneath, the upper surface glossy, the margins crenate; panicles c. 8 cm; shrubs or trees, 8-15 m; montane forests.  
2. O. darienensis  
21. Major secondary veins of leaves c. 5 mm apart, inconspicuous, the upper surface dull, the margins usually serrulate to serrate; panicles 5-15 cm; shrubs or trees, 2-3(-6) m; lowland thickets and savannas.  
10. O. nitida  
20. Leaves not rugulose, the tertiary venation flat or raised, not impressed above.  
22. Leaves with secondary veins regularly spaced, penniparallel.  
23. Leaves cuneate or narrowly rounded at the base, long acuminate at the apex; inflorescences c. 20 cm.  
16. O. rinconensis  
23. Leaves abruptly narrowed into a stalk-like base above the petiole, abruptly acuminate at the apex; inflorescences c. 9 cm.  
17. O. stenobasis  
22. Leaves with secondary veins irregularly spaced, crowded towards the margins.  
24. Leaves dull on both surfaces, the secondary venation obscure.  
15. O. pyramidalis  
24. Leaves usually shiny, at least above, the secondary venation evident.  
25. Stipule-like scales at the base of new growth usually crowded, often persistent; sepals 5.  
8. O. lucens
25. Stipule-like scales lacking, or if present not crowded or persistent; sepals 2.

14. *O. prominens*


*Ouratea costaricensis* Standl.

Shrubs or trees to 2.5 m, sometimes unbranched; branchlets stout. Leaves (30-)35-49(-54) × 6.5-13.5 cm, crowded, strongly ascending, oblanceolate, chartaceous, dull on both surfaces, minutely papillate above; venation obscure, the major secondary veins 1-3.5 cm, apart, arcuate-ascending, scarcely raised, or immersed or impressed, sometimes sulcate, the minor secondary veins spreading irregularly, the tertiary veins scarcely raised above, the venation slightly more raised below; base cordate or subauriculate; margins plane, serrulate; apex acuminate; petioles 2-4(-8) mm. Stipules c. 2 cm, persistent. Inflorescences 5-18 cm, terminal, racemose; rachis 1(-3), slender; flowers few, well-spaced, in shortly-pedunculate, bracteolate clusters of 2-3, or sometimes solitary; pedicels 5-8 mm, slender in flower, much thickened in fruit. Sepals 2, c. 8.5 mm, boat-shaped, coriaceous, the margins not scarious; petals c. 9.5 mm, obovate; anthers 7-8 mm. Torus 7-12 mm, obovoid or sometimes depressed-globose; drupelets c. 10 mm, ellipsoid.

*Primary or secondary forests.* N (*Neill 1540*, MO); CR (*Lent 2430*, F); P (*von Wedel 1648*, MO). 0-600 m. (Mesoamerica, Brasil.)

The Brasilian *Ouratea curvata* (A. St.-Hil.) Engl. ex Dwyer sometimes has been erroneously included in the synonymy of *O. crassinervia*; see Cuatrecasas (1950) and Williams (1961).


Trees, 8-15 m; branchlets slender. Leaves 10.5-21.5 × 4-7.5 cm, lanceolate, oblanceolate or oblong, chartaceous to coriaceous, slightly glossy and rugulose; venation with the tertiary veins impressed on both surfaces, the major secondary veins c. 15 mm apart, arcuate-ascending, obscure above, clearly evident beneath; base rounded or cuneate; margins slightly revolute, crenate; apex shortly acuminate; petioles 4-10 mm. Stipules 6-9 mm, caducous. Inflorescences 8-17 cm, axillary, broadly paniculate; rachis slender, conspicuously flattened, the branches 1-7, well-spaced, spreading; flowers well-spaced, solitary, or 2-3 in shortly pedunculate clusters;
Ouratea nitida has leaves with the venation impressed on both surfaces, a paniculate inflorescence and a calyx of 5 sepals. The leaves of O. nitida are dull on both surfaces, while those of O. darienensis are shiny adaxially. Ouratea nitida is also a smaller plant, rarely reaching 10 m, and is found at lower altitudes to 500 m, while O. darienensis is a plant of premontane or montane forests.


Shrubs or trees of unknown height; branchlets slender. Leaves 17-24 × 5-7 cm, narrowly oblong to oblanceolate, coriaceous, slightly glossy on both surfaces; venation with the minor veins raised on both surfaces, the major secondary veins irregularly spaced, mostly 20-30(-45) mm apart, narrowly arcuate-ascending, mostly sulcate, the minor secondary veins less arcuate, the tertiary venation spreading, reticulate; base rounded; margins plane or slightly revolute, irregularly and often sharply toothed towards the apex; apex acuminate; petioles c. 7 mm. Stipules not seen. Inflorescences c. 24 cm, terminal or axillary, narrowly paniculate, cylindrical; rachis 1, slender, flexuous; flowers 2-3, in well-spaced pedunculate clusters; pedicels 10-13 mm, slender, reflexed. Flower-parts described from bud; sepals 5, c. 9 mm, narrowly lanceolate, chartaceous; anthers c. 7 mm. Torus c. 10 mm, turbinate; drupelets to 9 mm, ellipsoid. Forests. P (Duke 8095, MO). 200-300 m. (Endemic.)


Shrubs or trees to 25 m; branchlets stout. Leaves 10-31 × 6-8 cm, broadly or narrowly oblong-lanceolate or elliptic, thinly coriaceous, usually slightly shiny on both surfaces, sometimes dull beneath; venation slightly raised, the major secondary veins mostly c. 5 mm apart, widely arcuate-ascending, the minor secondary veins crowded, straighter, the tertiary veins immersed or scarcely raised above and beneath; base cuneate or rounded; margins plane, sometimes subentire, or often toothed above the base, the teeth few, blunt and well-spaced or crowded, sharp and
sometimes subfalcate; apex acute or often short-acuminate; petioles 6-10 mm. Stipules to 5 mm, caducous. Inflorescences 8-27 cm, terminal and subterminal, elongating in fruit, paniculate, pyramidal; rachis stout, angular, with c. 8 well-spaced and stiffly spreading-ascending branches, the lower branches sometimes leafy; flowers crowded, in stout or slender pedunculate clusters of 2-5; pedicels 6-10 mm, slender, scarcely thicker in fruit. Sepals 5, 5-7 mm, ovate-lanceolate, chartaceous, often minutely granular-papillose without; petals 7.5-9 mm, broadly obovate, clawed, the apex rounded and often emarginate; anthers 5-6 mm. Torus 5-14 mm, obovoid or subglobose; drupelets to 9 mm, broadly ellipsoid to subglobose. *Wet forests, often near rivers*. Ch ([Matuda 5010](#)), B ([Schipp S-652](#), MO); G ([Ortíz 927](#), BM); H ([Gaumer 89](#), K). 700-1100 m. (Endemic.)

The Chiapas material tends to have duller, narrowly ovate leaves with fewer, blunter teeth. Specimens of this species are often erroneously identified as *Ouratea lucens* var. *podogyna* (Donn. Sm.) L.O. Williams; however, the type specimen of *O. podogyna* has dull-green leaves with deeply impressed secondary veins and the inflorescence a raceme or slender panicle. *Ouratea pyramidalis* is often included in the synonymy of *O. insulae*, but that species differs in its smaller, dull, oblong-elliptic, chartaceous to subcoriaceous, serrulate leaves, and slender, less crowded inflorescence. Balick et al. (2000) put this species into synonymy with the widespread *O. lucens*.


Shrubs or trees, 3-8.5 m; branchlets slender. Leaves 8-11 × 2.5-4.5 cm ovate-lanceolate or elliptic, coriaceous, slightly glossy on both surfaces; venation inconspicuous, the major secondary veins mostly 5-10 mm apart, arcuate-ascending, slightly raised, the minor secondary and tertiary veins flat or scarcely raised above, the venation slightly, or scarcely raised, or flat below; base cuneate or rounded; margins plane or slightly revolute, minutely toothed towards the apex, the teeth usually well-spaced; apex acuminate; petioles 2-5 mm. Stipules to 7 mm, caducous. Inflorescences (4-)6-10 cm, terminal or axillary, or terminating short, leafy shoots, broadly paniculate, or sometimes racemose; rachis slender, with c. 3 well-spaced slender branches, smooth; flowers well-spaced, solitary or occasionally paired, the pairs pedunculate; pedicels (5-)10-12 mm, slender or even filiform, spreading, smooth. Sepals 5, c. 6 mm, ovate-lanceolate, chartaceous, the inner margins scarious; petals 8-9 mm, broadly obovate, often reflexed, falling
before the sepals; anthers c. 5 mm. Torus 8-12 mm, obovoid; drupelets c. 8 mm, subglobose to obovoid. *Premontane forests*. CR (Estrada y Solano 1851, MO); P (Gómez Pompa et al. 3550, MO). 300-1000 m. (Endemic.)

*Ouratea jefensis* is remarkable for its large panicles of well-spaced flowers on filiform pedicels and reflexed, broadly obovate petals. The style is usually kinked, or strongly bent, at the base. Some specimens of *O. jefensis* have been determined as *O. coeleensis*, now included in *O. prominens*, a species with a 2-sepalled calyx. Many specimens have been named *O. lucens*, the most variable and widespread species of *Ouratea*, which generally has a cylindric inflorescence of crowded flowers on ascending pedicels, and larger, often obovate leaves.


Shrubs or trees, c. 6 m; branchlets slender. Leaves 11-18(-20) × 3-5(-6) cm, elliptic or lanceolate-elliptic, stiffly subcoriaceous, slightly shiny above and sometimes beneath; venation fine, slightly raised on both surfaces, the major secondary veins mostly 10-20 mm apart, widely arcuate-ascending; base cuneate; margins plane or revolute, subentire, crenate or denticulate; apex long- or occasionally short-acuminate; petioles c. 5 mm. Stipules c. 5 mm, deciduous. Inflorescences 5-15 cm, terminal, broadly paniculate or sometimes racemose, lax; rachis slender, unbranched or with 1-8 well-spaced spreading branches, the lowest branches to 8 cm; flowers solitary or 2-3 in pedunculate clusters; pedicels slender, lengthening in fruit to c. 2 cm. Sepals 5, c. 8 mm, ovate-lanceolate, chartaceous; petals c. 8.5 mm, obovate; anthers 6-6.5 mm. Only immature fruit seen, the torus broadly obovoid; drupelets ovoid. *Forests*. Ch (Breedlove, 1986: 148). 700-1200 m. (S. Mexico [Oaxaca], Mesoamerica.)


Trees, 8-18(-25) m; branchlets stout. Leaves (24-)30-40 × 6.5-10.5(-13) cm, narrowly oblong, narrowly elliptic or oblanceolate, thickly coriaceous, rugulose on both surfaces, dull or with a slight sheen; venation inconspicuous, the major secondary veins mostly 2-3 cm apart, spreading, widely arcuate-ascending, impressed above, raised beneath, the tertiary veins immersed or impressed on both surfaces; base rounded or sometimes cuneate; margins revolute,
subentire, or sometimes crenulate-serrulate towards the apex; apex acute, acuminate or obtuse; petioles 5-10 mm. Stipules c. 15 mm, occasionally persistent. Inflorescences 14-29 cm, terminal, broadly paniculate; rachis stout, with c. 4 spreading branches, bracteolate; flowers often crowded, in short, stoutly pedunculate clusters of 2-5; pedicels 10-14 mm, slender, sulcate, incrassate upwards, smooth, becoming thicker and slightly longer in fruit. Sepals 3(-5), when 3, 2 with a deep longitudinal groove, 10-13 mm, ovate-lanceolate, coriaceous; petals 11-18 mm, obovate or oblong; anthers to 12 mm. Torus 7-13 mm, depressed-globose, rough and wrinkled; drupelets to 15 mm, ellipsoid. *Tropical wet forests*. P (Dressler 4332, MO). 200-500 m. (Endemic.)

All collections seen are from along the Llano-Cartí road, Panamá Province, and the Santa Rita ridge, Colón Province. Specimens of *Ouratea knappiae* have been identified as *O. valerioi*, a widespread species which occurs in Honduras, Nicaragua, Costa Rica, and in Panama west of the Canal. *Ouratea knappiae* differs from this species in its venation and the finely rugose, texture of the leaves, and the smaller, depressed-globose torus. *Ouratea valerioi* has thinner, smoother leaves that dry a duller, more glaucous brown, and the torus is 10-24 mm, obovate to turbinate.


Trees, sometimes buttressed, or shrubs, sometimes scrambling, 1-6 m; branchlets usually slender. Leaves (6-)10-18(-29) × (2-)3.5(-9) cm, extremely variable, narrowly or broadly oblong, elliptic, ovate-lanceolate or often oblanceolate, chartaceous to coriaceous, usually glossy above and dull or sometimes shiny beneath; venation usually obscure, the major secondary veins 5-15 mm apart, arcuate-ascending, scarcely raised above and beneath, the minor secondary and tertiary veins spreading and immersed; base cuneate or sometimes rounded; margins plane or revolute, subentire, or crenate to serrate, or sometimes falcate-toothed, often subentire at the base; apex usually acuminate, acute or occasionally obtuse; petioles 3-9 mm. Stipules 4-10 mm, often persistent; stipule-like scales often crowded at base of new growth, often persistent. Inflorescences (2-)4-12(-17) cm, terminal or sometimes subterminal and sometimes axillary, usually racemose, occasionally paniculate, cylindrical; rachis 1(-3), slender or stout, occasionally
1-3-branched near the base, few- or many-flowered, dense or crowded; flowers borne singly, or in clusters of 2-6, the lower clusters sometimes pedunculate; pedicels 5-12 mm, slender, ascending often lengthening and thickening in fruit. Sepals 5, 6-7 mm, ovate-lanceolate, chartaceous; petals 6-8 mm, usually obovate, sometimes clawed and sometimes emarginate; anthers 5-6 mm. Torus 5-13 mm, subglobose, obovoid or turbinate; drupelets 7-10 mm, subglobose to ellipsoid. Moist and wet thickets. T (Matuda 3151, F); Ch (Matuda 16410, K); C (Carnevali et al. 6075, MO); QR (Cabrera et al. 4510, MO); B (Proctor 30098, BM); G (Ortíz 2479, MO); H (García 38, MO); ES (Standley 20194, US); N (Proctor et al. 26950, F); CR (Liesner 4500, MO); P (Holdridge 6502, MO). 0-900 m. (S. Mexico, Mesoamerica, Colombia.)

Ouratea lucens is a very variable species in need of further study and from which other taxa may eventually be split. Fruiting specimens can be very difficult to distinguish from those of O. prominens, but the presence of persistent stipule-like scales is characteristic.

Antonio 4109, Knapp et al. 4170, McPherson 9105 and Croat 49873 (all MO), from the Fortuna Dam area near Valle de Hornito, Chiriquí province, Panama, may represent a new species. Only fruiting material is available, however, and this is inadequate for description.


Ouratea pallida Standl., Ouratella mexicana (Bonpl.) Tiegh.

 Shrubs or trees, 2-4.5 m; branchlets short, stiff. Leaves (2.5-)4.7-8(-10) × (1.2-)2-2.8(-3.2) cm, clustered on the branchlets, soon deciduous, narrowly elliptic, ovate, obovate, lanceolate, or oblanceolate, chartaceous to coriaceous, slightly shiny above; venation scarcely raised above and below, the secondary veins vaguely arcuate, the tertiary veins reticulate; base cuneate or sometimes rounded; margins plane, serrulate or subentire; apex usually obtuse or rounded or occasionally acute; petioles 2-3(-4) mm, slender. Stipules to 3 mm, caducous. Inflorescences 1-3.5 cm, racemose, borne on short, stiff, slender lateral branchlets or sometimes terminal; rachis 1, usually unbranched; flowers crowded in clusters of 2-3; pedicels c. 7 mm, slender, thickening slightly in fruit. Sepals 5, 5-7 mm, ovate-lanceolate, chartaceous; petals 8-9 mm, broadly obovate, clawed; anthers c. 4 mm. Torus c. 5 mm, obovoid; drupelets c. 10 mm, obovoid. Pacific coastal areas. CR (Stone y Opler 3156, F); P (Duke 10466, MO). 0-200 m. (Mexico, Mesoamerica.)
This species is easily recognized by its pale grey bark, short axillary inflorescences and its often precocious flowers.


*Gomphia nitida* (Sw.) Vahl, *Ouratea cubensis* Urb., *O. panamica* Tiegh.?, *Trichouratea nitida* (Sw.) Tiegh.  

Shrubs or trees, 2-3(-6-10) m, sometimes suckering; branchlets slender, often flexuous. Leaves 6-14(-17) × 3-7 cm, elliptic, oblong, ovate, or occasionally obovate, usually stiffly coriaceous, occasionally chartaceous, both surfaces rugulose, usually having a dull sheen, or rarely glossy; venation inconspicuous, impressed, the major secondary veins hardly distinct from the minor ones, mostly c. 5 mm apart, penniparallel, spreading-ascending; base rounded or cuneate; margins slightly revolute, serrate or serrulate or crenate, entire at the base; apex abruptly acuminate; petioles 5-7 mm. Stipules 2-4 mm, caducous. Inflorescences 5-15 cm, terminal or terminating the upper branchlets, or sometimes axillary, paniculate; rachis slender, with 6-10 slender branches; flowers usually in shortly pedunculate clusters of 2-4, occasionally solitary; pedicels 7-9(-15) mm, slender, slightly longer and thicker in fruit. Sepals 5, 7-8 mm, ovate-lanceolate, chartaceous; petals 6-9 mm, broadly obovate, clawed, the apex often emarginate; anthers 4-6 mm. Torus 6-9 mm, depressed-globose; drupelets 7-9 mm, subglobose. Moist woodland, thickets, savanna. T (*Barlow* 3159, F); C (*Ocaña y Novelo* 139, MEXU); QR (*Cowan* 3021, MO); B (*Dwyer* 12475, MO); G (*Ortíz* 1320, MO); H (*Saunders* 683, MO); N (*Molina R.* 14856, F); CR (*Rodríguez et al.* 1656, MO). 0-500 m. (S. Mexico, Mesoamerica, Guyana, Cuba, Jamaica.)  

*Ouratea panamica* appears to be a synonym of *O. nitida*, but no Panamanian material other than a photograph of the type of *O. panamica* has been seen.


Shrubs of unknown height; branchlets slender. Leaves 8.5-9.5 × 3.5-4 cm, oblong-elliptic, stiffly coriaceous, glossy above, duller beneath; venation crowded, slightly raised above and beneath, the major secondary veins mostly 5-10 mm apart, spreading-ascending; base rounded; margins plane or slightly revolute, with a few small well-spaced teeth towards the apex; apex
shortly acuminate; petioles 2-3 mm. Stipules not seen. Inflorescences c. 4 cm, terminating an upper side-shoot, broadly paniculate, few-branched; flowers well-spaced, solitary or sometimes paired near the base of a branch; pedicels 3-4 mm, long- or short-stalked. Sepals 5, c. 6 mm, ovate-lanceolate, fleshy; petals c. 7 mm, broadly obovate, clawed; anthers c. 5 mm. Torus 12-14 mm, oblong-turbinate; drupelets 8-9 mm, ellipsoid. Cloud forests. P (McPherson 9504, MO). 800-900m. (Mexico?, Mesoamerica.)

The type locality of *Ouratea oblita* is unknown; the sheet at BM is labeled in Pavón’s hand “Ochna Jabotipita [or Tabotapira?] NE”, indicating that it is probably a Sessé y Mociño specimen from Mexico (McVaugh, 2000); this name, however, does not appear in any of the Sessé y Mociño material (see McVaugh, 2000). Sheets from the summit of Cerro Jefe in Panama exactly match the type and are here identified as this species, even though no specimens from the intervening region have been seen.


Shrubs, 2-5 m; branchlets slender. Leaves 21-23(-27) × 6.5-9 cm, broadly elliptic or oblong, thinly coriaceous, slightly shiny above, dull beneath; venation crowded, obscure, the midrib broad and flattish on both sides, the major secondary veins 10-15(-20) mm apart, widely arcuate-ascending, irregular, immersed or slightly raised, or sometimes sulcate above, raised beneath, the minor secondary and tertiary veins immersed or scarcely raised beneath; base cuneate or attenuate; margins plane, subentire to crenulate; apex long-acuminate; petioles 5-10 mm. Stipules not seen. Inflorescences 5.5-7 cm, terminal, broadly paniculate; rachis slender; lower branches to 7 cm, the branchlets to 2 cm; flowers 2-3, in well-spaced pedunculate clusters; pedicels 8-11 mm, slender. Sepals 5, 8-10 mm, chartaceous, the inner margins scarious; petals 10-12 mm, obovate, reflexed at anthesis; anthers c. 8 mm. Torus 4-7 mm, broadly obovoid to subglobose, drupelets c. 8 mm, subglobose to ellipsoid. Disturbed primary and secondary forests. CR (*Liesner 1862*, MO). 0-400 m. (Endemic.)

Most collections of this species are from the Osa Peninsula, Puntarenas province, Costa Rica. *Ouratea pyramidalis* is distinguished from *O. osaensis* by its dull-surfaced leaves with variously toothed margins and larger inflorescence with laxer pedicels; *O. insulae* differs in its larger, much more robust inflorescence. Two small-leaved collections which are only in young bud from Limón province (*Shank y Molina R. 4415*(BM, MO), 4452 (BM, US)) are here
considered to be *O. osaensis*. These sheets may represent a new taxon and were given a herbarium name by Standley y Williams (in sched.), but this was never published.


Trees, to 6 m; branchlets slender. Leaves 30-32 × 7.5 cm, narrowly oblong-lanceolate to oblanceolate, coriaceous, dull on both surfaces, paler beneath; major secondary veins arcuate-ascending, sulcate above, raised beneath, the minor secondary veins straighter, immersed or sulcate above, the tertiary venation immersed; base cuneate; margins obscurely toothed towards the apex; apex shortly acuminate; petioles c. 6 mm. Stipules not seen. Inflorescences c. 15 cm, terminal, racemose or paniculate, slender; rachis 1, slender; flowers solitary or paired; length of pedicels not known. Sepals 5, c. 6.5 mm, ovate-oblong, caducous at anthesis; petals c. 8 mm, obovate-oblong; anthers c. 6.5 mm. Fruit not known. *Forests. G* (*von Türckheim 1034*, US). c. 1200 m. (Endemic.)

This species is only known only from the type specimen, collected in the Pansamalá forest in the Department of Alta Verapaz.


**Ouratea cocleensis** Dwyer.

Shrubs or trees, 1-10 m, sometimes epiphytic; branchlets slender or stout. Leaves 6-14(-20) × 2-7(-9), narrowly elliptic to broadly ovate, oblong, ovate-lanceolate or obovate-lanceolate, chartaceous to thickly coriaceous, slightly shiny on both surfaces; venation with the major secondary veins 5-20 mm apart, irregularly spaced, widely or narrowly arcuate-ascending, scarcely raised, immersed or sulcate above, raised beneath, the tertiary veins immersed or scarcely raised on both surfaces; the base rounded, narrowly cuneate or attenuate; margins plane or revolute, subentire or crenate; apex abruptly or long-acuminate and usually acute, occasionally obtuse; petioles 2-11 mm. Stipules to 12 mm, occasionally persistent. Inflorescences 2-15 cm, terminal or terminating upper branchlets or occasionally axillary, racemose or paniculate; rachis 1(-3); flowers solitary or 2-4 in well-spaced, short-pedunculate clusters; pedicels (5-)10-12 mm, incrassate upwards, thickening in fruit; buds c. 8 mm, ovoid. Sepals 2, c. 7 mm, boat-shaped, coriaceous; petals 7-12 mm, oblong or spatulate, with a conspicuously thickened median band,
The leaves of *Ouratea prominens* are variable. Specimens from El Copé (Cocle province) and Cerro Campana (Panamá province), at middle elevations (800-1000 m) tend to have broadly ovate to oblong, more thickly coriaceous leaves with a rounded base, abruptly acuminate apex and subentire margins. Specimens from lowland Panama, Costa Rica and Nicaragua usually have narrowly elliptic, chartaceous leaves, narrowly cuneate at the base, with long-acuminate apices and crenate margins. Fruiting specimens can be difficult to distinguish from *O. lucens*; see comments under that species.


*Ouratea patelliformis* Dwyer.

Shrubs or trees, 2-3(-6) m; branchlets slender. Leaves 11-16(-20) × 4.5-6(-7) cm, ovate-lanceolate, oblong-elliptic or narrowly elliptic, chartaceous or occasionally subcoriaceous, dull on both surfaces; venation immersed or scarcely raised above, slightly more raised beneath, the major secondary veins obscure, vaguely arcuate-ascending, the minor secondary veins crowded, spreading; base cuneate or rounded; margins plane, serrulate, serrate or sometimes biserrate, or irregularly toothed, the larger teeth falcate; apex acuminate; petioles 4-8 mm. Stipules to 7 mm, caducous. Inflorescences 6-18 cm, terminal and subterminal, paniculate or occasionally racemose, lax; rachis 1, slender; flowers solitary or 2-4 in small, slender, pedunculate clusters, pedicels 7-11 mm, slender, unchanged in fruit. Sepals 5, 6-8 mm, ovate-lanceolate, thickly chartaceous; petals 7-9 mm, obovate, emarginate, clawed; anthers 6-7 mm. Torus 4-5 mm, strongly depressed-globose, becoming concave; drupelets 8-10 mm, ovoid. *Wet forests, swampy ground, near rivers and lakes*. T (Matuda 3371, MO); Ch (Matuda 17395, F); B (Gentle 3764, US); G (Jones et al. 3151, US); H (Nelson et al. 2903, MO); P (Allen 3445, MO). 0-100 m. (Endemic.)

This species is often erroneously identified as *Ouratea lucens* var. *podogyna* (see also *O. insulae*). However, the type specimen of *O. podogyna* has dull-green leaves with deeply impressed secondary veins, and the inflorescence a raceme or slender panicle. *Ouratea pyramidalis* is often included in the synonymy of *O. insulae*, which differs in its smaller, dull,
oblong-elliptic, chartaceous to subcoriaceous, serrulate leaves, and more slender, less crowded inflorescence.


Shrubs or trees, 3.5-7 m; branchlets slender. Leaves 19.5-27 × 3-7.5 cm, lanceolate, oblanceolate or elliptic, subcoriaceous, with a dull sheen on both surfaces; venation with the midrib sharply raised beneath, the major secondary veins 10-15 mm apart, regular, penniparallel, arcuate, mostly sulcate above, raised beneath, the minor veins slightly raised above and beneath; base cuneate or narrowly rounded; margins plane, crenate; apex long-acuminate; petioles 3-5 mm. Stipules c. 10 mm, caducous. Inflorescences 5-20 cm, terminating branchlets, racemose or narrowly paniculate; rachis 1, slender, lax, smooth, with 1-4 branches near the base, the lowest branch c. 7 cm; flowers well-spaced, solitary or more usually in long-pedunculate clusters of 2(-5); pedicels 8-11 mm, ascending, thickening upwards, smooth. Sepals 2, 8-9 mm, boat-shaped, coriaceous; petals c. 10 mm, narrowly oblanceolate, with a darker median band, the apex acute; anthers 5-7 mm. Torus c. 10 mm, obovoid; drupelets c. 11 mm, ellipsoid. *Primary forests*. CR (Aguilar 263, BM). 0-600 m. (Endemic.)


Shrubs, c. 4 m; branchlets slender, flexuous. Leaves 16-22 × 6.5-8.5 cm, broadly elliptic or oblong, thinly chartaceous to subcoriaceous, with a dull sheen on both surfaces; venation conspicuous, the major secondary veins mostly 7-15 mm apart, penniparallel, impressed on the upper surface, raised on the lower surface, the tertiary veins immersed on the upper surface, scarcely raised beneath; base abruptly narrowed into a c. 12 mm stalk-like base above the thickened, wrinkled petiole; margins plane or slightly revolute, crenate; apex abruptly acuminate; petioles c. 1 cm. Stipules c. 6 mm. Inflorescences c. 9 cm, terminal, racemose; rachis 1, slender, unbranched or with 1-3 short branches near the base; flowers solitary or in well-spaced, pedunculate clusters of 2-3; pedicels markedly incassate upwards, c. 10 mm in fruit. Flowers not seen; only very small buds present. Torus 9-12 mm, subglobose or obovate; drupelets c. 12 mm, ellipsoid. *Rainforests*. P (*Hammel et al. 14588* MO). 100-300 m. (Endemic.)
This species is distinct in its apparently long-petiolate leaves with conspicuously regular secondary venation. Known only from Bocas del Toro province, Panama.


Shrubs or trees, 2-5 m; branchlets stout, flexuous. Leaves 23-37 × 5.5-10(-13) cm, broadly or narrowly oblanceolate, stiffly coriaceous, glossy above, slightly shiny beneath; venation with the major secondary veins 5-25 mm apart, arcuate-ascending, usually deeply sulcate above, raised beneath, the tertiary veins raised, immersed or impressed above, scarcely raised beneath; base narrowly or widely subauriculate; margins revolute, subentire or with a few small teeth towards the apex; apex acuminate; petioles 2-3(-5) mm. Stipules 7-8 mm, persistent. Inflorescences 10-29 cm, terminal or terminating short, leafy side-shoots, paniculate or rarely racemose; rachises 1-4, slender, with 1-4 spreading-ascending branches or unbranched, smooth; stipule-like scales 5-7 mm occasionally persistent, clustered at the base, paired above the base and at the lower branching points of the rachis; flowers solitary or 2-3 in sessile or shortly pedunculate clusters; pedicels 7-12 mm, slender, much thickened in fruit. Sepals 2, 8-11 mm, boat-shaped, mucronate, coriaceous; petals 9-10 mm, obovate; anthers c. 7.5 mm. Torus 10-15 mm, broadly or narrowly ovoid; drupelets 8-10 mm, ovoid. *Wet forests, cloud forests.* P (*Gentry 1420*, MO). 100-700 m. (Endemic.)

This species has been collected only around the Santa Rita ridge, Colón province and along the Llano-Cartí road, the Cerro Jefe and Cerro Azul area, Panamá province. Specimens of *Ouratea sulcatinervia* have been identified as *O. theophrasta*, which has similar leaves, but *O. sulcatinervia* differs in its 2-sepalled calyx. *Ouratea theophrasta* occurs in Mexico and Guatemala.


*Ouratea tuerckheimii* Donn. Sm.

Shrubs or trees, 3-6 m; branchlets stout, strongly ascending. Leaves 35-55(-60) × 8-11 cm, clustered at the ends of the branchlets, narrowly oblong to narrowly oblanceolate, coriaceous, glossy above, dull and minutely papillate beneath; venation immersed or impressed, the major
secondary veins mostly 1-2(-4.5) cm apart, arcuate-ascending, deeply sulcate, the minor veins shorter and straighter, often sulcate above, raised beneath; base usually subauriculate or sometimes cuneate or rounded; margins revolute, subentire or irregularly and sharply toothed, entire towards the base; apex short- or long-acuminate or sometimes rounded; petioles 3-5 mm, rarely 9 mm. Stipules c. 10 mm, caducous. Inflorescences 18-55 cm, terminal, paniculate; rachises 1-4, slender, conspicuously flattened, each with 3-4 spreading-ascending branches, stipule-like scales 7-8 mm occasionally persistent on the rachis; flowers well-spaced, in pedunculate clusters of 2-3 or sometimes solitary; pedicels 7-9(-15) mm, slender, longer and slightly thicker in fruit. Sepals 5, 7-9 mm, ovate-lanceolate, coriaceous; petals 10-13 mm, obovate, shortly clawed; anthers 6-9 mm. Torus 5-10 mm, obovoid; drupelets c. 10 mm, broadly ovoid. 

This species is closely related to the Brazilian *Ouratea gigantophylla* (Ehrhard) Engl., which differs in its larger, less glossy leaves to c. 80 cm, the venation finer and less raised beneath, with most major secondary veins more than 2.5 cm apart, and the Inflorescences c. 20 cm, shorter and more congested than in *O. theophrasta*. No type specimens for *O. theophrasta* have been located at BR; however, several sheets made from plant cultivated in the Palm House at Kew (collected 3 Jan 1924, 13 Jan 1966 and Kew Accession Number 1969-17866 Dec 1999) all are a good match for the description in Linden (1860) and the plate in Hooker (1867). These could be potential neotype material should original material attributable to Linden not be located.


Shrubs or trees, 1-5 m; branchlets slender. Leaves 20-38 × 3-6.5 cm, narrowly lanceolate or narrowly ovate-lanceolate, chartaceous, dull and minutely papillate on both surfaces; venation with the major secondary veins 1-3 cm apart, acutely arcuate-ascending, immersed, sulcate above, raised beneath, the tertiary veins scarcely raised above and beneath; base cuneate; margins sometimes revolute, subentire or bluntly and widely toothed towards the apex; apex acute or acuminate; petiole c. 5 mm. Stipules not seen. Inflorescences c. 6.5 cm, terminal or axillary, racemose; rachis 1, slender; flowers solitary; pedicels c. 9 mm, much longer but scarcely thicker in fruit. Sepals 2, c. 7 mm, boat-shaped, thinly coriaceous; petals c. 7 mm, obovate; anthers c. 6 mm. Torus c. 9 mm, subglobose; drupelets c. 7 mm, obovoid. Cloud forests. P (Sytsma et al. 2868, MO). c. 700 m. (Endemic.)
This species is known only from the summit of Cerro Jefe, Panamá province.


Holotype: Costa Rica, *Valerio 435* (F!). Illustr.: Quesada Quesada et al., *Árboles Peníns. Osa* 256 (1997), como *O. valerii*.

Trees to 10 m; branchlets stout. Leaves 39-53(-68) × 12.5-15 cm, oblong or oblanceolate, thickly chartaceous, glaucous or dull on both surfaces; venation inconspicuous, immersed or scarcely raised above and below, the midrib flat above, sharply raised below, the major secondary veins 10-20 mm apart, widely arcuate-ascending; base cuneate; margins revolute, subentire, or finely and irregularly toothed towards the apex; apex usually acuminate or rarely rounded; petioles 10-15 mm. Stipules c. 15 mm, caducous. Inflorescences 20-35 cm, terminal, paniculate, the rachis stout, with c. 4 well-spaced arcuate-ascending branches; flowers in 3-6- flowered, stoutly pedunculate clusters; pedicels 1.2-1.8 cm, slender, thickening upwards, longer and much thickened in fruit. Sepals 3(-5), when 3, 2 with a deep longitudinal groove, 10-12 mm, narrowly ovate-lanceolate, coriaceous; petals (9-)11-13 mm, spathulate; anthers c. 1 cm. Torus 10-24 mm, obovoid to turbinate, smooth; drupelets 8-9 mm, broadly ellipsoid. *Tropical wet forests.* H (*Allen 6596*, F); N (*Little 25134*, F); CR (*Burger y Gentry 8948*, BM); P (*Carrasquilla 2001*, MO.) 0-200 m. (Endemic.)

3. **Cespedesia** Goudot

*Fournieria* Tiegh.

By C. Whitefoord.

Large trees, erect, glabrous. Leaves simple, shortly petiolate, spathulate; venation craspedromus, conspicuous; margins undulate, finely toothed, the teeth glandular and well-spaced. Stipules with basal fimbriae, eglandular and lacking marginal fimbriae on adult trees. Inflorescences terminal, thyrsoid, the flowers borne in well-spaced clusters on tertiary branches. Pedicels articulated near the base, bracteolate. Sepals 5, basally united, equal, deciduous after the petals. Petals 5, yellow. Staminodes absent. Stamens c. 80, in c. 3 whorls, caducous, the anthers dehiscing by apical pores. Ovary 1-locular, entire; stigmas 5, sessile. Capsules fusiform, septicidally 5-valved, dark brown and woody when ripe; seeds numerous, c. 2 × 1 mm, ellipsoid, with long lateral wings. 1 sp. Mesoamerica and tropical South America.


Trees to 30 m, often buttressed, with sucker growth and aerial roots, the branches and branchlets stout, with the leaves clustered at branch apices; new shoots (leaves and stipules) brilliant red when young. Leaf scars to 1.5 cm, oblate, conspicuous. Leaves 27-150 × 7-32 cm, coriaceous, both surfaces dull; venation with the midrib prominent and carinate above, prominent below, the lateral veins penni-parallel, ascending, 0.5-2 cm apart, usually prominent above, often prominent below, the tertiary veins parallel, crowded, usually immersed above and below; base cuneate; margins often somewhat lobed; apex obtuse or rarely acute; petioles 1-2.5 cm, stout. Stipules (1-)3.5-7 × 0.9-1.7 cm, densely imbricate and impressed, lanceolate or oblong, chartaceous to coriaceous, the margins and apex often splitting longitudinally, the adaxial surface bearing small basal appendages composed of partially fused fimbriae. Thyrses c. 1 m, exceeding the uppermost leaves; flowers mostly in clusters of 3; pedicels 1-1.8 cm, angular, thickening upwards, thickening in fruit; bracteoles minute, caducous. Sepals 2-5 mm, oblong or broadly ovate, rounded at the apex, thick, patent at anthesis, the margins minutely fringed, the apex rounded; petals 1.5-3 cm, obovate, concave, bright yellow; stamens clustered on one side of the ovary, the filaments 1-1.5 cm, flattened, the anthers 4-6 mm, falcate, smooth, the pollen white; ovary c. 1 cm, falcate, stipitate, secund; stigmas radial. Capsules 4-6.5 cm, splitting into 5 narrow valves; seeds numerous, the wings c. 10 × 1 mm, tapering, diaphanous. *Tropical wet forests, moist forests along the Atlantic slope, tropical dry forests.* H (Blackmore y Heath 2114, BM); N (Bunting y Licht 1066, F); CR (Lent 1920, US); P (Nee 7417, US). 0-1000 m. (Mesoamerica, Colombia, Venezuela, Guyana, Ecuador, Peru, Bolivia, Brasil.)

4. Elvasia DC.
Hostmannia Planch.

By C. Whitefoord.

Shrubs or small trees, branchlets slender, glabrous. Leaves simple, shortly petiolate, the blades ovate to oblong-lanceolate or elliptic, tending to split transversely, coriaceous with a slight sheen; venation fine, parallel, perpendicular to the midrib, the midrib keeled above, rounded beneath; margins slightly revolute and thickened, entire or minutely glandular-toothed. Stipules eglandular, caducous. Inflorescences terminal on short upper lateral branchlets or sometimes axillary, usually paniculate, occasionally racemose, bracteate. Bracts stipule-like or sometimes 3-5-fid, the central division shorter, stouter and articulate. Flowers yellow, solitary or in clusters of 2-3, bracteolate, sometimes shortly pedunculate; pedicels slender, articulate at the base. Sepals 2-4, equal, free, reflexed at anthesis, caduceus, smooth. Petals 3-6(-8), yellow. Staminodes absent. Stamens 7-28, the filaments persistent, the anthers porose, caduceous, smooth. Ovary 2-5 locular, globose or ovoid or lobed, the style terminal, persistent, the stigma scarcely differentiated. Capsules globular or in some South American species deeply lobed or asteroid; seeds ovoid, relatively large. 10 spp. Belice to Brasil.


1. Leaves ovate to oblong-elliptic; sepals 3-4; ovary 2-locular. 1. E. elvasioides
1. Leaves usually narrowly oblong-lanceolate to elliptic; sepals 2(3); ovary 3-locular. 2. E. bisepala


Shrubs or trees, 3-20 m. Leaves (5.5-)7.5-10(-12) × 3-4(-5) cm, ovate to oblong-elliptic; base cuneate, sometimes attenuate; apex acuminate, sometimes abruptly so, the tips acute or often blunt. Stipules 2-5 mm, acutely triangular or sometimes trifid. Inflorescences c. 13 cm, paniculate with c. 8 branches, occasionally with racemes in the axils of the upper branchlets; pedicels 5-7
mm, bracteolate. Sepals 3-4, 5-6 mm, boat-shaped; petals 4-6(-8), 6-7 mm, ob lanceolate; stamens
14-28, the filaments 1.5-3 mm, the anthers 2-3 mm; ovary flask-shaped, slightly laterally
compressed, 2-locular; style 4-5(-6) mm. Capsules 2-carpellate, globular. *Wet forests*. CR
(*Rodríguez 3552, INB), P (*Mori y Kallunki 5596, MO*). 50-400 m. (Mesoamerica, Venezuela,
Guayanas, Brasil.)


Trees c. 10 m. Leaves 6-13 × 2-4 cm, usually narrowly oblong-lanceolate or elliptic, the
base cuneate or sometimes attenuate, the apex acuminate, often long-acuminate. Stipules 1.5-5
mm, acutely triangular. Inflorescences 7-15 cm, broadly paniculate, sometimes with axillary
panicles or racemes amongst the upper branchlets; pedicels 3-8 mm. Sepals 2(3), 2-4 × 2-4 mm,
bowl-shaped, coriaceous; petals 3-4(-5), 6-7 mm, obovate; stamens c. 15, the filaments c. 2 mm,
the anthers c. 2 mm; ovary globose, 3-locular. Capsules 3-carpellate, or 1-2-carpellate by
abortion, more or less globular. *Semideciduous dry forests*. B (*Davidse y Brant 36164, MO*); H
(*Evans 1663, MO*). 100-300 m. (Endémica.)

**Bibliography**

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