

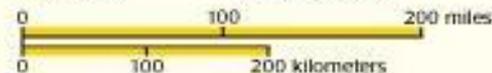
# ARACEAE OF THE GUIANAS

Kaieteur Falls,  
Guyana

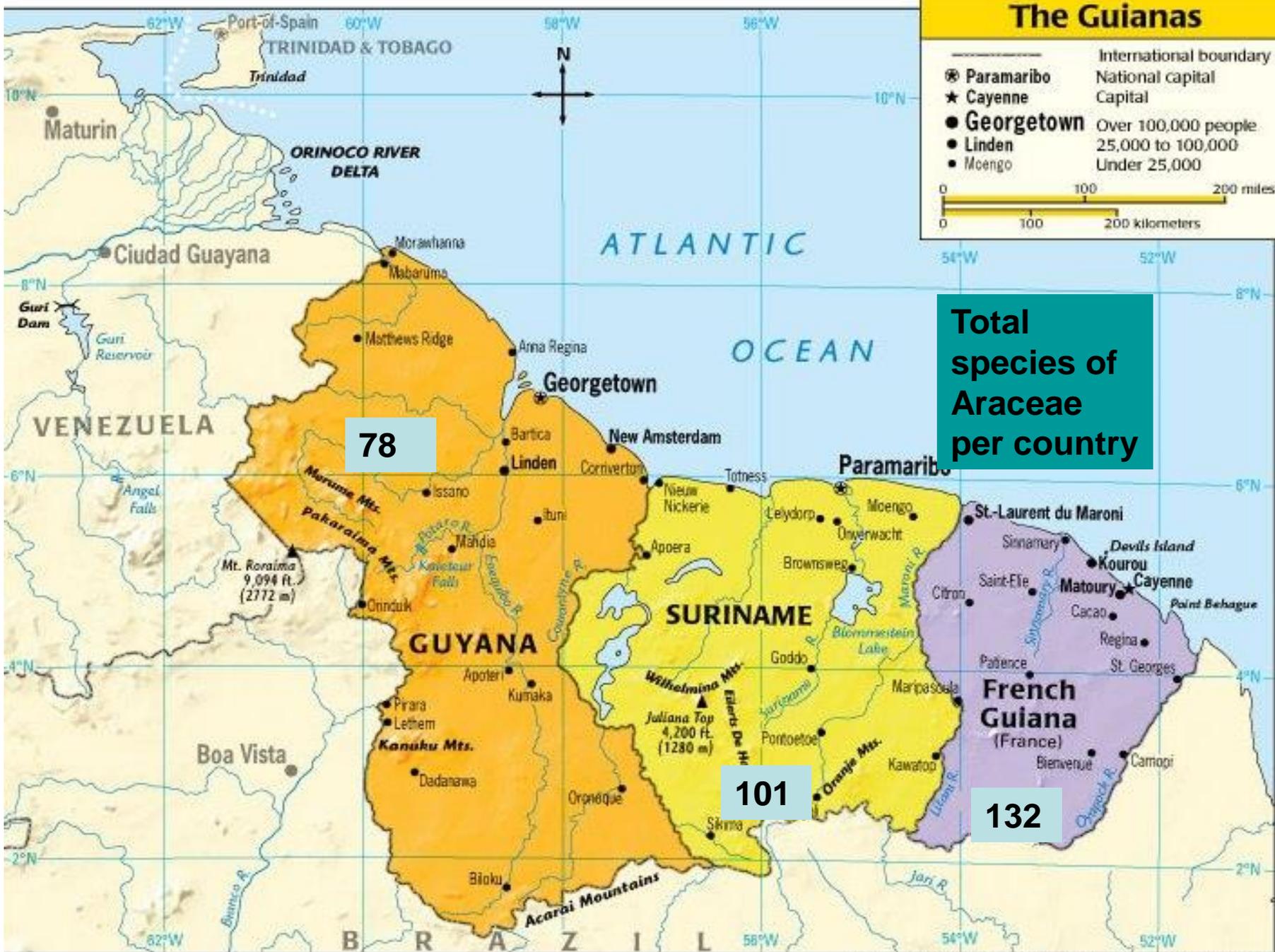
Thomas B. Croat  
Missouri Botanical Gardens

# The Guianas

- ⊗ Paramaribo International boundary
- ★ Cayenne National capital
- Georgetown Over 100,000 people
- Linden 25,000 to 100,000
- Moengo Under 25,000



Total species of Araceae per country



# Flora of Guianas Statistics

Brownsberg  
Park, Suriname

- Flora is moderately small
- Flora is moderately endemic
- 22 Native genera (4 Introduced genera)
- 160 native species (5 introduced species)
- 165 taxa (5 subsp. and var.)
- 78 species endemic to E. South America
- 50% of Native Species are Endemic to the Guianas.

- **Anaphyllopsis- 1**
- **Anthurium- 26**
- **Caladium- 4** →
- **Dieffenbachia-10**
- **Dracontium-4**
- **Heteropsis-6** →
- **Homalomena-1** →
- **Jasarum-1**
- **Landoltia-1**
- **Lemna-1**
- **Monstera-7** →



• **Montrichardia-2** →



• **Philodendron-66**

• **Pistia-1**

• **Philonotion- 2** →



• **Rhodospatha-4**



• **Spathiphyllum-6**

• **Stenospermation-2** →



• **Syngonium-2**



• **Urospatha- 2**

• **Wolffiella-2**

• **Xanthosoma-13** →



# Genera arranged by Size

- **Philodendron-60** [2.3 times larger than Anthurium]
- **Anthurium- 26**
- **Xanthosoma-13** [Unusually large percentage]
- **Dieffenbachia-10**
- **Heteropsis-6** →
- **Spathiphyllum-6**
- **Caladium- 4** →
- **Dracontium-4**
- **Rhodospatha-4** →



# Smaller genera by size

- **Philonotion-2**
- **Stenospermation-2**
- **Syngonium-2**
- **Montrichardia-2** →
- **Urospatha- 2** →
- **Wolffiella-2**
- **Anaphyllopsis- 1**
- **Homalomena-1**
- **Jasarum-1** →
- **Lemna-1**
- **Landoltia-1**
- **Pistia-1** →



# Philodendron-66 species

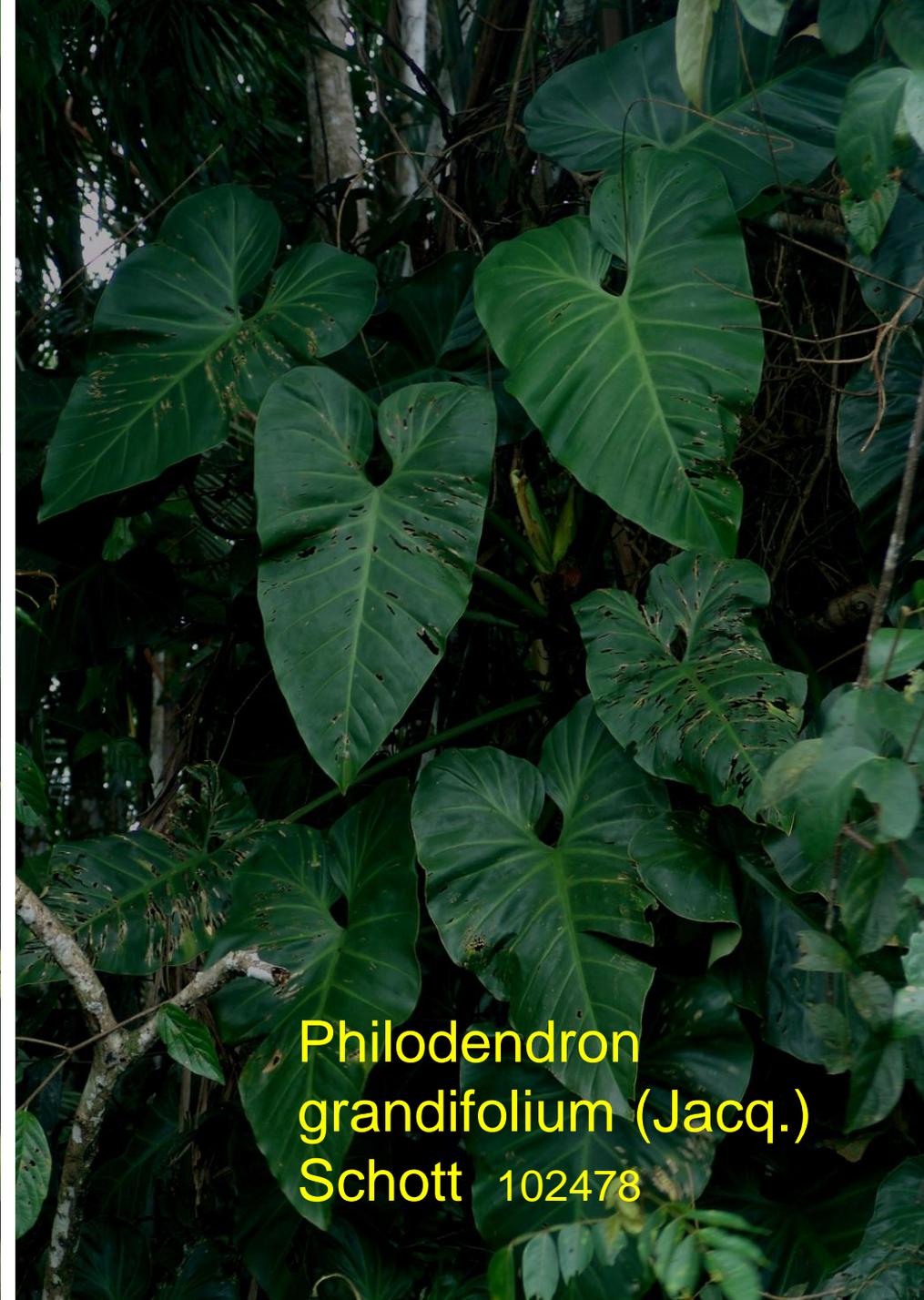
- Compared to the Andean countries of Western South America Philodendron is rich in the Amazon lowlands
- 40% of the species in the Guianas.
- 13% of species are subgen. *Pteromischium*

*Philodendron melinonii* Brongn. on Turtle Mt. overlooking Essequibo River



**Philodendron acutatum**  
Schott, Croat 102641

30 4:37 PM



**Philodendron grandifolium (Jacq.)**  
Schott 102478

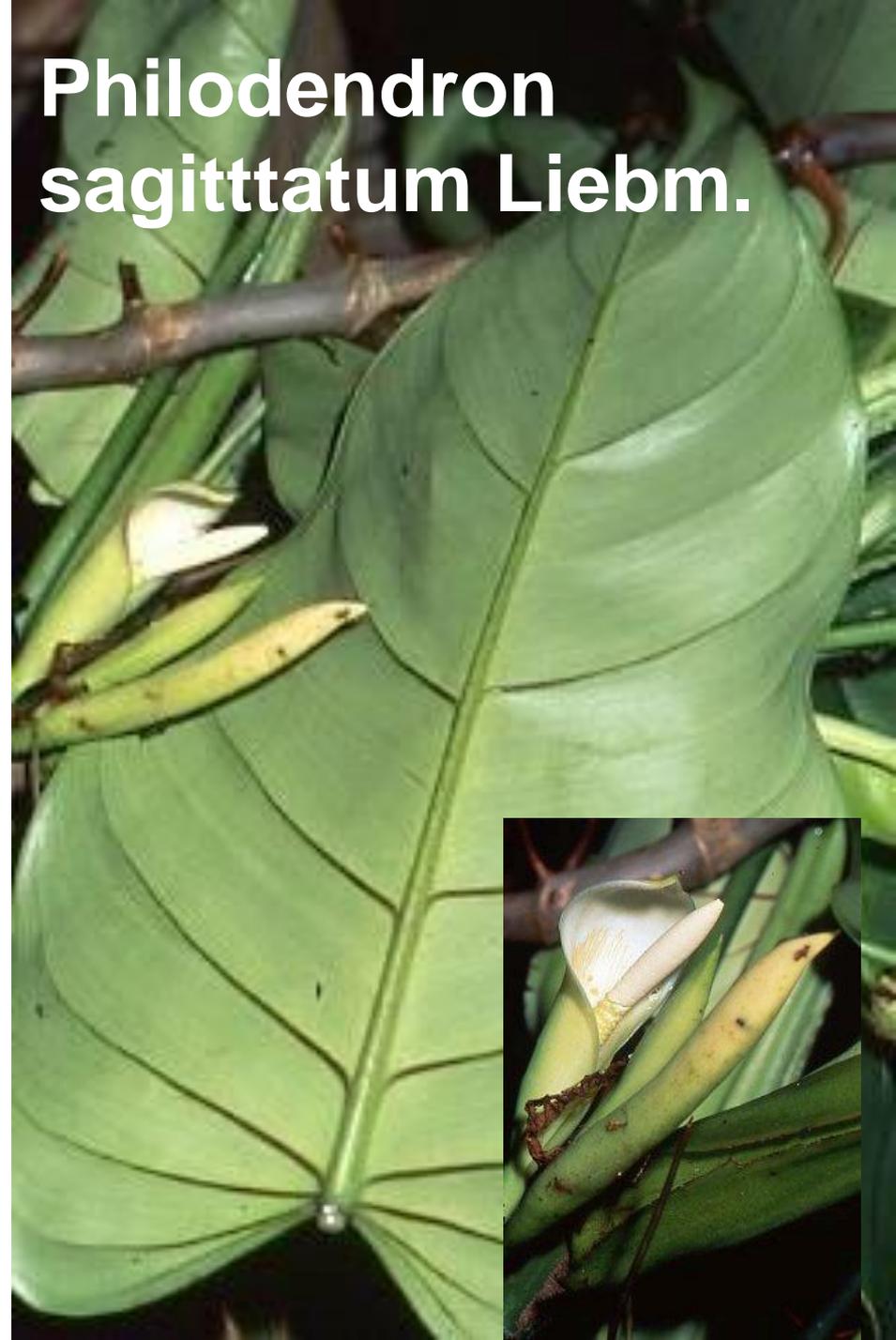


*Philodendron brandtianum* K. Kr., 101568

**Philodendron  
ornatum Schott**



**Philodendron  
sagittatum Liebm.**





**Philodendron melinonii**  
Brongn. juvenile 101826



101699



Philodendron deflexum  
Poeppig

27 9:45PM



102580

29 505mm

**Philodendron  
billietiae Croat  
120363**

A photograph of a Philodendron hederaceum plant in a forest. The plant has several large, heart-shaped, green leaves with prominent veins. A single, long, narrow, yellowish-green flower spike is visible on the left side of the plant. The background shows a dense forest with tall, thin tree trunks.

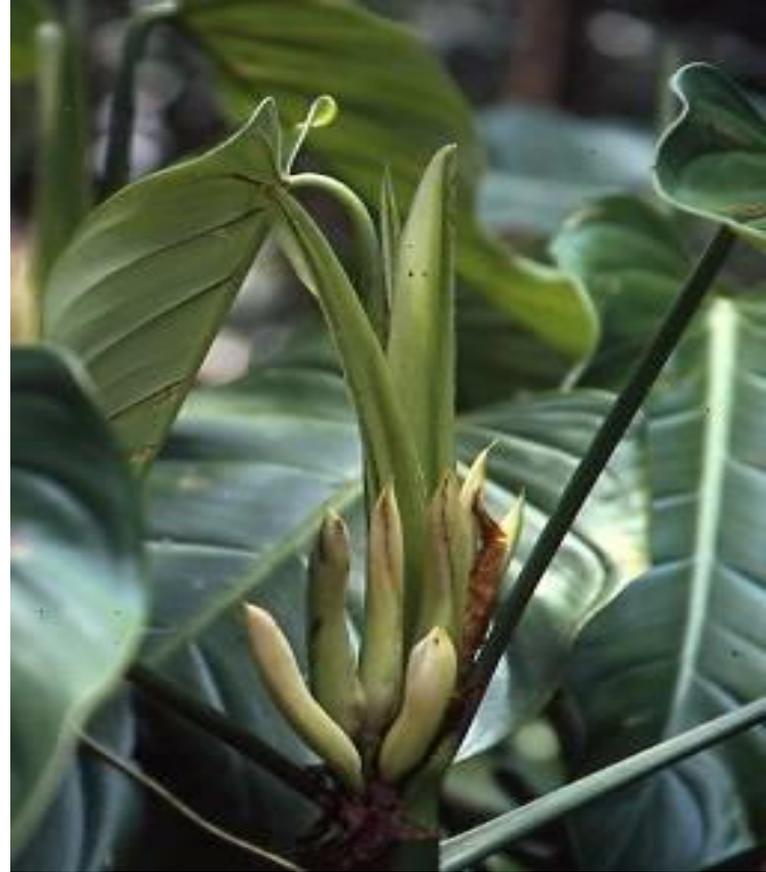
*Philodendron  
hederaceum*  
(Jacq.) Schott  
101997

A photograph of a Philodendron oyapockense plant in a forest. The plant has several large, heart-shaped, green leaves with prominent veins. The leaves are attached to a thick, woody stem. The background shows a dense forest with tall, thin tree trunks.

*Philodendron  
oyapockense* Croat,  
103916

*Philodendron pokigronense* Croat



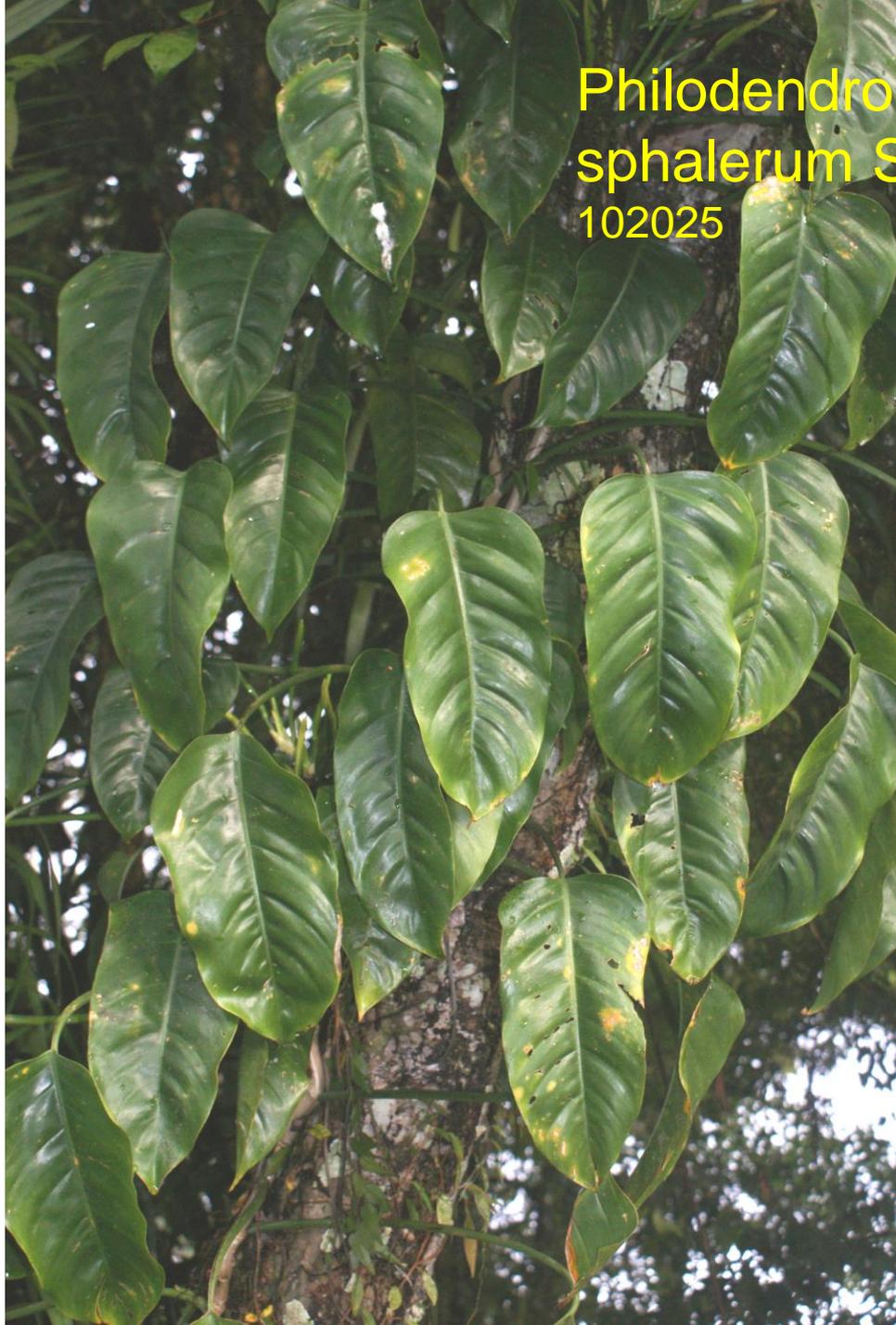


Philodendron moonenii Croat

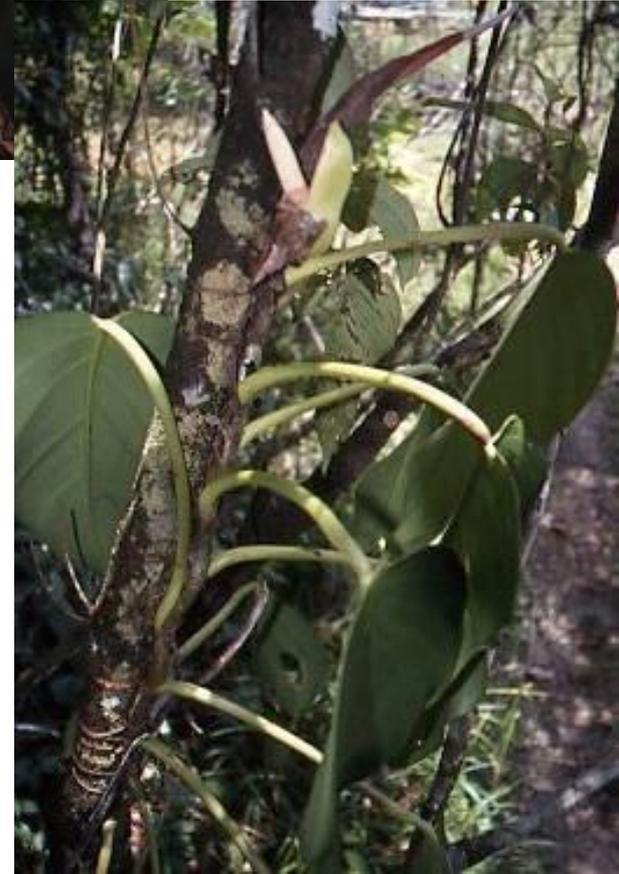


Philodendron  
ecordatum Schott,  
102754

Philodendron  
sphalerum Schott  
102025



*Philodendron ushanum*  
Croat & J. Moonen, 102968





**Philodendron linnaei Kth.**



**Philodendron  
wittianum Engl.**

**Philodendron  
carinatum  
Goncalves**

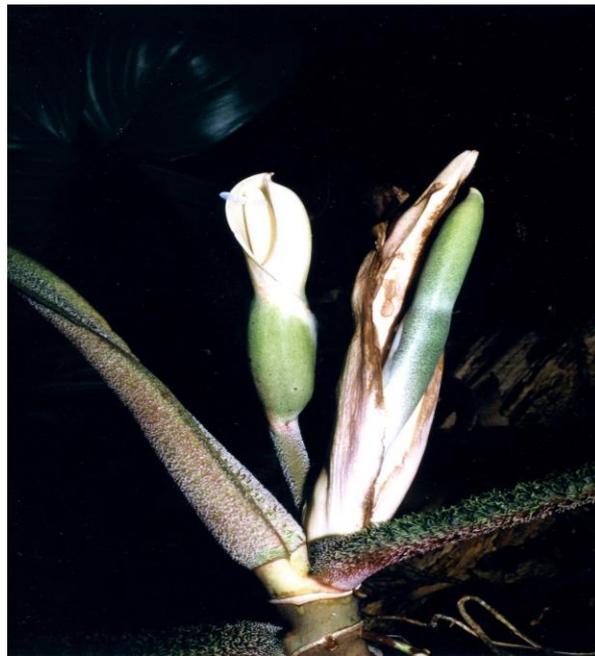




Philodendron pedatum (Hook.) Kth  
101794 Section Schizophyllum



**Philodendron  
polypodioides  
Jonker & Jonker**

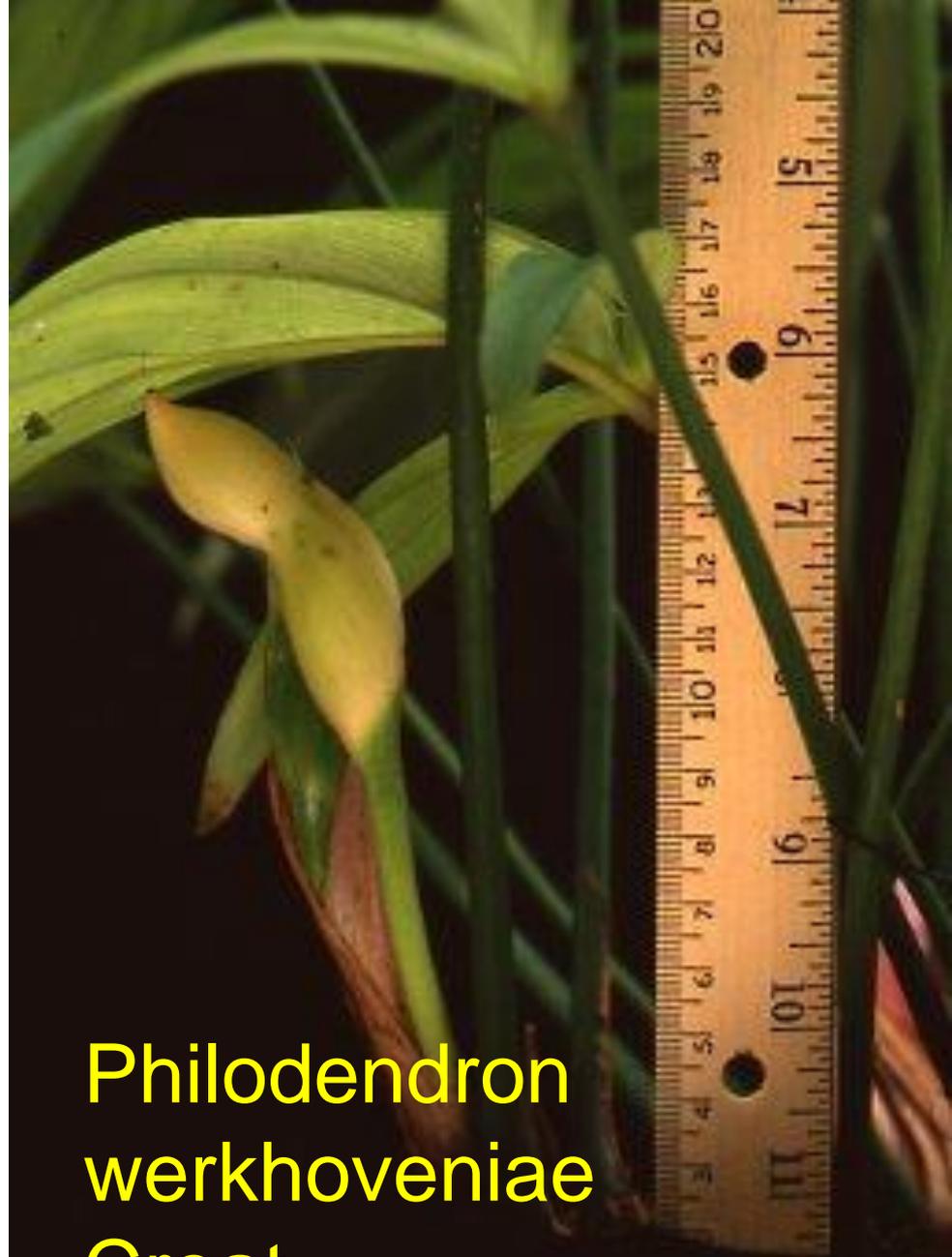


Philodendron  
squamiferum  
Poeppig





**Section unknown**



**Philodendron  
werkhoveniae  
Croat**



*Philodendron solimoesense*  
A.C. Sm.

**Subgenus  
Meconostigma**





Philodendron  
goeldii G.M.  
Barroso

A photograph of a Philodenden cremersii plant in a forest. The plant features large, vibrant green, ovate leaves with prominent parallel veins. A central stem is covered in a dense cluster of smaller, reddish-pink, heart-shaped bracts. The background shows a dense forest with various tree trunks and foliage.

**Subgenus Pteromischum**

**Philodenden cremersii**  
**Croat & Grayum 102775**

# Philodendron placidum Schott



**Philodendron  
rudgeanum Schott**



**Philodendron  
surinamense Miq.**



# Anthurium

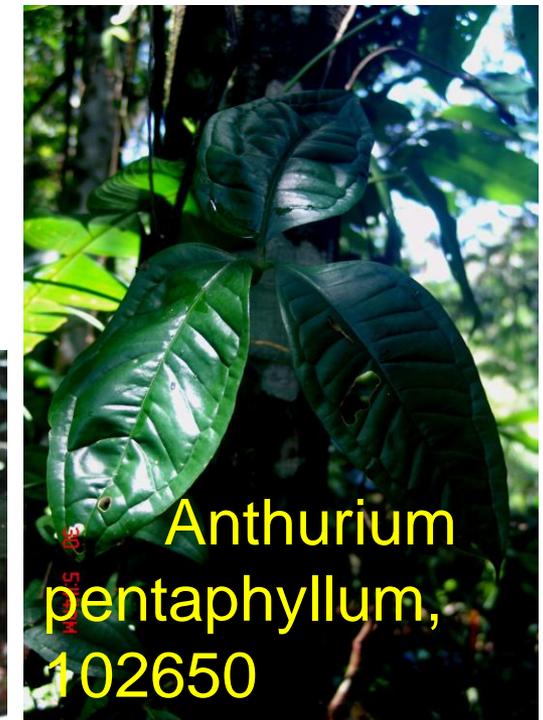
- 68% of the species are endemic to E. South America; Only 11% endemic to Guianas
- 32% of taxa are sect. Pachyneurium
- 28% of taxa are sect. are Dactylophyllium
- 6 other sections represented by 1-2 species each

# Other sections of Anthurium

- **Sect. Calomystrium- *A. roraimense***
- **Sect. Cardiolonchium- *A. sagittatum***
- **Sect. Dactylophyllum- *A. eminens*, *pentaphyllum* & *A. sinnuatum***
- **Sect. Digittinervium- *A. ptarianum***
- **Sect. Leptanthurium- *A. gracile***
- **Sect. Porphyrochitonium- *A. bakeri***
- **Sect. Tetraspermium- *A. obtusum* & *A. scandens***
- **Sect. Urospadix-*A. cremersii* & *A. trinervium***
- **Sect. nov. –*A. hookeri***

# Species of Anthurium widespread outside of the Guianas

- *A. clavigerum*
- *A. gracile*
- *A. hookeri*
- *A. obtusum*
- *A. pentaphyllum*
- *A. sagittatum*
- *A. scandens*
- *A. sinnuatum*



# Endemic species

- *A. cowanii* Croat
- *A. lanjouwii* Jonk. & Jonk.
- *A. martinianum* Koch & Kolb.
- *A. moonenii* Croat & Gonçalves
- *A. thrinax* Madison

# Endemic Anthurium species



*Anthurium thrinax* Madison



**Anthurium moonenii**  
**Croat & Gonçalves**



*Anthurium cowanii* Croat 101840



# Caladium

- *Caladium bicolor* (Ait.) Vent.
- *Caladium humboldtii* Schott
- *Caladium picturatum* K. Koch
- *Caladium schomburgkii* Schott
- Unusually rich in the Guianas for this comparatively small genus.



*Caladium picturatum*

# Dieffenbachia

- *Dieffenbachia duida* (Steud.) G.S. Bunting
- *Dieffenbachia elegans* A.M.E. Jonker & Jonker
- *Dieffenbachia humilis* Poepp. in Poepp. & Endl.
- *Dieffenbachia irwinii* Croat
- *Dieffenbachia paludicola* N.E. Br. ex Gleason
- *Dieffenbachia parvifolia* Engl.
- *Dieffenbachia prevostiae* Croat
- *Dieffenbachia seguine* (Jacq.) Schott
- *Dieffenbachia spruceana* Schott
- *Dieffenbachia stevelucasianum* Croat

# Dieffenbachia



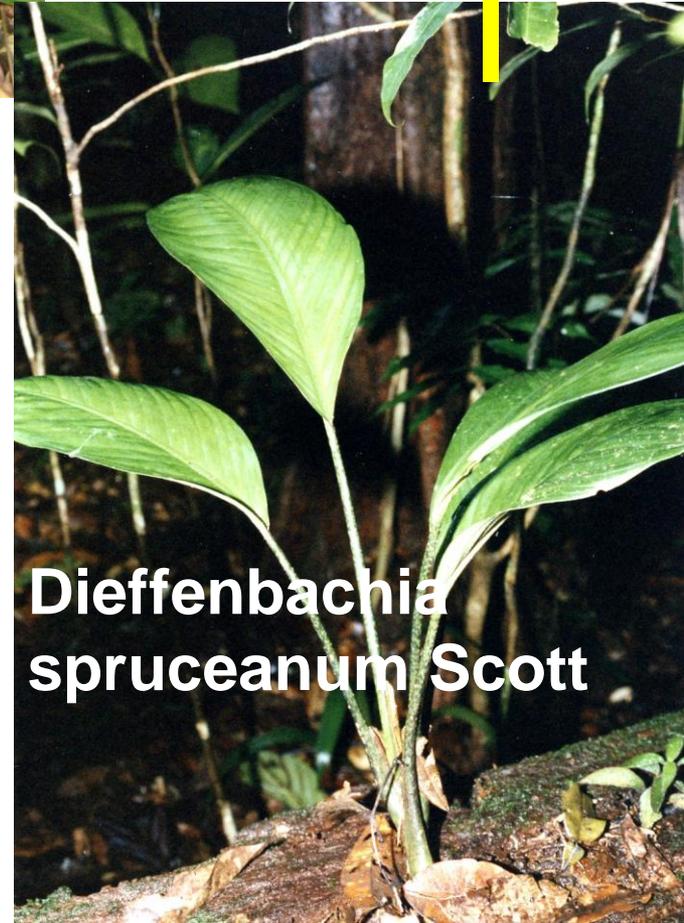
*Dieffenbachia spruceana*  
Schott



*Dieffenbachia seguine* (Jacq.)  
Schott

*Dieffenbachia humilis*  
Poeppig.

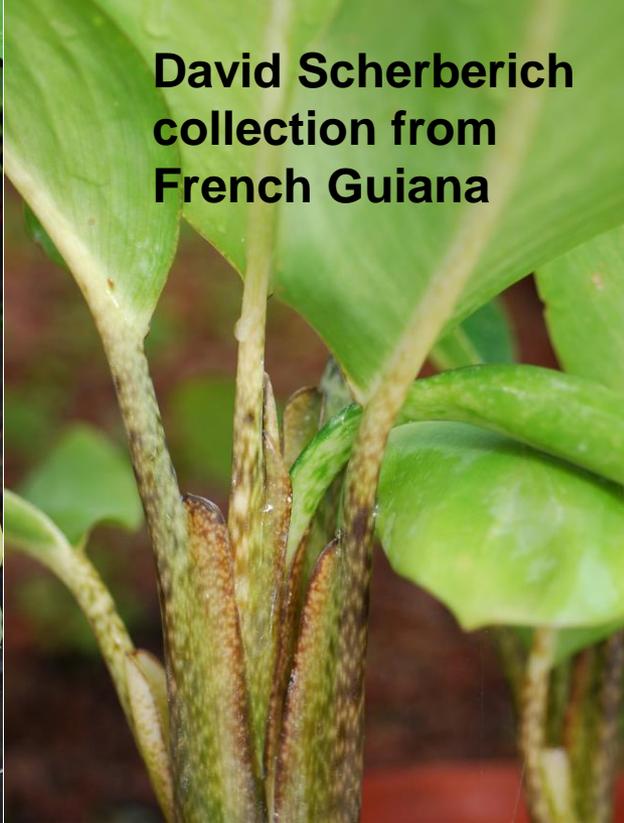
102729



*Dieffenbachia spruceanum* Scott



*Dieffenbachia paludicola* NE Br. ex Gl.



**David Scherberich  
collection from  
French Guiana**

**Undescribed  
Species**



**Van Andel,  
Suriname**

# Dracontium

- *Dracontium asperum* K. Koch
- *Dracontium guianense* G.H. Zhu & Croat
- *Dracontium polyphyllum* L.
- *Dracontium spruceanum* (Schott) G.H. Zhu
  
- Modest diversity in the Guianas



115



116



*Dracontium guianense*

148



149

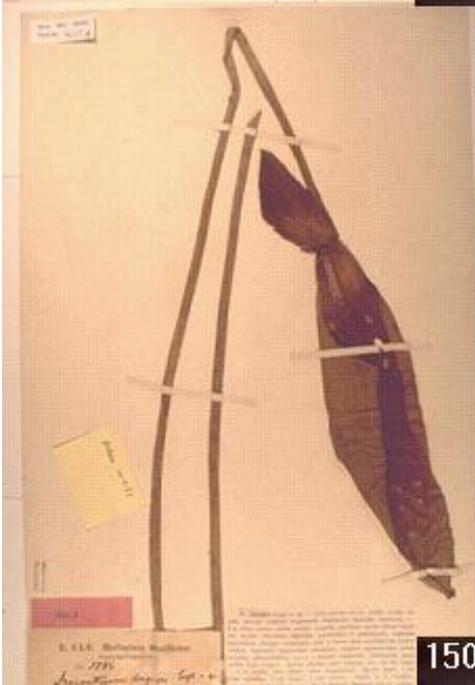
*Dracontium asperum*



117



118



150



151

# Dracontium polyphyllum

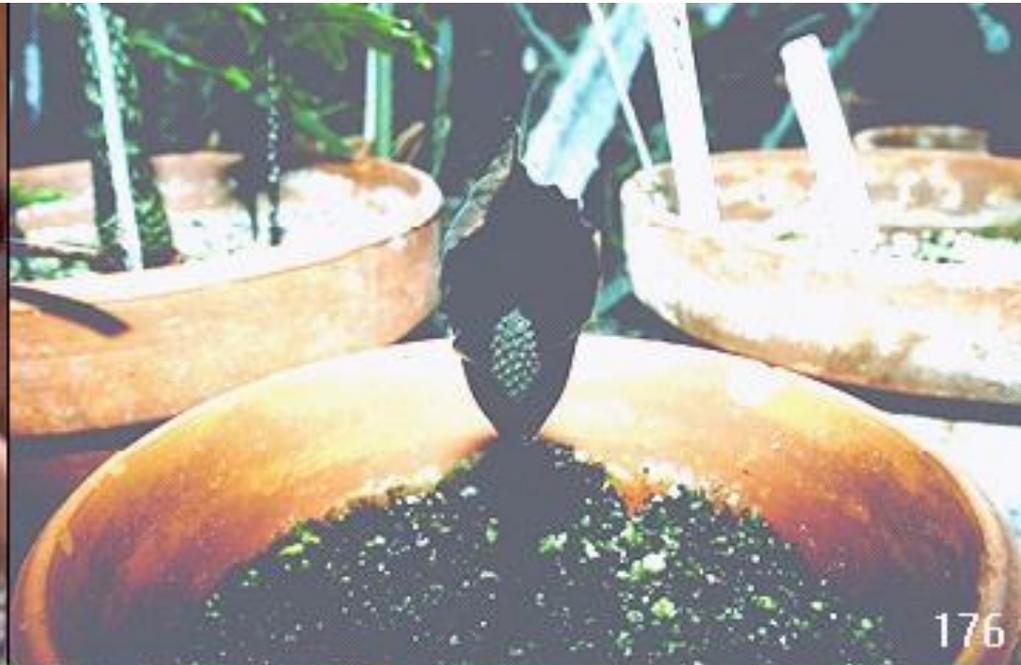




Photo: W.  
Hettterscheid

***Dracontium spruceanum*  
(Schott) Zhu**

# Heteropsis

- *Heteropsis flexuosa* (Kunth) G.S. Bunting
- *Heteropsis melinonii* A.M.E. Jonker & Jonker
- *Heteropsis spruceana* Schott
- *Heteropsis robusta* (G.S. Bunting) M. L. Soares
- *Heteropsis steyermarkii* G.S. Bunting
- *Heteropsis tenuispadix* G.S. Bunting
  - Unusually high species diversity

# Heteropsis



**Heteropsis flexuosa  
(Kth) Bunting**



**Heteropsis spruceana Schott**



*Heteropsis steyermarkii*  
Bunting, 102838



# Monstera

- *Monstera adansonii* var. *klotzschiana* (Schott) Madison
- *Monstera adansonii* var. *laniata* (Schott) Madison
- *Monstera barrieri* Croat & Moonen & Ponce
- *Monstera dubia* (Kunth in Humb., Bonpl. & Kunth) Engl. & K. Krause
- *M. expiliata* Schott
- *M. lechleriana* Schott
- *Monstera obliqua* Miq.
- *Monstera spruceana* (Schott) Engl. in Mart.
  
- One of the more difficult genera in the Guianas and still in need of further work.

**Monstera obliqua** Miq.



101979

# Monstera species

**Monstera adansonii** Schott var. *laniata*



*Monstera adansonii*  
Schott ssp.  
*klotschyana* (Schott)  
Madison Fourgassie  
Creek, French Guiana



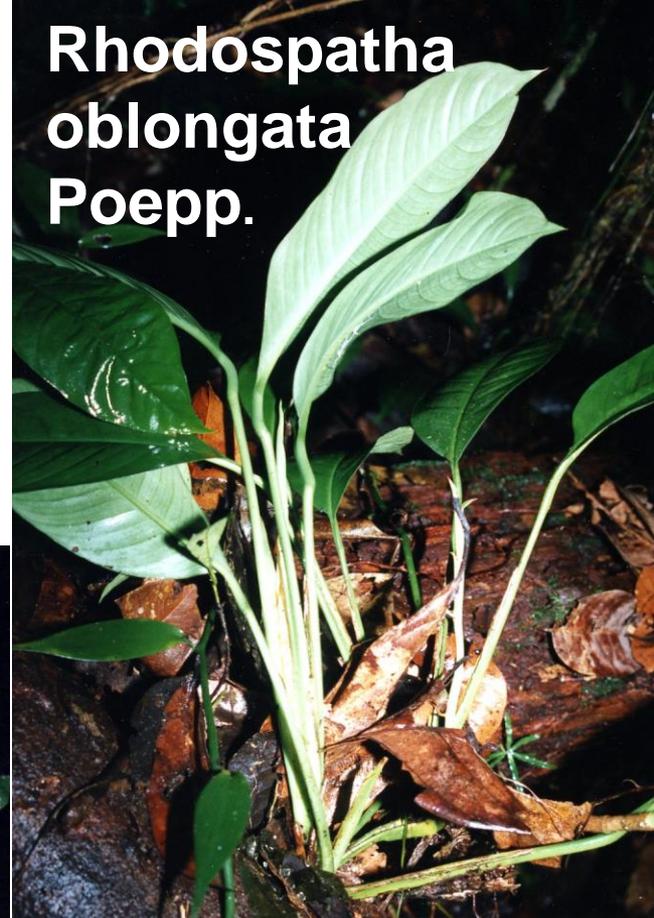
# Monstera barrieri Croat



**Rhodospatha  
venosa  
Gleason**



**Rhodospatha  
oblongata  
Poepp.**



**Rhodospatha**



**Rhodospatha  
brachypoda  
Bunting**

**R. latifolia Poepp**



# Spathiphyllum

*S. cannifolium*

*S. cuspidatum*

*S. floribundum*

*S. humboldtii*

*S. maguirei*

*S. schomburgkii*



*S. humboldtii* Schott



*S. cuspidatum* Schott



# Stenospermation

S. ammiticum Bunting

S. maguirei Jonk. & Jonk

S. multiovulatum (Engl.) NE Br.

S. spruceanum Schott

S. steyermarkii Bunting



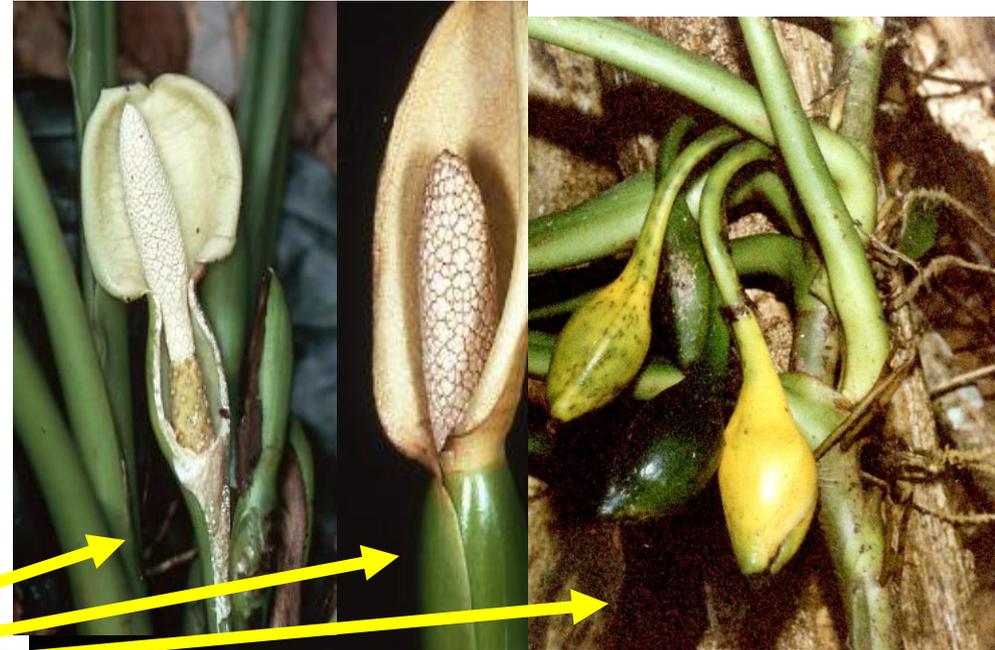
# Syngonium



102647

*S. podophyllum*  
Schott var.  
*vellozianum* (Schott)  
Croat

*S. yurimaguense*  
Engl.



# Xanthosoma

- *Xanthosoma acutum* E.G. Gonçalves
- *Xanthosoma belophyllum* Kunth
- *Xanthosoma caracu* K. Koch & Bouché
- *Xanthosoma conspurcatum* Schott
- *Xanthosoma cordatum* N. E. Br.
- *Xanthosoma cordifolium* N. E. Br.
- *Xanthosoma granvillei* Croat & Thompson
- *Xanthosoma helleborifolium* (Jacq.) Schott
- *Xanthosoma sagittifolium* (L.) Schott in Schott & Endl.
- *Xanthosoma striatipes* (Kunth & C.D. Bouché) Madison
- *Xanthosoma striolatum* Mart. ex Schott
- *Xanthosoma undipes* (K. Koch & C.D. Bouché) K. Koch
- *Xanthosoma violaceum* Schott

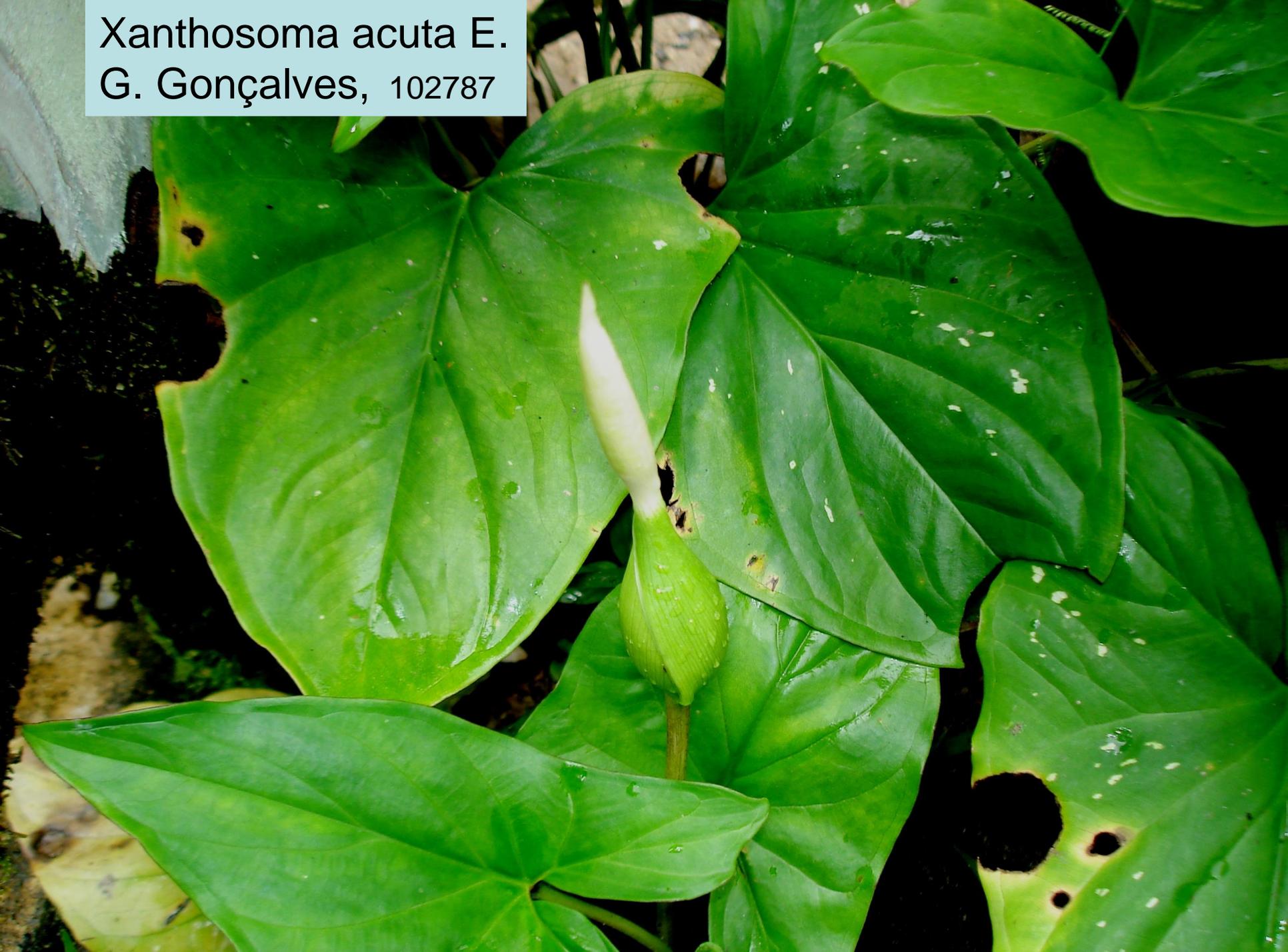
# Xanthosoma



**X. granvillei** Croat & Thompson



*Xanthosoma acuta* E.  
G. Gonçalves, 102787



# Conclusions

- The Guiana's Aroid flora is heavily endemic but is only modestly species-rich with 165 species. However with 22 native genera and with 2 genera endemic to the region it is generically rich. Species diversity is highest in the heavily forested portions in French Guiana in northern Suriname, less so in the drier savannas in southern Guyana and Suriname. *Philodendron* subgenus *Pteromischum* and *Xanthosoma* constitute areas where considerably more revisionary work is need.