

# A NEW ANTHURIUM FROM PANAMA

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Since the publication of the family Araceae for the Flora of Panama (Standley, 1944) numerous species have been added to the Flora. Standley included 37 names for the genus *Anthurium* but it is now known that these represented only 31 species. Considerable field work has taken place since the completion of Standley's work, and the areas opened to botanists have included areas known to be rich in species of Araceae. Thus, it is not surprising that over 100 species of *Anthurium* are now known from Panama. Many of these are species found elsewhere in Central America, but more commonly they are species from South America which range northward to Panama and sometimes to Costa Rica. Several of the Panamanian species of *Anthurium* are suspected to be new to science, but await further comparison with described species from Colombia and Ecuador. One Panamanian species is described as new in this paper.

Since color seems to be very important in the taxonomy of *Anthurium*, especially the color of flowers, an attempt is being made to use standard color terminology in describing such parts. A standardized color chart published by Brent Berlin and P. Kay (1969) is being used to quantify colors. This color chart, available from the University of California Press, is a reproduction of the Munsell Color Array of 40 hues, at maximum saturation, with nine degrees of brightness. It is characterized by having 9 rows and 40 columns of

different colored squares ranging from reds through yellows, greens, blues and purples. Successive colors are each represented by 4 columns, each numbered 2.5, 5, 7.5 and 10. The 40 columns represent different hues and the 9 rows represent different degrees of brightness.

My representation of a particular color in this color chart is included in parentheses commonly after more general (and more poorly defined) color terms which are often in common usage. For example "(B&K red 5/5)" means that the square is in the red range in row 5 and column 5. Rows are read first followed by columns.

## *Anthurium dressleri* sp. nov.

Planta terrestris; caudicula erecta, brevis; petiolus pluricostatus, supra laticaniculatus; lamina anguste ovata, acuta vel acuminata, basi cordata, sinu angusto. Inflorescentia erecta; pedunculus pluri costatus; spatha albida, ovata, acuminata basi cordata vel acuta; spadix flavovirens ad luteolus, 3.5-6.0 cm longus, 6-7 mm latus. Fructus ovatus, purpureus et luteus, ca. 6 cm longus et 5 mm latus.

Terrestrial, roots moderately few (usually 1 per node), brown; caudex to ca. 25 cm long, 1-2.3 cm diam.; internodes very short, cataphylls pale green, to 6 cm long, faintly 1-ribbed; acuminate and inrolled at apex; soon turning brown, persisting at the upper nodes intact; leaf scars conspicuous, 1.3-1.7 cm wide. Leaf lamina hanging down, held  $\pm$  perpendicular to petiole; petioles several-ribbed, 8-40 cm long, 5-7 mm diam. midway (including ribs), narrowly or broadly canaliculate adaxially, sometimes

also bearing 2 blunter medial ribs, the sides and abaxial surface sharply 4-7 ribbed, at least the adaxial surface sometimes purplish; the ribs slender, sharp, straight; the sheath conspicuous 1.5-5 cm long; the geniculum green, only slightly enlarged, its ribs minutely revolute; the blades ovate, acute to acuminate at apex, deeply lobed at base, 20-40 cm long, 11.5-30 cm wide, broadest at about the middle; the basal lobes 5-10 cm long, rounded, directed downward or inward, sometimes overlapping, often turned upward along their inner margin; basal veins (3)4-5(6), not at all coalesced; the sinus narrow or closed 5-10 cm deep, acute at apex; the upper surface dark green with velvety luster (but not glossy), the lower surface much paler, matte, the midrib, lower primary lateral veins and the basal veins prominently raised on both surfaces (acutely so beneath), the primary lateral veins 5-6 pairs, scarcely prominulous, a few acutely raised beneath; interprimary veins present, flat, darker than the surface beneath; the tertiary veins flat, darker than the surface, weakly elevated in part on drying, the reticulate veins not visible, the uppermost basal vein extending to the apex as a collective vein, the lowermost part of the blade (opposite the geniculum) elevated, pale green to reddish, and horny at point of petiole attachment. Inflorescence erect, shorter than the leaves, peduncle terete, firm, smooth or sharply many-ribbed, 7.5-17 cm long, 1/2-1/3 as long as the petioles; spathe moderately thin, white or greenish-white at anthesis (turning pale green in fruit), sometimes withering in age, inserted at ca. 35° angle (Note: touching spathe may cause it to

snap into a position at 90° angle to peduncle), held initially at 120°-125° angle or spreading at 80°-90° angle to peduncle, ± straight, 4.2-8.0 cm long, 1-2.5 cm wide, acuminate to caudate-acuminate and incurled along margins at apex, the apical 7 mm sometimes sharply downturned, broadest at lower 1/3, narrowly ovate to lanceolate, acute to acuminate at apex, the acumen inrolled, obtuse to cordate at base, the margins weakly decurrent or meeting at ca. 180° angle, (when lobed, the margin of basal lobes rolled weakly inward); upper surface matte, lower surface semi-glossy, veins 9, green, moderately distinct, even the secondary veins visible; stipe absent or very short; spadix pale yellow to yellowish-green (B&K yellow-green 9/2.5), narrowly cylindroid-tapered 3.5-7.5 cm long, 6-7 mm wide near base (to as little as 3 mm wide on drying), 4-5 mm wide near apex; flowers homogamous, the apices obscurely 4-lobed, 2.5-2.9 mm diam. in direction of spadix, 2.5-2.8 mm diam. perpendicular to spadix, the sides of apex jaggedly sigmoid; tepals yellowish green, glossy, weakly punctate, lacking viscid droplets, the apex of lateral tepals ca. .7 mm wide, the inner margin broadly rounded, the alternate pair weakly concave on inner margin; the space between the tepals quadrangular to oblong, .4 mm wide in direction of axis, .6 mm long perpendicular to axis; the pistil green, weakly emerged; the stigma ellipsoidal, ca. .4 mm long, .2 mm wide, obviously open at anthesis of stamens, stamens with the lateral pair emerging in a relatively prompt sequence from the base to the apex, the alternate pairs emerging much later or at least sometimes not emerging,

held immediately above the tepals or sometimes not completely exserted from beneath tepals; anthers white, 4-5 mm long, ca. .8 mm wide, the thecae not at all divaricate; pollen white. Fruiting spadix pendent, to 13 cm long and 1.7 cm wide, the fruits irregularly dispersed when exserted; the fruits obovoid, dark violet-purple in upper 1/3, white below, to ca. 6 mm long and 5 mm wide, rounded at apex; seeds 2, 4-5 mm long ca. 3.0 mm wide obovoid, flattened on one side, white, suspended in a sweet, watery matrix.

TYPE: Panama; Colon, Rio Guanche, upstream ca. 5 km above the bridge along road to Portobello, elev. ca. 200 m., *Croat 37000* (HOLOTYPE: MO 2395460); Isotypes at SCZ, US, and others to be designated.

The species is known from Panama and Colombia in tropical wet and premontane rain forest from 150-800 m. It has been collected in flower from January to March and in July. Mature fruits have been seen in July. Plants cultivated at the Missouri Botanical Garden have also flowered in October and November. It is similar to *Anthurium crystallinum* Linden & André but differs from that species in having a markedly winged petiole and a concolorous upper blade surface (i.e. lacking whitish major veins). *Anthurium crystallinum* has generally a terete petiole and leaf blades with prominently paler major veins. According to Birdsey (1951) and Engler (1905) *A. crystallinum* has orange anthers. Those of *A. dressleri* are white.

The species readily hybridizes with *Anthurium forgetii* N.E. Brown (Mike Madison, pers. comm.).

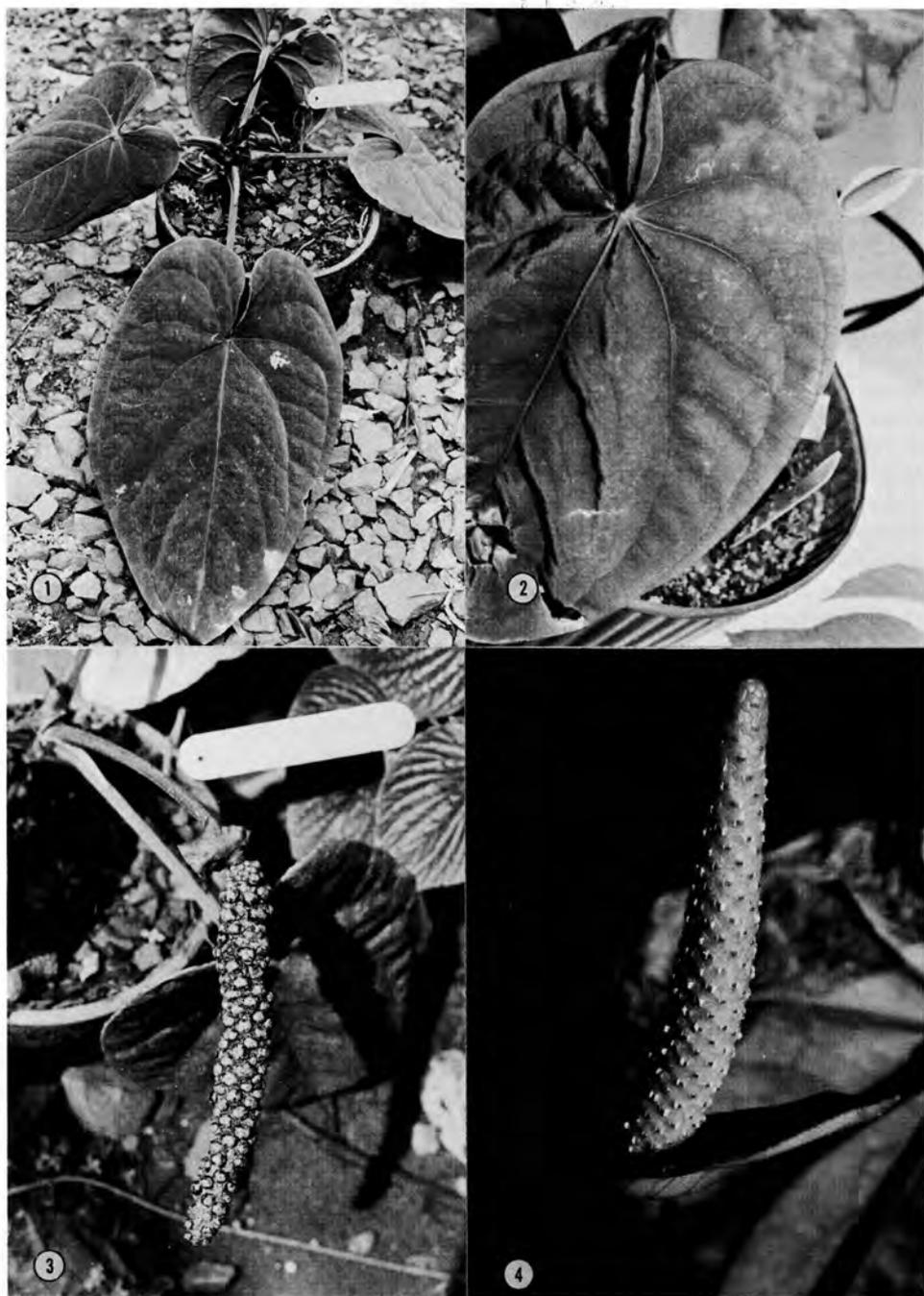
This handsome species is named in honor of Dr. Robert Dressler of the Smithsonian Tropical Research Institute in Panama who was responsible for its rediscovery and cultivation.

The earliest collection known to me was made by J. Triana in Colombia in 1853. It has subsequently been collected elsewhere in Colombia in the Department of Valle and Choco. In Panama it is known only from Central Panama east of the Canal Zone.

Other specimens seen - Panama: Panamá, Cerro Jefe, *Madison 3471* (collected from living collections made by Dr. Robert Dressler) (SEL), El Llano-Carti Road, 12 km. N. of Pan-Am Hwy. at El Llano, alt. ca. 400 m. *Nee 10492* (MO); Colon: Rio Guanche above bridge on road to Portobelo, *Foster 2808* (MO). Colombia: Valle?; La Berrugosa?, alt. 150 m., *Giana 1702* (Valle), Anchicayá, forest near hydroelectric plant, *Kennedy 731* (F), Chocó: spur of Alto de Buey and Rio Mutatá, alt. 300-1000 m., *Forero & Gentry 792* (COL).

#### Literature Cited

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- Birdsey, M. R., 1951. *The Cultivated Aroids*, the Gillik Press, Berkeley. 140 pp.
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*Anthurium dressleri* Croat. 1. Habit. 2. Leaf. 3. Infructescence. 4. Inflorescence.