Description of New species of *Anthurium* (Araceae) Sect. *Polyneurium*

Efraín Martínez, Universidad de Puerto Rico en Humacao
Mentor: Dr. Thomas B. Croat, Missouri Botanical Garden
Anthurium genus

- Is a Neotropical genus
- 1250 to 1500 species
- The flowers are bisexual
- Leaf blades with net-reticulate venation
Sect. *Polyneurium*

- Numerous closely parallel primary lateral veins
- Blades sagittate more or less oblong and acute to subcordate at the base
• Spadix usually purplish

• Cataphylls fiber residues
Aroid Research Program

• Program consists of Tom Croat, Carla Kostelac, Emily Colletti and 16 volunteer research assistants

• Activities:
  – Operating Lucid Key to *Anthurium* and *Philodendron*
  – Decisions on possible novelties
  – Describing plants
The Process of Identification

• Lucid key is used to test unknown species to determine if they are new.

Character states in *Anthurium* key:
• Ecology
• Stem
• Roots
• Cataphylls
• Leaves
• Inflorescence
• Infructescences
Lucid screen program
What features are good to start the identification?

• Geographic distribution

• Elevation

• Genus section

• Internodes

• Cataphylls: persistence

• Blades: shape, size, glossiness and texture

• Inflorescences: spathe and spadix color

• Infructescences: spathe persistence, berries color
Comparing specimen with existing species

Deciding it a plant is new and preparing diagnosis
Describing New Species

• Once a species is deemed to be new the material is assigned to a describer.
analyzing the inflorescence

taking measures

analyzing the texture of leaf surface

writing the description
Anthurium vargastorresense Croat, sp. nov. Ecuador. Esmeraldas: Eloy Alfaro, Reserva Ecológica Cotacachi-Cayapas, Parroquia Luis Vargas Torres; Río Santiago, estero Pote; 00°49’N, 78°45’W, 250 m, M. Tirado, P. Asimbulba, M. Coroso, J. Arroyo 558 (holotype, MO-04583472; isotype, QCNE).

Epiphytic; [all features from dried specimen]; internodes short; cataphylls deciduous; petioles 65.5 cm long, 3–6 mm diam., subterete, obtusely sulcate, drying greenish brown and prominently several-ribbed, geniculum 2.3 cm long, 3.2 mm diam.; blade ovate-sagittate, 65.5 cm long, 38 cm wide, broadest slightly below middle, 1.7 times longer than broad, as long as petioles, acuminate, deeply lobed at base, subcoriaceous, epunctate (lacking glandular punctations), slightly bicolorous, dark green and matte above, moderately paler and semiglossy below, drying dark brown and weakly glossy above, paler, semiglossy and yellowish brown below; anterior lobe more or less 47 cm long, broadly rounded on margins; posterior lobes 20 cm long, 14.5 cm wide more or less in the middle of lobe; sinus narrowly hippocrepiform, 17.7 cm deep, 6.3 cm wide; both surfaces smooth without notable features; midrib thicker than broad, drying slightly darker than surface above, narrowly convex, concolorous than below surface; basal veins 9 pairs, 2 pair free to the base; 4th fused 3 cm, 5th fused 5–5.5 cm 6th & 7th fused 5–6 cm, 8th pair fused 7–8.5 cm; posterior rib naked, 5.5–6 cm; primary lateral veins ca. (18)19–20 pairs, arising from the midrib at (40)42–57° angle, narrowly convex, slightly darker than surface above, narrowly rounded, slightly darker than surface below; collective veins arising from 4th pair of basal veins, moderately loop-connected, mostly 2.5–6 mm from the margin. INFLORESCENCE ca. 48.7 cm long; peduncle elongate, 31.2 cm long, 4–5 mm diam., drying red-brown; spathe sessile, long-spreading, spreading, light green, linear-lanceolate, more or less 27 cm long, 2.8 cm wide; spadix long-tapered, violet-purple, narrowly cylindroid, 17.5 cm long, 4–5 mm diam.; flowers 6–8 visible per spiral, 1–1.4 mm long, 1–1.2 mm wide; tepals moderately smooth; lateral tepals 0.4–0.5 mm wide, inner margin rounded, outer margin 2-sided.
New species described

- *Anthurium castrillonense* Croat
- *A. blanquitense* Croat
- *A. cajambrense* Croat
- *A. carmenense* Croat
- *A. castrillonense* Croat
- *A. convencionense* Croat
- *A. cotundoense* Croat
- *A. dolichocaulum* Croat
- *A. eforeroi* Croat
- *A. efrainii* Croat
- *A. falleniae* Croat
- *A. frieri* Croat
- *A. griseolaminum* Croat
- *A. griseosessilis* Croat
- *A. herediae* Croat
- *A. ipariaense* Croat
- *A. jasarum* Croat
- *A. jeanlindenii* Croat
- *A. josecamposii* Croat
- *A. killipii* Croat
- *A. liberum* Croat
- *A. longifilamentum* Croat
- *A. pedrazae* Croat
- *A. puchinaense* Croat
- *A. vargastorresense* Croat
Future works

• I will continue collaborating with Dr. Croat after I return to Puerto Rico by working on the Revision of *Anthurium* sect. *Polyneurium*.

• It is expected that by the means of loans to my institute I will be able to continue preparing descriptions of other new species.
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