

inner margins \pm straight, becoming turned up against pistil, the outer margins 2-sided; stigma ellipsoid, 0.4–0.5 mm long; anthers 0.5–0.6 mm long, 0.5–0.7 mm wide; thecae oblong, slightly divaricate. *Infructescence* erect; spathe persisting and withered or absent; spadix ca. 1.2 cm long, ca. 1.2 cm diam., with berries scattered throughout; berries greenish (immature), oblong, mammilliform at apex, 5.5–6 mm long, 3.2–3.6 mm diam.; pericarp thickened, with raphide cells present; seeds 2 per berry, orange-brown when dried, ca. 3 mm long, 2.2–2.4 mm diam., ca. 1 mm thick.

Anthurium angustilaminatum subsp. *cibuserpentis* is known from the provinces of El Oro and Cotopaxi in Ecuador, where it occurs at 2,135 to 2,500 m in lower montane moist and lower montane dry and/or montane moist (undeterminable from map) forest life zones.

The subspecies is distinguished by its short petioles and more or less oblong leaf blades with numerous primary lateral veins, which are rather abruptly and shortly rounded to truncate at the base. The color of the spadix at (or even near) anthesis is unknown.

Anthurium angustilaminatum subsp. *cibuserpentis* differs from the typical subspecies principally by its abruptly ending leaf bases and by occurring in drier life zones at higher elevations (2,135–2,500 vs. 1,200–1,500 m) to the south, rather than north, of the equator. The new subspecies is smaller in overall size as well. See discussion under subsp. *angustilaminatum* for distinguishing both subspecies from *A. soukupii*.

The name is taken from "cibus" (Latin, meaning food) and "serpentis" (Latin, meaning snake) in reference to label data stating that the fruits of the plant are eaten by snakes.

ECUADOR. COTOPAXI: Km 80 on road Quevedo–Latacunga, 2,500 m, *Dodson 15397* (MO). EL ORO: Pampa de los Cedros, S of Cerro Chivo–Turco, 2,135–2,285 m, *Steyermark 53764* (US, NY).

Anthurium anorianum Croat, sp. nov. TYPE: Colombia. Antioquia: between Segovia and Cañaverales, vic. Río Bagre, 300 m, *Croat 56757* (holotype, MO 3116672-74). Figures 30, 33, 34

Planta epiphytica; internodia brevia, 2–4 cm diam.; cataphyllum lanceolatum, persistens semi-intactum; petiolus 4–9 cm longus, 9–17 mm diam., obtuse D-formatus, late sulcatus; lamina late oblanceolata, basi attenuata, 36–100 cm longa, (12)20–60 cm lata; spatha lanceolata, 7.5–9(35)cm longa, 1–1.3 cm lata; spadix purpureus, leniter contractus, 14–23 cm longus, 5–6 mm diam.

Epiphytic; stem short, 2–4 cm diam.; roots numerous, very dense, spreading, green to whitish, grayish brown on drying, moderately thick, 6–24 cm long, 3–5 mm diam. when fresh, drying 1–2 mm diam.; cataphylls subcoriaceous, lanceolate, 2–3 cm long, acute at apex, green, drying brown (B & K yellow-red 4/10), persisting semi-intact. *Leaves* spreading; petioles 4–9 cm long, 9–17 mm diam., obtusely D-shaped, broadly convex adaxially with the margins shortly and sharply raised, rounded to 3–5-ribbed abaxially, surface pale-speckled, reddish when young; geniculum thicker and slightly paler than petiole, 1–1.5 cm long, prominently and transversely fissured with age; blades subcoriaceous, broadly oblanceolate, acute to acuminate at apex (the acumen apiculate), attenuate at base, 36–100 cm long, (12)20–60 cm wide, broadest above the middle, the margins broadly and shallowly undulate; both surfaces glossy to semiglossy, medium green above, slightly paler below, drying brown to greenish brown; midrib flat to obtusely raised at base, becoming acutely raised toward the apex and slightly paler than surface above, obtusely raised below and slightly paler than surface, pale short-lineate; primary lateral veins 12–16 per side, departing midrib at 40–55° angle, straight or weakly ascending to the margin, sunken above, prominently convex and slightly paler than surface below; tertiary veins obscure above, prominent and slightly darker than surface below, drying raised on both surfaces; collective vein arising in upper third or fourth of the blade, sunken above, raised below, less prominent than primary lateral veins, raised above and below on drying, 4–20 mm from margin. *Inflorescences* probably erect-spreading; peduncle 69–105 cm long, 5–15 mm diam. when dried, 6–9 \times as long as petioles, green, drying brown to pinkish brown, terete; spathe spreading, slightly recurled, subcoriaceous, green, tinged with purple near the apex, lanceolate, 7.5–9(35) cm long, 1–1.3 cm wide, broadest near the base, acuminate at apex (the acumen inrolled), acute to almost decurrent at base; stipe 1.5–1.8 mm long in front; spadix purple to dark purple, long-tapered, 14–23 cm long, 5–6 mm diam. near base, 3–4 mm diam. near apex; flowers \pm rhombic, 3–3.3 mm long, 2.8–3 mm wide, the sides straight, 4–5 flowers visible in principal spiral, 7–8 in alternate spiral; tepals smooth, pale-punctate, lateral tepals 2.1–2.4 mm wide, the inner margins straight to broadly convex, the outer margins 2-sided; pistils green; stigma ellipsoid, 0.4–0.6 mm long; anthers 0.3–0.4 mm long, 0.4–0.5 mm wide; thecae oblong, not divaricate. *Infructescence* with the spathe persisting withered; spadix (12)18–41(100) cm

long, 1.4–1.6 cm diam., bearing berries in the basal portion only; berries dark red, probably acute at apex, drying 4.8–5.5 mm long, 3–3.2 mm diam.

Anthurium anorianum is endemic to Colombia in the Department of Antioquia at 300–750 m in tropical moist and tropical wet forest life zones. All collections to date have been made from the northern drainage of the Río Canoa.

This species is characterized by its short petioles, its subcoriaceous, broadly oblanceolate leaf blades which are attenuate at the base and acuminate at the apex and dry tan to brownish green, and by its slender, long-tapered, dark red to purplish-brown spadix. Especially distinctive is the usually pinkish coloration of the peduncle and primary lateral veins on drying.

Anthurium anorianum is similar in appearance to *A. vaupesianum*, also from Colombia, with which it shares a slender, long-tapered spadix. *Anthurium vaupesianum* differs in being smaller in overall size, in having obovate leaf blades, and in occurring in the Amazon basin.

The species is named after the Municipio Anorí, where most collections were made.

COLOMBIA. ANTIOQUIA: Río Bagre, Segovia–Cañaverales, 1 km NE of village of El Río, 300 m, 7°10'N, 74°38'W, *Croat 56757* (COL, K, MO, US); Segovia–Antioquia, village of El Río, 750 m, *Renteria et al. 1576* (HUA, MO); Mpo. Anorí, Buenos Aires, Corregimiento de Providencia, 500–700 m, *Soejarto 2922* (HUA), 2995 (COL, HUA); Río Anorí, Dos Bocas–Anorí, Buenos Aires, trail along Quebrada Sarmiento, 600 m, *Soejarto et al. 4355* (MO); Mpo. Cáceres, El Doce Baja Cauca, 7°27'N, 75°20'W, *Callejas 210* (HUA); Mpo. Valdivia, Corregimiento Puerto Valdivia, 5 km from Puerto Valdivia at Río Pescado, 410 m, 7°20'N, 75°20'W, *Callejas et al. 3447* (HUA, MO, NY).

Anthurium asplundii Croat, sp. nov. TYPE: Ecuador. Los Ríos: Río Blanco, across river from Villa Hermosa, 3 km S of Sto. Domingo–Esmeraldas hwy. at Km 24, 00°05'S, 79°15'W, *Croat 50688* (holotype, MO 3313109-10; isotypes, K, QCA, US). Figures 8, 10, 35–37, 43.

Planta epiphytica; internodia brevia, 3.5–5 cm diam.; cataphyllum lanceolatum; petiolus 7–15(25) cm longus, ca. 10 mm diam., adaxiale complanatus cum costa mediana, abaxiale rotundus; lamina coriacea-subcoriacea, late oblanceolata-elliptica, acuta apud apicem, acuta usque late rotundata ad vadosa cordata apud basim, (60)90–125 cm longa, 20–34 cm lata; nervis primariis lateralis (11)16–26 utroque. Pedunculus (20)33–60 cm longus; spatha oblongo-lanceolata, viridis, aliquando purpurea tincta, (9)12–30 cm longa, 1–1.7 cm lata; spadix purpureus extendens ad marrinonium, leniter contractus, 12–23 cm longus, 3–6 mm diametro. Baccae ignotae.

Usually epiphytic, sometimes terrestrial; stem to 60 cm long, 3.5–5 cm diam.; roots very dense, spreading-ascending, greenish to white, smooth, ca. 7–15 cm long, ca. 5 mm diam.; cataphylls subcoriaceous, lanceolate, straight or hooked, to 14 cm long, acuminate at apex, drying whitish to reddish brown, persisting as linear fibers. *Leaves* erect-spreading; petioles 7–15(25) cm long, ca. 10 mm diam., sharply D-shaped, somewhat flattened with a medial rib and sharply erect or acute margins adaxially, rounded and sometimes weakly 1–2-ribbed abaxially; geniculum moderately thicker and slightly paler than petiole, 1–3 cm long; blades coriaceous to subcoriaceous, oblanceolate to broadly oblanceolate-elliptic, acute to abruptly and shortly acuminate at apex, acute to broadly rounded or shallowly cordate at base, rarely narrowly acute, (60)90–125 cm long, 20–34 cm wide, broadest above the middle, the margins moderately undulate; upper surface semiglossy, medium green (B & K yellow-green 2/7.5), lower surface weakly glossy, moderately paler; midrib convexly raised to prominently 1-ribbed at base, becoming acutely raised toward the apex above, moderately paler than surface, convexly raised and conspicuously paler than surface below; primary lateral veins (11)16–26 per side, departing midrib at 40–50(60)° angle, straight-ascending to very near the margin, then arcuate, frequently congested at base, convexly raised above, less conspicuously so below, paler than surface; interprimary veins usually present toward the apex and base of the blade; tertiary veins rather obscure above, less so below, drying conspicuously raised on both surfaces; reticulate veins prominulous on drying; collective vein arising from near the apex or absent, rather obscure on both surfaces, to 8 mm from margin. *Inflorescences* erect; peduncle (20)33–60 cm long, 3–5 mm diam., 3–6× as long as petioles, terete; spathe reflexed, subcoriaceous, green, sometimes tinged with purple, oblong-lanceolate, (9)12–30 cm long, 1–1.7 cm wide, broadest near the base, acuminate at apex, obtuse at base; spadix dark to dull purple to maroon, sessile or stipitate to 4 cm, cylindroid, slightly tapered, somewhat curved, held at 30–50° angle from peduncle, 12–23 cm long, 5–6 mm diam. near base, 3–4 mm diam. near apex, broadest at the base; flowers rhombic, 1.2–2.5 mm long, 1.2–1.6 mm wide, the sides smoothly sigmoid; 6–9 flowers visible in principal spiral, 4–5(8) in alternate spiral; tepals muricate; lateral tepals 0.7–1.5 mm wide, the outer margins 2-sided, the inner margins nearly straight to rounded; pistils yellowish when dried; filaments (dried) exerted for 0.2–0.3 mm, 0.3–0.7 mm wide; anthers pinkish, 0.3–0.4