

New Species of *Anthurium* (Araceae) from Andean Western South America

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ABSTRACT

Eleven new species of *Anthurium* are described and illustrated: *Anthurium aramoense* Croat (sect. *Digitinervium*), *A. banderasense* Croat (sect. *Pachyneurium*), *A. becerrae* Croat (sect. *Pachyneurium*), *A. betsyae* Croat (sect. *Porphyrochitonium*), *A. donovanae* Croat (sect. *Digitinervium*), *A. imazaense* Croat (sect. *Pachyneurium*), *A. magrewii* Croat (sect. *Pachyneurium*), *A. paloraense* Croat (sect. *Pachyneurium*), *A. quinonesiae* Croat (sect. *Porphyrochitonium*), *A. riocojimiesense* Croat (sect. *Tetraspermium*), and *A. trujilloi* Croat (sect. *Pachyneurium*). The species are from a broad area of the Andean South America from Colombia to Peru but six of the species: *Anthurium aramoense*, *A. banderasense*, *A. donovanae*, *A. magrewii*, *A. paloraense* and *A. riocojimiesense* are from Ecuador, while *A. becerrae*, *A. betsyae* and *A. imazaense* are from Peru and *A. quinonesiae*, and *A. trujilloi* are from Colombia.

KEY WORDS

Araceae, *Anthurium*, section *Digitinervium*, section *Pachyneurium*, section *Porphyrochitonium*, section *Tetraspermium*, new species.

INTRODUCTION

The senior author is trying to complete the Araceae treatment for the Flora of Ecuador. This project involves describing as many as one thousand species and in order to complete this work a skilled group of volunteer researchers have joined the effort. Two individuals are involved with helping me determine collections, isolating those likely to be undescribed and defining ways they differ from other described species using multichotomous keys, one for *Anthurium* called the Lucid Anthurium Key (Haigh et al., 2009) and one for *Philodendron*, the Lucid Philodendron Key (Mora, 2008) prepared in the Lucid program. Seven individuals are involved in preparing preliminary descriptions each handling material chiefly from a single section of *Anthurium*. Co-author Ann Grace has been responsible for sections *Digitinervium* and *Pachyneurium* which cover most of the species in this group that are being published in this paper. A revision of *Digitinervium* is being produced and will be published at a future date but two species are included here. *Anthurium* sect. *Pachyneurium* was revised and published (Croat, 1991) but six additional species have been discovered

which are being published in this paper. While we have a long term goal of revision for sect. *Porphyrochitonium*, two species, one from Peru and one from Colombia are being published here. In addition, a single species of *Tetraspermium* from Ecuador is included here. Most of the species reported here are from the western montane and pre-montane regions of Ecuador, Colombia and Peru. References to life zones in this paper are in accordance with the Holdridge Life Zone System (Holdridge, 1971).

***Anthurium aromoense* Croat, sp. nov.**

Type: ECUADOR. Manabí: El Aromo Rancho, Bello Horizonte, 100 m, X. *Cornejo* and C. *Bonifaz* 7346 (holotype, MO-5694735; isotype GUAY). Figures 1A–B.

The species is a member of the section *Digitinervium* characterized by its epiphytic habit, short, thick internodes, persistent intact cataphylls, deeply and sharply sulcate petioles, broadly ovate coriaceous blades with subtruncate leaf bases and narrowly rounded-emarginate apices, drying grayish dark brown above and medium reddish brown below as well as by the green reflexed spathe and the cylindroid-tapered green spadix with early emergent pistils. The short pale-lineate surface and the densely pock-marked lower surface are also distinctive.

Anthurium aromoense tracks in the Lucid Anthurium Key to *A. ovatifolium* Engl. which is distinguished by its 17–33 primary lateral veins, narrower blades (1.8 times longer than broad) and spadices with 12–15 flowers visible per spiral; *A. occidentale* Sodirol, distinguished by its longer and narrower blades (to 60 cm and 2 times longer than broad) and shorter peduncles (20 cm); *A. pachyspathum* K. Krause, distinguished by its narrower blades (2 times longer than broad), shorter peduncles (50–55 cm), stipitate spadices and broader spathes; *A. polystichum* Sodirol, differing by its scandent habit with very long internodes (8–15 cm), very long cataphylls (15–20 cm), narrower blades (2.2 times longer than broad), and shorter petioles (25–30 cm).

Epiphytic, **internodes** very short, 2.5 cm diam., with abundant adventitious roots; **cataphylls** 10–11.5 cm long, weakly acuminate at apex, drying reddish brown, persisting intact. LEAVES 86.3 cm long with **petioles** 46 cm long, 1 cm diam., drying dark brown, C-shaped, narrowly V-sulcate adaxially with the margins drying bluntly acute; **geniculum** 2.5–3 cm long, darker, slightly swollen with longitudinal striations; **blades** coriaceous, 39.8 cm long, 26.5 cm wide, widest in the lower 1/10, 1.5 times longer than wide, 0.9 times longer than petiole, narrowly rounded and weakly emarginate at the apex, truncate-broadly rounded at the base, matte to weakly glossy on both surfaces, margin prominently rolled under; **midrib** drying faintly raised in valley, concolorous above, narrowly rounded, finely ribbed, darker below; **primary lateral veins** 11 pairs, scalariform, arising from the midrib and basal veins at 30–40° angles, deeply sunken above with edges raised, finely, narrowly raised, irregularly ridged, darker below with usually a single somewhat irregular interprimary vein between; **tertiary veins** few; **basal veins** 4 pairs, concolorous, slightly raised in valley above, prominently raised, rounded below, inner pair forming the **collective veins**, middle pair margin out in upper 1/3 of blade, outer pair margin out in lower 1/5 of blade; **upper surface** drying semiglossy upon magnification, aerolate-ridged and densely but obscurely short-pale-lineate, grayish dark brown; **lower surface** drying semiglossy upon magnification, densely and conspicuously pock marked, sparsely short-pale-lineate, with scattered white pustules and large glandular punctations, medium reddish brown. INFLORESCENCE 86 cm long with **peduncles** 67.5 cm long; **spathe** green, 10.5 cm long, 1.5 cm wide, reflexed, subpendular; **spadix** green, sessile, 19.8 cm cylindroid-tapered, **flowers** 5–6 visible per spiral, 3.0–3.6 mm long and wide, **tepals** irregularly ridged-granular upon drying, inner margins nearly straight with edges curled upward, outer margins 2-sided.

Anthurium aromoense is endemic to Ecuador, known only from the coastal

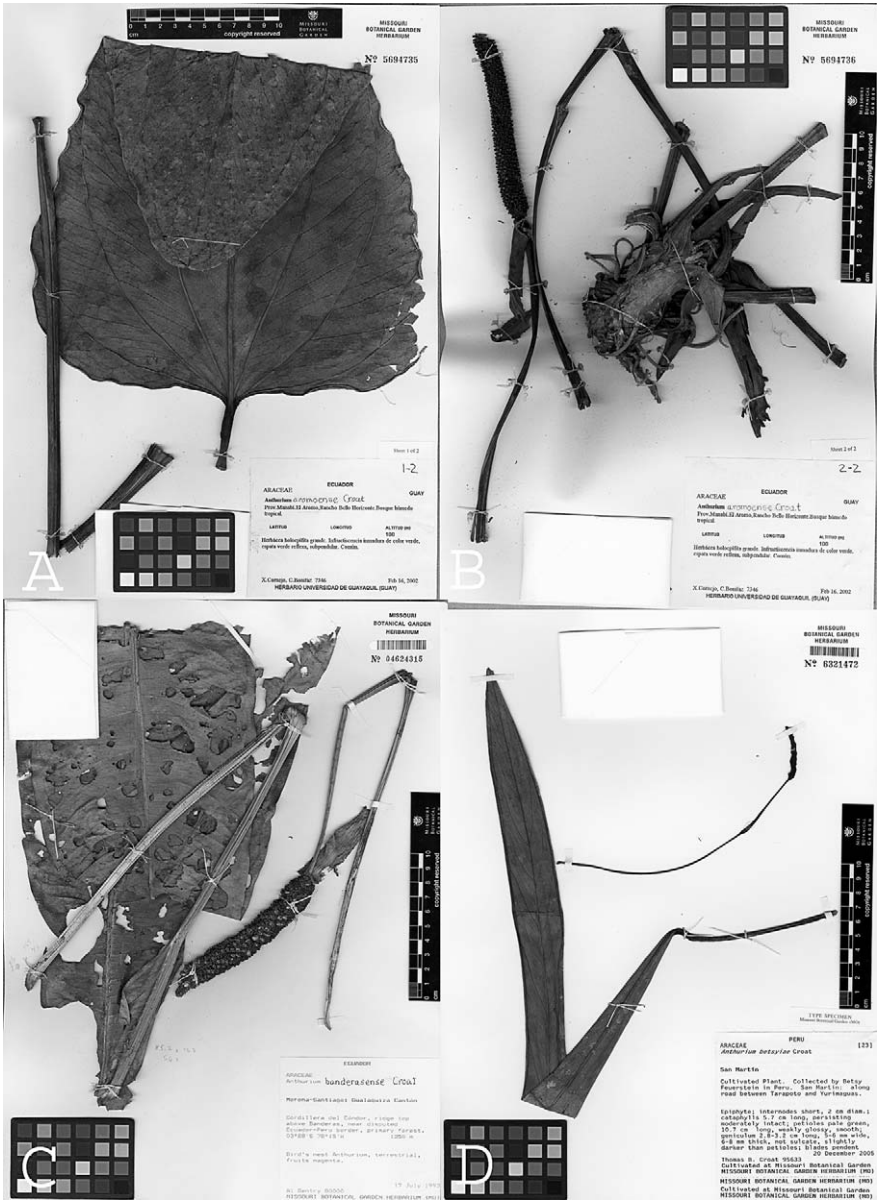


Fig. 1. A–B. *Anthurium aromoense* Croat. (Cornejo 7366). A. Herbarium type specimen showing leaf blade abaxial surface with adaxial surface folded back. B. Herbarium type specimen showing stem, cataphylls and inflorescence). C. *Anthurium banderasense* Croat. (Gentry 80000). C. Herbarium type specimen showing leaf blade folded four times, adaxial surface at upper portion of photo. D. *Anthurium betsyae* Croat. (Croat 95633). D. Herbarium type specimen showing leaf blade folded once with abaxial surface at apex.

mountains in Manabí Province at 100 m in a *Tropical moist forest* life zone.

Anthurium aromoense is named for the location at El Aromo Rancho where the type specimen was found.

***Anthurium banderasense* Croat, sp. nov.** Type: ECUADOR. Morona-Santiago: Gualaquiza Canton, Cordillera del Cóndor, ridge top above Banderas, near disputed Ecuador-Peru border, primary forest, 03°28'S, 78°15'W, 1,350 m, 17 July 1993, *A. Gentry 80000* (holotype, MO-04624315; isotype, QCNE). Figure 1C.

The species is a member of the section *Pachyneurium* characterized by its terrestrial habit, short internodes, moderately elongated pale yellow-brown-drying, sharply C-shaped petioles which have margins that dry sharply and narrowly acute, are flattened adaxially with a medial rib and abaxially several ribbed, with a short geniculum, yellowish green-drying blades with prominently pale-pustular surfaces, weakly raised primary lateral veins and collective veins that arise from one of the lower primary lateral veins as well as by the green reflexed spathe, and weakly tapered spadix with magenta berries.

In the *Lucid Anthurium Key* *A. banderasense* tracks to *A. bonplandii* G. S. Bunting which is distinguished by having more ovate blades (3–4 times longer than broad), shorter petioles (20–40 cm), and a prominent stipe; *A. glaucospadix* Croat, from the Cordillera Occidental in Colombia, differs by its more ovate blades (2.5–3.5 times longer than wide), long stipe (2–5 cm) and shorter petioles, 4–26 cm; *A. holm-nielsenii* Croat, differing by having more primary lateral veins (up to 20) which arise from the midrib at a 45–60° angle, a stipitate spadix and orange berries; *A. latissimum* Engl., differing by its more ovate blades (2–3 times longer than wide), fewer primary lateral veins (10–12), a stipitate spadix and shorter peduncles (20–35 cm long).

Terrestrial; **internodes** very short; **cataphylls** not seen. LEAVES 130.3 cm long with **petioles** 44.3 cm long, 0.8 cm diam.,

drying light tan, sharply C-shaped adaxially with margins acutely narrow and curled under, flattened adaxially with a medial rib, drying yellowish with 5 prominent ribs abaxially; **geniculum** 1 cm long, about as broad as shaft; **blade** 86 cm long, 16.3 cm wide, widest near the middle of the blade, lanceolate, narrowly acuminate at apex, narrowly attenuate at base, 5 times longer than wide, 1.9 times longer than petiole; **midrib** drying convex, minutely many-ribbed, drying sharply acute, finely ribbed and conspicuously granular-pustular below; **primary lateral veins** 19 pairs, arising at a 60–70° angle from the midrib, drying weakly and narrowly rounded, slightly lighter than blade on both surfaces; **basal veins** 1 pair margining out in a few cm; **collective veins** arising from one of the lower primary lateral veins, running 3–8 mm from the blade margin to the apex; **upper surface** drying medium dark yellowish green, semiglossy, minutely granular; **lower surface** slightly lighter yellowish green, semiglossy, minutely-granular (including on the **tertiary veins**, both surfaces epunctate but abundantly pale-pustular. INFLORESCENCE 54.4 cm long with **peduncle** 41.9 cm long, 4 mm diam., drying coarsely ribbed, light tan; **spathe** 7 cm long, 1.9 cm wide, lanceolate, reflexed, drying slightly orangish brown; **spadix** post-anthesis sessile, 12.4 cm long, 1.8 cm diam., weakly tapered. INFRUCTESCENCE: **berries** magenta, emergent, 3 mm × 3 mm.

Anthurium banderasense is endemic to the Cordillera del Cóndor in Ecuador (but is undoubtedly to be found in the same region on the Peruvian side of the border) at 1,350 m in a *Premontane wet forest* life zone.

The species is named for the type location near Banderas, Morona-Santiago, Ecuador.

***Anthurium becerrae* Croat, sp. nov.**

Type: PERU. Cajamarca: San Ignacio Province, Distrito Huarango, Poblada Selva Andina camino hacia la captación do humus; 05°03'50"S, 78°43'19"W, 2,378 m, 25 Aug 2007, *J.*

Perea, E. Becerra, A. Peña and J. Diaz
3784 (holotype, MO-6108182; iso-
type, USM). Figures 3A–B.

The species is a member of the section *Pachyneurium* characterized by its epiphytic habit, short internodes, densely arranged roots, lanceolate cataphylls which persist as a network of pale fibers, and short more or less fully sheathed petioles which are rounded abaxially and narrowly sulcate adaxially. The oblanceolate to oblanceolate-elliptic blades are narrowly rounded to truncate at the base, prominulous tertiary veins and collective veins that, when present, arise from one of the uppermost primary lateral veins. The long-pedunculate inflorescence has a greenish lanceolate reflexed-spreading spathe and a long tapered sessile pinkish red spadix.

In the Lucid Anthurium Key, *A. becerrae* tracks to *A. dombeyanum* Brongn. ex Engl., *A. ernestii* Engl., *A. lennartii* Croat and *A. soukupii* Croat. *Anthurium dombeyanum* occurs at somewhat lower altitudes (700–1,500 m), the blades have fewer primary lateral veins (less than 15), attenuate base and the spadix is larger and more cylindrical; *A. ernestii* occurs at even lower altitudes (100–700 m), the blades are attenuate at the base, have fewer primary lateral veins (less than 15), shorter peduncle (10–20 cm), a yellow spathe, and thicker spadix (1–1.5 cm diam.); *A. lennartii* has blades which are broadest in the middle, dries greenish to yellowish, has collective veins and the green spadix is supported by a 1–3 cm stipe; *A. soukupii* has smaller blades (less than 60 × 11 cm) that dry greenish or yellowish, collective veins and a smaller dark purple spadix 3–6 cm long and larger flowers (3–4 mm length and width).

Epiphytic; **internodes** very short; **cataphylls** sometimes persisting as orange hair-like fibers, 4–7 cm long. LEAVES 67–77 cm long with **petioles** 4–7.5 cm long, 0.4–1.1 cm diam.; **geniculum** 0.5 cm long, drying darker, slightly swollen; **blades** oblanceolate, 63.2–71.5 cm long, 11.7–17.3 cm wide, 4.1–5.4 times longer than broad, 9.5–15 times longer than petiole,

acuminate at apex, narrowly truncate at base; **midrib** narrowly acute above, broadly flattened with many fine ribs, reddish below; **primary lateral veins** 14–19 pairs, arising from the midrib at a 40°–50° angle, acutely and narrowly raised, concolorous above, narrowly rounded and darker below; **basal veins** numerous pairs (4–8) very fine veins radiating out of petiolar plexus and ending at the margin in the lower 5 cm of base; **collective veins** absent, each primary lateral vein arching to the margin; **upper surface** drying dark greenish brown, minutely and finely granular, sparsely pale short-lineate, semiglossy, epunctate, with scattered white pustules, **lower surface** drying lighter reddish brown, minutely granular, semiglossy, epunctate, with abundant white pustules, lacking short pale lineations. INFLORESCENCE 31–62 cm long (averaging 47) with **peduncle** 24–58 cm long (averaging 45), 0.2 cm diam.; **spathe** green, narrowly lanceolate, 6.5–15 cm long, 0.9–1.3 cm wide, **spadix** garnet-red, sessile, long, slender, long-tapered, 7–17.4 cm long, 0.4–0.5 cm diam., 4–5 flowers visible per spiral, 2.2–2.6 mm long, 1.8 mm wide, tepals matte papillate, glittering with a few pale cellular inclusions, lateral tepals 1.3 mm wide.

Anthurium becerrae is endemic to Peru, known only from the type locality in Cajamarca Department, San Ignacio Province at 2,378 m in a *Premontane tropical wet forest* life zone.

The species is named in honor of the Peruvian botanist, Edwin Becerra, who collected the type specimen along with J. Perea, A. Peña and J. Diaz. He is associated with the National University of San Marcos and recently published a dissertation on the Diversity of Orchidaceae in Yanachaga National Park, Chemillen, Peru.

***Anthurium betsyae* Croat sp. nov.** Type: PERU. San Martín: Along road between Tarapoto and Yurimaguas, just beyond the tunnel, 6°24'14"S, 76°18'10"W, 945 m, collected Jan 2002 by B. Feuerstein, cultivated plant vouchered 16 July 2012, *T. B. Croat* 95633

(holotype, MO-6321472: isotypes; AAU, B, CAS, COL, CUVC, F, G, HUA, K, M, NY, PSO, QCNE, S, SEL, UB, US, VEN). Figure 1D.

The species is distinguished by its thick, linear, pendent leaves that are matte above and dark glandular-dotted below as well as by its white, lavender-tinged berries. The species is similar to *Anthurium vittarifolium* Engl. from the upper Amazon region but that species lacks glandular punctations and has red berries. There are relatively few species of sect. *Porphyrochitonium* that have strap-shaped leaves but another species which does is *A. friedrichsthalii* Schott of which ranges from Costa Rica to Colombia. That species differs in having orange berries. The Lucid Anthurium Key tracks to three species of *Porphyrochitonium* from Peru with linear blades; *A. baguense* Croat which is distinguished by longer petioles (34–45 cm), blades which are shorter (21–32 cm long) and more ovate and green a spadix; *A. kayapii* Croat which is distinguished by a 25–40° angle departure of primary lateral veins from midrib and spadix which is green to pink; and *A. ligulare* Croat which may be distinguished by short petioles (9–11 cm), a maroon spadix with only 3 flowers visible per spiral.

Epiphytic; **internodes** short, 1.5–3 cm long; **cataphylls** 3–7 cm long, persisting as dark reddish brown shredded fibers. LEAVES 45–79 cm long (average 61), with **petioles** 11.7–19.1 cm long, (averaging 15.6 cm), 3–4 mm diam., nearly terete, narrowly flattened or with narrow, shallowly sulcus adaxially, sheathed 2 cm at base, pale green, weakly glossy, smooth; **geniculum** 1.5–3.2 cm long, 5–6 mm wide, 6–8 mm thick, not sulcate, slightly darker than petiole; **blades** linear, to linear-elliptic, pendent from spreading petioles, 33–60 cm long (averaging 45.3 cm), 3.7–6.3 cm wide (averaging 5 cm), widest near the middle, 5.5–7 times longer than wide (fresh blades), 14–15 times longer than wide (dried blades shrivel laterally and margins curl under), 2–5 times longer than petioles, narrowly acute at apex and at

base, dark green and matte and eglandular above, moderately paler and weakly glossy and dark glandular-punctate below, the margins curled under; **midrib** slightly paler than surface, convex at base, narrowly rounded by middle, becoming bluntly acute toward apex above, thicker, narrowly rounded and moderately paler below; **primary lateral veins** 7–10 pairs, arising at a 15–20° angle, weakly sunken and concolorous above, weakly raised, narrowly rounded and slightly darker below; **collective veins** arising from one of the lowermost pairs of primary lateral veins, more conspicuously sunken than primary lateral veins above, but less so than primary lateral veins below. INFLORESCENCE pendent; **spadix** nearly 90° pendent from spreading peduncle; **spathe** 3.7–7.3 cm long, 4–9 mm wide; **immature spadix** 3–7 cm long, 2–3 mm diam., purplish violet; **flowers** 4–5 visible per spiral, 1.6–2.5 mm long, 1.4–2.2 mm wide; **tepals** triangular, pinkish tan, glossy, speckled with violet; lateral tepals 1–1.5 mm wide, inner margins broadly rounded, outer margins 2 sided; **fruiting spadix** 20 cm long, 1.5–2 cm diam. with berries emergent with tepals faintly purplish, semiglossy, triangular to shield-shaped; inner margin broadly rounded, outer margin 2–4 sided. INFRUCTESCENCE: **berries** white, tinged lavender, lavender at apex at maturity, usually with a purplish cross with weak ridges at apex, 4.2–5.2 mm long, 3.2–3.5 mm diam.; stigma 0.4 mm diam., oblong-elliptic, borne in a weak depression, mesocarp whitish and mealy; seeds 2 per berry, manila, 1.8–2 mm long, 1.1–1.3 mm wide, ca. 1 mm thick, enclosed in a translucent envelope.

Anthurium betsyae is a member of sect. *Porphyrochitonium*, known only from the type locality in San Martín Department of Peru at 945 m in a *Tropical moist forest* life zone.

The species is named in honor of Betsy Feuerstein of Memphis, Tennessee, who discovered the species. Betsy has a keen interest in Araceae and explored several areas in Latin America but especially in Ecuador where she is often among the first to visit a region. She has been generous

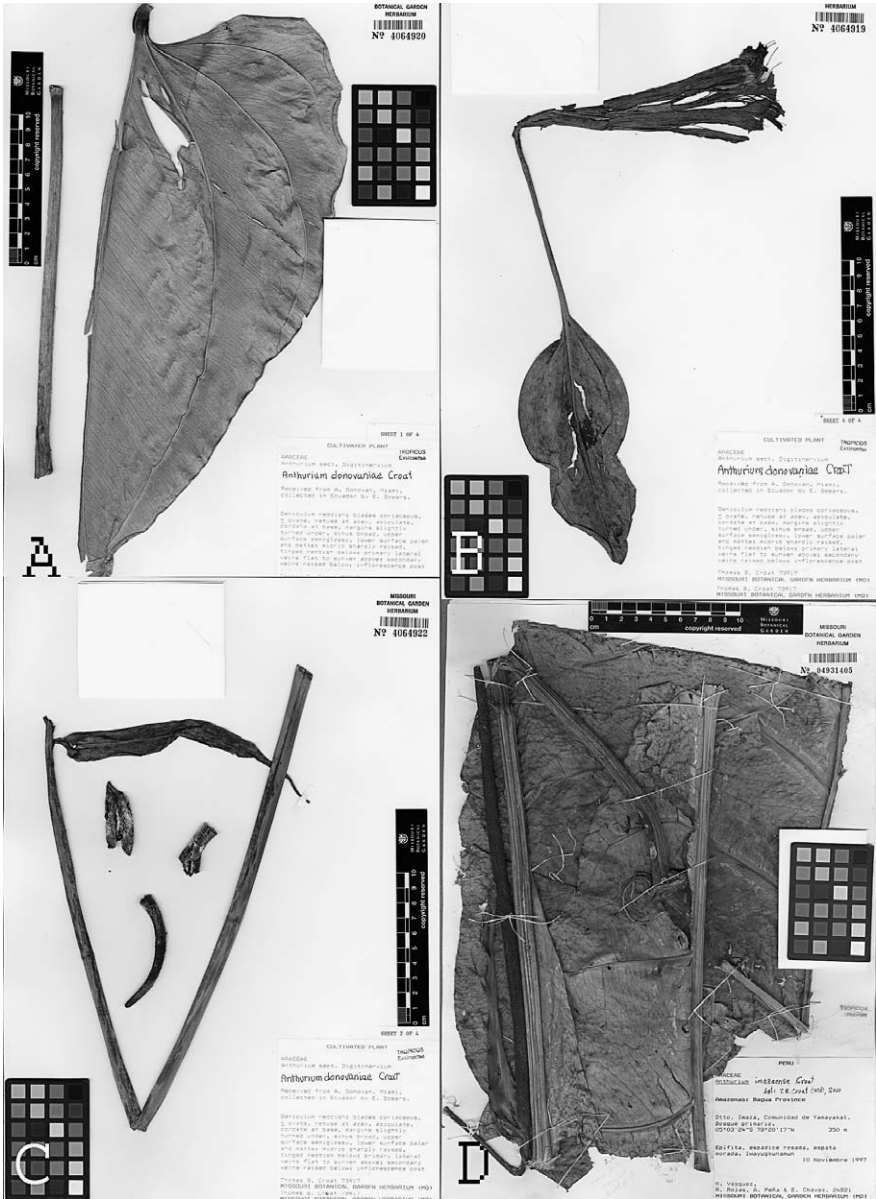


Fig. 2. A–C. *Anthurium donovoniae* Croat. (Croat 73917). A. Herbarium type specimens showing leaf blade and detached petiole, abaxial surface exposed. B. Herbarium type specimen showing smaller leaf with petiole. C. Herbarium type specimen showing inflorescence with detached spadix, spathe partially attached. D. *Anthurium imazaense* Croat. (Vasquez 24821). D. Herbarium type specimen showing leaf cut into three parts (left) apical portion with adaxial surface on right, the tip folded over to expose the abaxial surface; part of apex missing.

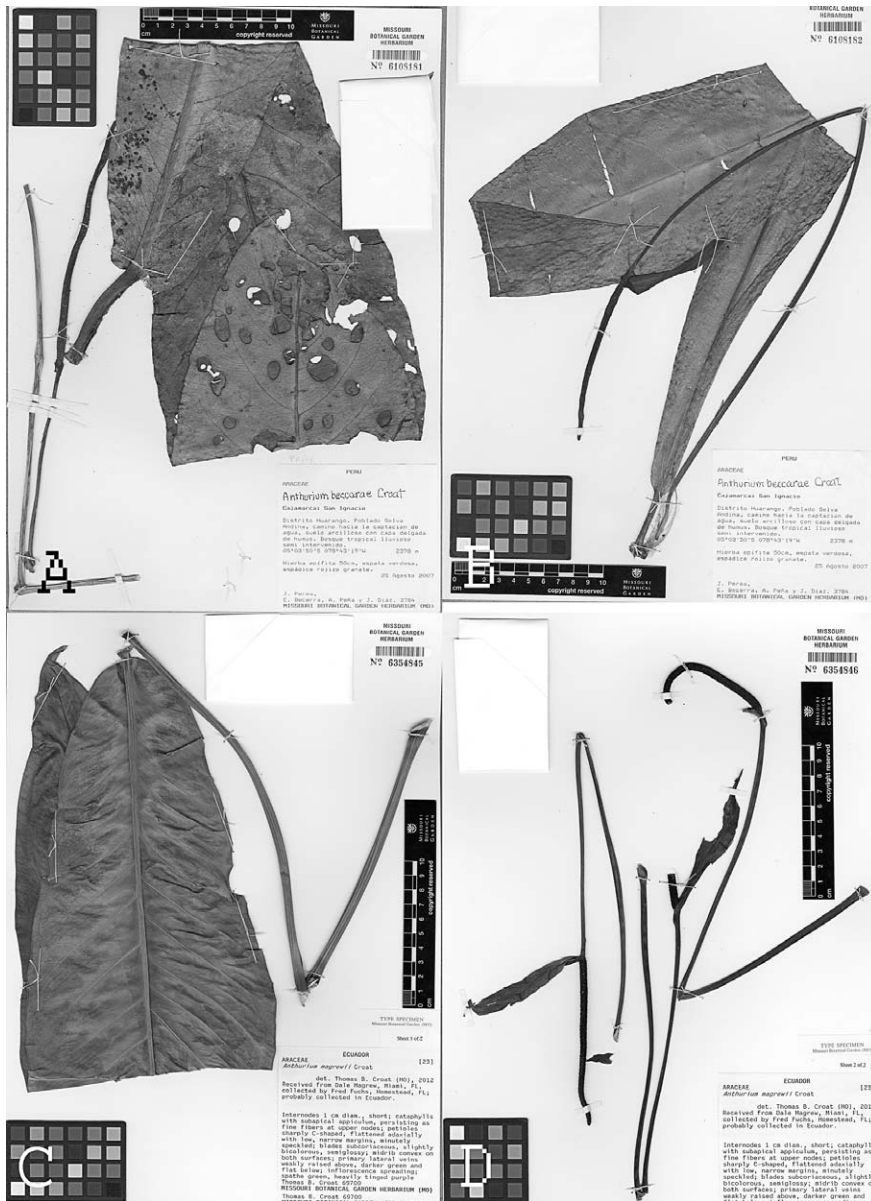


Fig. 3. A–B. *Anthurium becerrae* Croat. (Pera 3784). A–B. Herbarium type specimens: A. Showing blade folded (upper left side) base showing abaxial surface, (middle portion) abaxial surface. B. Showing blade folded at base and apex showing adaxial surface, middle portion abaxial surface. C–D. *Anthurium magrewii* Croat. (Croat 69700). C–D. Herbarium type specimens: C. Showing blade folded, basal 1/2 showing abaxial surface. D. Showing three separate inflorescences.

with her advice and with her living plant material and has been very beneficial to my research efforts.

***Anthurium donovaniae* Croat, sp. nov.**

Type: ECUADOR, without exact locality; collected by Elaine Spears, cultivated by Amy Donovan, vouchered July 3 1992, *T. B. Croat 73917* (holotype, MO-4064919-22). Figures 2A–C.

The species is a member of sect. *Digitinervium*, characterized by its short internodes, deeply sulcate petioles, ovate-cordate blades which are glandular-punctate on the lower surface with three pairs of basal veins, the innermost extending to the apex and very remote from the margin, the second of which extends to above the middle as well as in having rather closely parallel veins extending between the basal veins. In addition the species has a long-pedunculate inflorescence with a green spathe and spadix.

Anthurium donovaniae is not close to any other species of sect. *Digitinervium*, differing from most other species by having the blades drying yellow-green on the upper surface. The species resembles *Anthurium ovatifolium* but this species has much broader leaves, 4 or more basal veins and 14 flowers visible per spadix spiral. In terms of dried blade color, *Anthurium donovaniae* is more similar to *A. lingua* Sodiro but that species has a much narrower blade.

Internodes not seen; **cataphylls** persisting intact 10–15 cm, drying dark reddish brown. **LEAVES** 67.3 cm long with **petioles** narrowly sulcate adaxially, 26.3 cm long, 0.5 cm diam., **geniculum** reddish, 2 cm long, 1 cm diam., drying reddish brown; **blades** ovate, coriaceous, 41.5 cm long, 34 cm wide 1/3 length from the base, retuse, apiculate at apex, subcordate at base, margins slightly turned under; **sinus** 1.7 cm deep, 8 cm wide; **upper surface** semiglossy, drying greenish grey; **lower surface** drying semiglossy, yellow-green with dark uniformly scattered dark glandular punctations; **midrib** sharply raised, tinged with red below, drying broadly

rounded, finely ribbed below; **primary lateral veins** 7 pairs arising from the midvein at a 40–45° angle and ending in the 1st basal vein, the 1st pair of primary lateral veins loop connect to the 2nd and 3rd pair before joining the 1st basal vein, concolorous, flat to sunken above, slightly raised and inconspicuous on the lower surface; **basal veins** 3 pairs, much more prominent than primary lateral veins, larger, more steeply raised, 1st pair arising from the petiolar plexus at 55° angle, receiving the primary lateral veins and ending at the apex, 2nd pair arising from the plexus at a 20° angle and margining out above the middle of the blade, 3rd pair arising from the plexus and margining out ¼ the length of the blade. **INFLORESCENCE** 75.9 cm long, erect with **peduncle** 60.2 cm long, 0.5 cm diam., sulcate adaxially; **spathe** oblong-lanceolate with a long, tapering apex, 15.8 cm long, 2 cm wide, **spadix** 15.7 cm long, 1.2 cm diam., slightly curved and tapering; **flowers** 6–8 visible per spiral, 1.9 mm long, 2.0 mm wide; **tepals** drying glossy, papillate, lateral tepals width 1.2 mm.

Anthurium donovaniae is endemic to Ecuador but without a specific locality, however the species surely came from the middle to higher elevations in the Andes where all other species in the section occur.

The species is named in honor of the late Amy Donovan who provided the type specimen from a cultivated plant. Amy was long associated with the International Aroid Society and served as Editor of *Aroideana* between 1988–1998 before her death in 2006. Amy and her late husband, Jim, were mainstays of both the Aroid Society and the Bromeliad Society in the Miami Area. Their yard was always beautifully adorned with colorful flowers.

***Anthurium imazaense* Croat, sp. nov.**

Type: PERU. Amazonas: Bagua Province, Distrito Imaza, Comunidad de Yamayakat, 05°03'24"S, 78°20'17"W, 350 m, 10 Nov 1997, *R. Vasquez, R. Rojas, A. Peña & E. Chavez 24821* (holotype, MO-0493405; isotype, USM). Figure 2D.

The species is a member of sect. *Pachyneurium* characterized by its epiphytic habit, pale brown, fine cataphyll fibers, the petiole V-sulcate adaxially, 3-ribbed abaxially with a short geniculum but especially by the naked axis of the blade between the blade proper and the geniculum of the petioles. Also characteristic of this species is the short peduncle, the lanceolate violet-purple light red spathe and the violet-purple, narrowly long-tapered weakly stipitate spadix.

The characteristic naked axis in the lower part of the leaf blades above the short geniculum of *Anthurium imazaense* is similar to *A. pranceanum* Croat and *A. krukovii* Croat but both of these species occur in Brazil. In addition, *Anthurium pranceanum* differs in having ovate-elliptic to ovate blades with the lower blade surface dark glandular-punctate and an inflorescence with the peduncle much longer than the spadix and the stipitate spadix less than 10 cm long.

In the Lucid Anthurium Key, *A. imazaense* tracks to *A. dombeyanum* Brongn., *A. pendulifolium* N. E. Br. and *A. plowmanii* Croat. *Anthurium dombeyanum* may be distinguished in having very short petioles, (5.5–9.5 cm), the leaf base is directly connected to the geniculum and longer peduncle (25–35 cm), stipe and cylindrical spadix. *Anthurium pendulifolium* differs in having longer petioles (14–20 cm), lanceolate blade 4–6 times longer than wide and more primary lateral veins (15–20 pairs). *Anthurium plowmanii* is distinguished by its nearly elliptical blade with prominently undulate margins, thicker, darker geniculum directly connected to the blade base, primary lateral veins which arise from the midrib at a 40–50° angle.

Despite the marked differences with its remote geniculum the species probably most closely resembles *Anthurium dombeyanum* in appearance owing to its large brown-drying leaf blades and its petiole shape. Nevertheless that species, in addition to having the geniculum at the base of blade, differs in occurring generally at elevations above 900 m.

Epiphytic; **internodes** very short; **cataphylls** probably lanceolate. LEAVES 166 m long with **petioles** 34 cm long, 1 cm diam., drying with V-shaped sulcus adaxially, prominently 3-ribbed abaxially; **geniculum** 9 mm, remote from the leafy portion of the blade, naked axis of blade 11.5 cm; **blades** 132 cm long, 50 cm wide, 2.6 times longer than wide, 3.9 times longer than petiole, narrowly obovate, narrowly rounded at apex, attenuate at base, epunctate, semiglossy, somewhat bicolorous, drying grayish brown above, grayish yellow-brown below; **midrib** drying prominently raised, narrowly acute adaxially (1 cm wide, 0.7 cm high), narrowly raised, drying light yellow-brown, prominently 2 or more ribbed on either side, several-ribbed on each side abaxially; **primary lateral veins** 13 pairs arising from the midrib at an 80° angle near the base, a 50° angle toward the apex, drying narrowly round-raised (2 mm wide, 1 mm high), reddish brown adaxially, round-raised, finely ribbed, darker than surface abaxially; **collective veins** lacking, even the uppermost primary lateral vein merging with the margin; **upper surfaces** drying semiglossy, minutely granular with a few white pustules near and on the midrib; **lower surface** drying moderately smooth. INFLORESCENCE 42 cm long, sessile with **peduncle** 7.5 cm drying nearly terete, 3 mm diam.; **spathe** reddish, 20 cm long, 2 cm wide, erect-spreading, drying fibrous, reddish; **spadix** stipitate 6 mm, violet-purple, 34.5 cm long, 1 cm diam., gradually tapering; **flowers** 12–15 visible per spiral, 2.2–2.4 mm long, 1.8–1.9 mm wide; **tepals** sparsely granular, lateral tepals 1.3 mm wide, inner margins broadly rounded with rippling edges flaring upward, outer margins 2-sided.

Anthurium imazaense is endemic to Peru in Amazonas Department, Bagua Province at 350 m in a *Premontane wet forest* life zone.

The species is named for the type locality in the Distrito Imaza in Bagua Province.

***Anthurium magrewii* Croat, sp. nov.**

Type: ECUADOR. Exact locality unknown, originally collected by Fred

Fuchs, Homestead, FL, cultivated by Dale Magrew, vouchered 16 Mar 2012, *T. B. Croat 69700* (holotype, MO-6354845; isotypes, AAU, B, BR, C, CAS, COL, CUV, DUKE, F, G, GB, GH, GOET, HUA, IMB, INPA, K, L, LE, M, MEXU, MICH, NY, P, PMA, PSO, QCNE, RB, RSA, S, SEL, TEFH, TEX, UB, US, VEN, W). Figures 3C–D.

The species is a member of sect. *Pachyneurium* characterized by its short internodes, densely arranged roots, cataphylls persisting as fine fibers, U-shaped, obtusely and deeply sulcate petioles, moderately coriaceous oblong-elliptic blades with two basal veins, the outer of which merge soon with the margin, the inner forming the collective veins as well as by the spreading, moderately long-pedunculate inflorescences with a spreading green lanceolate spathe, and a long-tapered dark purple spadix with matte flowers.

In the Lucid Anthurium Key the species tracks to *Anthurium atropurpureum* R. E. Schultes & Maguire which differs in having broader blades (length/width ratio 2.9), only 12–14 pairs of primary lateral veins, and 10–12 flowers per main spiral; *A. pendulifolium* N. E. Br. which differs in having much longer blades (65–105 cm) which are attenuate at the base, and only 10–13 primary lateral veins; and *A. pseudospectabile* Croat which also differs in having much longer blades (65–150 cm) and as many as 40 primary lateral veins which arise from the midrib at a 35–40° angle.

Internodes 0.2–0.3 cm long, 3–4 cm diam.; **roots** moderately dense, 4 mm diam., light brown; **cataphylls** with subapical apiculum, persisting as fine fibers at upper nodes. **LEAVES** 105–131 cm long (averaging 118) with **petioles** 41.2–57 cm long, 8 mm thick, 7 mm wide, basically terete, drying obtusely U-shaped, obtusely deeply and narrowly sulcate, flattened adaxially with bluntly acute margins, minutely short-speckled, **geniculum** 2–2.5 cm long slightly swollen; **blades** oblong-elliptic, 55.1–74.1 cm long, 10–20.3 cm wide, 3.1–5.9 times longer than

wide (averaging 4.1), 1.0–1.4 times longer than petiole (averaging 1.3), subcoriaceous, shortly and gradually acuminate at apex, rounded at base; **midrib** drying narrowly rounded and concolorous above, narrowly rounded and slightly paler below; **primary lateral veins** 16–25 pairs, arising from the midrib at 40–50° angles, weakly raised to narrowly raised and concolorous above, bluntly acute and darker green below, drying paler below; **basal veins** 2 pairs, the outer pair weak and soon margining out, the inner and principle basal pair forming the **collective veins** and running to the apex, 7–10 mm from margins; **tertiary veins** flattened, darker than surface. **INFLORESCENCE** erect-spreading, 32–86 cm long (averaging 59) with **peduncles** 27–70 cm long (averaging 42.5 cm), terete, 5–7 mm diam., drying 2–4 mm diam.; **spathe** spreading, green, lanceolate, 6–18.4 cm long, 1–2.3 cm wide, heavily tinged purple within with midrib darker purple, sometimes also on outside; **spadix** dark purple, matte, 5–17.5 cm long (averaging 12.1), 4–8 mm diam. (averaging 6); **flowers** 5–8 visible per spiral, 2.8–3 mm long, 2.6 mm wide; **tepals** matte, minutely papillate, sparsely pale-dotted; **lateral tepals** 1.6 mm wide, the inner margin broadly rounded, outer margins 2-sided; stamens held at the level of the tepals; anthers 0.6 mm long, 0.95 mm wide. **INFRUCTESCENCE**: **berries** reddish, obovoid, 5 mm diam., 6 mm long; seeds ovoid, 2.8–3.3 mm × 2.2–2.5, purplish speckled, 1.0–1.8 mm thick bicolorous, dark green and weakly semiglossy to weakly glossy above, paler and matte, weakly glaucous below.

Anthurium magrewii is endemic to Ecuador, known only from the type specimen but from an unknown locality so both the life zone and elevation are also unknown.

The species is named in honor of the late, Dale Magrew from Miami from whom I received the plant. Dale was an avid collector of aroids and a long-standing and active member of the International Aroid Society.

Anthurium paloraense Croat, **sp. nov.**

Type: ECUADOR. Morona-Santiago: Palora to Yushin (Llushin), m 6.0 km NNW of Palora, then km E of main Palora-San Vicente de Tarquí Road, 01°40'14.4"S, 78°01'1.2"W, 875 m, *Croat 90105* (holotype, MO-606887; isotypes, B, COL, F, K, NY, M, QCNE, S, US). Figure 4A.

The species is a member of sect. *Pachyneurium* characterized by its short internodes, dense roots, short, D-shaped petioles, oblanceolate blades and sessile, narrowly cylindrical, pale yellow-green spadix.

Anthurium paloraense is closely related to *A. trujilloi* Croat from Caqueta Department in Colombia at 487–519 m. That species differs in having proportionately narrower blades that dry darker olive-brown on the lower surface with blackened primary lateral veins that arise at a 20–30° angle, petioles which are more prominently 3-ribbed abaxially and have more prominently raised, incurled margins adaxially with a prominent medial rib as well as a pale yellow-green spadix and tepals which are 3-sided on the outer margins.

The species also resembles *Anthurium latissimum* Engl. in having the lowermost primary lateral veins departing the midrib at 90° angles but that species has much longer petioles which are nearly equal in length to the blade and the blade is broadly ovate, reflected in the blade length/width ratio of 2 compared with 4 in *A. paloraense*. *Anthurium paloraense* is similar to an undetermined species from the Valley of Río Waiwaime but differs in that the blades dry a light brown with dark reddish black midrib. Also, the geniculum of *Anthurium paloraense* is much smaller and less noticeable than that of the other species whose geniculum is larger and much more prominent.

Epiphytic; **internodes** short, 1.3 cm diam.; **roots** densely arranged, pale greenish white; **cataphylls** 4.6 cm long, narrowly lanceolate, slightly curved, persisting more or less intact, reddish brown. LEAVES 79.5 long; **petioles** 7–8 cm long, 0.6–1.1 cm

thick and broad, narrowly D-shaped, the adaxial margins moderately acute and weakly raised (the margins sometimes weakly undulate toward apex, rounded to weakly 3-ribbed abaxially with a weak rib on one side, at least the younger petioles heavily tinged purple-violet, weakly glossy; **geniculum** 2 cm long, 1.4 cm thick and broad, drying darker than petioles; **blades** narrowly oblanceolate, 72.5–74 cm long, 17–19.7 cm wide, 4 times longer than broad, broadest in apical 1/3, 10 times longer than petioles, abruptly and weakly acuminate at apex, gradually tapered to base and abruptly ending with an inequilaterally acute base, semiglossy, somewhat bicolorous, drying dark brown and weakly glossy above, dark olive-brown and semiglossy below; **midrib** bluntly ribbed near the base, becoming promptly more acutely ribbed, sharply triangular to the apex, more or less concolorous above, narrowly rounded and reddish brown below, weakly ribbed near the base, drying the same; **primary lateral veins** 13–14 pairs, narrowly rounded and more or less concolorous above, slightly thicker, narrowly rounded and reddish brown below, arising at an acute angle then abruptly spreading at up to 90° angle near the base, to 70° angle midway and to 50° angle near apex; **tertiary veins** flat and darker than surface below, flat and moderately obscure above; **collective veins** lacking or at most arising from near the apex; margins weakly undulate. INFLORESCENCE 51.2–53.8 cm long, erect-spreading; **peduncle** 38–41 cm long, 5 mm diam., medium green, semiglossy, tinged purple in lower 2/5, drying light brown with fragments of reddish brown epidermis; **spathe** spreading-recurved, 9–14.2 cm long, 1.3–3 cm wide, narrowly acuminate at apex, decurrent to 3.5 cm at base, joining peduncle at ca. 25° angle, drying coriaceous and medium brown; **spadix** sessile, narrowly cylindrical, pale yellow-green, 9.4–18 cm long, 10 mm diam. at base, 12 mm diam. midway, 10 mm diam. at 1 cm from the apex, rounded at apex, drying dark brown; **flowers** 13–14 visible per spiral, 2.5–3 mm long, 2.3–3 mm wide, drying 2.2 mm long,

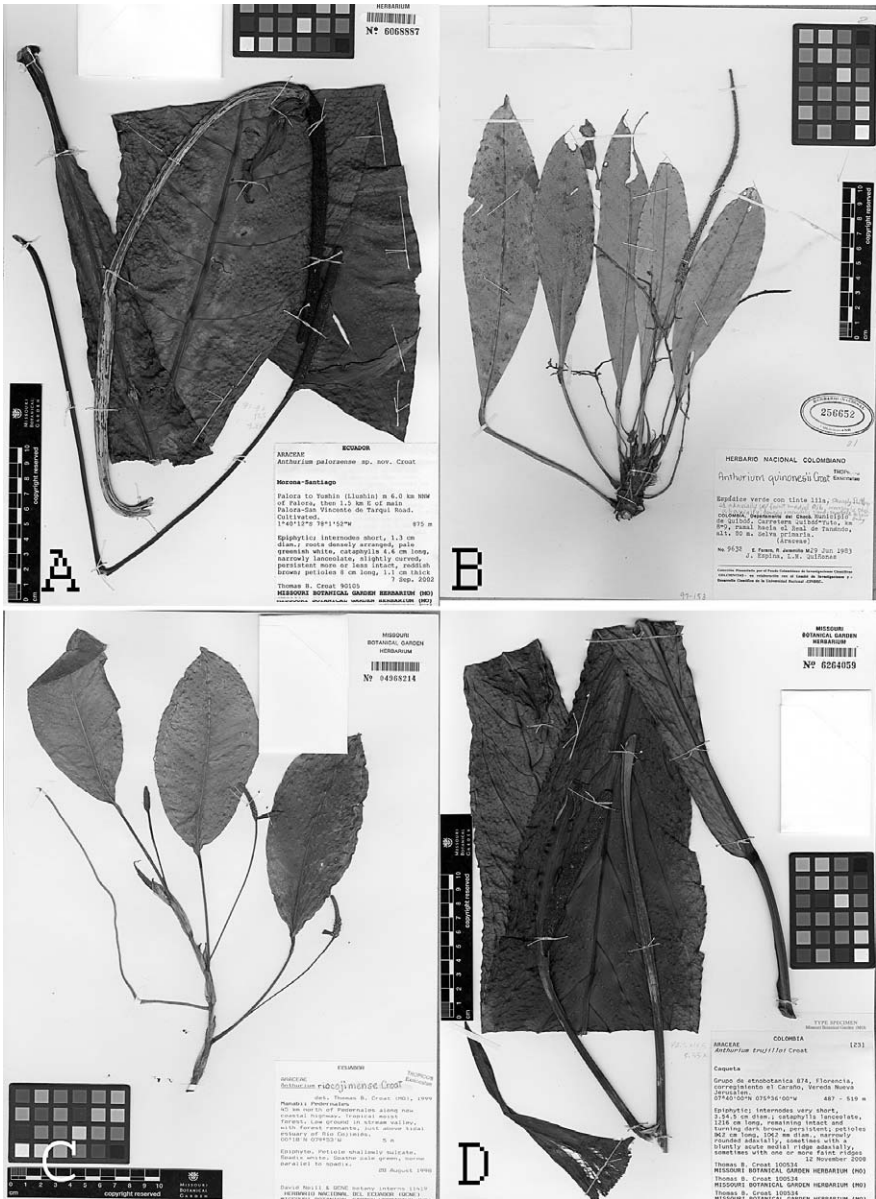


Fig. 4. A. *Anthurium paloraense* Croat. (Croat 90105). A. Herbarium type specimen showing blades folded, base and apex with adaxial surface. B. *Anthurium quinonesiae* Croat. (Forero 9632). B. Herbarium type specimen showing leaf blades with adaxial surface exposed except 2nd blade from leaf which has abaxial surface exposed. C. *Anthurium riocojimiesense* Croat. (Neill 11419). C. Herbarium type specimen showing leaf blade with predominantly abaxial surface exposed, middle blade abaxial surface exposed, right blade adaxial surface exposed. D. *Anthurium trujilloi* Croat. (Croat 100534). D. Herbarium type specimen showing blade folded three times, apex and center portion with adaxial surface exposed.

1.8 mm wide; **tepals** minutely granular upon drying; lateral tepals drying 1.1 mm wide, broadly shield-shaped, outer side 3–4-sided, the sides parallel to the spiral more or less straight, the sides perpendicular to the spirals jaggedly sigmoid; pistils pinkish red, 1 mm wide on each side; stigma 2 mm long, 1 mm wide.

Anthurium paloraense is known only from the type locality in Ecuador in Morona-Santiago Province in the region of Palora in the valley of the Río Pastaza at 380 m in a *Premontane wet forest* life zone.

The species is named for the type locality near Palora in Morona-Santiago Province.

***Anthurium quinonesiae* Croat, sp. nov.**

Type: COLOMBIA. Chocó: Municipio de Quibdó, Carretera Quibdó-Yuto, km 8–9, ramal hacia el Real de Tanando, 5°37'N, 76°39'W, 80 m, 29 June 1983, *E. Forero and R. Jaramillo, J. Espina, L.M. Quiñones 9632* (holotype, COL-256652; isotype, MO). Figure 4B.

The species is a member of the section *Porphyrochitonium* characterized by its epiphytic habit, short internodes, short red-brown cataphyll fibers, sharply flattened petioles with sharply erect margins and a medial rib adaxially and narrowly rounded abaxially, grayish drying blades which are dark glandular-punctate on the lower surface only, with a single pair of collective veins arising from the base and moderately obscure on the upper surface as well as by a long-pedunculate inflorescence with a short green spathe, a long slender long-tapered spadix that is green tinged with lilac and that dries with a knobby appearance by virtue of the short rows of mostly 2–3 flowers clearly visible in each spiral.

In the *Lucid Anthurium Key* *A. quinonesiae* tracks to *A. calimense* Croat & Bay, *A. fragrantissimum* Croat, *A. trianae* Engl. and *A. verrucosum* Croat & Bay. *Anthurium calimense* may be distinguished by its more ovate blades (length to width ratio 2.2–3) that have glandular punctations on the upper surface, collective veins which

run 8–15 mm from the margin and spadices that are yellow in flower and purple when in fruit; *A. fragrantissimum* differs in having longer blades (28–44 cm), more primary lateral veins (20–25 pairs), 4–6 flowers visible per spiral; *A. trianae* has longer petioles (20 cm), longer, wider blade (25 × 7 cm) and fewer primary lateral veins (8–9 pairs); *A. verrucosum* has blades 24–57 cm long and 5–19 cm wide that are prominently verrucose on the upper surface and its spadix ranges from gray to yellow when in flower.

Epiphytic; **internodes** very short, 1 cm diam., **cataphylls** persisting as fine shredded, reddish brown mostly parallel fibers, 1–6 cm long. LEAVES 18–47 cm long with **petioles** 4–11.2 cm long, 2–3 mm diam., sharply flattened adaxially with faint medial rib, narrowly rounded abaxially; **geniculum** 0.5–1.5 cm long, slightly swollen, with longitudinal wrinkles and darker than petiole; **blades** narrowly elliptic, 14–24.5 cm long, 3.6–5.9 cm wide, 3.3–5.1 times longer than broad (averaging 3.9), 1.7–4.1 times longer than petiole (averaging 2.3), acuminate at apex, narrowly acute to attenuate at base; **midrib** concolorous, narrowly and acutely rounded above and below, eglandular above, sometimes glandular along its lower border on lower surface; **primary lateral veins** 8–13 pairs, arising from the midvein at 40°–50° angles, concolorous and obscure above, very finely raised and barely discernable below, often undulate upon drying; **collective veins** arising from the base, 2–5 mm from the margin, slightly more prominent than primary lateral veins; **upper surface** drying medium grayish green, semiglossy, minutely aerolate-ridged, eglandular (but with dark removable punctations); **lower surface** drying medium brownish green, semiglossy, minutely granular-ridged and conspicuously dark glandular-punctate (punctations concave medially). INFLORESCENCE 11–41 cm long with **peduncles** 7.6–20.1 cm long (averaging 24.4), 1–3 mm diam.; **spathe** green, usually spreading, sometimes reflexed 2.3–3.5 cm long, 3–7 mm wide; **spadix** green, sessile, narrowly long-tapered, 3.4–21.2 cm long (averaging

11.9), 3–8 mm diam.; **flowers** rhombic, sometimes mounded, 3(–4) visible per spiral, 4.1 mm long, 2.5 mm wide; **tepals** surface papillate, lateral tepals typically much broader than wide, 1.6–2.3 mm wide, inner margins slightly rounded, outer margins 2-sided.

Anthurium quinonesiae is endemic to Colombia in the Department of Chocó at 45–100 m in a *Tropical rain forest* life zone.

The species is named in honor of Colombian botanist, Luz Mila Quiñones, who collected the type as a part of a team with Enrique Forero, R. Jaramillo and Josefina Espina in 1983. Luz Mila was Enrique Forero's first graduate student and spent her career at the Universidad de Villavicencio in the Department of Meta, retiring from teaching only recently.

Anthurium riocojimiesense Croat, **sp. nov.** Type: ECUADOR. Manabí: Pedernales, 45 km N of Pedernales along new costal highway, low ground in stream valley with forest remnants, just above tidal estuary of Rio Cojimiés, 00°18'N, 79°53'W, 5 m, 28 Aug 1998, *D. Neill 11419* (holotype, MO-04968214; isotype, QCNE). Figure 4C.

Anthurium riocojimiesense is a member of the section *Tetraspermium* characterized by its epiphytic habit, elongated internodes, cataphylls that tightly clasp and envelope much of the stem and persist as pale brown fibers, slender petioles, elliptic grey-green drying blades which are acute and shortly apiculate at apex and acute at base with an acute, slender midrib on the upper blade surface as well as by the long-pedunculate inflorescence with a green, erect spathe and a short weakly tapered white to greenish spadix.

Anthurium riocojimiesense tracks in the Lucid Anthurium Key to *A. obtusum* (Engl.) M. Grayum, *A. pescadilloense* Croat and *A. poblium* Engl.. *Anthurium obtusum* differs in lacking white raphide cells on either upper or lower surface and has larger, fewer dark glandular punctations on the lower surface, stouter stems (0.5–1.0 cm diam.), shorter petioles (2–6 cm)

and stamens that emerge only briefly before the pistils emerge; *A. pescadilloense* is distinguished by its longer internodes (5–9 cm), longer (20–21 cm), more ovate blades, and fewer primary lateral veins (5–7 pairs); *A. poblium* Engl. also has a very stout stem (0.8–2 cm diam.), very short internodes (less than 2 cm), and abundant adventitious roots. In addition, *Anthurium poblium* has more slender blades (length to width ratio 4.5).

Epiphytic; **internodes** 2.5–6 cm long, 4 mm diam., brownish; **cataphylls** persisting, 3–9 cm long, 3–4 mm wide, sheathing the stem, drying medium brown. LEAVES 21–28 cm long with **petioles** 7.5–11.5 cm long, sharply sulcate adaxially, drying C-shaped; **geniculum**, 0.8 cm, slightly darker than petiole; **blades** elliptic, acute at apex and base, rippled along the margins, 8.5–15.5 cm long, 3–6.9 cm wide, 2.1–3.0 times longer than wide, 0.75–2 times longer than petiole, **midrib** drying concolorous, finely and sharply raised above, slightly lighter to reddish, flattened to slightly rounded below; **primary lateral veins** 9–13 pairs, arising from the midrib at a 45–60° angle, concolorous, barely discernable above, concolorous, slightly more discernable below; **collective veins** somewhat more prominent, arising from the base and running to the apex 5–8 mm from the margins; **upper surface** nearly matte, drying dark gray-green, micro-granular, with rod-shaped raphide cells and dark glandular punctations; **lower surface** drying lighter gray-green, semiglossy, with abundant dark glandular punctations. INFLORESCENCE erect, 6–15 cm long with **peduncles** 4.5–11.5 cm long, 1 mm diam.; **spathe** 1.8 cm long, 0.4 cm wide, pale green, borne parallel to spadix, **spadix** white to greenish, sessile 1.4–3 cm long, 0.3–1 cm diam., slightly tapered, **flowers** 4–5 visible per spiral, 1.4 mm long, 1.4 mm wide, **lateral tepals** 1 mm wide, outer margins 2-sided, inner margins nearly straight, anthers emergent, arranged around the pistil. INFRUCTESCENCE: **berries** 4–5 mm long and wide.

The species is endemic to Ecuador in Manabí Province at near sea level in a

Tropical moist forest life zone near low-lying stream beds and estuaries.

The species is named for the type locality along the Rio Cojimiés in Manabí Department.

Anthurium trujilloi Croat, **sp. nov.** Type:

COLOMBIA. Caquetá: Grupo de etnobotánica 874, Florencia, corregimiento el Caraño, Vereda Nueva Jerusalen, 07°39'51"N, 75°36'23"W, 487–519 m. Originally collected 29 Oct 2005 by E. Trujillo Trujillo, Marco Correa, E. Cuellar, coll. # 874. Cultivated at Jardín Botánico of Universidad Amazonica, Florencia. Voucher prepared 12 Nov 2008, *T. B. Croat 100534* (holotype, HUAZ). Figure 4D.

The species is a member of sect. *Pachyneurium* characterized by its rosulate habit, short internodes, lanceolate cataphylls persisting intact, closely packed roots, short petiole with marginal ribs prominently raised and incurved with a prominent medial rib, as well as by the somewhat cylindrical, creamy yellow spadix with a strong fruity scent at anthesis.

Anthurium trujilloi is closely related to *A. paloraense* from Morona-Santiago Province in Ecuador at 875 m. That species differs in having leaf blades proportionately broader (3.8 times longer than broad) with the lower surface drying paler yellowish brown and semiglossy with prominently reddish brown veins which spread at about an 80° angle. In addition *Anthurium paloraense* has petioles which lack an adaxial medial rib and are usually rounded abaxially as well as a pale creamy yellow spadix with the tepals having the outer margins 3–4-sided. In contrast *Anthurium trujilloi* has blades which are ca. 5.5 times longer than wide, dry darker, somewhat olive-brown with the major veins blackened with the primary lateral veins arising at a 20–30° angle and a spadix that is pale yellow-green with the outer margin of the tepals 2-sided.

Anthurium trujilloi keys out in the Lucid Anthurium Key with *A. atropurpureum* and *A. bonplandii*, additional *Pachyneurium* species found in the general region.

Anthurium atropurpureum and *A. bonplandii* may be distinguished from *A. trujilloi* in having fewer primary lateral veins (8–10 compared to 12–13), light colored pustules on the lower surface of the blades. *Anthurium atropurpureum* also differs by having leaf blades that usually dry much paler and greenish as well as in having a moderately long-tapered spadix that is heavily tinged purple or maroon. In addition, *Anthurium bonplandii* blades have a very prominently dense and branching network of tertiary veins.

Epiphytic; **internodes** very short, 3.5–4.5 cm diam.; **cataphylls** lanceolate, 12–16 cm long, remaining intact and turning dark brown, persistent; **petioles** 6.4–12 cm long, 1.0–1.2 cm diam., drying 0.7–0.5 cm diam., narrowly rounded abaxially, sometimes with a bluntly acute medial ridge abaxially, sometimes with one or more faint ridges along the sides, flattened adaxially with prominently raised, in-turned lateral margins and an even more prominent medial ridge, medium-dark green and weakly glossy, weakly tinged purplish near the base, drying medium brown; **blades** narrowly oblong-oblancoate, 78.9–90 cm long, 11–17.5 cm wide, 5.6–7.2 times longer than wide, broadest slightly above the middle, gradually acuminate at apex, acute to narrowly rounded at base, subcoriaceous, dark green and semiglossy above, slightly paler and slightly more glossy below, drying dark gray-green above, lighter grey-green below; **midrib** sharply acute on both surfaces, concolorous above, slightly paler below with the sides of the midrib rounded; **primary lateral veins** 12–13 pairs, arising at a steep angle then spreading at ca. a 45° angle, thickly and narrowly raised, almost concolorous above, narrowly rounded and slightly paler below; **tertiary veins** in part weakly raised; **collective veins** arising from one of the uppermost primary lateral veins. INFLORESCENCE erect-spreading; **peduncle** 38–45.5 cm long, 0.6–1.0 cm wide, dark green weakly glossy, drying 0.4–0.5 cm diam., dark brown; **spathe** 15–15.5 cm long, 2.2–2.4 cm wide at anthesis,

medium green, matte inside, semiglossy outside, acuminate at apex, acute at base, drying 10.6–12.2 cm long, 1.3–1.5 wide, dark brown; **spadix** sessile, pale creamy yellow, matte, 10.7–15.4 cm long, 7–12 mm diam. at anthesis, with sweet fruity scent at anthesis, turning grayish green and 13.5 cm long, 1.5 cm diam. post-anthesis, eventually somewhat purplish in age, drying dark brown; **flowers** 9–10 visible per spiral, 1.8 mm long, 1.5 mm wide; **lateral tepals** 1.1 mm wide.

The species is endemic to Colombia known only from the type locality in Caquetá Department at about 500 m in a *Premontane wet forest* life zone.

The species is named in honor of my good friend, Edwin Trujillo, formerly a student of Marco Correa at the Universidad Amazonia in Florencia, Caqueta who made the type collection. Edwin is one of a small group of Colombians who work with Araceae. He is concentrating on revising the Araceae of the Caqueta Department.

LITERATURE CITED

- Croat, T. B. 1991. A revision of *Anthurium* section *Pachyneurium* (Araceae). *Ann. Missouri Bot. Gard.* 78: 539–855.
- Haigh, A., S. J. Mayo, T. B. Croat, L. Reynolds, M. Mora Pinto, P. C. Boyce, L. Lay, J. Bogner, B. Clark, C. V. Kostelac & A. Hay. 2009. *Interactive web-taxonomy for the Araceae*:// www.cate-araceae.org on 30 October 2009.
- Holdridge, L. R., W. H. Hatheway, T. Liang & J. A. Tosi. 1971. *Forest Environments in Tropical Life Zones*. Pergamon Press, New York.
- Mora, M., T. B. Croat, S. J. Mayo & A. Haigh. 2008. Key to *Philodendron* subg, *Philodendron* (excl. Brazilian endemic species). In A. Haigh, L. Reynolds, L. Lay, S. J. Mayo, T. B. Croat & B. R. Clark (eds.), *CATE ARACEAE* version 0.5. Published on the internet at <http://www.cate-araceae.org> on 4 April 2008.