

weakly glossy to semiglossy, dark green, lower surface matte, paler; midrib flat at base, becoming convexly raised toward the apex, much paler than surface above, prominently higher than broad and sharply 1-3-ribbed at base below, gradually becoming prominently and obtusely to acutely angular and eventually convex toward the apex, paler than surface; primary lateral veins 10-25 per side, departing midrib at 60-70° angle, slightly arcuate-ascending, weakly raised in grooves above, narrowly and convexly raised below; interprimary veins sunken above, flat or slightly raised and darker than surface below; tertiary veins obscure above, darker than surface below; collective vein arising from near the base, sometimes in the upper third of the blade, sunken or ± obscure above, weakly raised to flat and darker than surface below, 3-10 mm from margin. *Inflorescences* erect-spreading and slightly arching, equaling or shorter than leaves; peduncle 49-85 cm long, 1.3-2 cm diam., 0.5-3(6.6)× as long as petiole, green to violet-purple, with prominent rounded rib adaxially, more prominently ribbed abaxially; spathe erect to cucullate, hooding the spadix, coriaceous, dark purple, narrowly ovate to oblong-lanceolate, 9-33.5 cm long, 2-11 cm wide, broadest in the lower third, inserted at 60° angle on peduncle, acuminate at apex (the acumen caudate, to 15 mm long), decurrent at base; spadix violet-purple to maroon, shortly tapered toward apex (occasionally toward both ends), 7-18 cm long, 8-28 mm diam. near base, 5-17 mm diam. near apex; flowers rhombic to slightly 4-lobed, 2-3.6 mm long, 1.8-3 mm wide, the sides straight to jaggedly sigmoid; ca. 15 flowers visible in either spiral; tepals matte to semiglossy, minutely punctate, covered with dust-like waxy bloom; lateral tepals 1.2-1.5 mm wide, the inner margins turned up against pistil; pistils exerted ca. 0.5 mm, green at base, purplish brown at apex; stigma 1 mm long, droplets copious, appearing 3-4 weeks before stamens emerge; stamens emerging in a scattered pattern throughout spadix, lateral stamens emerging to apex before alternates start emerging; anthers creamy, 0.4-0.5 mm long, 0.6-1 mm wide; thecae ellipsoid, slightly divaricate; pollen yellow-orange fading to white. *Inflorescence* erect or spreading; spathe cucullate and withered; spadix 20-25 cm long, to 4 cm diam.; berries orange to yellow (B & K yellow 8/25), oblong-ellipsoid to obovoid, acute at apex, 8.9-19 mm long, 5-8 mm diam.; pericarp thickened, transparent in lower half with few raphide cells; mesocarp mealy, orange; seeds 2 per berry, tan, oblong, 4-6.5 mm long, 2-2.7 mm diam., ca. 2 mm thick, weakly beaked at both ends.

Anthurium luteynii is known only from Panama, on both slopes of the Continental Divide, in tropical wet and premontane rainforest life zones at elevations of 530 to 1,350 m.

This species is characterized by its coriaceous, more or less narrowly oblanceolate leaves and its somewhat trapezoidal petiole that is prominently three-ribbed abaxially and sharply sulcate adaxially. Also characteristic is the stout, semi-erect inflorescence with a broad, often cucullate, purplish spathe and violet-purple spadix and the long, sharply pointed, orange berries.

Although initially confused with *Anthurium seibertii* because of its orange, pointed berries and coriaceous, persistent, intact cataphylls, *A. luteynii* is not believed to be closely related to that species or to any other known species. *Anthurium seibertii* differs from *A. luteynii* principally in having thinner, strap-shaped leaves with the collective vein always arising from near the base, and in having a narrowly tapered, much paler violet-purple spadix.

PANAMA. BOCAS DEL TORO: Fortuna Road, Gualaca-Chiriqui Grande, 33 km from Gualaca, 530 m, 8°36'N, 82°19'W, Hoover 1334 (MO). COCLÉ: N of El Valle de Antón, trail to Las Minas, 800-900 m, *Luteyn 3162* (DUKE, MO); El Copé Region, sawmill 7 km NE of El Copé, 600 m, Antonio 1140 (MO); Alto Calvario above El Cope, 8°39'N, 80°36'W, Croat 68773 (MO); El Valle Region, Cerro Gaital, N slopes of mountain near La Mesa, N of El Valle, 800-900 m, 8°40'N, 80°7'W, Knapp & Dressler 4881 (MO); El Valle de Antón, La Mesa, Folsom 2785 (MO); El Valle de Antón, 2 km W of Cerro Pílon, La Mesa, 860-900 m, Croat 37416 (MO); beyond La Mesa, toward Los Llanos, *Luteyn 3163* (DUKE). DARIÉN: Río Tuquesa headwaters, 2 km by air from Continental Divide, upper gold mining camp of Tyler Kittredge, 700 m, Croat 27120, 27156, 27169 (MO). PANAMÁ: Cerro Jefe, ridge above Altos de Azul to Río Chagres, 9°15'N, 79°30'W, McPherson 11900 (MO). VERAGUAS: Santa Fe Region, vic. Escuela Agrícola Alto Piedra, 735-770 m, Croat & Folsom 33993 (MO), Hammel 4669 (MO), Mori & Kallunki 4751 (MO); Río Santa María, road from Santa Fe, Witherspoon & Dressler 8923 (MO); Cerro Tute, 830-1,150 m, Croat 48909 (MO); D'Arcy 14982 (MO); Río Primero Brazo, 2.5 km beyond school 700-750 m, Croat 25521 (B, C, CAS, CM, CR, DUKE, F, K, M, MEXU, MO, NY, PMA, SAR, SEL, UCLA, US, VEN), 48990 (MO), 49071 (FTG, MO); NW of Santa Fe, W fork of road beyond school, 1,300 m, Croat 49044 (CM, ENCB, IBE, K, MO, VDB).

Anthurium machetioides Matuda, Anales Inst. Biol. Univ. Nac. Mexico 22: 379, fig. 7. 1952.
TYPE: Mexico. Oaxaca: Chinantia, 1,200 m, Ramirez 144 (holotype, MEXU). Figure 190.

Description based on dried material only. Stem short; cataphylls thin, to 6.5 cm long, drying brown,

persisting as linear fibers, probably deciduous. *Leaves* with petioles 6–7 cm long, 4–5 mm diam., broadly sulcate adaxially, rounded abaxially; geniculum 0.4–0.5 cm long; blades, oblanceolate, narrowly acuminate at apex, narrowly cuneate at base, 45–48 cm long, 6–8 cm wide, broadest above the middle, both surfaces matte; midrib prominently and narrowly raised above and below; primary lateral veins 10–15 per side, departing midrib at 20–30° angle, arcuate to the collective vein; reticulate veins prominent; collective vein arising from one of the lowermost primary lateral veins, 3–4 mm from margin. *Inflorescences* equaling or longer than leaves; peduncle 40–48 cm long, to 5 mm diam., terete; spathe narrowly lanceolate, inserted at 45° angle on peduncle; spadix greenish, glaucous, long-tapered, 20–24 cm long, 13 mm diam. near base, 6 mm diam. near apex; flowers rhombic, 2–2.4 mm long, 2.4–2.6 mm wide; 13–14 flowers visible in principal spiral, 9–10 in alternate spiral; pistils not emergent; stigma ellipsoid, slitlike, 0.5 mm long; stamens emergent, held at edge of tepals; thecae ovoid.

Anthurium machetioides is endemic to central Mexico on the Atlantic slope. The type was from the region of Chinantla in northeastern Oaxaca (a region comprising parts of four districts south of Valle Nacional), at 1,200 m in "selva baja caducifolia," and a second collection was made relatively nearby at 200 m in the District of Tuxtpec (between Valle Nacional and Tuxtpec).

This species is characterized by its oblong-linear leaves with a collective vein arising from near the base, primary lateral veins that are scarcely more prominent than the tertiary veins, and a very elongate, gradually tapered spadix.

In describing this species Matuda posited its relationship as sect. *Leptanthurium*; however, despite the fact that it has a collective vein arising from the base, its affinities are more likely with *Anthurium schlechtendalii*, which often has a collective vein from near the base in juvenile leaves. It differs from *A. schlechtendalii* in its proportionally narrow leaves, the presence of a collective vein, and in its proportionally much longer spadix.

MEXICO. OAXACA: Chinantla, 1,200 m, *Ramírez 144* (MEXU); Dist. Tuxtpec, Chiltepec, 200 m, *Martínez-Calderón 844* (LL, MICH).

Anthurium maguirei A. Hawkes, Bull. Torrey Bot. Club 75: 633. 1948. TYPE: Surinam. Table Mountain, 564 m, *Maguire 24218* (holotype, NY; isotypes, F, US). Figure 191A.

Description based on dried material only. Terrestrial or epiphytic; stem moderately elongate, horizontally creeping; internodes short, 0.8–1 cm diam.; roots moderately few, brownish, smooth, moderately slender and elongate, ca. 2–3 mm diam.; cataphylls broadly triangular, 1.5–3.5 cm long, acute at apex, reddish brown to dark brown, persisting intact. *Leaves* with petioles 4.5–21 cm long, ca. 2–3 mm diam., apparently subterete or C-shaped, sharply and narrowly sulcate adaxially, rounded abaxially; geniculum slightly thicker than petiole, 0.3–0.7 cm long; blades coriaceous, oblong-ovate to broadly elliptic, obtuse at apex (the acumen apiculate), rounded (occasionally obtuse) at base, 9.5–16 cm long, 2.8–5.7 cm wide, broadest at or below the middle; both surfaces matte, yellowish brown; midrib apparently acutely raised above, convexly raised below; primary lateral veins 5–8 per side, departing midrib at 30–45° angle, arcuate, probably flat or weakly sunken above, raised below; interprimary veins almost as conspicuous as primary lateral veins; tertiary veins weakly raised below; collective vein arising from near the apex, sunken above, raised below, equally as prominent as primary lateral veins, 2–6 mm from margin. *Inflorescences* longer than leaves; peduncle 22–26.5 cm long, ca. 2–3 mm diam., 3.1–5.5× as long as petiole, terete; spathe probably spreading or reflexed, subcoriaceous, green, lanceolate, 3–4 cm long, 0.6–0.8 cm wide, broadest near the base, acuminate at apex (the acumen inrolled, 1–2 mm long), acute at base; stipe 2–2.2 cm long in front, 1.7–1.8 cm long in back; spadix green, cylindrical, 4.3–4.5 cm long, 4 mm diam.; flowers square, 2–2.4 mm in both directions, the sides straight to smoothly sigmoid; 5–6 flowers visible in principal spiral, 3–4 in alternate spiral; tepals apparently smooth; lateral tepals 1.2–1.5 mm wide, the inner margins straight, the outer margins 2-sided; pistils exposed; stigma linear, 0.2–0.3 mm long; anthers 0.4 mm long, 0.5 mm wide, inclined over and obscuring the pistil; thecae oblong-ovoid, slightly divaricate. *Infructescence* not seen.

Anthurium maguirei appears to be a local relict of the Guiana Shield flora, known only from Table Mountain in Surinam at 564 to ca. 1,000 m. It has been recorded as growing terrestrially in a "marshy" area as well as "terrestrial/epiphytic, climbing," although the last attribution is dubious.

This species is characterized by its very small size, moderately elongate stem and more or less elliptic leaf blades. It is one of the most distinctive species within sect. *Pachyneurium* and is unlikely