

---

# New Species of *Anthurium* Sect. *Semaeophyllum* (Araceae) from Central and South America

Mónica Carlsen and Thomas B. Croat

Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, U.S.A.  
monica.carlsen@mobot.org; thomas.croat@mobot.org

---

**ABSTRACT.** Seven new species of *Anthurium* with trilobed leaves belonging to section *Semaeophyllum* (Araceae) have been discovered and are here published for the first time. They include: *Anthurium ancuashii* from Peru, *A. chimborazense* from southern Ecuador, *A. ternifolium* and *A. pinkleyi* from northeastern Ecuador, *A. constrictum* and *A. moronense* from southeastern Ecuador and Peru, and *A. rotundatum* ranging from southern Costa Rica and Panama to northern Colombia.

**RESUMEN.** Siete nuevas especies de *Anthurium* con hojas trilobadas, pertenecientes a la sección *Semaeophyllum* (Araceae), han sido descubiertas y aquí se publican por primera vez. Ellas incluyen: *Anthurium ancuashii* de Perú, *A. chimborazense* del sur de Ecuador, *A. ternifolium* y *A. pinkleyi* del noreste de Ecuador, *A. constrictum* y *A. moronense* del sureste de Ecuador y Perú, y *A. rotundatum* distribuida desde el sur de Costa Rica y Panamá hasta el norte de Colombia.

**Key words:** *Anthurium*, Araceae, *Semaeophyllum*, trilobed leaves.

*Anthurium* Schott is an exclusively Neotropical genus and one of the most diverse within the family Araceae, with approximately 1000 species (Croat, 1994). It is recognized by being typically terrestrial or epiphytic, having leaf blades with reticulate tertiary venation and collective veins, and by its bisexual flowers with four tepals that are arranged in a uniform spadix subtended by an open, often persistent spathe. Leaf morphology is one of the most variable characteristics within *Anthurium*, and that has led to the description of several sections (Croat & Sheffer, 1983). One of the most easily recognizable of these groups is section *Semaeophyllum*, characterized by having trilobed leaves with pedate venation and lobes that are united at the base. It was first recognized by H. C. Schott in his *Prodromis Systematis* (Schott, 1860), and formal revision of section *Semaeophyllum* is currently being carried out by the authors (Carlsen & Croat, in prep.). Section *Semaeophyllum* ranges from southwestern

Nicaragua into Costa Rica and Panama to Colombia, Venezuela, and Ecuador into northern Peru. The species diversity increases considerably north to south, from Panama to Colombia, and especially into Ecuador.

All measurements included in the descriptions of new species presented here are based on dried herbarium specimens. Features that distinguish juvenile specimens are included between square brackets. Characteristics that occur in less than 5% of the specimens examined are placed between parentheses. Colors of fresh leaf blades, petiole, peduncle, spadix, and spathe, as well as habit and cross section of the petiole, were recorded from the specimen labels. Colors of dry parts are specified as such.

***Anthurium ancuashii*** Croat & Carlsen, sp. nov.

**TYPE:** Peru. Amazonas: Quebrada Kayamas along Río Cenepa, ca. 300 m, 14 May 1973, E. Ancuash 365 (holotype, MO 3116682–3116683 [2]; isotype, USM). Figure 1A.

Planta terrestris aut epiphytica. Folium petiolo pedunculo longiore; lamina profunde triloba usque ad 5–10 cm e basi fissa, lobis lateralibus falcatis, costis posticis nudis, venis collectivis lobi medii in illas loborum lateralium confluentibus. Inflorescentia spatha viridi; spadice sessili vel breviter stipitato, albo, longe acuminato.

Terrestrial, occasionally epiphytic; internodes 1–2 × 1.5–2.5 cm; cataphylls drying reddish brown, 5–7 cm long, a few of the uppermost cataphylls persisting, partly decomposed, ultimately deciduous. *Leaves* erect-spreading; *petiole* 48–80 cm × 5–8 mm, drying grayish, matte; *geniculum* 1–2 cm × 5–7 mm; *blades* deeply trilobed to 5–10 cm from the base, subcoriaceous, 35–56 × 28–40 cm, upper surface darker, drying grayish tan, small raphides visible at 10×, base cuneate to truncate; central lobe oblanceolate to oblong-ob lanceolate, 28–48 × 7–16 cm, apex acuminate; midrib raised above, rounded, raised below, angled; primary lateral veins 7 to 10 per side, arcuate-ascending, weakly raised above, more prominently raised below, departing midrib at ca. 30°; tertiary veins prominulous; col-

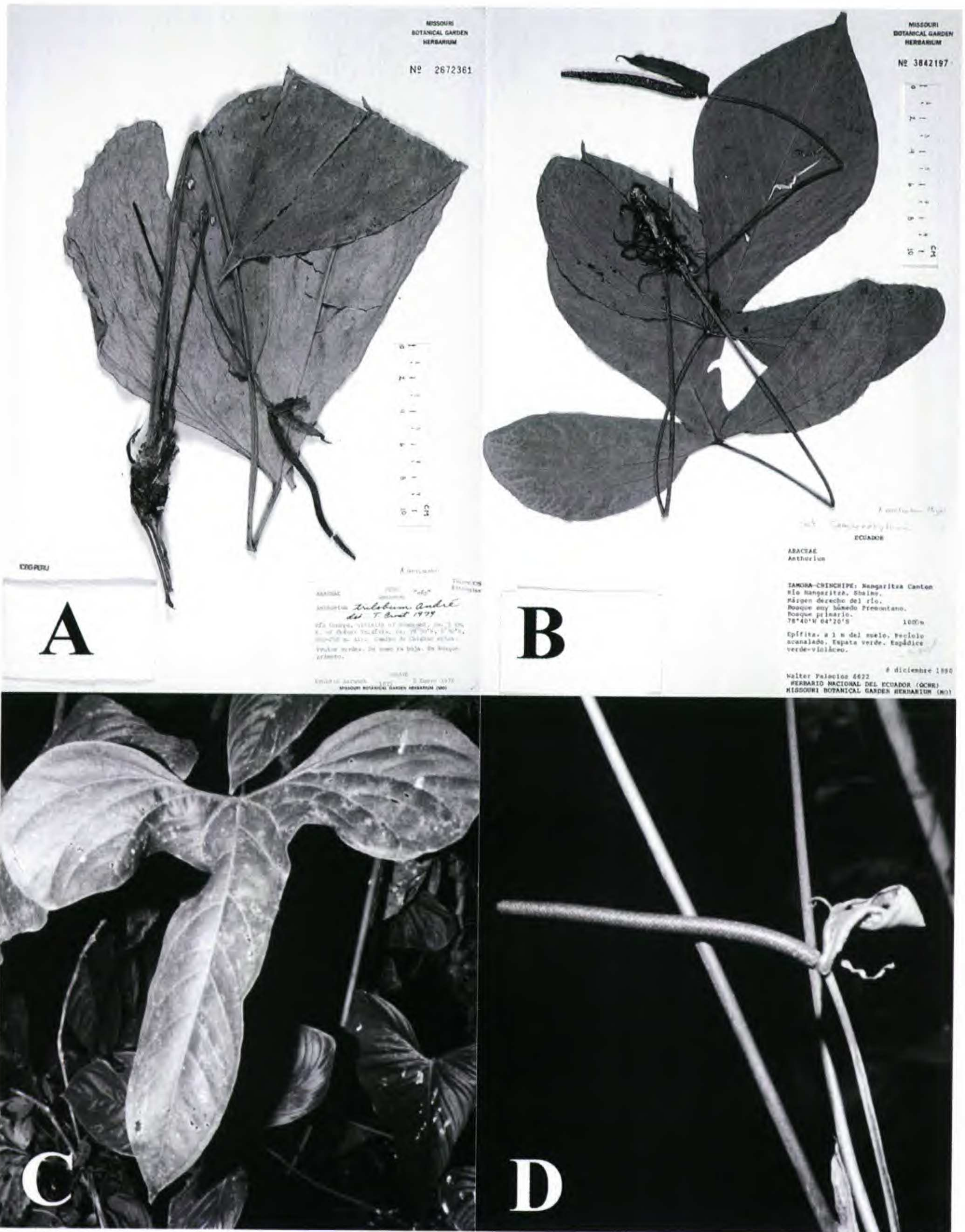


Figure 1. —A. Representative herbarium specimen of *Anthurium ancushii* Croat & Carlsen (*Ancush* 1235, MO). —B. Holotype specimen of *Anthurium constrictum* Croat & Carlsen (*Palacios* 6622, MO). C, D. *Anthurium chimborazense* Croat & Carlsen (*Croat* 61556). —C. Leaf showing naked posterior rib and spreading, rounded lateral lobes, adaxial surface. —D. Detail of immature inflorescence.

lective veins arising from the first or second lowest pair of primary lateral veins, 3–8 mm from the margin, usually loosely connected to that of the lateral lobes, sunken above, raised below, rounded; lateral lobes falcate,  $50^{\circ}$ – $70^{\circ}$ –( $90^{\circ}$ ) from central lobe,  $23$ – $34 \times (4)$ – $7$ – $11$  cm, apex narrowly round-

ed, inner margin straight (convex), outer margin concave; basal veins 3 or 4 pairs, 2 or 3 of them joined for 6–13 cm; posterior ribs almost straight,  $45^{\circ}$ – $60^{\circ}$  from midrib, naked for up to 4 cm. *Inflorescence* erect-spreading; peduncle 18–44 cm  $\times$  2–3 mm, shorter than petiole; *spathe* green, linear-

lanceolate, 8–10 cm × 6–10 mm, apex narrowly acuminate, base shortly decurrent for 4 mm; spadix sessile (shortly stipitate, 1–2 mm long), white, long-tapered, 8–11 cm × 4–8 mm diam. at base, 2–3 mm diam. at apex; 6 to 8 flowers per principal spiral, rhombic, 1.8–1.9 × 1.2–1.5 mm, sides straight; tepals matte to weakly glossy, covered with whitish granular, weakly raised structures; lateral tepals 0.9–1.1 mm wide, inner margin rounded, turned upward against the weakly emergent pistil, outer margin bluntly angled; stamens weakly exerted; anthers ca. 0.3 × 0.6 mm, thecae ovoid, slightly divaricate; pistils weakly emergent; stigma slit-like, ca. 0.4 mm across. *Infructescence* ca. 1 cm diam.; fruits whitish green, becoming dark purple, obovoid, 4–5 × 3.5–5 mm.

*Anthurium ancuashii* is known only from northeastern Peru in the Río Cenepa drainage, very close to the Ecuadorian border, between 200 and 300 m, in tropical wet forests (Fig. 4A). The species is named in honor of the first collector, Ernesto Ancuash, a local collector for Brent Berlin who conducted anthropological studies in that region in the 1970s.

*Anthurium ancuashii* is recognized by the collective veins of the central lobe being connected to those of the lateral lobes, its naked posterior ribs, falcate lateral lobes, and its long-tapered, sessile, white spadix. The grayish color of dried blades is also characteristic, although it may be due to treatment with formaldehyde prior to drying.

Within Peru, *Anthurium ancuashii* could be confused with *A. huallagense* Engler, both having naked posterior ribs and the peduncle shorter than the petiole. The latter differs in having spreading lateral lobes with broadly rounded apices, and wider central lobe (10–30 cm across). Elsewhere, *A. ancuashii* can also be confused with *A. trilobum* André. In fact, the type specimen of *A. ancuashii* was annotated by M. Madison (in 1977) as *A. trilobum*. He indicated on the specimen that although it was morphologically similar to *A. trilobum*, it was geographically disjunct. *Anthurium trilobum* differs in having the posterior ribs winged and a stipitate yellow spadix. It ranges from southwestern Panama to the Pacific coast of Colombia and Ecuador, whereas *A. ancuashii* occurs on the east side of the Andes near the border between Ecuador and Peru.

*Paratypes*. PERU. **Amazonas**: Río Cenepa, vic. of Huampami, 5 km E of Chávez Valdivia, Quebrada Tujushik, Chigkan entsa, *E. Ancuash* 1077 (MO), *E. Ancuash* 1235 (MO), *R. Kayap* 756 (MO), *A. Kujikat* 99 (MO), *A. Kujikat* 194 (MO).

***Anthurium chimborazense*** Croat & Carlsen, sp. nov. TYPE: Ecuador. Bolívar-Chimborazo: carretera Pallatanga–Yunguilla–Llimbe, a orillas del Río Chimbo, 1720 m, 7 Sep. 1987, V. Zak & J. Jaramillo 2806 (holotype, MO 3583458–3583459 [2]; isotypes, NY, US). Figure 1C, D.

Planta epiphytica aut hemiepiphytica. Folium petiolo pedunculo longiore; lamina profunde triloba usque ad (4–)5–11 cm e basi fissa, lobis lateralibus patentibus apicibus late rotundatis, venis basalibus apicem versus acute curvatis, costis posticis nudis et rectis. Inflorescentia spathe viridi apice involuta; spadice sessili, atroviridi, longe acuminato. Floribus antheris tepala superantibus.

Epiphyte or hemiepiphyte; internodes 1–3 × 1–2 cm; cataphylls drying greenish yellow, moderately thin, (4–)7–14 cm long, ultimately deciduous. *Leaves* erect-spreading; petioles 24–44(–65) cm × 3–8 mm, terete to sulcate adaxially; geniculum 1–1.5(–2) cm × 3–6 mm, drying concolorous; *blades* deeply trilobed to (4–)5–11 cm from the base, chartaceous to subcoriaceous, (22–)26–46(–60) × 24–48(–60) cm, dark green and glossy above, moderately paler and glossy below, scattered raphides on the upper surface, base truncate; central lobe oblong to oblong-elliptic to oblong-obovate, 20–37 (–50) × (4–)7–17 cm, apex acuminate; midrib raised above, angled, sunken toward the apex, raised below, rounded; primary lateral veins 6 to 10 per side, arcuate when reaching the collective veins, raised above, rounded, raised below, angled, departing midrib at (30°–)40°–55°; tertiary veins prominulous below; collective veins arising from the first or second lowermost pair of primary lateral veins, (2–)3–5 mm from the margin, scarcely raised to sunken above, raised below, rounded; all major veins on the abaxial side drying yellowish and conspicuously paler than the surface; lateral lobes spreading, (80°–)90° from central lobe, 12–35 × 9–18(–23) cm, (3–)5–10 cm toward base, apex broadly rounded, inner margin concave [slightly convex], outer margin concave; basal veins 4 to 6 (to 8) pairs, the first pair free to the base, the rest joined for 4–7(–11) cm then curved sharply apically; posterior ribs straight, 90° from midrib, naked for 2–5(–9) cm. *Inflorescence* erect-spreading; peduncle 17–45 cm × 3–5 mm, shorter than petiole; *spathe* green, linear-lanceolate, reflexed-spreading, (4.5–)10.5–16(–20) cm × 5–10(–17) mm, apex acuminate, involute, base clasping; *spadix* sessile, deep green, long-tapered, (12–)25–38 cm long, 5–9 mm diam. at base, 3–4 mm diam. at apex; 5 to 8 flowers per principal spiral, rhombic, 1.8–2.5 × 1.4–2 mm, sides straight to weakly sigmoid; tepals thick, lateral tepals 1–1.5 mm wide,

inner margin rounded to straight, outer margin bluntly angular; stamens weakly exerted; anthers 0.4–0.5 × 0.5–0.65 mm, thecae oblong-elliptic, slightly divaricate; pistils weakly emergent; stigma slit-like to ellipsoid, 0.3–0.4 mm across. *Infructescence* unknown.

*Anthurium chimborazense* is known only from Ecuador in two disjunct mountain ranges, the eastern slopes of the Andes in Chimborazo Province and the Cordillera Chongón-Colonche, near the Pacific coast, in Guayas Province (Fig. 4A). The species occurs in pre-montane and montane moist forests, at lower elevational ranges in Guayas Province (500–700 m) than in Chimborazo (1350–2000 m). The localities in Guayas Province are closer to the ocean, and the consequent increase in humidity causes the vegetation belts to be lower than elsewhere.

*Anthurium chimborazense* is distinguished by its straight naked posterior ribs and broadly rounded lateral lobes with basal veins curved sharply apically. It also has a spathe that is inrolled at the tip and a sessile, deep green spadix with anthers reaching just above the tepals.

In Ecuador, *Anthurium chimborazense* can be confused with *A. moronense*, a species that occurs in pre-montane forests on the eastern slopes of the Andes between Ecuador and Peru. The latter differs in having a square petiole, blades with the central lobe broadly obovate, and a cylindric, purplish violet spadix. *Anthurium chimborazense* can also be confused with *A. rotundatum* from southern Costa Rica to Colombia, another species with broadly rounded lateral lobes, but with the collective veins 4–8 mm from the margin and a stipitate, bright yellow spadix.

*Paratypes.* ECUADOR. **Chimborazo:** Hacienda La Carmela, *M. Acosta-Solis* 5399 (F); Río Chanchán, ca. 5 km N of Huigra, *W. H. Camp* E-3278 (AAU, MO, NY, SEL); rd. betw. Alausi & El Triunfo, 6.9 km W of Huigra, *T. Croat* 61564 (MO), *T. Croat* 61566 (MO); betw. Guayaquil & Riobamba, near Río Chanchán, Hacienda de Licay, *J. F. Smith* 2014 (QCA, WIS). **Guayas:** Cordillera Chongón-Colonche, Bosque Protector Loma Alta, *X. Cornejo* & *C. Bonifaz* 5415 (GB, GUAY, MO), *X. Cornejo* & *C. Bonifaz* 5701 (GUAY, MO); Reserva Ecol. Manglares Churute, Cerro Pancho Diablo, *X. Cornejo* & *C. Bonifaz* 5548 (GUAY, MO); Manabí, San Sebastián, Machalilla National Park, *A. Gentry et al.* 72574 (MO).

***Anthurium constrictum*** Croat & Carlsen, sp. nov. TYPE: Ecuador. Zamora-Chinchipec: Nangaritza Cantón, Río Nangaritza, Shaime, margen derecho del río, bosque muy húmedo pre-montano, 4°20'S, 78°40'W, 1000 m, 8 Dec. 1990, *W. Palacios* 6622 (holotype, MO 3842197; isotype, QCNE). Figure 1B.

Planta terrestris aut epiphytica. Folium petiolo canaliculato vel D-formi; lamina profunde triloba usque ad 2–4(–6) cm e basi fissa, lobo medio basi constricto, lobis lateralibus patentibus aut leviter falcatis apicibus late rotundatis, costis posticis nudis. Inflorescentia spatha viridi; spadice sessili, atropurpureo, cylindrico, gracili.

Terrestrial or epiphytic; internodes short, ca. 1 cm diam.; cataphylls drying yellowish green, 5–9 (–17) cm long, with apiculum 2–4 mm long, persisting intact at uppermost nodes. *Leaves* erect; *petiole* 16–31(–46) cm × 2–4 mm, caniculate to D-shaped; *geniculum* 1–1.5(–3) cm × 2–4 mm; *blades* deeply trilobed to 2–4(–6) cm from the base, subcoriaceous, 13–27(–35) × 17–36(–40) cm, fresh surface color unknown, very few raphides above, denser and conspicuous below, base truncate to cuneate; central lobe broadly obovate, 12–24(–30) × 7.5–14(–24) cm, 2–4(–6) cm across at base, apex cuspidate; midrib weakly raised to sunken above, raised below, angled; primary lateral veins 9 to 13 per side, straight, weakly raised above, rounded, raised and very conspicuous below, departing midrib at 40°–50°; tertiary veins prominulous; collective veins arising from one of the lowermost primary lateral veins, usually the third pair, 4–5 mm from the margin, weakly raised to sunken above, raised below; lateral lobes spreading to slightly falcate, 60°–70° from central lobe, 8.5–20(–25) × 5–10 (–16) cm, apex broadly rounded, slightly turned forward, inner margin concave to straight, outer margin concave; basal veins 4 or 5 pairs, joined for 1.5–4 cm, all of them separating at the same distance; posterior ribs straight, 80°–90° from midrib, naked for up to 4 cm. *Inflorescence* erect; peduncle 20–29 cm × 3–5 mm, longer than or equal to petiole; *spathe* green, lanceolate, erect, 5–7 × 0.6–1.2 cm, apex long acuminate (tip inrolled), base acute; *spadix* sessile, dark purple, cylindric, 5–9.5 cm × 4–6 mm; 4 to 5 flowers per principal spiral, rhombic, 2.4–3.2 × 1.6–2.8 mm, sides weakly sigmoid; tepals thin and velvety, lateral tepals 0.8–1.1 mm wide, inner margin rounded, outer margin angled; stamens weakly exerted; anthers ca. 0.6 × 0.4 mm, thecae elliptic, slightly divaricate; pistils exposed even in very immature inflorescences; stigma round to elliptic, ca. 0.3 mm across. *Infructescence* purple, up to 6 mm diam.; fruits purple, rounded, covered by scale-like tepals, ca. 2 mm diam.

*Anthurium constrictum* occurs on the eastern slopes of the Andes in southern Ecuador and northern Peru, along the mountain range that connects the Cordillera de Cutucú and Cordillera del Cóndor (Fig. 4A). It grows in pre-montane and montane wet forests between 800 and 2200 m. The specific epithet refers to the constriction at the base of the

central lobe of the leaf blade. *Anthurium constrictum* is recognized by this constriction, its caniculate to D-shaped petiole, spreading lateral lobes with rounded apices, and sessile, dark purple, slender spadix.

The paratype *T. Croat* 72700 has very large leaves and the collective veins are 10 mm from the margin. It was collected in the same geographical area as more typical specimens of *Anthurium constrictum*; all have a generally similar leaf morphology. Collections from Ecuador (*H. van der Werff* & *W. Palacios* 10379, 10382) differ in having the peduncle shorter than the petiole, which is terete; the stipe is up to 6 mm and the spadix is 11–29 cm long. Peruvian specimens, all collected near the Ecuadorian border, dry yellowish and have internodes 3–8 cm long, but otherwise are very similar in vegetative and reproductive morphology. Further collections may suggest that some of these variants need formal recognition.

*Anthurium constrictum* can be confused with *A. ternifolium*, another middle-elevation species from Ecuador with naked posterior ribs, D-shaped petiole, peduncle longer than or equal to petiole and very thin, sessile spadix. The latter differs in having blades with an oblong-lanceolate central lobe that is not constricted at the base; falcate, not spreading lateral lobes, and a green, not dark purple, spadix. *Anthurium constrictum* can also be confused with *A. rimbachii* Sodiro. The latter also has blades with a constricted central lobe and a sessile spadix becoming dark purple when old. However, *A. rimbachii* has broader leaves (28–46 cm wide), a broader spadix (5–9 mm diam.), and winged posterior ribs.

*Anthurium constrictum* is rather similar to *A. alatum* Engler, a Colombian high-elevation species with the same constriction of the central lobe and sessile spadix. However, the latter has falcate lateral lobes, collective veins farther from the margin (5–12 mm in *A. alatum* vs. 4–5 mm in *A. constrictum*), and a green spadix.

**Paratypes.** ECUADOR. **Morona-Santiago:** Cordillera de Cutucú, rd. Méndez-Morona, *H. van der Werff* & *W. Palacios* 10379 (MO, QCNE), *H. van der Werff* & *W. Palacios* 10382 (MO, QCNE). **Zamora-Chinchipec:** rd. betw. Loja & Zamora, at Río Zamora, *T. Croat* 72700 (MO, QCNE); 4 km W of Panguintza, *G. Harling* & *L. Andersson* 24129 (GB, QCA); Cordillera del Cóndor, Shaimi, Río Nangaritza, *W. Palacios et al.* 8755 (MO, QCNE). PERU. **Cajamarca:** El Triunfo-Convento, *J. Campos* & *E. Rodríguez* 2820A (MO); Estrella del Oriente, *J. Campos et al.* 4814 (MO); El Progreso, *J. Campos et al.* 6287 (MO); San José de Lourdes, *C. Díaz* & *A. Torres* 7797 (MO); Santo Tomás, NE del Maraón, *V. Quipuscoa* 406 (MO).

***Anthurium moronense*** Croat & Carlsen, sp. nov.

**TYPE:** Ecuador. Morona-Santiago: Gualaquiza, Misión Bomboiza, Misión Salesiana, 700–800 m, 3 Oct. 1967, *B. Sparre* 19282 (holotype, QCA; isotypes, MO 2310065, S). Figure 2A, B.

Planta epiphytica scandens, internodiis 3–6 cm longis. Folium petiolo pedunculo longiore, rubro, quadrangulari; lamina triloba usque ad 6–12 cm e basi fissa, lobo medio apice acuto in apiculum 1–2 mm longum desinente, lobis lateralibus patentibus apicibus late rotundatis, costis posticis nudis. Inflorescentia spatha viridi; spadice sessili, purpurascete, cylindrico.

Climbing epiphyte; internodes 3–6 × 0.8–1.2 cm; cataphylls thick, drying brownish, 7–12 cm long, persisting intact at least at upper nodes. *Leaves* erect; *petiole* 25–45 cm × 4–5 mm, square, reddish; *geniculum* 1.5–2 cm × 4–7 mm; *blades* trilobed to 6–12 cm from the base, coriaceous, 21–32 × 26–42 cm, pale green below, raphides sunken on upper surface, not easily visible, drying with red-purple dots on a silver-white surface below, base truncate; central lobe broadly obovate, 15–22 × 10–17 cm, apex acute, apiculum 1–2 mm long; midrib raised above and below, rounded; primary lateral veins 5 to 6 per side, arcuate-ascending, weakly raised above, rounded, raised below, departing midrib at 40°–50°; tertiary veins prominent below; collective veins arising from the first pair of basal veins, 0.8–1.5 cm from the margin, sunken above, raised below; lateral lobes spreading, 90° from central lobe, 15–25 × 8–15 cm, apex broadly rounded, inner margin straight to weakly convex, outer margin concave; basal veins 4 to 6 pairs, the first one free, the second joined for up to 1 cm, the rest joined for up to 5.5 cm; posterior ribs weakly arcuate, 80°–90° from midrib, naked for up to 2.5 cm. *Inflorescence* erect; peduncle reddish, 12–24 cm × 2–6 mm, shorter than petiole; *spathe* green, lanceolate, 6.5–16 × 0.7–2 cm, apex acuminate, base acute; *spadix* sessile, purplish violet, cylindric, 7–14(–20) cm × 4–7 mm; 4 to 6 flowers per principal spiral, rhombic to 4-lobed, 2.5–3 × 2–2.5 mm, sides straight to weakly sigmoid; tepals velvety, lateral tepals ca. 1.2 mm wide, inner margin rounded, outer margin bluntly angled; stamens weakly exerted; anthers ca. 0.5 × 0.45 mm, thecae elliptic, slightly divaricate; pistils weakly emergent; stigma rounded, ca. 0.35 mm across. *Infructescence* with purple spadix, 11–20 × 0.7–1 cm; fruits red-violet, dark at apex, much paler at base, lanceolate with acute apex, ca. 4.5 × 2.5 mm.

*Anthurium moronense* is found in southeastern



Ecuador (Morona-Santiago and Zamora-Chinchipe Provinces) and northeastern Peru (Cordillera del Cóndor, near the Ecuadorian border) (Fig. 4A). It grows in pre-montane and montane wet forests between 700 and 1200 m in elevation.

*Anthurium moronense* is distinguished by its reddish petiole that is square in cross section, its spreading lateral lobes with broadly rounded apex, central lobe with acute apex and an apiculum 1–2 mm long, and its sessile, cylindrical and purplish violet spadix.

The species can be confused with *Anthurium truncicola* Engler, an Ecuadorian species that also occurs at medium to high elevations. They both have elongated internodes, and their collective veins arising from the first pair of basal veins, running 8–15 mm distant from the margin. *Anthurium truncicola* differs in having winged posterior ribs and a green, stipitate spadix.

*Anthurium moronense* might also be confused with *A. platyglossum* Sodiro, but the latter differs in having a terete petiole, winged posterior ribs, and a green, stipitate spadix. These species both grow in Morona-Santiago Province, but *A. platyglossum* occurs at higher elevations (1600–1800 m) there than does *A. moronense* (700–800 m).

*Paratypes.* ECUADOR. **Morona-Santiago:** Río Cuyes y vía Bomboiza-Gualaquiza, W. Palacios 1458 (MO, QCA, QCNE); Gualaquiza, Misión Bomboiza, B. Sparre 19108 (S), B. Sparre 19114 (S), B. Sparre 19252 (S). **Zamora-Chinchipe:** Río Nangaritzá, Pachicutza, J. Jaramillo 13943 (QCA), J. Jaramillo 14092 (QCA), J. Jaramillo & E. Grijalva 13413 (QCA), W. Palacios & D. Neill 6474 (MO, QCNE), W. Palacios et al. 8330 (MO, QCNE); Miazí, detrás del Campamento Militar, W. Palacios et al. 8506 (MO, QCNE). PERU. **Amazonas:** NW del PV Falso Paquisha, Cordillera del Cóndor, S. Baldeón 541 (USM); Cordillera del Cóndor, PV Alfonso Ugarte, Río Comainas, H. Beltrán & R. Foster 795 (MO).

***Anthurium pinkleyi*** Croat & Carlsen, sp. nov.

TYPE: Ecuador. Napo: Limoncocha, 240 m, 20 May 1991, S. Ingram & D. Atwood 977, originally collected by M. Madison et al. s.n., Selby accession #78-1156 (holotype, SEL; isotype, MO 4224348). Figure 2C, D.

Planta terrestri. Flos lamina profunde triloba usque ad 4–7 cm e basi fissa, lobis omnibus latitudine aequalibus, lobo medio oblongo vel oblanceolato, lobis lateralibus patentibus apicibus anguste rotundatis, costis posticis nudis. Inflorescentia spatha viridi, purpurascens, fibrosa; spadice sessili, purpureo usque atrobrunneo, cylindrico aut anguste acuminato.

Terrestrial; internodes short, 2–2.5 cm diam.; cataphylls drying reddish brown, 3–6 cm long, deciduous. Leaves erect-spreading; petiole (20–)33–55 cm × 3–5 mm, terete (slightly D-shaped); genicu-

lum yellow, 1.5–3 cm × 2–3 mm, drying somewhat darker than petiole; blades deeply trilobed to 4–7 cm from the base, subcoriaceous, (18–)22–37 × (20–)26–44 cm, medium green above, pale yellowish green below, lower surface drying conspicuously paler than above and silvery, both surfaces matte to semiglossy, raphides usually absent, base acute to truncate; central lobe oblong to oblanceolate, (15–)20–33 × 5–11 cm, apex acuminate, apiculum 2–3 cm long; midrib raised above, somewhat sunken toward the apex, raised below; primary lateral veins 4 to 6 per side, arcuate-ascending, weakly raised above and below, departing midrib at 30°–40°; tertiary veins weakly raised below; collective veins arising from the third (second) pair of primary lateral veins, 4–6 mm from the margin, sunken above, raised below, angled; lateral lobes spreading, 90° from central lobe, 14–22 × 4.5–10 cm, apex narrowly rounded, inner margin convex to straight, outer margin concave; basal veins 5 to 6 pairs, the first one joined for 1–3 cm, the rest up to 8 cm; posterior ribs straight to weakly arcuate, 80°–90° from midrib, naked for 2–3.5 cm. Inflorescence erect; peduncle 16–40(–54) cm × 2–4 mm, shorter than petiole (equal); spathe green becoming purplish, lanceolate, fibrous, 5.5–9.5 × 0.9–1.5 cm, apex long-acuminate, base meeting peduncle at 90°, somewhat auriculate; spadix sessile, purple to dark brown, cylindrical to narrowly tapered, stout, 4–9 cm long, 4–8 mm diam. at base, 3–5 mm diam. at apex; ca. 6 flowers per principal spiral, rhombic, 2.8–3.2 × 2.8 mm, sides straight to weakly sigmoid; lateral tepals ca. 2.3 mm wide, inner margin straight to weakly rounded, turned upward when the pistil emerges, outer margin angled; stamens weakly exerted; anthers ca. 0.5 × 0.65 mm, thecae elliptic, slightly divaricate; pistils emergent; stigma elliptic, ca. 0.4 mm across. Infructescence dark purple, 8–9 × 1–1.4 cm; fruits green becoming dark purple, roundly ovate, ca. 3 × 2.5 mm.

*Anthurium pinkleyi* is known only from northeastern Ecuador in Napo and Orellana Provinces (Fig. 4A). It grows in tropical moist forests at less than 500 m in elevation. It is named after its earliest collector, Homer V. Pinkley, who made a specimen in 1966 (H. Pinkley 278, ECON) from Durano, Río Aguarico, just east of Lago Agrio, while conducting ethnobotanical studies in the area.

*Anthurium pinkleyi* can be recognized by its naked posterior ribs departing from the midrib at 80°–90°, its slender lobes, the central one being oblong and the lateral ones spreading, and its sessile, dark purple, cylindrical spadix subtended by a fibrous green to purplish green spathe. Also characteristic

are the tepals that twist upward after the pistil emerges.

Eight of the collections examined, including the type specimen, were made from cultivated plants growing at Marie Selby Botanical Gardens (Selby accessions: 78-1126, 78-1149, and 78-1156), that were originally collected by Madison and colleagues in Ecuador, Napo Province, near Limoncocha in the vicinity of the Río Napo. Apparently no herbarium specimen was made at the time of collection of the living material for cultivation.

When Madison (1978) redescribed *Anthurium rimbachii* Sodiro, he included as a representative specimen one of the collections taken from the type plant of *A. pinkleyi* (M. Madison 4135). He did not have the type specimen of *A. rimbachii* on hand and was clearly confusing that species with this new material, because they both have deep purple, sessile spadices. According to the original description of Sodiro (1903), *A. rimbachii* was collected in western Ecuador (Guayas Province) and it differs in having winged posterior ribs and bigger leaf blades (26–58 × 28–46 cm). It also differs in having very long exerted stamens and an obovate central lobe, constricted at the base. Unfortunately, the location of the type specimen of *A. rimbachii* is unknown. However, *A. rimbachii* clearly differs from the material included here in *A. pinkleyi* by all the above-mentioned characters.

In Ecuador, *Anthurium pinkleyi* might also be confused with *A. moronense*, both having purple, sessile spadices. However, the latter species has broader central and lateral lobes (10–17 cm and 8–15 cm wide, respectively) and occurs at higher elevations in southeastern Ecuador. *Anthurium pinkleyi* may be confused with *A. angustilobum* Croat from Panama, both sharing slender, oblong central lobes. The latter differs in having collective veins arising from the first pair of basal veins and running 3–4 mm from the margin, and a stipitate green spadix.

*Paratypes.* ECUADOR. **Napo:** Limoncocha, originally collected by M. Madison et al., cultivated at Marie Selby Botanical Gardens, *A. Christenson* 1108 [SEL 78-1149] (MO, SEL), *T. Croat* 79395 (MO), *S. Ingram* 1159 [SEL 78-1156] (SEL), *M. Madison s.n.* [SEL 78-1149] (MO), *M. Madison* 4135 (SEL), 4 July 1978, *M. Madison et al. s.n.* [SEL 78-1126] (SEL), *T. Plowman* 14068 [SEL 78-1149] (F, SEL), *T. Plowman* 14069 [SEL 78-1126] (F); Est. Biol. Jatún Sacha, Río Napo, 8 km E de Misahuallí, *C. Cerón* 1732 (MO, QCNE); E of Lago Agrio rd. to CEPE Ferry Crossing, *T. Croat* 50428 (MO); San Pablo de los Secoyas, *J. Jaramillo & F. Coello* 2711 (QCA); Río Aguarico, Durano, *H. Pinkley* 278 (ECON). **Orellana:** P. N. Yasuní, km 46–49 of petroleum pipeline rd., *R. Burnham* 1924 (MICH, MO), *D. Neill et al.* 10271 (MO, QCNE).

***Anthurium rotundatum* Croat & Carlsen, sp. nov.**

TYPE: Panama. Colón: betw. Portobelo & Nombre de Dios, 1.2 mi. beyond road to Isla Grande, 9°40'N, 79°35'W, 5 Apr. 1980, *T. Croat* 49788 (holotype, MO 2739714–2739716 [3]; isotypes, COL, F, HUA, PMA, US, WU; living plant at MO). Figure 3A, B.

Planta epiphytica scandens, internodiis usque ad 2 cm longis. Folium petiolo pedunculo longiore; lamina triloba usque ad 7.5–14 cm e basi fissa, lobis lateralibus patentibus vel leviter falcatis apicibus late rotundatis, costis posticis nudis. Inflorescentia spatha pallide viridi; spadice stipitato, vivide flavo, acuminato.

Climbing epiphyte; internodes up to 2 cm long, 2–2.5 cm diam.; cataphylls subcoriaceous, faintly one-ribbed, drying reddish brown, 8–16 cm long, persistent as fibers. *Leaves* erect-spreading; *petiole* (17–)20–77 cm × 5–10 mm, terete (slightly flattened adaxially); *geniculum* 1–3.5 cm × 1–8 mm; *blades* trilobed to 7.5–14 cm from the base, subcoriaceous, 30–72 × 22–78 cm, green, dull to semiglossy above, pale green, glossy below, upper surface densely covered by raphides, lower surface drying brown-speckled, base cuneate; central lobe oblanceolate to obovate, 25–60 × 8.5–36 cm, apex acuminate; midrib raised above, angled, diminishing and sunken toward the apex, raised below; primary lateral veins (4 to)5 to 9 per side, straight, sunken to weakly raised above, raised below, departing midrib at 30°–45°(–50°); tertiary veins inconspicuous; collective veins arising from one of the lowermost pairs of primary lateral veins [from the first pair of basal veins], 4–8 mm from the margin, sunken above, raised below; lateral lobes spreading to slightly falcate, 70°–90° from central lobe, 11–40 × 6–29 cm, apex broadly rounded, inner margin concave, outer margin concave; basal veins 3 to 6 pairs, joined for (1–)3–8.5 cm (the first pair free); posterior ribs straight to weakly arcuate, 70°–90° from midrib, naked for 1.5–8 cm. *Inflorescence* erect-spreading; *peduncle* (8–)12–34 cm × 3–6 mm, shorter than petiole; *spathe* pale green, lanceolate, spreading-reflexed, 8.5–35 × 1.5–3 cm, apex acuminate, base acute, decurrent; *stipe* 0.5–2 cm long; *spadix* bright yellow, tapered, (9–)13–45 cm long, 5–10 mm diam. at base, 3–6 mm diam. at apex; 5 to 10 flowers per principal spiral, rhombic to 4-lobed, 1–2.5 × 1.5–2 mm, sides straight to weakly sigmoid; tepals glossy, lateral tepals 0.5–2 mm wide, inner margin rounded, outer margin angled; stamens weakly exerted; anthers 0.5–1 × 0.5 mm, thecae elliptic, slightly divaricate; pistils scarcely emergent; stigma elliptic, ca. 0.5 mm across. *Infructescence* turning dark red-purple, 25–



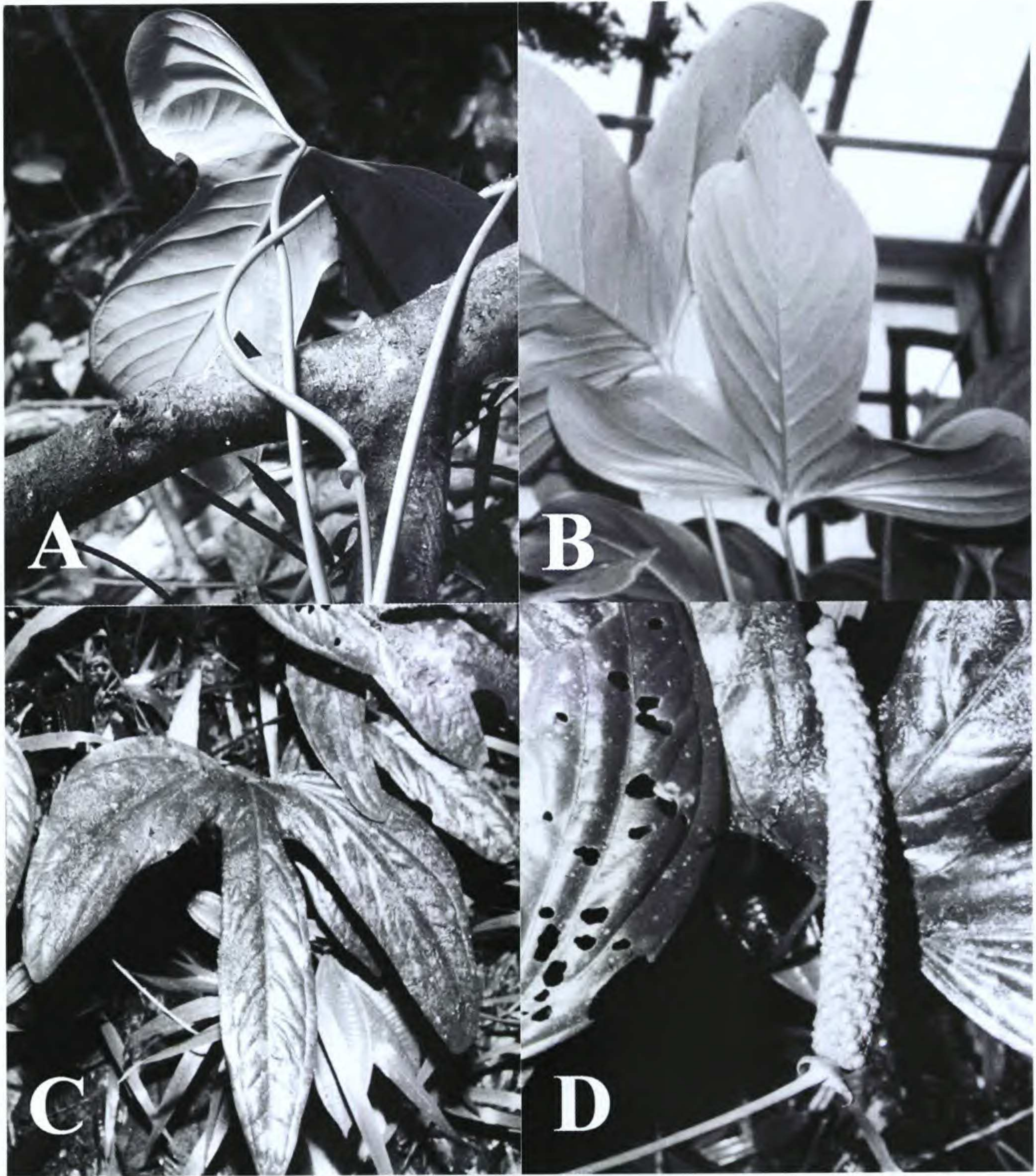


Figure 3. A, B. *Anthurium rotundatum* Croat & Carlsen (Croat 49788, type plant, cultivated at MO). —A. Detail of inflorescence and leaf. —B. Leaves showing spreading and rounded lateral lobes, abaxial surface. C, D. *Anthurium ternifolium* Croat & Carlsen (Croat 72829). —C. Trilobed leaves showing falcate lateral lobes and sunken primary lateral veins. —D. Close-up of immature infructescence.

52 × 1.3–2 cm; fruits dark purple, white at base, obovoid, apiculate, 5–7 × 3–4 mm.

*Anthurium rotundatum* ranges from the Atlantic slopes of southern Costa Rica to Panama (Atlantic and Pacific slopes) into the very northern tip of Colombia (Fig. 4B). It grows from sea level to 1000 m in elevation, in tropical wet or premontane forest. The specific epithet refers to the almost rounded apex of the lateral lobes of the leaves. *Anthurium rotundatum* is recognized by its naked posterior

ribs, spreading lateral lobes with broadly rounded apices, and its stipitate yellow spadix.

Most specimens now attributed to this new species were formerly identified as *Anthurium garagaranum* Standley. However, Croat (1986) pointed out that the Panamanian material he included in *A. garagaranum* differed from the other material in having stout, naked posterior ribs, and shorter, more rounded lateral lobes. *Anthurium rotundatum* and *A. trilobum* share a yellow, stipitate spadix. The

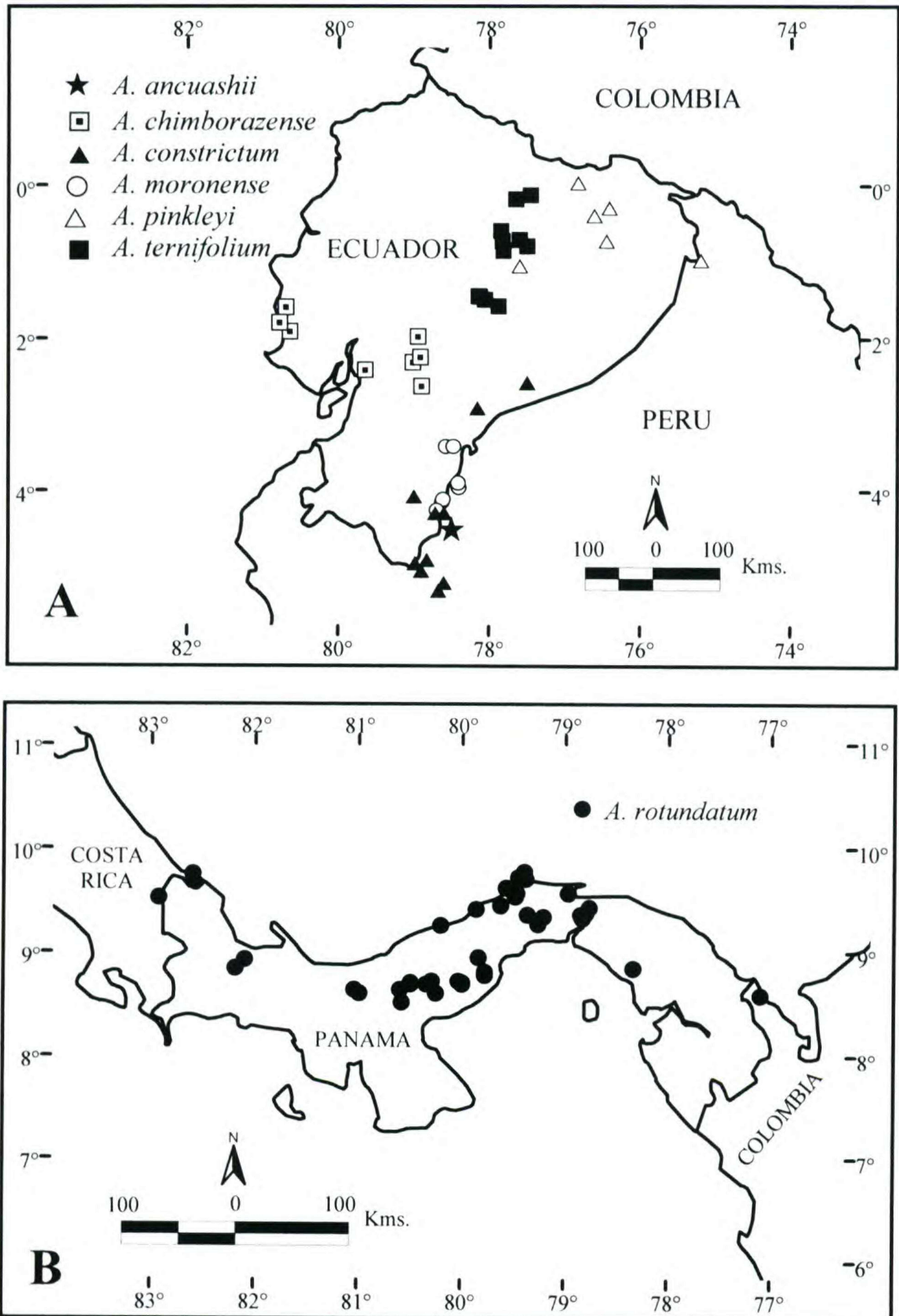


Figure 4. —A (top). Distribution map of six new South American species of *Anthurium* sect. *Semaephyllum*. —B (bottom). Distribution map of the new Central American species, *Anthurium rotundatum*.

latter differs in having winged posterior ribs, lateral lobes narrowly rounded at apex, and 8 to 14 pairs of primary lateral veins.

*Anthurium rotundatum* can also be confused with *A. chimborazense* from Ecuador, both sharing naked, straight posterior ribs and spreading lateral lobes, rounded at apex. The latter differs in having the collective veins (2–)3–5 mm from the margin and a sessile deep green spadix.

**Paratypes.** COSTA RICA. **Limón:** Manzanillo de Talamanca, *M. Grayum* & *W. Burton* 4328 (MO); Qda. Mata de Limón, Finca Anai, *M. Grayum et al.* 4446 (MO); unión de Río Urén y Río Sukut, 1.5 km aguas arriba, *G. Herrera* 3175 (MO). PANAMA. **Bocas del Toro:** entre la presa y Valle La Esperanza, río Changuinola, *L. Carrasquilla* & *R. Mendoza* 1384 (PMA); rd. betw. Fortuna Dam and Chiriquí Grande, 7.3 mi. N of bridge, *T. Croat* & *M. Grayum* 60260 (MO). **Chiriquí:** rd. betw. Chiriquí Grande and Fortuna, 7.7 mi. W of Chiriquí Grande, *T. Croat* & *M. Grayum* 60093 (CM, MO, PMA, RSA). **Coclé:** trail to Las Minas, *P. H. Allen* 2462 (US); La Mesa, *T. Croat* 14397 (MO); Cerro Pilón, *T. Croat* 37340 (MO), *T. Croat* 37567 (MO); El Copé, near Continental Divide, *T. Croat* 44723 (MO), *B. Hammel* 955 (MO), *B. Hammel* 1049 (MO), *S. Knapp* & *R. Dressler* 3488 (MO); Llano Grande-Coclecito, N of La Pintada, *T. Croat* 49222 (MO); rd. betw. Finca Mandarinas and Finca Furlong, *T. Croat* 67194 (MO); Cerro Gaital, *T. Croat* 74811 (MO), *G. de Nevers et al.* 3509 (MO, PMA), *S. Knapp* 5321 (MO), *S. Knapp* 5800 (MO); Alto Calvario, *J. P. Folsom* 2480 (MO); La Junta-Alto Calvario, *J. P. Folsom* 5908 (MO); from La Mesa towards Los Llanos, *J. Luteyn* 4104 (DUKE); Llano Grande-Cascajal, NW of Penonome, *K. Sytsma* 3844 (MO); Cerro Caracoral, *K. Sytsma* 4083 (MO); Cerro Turega, *R. E. Woodson* & *R. W. Schery* 167 (MO). **Colón:** along Río Guaniche, *T. Antonio* 4810 (MO), *T. Croat* 37021 (MO), *G. McPherson* 8516 (MO); Cerro Jefe region, Santa Rita Ridge Rd., 10–21 km from Transisthmanian Hwy., *M. Correa* 587 (DUKE, MO), *T. Croat* 34304 (MO), *S. Knapp* & *R. Schmalzel* 5209 (MO), *S. Knapp* & *R. Schmalzel* 5228 (MO), *G. McPherson* 10232 (CM, MO), *S. Mori* & *J. Kallunki* 5058 (MO); Portobelo-Nombre de Dios, Nuevo Tonosi-Río Indio, *T. Croat* 33529 (MO, PMA); Portobelo-Río Cascajal, vic. Nuevo Tonosi, *T. Croat* 33658 (MO); Portobelo-Nombre de Dios, 10 km W of Nombre de Dios, *S. Knapp* & *J. Mallet* 5686 (MO), *S. Knapp* & *J. Mallet* 5705 (MO); SW of Portobelo, *R. Liesner* 1032 (MO); originally collected at Cerro Jefe, cultivated at Univ. of Hawaii, *R. Sheffer* 176 (MO), *R. Sheffer* 275 (MO); 5–8 km SW of Cerro Bruja, *K. Sytsma et al.* 4296 (MO, PMA); Donoso, hacia Valle Grande, *A. Zapata et al.* 969 (PMA). **Panamá:** Cerro Azul, *T. Croat* 11594 (MO); Cerro Campana, *T. Croat* 12161 (MO), *T. Croat* 35942 (MO), *P. Hutchinson* & *R. Dressler* 2955 (DAV), *H. van der Werff* & *J. Herrera* 6209 (MO); rd. beyond Su Lin Hotel, *T. Croat* 14229 (MO); El Llano-Cartí, 7–20 km from Inter-American Hwy., *T. Croat* 25147 (MO), *T. Croat* 75141 (CAS, MO), *J. P. Folsom* 2564 (MO), *J. P. Folsom* & *L. Collins* 1519 (MO), *S. Hoover* 1311 (MO), *R. Liesner* 1192 (MO, NY), *S. Thompson* 4623 (MO); 3–3.5 mi. NE of Altos de Pacora, *T. Croat* 68677 (MO); P. N. Altos de Campana, Buena Vista, *Espinosa et al.* 3165 (PMA); Torti Arriba, Rancho Chorro, *J. P. Folsom et al.* 6678 (MO); Peluca meteorological station, *H. Kennedy* & *R. Dressler* 2983 (MO); Río

Terrible valley, *S. Knapp* & *R. Schmalzel* 5489 (MO); Serranía de Mají, S of Ipeti, *S. Knapp et al.* 4485 (B, K, MO). **San Blas:** El Llano-Cartí Rd., Km 19–28, *G. de Nevers* & *H. Herrera* 7248 (CM, K, MEXU, MO, NY), *G. de Nevers et al.* 5079 (MO); Río Cangandi, Pueblo Cangandi, *H. Herrera* 208 (MO); Nusigandí, *G. McPherson* 10788 (MO); Río Acla, Aila Tiwar, *A. Sugden* 455 (K, MO). **Veraguas:** Alto Piedra-Río Dos Bocas, 5–8 km from Escuela Agrícola Alto Piedra, *T. Croat* 25966 (MO); Santa Fe-Calovebora, Escuela Agrícola Alto Piedra, *T. Croat* 49010 (MO), *T. Croat* & *J. P. Folsom* 33969 (MO), *J. P. Folsom* & *L. Collins* 1614 (MO); Santa Fe to Río San Luis, Río Segundo Brazo, *T. Croat* 66894 (MO); Río Primero Brazo, 5 mi. NW of Santa Fe, *R. Liesner* 819 (MO). COLOMBIA. **Chocó:** E side of Serranía del Darién, approached from Acaandí, *A. Juncosa* 666 (MO).

***Anthurium ternifolium* Croat & Carlsen, sp. nov.**

**TYPE:** Ecuador. Pastaza: along road betw. Puyo & Baños, vic. of Shell, less than 1 km N of village, 1°29'39"S, 78°3'52"W, 1096 m, 15 Aug. 2002, *T. Croat*, *L. Hannon* & *P. Schmidt* 86586 (holotype, QCNE; isotypes, B, COL, HUA, K, MO 5735452–5735453 [2], NY, QCA, US, USM, VEN). Figure 3C, D.

Planta terrestris aut epiphytica scandensque, internodiis usque ad 7 cm longis. Folium petiolo semitereti vel D-formi; lamina profunde triloba usque ad [2–]4.0–6.5 cm e basi fissa, lobo medio oblongo-lanceolato gracili, lobis lateralibus falcatis apicibus anguste rotundatis, costis posticis nudis, costa media utrinque acute elevata. Inflorescentia spatha viridi; spadice sessili, viridi, cylindrico aut anguste acuminato.

Terrestrial or climbing epiphyte; internodes up to 7 cm long, 1–1.5 cm diam.; cataphylls drying reddish brown, 4–8 cm long, apex acuminate, decomposing into fibers, persisting at upper nodes. *Leaves* erect; *petiole* (14–)20–34 cm × 3–5 mm, semiterete or D-shaped; *geniculum* 1–1.5 cm × 3–5 mm; *blades* deeply trilobed to [2–]4–6.5 cm from the base, subcoriaceous, 13–28 × [12–]16–26 cm, dark green, semiglossy above, slightly paler, matte below, raphides visible on upper surface, base cuneate; central lobe oblong-lanceolate, [8.5–]14–26 × [3.5–]5–10 cm, apex acuminate; midrib raised above and below, angled; primary lateral veins 5 to 7 per side, arcuate-ascending, sunken above, raised below, departing midrib at 30°–45°; tertiary veins moderately conspicuous; collective veins arising from one of the lowermost pairs of primary lateral veins, 4–7 mm from the margin, sunken above, raised below; lateral lobes falcate [spreading], 35°–45° [70°–90°] from central lobe, 14–22 × 4–8.5 cm, apex narrowly rounded, inner margin straight to weakly convex, outer margin concave; basal veins 3 to 5 pairs, the first free, the rest joined for 2.5–4 cm; posterior ribs straight to weakly arcuate, 55°–65° from midrib, naked for 1–3 cm. *Inflores-*

*cence* erect; peduncle 20–35 cm × 2–5 mm, equal or longer than petiole; *spathe* green, lanceolate, reflexed, 4–8 × 0.6–1 cm, apex acuminate, acumen 3–5 mm long, base obtuse, clasping; *spadix* sessile, green, cylindric to narrowly tapered, (3–)5–10(–14) cm long, 4–5 mm diam. at base, ca. 3 mm diam. at apex; 3 to 4 flowers per principal spiral, rhombic, 3–3.5 × 2–2.5 mm, sides sigmoid; tepals semi-glossy, lateral tepals ca. 1.5 mm wide, inner margin straight to weakly rounded, then curved upward, outer margin angled; stamens not exerted; anthers ca. 3.5 × 0.5 mm, thecae elliptic, slightly divaricate; pistils emergent just at tepal level; stigma slit-like, ca. 0.5 mm across. *Infructescence* green, 7–14 × 0.7–1.5 cm; fruits green, ovate, ca. 5 × 3–4 mm.

*Anthurium ternifolium* is endemic to the northeastern slopes of the Andes in Ecuador (Morona-Santiago, Napo, and Pastaza Provinces), growing between 800 and 1700 m in premontane and montane wet forests (Fig. 4A). The species epithet refers to the deeply trilobed leaf blades with the central lobe being almost equal to the lateral ones in width and length.

*Anthurium ternifolium* is distinguished by its slender, oblong-lanceolate central lobe, semi-terete petiole, midrib acutely raised on both sides, falcate lateral lobes, collective veins 4–7 mm from the margin, and its short, green, sessile spadix.

*Anthurium ternifolium* can be confused with *A. grex-avium* Madison, which occurs at high elevations in southeastern Ecuador, both having falcate slender lateral lobes, climbing habit, and elongated internodes. However, *A. grex-avium* differs in having just one very conspicuous pair of basal veins, winged posterior ribs, and a stipitate spadix. The leaves of *A. ternifolium* may also resemble juvenile leaves of *A. furcatum* Sodiro, both having naked posterior ribs, falcate lateral lobes, and an oblong central lobe. However, *A. furcatum* is distinct in its primary lateral veins departing the midrib at 60°–70°, in having a stipitate, red-purple spadix, and in occurring on the western slopes of the Andes in Ecuador.

*Paratypes.* ECUADOR. **Morona-Santiago:** P. N. Sangay, entre Río Sardina y Volcán, *Montalvo & C. Cerón 21* (QAP). **Napo:** carretera Hollín-Loreto, km 25–31, *A. Alvarado 149* (MO), *F. Hurtado & X. Ruiz 1796* (MO), *W.*

*Palacios 4068* (MO); rd. betw. Baeza and Tena, 31–59 km N of Archidona, *T. Croat 49606* (MO), *T. Croat 49626* (MO), *T. Croat 58783* (MO, QCA); 6.7 km W of Río Payamino, 20 km W of Loreto, *T. Croat 72628* (MO); Río Granadillo, Campamento de INECEL, “Codo Alto,” *W. Palacios 5512* (MO); Proyecto Hidroeléctrico Coca, Río Quijos, 10 km S de Reventador, *W. Palacios 5892* (MO, QCNE). **Pastaza:** vicinity of Mera, *E. Asplund 18548* (S), *E. Asplund 18574* (S), *E. Asplund 19596* (S), *T. Croat 72829* (MO), *M. Lugo 64* (MO, S), *T. Plowman & E. Davis 4549* (S); vicinity of Shell, *X. Cornejo & C. Bonifaz 1460* (GUAY), *T. Croat 73547* (MO, QCNE); Colonia Isidro Ayora, *G. Harling & L. Andersson 16956* (GB); Puyo-Puerto Napo rd., San José ca. 17 km E of Puyo, *G. Harling & L. Andersson 17115* (GB); 4 km N of Mera, along Río San Jorge and Río Tigre, *B. Øllgaard & H. Balslev 9141* (AAU); 3.5 km W of Mera on road to Baños, *B. Stein 2986* (MO).

*Acknowledgments.* The authors thank Peter Stevens (MO) for numerous and very helpful comments on the original manuscript. This publication is part of a yet unpublished revision of *Anthurium* sect. *Semaeophyllum* that the first author carried out as a master’s thesis project at the Biology Department of the University of Missouri–St. Louis, under the guidance of P. Stevens and T. Croat. All photographs used to illustrate the species were taken by the second author. We are thankful to P. Stevens and Roy Gereau for correcting Latin descriptions, and Victoria Hollowell, Dorothy Bay, Jon Ricketson, and an anonymous reviewer for helpful comments on the manuscript. The following herbaria are gratefully acknowledged for their specimens on loan: AAU, B, CAS, CM, DAV, DUKE, ECON, F, GB, GUAY, K, MEXU, MICH, NY, PMA, QAP, QCA, QCNE, S, SEL, US, USM, WIS, WU.

#### Literature Cited

- Croat, T. B. 1986. A Revision of the Genus *Anthurium* (Araceae) of Mexico and Central America. Part II: Panama. *Monogr. Syst. Bot. Missouri Bot. Gard.* 14: 1–204.  
 ———. 1994. Taxonomic status of Neotropical Araceae. *Aroideana* 17: 33–60.  
 ——— & R. D. Sheffer. 1983. The sectional groupings of *Anthurium* (Araceae). *Aroideana* 6: 85–123.  
 Madison, M. 1978. The species of *Anthurium* with palmately divided leaves. *Selbyana* 2: 239–281.  
 Schott, H. C. 1860. *Prodromus Systematis Aroidearum*. Typis congregationis mechitharisticae, Vienna.  
 Sodiro, L. 1903. *Anturios Ecuatorianos*. Monografía II, Contribuciones al conocimiento de la flora Ecuatoriana. Tip. de la Escuela de Artes y Oficios, Quito.