

to dark purple or green; stigma linear to elliptic, 0.6–1 mm long; stamens emerging in a regular or scattered pattern, the laterals preceding the alternates by ca. $\frac{1}{2}$ length of the spadix, the 3rd stamen preceding the 4th by ca. 15 spirals, arching over and obscuring pistil; anthers purplish violet to pinkish tan, 0.6–0.8 mm long, 0.8–0.9 mm wide; thecae oblong-ellipsoid to ovoid, slightly divaricate; pollen pale yellow to creamy, fading to white, spicyscented. *Infructescence* spreading; spadix (6)14–28 cm long, 2 cm diam., greenish when young; mature fruits unknown; berries reddish brown, ob-ovoid, 8–9 mm long, 4–5 mm diam.; seeds 5–6 mm long, 2.5–2.7 mm diam., 1.3–1.5 mm thick, with a gelatinous appendage at each end.

Anthurium barclayanum occurs in coastal Ecuador in El Oro, Manabí, and Guayas provinces, and in adjacent Tumbes Dept., Peru, from sea level to 890 m, in premontane moist, premontane dry, and very dry tropical forest life zones, as well as in tropical desert scrub. It is expected to be in tropical dry forest.

This species is characterized by its large, usually strongly undulate leaf blades, the usually greenish spadix and by its occurrence in dry habitats. *Anthurium asplundii*, its closest ally, occurs in adjacent Esmeraldas and Pichincha provinces in less dry life zones. Another close ally is *A. linguifolium*, which is sympatric with *A. barclayanum* in at least one locality, where *A. barclayanum* is epiphytic and *A. linguifolium* terrestrial in open areas. See those species for distinguishing characters.

In the southern part of its range, in El Oro Province, the spadix color of *A. barclayanum* is sometimes violet-purple, but these plants (e.g., *Croat 50711*, *50712*; *Thompson 362*) otherwise agree well with other specimens. An intergradation with *A. asplundii* (with spadices maroon to purple) is conceivable, but the aberrant specimens of *A. barclayanum* occur in the part of its range furthest from *A. asplundii*, well separated by typical material with greenish spadices.

One collection (*Ittis & Mohr 234*) shows the odd character of having the tepals colored like the pistils, shriveled and very inconspicuous (compared to the pistils) in early fruit, whereas in all other specimens at apparently the same stage (or very near) the tepals are pale and conspicuous and not as shriveled.

ECUADOR. EL ORO: Avenillas-Piñas, 03°40'S, 79°45'–55'W, *Thompson 362* (CAS, CM, GH, MO, RSA, UCLA); Machala-Loja, 1 km SE of La Avareada, 18 km NW of Saracay, 80 m, 04°25'S, 79°55'W, *Croat 50711* (C, MO, P, QCA); 25 km SE of jct. to Pinas, 890 m, 04°15'S,

79°45'W, *Croat 50712* (BM, M, MISSA, MO, OOM, QCA); 7.6 km from Tahir, road to Piedras, 100 m, *Thompson 132* (MO). GUAYAS: Manglaralto-La Rincónada, *Harling et al. 20777* (GB). MANABÍ: Isla Salango, 01°36'S, 80°52'W, *Barclay 646* (BM); Jipijapa-Puerto López, 5 km S of Punta Cayo, 150 m, 01°25'S, 80°42'W, *Croat 50708* (B, CAS, K, M, MBM, MO, NY, RSA, SAR, SEL, US, W); N of San Vicente, farm road E of Hda. Napo (Hotel de la Playa), 50 m, *Croat 50702* (B, CAS, CM, F, GH, IBE, K, MO, OOM, QCA, U), *Ittis & Mohr 234* (WIS, QCA); MANABÍ-GUAYAS: Puerto López-Río Ayampe, 01°33'–45'S, 80°40'W, *Thompson 373* (MO, SAR). PERU. TUMBES: Prov. Zarumilla, Dtto. Matapalo, Cerro Tres Picos, El Caucho-Figueroa, 3–4 km on trail from Figueroa, Campo Verde road, 550 m, *Simpson & Schunke 394* (F).

***Anthurium basirotundum* Croat, sp. nov. TYPE:**

Peru. San Martín: Tarapoto, above Hotel Turista, 400 m, cultivated at SEL (# 86-1976-2), *Plowman 5980A* (holotype, MO 2727371; isotype, SEL). Figures 50–52.

Internodia brevia, 2–3 cm diam.; cataphyllum lanceolatum, persistens fibris subtilibus et reticulatis; petiolus 5–24 cm longus, 3–5 mm diam., D-formatus aut plus minusve triangulatus, adaxialiter complanatus, marginibus acute elevatis; lamina ovata-elliptica, (15)19–41 cm longa, 6–17 cm lata, basi acuta, obtusa, rotundata vel subcordata; nervis primariis lateralis (3)4–8 utroque. Pedunculus (17)26–36 cm longus; spatha oblonga-lanceolata, 2–6.2 cm longa, 1.2–1.8 cm lata; spadix 3.5–9 cm longus, violaceus ad purpurascens. Bacca ovoidae, 4.5–5 mm longae, vinosae.

Stem to 12 cm long, 2–3 cm diam.; leaf scars obscured by cataphylls, 0.8–1 cm high, 1.4–1.7 cm wide; roots numerous, descending to spreading, green, scurfy, weakly pubescent, slender and elongate, 10–11 cm long, 3–5 cm diam.; cataphylls subcoriaceous, lanceolate, 3–7 cm long, rounded at apex with a subapical apiculum, green tinged reddish, drying tan to brown (B & K yellow 6/5), persisting as a reticulum of fibers with apex remaining intact, eventually deciduous. *Leaves* erect-spreading; petioles 5–24 cm long, 3–5 mm diam., D-shaped to somewhat triangular, flattened, sometimes with a medial rib adaxially, the margins sharply raised, rounded to obtusely 1-ribbed abaxially, surface sometimes minutely pale-speckled; geniculum slightly thicker than petiole, ca. 0.7 cm long; blades subcoriaceous, ovate-elliptic, acute at apex (the acumen slightly inrolled), acute to obtuse to usually semirounded to subcordate (sometimes acute to obtuse) at base, (15)19–41 cm long, 6–17 cm wide, broadest at or below the middle, the margins broadly undulate; both surfaces matte to semiglossy, dark to medium green above, somewhat paler below, brown to green on drying; midrib acutely raised at base, becoming flat toward the

apex above, prominently convex at base and slightly paler than surface below; primary lateral veins (3)4–8 per side, departing midrib at 45–50° angle, weakly arcuate-ascending, slightly acutely raised above, somewhat convexly raised below; interprimary veins obscure; reticulate veins obscure; collective vein arising from near the base or in the upper 1/3 of blade, weakly sunken above, raised below, 5–10 mm from margin. *Inflorescences* erect to erect-spreading; peduncle (17)26–36 cm long, (2)3–5 mm diam., 1.5–7.7 × as long as petioles, green tinged with red-violet or purple, terete, sometimes sulcate; spathe reflexed-spreading or sometimes recurved, subcoriaceous to coriaceous, deep red-violet to dark purple (B & K purple 2/7.5), oblong-lanceolate, 2–6.2 cm long, 1.2–1.8 cm wide, broadest near the base, inserted at 30–35° angle on peduncle, abruptly acuminate to cuspidate at apex (the acumen inrolled), rounded to obtuse at base, the margins meeting at 180° angle; spadix red-violet to violet-purple (B & K purple 2/7.5), tapered to somewhat cylindroid, sessile, erect, straight, 3.5–9 cm long, 5–9 mm diam. near base, 3–4 mm diam. near apex, broadest at the base; flowers ± square to rhombic or 4-lobed, 2.2–3.2 mm long, 2.1–3.5 mm wide, the sides straight to smoothly sigmoid, 5–6 flowers visible in principal spiral, 8–9 in alternate spiral; tepals smooth to weakly papillate, matte, weakly punctate; lateral tepals 1–2 mm wide, the inner margins ± straight to convex, the outer margins 2-sided; pistils emergent, dark red-violet; stigma ellipsoid to linear, 0.5–0.7 mm long, brushlike; stamens emerging in a regular sequence from the base, laterals emerging almost to the apex before alternates emerge; filaments exerted, ca. 0.5 mm, 0.6 mm wide; anthers reddish to purple-violet, 0.4–0.8 mm long, 0.6–1 mm wide, inclined over the pistil; thecae ellipsoid to oblong, 0.3 mm wide, not divaricate; pollen cream-yellow (B & K yellow 9/2.5), fading to white. *Infructescence* with spathe persisting; spadix 4.3 cm long, 0.9 cm diam.; berries deep wine-red, ± ovoid, rounded at apex, 4.5–5 mm long, 3–3.5 mm diam.

Anthurium basirobundum is known only from Peru in San Martín Department in the vicinity of Tarapoto in a tropical dry forest life zone at 400 m.

This species is characterized by its small overall size, leaf blades which are broadest generally below the middle and usually rounded to subcordate at base, and by its long-pedunculate inflorescence with a tapered, red-violet to violet-purple spadix and deep wine-red berries.

Anthurium basirobundum is probably most closely related to *A. tarapotense*, which occurs in the same area. The latter differs mainly in its elliptic-oblongate leaf blades which are attenuate to long-attenuate (rarely acute) at the base.

The species is named for the leaf blades, which are usually rounded to subcordate at the base.

PERU. SAN MARTÍN: Tarapoto, above Hotel Turista, 400 m, cultivated at SEL (#81-1976-2), *Plowman 5980A* (MO, SEL).

Anthurium bonplandii Bunting, *Acta Bot. Venez.* 10: 267–268. 1975.

a. *Anthurium bonplandii* subsp. *bonplandii*. TYPE: Venezuela. Amazonas: Dept. Atures, Río Orinoco near Siquita, between Isla Castillito and San Fernando de Atabapo, 100–140 m, *Bunting et al. 3676* (holotype, MY). Figures 53–55.

Anthurium atropurpureum var. *apertum* R. E. Schultes, *Bot. Mus. Leafl. Harvard Univ.* 16: 180. 1951. TYPE: Colombia. Amazonas: Jerijerimo, Río Apaporis, *Schultes 12094* (holotype, GH).

Anthurium bonplandii Bunting subsp. *rionegreense* Bunting, *Phytologia* 64: 459, figs. 1, 2. 1988. TYPE: Venezuela. Amazonas: Dept. Río Negro: San Carlos de Río Negro, 125 m, *Steyermark & Bunting 102741* (holotype, MO).

Terrestrial, rarely epilithic or epiphytic; stem 10–20 cm long, 1–4 cm diam.; roots descending and spreading, sometimes ascending when epiphytic and forming a globose “ant garden,” grayish brown when dried and with raphide cells, reportedly with velamen, 5–28 cm long, drying 3–5 mm diam.; cataphylls subcoriaceous, 2–13 cm long, acute at apex, green, drying pale brown, persisting intact or as weathered fibers, once reported to be deciduous. *Leaves* erect-spreading; petioles (6)10–35 cm long, 3–20 mm diam., D-shaped, often broader than thick, flattened to broadly concave and occasionally with a medial rib adaxially, rounded to 4-ribbed abaxially; geniculum slightly thicker than petiole, 0.5–1.5 cm long, sheathing in lower 1/3 to 1/2 of the petiole; blades coriaceous, elliptic to broadly elliptic, rarely somewhat oblanceolate, acute to acuminate at apex (the acumen ± flat or slightly inrolled), usually acute to attenuate (sometimes barely rounded) at base, (10)30–75(100) cm long, (5)10–30(40) cm wide, broadest at or near the middle, the margins usually flat; upper surface glossy to semiglossy, dark green, lower surface ± matte, paler, usually pustular or glandular-punctate; midrib prominently convex above and below,