

Araceae of the Kampong



The Kampong

OF THE NATIONAL TROPICAL BOTANICAL GARDEN
FORMER HOME OF DR. DAVID FAIRCHILD
ADMITTANCE BY APPOINTMENT ONLY

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Larry Schokman, Director of the Kampong

History of the Kampong

The Kampong, former residence of the late David Fairchild an early 20th Century plant explorer who was responsible for finding and introducing many tropical plants, especially fruit crops. The Kampong is currently owned and operated by the National Tropical Botanical Gardens in Kawaii, Hawaii and is directed by Larry Schokman and his wife Colleen. The Kampong grounds has an astounding display of tropical plants.

The Family Araceae

The Araceae are world wide in distribution ranging as far north as near the arctic circle but most species are tropical. There are roughly equivalent numbers of genera in the Old World and the New World but about two-thirds of all the species in the family are in South America and both of the largest genera, *Anthurium* and *Philodendron* occur there.

The family is characterized by having flowers arranged in congested spikes called spadices with the spadix subtended by a spathe. Flowers may be unisexual or bisexual and when unisexual the plants are typically monoecious (bearing both male and female flowers on the same spadix).

Vegetative Morphology

Leaves of Araceae are highly variable and may be pinnately or palmately compound or simple and oblong, ovate, cordate, sagittate or hastate. The primary lateral veins are usually pinnate but often join to form collective veins as in *Anthurium*, *Chlorospatha*, *Syngonium* or *Xanthosoma*. Frequently the blades are deeply palmately or pinnately lobed and in some genera, notably in *Monstera* the blades may be fenestrate (with holes). Some genera have heteroblastic development where the juvenile plants look markedly unlike the adults, such as in *Monstera* and *Syngonium*. Growth form is also highly variable with habit ranging from free-floating aquatics (*Pistia*), to rooted emergent aquatics (*Montrichardia*), rooted and submerged aquatics (*Jasarum*), terrestrial cauline genera (*Dieffenbachia*), terrestrial and rhizomatous (*Spathiphyllum*, *Homalomena*), terrestrial and tuberous (*Amorphophallus*, *Caladium*, *Dracontium*) or epiphytic (*Anthurium*, *Stenospermation*) to hemiepiphytic (*Monstera*, *Philodendron*, *Syngonium*)

Floral Morphology

The spathe may be free and persistent as in *Anthurium* and *Spathiphyllum*, deciduous as in *Monstera* and *Stenospemation* or remaining around and enclosing the spadix as in most genera with unisexual flowers including *Dieffenbachia*, *Homalomena* and *Philodendron*, *Syngonium* and *Xanthosoma*. The spathe may be divided into a tube and blade portion (typically in the case of plants with unisexual flowers) and the blade portion may fall free (*Chlorospatha*, *Schismatoglottis*, *Syngonium*, *Xanthosoma*). The spadix, while almost always having the flowers tightly compressed in spirals, may have the female and male portions of the spadix separated by appendages (*Arisaema*, *Ulearum*) and usually have a series of sterile male flowers which function as a food source for pollinators. The arrangement and disposition of the flowers usually dictate the generic characters.

Aglaonema marantifolium Blume Cultivated Plants at Kampong, Miami, Florida, 21 September 2003, *Croat 90050* (MO).

1 m tall; **internodes** dark green, weakly glossy, 1.8 cm diam.; **petioles** sharply and broadly sulcate; **blades** subcoriaceous, semiglossy, moderately bicolorous, mottled paler gray-green in irregular patterns along primary lateral veins; **midrib** sunken and concolorous above, convex and concolorous below; minor veins obscure; **spathe** pale green, erect; **berries** green.



Aglaonema marantifolium, Croat 90050

Aglaonema modestum Schott ex Engl. Cultivated Plants at Kampong, Miami, Florida, 21 September 2003, *Croat 90048* (MO).

To 75 cm tall; **internodes** dark green, matte to weakly glossy; **petiole** bases paler green; free part terete, medium green; **blades** subcoriaceous, dark green and semiglossy above, paler and matte below; **midrib** sunken and concolorous above, narrowly raised and concolorous below; **primary lateral veins** quilted and concolorous above, weakly pleated-raised and concolorous below; minor veins moderately distinct. INFLORESCENCES 3 per axil; **spathe** medium green, erect; pistils green; female spadix creamy.



Aglaonema modestum Schott ex Engl., Croat 90048

Alocasia cucullata Schott





Alocasia cucullata Schott

***Alocasia macrorrhizos* (L.) G. Don in Sweet**

Massive pachycaule with the stem decumbent or erect, to 4 m tall; petioles to 1.3 m long, sheathing in lower 1/3—1/2; **blades** ovato-sagittate, bluntly triangular in general outline, lobes ca. 1.3—1/2 the length of the anterior, somewhat rotund, often overlapping; held more or less erect, with the margin entire to very slightly; anterior lobe ca. 70 cm to over 1 m long, ca. 60—90 cm wide at base, with ca. 9 rather distant primary lateral veins on each side of the anterior costa diverging at ca. 60°; glands in axils of primary veins on abaxial side distinct; secondary venation flush with the lamina or but slightly raised abaxially, not forming interprimary collective veins or these poorly defined; posterior inflorescences paired among the leaf bases, subtended by membranous cataphylls; peduncles barely exceeding the cataphylls at anthesis; **spathe** rather variable in length, ca. 13—35 cm long, constricted ca. 1/6th of the way from the base; lower part green, ovoid; limb broadly oblong-lanceolate, cowl-like at anthesis, later reflexed, then deliquescent, membranous, pale yellow; **spadix** slightly shorter than the spathe, shortly stipitate; female zone 1—2 cm long, ca. 1.5 cm diam.; ovaries pale green, ca. 3 mm diam.; stigma sessile, 3—5 lobed, the lobes conic, yellow; sterile interstice slightly shorter than to equalling, the female zone, whitish, very slightly narrowed corresponding to the spathe constriction,

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composed of rhombo-hexagonal synandrodia ca. 2.5 mm diam., the lower ones paler, incompletely connate or with a central hole, the upper ones resembling synandria; male zone cylindrical, ca. 3—7 cm long, ca. 2 cm diam., whitish; synandria rhombo-hexagonal, convex-topped due to cap-forming synconnective, ca. 2 mm diam.; appendix yellowish, slightly thicker than the male zone at the base, thence tapering, equalling to considerably exceeding half the length of the spadix, staminodial; fruiting spathe ca. 8 cm long, longitudinally dehiscent, green; berries scarlet.



Alocasia macrorrhizos (L.) Schott



***Alocasia macrorrhizos* (L) Schott**

Alocasia plumbea van Houtte, J. Gen. Hort 21:93-94. T.2206. 1875.

Stems short, to 6 cm diam.; internodes short; Leaves more or less erect with the blade directed in the same direction at the petiole; petioles olive-green, tinged purplish, to more than 1 m long, sheathed in lower 1/3, smooth; **blade** ovate-triangular-sagittate, to 90 cm long, 55 cm wide, glossy dark olive-green above, purplish-silvery with dark purple veins below; margins weakly sinuate; anterior lobe longer than broad; posterior lobes narrowly rounded, overlapping; sinus narrow, closed; midrib sunken and weakly paler above, round-raised and purplish below; **primary lateral veins** sunken and concolorous below; peduncles purple; spathe with tube purple, to 4.5 cm long; blade white; spadix almost as long as spathe, with sterile appendage to 11.5 cm long. Native to Java.

Similar to *Alocasia macrorrhiza* but with blades narrower, margins weakly sinuate, upper main lobes longer than wide, upper surface glossy dark olive-green, lower surface purplish-silvery, with dark purple veins; petioles and peduncles purple; spathe with tube purple, to 4.5 cm long; blade white; spadix almost as long as spathe, with sterile appendage to 11.5 cm long



Alocasia plumbea van Houte

Alocasia cf. maccorhizos (L.) G. Don in Sweet, Croat 95679

Terrestrial, to ca. 1 m tall; stems short, less than 30 cm long; internodes short, 5 cm diam.; petioles to 70 cm long, sheathed to midway, medium green, matte, obtusely and weakly flattened adaxially, 2 cm diam. midway; sheath erect-spreading, one margin outward and under, pale green inside; blades ovate-cordate, weakly peltate, 56 cm long, 42 cm wide, thinly coriaceous, rounded and cuspidate at apex, deeply lobed at base, dark green and weakly glossy above, slightly paler and glossy below; midrib 1 cm wide, broadly convex and slightly paler above, narrowly rounded and moderately paler below; primary lateral veins 5 pairs, arising at 60° angle, narrowly rounded and concolorous above, narrowly rounded, paler and semiglossy below; minor veins arising principally from the primary lateral veins and confluent midway between the primaries, collecting into an antimarginal vein; basal veins 7 pairs, 1st pair free to base and spreading at 90° angle, the remainder fused and regularly branching off a straight posterior rib, 3 acroscopic, 2-3 basioscopic; posterior lobes to 22 cm long, 19 cm wide midway, directed toward the base and fused up to 3 cm from petiolar plexus.

Inflorescence several; peduncle 40 cm long, 11 x 13 mm midway; spathe 18 cm long, tube 6 cm long, 2.3 x 3.2 cm, weakly glaucous and dark green; spathe blade greenish yellow, hooding, 13 cm long (16 cm long around outer curve), gaping 4 cm wide at anthesis, matte outside, semiglossy within, the veins fine and visible; spadix erect; pistillate portion 2.3 cm long, pistils dark green, stigmas whitish; staminate portion 14.3 cm long; sterile staminate portion 3 cm long, 1 cm diam. at base, 7 mm diam. at constricted portion at apex, fertile staminate portion creamy white, 12 x 13 mm wide; appendix 5 cm long, 1.5 cm diam at base, tapered to blunt tip, creamy yellow.

Alocasia cf. macorrhizos





Alocasia cf. macorrhizos Croat 95679



Alocasia cf. macrorrhizos
Croat 95679





Alocasia sp.



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Alocasia sp.

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Alocasia sp.

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Alocasia sp.

Amydrium magnificum (Engl.) Nicolson Cultivated Plants at Kampong, Miami, Florida, 21 September 2003, *Croat 90043* (MO).

Hemiepiphyte; **internodes** 4-20 cm long, 1-2.7 cm diam., gray-brown, smooth except moderately pustular near apex of each nodes; **petioles** terete, 1 cm diam., dark green and matte increasingly sulcate toward apex, sharply and broadly sulcate near apex; **blades** subcoriaceous, dark green and weakly glossy above, slightly paler and semiglossy below; **midrib** sunken and concolorous above, narrowly raised and paler below; **primary lateral veins** one per pinnae, sunken and concolorous above, narrowly raised and white below; collective vein weakly sunken and concolorous above, narrowly raised and concolorous below. **INFLORESCENCES** 4, 1 per node at apex of stem, each subtended by a bract but without full blade; **peduncle** dark green, semiglossy minutely warty, 1 cm diam.; **spathe** 21 cm long, 74 cm in circumference, dark green, preanthesis, semiglossy and pale orange and weakly glossy inside, thickly coriaceous; **spadix** pale creamy yellow, matte, 10 cm long, 2.3 cm diam.



Amydrium magnificentum Nicolson, Croat 90043



Amydrium magnificentum Nicolson, Croat 90043



Amydrium magnificentum Nicolson, Croat 90043



Amydrium magnificentum Nicolson, Croat 90043

Anthurium dolichostachyum Sodiro, Anal. Univ. Quito 15 (108): 1901. Type:

Terrestrial or hemiepiphyte; stems 1-1.2 m long; internodes 1-3 (7.0) cm long, 1-4 cm diam, dark green, semiglossy; cataphylls 20-25 cm long, dark to medium green and leathery, persisting semi-intact, promptly weathering to pale tan, soon deciduous, sometimes with only their bases persistent; petioles 65-121 cm long, subterete, obtusely and narrowly sulcate; blades broadly ovate-sagittate, 58-81 cm long, 40-66 cm wide, 1.2-1.6 times longer than wide, subcoriaceous, dark green and semiglossy to velvety or weakly sublustrous-matte above, moderately and slightly paler and weakly glossy to semiglossy or matte below, drying medium yellow-green to dark brown above, moderately paler and yellowish brown to greenish below, acuminate at apex; sinus spatulate-ovate to hippocrepiform, sometimes closed with the lobes overlapping on larger leaves, 6-26 cm deep, 6-24 cm wide; basal veins 7--10(11) pair, the 1st and sometimes 2nd pair free to the base, 4th and higher pairs coalesced 1.5-3.0 cm, on larger blades the 6-8th and higher pairs fused 9-20 cm; midrib slightly paler and convex to narrowly rounded, thicker than broad above, narrowly triangular toward apex above, thicker than broad to round-raised and much paler below; primary lateral veins 10--28 per side, arising at 45--50 degree angle, weakly raised to bluntly acute and concolorous above, narrowly raised and more prominent and paler below; tertiary veins flat and darker below; collective veins arising from the 5th basal vein, to 3.5 cm from the margin; secondary basal vein 4 mm from margin. Inflorescence erect to spreading, peduncle 30-55 cm long, 4-6 mm diam, terete, ca 1/2 as long as the petioles; spathe lanceolate, (14)24-35 cm long, 2-6 cm wide, whitish to pale green, tinged pink when young, initially erect, then spreading to reflexed, finally rolled and curled, weak and brittle; spadix greenish to creamy white or pale-olive to olive-green, 35-45 cm long, sessile or stipitate 3-5 mm; flowers 10-13 visible per spiral, 1.9 --2.4 mm; anthers cream to yellow, stamens long-exserted; pistils red, early-emergent. Infructescence pendent, 30--45 cm long, 3 cm diam; berries subclaviform, to 5 mm diam, juvenile berries maroon, mature berries red at the apex and white at the base; pericarp with raphide cells; seeds 2, discoidal, olive- green.

Anthurium dolichostachyum ranges from southern Colombia (Nariño) to central Ecuador on the Pacific slope at 60--1900 m. elevation The species is recognized by its frequently terrestrial habit, long stem, short internodes, mostly deciduous cataphylls, long-petiolate, large ovate-cordate leaf blades which are typically matte-subvelvety above, the promptly deciduous spathe and the greenish to whitish spadix with red berries.



Anthurium dolichostachyum Sodiro

Anthurium dolichostachyum

Sodiro

Inflorescence





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Anthurium llewelynii Croat



Anthurium llewlynii Croat

Anthurium llewellynii Croat 95554



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Anthurium plowmannii Croat

Epiphyte; 2-5 m; internodes short, 2-4.5 cm diam.; **internodes** short, 4 cm diam.; cataphylls persisting semi-intact, reddish brown fibrous at base; **petioles** slightly thicker than broad, deeply and narrowly sulcate, dark green, weakly glossy; dark green, semiglossy; petioles and lower midrib densely speckled; **blades** moderately coriaceous, medium to dark green and matte-subvelvety above, moderately paler and weakly glossy below, the margins turned upward, broadly and conspicuously undulate; **midrib** with narrow medial rib above, bluntly 3-ribbed at base, convex and slightly paler toward apex below; **primary lateral veins** prominently convex on both surfaces, thickly raised and concolorous on both surfaces; **tertiary veins** in part weakly raised below, darker than surface; **peduncle** short; **spathe** green, heavily tinged with purple, recurled; **spadix** dark green; tinged purplish; fruiting spadix.



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Anthurium plowmanii Croat



*Anthurium
plowmanii* Croat

Anthurium schlechtendalii Kunth



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Anthurium schlechtendalii Kunth



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Colocasia esculenta (L.) Schott in Schott & Endl., Melet. Bot. 18. 1832. *Arum esculentum* L., Sp. Pl. 965. 1753.

Large perennial herb 1-2.5 m tall; stem a cormose or rarely rhizomatous subglobular to oblongoid caudex, mostly 15-18 cm diam, with close leaf scars around its circumference and with smaller secondary subglobular cormules in the lower part of stem; roots arising from the lower portion of stem; leaves arising in whorls from apex of stem; petioles (0.7)1-2.1 m long, glaucescent, sheathed 1/3 to about midway, sheath apex decurrent, the free part subterete, obtusely flattened adaxially, weakly sulcate medially, medium green, faintly striate abaxially and on the sides; **blades** conspicuously peltate, ovate-cordate to ovate-sagittate, 25-85 cm long, 20-60 cm wide, acuminate at apex, the upper surface often reddish at point of petiole attachment posterior lobes fused to about midway, the lobes rounded; major veins concolorous; **midrib** flat above, thickly convex and paler below; **primary lateral veins** 3-6(8) pair, arising at 50-70° angle; basal veins 5-8 pair, the 1st pair free to the base, the remainder variously coalesced into a prominent more or less straight posterior rib which extends to near the end of the posterior lobes; surfaces matte & glabrous, upper surface medium green, sometimes weakly subvelvety, lower surface moderately paler, glaucescent.

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INFLORESCENCES with peduncle 15-30 cm long; spathe 20-40 cm long, the tube 3-5 cm long, green on both surfaces; blades 15-30 cm long, pale sulfur-yellow to orange-yellow outside, slightly paler inside, oblong-lanceolate, arching away from the spadix or reflexed, twisted apically; **spadix** 6-14 cm long; pistils greenish, ovules unilocular with a single sessile stigma; ovules 37-67 per locule on 2 to 4 parietal placentas with sterile pistillate flowers scattered among the fertile pistils, these lacking stigma and style; staminate spadix cream-yellow, sterile staminate section of spadix markedly constricted, 2-5 cm long; fertile staminate portion about as thick as the pistillate portion, staminodia with 2-6 linear anthers, thecae dehiscent by terminal pores; terminal sterile appendage creamy white, many times longer than the fertile portion of spadix. **Berries** red, seeds 1.0-1.5 mm long, 0.7- 1.0 mm diam, ovate, pale yellow, longitudinally ridged, bearing a conspicuous hilum at one end and a delicate, translucent funiculus; chromosome number $2n=28$.

Native to some unknown area of Asia but now widely cultivated in tropics and subtropics of both hemispheres.



Colocasia esculenta (L) Schott

Dieffenbachia killipii Croat, sp. nov. TYPE: Panama. Coclé: vic. of El Valle de Antón, La Mesa, forested flat area near Finca Macarenita, 8°36'N, 80°07'W, 800 m, 6 July 1994, *T. B. Croat & G. Zhu 76666*

Medium-sized herb, 40--100 cm tall, stem creeping over surface of ground at base, then erect; sap milky, unscented; *internodes* initially weakly glossy, often faintly dark green and medium yellowish green-marbled at lower nodes, becoming glossier in age, 1.5--5.5 cm long, (0.8)1.5--3(4) cm diam., medium to dark green or olive-green or black-green, drying dark yellow-brown to orange-brown, rarely dark brown, epidermis sometimes fissured in a cracked network so as to appear corky in some areas. LEAVES scattered along stem, denser near apex; *petioles* (4)6--20(24.5) cm long (averaging 12.2 cm long), firm to spongy, slightly paler or darker than stem, medium green to dark green, matte to weakly glossy, faintly striate toward the base, sheathing for 2/5 to fully throughout (0.4--1 the petiole length and averaging 0.69); sheath 3--18 cm long, (averaging 8 cm), with the sheath margins not drying markedly different than the remainder of sheath; sheath apex with the tip free-ending and inequilaterally acute to emarginate; unshathed portion C-shaped and sharply sulcate to narrowly and sharply sulcate to subterete and weakly sulcate or obtusely and narrowly sulcate in cross section; *blades* oblong-elliptic to oblong-ovate, rarely narrowly ovate, (13)19--30(33.5) × (4.5)7--16(21.3) cm (averaging 25 × 11 cm), 1.5--4.2 times longer than wide, as long as or up to 4.8 times longer than petiole (averaging 2.3 times longer than petiole), inequilateral, one side 0.5--1.5 cm wider than the other side, sometimes falcate, subcoriaceous to weakly coriaceous, moderately bicolorous, acuminate to gradually acuminate at apex inequilateral, sometimes inequilaterally rounded to subcordate, rarely acute at base; margins moderately straight on one side, frequently markedly undulate on other side; upper surface semiglossy, dark green, frequently white, pale green or yellowish green-spotted or white-streaked; lower surface paler, matte to weakly glossy, drying yellow-brown; sinus less than 1 cm deep, rarely to 2.5 cm deep:

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midrib flat-raised, 3--5 mm wide, sometimes sulcate toward base, usually in moderately deep valleys, usually concolorous, sometimes paler than surface above, sometimes weakly 3- to 4-grooved on upper surface, drying flat-raised to broadly convex, slightly paler to concolorous above, thicker than broad and narrowly rounded to almost round-raised, matte, paler than surface to almost concolorous below, drying brown with ridges, darker than surface below; *primary lateral veins* 8 to 12 per side, arising at an acute angle, then spreading at mostly (40°)45°--70° angle (rarely to 30°, sometimes to 80° toward base, rarely to 110° at base), frequently forming collective veins that merge with the margin higher up on the blade, narrowly sunken to weakly quilted-sunken above, thicker than broad to convex and weakly pleated-raised, darker than surface to almost concolorous below, usually drying darker than surface; minor veins few, obscure above, obscurely visible and darker than surface to moderately distinct below.

INFLORESCENCES 1 to 4 per axil; bracts 9--20 cm long; *peduncle* 4.5--9 cm long, 6--7 mm diam., medium green, white at base; *spathe* 12--19 cm long at anthesis, 1--2 cm longer than the spadix, medium green throughout, sometimes faintly dark green-lineate on faded areas outside, slightly paler and glossy inside; spathe tube 2--3 cm diam. when closed, 5.5--7.5 cm wide when flattened, 1.5--2 cm diam. at constriction (flattening 3.5--4 cm wide); spathe blade 2.5--3 cm diam.; *spadix* bluntly pointed, weakly protruding forward at anthesis, 12--15 cm long; free portion 5.5--6 cm long (sometimes with a few pistillate flowers in the basal portion); pistillate portion 5--8.5 cm long, 10 mm diam. throughout; fertile staminate portion 4.5--6.8 cm long, 7--8 mm diam. midway, sometimes bluntly pointed (frequently with the withered portion weakly protruding out of the front of the spathe after anthesis); sterile intermediate segment to ca. 5 mm diam., but usually absent with the pistillate and staminate portions almost contiguous;

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pistils 20 to 37, well-spaced, sometimes aggregated into weak rows, frequently irregularly gapped, 2 or 3(6) dispersed across spadix width, widely spaced at base and at apex, pale yellow-green, 2.4 mm diam., 1.4 mm high; stigma 1.8--2.2 mm diam; staminodia very thickened and mostly joined at base, tapered gradually toward apex and not markedly thickened, sometimes broadened laterally and apparently consisting of a union of 2 staminodia, sometimes with 2 pistils contiguous and apparently sharing staminodia; synandria 1.2--1.4 mm diam., ca. 4 per spiral, irregularly rounded to 4- to 6-sided, drying widely spaced, the margins of apex markedly turned upward. INFRUCTESCENCE to 23 cm long; spathe orange outside; *spadix* 9--10.5 cm long, 2.5 cm wide; *berries* red to reddish orange or orange-red, drying pale orange-brown, ellipsoid, 2- to 3-lobed, 7--8 mm long, 6--10 mm diam.; seeds 1 to 2 per berry, drying dark brown, flattened on funicular side, to 4.9 mm long, 4.4 mm diam., drying smooth, 3 mm thick.

Distribution and habitat. *Dieffenbachia killipii* ranges from southwestern Costa Rica (Puntarenas) to Panama and the western slopes of the Andes in Colombia (Antioquia, Chocó, Tolima, and Valle) and Ecuador (Esmeraldas, Guayas, El Oro, Pichincha, Los Ríos, and Manabí on the Pacific slope and in Napo on the Atlantic slope) at 0 to 900 m elevation. In Panama it occurs in *Tropical wet forest* (T-wf) and *Premontane wet forest* (P-wf) life zones (Holdridge, 1967) and ranges from Coclé Province to Darién Province in the east. In Colombia it is known from *Tropical wet forest* (T-wf) and *Tropical rain forest* transition to *Premontane wet forest* (T-rf/P-wf) life zones.



Dieffenbachia killipii Croat, Croat 90049

Dieffenbachia longispatha Engl. & K. Krause, Pflanzenr. IV, 23 Dc(Heft 64): 44. 1915. TYPE: Panama. Colón: Fato (Nombre de Dios), July 1911, *H. F. Pittier 3838* (holotype, US!; isotypes, B!, F!, MO!).

Terrestrial, (1)1.5--3.5 m tall; sap very foul and pungent; stem prostrate at base, then erect; *internodes* 4--12 cm diam., with leaf scars prominent, dark green, semiglossy; *petioles* thick and succulent, semiglossy, usually solid dark green, rarely streaked with pale green, 23--55 cm long (averaging 36 cm long), sheathed to about middle (0.58--0.85 their length, averaging 0.72); sheath 25--41 cm long, inequilaterally rounded at apex, sometimes weakly free-ending; unsheathed portion 4.0--30.5 cm long (averaging about 11 cm), C-shaped and obtusely sulcate or \pm terete with a faint flat rib adaxially; *blades* oblong-elliptic, 41--72 \times 17--38 cm (averaging 53 \times 24 cm), 1.7--2.9 times longer than wide (averaging 2.3 times longer than wide), 1--2 times longer than petioles, coriaceous to subcoriaceous, semiglossy, bicolorous, weakly inequilateral, one side 0.6--3.5 cm wider than the other, usually short-acuminate at apex, sometimes acute to rounded with a short acumen, acute to rounded at base, with the edges turned up near the base; upper surface dark green; *midrib* flat, 1--2 cm wide at base, concolorous or slightly paler than surface above, drying slightly paler than surface and weakly raised above, concave to prominently raised on lower surface, drying brownish; *primary lateral veins* 15 to 26 pairs, sunken above, convex below, arising at an acute angle to the midrib then spreading at an angle of 45°--60°(70°), sometimes to 90° near the base of the blade, sometimes drying moderately wrinkled; interprimary veins lacking or 1 between each pair of primary lateral veins, sometimes almost as prominent as the primary lateral veins; minor veins indistinct. Juvenile blades with acute base and solid green midrib.

INFLORESCENCES 1 to 3 per axil; *peduncles* (5.5)7--25 × 1.5--2 cm; *spathe* medium to dark green, broadly curved, long-acuminate, 27--48 cm long, 2.5--8.2 times longer than peduncle, to 4 cm wide at anthesis, tube flattening 5--12.5 cm wide, constricted area 2.5--3 cm diam., flattening 3.2--5 cm wide, *spathe* blade 3--6 cm wide at anthesis, flattening to 6--12 cm wide midway, the distal inner surface sometimes white when open; *spadix* (21)35--38 cm long; free portion 12--19 cm long; pistillate portion of spadix fused to spathe, 13--15 cm long; fertile staminate portion (8)11--14 cm × (9)12--14 mm (drying 6--9 mm diam.); mostly sterile intermediate portion (2)3--4.3 cm long with a few scattered staminodia in the upper half (sometimes to throughout its length); pistillate flowers 10 to 26, round or barely bilobed, widely spaced, 5--10(20) mm apart, forming in a single irregular row or scattered but usually no more than 2 flowers across the width of the spadix (rarely 3); ovaries pale green, 4--7 mm diam.; stigmas 4--6 mm diam., yellow to orange, somewhat broadly bowl-shaped, 5--7 mm thick on the edge, medially with 1 to 2 somewhat elongate lobes, the lobes 1--1.5 mm diam., somewhat longer than broad; staminodia 5 to 6 per pistil, white, irregular, 2--6 × 2--3 mm, much flattened at base, less so toward the apex, often somewhat puckered at the apex; synandria in spirals of 4 to 7 each, 3--4 mm wide, subrounded, drying light yellow-brown and concave at apex.

INFRUCTESCENCES 17--24 cm long; *berries* 1.5--2 cm diam., often deeply emarginate at both ends and appearing to be a double fruit, bright yellow to orange; mesocarp ca. 2 mm thick, soft, sweet and tasty at maturity; seeds oblong, 7--8 mm diam., brown to black, smooth.

Distribution and habitat. *Dieffenbachia longispatha* ranges from central Panama to northern Colombia, mostly from sea level to 180 m, but perhaps to 250 m (owing to a collection at Río Tuquesa with no elevation reported), occurring in *Tropical moist* (T-mf), *Premontane wet* (P-wf), and *Tropical wet forest* (T-wf) life zones (Holdridge, 1967). In Panama it occurs on both coasts, but it is relatively rare on the Pacific slope.



Dieffenbachia longispatha Engl. & K. Krause

Dieffenbachia longispathum
Engl. & K. Krause

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*Dieffenbachia
longispatum*
Engl. & K. Kr



Dieffenbachia parlatoresii
Linden & André



Dieffenbachia parlatorei
Linden & André



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Dieffenbachia seguine forma Barranquiniana



Dieffenbachia seguine forma
Barranquiniana



Dieffenbachia sequine forma *barranquiniana*



Dieffenbachia seguine (Jacq.) Schott

4 11:53



**Dieffenbachia
seguine (Jacq.)
Schott**



***Lasia spinosa* (L.) Twaites**



Lasia spinosa (L.) Twaites

Monstera Adans. Cultivated Plants at Kampong, Miami, Florida,
21 September 2003, *Croat 90044* (MO).

Hemiepiphyte; **internodes** medium to dark green, weakly glossy,
acutely and deeply sulcate on one side, smooth; **blades**
subcoriaceous, slightly bicolorous, moderately glossy; major veins
narrowly raised and much paler below; minor veins moderately
distinct below.



Monstera adansonii (Schott) Madison



Monstera adansonii Schott

Monstera deliciosa Liebm. Vidensk. Meddel. Dansk Naturhist. Foren. Kjobenhavn 1: 19-20. 1849.

Epiphyte or terrestrial, sometimes on rocks; juvenile leaves shingled; internodes mostly short, smooth, green, 4-10 cm long, 2-8 cm diam.; petioles 30-100 cm, smooth, sheathed to the geniculum; sheath deciduous; blades ovate to orbicular, 25-100 cm long, 25-75 cm wide, cordate at base, regular pinnatifid, perforate or not; perforations in 1-5 rows on each side, elliptic, 0.5-8 cm long; midrib sunken above, paler and thicker than broad below; primary lateral veins 6-14 per side; secondary lateral veins reticulate. Inflorescences 10-19 cm long, tuberculate or smooth; spathe cream to pale pink inside, white to cream or yellowish outside, 6-25 cm long; spadix white to greenish, 10-18 cm long, 2.5-3.0 cm diam. Infructescence green to bluish green; berries 10-18 mm diam.; seeds spherical 16-22 cm long, 10-13 cm diam.

Monstera deliciosa ranges from Mexico to Panama, 400-2000 m



Monstera deliciosa Liebm.

18 8:34

Monstera deliciosa Liebm.



Monstera deliciosa Liebm.





5 10:14



5 10:15

Monstera dubia (HBK) Kunth

KEY TO SUBGENERA OF PHILODENDRON

Stems arborescent with large adventitious roots often more than 1 cm diam.; interpetiolare scales conspicuous; staminate flowers many times longer than wide.

subgenus *Meconostigma*

Stems typically not arborescent and roots usually much less than 1 cm diam.; interpetiolar scales absent or inconspicuous; staminate flowers scarcely longer than wide.

Stems producing a series of leaves before producing an inflorescence; petioles usually fully sheathed on adult plants.

subgenus *Pteromischum*

Stems producing inflorescences at each leaf axil; petioles of adult plants unsheathed.

subgenus *Philodendron*

Philodendron subgenus Philodendron

Interpetiolar squammas absent or
inconspicuous





Philodendron davidsonii Croat

4 12:27



4 12:27

Philodendron davidsonii Croat



4 12:27

Philodendron davidsonii Croat



Philodendron goeldii G. M. Barroso, Croat 90037

Philodendron goeldii G. M. Barroso, Croat 90037



18 16:36

Philodendron fragrans sect. Rupicola

Terrestrial; stem creeping over ground, 5 cm diam.; **internodes** dark violet-purple, becoming gray, semiglossy, coarsely white-streaked at apex of internodes; **cataphylls** to 16 cm long, sharply 2-ribbed (winged), medium green, densely pale short-lineate; **petioles** 45-60 cm long, 1.5-2.0 cm wide, sharply D-shaped, prominently pale green-streaked throughout, broadly convex adaxially with narrow erect-spreading rib; **blades** ovate-cordate, 40-50 cm long, 35-40 cm wide, subcoriaceous, moderately bicolorous, dark green and semiglossy above, much paler and glossy below; **midrib** flattened and concolorous above, broadly convex, matte, faintly pale short-lineate below; **primary lateral veins** 6-7 pair, arising at ca. 45 degree angle, obtusely sunken and concolorous above, deeply sunken and concolorous above, thickly concolorous, matte and slightly paler below; minor veins moderately distinct; basal veins 6-7 pair, several of these with one or more branches, the 1st or 2nd free to the base, the 3rd and higher order coalesced 5-6 cm, the posterior rib naked up to at least 4 cm; sinus obovate to closed.

INFLORESCENCES 2 per axil, erect at anthesis, reclining post-anthesis; **peduncle** 18 cm long, 1 cm diam., coarsely white-streaked at apex, the base of spathe purplish; **spathe** blade white, gray-green, weakly glossy; spathe tube pale yellow-green outside, green-white inside. *Croat 90047* (MO).



Philodendron fragrans. sect. *Rupicola*, Croat 90047



Philodendron fragrans section *Rupicola*, Croat 90047



Philodendron fragrans section *Rupicola*, Croat 90047

Philodendron giganteum Croat 95553



19 758



19 759



Philodendron
giganteum
Schott

Croat 95553

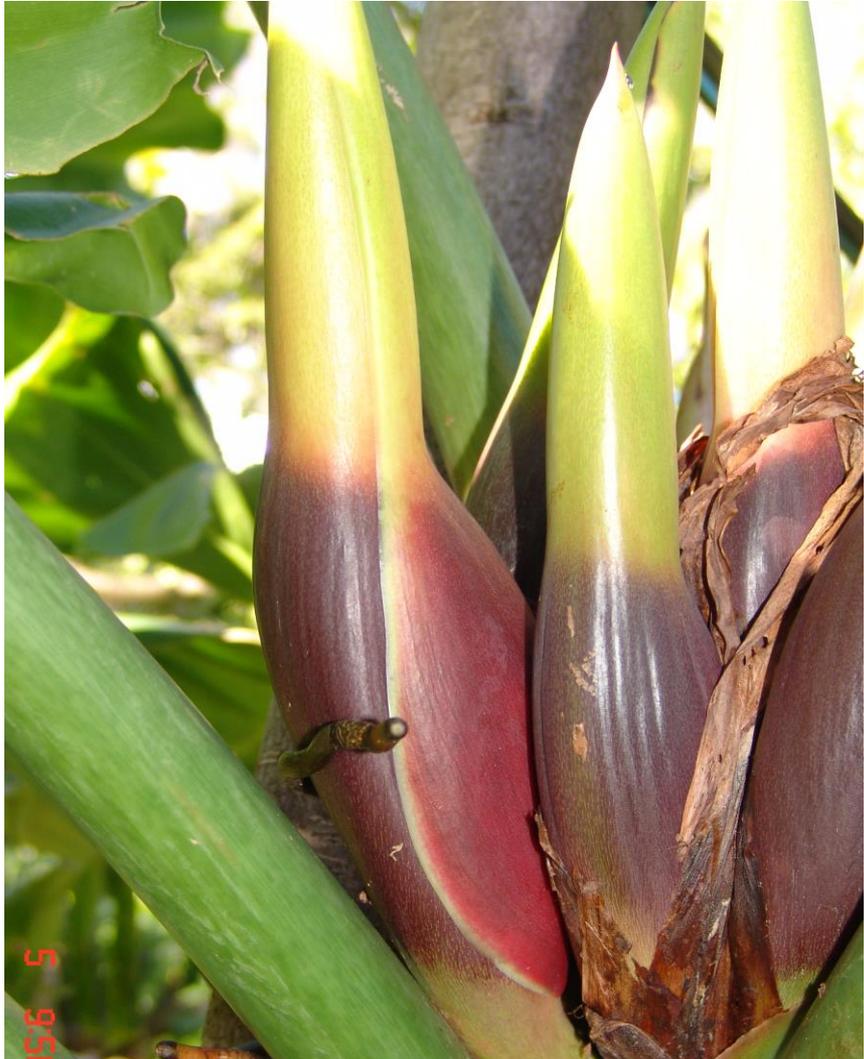
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753



5 9:54



5 9:53



5 95

Philodendron cf. mexicanum
Engl. Hemiepiphyte; **internodes**
6-7 cm long, 2.5-3 cm diam.;
medium green, soon gray-green,
matte; **cataphylls** weakly 1-
ribbed, pink; **petioles** medium to
dark green, semiglossy, sparsely
purple-spotted, terete; **blades**
subcoriaceous, weakly
bicolorous, semiglossy; **midrib**
broadly convex and concolorous
to slightly paler above, narrowly
rounded and paler below;
primary lateral veins weakly
sunken and concolorous above,
narrowly raised and paler below;
minor veins moderately obscure.
Cultivated Plants at Kampong,
Miami, Florida, 21 September
2003, *Croat 90051* (MO).





Philodendron cf. mexicanum Liebm.



Philodendron cf. mexicanum Liebm.



Philodendron cf. mexicanum

Philodendron lacerum (Jacq.) Schott Cultivated Plants at Kampong, Miami, Florida, 21 September 2003, *Croat 90045* (MO).

Internodes 2-10 cm long, 1.8-3.0 cm diam., gray-brown, 1.8-2.3 cm diam.; **cataphylls** green, unribbed, 33 cm long, persisting intact, brown; **petioles** medium to dark green, subterete, weakly glossy, weakly and obtusely flattened adaxially; **blades** subcoriaceous, semiglossy, moderately bicolorous; **midrib** flattened and more or less concolorous above, narrowly rounded and slightly paler below; minor veins moderately obscure.



Philodendron lacerum Schott, Croat 90045

Philodendron martianum Engl.



Philodendron martianum Engl.



18 16:36



Philodendron melinonii

Brongn. ex Regel

Philodendron melinonii Brongn. ex Regel



18 16:38

Philodendron melinonii Brongn. ex Regel



***Philodendron pastazanum* K. Krause**, Notizbl. Bot. Gart. Berlin-Dahlem 15: 42. 1940.

Type: Ecuador. Pastaza: Mera, 1200 m, Schulze-Rhonhof 3073

(holotype:B)

T

Terrestrial on road bank; stem repent, less than 40 cm long; internodes 5-6 cm diam., short; cataphylls persisting terete, somewhat spongy, finely pale striate, medium green, semiglossy; petioles 6-90 cm long, flattened adaxially, rounded adaxially, marginally winged with the wings undulate; blades peltate, broadly ovate-cordate, 30-50 cm long, 25-40 cm wide, acuminate at apex, deeply lobed at base, semiglossy, moderately bicolorous; sinus narrow to closed; midrib broadly flattened-convex and paler above, narrowly rounded and concolorous below; primary lateral veins 3-4 per side, obtusely deeply sunken and concolorous above, prominently round-raised and concolorous below; minor veins moderately distinct; inflorescences 2 per axil; peduncles to 10 cm long, 1-1.5 cm diam., dark green, weakly glossy, prominently white-streaked; spathe 15-20 cm long, 3-3.5 diam., tube dark purple-violet outside and inside; blade white on both surfaces.

Philodendron pastazanum is endemic to eastern Ecuador, ranging from Pastaza to Zamora-Chinchipec at 300-500 m elevation. The species is easily recognized by its terrestrial habit, creeping caudex, undulate-winged petiole and weakly peltate ovate-cordate blade.



5 10:54

Philodendron pastazanum
K. Krause

Philodendron pinnatifidum (Willd.) Schott

Cultivated Plants at Kampong, Miami, Florida, 21
September 2003, *Croat 90041* (MO).

Hemiepiphyte; **internodes** short, 4 cm diam.;
cataphylls sharply 2-ribbed, pale green, tinged red on
back medially, soon dark brown, semi-intact at upper
nodes but promptly fibrous; **petioles** sharply C-shaped,
flattened medially with erect margins, medium green,
finely striate-lineate; **blades** subcoriaceous, dark green
and matte above, moderately paler, semiglossy below;
midrib sunken and paler above, narrowly rounded and
concolorous below, faintly short-lineate; **primary
lateral veins** sunken and slightly paler above, thickly
convex and concolorous below; minor veins fine,
moderately distinct.



Philodendron pinnatifidum (Willd.) Schott, *Croat 90041*



Philodendron pinnatilobum Engl.

10 1545



16 15:45

Philodendron pinnatilobum Engl.



Philodendron pinnatilobum Engl.



16 15:47

Philodendron pinnatilobum Engl.

Philodendron sagittifolium Liebm., Vidensk. Meddel. Dansk Naturhist. Foren. Kjobenhavn 1849: 17. 1849. TYPE: Mexico. Veracruz: Rio Nautia at Pital, Apr. 1841, *Liebmann s.n.* (holotype, C).

Usually hemiepiphytic, rarely terrestrial or epilithic; stem appressed-climbing, parchment-white, sap turning blackish, slimy; internodes usually terete, weakly angular, sometimes obscurely flattened on one side or closely and acutely ribbed, semiglossy to matte, 1-20 cm long, 1.5-4 cm diam., dark green, becoming usually gray-green to brown, sometimes pale yellow-green, epidermis somewhat ridged ("wrinkled"), sometimes fissured transversely; cataphylls 15-18 cm long, usually weakly 1-ribbed, sometimes unribbed or weakly to sharply 2-ribbed or sharply 1-ribbed (ribs to 1 cm high), soft, green, sometimes reddish to pinkish, sometimes sparsely green-spotted, purple-maroon or darker striate near base, drying reddish brown, margins sometimes prominently and thinly raised, usually soon deciduous, rarely persisting as a rotting mass, rounded at apex; **petioles** 20-65(91) cm long, 3-15 mm diam., usually subterete, moderately spongy to firm, medium green, drying greenish brown, obtusely flattened, usually obtusely and narrowly sulcate, rarely obtusely and broadly sulcate adaxially, surface minutely and densely short purple- or occasionally white-striate, sometimes dark green or violet-purple blotched, sometimes smooth to irregularly ribbed and folded; **blades** ovate to ovate-triangular, semiglossy, moderately coriaceous, weakly to moderately bicolorous, acuminate to narrowly acuminate, sometimes short-acuminate at apex, prominently cordate to sagittate at base, 30?cm long, 15?cm wide (1.85-2 times longer than wide), (0.6? times longer than petiole), margins somewhat hyaline, weakly revolute, upper surface medium green, drying brownish green to greenish brown, semiglossy, lower surface pale yellow-green, sometimes reddish, drying usually reddish brown, sometimes yellowish brown, weakly glossy to matte; anterior lobe 24 cm long, 13-34.5 cm wide 2-5.5 times longer than posterior lobes);

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posterior lobes usually narrowly rounded, 6-20.5 cm long, 5-17.6 cm wide; sinus V-shaped to almost closed, 6cm deep; midrib flat to weakly raised, paler than surface, drying broadly raised and concolorous above, convex to narrowly raised, sometimes maroon-spotted or with white flecks, concolorous to darker than surface, drying broadly raised and reddish below; basal veins 3-5(6) per side, with 0) free to base, third and higher order veins sometimes coalesced 2.5 cm, a few additional veins sometimes coalesced to 6.5 cm; posterior rib not at all naked or only briefly so; primary lateral veins 4 per side, departing midrib at a 60° angle, weakly curved to the margins, but usually turned prominently up just before the margin, rather prominently downturned just before the midrib, round-raised to flat to obtusely sunken and paler than surface above, convex, concolorous to darker than surface below; interprimary veins weakly sunken, concolorous above, flat, darker than surface below; minor veins weakly visible below, arising from both the midrib and primary lateral veins, drying moderately prominent, weakly undulate, alternating with dark, mostly contiguous secretory ducts.

INFLORESCENCES erect, 1-3 per axil; **peduncle** 4-15 cm long, 1.6-1.8 cm diam., somewhat flattened to terete, green, sometimes tinged reddish, drying greenish, densely short and broad striate; **spathe** 8-22 cm long, 2-3 cm diam. (0.8-2.2 times longer than peduncle), weakly to obscurely constricted above the tube, semiglossy, usually green, sometimes plum-red, often purple-spotted, densely short pale lineate throughout, weakly so near apex, blunt to narrowly cuspidate-acuminate to prominently acuminate, frequently tinged purplish violet at base; spathe blade green to pale yellow-green, 8?cm long (opening 3-4.3 cm wide, sometimes opening to near the base), greenish white, weakly tinged red-purple in throat to pale yellow-green or white inside, sometimes reddish throughout in age; resin canals appearing as continuous lines, red-purple to orange in color,

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spathe tube green, sometimes moderately to heavily tinged red-purple to red (B & K red-purple 3/7.5), with sparse, dark purplish spots (mostly medially) throughout outside, 4 m long, 2.5 cm diam., red to reddish purple (B & K red-purple 3/7.5), white striate inside; **spadix** stipitate to 7 mm long; tapered toward apex, (8)9 cm long, broadest below the middle or near the base, usually protruding somewhat forward at anthesis but not curved; npistillate portion pale green (anthesis) to greenish white to yellow-green (post-anthesis), uniformly wide throughout or weakly tapered toward both ends, 2.5-2 cm long in front, 2 cm long in back, 1-1.2 cm diam. at apex, 1.1-1.7(2.1) cm diam. at middle, 1.1 cm wide at base; staminate portion 6.3-13 cm long; fertile staminate portion usually creamy white, sometimes pale green to pinkish, 9-13 mm diam. at base, 11-13 mm diam. at middle, 8?mm diam. ca. 1 cm from apex, broadest at base or middle, about as broad as the pistillate and sterile portions; sterile staminate portion often broader than the pistillate portion, white, (0.9-1)1.2-1.9 cm diam.; pistils (0.9)1.8-4.4 mm long, (0.9)1.3-2.3 mm diam.; ovary 6-ocular, 1-(3) mm long, 1.3 mm diam., with sub-basal placentation; locules 1-1.7(3) mm long, 0.2-0.4 mm diam.; ovule sac (0.6)0.8-1.2 mm long; ovules usually 2-4, rarely 5 per locule, 1-seriate (2-seriate, if 4 or more ovules), usually contained within translucent, gelatinous ovule sac, sometimes contained within gelatinous matrix (no true envelope), 0.1 mm long, usually longer than funicle; funicle 0.1 mm long (can be pulled free to base), sometimes adnate to lower part of partition, style (0.4)0.6-0.8 mm long, (0.8)1.2-1.6 mm diam., similar to style type B; style apex flat to sloping; stigma discoid or subdiscoid. truncate, (0.7)1-1.5 mm diam., (0.1)0.3-0.5 mm high, covering entire style apex, sometimes shallowly depressed at middle; the androecium truncate, prismatic, oblong, margins irregularly 4-6-sided to weakly ovate, ca. 1 mm long, 1.6-2 mm diam. at apex; thecae oblong, 0.4 mm wide, parallel to one another, sometimes contiguous; sterile staminate flowers blunt, irregularly 4-6-sided, sometimes clavate or prismatic, 1.4-2.1 mm long, 1.4 m wide. NEXT PAGE.

INFRUCTESCENCE pink, green at base with reddish spots outside; berries pale yellowish, rarely orange, with stigmas reddish brown, 7 mm long; seeds 2 per locule, drying pale brown to tannish brown, narrowly ellipsoid to oblong-ellipsoid, 1.4-2 mm long, 0.7-0.9 mm diam., with faint striations.

Flowering in *Philodendron sagittifolium* occurs almost throughout the year, principally after the onset of the dry season and continuing throughout much of the rainy season. There is a slight geographical shift, with flowering beginning about one month earlier in Mexico and Guatemala (January through August, less frequently in September and October) and continuing somewhat longer in Panama (February through September, but also rarely in December). Fruits apparently mature in about two months' time, but mature fruits have seldom been collected, only from January and July.

Philodendron sagittifolium ranges from Mexico (Veracmz) to Colombia (and probably also to Venezuela), from sea level to 1800 m elevation. It is probably the most morphologically variable, and one of the most ecologically versatile, species in Central America. In Mexico, this species occurs in "Selva Alia Perennifolia," "Selva Mediana Subper-ennifolia," "Selva Baja Caducifolia," and "Bosque Caducifolio." In the remainder of Central America, it occurs principally in *Tropical moist forest* and *Premontane wet forest*, but also in *Premontane rain forest* and *Tropical wet forest* life zones.



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**Philodendron
sagittifolium Liebm.**



Philodendron sagittifolium Liebm.



Philodendron sagittifolium

Philodendron simsii (Hook.) G. Don Cultivated Plants at Kampong, Miami, Florida, 21 September 2003, *Croat 90055* (MO).

Typically epiphytic sometimes terrestrial, 1.3 m tall; stem to 1 m long, in part reclining; **cataphylls** 35-40 cm long, sharply 2-ribbed, persisting semi-intact, with fibers exposed at base; **petioles** 80-100 cm long, 3 cm diam at base, 1.5 cm diam. at apex, 1.3 times longer than blade,, subterete obtusely flattened adaxially; **blades** ovate-sagittate, 50-75 cm long, 40-60 cm wide, subcoriaceous, moderately bicolorous, weakly glossy above, semiglossy below; acuminate at apex, deeply lobed at the base; sinus hippocrepiform to oblong or spatulate, 11-15 cm deep; posterior lobes subrounded, sometimes overlapping; midrib flattened and concolorous above, bluntly angular and slightly paler below; primary lateral veins, 5-6 pair, arising at 45-65 degree angle, obtusely sunken and concolorous above, thickly raised and slightly paler below; minor veins somewhat distinct, fine below; basal veins 6-8 pair, the 1st pair coalesced only weakly coalesced at the base; the 3rd and higher order coalesced to about 6 cm; posterior ribs naked for up to 2.5-8.5 cm long. INFLORESCENCES 2-7 per axil; peduncle 2.5-8 cm long, to 2 cm diam.; **spathe** 16-21 cm long; tube bright red outside except whitish on margins, to 7 cm long, to 5 cm diam., broadly elliptical, tinged weakly purple inside tube, blades whitish green outside, to 14 cm long; spadix 15-16.5 cm long; pistillate portion 1.5-4 cm long, to 2.5 cm diam.; staminate portion 1-13.5 cm long; sterile staminate portion 2.0 cm long; pistils 6-7-locular, each with many axillary ovules.

Philodendron simsii ranges from the Virgin Islands to Trinidad and Tobago; Guyana, sea level to 920 m. elevation.

minor veins fine and conspicuously visible, arising from both the midrib and primary lateral veins

INFLORESCENCES usually solitary, sometimes 2–3 per axil; **peduncle** 3–16 cm long, 6–13 cm diam., medium green, moderately recurved with reddish ring around the apex; **spathe** (8)13–21 cm long, 1.2–4 cm diam., weakly constricted above the tube, to 2.5 cm diam. at constriction, usually medium green to yellow-green, rarely creamy white, with dark purple dots (most to 3 mm circumference) heavily so on tube, less so on blade throughout, white to creamy white or greenish white within, cucullate at apex, convolute in lower 2/3 of tube at base, margins whitish or colorless, recurled at anthesis; spathe blade glossy, smooth outside, (the opening 7.5–8.5 cm long, 3.4–5.2 cm wide), creamy white, glossy; resin canals intermittent, orange, appearing medially and extending into spathe tube inside; spathe tube oblong, glossy outside, 5 cm long, 3 cm diam., maroon, deep red, or purplish-violet inside; **spadix** sessile or shortly stipitate (to 2 mm); clavate, more or less erect, 12.3 cm long, broadest above the middle, weakly constricted between sterile and fertile portions; pistillate portion greenish white to pale yellowish green, 2.5–4.5(6.2) cm long, 1–1.8 cm diam. throughout; staminate portion 7.5–8.5 cm long; fertile staminate portion creamy white, 1.2 cm diam. at base, 1.3 cm diam. at middle, 1 cm diam. ca. 1 cm from apex, broadest in the middle, usually narrower than the pistillate and sterile portions; sterile staminate portion usually broader than the pistillate portion, creamy white, drying yellowish, 1.3 mm diam.; pistils 1.7–2.5(3.4) mm long, 0.6–1.1(2.3) mm diam.; ovary 6–8(10)-locular, 0.8–2.3 mm long, 1.1–2.3 mm diam., with sub-basal placentation; locules 0.8–1.1(2.3) mm long, 0.2–0.4(0.7) mm diam.; ovule sac 0.7–0.9(1.2) mm long; ovules 1–2 per locule, contained within a translucent and gelatinous matrix, 0.4–0.6 mm long, longer than funicle; funicle 0.2–0.4 mm long, (can be pulled free to base), style 0.4–0.8 mm long, 1–1.4(2.5) mm diam., usually similar to style type D (rarely B or E); style apex more or less rounded; stigma subdiscoid, truncate, 0.7 mm diam., 0.2–0.3 mm high, covering center of style apex, inserted on style boss;

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Philodendron simsii
(Hook.) G. Don in Sweet,
Croat 90054



Philodendron simsii (Hook.) G. Don in Sweet, Croat 90054



Philodendron simsii (Hook.) G. Don in Sweet, Croat 90054

Philodendron
simsii Croat
95547



Philodendron simsii Croat 95547



18 16:54

Philodendron simsii Croat 95547



18 16:53



18 16:53



Philodendron sinnuatum

16 15:49



Philodendron sinuatum

10 15:50

Philodendron tripartitum (Jacq.) Schott, Wiener Z. Kunst 1829: 780. 1829. *Arum tripartitum* Jacq., Pl. hort. schoenbr. 2: 33, t. 190. 1797.

Hemiepiphytic; appressed-climbing, stem often several meters long, sap watery, very aromatic-scented; internodes moderately elongate except near the apex, semiglossy, drying coarsely and irregularly ribbed (the ribs usually acute), 3–14 cm long, 1–2 cm diam. (to 3.5 cm diam. in Colombia), green to dark green to gray-green, soon drying light brown, epidermis sometimes loose and papery, roots usually 3–6 per node, usually less than 20 cm long, drying brown, less than 3 mm diam., semiglossy, sparsely scaly; cataphylls thin, (10)18–33 cm long, usually unribbed, sometimes sharply 1-ribbed, greenish, sometimes tinged reddish, deciduous intact. LEAVES erect-spreading to spreading; **petioles** 20–61 cm long, 6–15 mm diam., terete to subterete, moderately spongy, sometimes obtusely somewhat flattened, sometimes with an obtuse medial rib, dark green, surface glossy to weakly glossy; **blades** deeply 3-lobed almost to the base or rarely trisect, ca. as broad as long in outline, thinly coriaceous, semiglossy, moderately bicolorous, acuminate at apex; lobes typically rather dissimilar, median segment usually oblanceolate, sometimes nearly elliptic, rarely oblong to linear, 15–45 cm long, (4.5)7–14(19) cm wide, 1.9–7.8 times longer than wide (averaging 4.3 times longer than wide), (0.9)1.5(1.7) times longer than lateral segments;) the lateral segments conspicuously inequilateral, arcuate-spreading toward apex, (12)18–35 cm long, 1.3–15 cm wide, the inner margin always much narrower than the outer margin and weakly confluent with medial lobe, usually to 1 cm., rarely to 2 cm, the outer margin 1.5–5 times wider than the inner margin where the difference is most severe; midrib broadly convex, concolorous above, convex to round-raised, darker below; basal veins lacking; primary lateral veins (4)6–10(12) per side, departing midrib to a 25° angle on narrow blades or to 90° angle on broader blades, weakly curved on narrow blades or markedly curved on broader blades to the margins, sunken and usually concolorous above, convex and darker than surface below:

START HERE

; the androecium truncate, prismatic, margins usually irregularly 5-sided, 1.4 mm long, 2.2 mm diam. at apex; thecae oblong, 0.5 mm wide, more or less parallel to one another; sterile staminate flowers blunt, prismatic, irregularly 4–6-sided, 1.9 mm long, 1.5–2 mm wide. Berries whitish, irregularly angular, 4 mm long, 2–2.7 mm diam.; seeds usually 6–8 per berry, cylindrical, 1.5 mm long, sticky. JUVENILE plants with blades maroon below.

Flowering in *Philodendron tripartitum* occurs throughout the dry season and the first half of the rainy season (mostly May through July), with seemingly little phenological variation throughout its range. Most flowering collections have been made from January through July with a few from August and also November. Post-anthesis inflorescences have been collected throughout the whole year with the greatest concentration from May to July. Immature fruits are known from January, April, July, August, September, and November, while mature fruits are known only from October.

Philodendron tripartitum ranges from Mexico to Ecuador from near sea level to 1300(1500) m elevation. In Central America, this species ranges along the Caribbean slope in Mexico (Veracruz to Tabasco) and throughout Middle America but occurs on both slopes in Costa Rica and Panama thence along the Pacific slope into lowland Antioquia and Chocó Departments, Colombia. In Mexico, *Philodendron tripartitum* occurs in Selva Alta Perennifolia and the transition forest to Bosque Caducifolia. In Costa Rica and Panama, it occurs in *Tropical moist forest* to *Premontane wet forest*, *Tropical wet forest* and *Premontane rain forest*.



Philodendron tripartitum (Jacq.) Schott

Philodendron warszewiczii K. Koch & Bouché, in A. Braun et al., Append. gen. sp. Hort. berol. 1855: 4. 1855–1856. TYPE: Guatemala. San José and Florida, *Warszewicz s.n.* (holotype, B?; lost?). Guatemala. Santa Rosa: Volcán Jumaytepeque, 6000 ft., *Hyde & Lux 4282* (neotype, K; here designated).

Usually terrestrial, or on rocks, sometimes epiphytic; stem appressed-climbing, thick, succulent, bare, leaf scars conspicuous; internodes short, 2.5–7(10)cm diam., dark green to gray-brown; cataphylls thin, soft, 18–33 cm long, weakly to sharply 2-ribbed, deciduous intact. LEAVES often deciduous in dry season; **petioles** 33–58(80) cm long, subterete to C-shaped, moderately soft, weakly flattened to rounded with thick; **blades** triangular-sagittate in outline, deeply bipinnately or bipinnatisect to within 1–4 cm of the midrib, thin, semiglossy, moderately bicolorous, more or less rounded at apex (the acumen 2 mm long), cordate at base, 31–78 cm long, 30–62 cm wide (0.9–1.3 times longer than wide), (1–1.3 times longer than petiole); median lobe 17–52 cm long, 23–63 cm wide, rounded to obtuse; lateral segments 1–30 cm long, 11–28 cm wide, pinnately lobed with 3 or more lobes per side, acute or acuminate; interlobal sinuses 0.78–0.94 the length of the blades; midrib flat, slightly paler than surface above, raised, obscurely striate, slightly paler than surface below; basal veins 2–6 per side, with 0–1 free to base, second and third pair coalesced 2–5 cm, third and higher order veins coalesced 5–7 cm; posterior rib naked along most of its margin; primary lateral veins 3–6 per side, departing midrib at a 55–70° angle, straight to the margins, weakly raised above, raised, paler than surface below; tertiary veins raised, paler than surface above and below; minor veins visible, darker than surface below, distinctly visible on drying, arising from both the midrib and primary lateral veins. INFLORESCENCES 1(3) per axil; **peduncle** 4.5–11 cm long; **spathe** 13.5–30 cm long, 4–7.5 cm diam. (1.1–3.6(4.7) times longer than peduncle), medium to dark green throughout, scarcely constricted; spathe blade short dark green lineate outside, 12 cm long, pale green to white inside; spathe tube, 14 cm long, pale green to white or purple or red inside; **spadix** sessile; 14–24(30) cm long, constricted weakly above pistillate portion; pistillate portion 3 cm long 1.7 cm diam. at middle; staminate portion 8.3–15 cm long; fertile staminate portion 1.6 cm diam. at base, 1.4 cm diam. at middle; sterile staminate portion 1.3 cm



Philendron warszewiczii

Internodes short, 3.5 cm diam., no sign of interpetiolar squammulae; **cataphylls** sharply 2-ribbed, one margin pink, persisting intact, dark brown; **petioles** subterete, dark green, semiglossy, obtusely and broadly sulcate above middle; **blades** subcoriaceous, slightly bicolorous, semiglossy, margins markedly sinuate; major veins broadly convex and concolorous above, thickly raised and slightly paler below; minor veins indistinct.

Philodendron warszewiczii K. Koch & C.
D. Bouché. Cultivated Plants at Kampong,
Miami, Florida, 21 September 2003, *Croat*
90053 (MO).



Philodendron warszewiczii



Philodendron Croat 95545



18 8:44



Philodendron Croat 95545



Philodendron Croat 95545



Philodendron Croat 95545

Philodendron Croat 95545



18 15:03

Philodendron Croat 95545



18 15:04

18 15:05

Philodendron Croat 95545



18 15:41

Philodendron Croat 95545



18 15:42

Philodendron hybrid

Hemiepiphyte; internodes short, to 3.5 cm diam.; cataphylls to 30 cm long, heavily tinged purplish, sharply flattened on one side, persistent intact at upper nodes, turning brownish; petioles equaling or longer than the blades, medium green, spotted with violet-purple; blades narrowly triangular-sagittate, 45-60 cm long, 30-40 cm wide, subcoriaceous, medium-dark green and semiglossy above, slightly paler and semiglossy below, prominently sinuate along the margins; midrib sunken and slightly paler above, narrowly rounded and paler below; primary lateral veins 6-7 pair, spreading at 60-70 degree angle, weakly sunken and slightly paler above; narrowly rounded and slightly paler below; sterile.

Croat 90040



Philodendron sp., Croat 90040



Philodendron sp.,
Croat 90040

Philodendron hybrid Cultivated Plants at Kampong, Miami, Florida, 21 September 2003, *Croat 90057* (MO).

Appressed hemiepiphyte; **internodes** short 4 cm diam.; **cataphylls** deeply reddish purple, 2-ribbed, deciduous; **petioles** obtusely D-shaped, dark green, tinged with purple, weakly glossy, smooth blades subcoriaceous, dark green and glossy above, moderately paler and weakly glossy below; **midrib** flat and slightly paler above, narrowly rounded and purple below; **primary lateral veins** deeply sunken and paler below, near midrib, otherwise concolorous; minor veins obscure.

Philodendron hybrid

Hemiepiphyte; stem 2.5 along; **internodes** 3-6 cm long, 4.5-6 cm diam., dark purple, becoming yellow-brown in age; **cataphylls** purple-red, 2-ribbed, one rib acute, one rib blunt, turning brown and persisting intact; **petioles** sharply C-shaped, the edges acute, weakly raised with obtuse medial rib, 4.5 cm diam. at base, 2.5 cm midway, 2.0 cm diam. at apex, dark green, faintly streaked; **blades** subcoriaceous, moderately bicolorous with margins sinuate; **midrib** flattened and more or less concolorous, weakly roughened above, narrowly rounded, paler and short dark green-lineated below; minor veins moderately indistinct. *Croat 90046* (MO).



Philodendron sp., Croat 90046



Philodendron sp, Croat 90046



Philodendron sp., Croat 90046



**Philodendron sp., Croat
90046**

Philodendron Schott Cultivated Plants at
Kampong, Miami, Florida, 21 September 2003,
Croat 90054 (MO).

Stem to 1 m long, 12 cm diam.; **internodes** short;
cataphylls persisting semi-intact; **petioles**
moderately spongy, subterete, dark green and
semiglossy obtusely flattened adaxially; **blades**
subcoriaceous, semiglossy, moderately
bicolorous, markedly sinuate along margins;
midrib broadly flattened-convex and slightly
paler above, narrowly rounded and darker short-
lineate, slightly paler below; **primary lateral**
veins obtusely sunken and slightly paler above,
thickly convex and paler below; minor veins
moderately indistinct below.



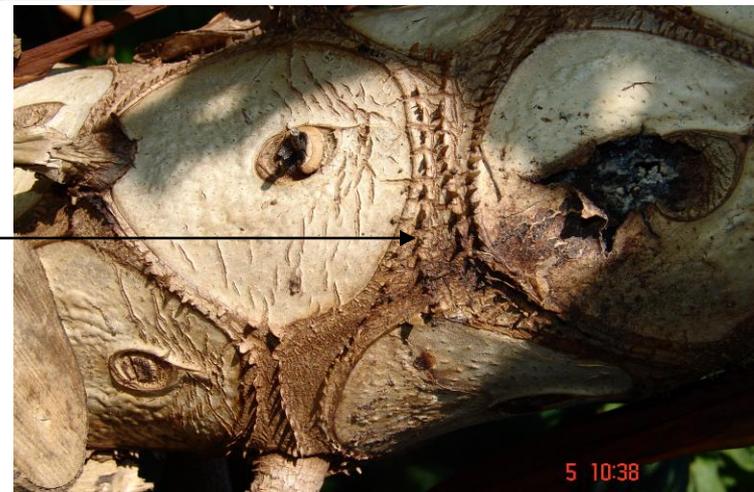


Philodendron subg. Meconostigma

Conspicuous stilt roots



Interpetiolar
summite



- *Philodendron bipinnatifidum* Schott
- Terrestrial to ca 1 m tall; internodes short, 8 cm diam; roots 1.3-1.7 cm diam.; petiole scars conspicuous; interpetiolar squamulae moderately few, much thickened and protruding; petioles obtusely C-shaped, broadly sulcate, medium-dark green, matte; blades deeply bipinnatifid, broadly ovate in outline, semiglossy, bicolorous; lateral lobes ca. 6 pairs, these in turn bearing several pointed lobes corresponding to major veins; posterior lobes with 3-4 lateral lobes and 4-5 basioscopic lobes; major veins broadly convex and slightly paler above, narrowly rounded and paler below; primary lateral veins 5-7 pair; basal lobes 8-9 pair, the 1st sometimes free to the base, the remainder fused and regularly branching from the posterior rib, 3-4 acroscopic, the remainder basioscopic; sinus closed;



Philodendron bipinnatifidum

4 12:18



Philodendron bipinnatifidum

Philodendron bipinnatifidum Schott



Philodendron bipinnatifidum Schott



Philodendron bipinnatifidum Schott





Philodendron brasiliense Engl.



41221



14819

**Philodendron brasiliense
Engl.**



Philodendron brasiliense Engl.



Philodendron brasiliense Engl.

18 841

18 841

Philodendron undulatum Engl. Croat 95557



Philodendron undulatum Engl. Croat 95557



19 7:32



19-1706



19-1702

Philodendron undulatum Engl.

Philodendron undulatum Engl.



18 17:07

- *Philodendron* sp.
- Terrestrial; internodes short, with massive light brown roots at nodes 1.7-2.2 cm diam.; petioles obtusely D-shaped, 114 cm long; cataphylls 89 cm long, deciduous intact; blades ovate-triangular-sagittate in outline, deeply 4-5 lobed along margins, 133 cm long, 76 cm wide, dark green and semiglossy above, paler and semiglossy below; major veins broadly rounded and slightly paler above, narrowly rounded and paler below, most ending in a lobe along the margins; primary lateral veins 6 pair; basal veins 8-9 pair, the 1st free to the base, spreading at ca. 90° angle, the remainder fused and regularly branching from the posterior rib, 3 acroscopic, 4 basioscopic. Inflorescences 1 per axil; peduncle 9-10 cm long, held entirely within the sheath; spathe 39 cm long, medium green with the outer margin bright red.



4 12:05



4 12:05



4-12-05



**Philodendron subg.
Meconostigma**



Philodendron Croat 95549



Philodendron sub. Meconostigma Croat 95555

19 6:59

27:91 18

Philodendron sub. Meconostigma Croat 95555



Philodendron sub. *Meconostigma* Croat 95555



19 7:00

Philodendron subgen. Meconostigma Croat 95556



19 7:07



Philodendron subgen. *Meconostigma* Croat 95556



Philodendron subgen. Meconostigma Croat 95552



19
7:15

19
7:15

Philodendron subgen. Meconostigma Croat 95552

Philodendron subgen. Meconostigma Croat 95552





Philodendron subgen.

Meconostigma Croat 95552

19
7-16

Philodendron subgen. Meconostigma Croat 95552





19 722



19 722

Philodendron subgen. Meconostigma Croat without number

Philodendron subgen. Meconostigma Croat without number



Philodendron subgen. Meconostigma Croat without number



Philodendron williamsii Hook. F. Bot. Mag. T. 5899. 1871.

Stem to 1 m long, 12 cm diam.; internodes short; cataphylls persisting semi-intact; petioles moderately spongy, subterete, dark green and semiglossy obtusely flattened adaxially; blades 35-50 cm long, 25-35 cm wide, subcoriaceous, semiglossy, moderately bicolorous, markedly sinuate along margins; midrib broadly flattened-convex and slightly paler above, narrowly rounded and darker short-lineate, slightly paler below; primary lateral veins obtusely sunken and slightly paler above, thickly convex and paler below; minor veins moderately indistinct below. INFLORESCENCE with peduncle to 20 cm long, 1.5-2.0 cm ; spathe dark purple inside, to more than 20 cm long; spadix ca. 20 cm long; pistillate portion 3 cm long, to 2 cm diam.; staminate portion 8 cm long, the sterile staminate portion ca 1 cm long; pistils pale yellowish, 8-9 locular.

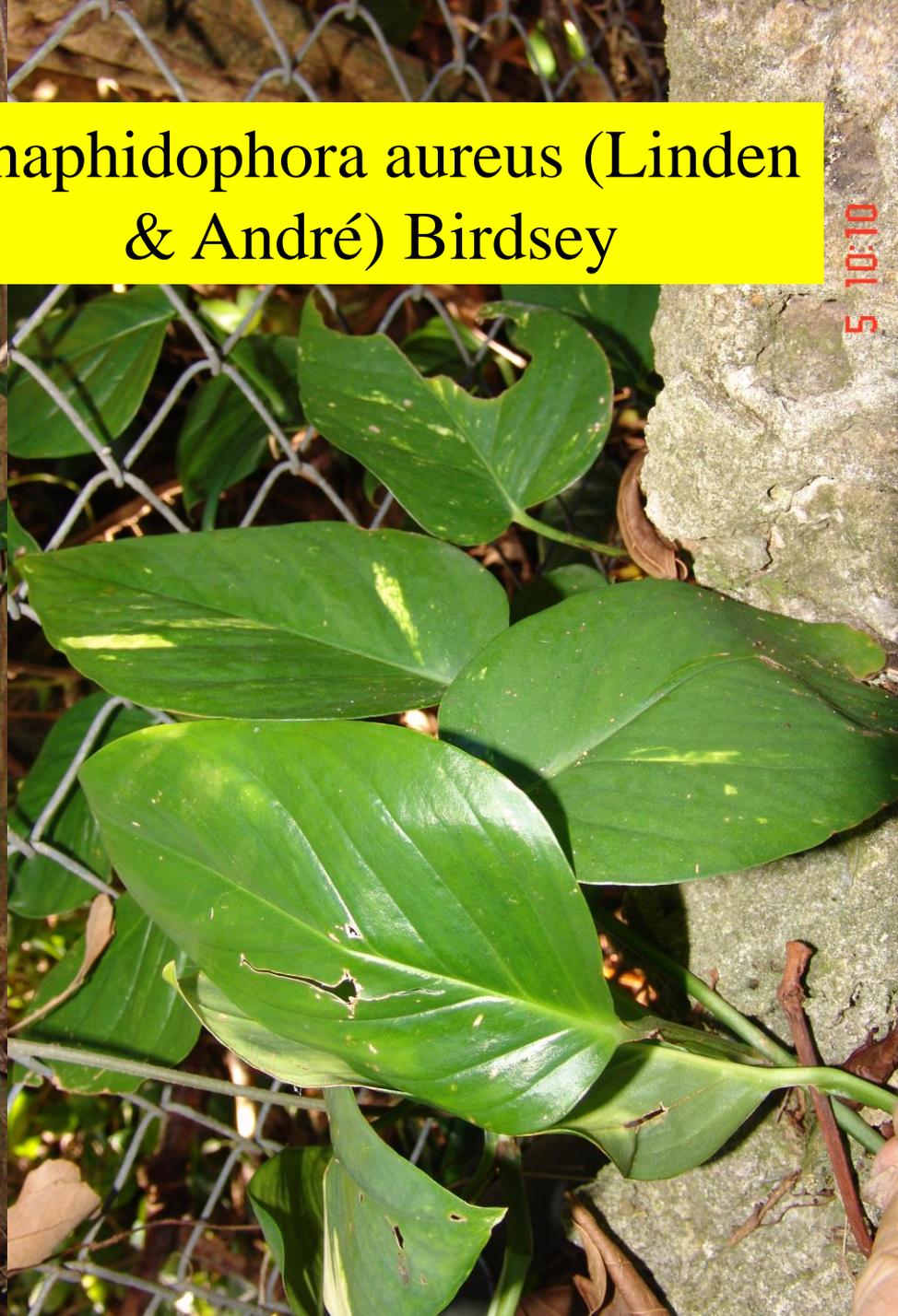
Philodendron williamsii ranges from Southern Brazil to Paraguay.

Thomas B. Croat 90054



Philodendron undulatum Croat 90053

Rhaphidophora aureus (Linden
& André) Birdsey





Rhaphidophora aureus (Linden
& André) Birdsey

5 10:09

Rhaphidophora aureus (Linden
& André) Birdsey



5 10:10



Creeping lithophytic and epiphytic vine;
spathe dull light brown-yellow;
flowers white. Native from Vietnam

Raphidophora decursiva (Roxb.) Schott



*Raphidophora
decursiva* (Roxb.)
Schott



Raphidophora
decursiva (Roxb.)
Schott



4 11:58

4 11:58



Raphidophora decursiva (Roxb.) Schott

Raphidophora decursiva (Roxb.) Schott



18 17:04

Raphidophora montana Schott, in Miq., Ann. Mus. Bot. Lugduno-Batavum I. 128.

Hemiepiphyte: internodes dark olive-green, matte, 2.5-5 cm long, 2.2 cm diam; petioles medium dark green, matte, 23-28 cm long, sheathed to the geniculum; sheath initially erect, becoming dark brown, flaring somewhat and with the margins thin and fragmenting on drying; blades narrowly ovate to ovate-elliptic, 30-60 cm long, 12.5-20 cm wide, moderately coriaceous, stiff, dark green and semiglossy above, moderately paler and weakly glossy below; midrib obtusely sunken and concolorous above, narrowly round-raised and slightly darker below; primary lateral veins 8-10 per side, weakly sunken above, convex and slightly paler below, arising from midrib at 60-70 degree angle; interprimary veins usually present, one per pair of primary lateral veins; minor veins moderately distinct. Inflorescence 1 per axil; peduncle 10 cm long, 2 x 1.5 cm diam., green; spathe 19 cm long, 4 cm wide when unopened, whitish at anthesis, dark blackish brown post-anthesis and persisting; spadix 18.5 cm long, 4 x 3.5 cm diam., flowers 4-5 mm long, 2.5-3 mm wide, truncate at apex, drying dark gray-brown.

Croat 90007



Rhapidophora montana Schott



Raphidophora monticola K. Kr.



Rhipidophora montana Schott



4 11:58





4 11:58

Raphidophora sp.

Hemiepiphytic vine; **internodes** dark green, weakly glossy; geniculum sulcate; **blades** subcoriaceous, semiglossy, slightly bicolorous; major veins sunken and concolorous above; **midrib** narrowly rounded and darker below; **primary lateral veins** weakly raised and concolorous below; minor veins moderately distinct.

Croat 90052 (MO)



Rhaphidophora sp.

Rhodospatha venosa Gleason Cultivated
Plants at Kampong, Miami, Florida, 21
September 2003, *Croat 90039* (MO).

Hemiepiphytic vine; **internodes** to 10 cm long to 2.3 cm diam., matte, dark green; **petioles** sheathed to near geniculum (margins incurled), medium green, weakly glossy; geniculum obtusely flattened adaxially; **blades** subcoriaceous, dark green and semiglossy above, slightly paler and semiglossy below; **midrib** obtusely sunken and concolorous above, narrowly raised and slightly paler below; **primary lateral veins** quilted-sunken and concolorous above, convex and darker below; minor veins distinct, darker than surface.



Rhodospatha venosa Gleason, Croat 90039

Spathiphyllum



Spathiphyllum



18 8:31

Spathiphyllum



Spathiphyllum



18 8:32

Spathiphyllum



Spathiphyllum



18 8:33

Spathiphyllum





18 8:31

Syngonium aureum (L.) Schott, Wiener Z. Kunst 3:780. 1829.

Juvenile plants with blades ovate, sagittate to hastate at base. **Adult stems** slightly glaucous; internodes 4-9 cm long; **petioles** 15-48 cm long, broadly sheathed usually $\frac{4}{5}$ their length (rarely to $\frac{2}{3}$); **blades** usually trisect or sub-5-pedatisect, rarely 5 pedatisect, the lobes confluent, the median lobe 10-30 cm long, 6-20 cm wide, broadly elliptic, abruptly acuminate at apex, the base obtuse, the tissue continuous with the lateral lobes, the first pair of lateral lobes ovate to elliptic, 6-21 cm long, 3-11 cm wide, acute at the apex, strongly inequilateral, usually conspicuously auriculate on the outside at the base, the auricle sometimes free, then 4-10 cm long to ca 4 cm wide, the upper surfaces semiglossy, medium green, the lower surface paler: primary lateral veins mostly 5-7 pairs, joining the midrib at a 20-45 degree angle. Inflorescences to 3 per axil, dark green outside, green inside with a suffusion of bronzy red at the base; spathe blade ovate in outline when opened, mucronate at apex, conspicuously constricted at the base, 12-18 cm long 7-10 cm wide (flattened), creamy white on both sides, sometimes greenish white on the outside and creamy white tinged faintly with violet-purple within; spadix extending to $\frac{1}{2}$ as high as the spathe blade; pistillate portion of the spadix 3.4-4.8 cm long, 9-12 mm diam., the flower mostly rhombic to 5- or 6-sided, the stigma discoid, dark yellowish green; staminate portion of the spadix 3.5-9.2 cm long, rounded at the apex, slightly attenuate toward the apex, the sterile staminate section 7-17 mm long, creamy white, oblong, slightly attenuate at the apex, the sterile staminate flower larger and more irregular than fertile staminate flowers, the fertile staminate flowers 2-5 (usually 4), the synandria retuse at the apex, the stamens fused together only on the inner side. Infructescences pendent, fruiting spadix 7-7.8 cm long, 1.4-2 cm diam.

Syngonium aureum is known only from the Greater Antilles in Cuba, Jamaica and Hispaniola.



Syngonium auritum (L) Schott



Syngonium auritum (L) Schott



05/01/5



5/10/50

Syngonium auritum (L) Schott



Syngonium auritum (L) Schott



**Syngonium
podophyllum Schott**

A close-up photograph of the leaves of a Syngonium auritum plant. The leaves are large, green, and have a prominent vein pattern. Several small, clear water droplets are visible on the leaf surfaces. A yellow rectangular label is overlaid on the right side of the image, containing the text 'Syngonium auritum (L.) Schott'. The background is dark and out of focus, showing more of the plant's foliage.

Syngonium auritum (L.)
Schott

5 9:23



Syngonium podophyllum Schott

Syngonium podophyllum Schott



18 17:05

Syngonium podophyllum Schott



Xanthosoma peltatum G. S. Bunting Cultivated Plants at
Kampong, Miami, Florida, 21 September 2003, *Croat 90042* (MO).

Trunk short, 10 cm diam.; **petioles** glaucous, medium green, semiglossy when rubbed, terete, very spongy, sheathed to middle; **blades** thinly coriaceous, soft weakly glaucous on both surfaces, slightly bicolorous; major veins convex and slightly paler above, thickly convex and white below; tertiary veins weakly raised in part below. INFLORESCENCES 2-3 per axil; **peduncle** flattened, medium green, glaucous; **spathe** tube pale green and glaucous outside, white and moderately glossy inside, pre-anthesis; **spathe** blade pale whitish green on both surfaces, matte; female spadix 13 cm long, creamy yellow, 2.5 cm long, 1.3 cm diam., male spadix acutely pointed at apex, sterile male part 3 cm long, constricted to 7 mm diam., midway, fertile portion 1.4 cm diam., acute at apex.



Xanthosoma
peltatum G. S.
Bunting, Croat
90042



Xanthosoma peltata G. S. Bunting, Croat 90042

Xanthosoma robustum Schott Oesterr. Bot. Wochenbl. 3: 370. 1853.

To 2.5 m tall; stem erect to 30 cm long, to 20 cm diam., brown, scurfy; **petioles** 1.5-2.2 m long, 6 cm wide at base, 3.0 cm diam. midway, 1.2 cm diam. at apex, spongy, obtusely flattened, weakly abaxially, weakly glaucous, finely striate, sheath to 50 cm long, curled outward, wrinkled in lower 1/3; **blades** simple, deltate, 50-138 cm long, 48-106 cm wide, subsagittate at base, thinly coriaceous, dark green and semiglossy above covered with a thin waxy bloom so as to appear matte above, slightly paler and weakly glossy below; basal lobes quadrate, sinus naked, 2-8 cm; posterior lobes to 62 cm long; **midrib** shallowly sunken and slightly paler above, narrowly round-raised and slightly paler below; **primary lateral veins** 7-9 per side, deeply and obtusely sunken and slightly paler above, narrowly round-raised and slightly paler below; tertiary veins weakly etched and concolorous above, weakly raised and concolorous below; posterior rib naked 1-7 cm. INFLORESCENCES erect, 2 per axil; **peduncle** 47 cm long, 3.3 x 3.7 cm diam., medium to dark green, matte; **spathe** tube 12 cm long, 6 cm diam., medium to dark green and matte outside, weakly glossy and pale green within; blade 33 cm long, 10 cm wide, creamy white outside, pale yellow within, cuspidate at apex, matte on both surfaces; **spadix** 33 cm long; female spadix 6.3 cm long, 3 cm diam. at base, 2 cm diam. at apex, pale yellow-green; sterile male flowers 4.5 cm long, 2.7 cm diam., creamy white; fertile male flowers 2.2 cm diam.;

Xanthosoma robustum ranges from Mexico (Nueva Leon, Tamaulipas) to Costa Rica from 50-200 m.



Xanthosoma robustum Schott



Xanthosoma robustum Schott



Xanthosoma robustum Schott



Xanthosoma violaceum Schott

Xanthosoma wendlandii Schott, Oerst. Bot. Z. 15: 33. 1865.

Terrestrial; tuber subglobose, 1.5-3 cm diam.; internodes short, to 2 cm diam.; petioles to 40-130 cm long, sheathed to about 1/3 its length, obtusely flattened and striate, sulcate toward apex, dark green, weakly glossy, densely variegated with purple; blades pedately 5-9-foliolate, thin, semiglossy, weakly bicolorous; medial lobe oblong-elliptic, 20-50 cm long, 5-17 cm wide, acuminate at apex, acute at base; rachis naked, curved; major veins sunken and slightly paler above; midrib narrowly raised and paler below; primary lateral veins 4-9 per side, weakly raised and slightly paler below; inflorescence 1 or more per axil, held below the leaves; peduncle 23-37 cm long; spathe tube green, elliptic, 4-6 cm long, weakly glossy outside, slightly paler green, glossier inside; blade white, erect and arching, 8-10 cm long, 3-4 cm wide, turning pale yellow; spadix 11-16 cm long, 1-1.3 cm wide, arching forward out of spathe, slender, curved at anthesis; female spadix pale green, 2 cm long, to ca 1 cm diam.; fruits white.

Xanthosoma wendlandii ranges from Mexico (Sonora) to Panama (Azuer Peninsula) and N. Venezuela, occurring principally on the Pacific slope in Central America; sea level to 1300 m.

Xanthosoma wendlandii
Croat 90056

Croat 90056





Xanthosoma wendlandii

Xanthosoma wendlandii Schott

