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THOMAS B. CROAT & EDUARDO GONÇALVES

Anthurium (sect. *Dactylophyllium*) *moonenii,* a new species from French Guiana

Abstract

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An unusual and attractive member of *Anthurium* sect. *Dactylophyllium* was discovered in French Guiana by the naturalist Joep Moonen, in honour of whom the species is named. *Anthurium moonenii* is characterized by 3-lobed leaf blades, slender, generally pendent segments with numerous deeply sunken primary lateral veins, and long-pedunculate inflorescences with pendent, very elongated, slender, pale green spadices and greenish yellow berries.

The new species described here, *Anthurium moonenii,* is a member of *A.* sect. *Dactylophyllium* (Schott) Engl. with presumed affinities to *A. thrinax* Madison and *A. triphyllum* Brongn. ex Schott. Madison (1978) treated species of *A.* sect. *Dactylophyllium* in his account of palmately-lobed *Anthurium,* but this new species was unknown to him at the time. It was first discovered about ten years ago by Mr Joep Moonen and has been collected since by a number of collectors, the senior author included.

Anthurium moonenii Croat & Gonçalves, **sp. nov.** – Fig. 1-2
Holotype: French Guiana, Route de l'Est (#2), Cayenne-Regina, vicinity peak 93, 4°18'N, 52°10'W, 0-150 m, *T. B. Croat & J. Moonen 74316* (MO-4343678; isotypes: B, CAY, INPA, K, NY, P, U, UB, US).

Ad sectionem *Dactylophyllium* (Schott) Engl. pertinens. *Herba* hemiepiphyta; *petiolus* (18-)63-75 cm longus, 6-8(-12) mm diam., supra anguste et obtuse sulcatus; *lamina* 3-partita, foliolo medio ovato vel elliptico, 18-56 × 5-15.5 cm, apice acuminato, nervis primariis lateralibus 20-21 utroque, supra immersis, subtus prominentibus, nervo collectivo a margine 3-5 mm remoto; foliolis lateralibus subequilateribus; *pedunculus* 30-60 cm longus; *spatha* pallide viridis, 16-25 cm

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Fig. 1. *Anthurium moonenii* – A: flowering habit; B: habit, showing adaxial leaf surface. – Photographs by João Batista.

longa, 7-10 mm diam., lineari-lanceolata, ad basim erecta sursum pendens; *spadix* obscure viridis, flagelliformis, pendens, 28-60 cm longus, inferne 4-5 mm diam. sursum attenuatus.

Appressed-climbing epiphyte or hemiepiphyte; *stems* to 1(-3) m long, 2-2.5 cm in diam.; *roots* 1-2 per node, c. 2 mm thick, dark green, spreading laterally, initially to 15 cm long; *internodes* much shorter than broad, 2-3 × 1.5-3 cm, dark green, semiglossy, the uppermost hidden by cataphylls; *cataphylls* 9-10(-14) × 1-2 cm, persisting intact (splitting at base). *Leaves* spreading; *petioles* erect-spreading to spreading, terete, sometimes weakly and narrowly sulcate, medium green, semiglossy, 6-8(-12) mm in diam. midway, faintly striate but otherwise unmarked, (18-)63-75 cm long, longer than the blades; *geniculum* 2-2.5 cm long; *blade* simple and pendent when young, becoming deeply 3-lobed, spreading-pendent and arching, subcoriaceous, semiglossy, weakly bicolourous, lobes 18-56 × 5-15.5 cm, acuminate at apex, median lobe acute at base; lateral lobes unequal, obtuse on the outside, acute on the inside; *midrib* convex and concolourous (becoming narrower toward the apex) above, convex and yellowish green below; *primary lateral veins* in 20 to 25 pairs, quilted-sunken above, prominently pleated-raised below, departing midrib at 55-70° angle; collective vein arising from base, 3-5 mm from margin; interprimary and tertiary veins in part sunken above, prominently raised below, the petiolules spreading-erect, 0.5-1.5 cm long, sharply sulcate, becoming prominently wavy in older plants. *Inflorescence* pendent to spreading; *peduncle* 30-60 cm long, longer than the petioles, 5-7 mm in diam., terete; *spathe* linear-lanceolate, 16-25 cm long, 7-10 mm in diam., light green, directed at 180° to the peduncle, slightly arched near the base, spathe margins meeting at 90-100° angle; *spadix* pale green to green, whip-like, pendent, 28-60 cm long, 4-5 mm in diam., barely tapered; stipe 3-15 mm. *Flowers* 4-lobed, 2-3 × 2-3 mm, sigmoid; 5-6 flowers visible in the principal spiral, 5 flowers visible in the

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Fig. 2. *Anthurium moonenii* – herbarium specimen *Cremers 13272* showing young, simple leaf blade and inflorescence.

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alternate spiral; lateral tepals 0.5-0.7 mm wide, inner margin convex; pistils non-emergent; stigma ellipsoid, 0.4-0.5 × 0.4 mm; stamens weakly exserted, filaments flattened, 0.3 × 0.2 mm, anthers covering the stigma, retrorse, thecae ovoid, 0.4-0.5 × 0.3 mm. *Infructescence* pendent; spathe green, linear-lanceolate, persistent in fruit, spadix to 70 cm long, 8-10 mm in diam.; *berries* yellowish green, 6-7 mm long, 5-6 mm in diam.

Eponymy. – The species is named in honour of Mr Joep Moonen, naturalist and tour guide in French Guiana, who first brought the species to the attention of the senior author and who has collected the living material from which the type specimens were prepared. The species is in cultivation both at the Missouri Botanical Garden and at the Emerald Jungle Village residence of Mr Moonen. He has cultivated the new species for a number of years, has made observations on its growth behavior and has also pollinated the plant to produce berries. Mr Moonen has been responsible for collecting many new and interesting species of *Araceae* and has been collaborating for many years with the senior author on the *Araceae* of French Guiana.

Distribution. – Anthurium moonenii is endemic to eastern South America, known largely from French Guiana with an outlying population in the central part of Amazonas State in Brazil just south of the Rio Solimtes, known only from primary forest at less than 200 m in altitude. In addition to the localities given in the specimen list, the species has been observed or collected by Mr Joep Moonen along (1) the Rte de l'Est, on the Compté River, one hour by powerboat above the village Cacao, (2) the Cascades River, one hour by powerboat above the CD5 Bridge, (3) in the Kaw Mountains near the road to Fourgassie, (4) along the Piste de Belizon at PK 30, (5) on the Montagne Gabrielle, (6) along the Crique Inéry, 5 km north of Regina, and (7) along the Route de Coralie. The area where the species has been observed in French Guiana is approximately 100 × 40 km.

Other specimens seen. – French Guiana: Montsinéry: Crique Matarony, Bassin de l'Approuague, 4°17'N, 52°10'W, *J. Moonen 69;* Montsinery, 14.11.1993, *Cremers 13261* (CAY); ibid., 9.3.1994, *Cremers 13272* (CAY); ibid., 29.8.1994, *Mori & Gracie 23705* (NY); Haute Camopi-Mont Belvédère, 7.12.1984, *Granville 7154* (CAY); Bassin de l'Approuague, Layon Montagne Prise d'Eau, 4°28'N, 52°02'W, 7.11.1997, *V. Hequet 408* (MO); La Comté River, cultivated at Miege Belgium, [S-2292], 1.9.1988, *Billiet* (BR); Cayenne-Regina, km 93, 4°18'N, 52°10'W, 100-150 m, 21.2.1993, *Croat 74316* (CAY, MO). — Brazil: Amazonas: Coari, Alojamento Papagaio, Estrada do Porto Evandro, Base de Produçno e Exploraçno de Petróleo do Rio Urucu, 4°30'S, 63°08'W, 10.6.2003, *J. B. F da Silva 1224* (MG, UB).

Relationships. – The species is distinguished from other species of *Anthurium* sect. *Dactylophyllium* by its appressed-climbing habit, short internodes with persistent intact cataphylls (splitting at base), terete, semiglossy petioles weakly or narrowly and obtusely sulcate, deeply 3-lobed blades with 20 to 25 pairs of primary lateral veins, strongly undulate-marginate petiolules and by a pendent inflorescence with a slender, elongate spadix.

It is apparently closely related to *Anthurium thrinax* Madison, which differs in growing on rocks with erect, free-standing stems, in having leaflets with only up to 14 pairs of primary lateral veins (versus 20-25) that are merely etched on the upper surface and moderately inconspicuous (versus ± bullate in *A. moonenii*). In addition, the midrib in *A. moonenii* is convex on both surfaces, whereas in *A. thrinax* the upper midrib is narrowly and acutely raised on the upper surface and ± quadrangular with acute margins on the lower surface. The inflorescence of *A. thrinax,* finally, is erect and bluish green (matte) whereas pendent and green in *A. moonenii*.

The species is also related to *Anthurium triphyllum* Brongn. ex Schott from the eastern Andes and the Guianas, but the latter has only 5-7 pairs of primary lateral veins in each leaflet (versus 20-25 pairs in *A. moonenii),* and a much shorter (9-16 cm instead of 40-54 cm in *A. moonenii*) and erect (instead of pendent) spadix.

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