

Xavantina, 550 m, *Hunt 5800* (K), *Hunt & Ramos 5740* (K, NY), *Irwin et al. 16446* (GH, IAN, MO, TEX); Mpo. Jauru & Pontes e Lacerda, 38 km SE of Pontes e Lacerda on BR 174 to Cáceres, 15°27'S, 59°04'W, *Thomas et al. 4694* (NY); Mpo. Luciaria, 43 km S of Pto. Alegre do Norte, 1-5 km W of BR158, 11°17'S, 51°45'W, *Thomas et al. 4440* (MO); Mpo. Rondonópolis, Serra da Petrolina, *Hatschbach 34125* (K). PARÁ: Marabá, Alto da Serra, *Secco et al. 136* (MO); Rio Cururú, canal SE of Missão Cururú, Alto Tapajós, 140 m, 7°35'S, 57°31'W, *Anderson 10602* (NY); 2 hours downstream from Missão Cururú, Mouro, Alto Tapajós, 100-200 m, 7°15'S, 57°55'W, *Anderson 11080* (COL, K, MO, NY, U); Tapajós, *Rosa & Santos 1906* (MG, MO, NY); Serra do Cachimbo, Cachimbo, 500-600 m, 9°20'S, 54°53'W, *Bockermann 248* (UB), *Pereira 1821* (RB); Serra dos Carajás, Serra Norte, AMZA exploration camp, 600 m, 6°00'S, 50°15'W, *Berg & Hendersen 493* (F, GH, INPA, MG, RB, US, WIS); 2 km W of AMZA Exploration Camp N-5, 700 m, 6°04'S, 50°08'W, *Sperling et al. 5658* (MG, MO); 20 km NW of Serra Norte mining camp, less than 500 m, 5°55'S, 50°26'W, *Daly et al. 1697* (INPA, MG, MO); Serra Norte, Marabá, *Clareira N-1, Cavalcante & Silva 2631* (MG), *Silva et al. 1631, 1866* (MG); Mpo. Itaituba, Serra do Cachimbo, 5 km from Cachimbo airport, along Rio Formiga, 500-600 m, 9°23'S, 54°55'W, *Silva et al. 135* (NY, INPA). RONDÔNIA: ca. 35 km WSW of Ariquemes, Mineraceo Taboca at Massangana, 10°02'S, 63°20'W, *Zarucchi et al. 2650* (F, INPA, MG, MO, NY, RB, US); 4 km from Ariquemes, BR-364, 200-500 m, 9°55'S, 63°06'W, *Vieira et al. 548* (MG, MO, NY).

Anthurium linguifolium Engl., *Pflanzenr.* IV. 23B(Heft 21): 162. 1905. TYPE: Ecuador. Manabí: between El Recreo and Agua Amarca, *Eggers 15530* (lectotype, B; isolecotypes, F, K). Figures 178, 180.

Terrestrial; stem to 19 cm long, ca. 1 cm diam.; roots dense, ascending, green to whitish, pubescent to smooth, short, 1-1.5 cm long, 5-6 mm diam.; cataphylls subcoriaceous, linear-lanceolate, 3-10.5 cm long, obtuse to acute or acuminate at apex, drying reddish brown (B & K yellow-red 4/10), persisting \pm intact, splitting at base. *Leaves* erect-spreading; petioles 4-7 cm long, 5-7 mm diam., erect-spreading, subtriangular, convexly raised to obtusely ribbed, sometimes broadly sulcate adaxially, the margins sharply raised, somewhat rounded and sharply 1-ribbed abaxially, conspicuously swollen to 14 mm diam. at base; geniculum slightly paler and conspicuously thicker than petiole, 0.5-2 cm long; blades subcoriaceous, oblong-linear, acute, sometimes apiculate at apex, acute to rounded at base, 25-85 cm long, 2.5-6.5 cm wide, broadest at or near the middle, the margins broadly and shallowly undulate; upper surface matte to semiglossy, medium green, lower surface matte, conspicuously paler; midrib above obtusely raised at base, becoming sharply and acutely raised and

higher than broad toward the apex, pale-speckled, slightly paler than surface, below acute throughout, paler and more yellowish than surface; primary lateral veins 8-15 per side, departing midrib at 30-60(-70)° angle, not well distinguished from interprimary veins, slightly arcuate to the margin, weakly sunken to weakly raised in shallow grooves, rather obscure above; interprimary veins almost as conspicuous as primary lateral veins; tertiary veins obscure above, conspicuously darker than surface below, prominulous on both surfaces when dried; collective vein usually arising from near the apex, sometimes from near the base, obscure above, equally as prominent as interprimary veins below, 1-7 mm from margin. *Inflorescences* erect-spreading to spreading, shorter than or equaling leaves; peduncle 38-57 cm long, 4 mm diam., 7.6-19(38) \times as long as petiole, green, terete; spathe spreading to reflexed-spreading, coriaceous, yellow-green, sometimes tinged with purple abaxially (B & K yellow-green 5/7.5), narrowly lanceolate, 7-8.5 cm long, 0.8-1.5 cm wide, broadest near the base, inserted at 45° angle on peduncle, acuminate at apex (the acumen inrolled), obtusely rounded at base; spadix glaucous, dull lavender-purple (B & K purple 5/2.5), sessile, slightly tapered, cylindroid, erect, 5-8.2 cm long, 7-9 mm diam. near base, 4-6 mm diam. near apex, broadest at the base; flowers 4-lobed, 2.1-2.6 mm long, (1.5)2.4-3 mm wide, the sides weakly sigmoid; (4)7-9 flowers visible in principal spiral, (3)5-7 in alternate spiral; tepals matte; lateral tepals 0.8-1.4 mm wide, the inner margins weakly concave to slightly rounded, the outer margins usually 2-, sometimes 3-4-sided; pistils emergent, bright green (B & K yellow 5/2.5); stigma ellipsoid, 0.3-0.4 mm long; stamens emerging in a regular sequence from the base, the laterals preceding the alternates by 9 spirals, the 3rd stamen preceding the 4th by 3 spirals, borne at edge of tepals in a circle around the pistil; anthers straw-colored (B & K yellow-red 9/10), 0.6 mm long, 0.8 mm wide; thecae ovoid, slightly or not divaricate; pollen pale yellow (B & K yellow 9/2.5), sweetly scented at anthesis. *Infructescence* with persistent spathe; fruits not seen.

Anthurium linguifolium is known from only two collections made in coastal Ecuador in Manabí province, between Bahía de Caraquez and Canoa, near sea level in a very dry tropical forest life zone.

This species is characterized by its linear-oblong, weakly undulate blades, short petioles, rather elongate stem with short, more or less erect roots throughout its length (above ground) and by its glaucous, dull lavender-purple spadix.

The closest ally of *A. linguifolium* is *A. barclayanum*. The latter differs in greenish (rarely violet-purple) spadix, much larger size, longer petioles and oblanceolate blades. *Anthurium barclayanum* is sympatric with the present species at one locality at least, but they occur in very different habitats. The first is epiphytic, the second terrestrial in open areas. In addition, the ratio of peduncle to petiole length is much greater in *A. linguifolium* (7.6–19(38) vs. 3.5–6(9)).

ECUADOR, MANABI: 6 km N of Bahía de Caraquez, 3–4 km E of ocean, 50 m, 0°30'S, 80°22'W, *Croat 50697* (K, MO, NY, QCA, US); El Recreo–Agria Amarga, 0°29'S, 80°27'W, *Eggers 15530* (B, F, K, NY).

Anthurium llewelynii Croat, sp. nov. TYPE: Peru.

San Martín: Prov. Tarapoto, Río Mayo, near Cumumbigue, 6 km S of Tarapoto–Moyobamba road at Km 15, 350 m, 6°23'S, 76°39'W, *Croat 51092* (holotype, MO 2819899; isotypes, B, K, M, NY, RSA, SEL, US, USM). Figures 181, 183–185.

Planta terrestris; internodia brevia, 2.5–4 cm diam.; cataphyllum lanceolatum, persistens in reticulum fibrarum; petiolus (5)21–40 cm longus, 3–7 mm diam., adaxile complantus, abaxile rotundatus; lamina oblanceolata ad anguste oblanceata aut elliptica, (29)50–110 cm longa, (5)7–15(20) cm lata, base plerumque abrupte rotundata vel subcordata; nervis primariis lateralibus 4–12 utroque; pedunculus 23.5–75 cm longus, 3–5 mm diam.; spathe lanceolata aut ovato-lanceolatae, 5–9 cm longa, 1–2.5 cm lata, viridis; spadix leviter contractus, 3.6–9 cm longus, 5 mm diam., olivaceus rubellus; baccae atropurpureae, globoso-obovoidae, 3–5 mm diam.

Usually terrestrial, rarely epiphytic; stem creeping, to 20 cm long; internodes short, 2.5–4 cm diam.; roots numerous, dense, descending, whitish, velutinous, 4–5 mm diam.; cataphylls subcoriaceous, lanceolate, 3–7 cm long, acute to acuminate at apex, drying brown (B & K yellow 3/7), persisting as a reticulum of fibers. *Leaves* erect-spreading to spreading; petioles (5)12–40 cm long, 3–8 mm diam., erect, sharply D-shaped, flattened to slightly convex adaxially, rarely with a medial rib, the margins sharply raised, rounded abaxially; geniculum paler than petiole, becoming calloused with transverse fissures, conspicuously thicker than petiole, 0.5–2 cm long, sometimes extending beyond leaf base up to ½ its length; sheath 2–6 cm long; blades subcoriaceous, oblanceolate to narrowly oblanceolate or elliptic, acute to acuminate at apex, narrowing toward the base, ending abruptly, obtuse to rounded or shallowly cordate at base, (29)50–110 cm long, (5)7–15(20) cm wide, broadest at or above the middle, the margins moderately

to broadly undulate; upper surface glossy to semiglossy, occasionally matte, dark to medium green (B & K green 3/7.5), lower surface matte to semiglossy, considerably paler; midrib pale-speckled, conspicuously to scarcely paler than surface, broadly rounded-raised at base, becoming acutely angled toward the apex above, broadly rounded-raised to bluntly angled and slightly paler than surface below; primary lateral veins 4–12 per side, departing midrib at 35–90° angle (rarely retrorse to 110°), arcuate-ascending to the margin, convexly raised and paler than surface above, less prominently raised and darker than surface below; interprimary veins almost as conspicuous as primary lateral veins; tertiary veins obscure; collective vein arising from near the base or in the upper third of the blade, weakly raised above and below, 3–19 mm from margin. *Inflorescences* erect to spreading; peduncle 23.5–75 cm long, 3–5 mm diam., equaling to 5× as long as petiole, green to brownish green, pale-speckled, terete to subterete; spathe spreading to reflexed, coriaceous to subcoriaceous, green, sometimes tinged with red at margins, lanceolate to ovate-lanceolate, 5–9 cm long, 1–2.5 cm wide, broadest near the base, inserted at 45–60° angle on peduncle, abruptly acuminate to acute at apex (the acumen inrolled), acute at base; spadix reddish olive-green, sessile, cylindrical, slightly tapered, erect or slightly curved, 3.6–9 cm long, 5 mm diam. midway, 3–4 mm diam. near apex; flowers rhombic to 4-lobed, strongly scented like rotting fruit, 1.5–3 mm long, 2–2.4 mm wide, the sides jaggedly sigmoid to straight; 4–8 flowers visible in principal spiral, 5–7 in alternate spiral; tepals matte, sparsely white-punctate, densely papillate; lateral tepals 0.6–0.8 mm wide, the inner margins straight to broadly convex, the outer margins 2–4-sided; pistils weakly raised, olive-green to maroon; stigma linear-oblong, caviform, 5 mm long; stamens emerging in a scattered pattern from the base, the laterals preceding the alternates by up to 17 spirals, the 3rd stamen preceding the 4th by 13 spirals, arranged in a circle around the pistil; anthers pinkish to yellow tinged with pink, 0.3–0.6 mm long, 0.5–0.9 mm wide; thecae oblong-ovoid, slightly divaricate; pollen yellow fading to white. *Infructescence* spreading-pendent; spadix 11–18 cm long, 1–1.3 cm diam.; berries dark purple (B & K red-purple 2/2.5), globose-obovoid to subglobose, truncate at apex, 5 mm long, 3–5 mm diam.; pericarp moderately thickened; mesocarp gelatinous, with raphide cells; seeds 1–2 per berry, brownish purple, oblong-ellipsoid, 4–5 mm long, 2.1–2.5 mm diam., 1.5–