

# A new hybrid, *Philodendron* × *lucasiorum* Croat & Moonen (Araceae) from French Guiana.

Thomas B. Croat  
P. A. Schulze Curator of Botany  
Missouri Botanical Garden  
4344 Shaw Blvd., St. Louis, MO 63110  
[Thomas.croat@mobot.org](mailto:Thomas.croat@mobot.org)

Joep Moonen  
Volunteer Research Associate  
Missouri Botanical Garden (resides in French Guiana)  
[973ejv@gmail.com](mailto:973ejv@gmail.com)

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## ABSTRACT

A new wild-collected natural hybrid presumed to be parented by *Philodendron melinonii* Brongn. ex Regel and *P. linnaei* Kunth is described and illustrated from eastern French Guiana.

## KEY WORDS

French Guiana, hybrid, new species, *Philodendron*.

## INTRODUCTION

Joep Moonen, the junior author of this article, is a Dutch naturalist who has spent most of his adult life living and working in the Guianas and is interested in observing both aroids and bromeliads. Owing to his ecotourism business, he spends much of his

time in the jungles of the Guianas or on the waterways. This provides Joep time to observe and enjoy nature. An astute observer of wildlife, Joep has discovered many new species, and in this case a natural aroid hybrid. This is only one of several hybrids that he has studied in the forests of French Amazonia.

It takes special skills to recognize hybrids owing to the normal plasticity in all species so it is a testament to Joep's powers of observation and his special knowledge of the local aroids that he made and recorded the observation of this natural hybrid which is fully described here. This paper honors another special naturalist and lover of aroids, Steve Lucas who also played a large role in the development of interest in the Araceae.



**Figure 1.** *Philodendron linnaei*. Habit. — Photo Joep Moonen.





**Figure 2.** *Philodendron linnaei*. Stems. — Photo Joep Moonen.





**Figure 3.** *Philodendron linnaei*. Inflorescence. — Photo Joep Moonen.





**Figure 4.** *Philodendron* × *lucasi*. Habit. — Photo Joep Moonen.





**Figure 5.** *Philodendron* × *lucasi*. Leaf blade. — Photo Joep Moonen.





**Figure 6.** *Philodendron* × *lucasi*. Inflorescence. — Photo Joep Moonen.

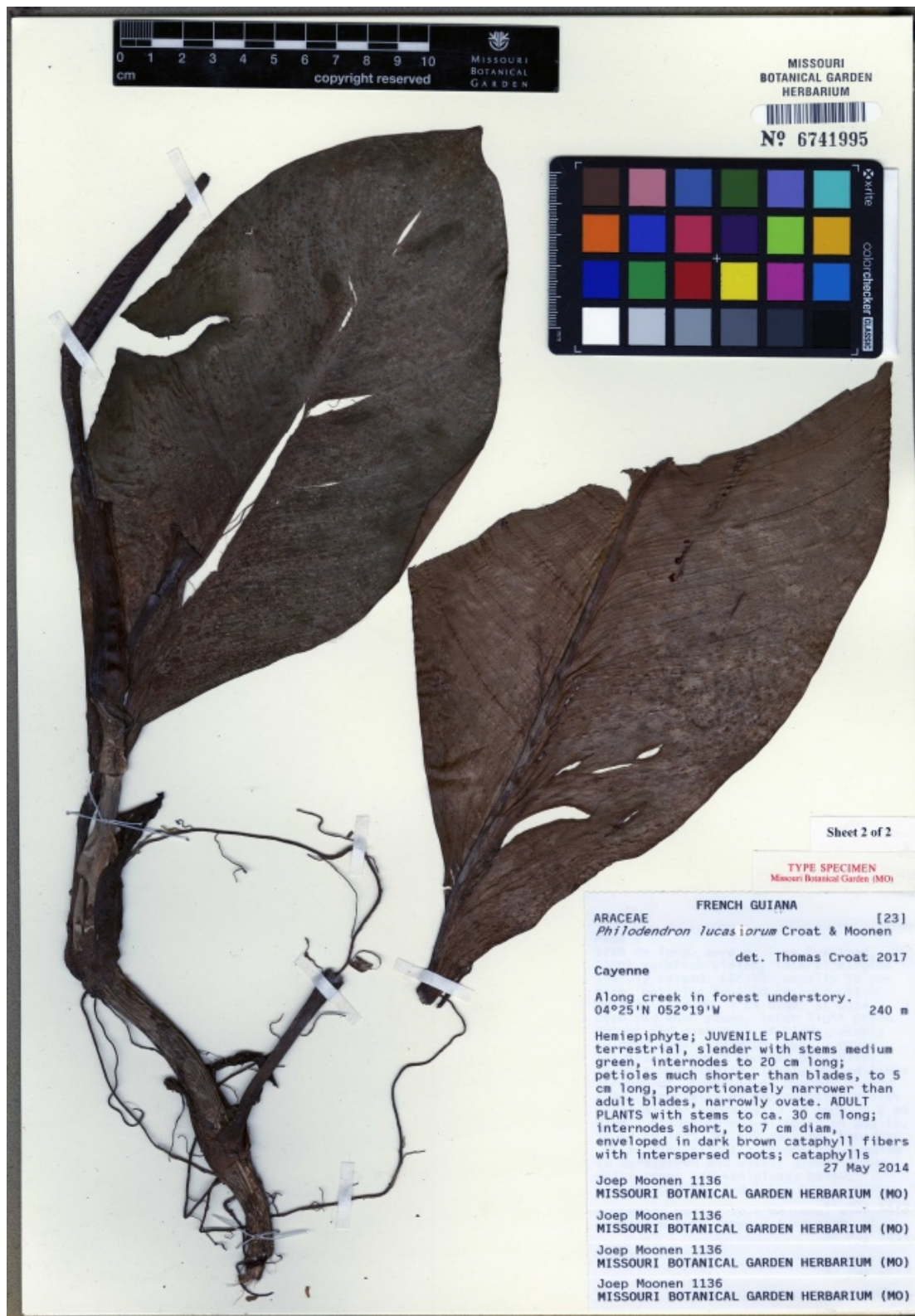


**Figure 7.** Collector Joep Moonen holding inflorescence of *Philodendron*  $\times$  *lucasi*. — Photo Mr. John Gerritzen.





**Figure 8.** *Philodendron* × *lucasiorum*. Herbarium type specimen (Moonen 1136, sheet 1). — Photo Thomas B. Croat.

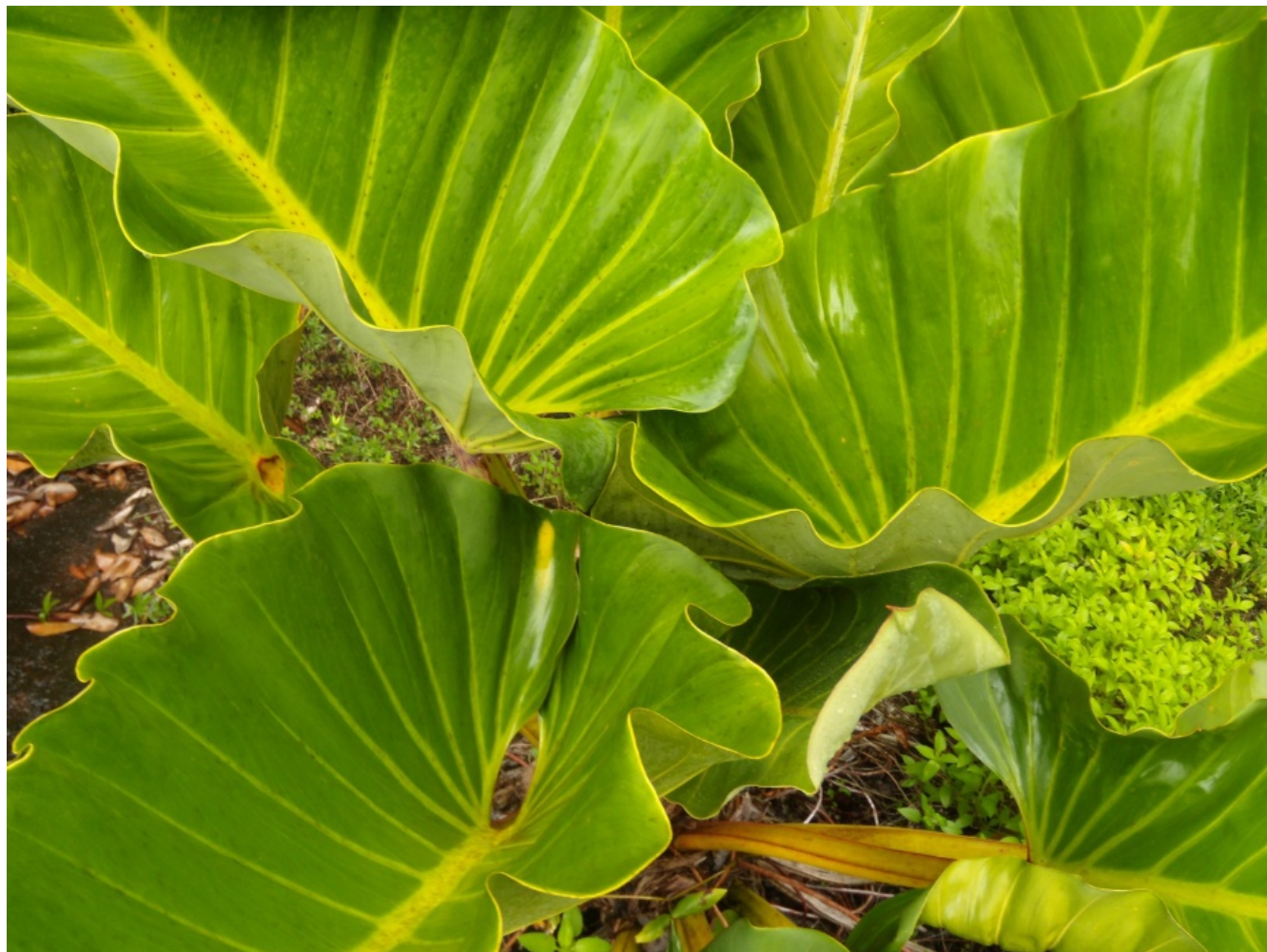


**Figure 9.** *Philodendron* × *lucasiorum*. Herbarium type specimen (Moonen 1136, sheet 2). — Photo Thomas B. Croat.





**Figure 10.** *Philodendron melinonii*. Habit. — Photo Thomas B. Croat.



**Figure 11.** *Philodendron melinonii*. Leaf blade. — Photo Thomas B. Croat.





**Figure 12.** *Philodendron melinonii*. Stems, cataphylls and inflorescence. — Photo Thomas B. Croat.



**Figure 13.** *Philodendron melinonii*. Inflorescence, close-up. — Photo Thomas B. Croat.



***Philodendron* × *lucasionum*** Croat & Moonen, **nothosp. nov.** Type: French Guiana. Along creek in forest understory, 04°25'N, 52°19'W, 240 m, 27 May 2014, J. Moonen 1136 (holotype, MO-6741994–95; isotypes, CAY, K, US). **Figures 1–13.**

*Philodendron* × *lucasionum* most closely resembles *P. melinonii* owing to its similar hemiepiphytic habit, large size, and the sharply sulcate petiole. In contrast, the other putative parent, *Philodendron linnaei* has more oblong blades and also differs by sending out branching 'pioneer' shoots. The inflorescence, red-colored petioles and leaf shapes (adult- and juvenile) of *Philodendron* × *lucasionum* are also very different from *P. fragrantissimum* (Hook.) G. Don.

Hemiepiphyte. JUVENILE PLANTS terrestrial, slender with stems medium green; internodes to 20 cm long; petioles much shorter than blades, to 5 cm long, proportionately narrower than adult blades, narrowly ovate. ADULT PLANTS with stems to ca. 30 cm long; **internodes** short, to 7 cm diam, enveloped in dark brown cataphyll fibers with interspersed roots; **cataphylls** 12–20 cm long, more or less D-shaped, light purplish violet, lateral margins sharply raised. LEAVES usually 5–8 per stem; **petioles** to 43–50 cm long, 1–1.5 cm diam. midway, 3 cm diam. at base, deep red when young, later light green except red near base of blade, deeply sulcate adaxially with bluntly acute margins, narrowly rounded abaxially, faintly speckled in closely spaced lines throughout, these lines coarser

toward apex, especially on the purplish violet geniculum; **geniculum** ca. 3 cm long, 2.2 mm diam.; **blades** oblong-elliptic as adults, to 67 cm long, 28.5–32 cm wide, broadest at middle, slightly asymmetric, medium to dark green and weakly glossy above, paler green and semiglossy below; margins broadly undulate; basal veins 2–3 pairs, all free to the base; major veins sunken and slightly paler above, narrowly rounded and slightly paler below; **midrib** light green above, reddish below; **primary lateral veins** 8 pairs, obtusely sunken and concolorous above, deep red on lower surface; interprimary veins usually 1 for each pair of primary veins; minor veins moderately distinct below (some of them vaguely more readily visible). INFLORESCENCE 1 or rarely 2 per axil; **peduncle** 18 cm long, 13–1.8 cm diam, yellowish white; prophylls 16 cm long; **spathe** 12–15 cm long, 3.3–4.0 cm diam., medium green throughout outside, the tube darker on inside than the blade, probably colored inside at anthesis; **spadix** 10.5 cm long; staminate portion 6.5 cm long, 1.6 cm diam. at broadest point in distal 2/3<sup>rd</sup>; sterile staminate portion 2.3 cm long, 1.9 cm diam. at base, 1.5 cm diam. at apex; pistillate portion 5 cm long, 1.7 cm diam.; pistils 3 mm long, 1.8 mm diam.; style 0.6 mm thick, 1.8 mm diam., drying darker than ovary, with rounded margins; stigma depressed-globose with the papillae covering a donut-shaped orifice 0.8 mm diam., raised from surface, smoothly sunken medially; ovule cylindroid, 5–6-locular; ovules ca. 30 per locule, arranged all along

the axile placenta, 0.4 mm long, the ovule proper about as long as the funicle.

*Philodendron* × *lucasi* is endemic to French Guiana, known at present only from the type locality in a forested creek valley in the eastern part of the region. It was first discovered at the end of May 2014. Plants grow in trees on open sunny spots near the creek but also in the shade on the forest floor.

The plant is presumably a natural hybrid between *Philodendron melinonii* Brongn. ex Regel and *P. linnaei* Kunth, both of which occur in the area where the hybrid was found. *Philodendron* × *lucasi* differs from the former by having more elliptic blades and a much narrower, more deeply sulcate petiole and from the latter by having a proportionately longer reddish peduncle and a different inflorescence which has the spathe tube dark maroon on both the inner and outer surfaces. The hybrid produces very reddish pioneer stems. In addition, the more oval leaf blades on the pioneer stems in *Philodendron* × *lucasi* are lacking on *P. melinonii* but are a feature of the juvenile plants of *P. linnaei*. Adult plants of *Philodendron linnaei* have more long-pedunculate spreading inflorescences with the spathe tube bright red and the blade white. In contrast, adult plants of *Philodendron* × *lucasi* have moderately short-pedunculate erect inflorescences with the spathe tube pale green outside and with the blade white.

This newly discovered natural hybrid is named in honor of the late Steve Lucas and his wife Janice. Steve was a naturalist, a deep sea photographer and a plant lover who specialized in aroids. He and his wife, Janice lived in Florida but after Steve's retirement in 1999 they moved to Siloam Springs, Arkansas where Janice had previously lived. Steve was a very active member of the International Aroid Society and at the time of his death he was serving on the IAS Board of Governors and as Corresponding Secretary for the IAS. He was instrumental in founding the Midwestern Chapter of the IAS along with Zach Dufran and helped to organize two of its first meetings before his untimely death at the age of 64 on January 13, 2011. Since Steve was restricted to a wheelchair, it was Janice who made most things happen. She served as his arms and especially his legs, doing much of the work in the greenhouse, driving Steve to the Missouri Botanical Garden and to the Miami meetings nearly every year and to meetings of the Midwestern Chapter of the IAS in St. Louis and in Oklahoma City. Steve was one of the most engaged aroiders for many years. After retiring to Arkansas, Steve and Janice built a home with a huge attached greenhouse where Steve used to grow his aroids. It was equipped with a pool, a waterfall and tree-like structures on which he cultivated his plants. Though Steve was confined to a wheelchair, he managed to accumulate and care for all of these collections in a loving manner with the able assistance of Janice. Before long, Steve put his knowledge into publications and his personal website which soon developed into



one to the most heavily visited horticultural sites which he called 'The Tropical Rainforest'. Steve was passionate about plants and passionate about people, which made his role as IAS Secretary a perfect match. Steve enjoyed getting to know new members of the Society and hearing about their interests. Many members felt as though they knew Steve very well because of his communication through emails, mailing lists, plants forums and Facebook. Steve enjoyed bringing like-minded people together to discuss plants, animals and nature in general. His website gradually

produced a huge following of people seeking information about aroids. It was Steve's joy to answer questions about his wonderful atrium and the plants he loved. Those who had the opportunity to visit Steve in his home knew him to be a very generous person, sharing cuttings of many of his plants with those who were interested. Since Steve's death, his work lives on in an internet website (<https://www.aroid.org/>) which was inherited and is now maintained by the International Aroid Society.