

parting midrib at 40–65° angle, ± straight, raised above and below, more sharply so below; tertiary veins weakly raised; reticulate veins obscure above, weakly raised below; collective vein arising from near the base to about the middle of the blade, equally as prominent as primary lateral veins, 5–15 mm from margin. *Inflorescences* with peduncle 31–57.5 cm long, ca. 3–4 mm diam., equaling or to 1.8× longer than petiole, light to olive-green, terete; spathe recurled, membranous, pale reddish green, oblong-lanceolate, to 8 cm long, ca. 0.7 cm wide, broadest near the base, narrowly acute at apex, acute and decurrent at base; stipe 1.5–3.5 cm long in front, (0)8–17 mm long in back; spadix dark red to brown, long-tapered, usually long-stipitate, 12–15 cm long, 4–5 mm diam. near base, ca. 2 mm diam. near apex; flowers ± square or rhombic when dried, 1.2–1.8 mm in both directions, the sides straight to smoothly sigmoid; 5–7 flowers visible in principal spiral, 8–9 in alternate spiral; lateral tepals 0.9–1.2 mm wide, the inner margins straight to broadly rounded, the outer margins 2-sided; pistils emergent, not raised; stigma ellipsoid, 0.5–0.7 mm long; anthers 0.2–0.3 mm long, 0.4–0.5 mm wide, inclined over pistil; thecae ovoid, slightly divaricate. *Infructescence* with spathe deciduous; spadix ca. 1 cm diam.; berries violet, (rehydrated) globose to oblong-ovoid, rounded at apex, 3.5–3.7 mm long, 2.6–3.5 mm diam.; pericarp somewhat thickened with moderately numerous pale raphide cells; seeds 1 or 2 per berry, brown, oblong-ovoid, somewhat flattened laterally, 2.5–2.8 mm long, 1.8–2 mm diam., 1.2–1.4 mm thick.

Anthurium krukovii is known from a few collections made in the central, northern and southwestern parts of Amazonas, Brazil, below 150 m, probably in a tropical moist forest life zone.

The species is characterized mainly by the shape of its leaf blades, which are rounded and abruptly attenuate at the base and narrowed even further to the geniculum in a manner that makes the latter seem remote from the base of the blade by 4–11 cm.

Anthurium krukovii is mostly closely allied to *A. atropurpureum* var. *arenicola*, which differs in having more coriaceous and usually narrower leaf blades which are long-attenuate (with more or less parallel margins) toward the base, and in having mostly shorter petioles. The same general differences apply to the typical variety of *A. atropurpureum*, which is smaller in overall size.

The occurrence of clear pustules on the under-surface of the dried leaf blades in the present

species is of interest. The same feature occurs, albeit rarely, in *A. atropurpureum*, the presumed closest relative of *A. krukovii*. The two collections of *A. krukovii* which show this feature are *Byron et al. 621* and *Duarte 6958*.

The new name *Anthurium krukovii* honors Boris Alexander Krukoff, one of the first major American collectors to explore Amazonian Brazil, and whose philanthropy funds many important botanical functions to this day. In addition, Krukoff was the first known collector of the present species.

BRAZIL. AMAZONAS: Barcelos, *Duarte 6958* (RB); Rio Embira (tributary of Rio Tarauaca), 7°30'S, 70°15'W, *Krukoff 4927* (NY); Mpo. Maraa, Rio Japurá, vic. Maraa, Lago Maraa, *Plowman et al. 12211* (MO, INPA); Sitio Fortaleza, 7 km NW of Maraa, *Plowman et al. 12278* (INPA, NY); mouth of Igarape Maraa and Lago Maraa, *Plowman et al. 12380* (NY, INPA); Mpo. Tefe, Lago Tefe, Vila Nogueira, Porto Camanaus, *Byron et al. 621* (MO, INPA); Lago Tefe, NW shore, *Plowman et al. 12442* (MO, INPA).

Anthurium lanjouwii Jonk. & Jonk., *Acta Bot. Neerl.* 15: 133. 1966. TYPE: Surinam. Emma Mountains, S slope, 850 m, *Daniels & Jonker 1101* (holotype, U). Figure 348.

Terrestrial; stem to 15 cm long; internodes short, 1–1.5 cm diam.; roots moderately dense, spreading, to 25 cm long, the younger roots light brown, villous; cataphylls narrowly triangular, 3.4–5 cm long, persisting semi-intact toward apex, as fibers toward base. *Leaves* with petioles 7–23 cm long, drying 3–7 mm diam., subterete, sulcate adaxially, drying with sharp margins, rounded abaxially; geniculum sharply sulcate, 0.5–1 cm long; blades subcoriaceous, elliptic to ovate-elliptic, acuminate and apiculate at apex, obtuse to rounded or sometimes cuneate at base, 23–36 cm long, 12–19 cm wide, drying yellow-green to yellow-brown; midrib prominently raised on both surfaces, drying angular and paler than surface below; primary lateral veins 6–9 per side, departing midrib at 40–60° angle, moderately straight to the margin, then markedly ascending and merging with the margin or loop-connecting with the next higher vein, raised on both surfaces; tertiary veins drying prominulous below; collective vein lacking or arising below the middle of the blade. *Inflorescences* erect, shorter than leaves; peduncle 17–39 cm long; spathe promptly withering and soon deciduous, green tinged with purple, lanceolate, 2.5–4.5 cm long, 0.7–0.8 cm wide, inserted at ca. 45° angle on peduncle, mucronate at apex, acute at base; spadix purplish brown, weakly tapered, short-stipitate, 5–14 cm long, drying 4–6 mm diam.; flowers rhombic, 2.5–

3.3 mm long, 1.7–2.3 mm wide, the sides smoothly sigmoid parallel to spiral, jaggedly sigmoid perpendicular to spiral; 5–7 flowers visible in principal spiral; tepals matte and brown on drying; lateral tepals 0.8 mm wide, the inner margins rounded, the outer margins bluntly triangular; pistils not at all emergent; stigma linear, slitlike, to 0.8 mm long, stamens emerging in a regular sequence, held just above the tepals in a tight cluster above pistil, inclined over and obscuring the pistil; anthers 4 mm long, 5.5 mm wide; thecae ovoid, moderately divaricate. *Infructescence* unknown.

Anthurium lanjouwii is endemic to Surinam, known only from steep southern slopes of the Emma Mountains, on sandstone and dolomite, at 850 m.

This species is most closely related to *Anthurium bonplandii* and may prove to be only subspecific with that taxon. It differs from that species in being isolated geographically, having more or less elliptic blades and lacking plate-glands or pustules. It is geographically closest to *A. bonplandii* subsp. *guayanum*, which has much larger, oblanceolate to obovate blades with conspicuous dark glandular-punctations.

FRENCH GUIANA. Sommet Tabulaire, 40 km SE of Saül, 650–700 m, *Cremers 6469* (CAY). SURINAM. Emma Mountains, south, sandstone slope, 850 m, *Daniels & Jonker 1101, 1241, 1264* (U).

Anthurium latissimum Engl., *Pflanzenr.* IV. 23B(Heft 21): 292. 1905. TYPE: Peru. Junín: Prov. Tarma, La Merced, Río Chanchamayo, 1,000 m, *Weberbauer 1939* (holotype, B; isotype, MO-3122266). Figures 167–170.

Terrestrial or epiphytic; stem to 30 cm long, 2–3.5 cm diam.; roots dense, descending, white, fuzzy, short, ca. 3 mm diam.; cataphylls subcoriaceous, lanceolate to hook-shaped, 2-ribbed, 5–11.5 cm long, acute to acuminate at apex, drying reddish brown, persisting semi-intact, eventually as a reticulum of fibers. *Leaves* erect-spreading; petioles 8–48 cm long, 4–12 mm diam., sharply D-shaped to C-shaped, flattened to sulcate and with a medial rib adaxially, the margins sharply to bluntly raised or bluntly acute, rounded to 3–5-ribbed abaxially, the surface pale-short-lineate, sometimes tinged with purple; geniculum paler and thicker than petiole, becoming calloused and minutely transverse-fissured with age, 1–2 cm long; sheath 3–10 cm long; blades subcoriaceous, broadly oblanceolate to obovate-elliptic to broadly elliptic, acute to acuminate at apex, acute to attenuate at base, (26)50–125 cm long, 10.5–36.5 cm wide, broadest at or above the middle, the margins un-

dulate, concave toward base; upper surface semi-glossy, dark to medium green, lower surface semi-glossy to weakly glossy, moderately paler; midrib above flat to bluntly raised at base, becoming sharply acute toward the apex and paler than surface, below bluntly acute at base, becoming broadly convex to acutely raised toward the apex; primary lateral veins 6–14 per side, departing midrib at 70–90° angle, retrorse to 130° toward the base, ± straight to arcuate ascending to the margin, raised above, bluntly convex below; interprimary veins not visible; tertiary veins weakly raised above, flat and darker than surface below; collective vein arising from near the base or near the apex, prominent, 2–10 mm from margin. *Infructescences* erect to spreading; peduncle (10)30–98 cm long, 2–9 mm diam., 1.2–4.6 × as long as petiole, green to reddish green, terete; spathe reflexed-spreading, sometimes recurved, subcoriaceous, sometimes reddish, usually green tinged with red or purple (B & K yellow 5/7.5), broadly lanceolate, (3.5)8–12(18) cm long, 1.3–2.5 cm wide, broadest near the base, inserted at 40–60° angle on peduncle, acute to acuminate at apex (the acumen apiculate), acute to rounded at base; spadix olive-green to gray-green to brownish to violet-purple (B & K red-purple 2/2.5), sometimes weakly glaucous, slightly tapered, sessile or stipitate to 2 cm, erect, straight to curved, held at ca. 180° angle from peduncle, 5–13(28) cm long, 4–7 mm diam. midway, 2–4 mm diam. near apex; flowers rhombic to 4-lobed, 2–2.3 mm long, 2 mm wide, the sides smoothly sigmoid to jagged; 7–10 flowers visible in principal spiral, 5–7 in alternate spiral; tepals minutely papillate, matte, white-pustulate; lateral tepals 0.5–0.6 mm wide, the outer margins 3–4-sided, the inner margins weakly curved; pistils papillate, minutely granulose, raised, red-violet to maroon; stigma linear, 0.4 mm long; stamens emerging in a regular sequence, the laterals preceding the alternates by 4–14 spirals, the 3rd stamen preceding the 4th by 5–7 spirals, arranged in a circle around the pistil; anthers pinkish to reddish brown, 0.5–0.7 mm long, 0.5–0.7 mm wide, thecae divaricate; pollen yellow fading to white, yeasty-scented. *Infructescence* with spathe persisting; spadix 9–17 cm long; berries maroon to deep red-violet (B & K red-purple 2/5), obovoid, flattened to depressed at apex, 6.5–7.5 mm long, 5–6 mm diam.; mesocarp transparent, gelatinous; seeds 2 per berry, white tinged with red-violet at base, 4.5–6 mm long, 2–3.5 mm diam.

Anthurium latissimum is endemic to Peru, where it ranges from San Martín to Huánuco, Junín, and