

(MO). CUZCO: Río Lucumayo, La Convención, 6 km from Incatamba, 2,350 m, *Peyton & Peyton 994* (MO); Prov. Urubamba, 2,100 m, *Nuñez 8928* (MO); Machupicchu, on slope 0.5 km N of confluence of Río Sayacmarca and Río Aobamba, 2,370 m, *Peyton & Peyton 1486* (MO); 2.5 km from Machupicchu, above 1st waterfall of Río Mandor, 2290 m, *Peyton & Peyton 455* (MO). JUNIN: Prov. Oxapampa, *Soukup 2324* (GH). PASCO: Cordillera Yanachaga, trail to summit of Cordillera via Río San Daniel, 2,400 m, 10°23'S, 75°27'W, *Smith et al. 7929* (MO).

Anthurium sparreorum Croat, sp. nov. TYPE:

Ecuador. Los Ríos: Centro Científico Río Palenque, W of laboratory & vic. of laboratory clearing, 210–250 m, *Croat 38666* (holotype, MO 2387864-65; isotypes, B, CAS, CM, K, M, NY, QCA, RSA, US). Figures 12, 19, 299, 300–302.

Planta plerumque epiphytica, subinde terrestris; cataphyllum late lanceolatum, persistens semi-intactum, demum in reticulum fibris tenuis; petiolus (11.5)15–38 cm longus, 6–15 cm diam., D- ad U-formatus complenatus ad sulcatus ad leviter sulcatus; lamina oblongo-elliptica ad anguste oblanceolata ad oblongo-lanceolata, 46–96 cm longa, (9.5)15–25 cm lata; pedunculus 11–34 cm longus, 5–10 mm diam.; spathe lanceolata vel ovata, (9)12–16 cm longa, 2.8–4.5 cm lata; stipes 5 mm longus; spadix atropurpureus ad violaceus, cylindricus, 5.8–20 cm longus, 8 mm diam.; coracae rubrae.

Usually epiphytic, occasionally terrestrial; stem short and thick, 5.5–15 cm long, 2.5–5 cm diam.; roots numerous, descending, bright green to greenish white, densely pubescent, elongate, 3–5 mm diam.; cataphylls subcoriaceous, broadly lanceolate, conspicuously 1-ribbed, 9–18 cm long, acute at apex with subapical apiculum, green, drying pale yellow-tan (B & K yellow-red 9/7.5), persisting semi-intact, eventually dilacerating into reticulum of fine fibers. *Leaves* erect to spreading; petioles (11.5)15–38 cm long, 6–15 mm diam., D- to U-shaped, flattened and sulcate to weakly convex with the margins bluntly to sharply raised adaxially, rounded to 1–3-ribbed abaxially, the surface densely pale-speckled; geniculum thicker and paler than petiole, 1–2.5 cm; blades coriaceous, oblong-elliptic to narrowly oblanceolate to oblong-lanceolate, acuminate to obtuse-rounded at apex (the acumen weakly apiculate), acute to obtuse or cuneate at base, 46–96 cm long, (9.5)15–22 cm wide, broadest at or near the middle, the margins slightly undulate; upper surface matte to semiglossy, medium to dark green, lower surface glossy to semiglossy, paler; both surfaces drying matte, green to pale yellow; midrib above prominently convex at base, becoming 1-ribbed toward the apex, paler than surface and somewhat speckled, below ob-

tusely raised at base, becoming prominently convex toward the apex and paler than surface, drying convex on both surfaces; primary lateral veins (15)20–30 per side, departing midrib at 40–70° angle, straight or arcuate, prominently convex and paler than surface above, less convex to flat and slightly darker than surface below; interprimary veins almost as conspicuous as primary lateral veins, raised above, flat to weakly raised below; tertiary veins obscure above and below, slightly raised when dried on both surfaces; collective vein arising from near the base, occasionally in the upper third of the blade, weakly sunken and less prominent than primary lateral veins above, raised and equally as prominent as primary lateral veins below, 4–15 mm from margin. *Inflorescences* erect to erect-spreading to spreading, shorter than leaves; peduncle 11–34 cm long, 5–10 mm diam., 0.5–2× as long as petiole, medium green, terete, sometimes 1-ribbed below the spathe; spathe reflexed-spreading, slightly twisted, subcoriaceous, green (B & K green 6/2.5), broadly to narrowly lanceolate or ovate, 9–16 cm long, 2.8–4.5 cm wide, broadest near the base, inserted at 60° angle on peduncle, acuminate at apex (the acumen inrolled), obtuse at base, the margins meeting at 110° angle; stipe 7–10 mm long in front, to 5 mm long in back; spadix dark purple to reddish violet (B & K purple 3/2.5), cylindroid to short-tapered at apex, ± erect, 5.8–20 cm long, ca. 8 mm diam. near base, 4–5 mm diam. near apex; flowers irregularly 4-lobed to rhombic, 1.8–2.6 mm long, 1.8–2.8 mm wide, the sides jaggedly sigmoid to straight; 9–13 flowers visible in principal spiral, 8–10 in alternate spiral; tepals matte, densely and minutely punctate and papillate; lateral tepals 1–1.2 mm wide, the inner margins straight; pistils scarcely emergent, glossy, papillate, with exposed portion ± rectangular, green; stigma linear, dark purple, 0.4–0.6 mm long; stamens emerging ± regularly and promptly from the base, laterals emerging throughout, or at least to midway, before alternates emerge, borne at the edge of tepals; filaments translucent to greenish, minutely purple-spotted, soon retracting, 0.9 mm wide; anthers pale orange with purple punctations, 0.5–0.7 mm long, 0.7–0.8 mm wide; thecae oblong-ovoid, scarcely divaricate; pollen bright orange fading to lavender or pinkish white, faintly yeasty-scented. *Inflorescence* with spathe persisting; spadix 20–22 cm long, ca. 2 cm diam.; berries red, exerted slightly beyond the tepals, subglobose, ca. 5 mm diam.; tepals becoming fleshy, white, enlarged, elongate and 3-sided in cross section with the outer angle of the apex raised and acute.

Anthurium sparreorum is nearly restricted to the Province of Los Ríos in Ecuador, at 210 to 250 m in a tropical moist forest life zone. An additional collection is known from Cotopaxi.

This species is characterized by its short stem, dense, bright green to greenish white roots, cataphylls drying pale yellow-tan and persist semi-intact, coriaceous leaf blades drying matte and green and reddish violet, cylindroid spadix. Most significant is the infructescence, with the berries exerted beyond the tepals. The latter become fleshy, whitish, enlarged and elongated, with the outer edge raised and acute.

Anthurium sparreorum bears some resemblance to both *A. campii* and *A. bucyanum*, which also have large, green-drying leaves with the collective vein arising from near the base. *Anthurium campii* differs in its green spadix, more coriaceous leaf blades, and shorter petioles. *Anthurium bucyanum* differs in its very thin leaves and prominently stipitate spadix. *Anthurium sparreorum* also has a shorter peduncle than either of these species.

The new species is named in honor of the late Benkt Sparre, formerly curator of the Regnellian Herbarium in Stockholm and co-editor of the Flora of Ecuador Project, and his wife, Bride. Together they made concentrated efforts to collect Araceae and discovered numerous novelties in the process.

ECUADOR. Cultivated by Tom Fennel, Homestead, Florida, *Croat 57195* (F, MO). COTOPAXI: Rio Guapara, 20 km NW of El Corazón, 250 m, *Sparre 17248* (S). LOS RÍOS: Rio Palenque Biological Station, Quevedo-Santo Domingo, 210–250 m, *Croat 38666* (B, CAS, CM, K, M, MO, NY, QCA, RSA, US), *Dodson & Tan 5389* (US, SEL), *Madison 3715* (SEL), *5513* (K), *6959* (MO, SEL, US).

Anthurium spathiphyllum N. E. Br., Gard. Chron. I. 652. 1877. TYPE: Origin unknown, Hort. Kew, 8 Nov. 1876 (holotype, K). Figures 303, 304.

Epiphytic; stem ca. 10 cm long, 2 cm diam.; roots moderately numerous, descending, greenish gray, prominently pubescent, gradually tapered and elongate, 3–5 mm diam.; cataphylls subcoriaceous, lanceolate, 6–8 cm long, cuspidate at apex with subapical apiculum ca. 15 mm long, green, drying pale tan (B & K yellow 9/7.5), persisting as linear fibers. *Leaves* spreading; petioles 6–26 cm long, 5–8 mm diam., triangular, sometimes 3–5-ribbed or flattened with the margins prominently raised adaxially, sharply 1–2-ribbed abaxially; geniculum conspicuously thicker and slightly paler than petiole, 0.7–1 cm long; blades subcoriaceous, linear

to narrowly oblong-elliptic or narrowly oblong-ob-lanceolate, more than 5 × longer than wide, acuminate at apex (the acumen apiculate), narrowly acute at base, 46–80 cm long, 5.5–12.5 cm wide, broadest at or above the middle, the margins broadly undulate; upper surface matte to glossy, dark to medium green, lower surface matte to weakly glossy, paler below; midrib flat at base, becoming angular-raised toward the apex above, prominently and sharply raised and slightly paler than surface below; primary lateral veins 20–30 per side, departing midrib at 40–45° angle, straight to the collective vein, deeply sunken above, sharply raised below; interprimary veins almost as conspicuous as primary lateral veins, sunken above, raised below; tertiary veins obscure above, raised and slightly darker than surface below; collective vein arising from near the base, sunken above, sharply raised below, equally as prominent as primary lateral veins, 3–10 mm from margin. *Inflorescences* spreading, shorter than leaves; peduncle 33–48 cm long, 4–15 mm diam., 2 × as long as petiole, green, prominently 2-winged-angled on one side, rounded to sharply acute on the other (or triangular or few-angled near base); spathe erect, hooded over the spadix, subcoriaceous, green, lanceolate to broadly lanceolate, 6.5–8 cm long, 1.7–3 cm wide, broadest near the base, about twice as long as spadix, inserted at 50° angle on peduncle, acuminate at apex (the acumen apiculate, 4 mm long), obtuse to rounded at base; spadix pale yellow to creamy white, cylindroid to clavate, short and stubby, erect, (1.7)2–4 cm long, 6–11 mm diam.; flowers 1.8–2.2 mm long, 1–1.2 mm wide, the sides smoothly to jaggedly sigmoid; 7–12 flowers visible in principal spiral, 11–15 in alternate spiral; tepals matte, densely and minutely papillate; lateral tepals 0.7–0.8 mm wide, the inner margins straight to convex, the outer margins irregularly 2–4-sided; pistils somewhat emergent, matte, pale yellow; stigma linear, 0.1–0.2 mm long; stamens emerging in a scattered pattern throughout, lateral stamens almost to apex before alternates emerge, inclined over and obscuring pistil; filaments fleshy; thecae oblong, not divaricate; pollen pale yellow fading to creamy white. Berries translucent white.

Anthurium spathiphyllum is known from Nicaragua to Panama mostly from sea level to 380 m (rarely to as high as 1,350 m) on the Atlantic slope in wetter parts of tropical wet forest and in premontane wet and tropical wet forest life zones.

Anthurium spathiphyllum can be recognized by its epiphytic habit, chartaceous leaves, usually triangular, sometimes three- to five-ribbed petiole,