

veins weakly visible, flat to weakly raised above and below; collective vein absent. *Inflorescences* erect; peduncle 36 cm long, ca. 2 mm diam., 4.5 × as long as petiole, drying the same color as midrib, terete; spathe spreading-ascending, subcoriaceous, purple, drying brown, lanceolate, 8 cm long, ca. 1.3 cm wide, acuminate at apex (the acumen in-rolled, 13 mm long), narrowly acute at base; spadix drying brownish, oblong-cylindroid, slightly curved, 12 cm long, ca. 4 mm diam. midway; flowers square to rhombic, ca. 4–7 flowers visible in principal spiral tepals ± smooth; lateral tepals 4 mm wide, the inner margins broadly convex, the outer margins 2-sided; anthers 0.4–0.5 mm long, 0.6 mm wide; thecae slightly divaricate. *Infructescence* not seen.

Anthurium bushii is known only from the type collection from the Province of Morona-Santiago in Ecuador, where it was collected in the Serranía de Cutucú at 1,300 m in a premontane moist forest life zone.

This species is characterized by its very long, oblong-oblancoate blades which dry grayish green and are very long-tapered in the lower third, and by its purplish spathe and slender, cylindroid spadix which dries brown.

This species is probably most closely related to *A. harlingianum*, which differs in having proportionately broader leaf blades, which are mostly truncate to shallowly cordate at the base and usually dry brown.

The species is named in honor of E. O. (Mike) Bush III, former superintendent of Selby Gardens, who accompanied Michael Madison when the type collection was made. He is now at Bermuda Botanical Gardens.

ECUADOR. MORONA-SANTIAGO: Cordillera de Cutucú, W slopes, Logroño-Yaupí, 1,300 m, 2°46'S, 78°6'W. *Madison et al.* 3285 (SEL).

Anthurium campii Croat, sp. nov. TYPE: Ecuador. Chimborazo: along road between Alausi and El Triunfo, 6.9 km W of Huigra, 2°19'S, 79°0'W, 1,350 m, *Croat 61562* (holotype, MO 3420768-71; isotypes, B, CM, K, NY, QCA, RSA, US). Figures 74–76, 79, 80.

Planta terrestris aut epiphytica; cataphyllum 22–40 cm longum, lanceolatum, persistens intactum vel semi-intactum; petiolus (3)17–23 cm longus, (6)10–15 mm diam., D-formatus, trapeziformis vel C-formatus; lamina late oblanceolata vel oblonga-elliptica, (46)90–145 cm longa, 23–37 cm lata; nervis primariis lateralis 14–40 utroque; nervis collectivis de basi exorientibus. Pedunculus (36)50–85 cm longus; spathe oblonga-lanceolata,

(7)13–20 cm longa, 1.3–2 cm lata; spadix 12–23 cm longa, 5–9 mm diam., viridis. Baccae purpureae.

Terrestrial or epiphytic; stem short, 3.5–5.5 cm diam.; roots dense, upper ones ascending, lower ones descending, whitish to grayish, woolly-pubescent, moderately tapered, ca. 3–12 cm long, 4–5 mm diam.; cataphylls thickly coriaceous, lanceolate, 22–40 cm long, obtuse at apex, medium green, drying medium brown, persisting intact or semi-intact, eventually as coarse linear fibers.

Leaves erect-spreading; petioles (3)17–23 cm long, (6)10–15 mm diam., thicker than broad to D-shaped to trapezoidal or C-shaped, sharply to broadly V-sulcate adaxially with the margins raised, sharply 2–9-ribbed abaxially; geniculum conspicuously thicker than petiole, 1–2.5 cm long; sheath 9–13 cm long; blades coriaceous to subcoriaceous, broadly oblanceolate to oblong-elliptic, rounded to obtuse or sometimes acute at apex, acute at base, (46)90–145 cm long, 23–37 cm wide, broadest above the middle, the margins slightly undulate; upper surface matte to semiglossy, dark green, lower surface semiglossy to glossy, paler; midrib broadly convex at base, becoming flat-raised toward the middle and narrowly convex at the apex above, trapezoidal and 3-ribbed at base, becoming acutely angled and then convex toward the apex below; primary lateral veins 14–40 per side, departing midrib at 50–70° angle, straight or slightly arcuate to the collective vein, convexly raised above, less conspicuously so below; interprimary veins sometimes present, inconspicuous to almost as conspicuous as primary lateral veins; tertiary veins darker than surface and flat below, moderately indistinct; reticulate veins prominulous above and below (or not visible) on drying; collective vein arising from or near the base, equally as prominent as primary lateral veins, 1–13 mm from margin. *Inflorescences* erect; peduncle (36)50–85 cm long, (3)5–6 mm diam., 2.5–3(6) × as long as petiole, terete to bluntly or sharply multiribbed; spathe spreading, with the margins curled under, subcoriaceous, medium green, becoming yellowish, oblong-lanceolate, (7)13–20 cm long, 1.3–2 cm wide, broadest near the base, inserted at 30° angle on peduncle, shortly acuminate at apex, acute at base; spadix medium green, sessile or shortly stipitate, cylindroid to long-tapered, erect to curved, (8)12–23 cm long, 5–9 mm diam. near base, 3–4 mm diam. near apex; flowers rhombic, 1.7–2.6 mm long, 1.1–1.9 mm wide, the sides straight to smoothly sigmoid; 6–13 flowers visible in principal spiral, 5–7 in alternate spiral; tepals matte; lateral tepals 1–1.3 mm wide, the inner margins rounded, erose, the outer mar-

gins 2-sided; pistils weakly emergent; stigma ellipsoid to broadly ellipsoid; anthers tan, 0.5–0.6 mm long, 0.6–0.7 mm wide; thecae oblong, not divaricate; pollen yellow fading to white. *Infructescence* (immature): spreading(?); spathe reflexed and persistent, green; spadix 22–30 cm long, 1.4 cm diam.; berries light purple; pericarp with raphide cells; seeds unknown.

Anthurium campii is endemic to Ecuador in southern Bolívar and southwestern Chimborazo provinces at 1,200 to 2,150 m as an epiphyte or terrestrially in either lower montane dry or pre-montane dry forest life zones (life zone uncertain).

This species is distinguished by its very large, broadly oblanceolate to oblong-elliptic, coriaceous leaf blades which dry green or yellowish green, its very long, thick cataphylls, and by the collective vein which arises from the lowermost portion of the blade. Its closest ally, and the only species with which it might be confused, is *A. sparreorum*, which occurs at 210–250 m in Cotopaxi and Los Ríos provinces and has shorter cataphylls (9–18 cm vs. 22–40 cm long), a much shorter, stubby, reddish violet spadix on a short peduncle, and a perianth becoming fleshy in fruit and extending beyond the red berry. *Anthurium campii* is also similar in overall appearance to *A. bucayanum*, which has very thin leaves and a long-stipitate, dark violet-purple spadix.

Anthurium campii is named in honor of Wendell H. Camp, who collected during 1944 and 1945 in Ecuador under the auspices of the New York Botanical Garden, and who was one of the first collectors of the species.

Occasional herbarium specimens of a different species have been seen bearing the name "*campii*," as proposed by A. D. Hawkes but never published. These specimens are attributable to *A. andicola* Lieb., an unrelated species of sect. *Belolonchium* from Mexico, and are not to be confused with this new Ecuadorian species.

ECUADOR, BOLÍVAR: Valle de Tablas, 1,200 m, *Acosta Solís* 6075 (MO, F). CHIMBORAZO: Alausí—El Triunfo, 6.9 km W of Huigra, 1,350 m, 2°19'S, 79°0'W, *Croat* 61562 (B. CM, K, MO, NY, QCA, RSA, US); Río Chanchán, 5 km N of Huigra, 1,650–2,150 m, *Camp* 3428 (MO), *E-3360*, *E-3460* (NY).

Anthurium carchiense Croat, sp. nov. TYPE: Ecuador. Carchí: vic. Maldonado, 1,500–1,900 m, *Madison* 3998 (holotype SEL-027098; isotype, MO-2925092). Figures 77, 78, 81.

Planta terrestris aut epiphytica; internodia 6–8 cm longa, 0.8–2 cm diam.; cataphyllum anguste lanceolatum, persistens fibris subtilibus et reticulatis; petiolus teres vel D-formatus 7–17(30.5) cm longus, 4–5 mm diam.; lamina oblonga aut oblanceolata, 30–57 cm longa, 2.7–6 cm diam.; nervis primariis lateralis 13–16 utroque; nervis collectivis de basi exorientibus. Pedunculus 17.5–39 cm longus; spatha 3–6.5 cm longa, 6–10 mm lata; spadix cylindricus, purpureus ad porphyreus, 2.3–6.3 cm longus, 3–5 mm diam.; stamina exserta. Baccae aurantiaco-rubrae, 6–7 mm longae, 3.2–3.4 mm diam.

Terrestrial or epiphytic; stem ca. 6–8 cm long, 0.8–2 cm diam.; leaf scars obscured by cataphyll fibers, 5–6 mm high, 1–1.3 cm wide; roots moderately numerous, generally descending, pale grayish white, drying tan, smooth, short to elongate, blunt at apex, to 14 cm long, 1–4 mm diam.; cataphylls subcoriaceous, narrowly lanceolate, unribbed, 5–9 cm long, acuminate at apex, green, drying tan to dark brown, persisting as a reticulum of fibers. *Leaves* spreading; petioles 7–17(30.5) cm long (mostly less than 16 cm long), 4–5 mm diam., terete to D-shaped, rounded to bluntly and narrowly sulcate (rarely broadly and sharply sulcate) adaxially, rounded abaxially, the surface somewhat pale-speckled; geniculum slightly paler and thicker than petiole, 0.7–2 cm long; blades subcoriaceous to coriaceous, oblong to oblong-elliptic, sometimes somewhat lanceolate or oblanceolate, long-acuminate (rarely acute) at apex, narrowly acute at base, 30–57 cm long, 2.7–6 cm wide, broadest at or slightly above the middle, the margins flat; upper surface glossy to semiglossy, dark green above, matte when dried, lower surface glossy, paler below, semiglossy when dried; both surfaces greenish to yellowish on drying; midrib acutely raised above, prominently and sharply acute below, slightly paler than surface; primary lateral veins 13–16 per side, departing midrib at 50–60° angle, ± straight-ascending to the collective vein, flat above, obscure and very weakly raised below; interprimary veins numerous, obscure above and below, drying raised and almost as conspicuous as primary lateral veins; tertiary veins visible when dried; collective vein arising from or near the base, weakly sunken above, raised below, raised above and below when dried, 3–8 mm from margin. *In-florescences* erect to spreading; peduncle 17.5–39 cm long, drying 1–4 mm diam., 1.9–5.5 × as long as petiole, green (brown when dried); spathe reflexed, subcoriaceous, pale green tinged with purple at margins, oblong-lanceolate to lanceolate, 3–6.5 cm long, 0.6–1 cm wide, broadest near the base, inserted at 45° angle on peduncle, acuminate at apex, acute at base, the margins meeting at 60–