

Viejo, upper part, Monte Lirio, *Seibert 172* (K, NY). VERAGUAS: Santa Fe Region, Cerro Arizona, 1,330 m, *Hammel & Kress 8570* (MO); Cerro Tute, above Escuela Agrícola Alto Piedra, 800–1,450 m, *Croat 48964* (F, MO, PMA, US), *Folsom & Mauseth 8344* (MO), *Knapp & Dressler 5407* (MO), *Knapp & Kress 4353* (MO), *Sytma & Andersson 4587* (MO).

Anthurium pseudospectabile Croat, Monogr.

Syst. Bot. Missouri Bot. Gard. 14: 165. 1986.

TYPE: Panama. Chiriquí: along road between Gaulaca and Fortuna Dam site, 8.3 mi. NW of Los Planes de Hornito, 8°44'N, 82°16'W, 1,260 m, *Croat 49942* (holotype, MO 2769003-005; isotypes, B, K, NY, PMA, SEL, W). Figures 252–254.

Usually epiphytic; stem \pm slender, less than 30 cm long, 1.5–5 cm diam.; leaf scars 2–4 cm wide; roots few, spreading to descending, pale grayish to pale tan, occasionally greenish, somewhat pubescent, thick and elongate, tapered, 3–6 mm diam.; cataphylls coriaceous to subcoriaceous, lanceolate, stiffly erect, 19–37 cm long, acute to obtuse or \pm rounded at apex, with subapical apiculum to ca. 4 mm long, light green, drying orange brown to tan, persisting intact, eventually as a reticulum of fibers. *Leaves* spreading to pendent; petioles 14–60 cm long, 7–12 mm diam., subterete to bluntly 4-sided, flattened to weakly and broadly sulcate adaxially, rounded abaxially, the surface pale-speckled; geniculum thicker and slightly paler than petiole, 1–3 cm long; blades subcoriaceous to coriaceous, oblong to oblong-elliptic, gradually acuminate at apex (the acumen weakly apiculate), decurrent to obtuse to truncate or subcordate at base, 45–150 cm long, 12–45 cm wide, broadest at or just below the middle, the margins weakly undulate; upper surface matte to semiglossy, dark green, lower surface semiglossy to glossy, slightly paler; midrib obtusely angular, becoming flat toward the apex above, prominently convex to round-raised, conspicuously paler than surface below; primary lateral veins up to 40 per side, departing midrib at 35–75° angle, straight to weakly arcuate to the collective vein, raised above in grooves, prominently raised below; interprimary veins almost as conspicuous as primary lateral veins, flat to weakly sunken above, raised below; tertiary veins obscure above, slightly darker than surface and weakly raised below; collective vein arising from near the base, sunken above, prominently raised below, equally as prominent as primary lateral veins, 2–5 mm from margin. *Inflorescences* spreading-pendent; peduncle 13–36 cm long, 5–9 mm diam., equaling up to 1.5 \times as long as petiole, terete to

weakly quadrangular with blunt margins; spathe usually twisted or recurled, moderately coriaceous, green below, heavily tinged with purple above, lanceolate, 10–32 cm long, 2.5–7 cm wide, broadest near base, inserted at 45–60° angle on peduncle, gradually acuminate at apex, rounded to cordate at base; spadix yellowish green to green, sessile, narrowly tapered, 15–38 cm long, 8–12 mm diam. near base, 3–5 mm diam. near apex; flowers rhombic, ca. 3.5 mm long, 2.7–3 mm wide, the sides straight to weakly sigmoid; 4–7 flowers visible in principal spiral, 6–9 in alternate spiral; tepals matte, minutely papillate; lateral tepals 1.8–2 mm wide, the inner margins convex, turned up against the pistil; pistils early emergent, pale green; stigma linear, 0.6 mm long; stamens emerging \pm rapidly from the base, arranged in a loose cluster around pistil; filaments ca. 0.3 mm long, ca. 0.5 mm wide; anthers white; thecae oblong, scarcely divaricate; pollen white. *Inflorescence* pendent; berries orange, oblong-ellipsoid, 10–12 mm long, 5–6 mm diam.

Anthurium pseudospectabile is endemic to Panama at (590)1,000 to 1,600 m in a region that is probably premontane wet or premontane rain forest.

This species is distinguished by its pendent habit and its large, almost strap-shaped, many-veined blades with undulate margins. Also characteristic are the short-pedunculate inflorescence with a spreading, usually twisted and contorted green to purple spathe, the weakly protruding tepals, exserted stamens, early-emergent pistils, and orange berries.

Anthurium pseudospectabile is closely related to *A. spectabile*, from Costa Rica, but the latter has proportionately broader leaf blades which generally lack the undulate margins, and a petiole that is markedly quadrangular in cross section.

PANAMA. BOCAS DEL TORO: Cerro Colorado, trail along quebrada 7.5 mi. from Chamí, 1,220–1,250 m, 8°35'N, 81°45'W, *McPherson 8853* (MO); Fortuna Dam area, *Correa et al. 2664* (PMA); Oleoducto Road, Continental Divide, 1,000 m, *Churchill et al. 4647* (MO), *4648* (MO, PMA); vic. Fortuna Dam, Continental Divide, trail west of highway, 1,250 m, *McPherson 11626* (MO); Fortuna–Chiriquí Grande, 8.5 mi. N of bridge over Fortuna Lake, 4.3 km N of Continental Divide, 590 m, *Croat & Grayum 60203* (CM, MO); road branching N off main Fortuna–Chiriquí Grande Highway, Continental Divide, 1,200 m, *Croat & Grayum 60339* (CM, MO); 1.1–1.2 km N of Continental Divide, *Croat 60363* (MO, PMA, RSA), *60446* (MO). CHIRIQUÍ: Fortuna Dam area, *Hammel 2080* (MO, PMA), *Mendoza 336* (MO, PMA); 1,100–1,200 m, 8°45'N, 82°18'W, *Croat 66592* (MO), *Croat 48738* (MO); 1,200–1,600 m, *Croat 48737* (MO), *Folsom et al. 5516* (MO), *8220* (MO, PMA), *5607* (B, MO,

VEN); 5.9–8.6 mi. beyond Los Planes de Hornito, 1,260–1,400 m, *Antonio 5022* (MO), *Croat 48732* (MO), *48777* (MO, US), *49851* (CM, MO), *49930* (B, K, MO, NY, SEL, W), *49942* (B, K, MO, NY, PMA, SEL), *Knapp 4962* (MO), *Knapp & Vodicka 5496* (B, MO); N of Gualaca, 22.7 mi. beyond bridge over Río Estí, 1,400 m, *Antonio 2773* (MO, PMA), *Croat 48674* (B, CAS, CM, COL, DUKE, F, K, MEXU, MO, NY, PMA, RSA, UC, US, VEN); Fortuna Lake–Chiriquí Grande, Fortuna Dam, 4.5–5 km N of dam over Fortuna Lake, 1,100–1,135, *Croat & Grayum 60072* (K, MO).

Anthurium purpureospathum Croat, Selbyana 5(3–4): 328. 1981. TYPE: Panama. Bocas del Toro: Changuinola–Almirante Railroad, Station Milla 7.5, 0–100 m, *Croat 38094* (holotype, MO 2388335; isotypes, B, BM, C, CAS, CM, CR, DUKE, F, GH, IBE, K, LE, M, MISSA, NY, P, PMA, QCA, RSA, S, SEL, US, VEN, W). Figures 263, 264.

Epiphytic, or terrestrial at higher elevations; stem ca. 2 cm diam.; roots dense, descending, brown to greenish, smooth to scurfy, moderately thick, somewhat elongate, 3–5 mm diam.; cataphylls coriaceous to subcoriaceous, narrowly lanceolate, 7–14(25) cm long, obtuse to acuminate at apex, yellowish green, weakly tinged with red, drying dark tan (B & K yellow 5/2.5), persisting semi-intact, eventually as a reticulum of fibers. *Leaves* erect to spreading; petioles 12–37(66) cm long, 4–10 mm diam., quadrangular to D-shaped, flattened to broadly and sharply sulcate adaxially, the margins raised, rounded to 1–3-ribbed abaxially, the surface pale-speckled; geniculum thicker and paler than petiole, 1–2.5 cm long; blades subcoriaceous to moderately coriaceous, oblong-oblancheolate to oblong-elliptic, shortly acuminate at apex (the acumen apiculate), obtuse to acute or attenuate at base, 27–74(94) cm long, 7.5–40 cm wide, broadest at or above the middle, the margins broadly undulate; upper surface matte to semi-glossy, dark green, lower surface glossy to weakly glossy, paler; midrib above obtusely angular-raised to convex at base, becoming narrowly raised toward the apex, below prominently higher than broad and 1-ribbed at base, gradually becoming convexly raised toward the apex, paler than surface above and below; primary lateral veins (6) 11–16 per side, departing midrib at 45–70° angle, arcuate-ascending, loop-connecting in the upper half of the blade, convexly raised in grooves, paler than surface above, prominently and convexly raised and somewhat darker than surface below; interprimary veins sometimes present, almost as conspicuous as primary lateral veins; tertiary veins weakly visible

above, flat to weakly raised and darker than surface below; collective vein arising from about the middle or the base of the blade, weakly sunken above, raised and darker than surface below, less prominent than primary lateral veins, 4–8(13) mm from margin. *Inflorescences* erect to spreading; peduncle 3–38(50) cm long, 6–20 mm diam., rarely shorter than, mostly equaling or slightly longer than petiole, purplish or green, subterete; spathe subcoriaceous, purple to purplish with green mottling especially near the base at the center, oblong to narrowly ovate, 4.5–17.5 cm long, 1.5–4 cm wide, broadest just above the base, acute at apex (the acumen cuspidate), obtuse to rounded at base; spadix dark violet-purple (B & K purple 2/7.5), cylindrical to slightly tapered, (4)5–22 cm long, 3–10 mm diam. near base, 2–5 mm diam. near apex; flowers rhombic to weakly 4-lobed, 2–2.3 mm long, 2.5–3 mm wide, the sides smoothly to jaggedly sigmoid; ca. 14 flowers visible in principal spiral, ca. 7 in alternate spiral; tepals matte with small, scattered droplets; lateral tepals 1.4–1.6 mm wide, the inner margins flat against pistil; pistils slightly raised, purple becoming green and finally orange; stigma linear, ca. 0.5 mm long, droplets persisting for 4–10 days, drying with exerted papillae 4–6 days before stamens emerge; stamens emerging slowly from the base, held tightly in a circle around pistil; filaments transparent, flattened, soon retracting, holding anthers at level of tepals, 0.7–1 mm long, ca. 0.7 mm wide; anthers pale orange; thecae ellipsoid, usually not divaricate; pollen golden yellow (B & K yellow 8/2.5) fading to creamy white. *Inflorescence* erect to spreading; spathe usually persisting; spadix 9–19 cm long, to 4 cm diam.; berries orange, red-orange to red (B & K red 6/7.5), narrowly ovoid, acute with minute, mammilliform style at apex, to 10 mm long; mesocarp pasty, transparent; seeds 1 or 2 per berry, pale greenish yellow, ca. 4 mm long, 2 mm diam.

This species is known only from Panama and occurs principally from near sea level to 1,500 m in Bocas del Toro and Chiriquí provinces in wetter parts of tropical moist and premontane wet forest. A collection from San Blas (*de Nevers 4207*) is out of range, but does not differ significantly from other collections from western Panama.

Anthurium purpureospathum is distinguished by its rosulate habit, large, thin, semi-intact cataphylls, more or less oblanceolate leaf blades, almost quadrangular petioles which are often three-ribbed abaxially, its generally short peduncles, usually violet-purple, reflexed spathe, usually short violet purple spadix, early-emergent pistils, and by