

flexed, sometimes twisted, occasionally with prominently revolute margins, subcoriaceous, matte above and below, green to green heavily tinged with red or purple-violet (especially on adaxial surface), oblong-lanceolate to oblong-triangular, (6)10–32(55) cm long, (1)2–3.5(4.0) cm wide, broadest near the base, inserted at 20–35° angle on peduncle, long-acuminate to abruptly short-acuminate at apex (the acumen often inrolled, 15–20 mm long), acute or decurrent to 6.5 cm at base; stipe rarely to 14 mm; spadix glaucous, bluish green, sometimes weakly tinged with purple or yellow, very long-tapered, ± erect to pendent and curved upward, (7.5)14–33 cm long, 5–12 mm diam. near base, 3–4 mm diam. near apex, broadest at the base; flowers rhombic, (1.6)1.8–3 mm long, (1)1.4–2.6 mm wide, the sides straight to jaggedly sigmoid; (5)6–9 flowers visible in principal spiral, 8–13 in alternate spiral; tepals glaucous, matte, minutely papillate, with a few scattered droplets, lateral tepals 1–1.6 mm wide, the inner margins broadly convex to straight, the outer margins ± straight or bluntly angled to obtusely 3-sided; pistils emergent, papillate, matte, squarish, pale green; stigma ellipsoid becoming circular, 0.4–0.6 mm long; stamens emerging rapidly in a regular and complete sequence over a 5–6-day period, the laterals preceding the alternates by (3)10–14 spirals, the 3rd stamen preceding the 4th by 1–3 spirals, inclined over and obscuring pistil; anthers pale yellow, 0.2–0.8 (dried) to 1 (fresh) mm long, 0.4–0.9 mm wide when fresh; thecae oblong, not divaricate; pollen pale yellow fading to cream, sweetly scented like rotting fruit. *Infructescence* with spathe persisting; spadix 12–53 cm long, 1.5–3.5 cm diam.; berries reddish purple, obovoid to oblong, 7–12 mm long, 4–5.5 mm diam.; pericarp thin, with raphide cells; mesocarp gelatinous; seeds 1–2 per berry, oblong, 4–5 mm long, 1.6–2.2 mm diam., 1–1.2 mm thick, with a mucilaginous appendage.

Anthurium glaucospadix is endemic to Colombia in the departments of Risaralda, Santander, Santander Sur, Cundinamarca, Valle and Huila, from 500 to 2,100 m. The distribution is unusual in that it included both slopes of the Cordillera Occidental (but only an unusually dry region of the Pacific slope). *Anthurium glaucospadix* is terrestrial or epiphytic on dry, rocky, steep slopes, exposed areas and thickets or as an understorey herb in disturbed forest in premontane moist and premontane wet forest life zones.

This species is recognized by its long-tapered, bluish green, glaucous spadix (hence the name), its

distinctive, usually emarginate or apically rounded blade, and by its reddish purple fruits.

This species is most closely related to *A. cavallense*, also from Colombia, which differs by having a nonglaucous spadix, hooked cataphylls, more acute blade apices and more broadly spreading primary lateral veins.

Worthy of mention is *Triana 683/1702*, a mixed collection, two sheets of which are mounted with the leaves of a dicotyledonous plant, apparently of the Lecythidaceae. Although this number was recorded as being from Cundimarca, *Triana 682* is from Pasto.

COLOMBIA. CUNDINAMARCA: Fusagasuga–Girardot, km 63, 7 km S of Fusagasuga, 1,520 m, 4°25'N, 74°25'W, *Croat 52000* (AAU, B, CAS, CM, COL, G, JAUM, K, M, MEXU, MO, NY, QCA, SAR, US), 55428 (K, MO, NY, US); Fusagasuga–Melgar, 4 km SW of Fusagasuga, 1,525 m, *Barclay et al. 3645* (US); Mosquera–La Mesa, km 32, Laguna Pedro Palo above Finca San José, 2,000–2,250 m, *Gentry & Fallen 17159* (COL, MO); Tena–La Mesa, 6 km NE of La Mesa, 1,300 m, 4°39'N, 74°26'W, *Croat 55257* (B, CAS, COL, CM, DUKE, ENCB, F, GH, K, MBM, MO, NY, OOM, QCA, RSA, SAR, SEL, TEX, VBD, US, Z); Anolaima, 1,800 m, *Daniel & Augusto 4567* (COL); 6 km from La Mesa, 1,470 m, *Foreiro & Garzón 307* (COL); Quebrada Blanca, Choachi–La Calera, 1,900 m, *Acosta-Arteaga 25* (COL, MO); Quebrada Cabaña, Tocaima–Puzenza, 380–600 m, *Killip et al. 38371* (COL, US); Rio Bogotá, above Apulo (Rafael Reyes), 2,100 m, *Plowman & Davis 3760* (COL); Santandercito, bridge over river, 1,600 m, *Silva Mojica 404* (COL); Anapoima, WSW of Bogota, 2,000 m, *Triana 683/1702* (BM, COL, P, US); Mpo. Tena, Lago Pedro Palo, 3 km N of Tena, 2,080 m, *Fernández & Mora 1445* (COL). HUILA: Cordillera Oriental, E. of Neiva, 1,300–1,800 m, *Rusby & Pennell 998* (NY); 0.5 km above Vegalarge, 1,300 m, *Croat 55274* (MO); San Agustín, 1,500 m, *Bogner 846* (cultivated) (K). META: Cordillera Oriental, *Dryander 2154* (US). PASTO: 2,200 m, *Triana 682* (US). RISARALDA: along road between Pueblo Rico and Istmina, 14 km NW of Pueblo Rico, 5°03'N, 76°00'W, 780 m, *Croat 70848* (MO). SANTANDER: 0.5 km S of Berveo, 15 km NW of Velez, 2,000–2,500 m, *Fassett 25107* (MO, US). SANTANDER SUR: Mpo. Florida, cultivated at Jardín Botánico “Eloy Venezuela,” 880 m, 7°05'N, 73°07'W, *Croat 56546* (MO). VALLE: Buga–Buenaventura: near Lago Calima, 1,430 m, 3°54'N, 76°33'W, *Croat 56747* (COL, MO); Km 44, Vereda El Trapiche, 1,140 m, 3°48'N, 76°37'W, *Croat 56753* (CM, COL, JAUM, MO, QCA, U, US); Cali–Buenaventura, NW of Loboguerrero at km 58.8, W of Cali, 575 m, 3°42'N, 76°39'W, *Croat 57518A* (MO), *57519* (COL, F, JAUM, MO, P, QCA, U, WIS); Cisneros, 300–500 m, *Killip 35595* (COL, F, US); Dagua, 700–900 m, *Killip 5441* (GH, NY, US), *5442* (NY); 1,200 m, *Heredia & Alvaré 369* (MO); Mun. Restrepo, along Rio Grande between Pavas and Restrepo, 1,000 m, *Ramos & Reyna 908* (CUVC, F, MO).

Anthurium guanchezii Bunting, *Phytologia* 60(5): 294–295, fig. 3. 1986. TYPE: Vene-

zuela, Amazonas: Dpt. Atures, Caño Cabeza de Monteco, affluent of Río Autana, 110–120 m, 4°52'N, 67°27'W, *Guanchez & Melgueiro 3451* (holotype, VEN; isotype, VZM).

Terrestrial; internodes short, drying 2.5 cm diam.; cataphylls persisting semi-intact; petioles 30 cm long, sheathing 1.7 cm at the base, cross-sectional shape not known; geniculum 0.8–1 cm long, remote from the blade base by 4.5 cm; blades pergamentaceous to subcoriaceous, broadly ovate, gradually acuminate at apex (the acumen 25 mm long), weakly cordate at base, 33.5 cm long, 22.5 cm wide; sinus 1.8 cm deep; the lower surface brown-punctate; the lower naked portion of midrib subterete and narrowly sulcate; posterior rib naked 1.5–2 cm; primary lateral veins ca. 8 per side, slender, departing midrib at ca. 40° angle, the lower 2–3 pairs at broader angle, arcuate-ascending to the margin; collective vein lacking or arising only in the upper fourth of the blade. *Inflorescences* slightly longer than leaves; peduncle 58 cm long; spathe reflexed-recurved, narrowly ovate, 9 cm long, 2.5 cm wide, acuminate at apex, decurrent 1.2 cm at base; stipe 1.7 cm long in front, 4 mm long in back; spadix weakly tapered, 8.2 cm long (apex missing), 7 mm diam. at anthesis, to 1.1 cm diam. in pre-fruiting condition. *Infertescence* not known.

Anthurium guanchezii is endemic to Venezuela and known only from the type locality at 110 to 120 m in a region which lies near the boundary between the tropical moist forest and premontane wet forest life zones.

The description given here is based only on the original type description and the species is therefore imperfectly known. Still, there is little doubt that *A. guanchezii* is a member of sect. *Pachyneurium* and is probably most closely related to *A. iramirezae*, which is also glandular-punctate, but differs in lacking a remote geniculum and in having a cartilaginous rather than a subcoriaceous blade with basal veins not naked at the sinus. In addition, *A. iramirezae* has a narrower spathe, a sessile spadix and occurs at 1,350 m on granite outcrops.

Anthurium guanchezii is also related to *A. bonplandii* because of its glandular-punctations. It is easily distinguished from any of the varieties of that species by its ovate blades with a remote geniculum. While some specimens of *A. bonplandii* subsp. *bonplandii* have a remote geniculum, none have such ovate blades.

VENEZUELA: AMAZONAS: Dept. Atures, Caño Cabeza de Manteco, affluent of Río Autana, "Manteco" rapids, 110–

120 m, 4°52'N, 67°27'W, *Guanchez & Melgueiro 3451* (VEN, VZM).

Anthurium halmoorei Croat, Ann. Missouri Bot.

Gard. 70(2): 301. 1983. TYPE: Mexico. Nayarit: along Hwy. 28 between Tepic and Jaliscoacán at Km 15.5, ca. 1,000 m, *Croat 45337* (holotype, MO 2690192-193; isotypes, CAS, K, MEXU, MICH, SEL). Figures 146, 147, 152.

Epiphytic or epilithic; stem 1.5–5 cm diam.; roots dense, spreading to descending, tan to greenish, smooth, short, and stubby, 7–10 mm diam.; cataphylls coriaceous, lanceolate, (5)17–23 cm long, acute and apiculate at apex, green, sometimes reddish, drying tan to brown, persisting with apex remaining intact, dilacerating at base. *Leaves* erect to spreading; petioles 15–26 cm long, 7–18 mm diam., D-shaped to thicker than broad, broadly sulcate adaxially with the margins sharply raised to obtuse, sharply 1-ribbed to obscurely 3-ribbed or rounded abaxially, the surface pale-speckled; geniculum paler and thicker than petiole, 1–2.5 cm long; blades coriaceous, oblanceolate to oblanceolate-elliptic, short-acuminate at apex (the acumen shortly apiculate), acute to attenuate at base, 32–108 cm long, 10–43 cm wide, broadest above the middle, the margins prominently undulate; upper surface semiglossy, medium green, lower surface semiglossy to matte, much paler; midrib flat to obtusely angular at base, becoming narrowly acute and then flat toward the apex above, prominently higher than broad and 1-ribbed at base, becoming convexly raised toward the apex; primary lateral veins 5–14 per side, departing midrib at 40–55° angle, straight then arcuate-ascending to the margin, convexly raised, much paler than surface above, prominently raised and paler than surface below; interprimary veins less conspicuously raised above, visible and flat below; tertiary veins obscure above, darker than surface below; collective vein arising from near the apex or absent, flat to weakly sunken above, weakly raised and darker than surface below, 6–11 mm from margin. *Inflorescences* spreading, shorter than leaves; peduncle 32–43 cm long, 9–10 mm diam., 2–2.5 × as long as petiole, subterete, obscurely angled; spathe spreading, subcoriaceous, green, sometimes tinged with purple (B & K yellow-green 6/10), ovate to broadly ovate, 13–16 cm long, 6.2–9.7 cm wide, broadest near the base, inserted at 70° angle on peduncle, acuminate at apex, acute at base; spadix green, purple or green heavily tinged with purple (B & K red-purple 2/5), cylindrical,