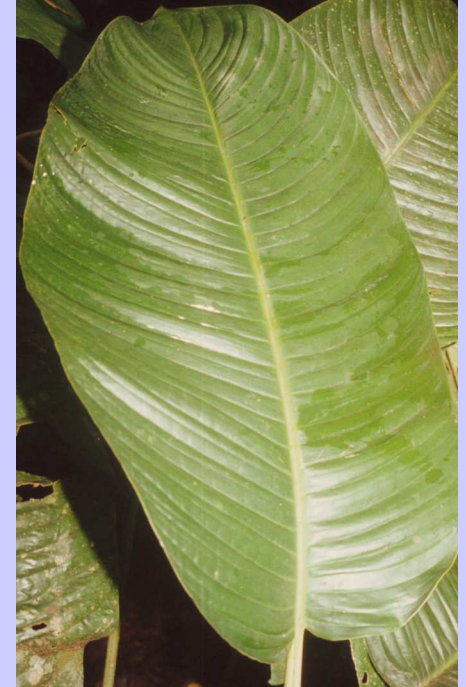
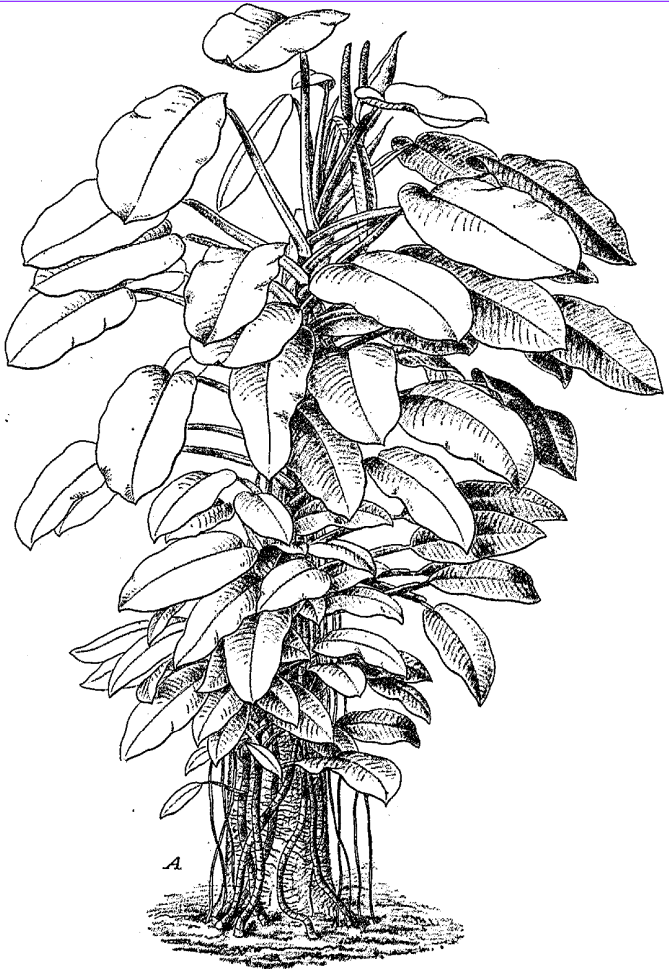
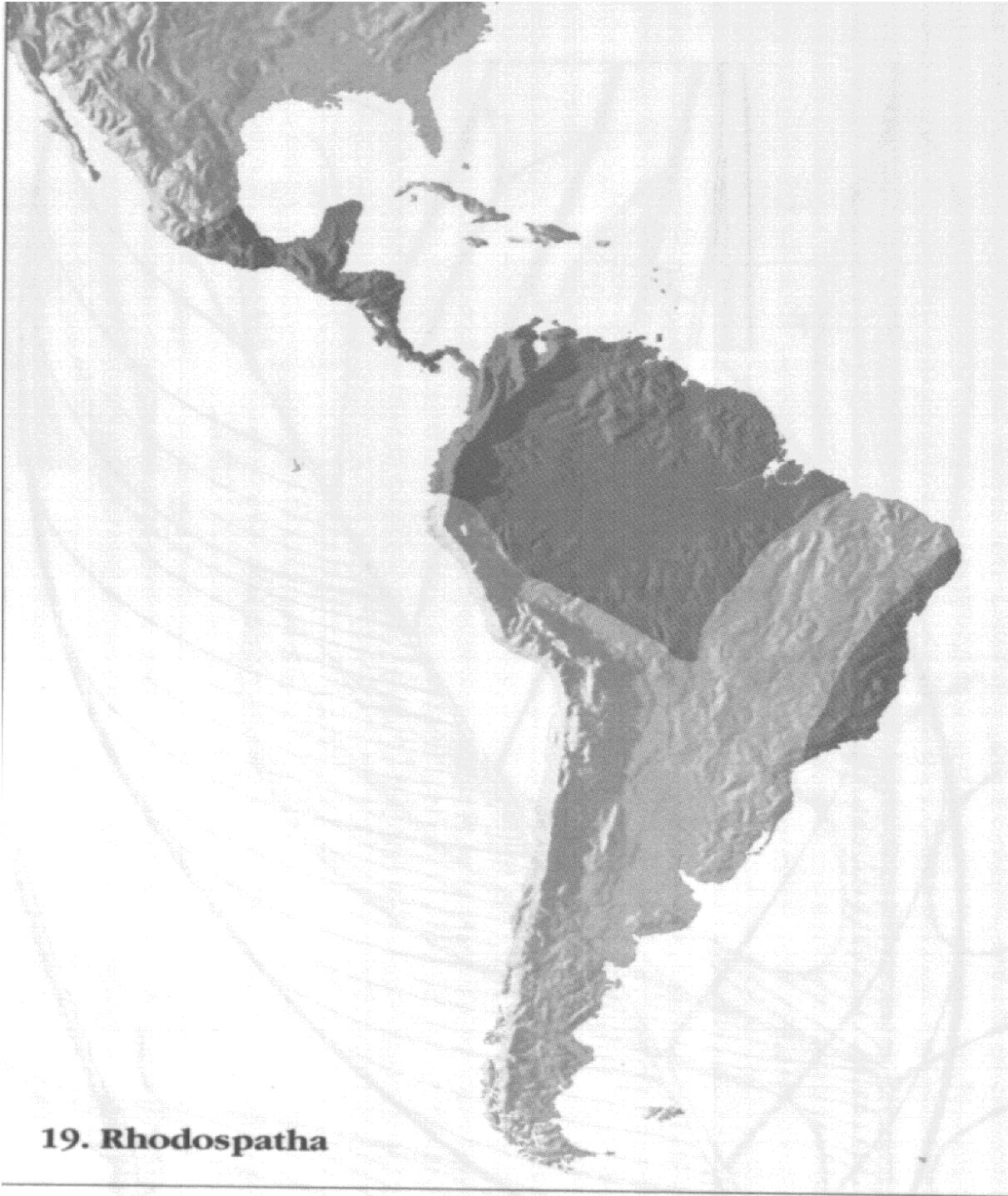


Revision of *Rhodospatha* (Araceae) for the Neotropics



Dr. Thomas B. Croat
Missouri Botanical Garden



Rhodospirillum
distribution

19. *Rhodospirillum*

Phytogeography

Rhodospatha
primarily from
South America – 71
species



Phytogeography (cont.)



14 in Central America

3 described:

R. forgetii,
R. moritziana,
R. wendlandii

Phytogeography (cont.)

<u>Country</u>	<u># species</u>
Ecuador	27
Peru	19
Colombia	18
Panama	13
Venezuela	11
Costa Rica	8
Brazil	4
Guianas	3
Bolivia	2
Nicaragua	1
West Indies	1

** Center of diversity for *Rhodospatha* is in Central America and the Central Andes of western S. America, especially Ecuador

Even without Sodiro species
Ecuador = 22 species

- Inhabits wet forest at middle to low elevations
- S. America most known from Andean/foothill regions
- Amazon basin – a few widespread species present –
R. oblongata, *R. latifolia*, *R. venosa*.



R. venosa



R. moritziana

R. moritziana & *R. oblongata* – unusual distributions – very few Araceae occur on both slopes of the Andes

Species in Ecuador

Andes, western
slope

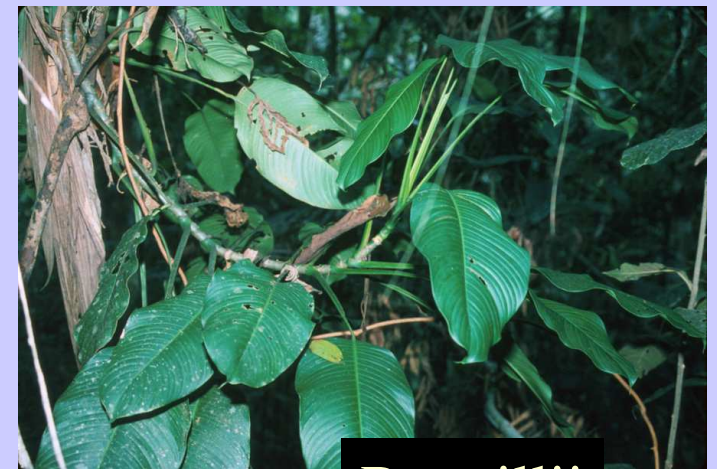


R. dodsonii



R. endesaense

Andes, eastern slope



R. neillii

Species described during Schott's career

R. oblongata Poeppig

R. latifolia Poeppig

R. heliconifolia Schott

R. wendlandii Schott,

Anepsias moritzianus Schott =

Rhodospatha moritzianus



Rhodospatha picta Nicols.

- This species, described in 1886 proved to also be *Rhodospatha moritziana*

Species published by Luis Sodiro in Ecuador (1908)

R. dammeri Sodiro

R. dissidens Sodiro

R. kraenzlinii Sodiro

R. macrophylla Sodiro = *R. densinervia*

R. robusta Sodiro

R. statutii Sodiro

Engler's revision in 1908

R. blanda Schott = *R. oblongata*

R. costaricensis Engl. & K. Kr. = *Monstera*

R. densinervia Engl. & K. Kr.

R. heliconifolia Schott

R. longipes Engl. (1905) = *R. oblongata*

R. melinonii (Engl.) Engl. & K. Kr. = *Heteropsis*

R. oblongata Poeppig

R. picta Nicols. = *R. moritziana*

R. tuerckheimii Engl. & K. Kr. = *Stenospermation*

R. wendlandii Schott

List of Engler's species of *Rhodospatha* (1908)

R. densinervia Engl. & K. Kr. Ecuador

R. heliconifolia Schott Venezuela

R. moritziana (Schott) Schott Costa
Rica-Peru

R. oblongata Poeppig Colombia-
Brazil

R. wendlandii Schott Costa Rica-
Colombia

Species described after *Das Pflanzenreich* revision by Engler & Krause

<i>R. dammeri</i> Sodiro	1908 Ecuador
<i>R. dissidens</i> Sodiro	1908 Ecuador
<i>R. kraenzlinii</i> Sodiro	1908 Ecuador
<i>R. macrophylla</i> Sodiro	1908 Ecuador
<i>R. robusta</i> Sodiro	1908 Ecuador
<i>R. boliviense</i> Engl. & Kr.	1908 Boliva
<i>R. forgeti</i> N. E. Brown	1913 Costa Rica

Species described by Bunting in Venezuela

<i>R. badilloi</i> Bunting	1975
<i>R. bolivarana</i> Bunting	1975
<i>R. falconensis</i> Bunting	1986
<i>R. guasarensis</i> Bunting	1986
<i>R. steyermarkii</i> Bunting	1986
<i>R. brachypoda</i> Bunting	1988
<i>R. cardonae</i> Bunting	1988
= <i>R. latifolia</i>	

<i>R. badilloi</i> Bunting	Venezuela
<i>R. bolivarana</i> Bunting	Venezuela
<i>R. boliviense</i> Engl. & K. Kr.	Bolivia
<i>R. brachypoda</i> Bunting	Venezuela-Bolivia
<i>R. dammeri</i> Sodiro	Ecuador
<i>R. densinervia</i> Engl. & K. Kr.	Ecuador
<i>R. dissidens</i> Sodiro	Ecuador
<i>R. falconensis</i> Bunting	Venezuela
<i>R. forgeti</i> N. E. Brown	Costa Rica
<i>R. guasarensis</i> Bunting	Venezuela
<i>R. heliconifolia</i> Schott	
<i>R. kraenzlinii</i> Sodiro	Ecuador
<i>R. macrophylla</i> Sodiro	Ecuador
<i>R. moritziana</i> (Schott) Schott	Costa Rica-Peru
<i>R. oblongata</i> Poeppig Amazon	Colombia-
<i>R. robusta</i> Sodiro	Ecuador
<i>R. venosum</i> Gleason	Colombia-Brazil
<i>R. wendlandii</i> Schott Colombia	Costa Rica-

Species

published

by the time

Croat began

studies with

Rhodospatha

***Rhodospatha* species published by Croat (or in press)**

***R. acostasolisii* Croat**

***R. brentberlinii* Croat**

***R. katipas* Croat**

***R. monsalvae* Croat**

***R. mukuntakia* Croat**

***R. piushaduka* Croat**

Appressed-climbing
hemiepiphytes

Habit

Terrestrial



R. venosa



R. neillii



R. moritziana

Branching is common in adult plants



Tightly appressed
to tree

Stems

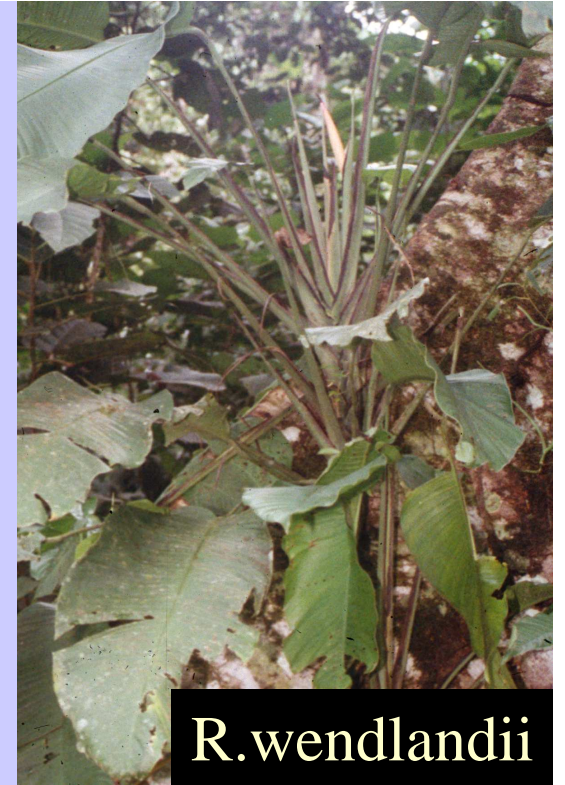


R. endesae

Loosely rooted



R. brachypoda
ssp. *meraense*



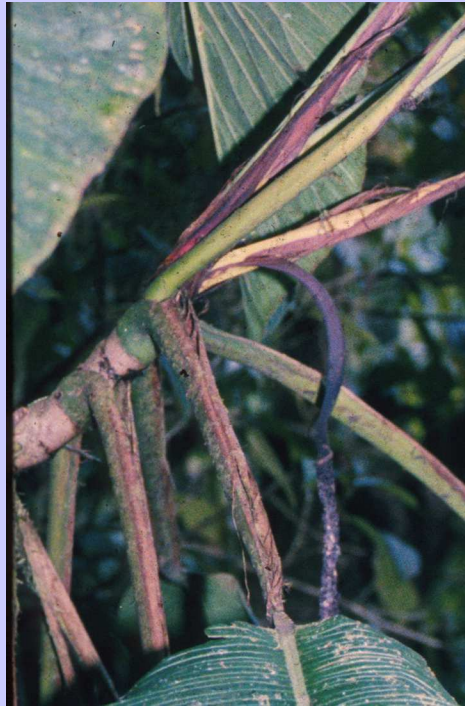
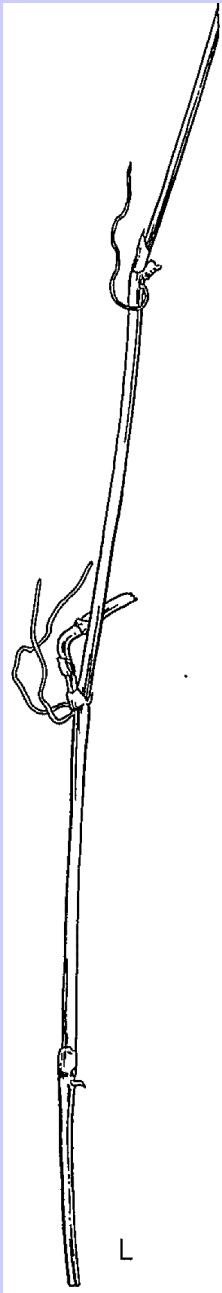
R. wendlandii

Detached, spreading from tree



R. wendlandii

Stems



Internodes
broader
than long



Internodes about
as long as broad

Distichously arranged leaves



R. endesaense



R. monsalvae

Petiole sheaths breaking into pieces



R. monsalvae

Petiole sheaths becoming fibrous and persisting

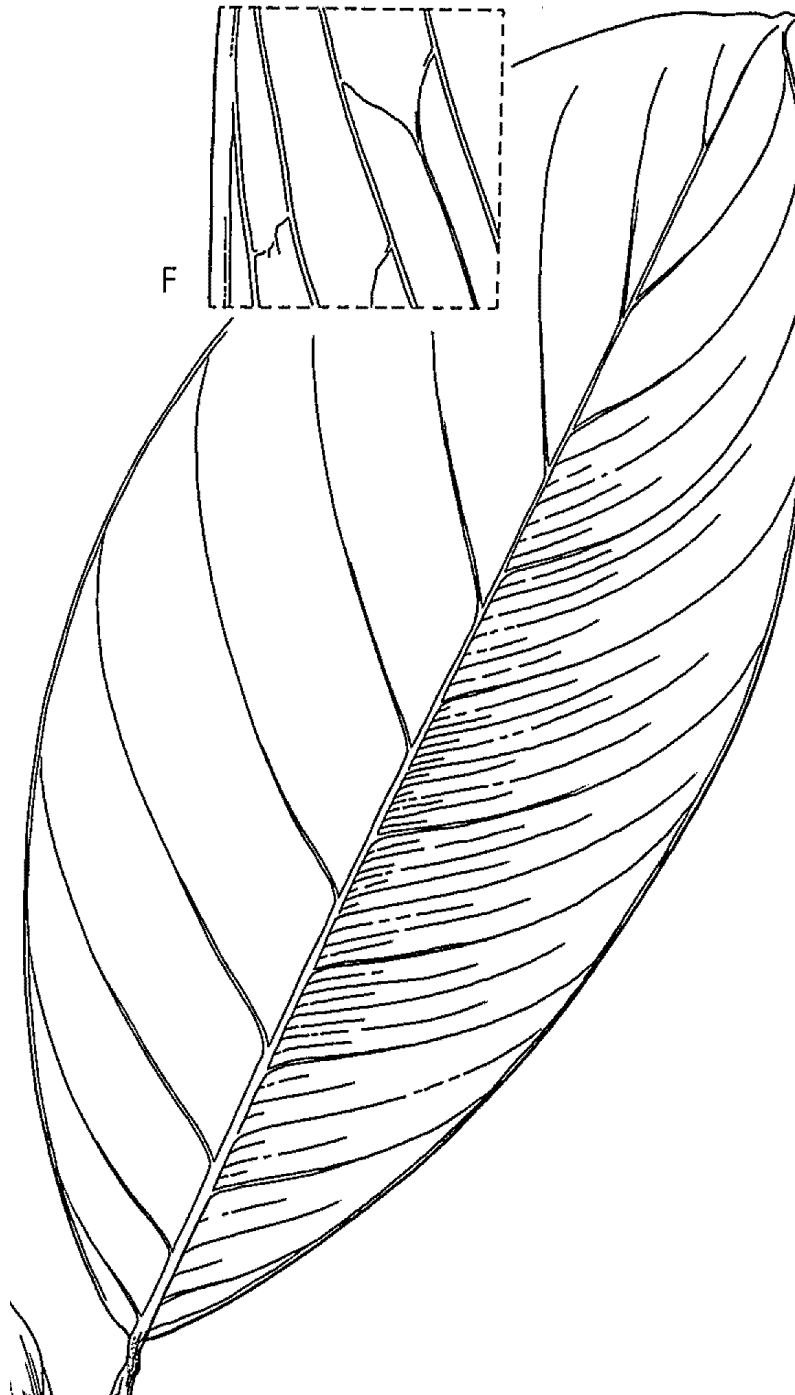


R. neillii



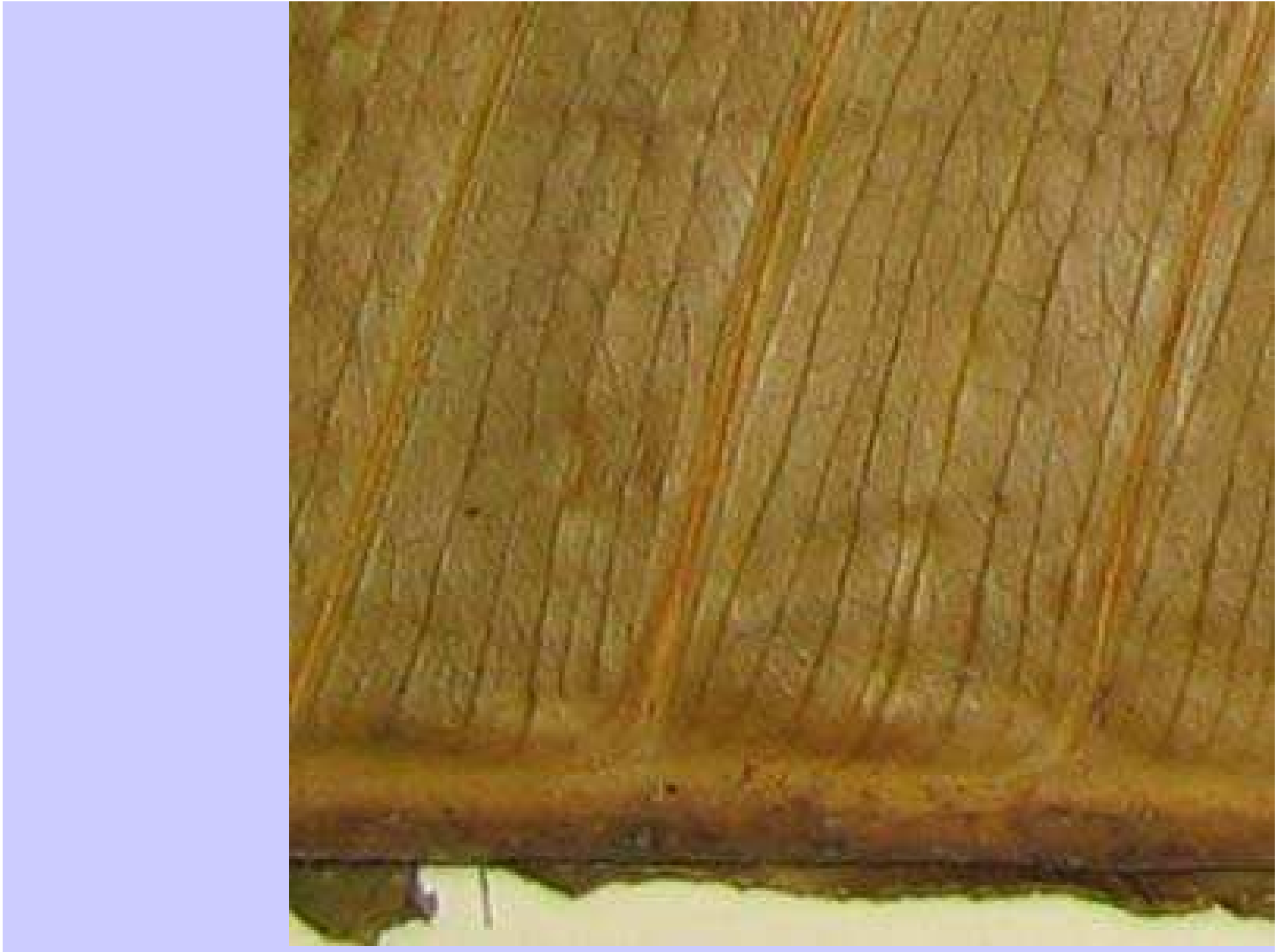
R. neillii

Leaves



Close-up of veins





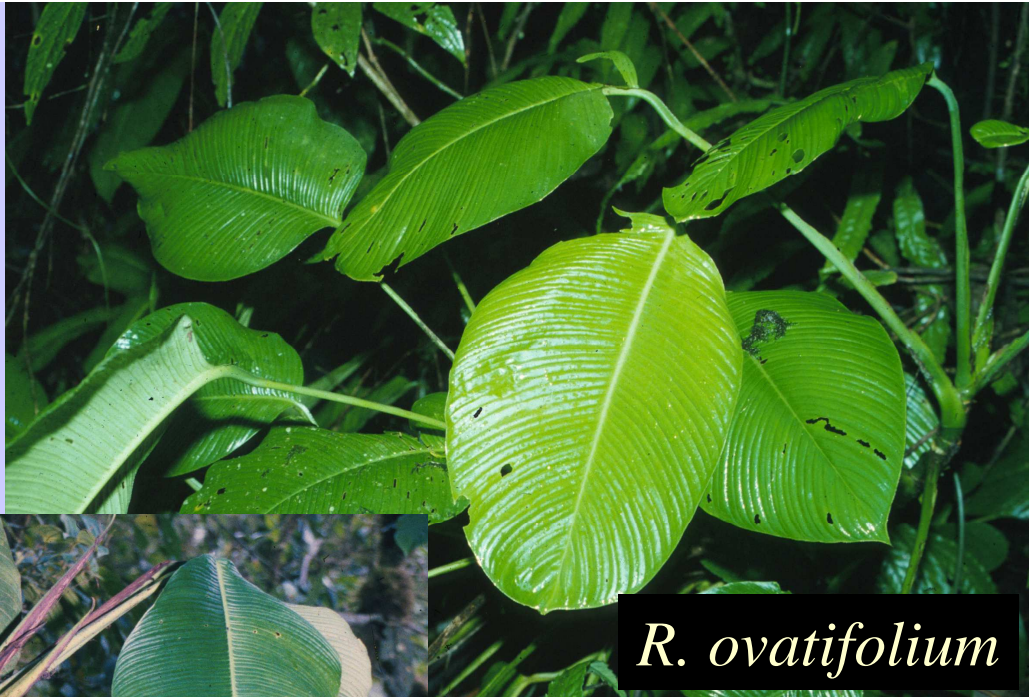


R. wendlandii

Blades typically oblong-elliptic and inequilateral



R. densinervia



R. ovatifolium

Midrib thicker than broad on lower surface
Slightly inequilateral



Rhodospatha
inflorescences



R. parvifolia

Loosened spathe
that will soon
open

R. moritziana



R. heliconifolia

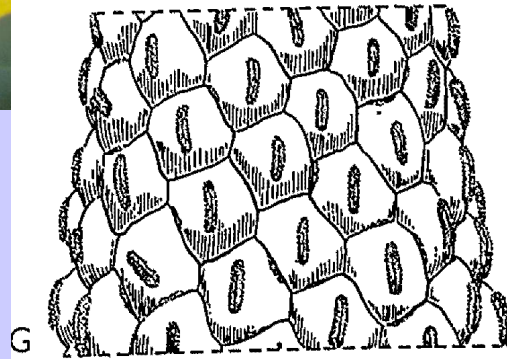
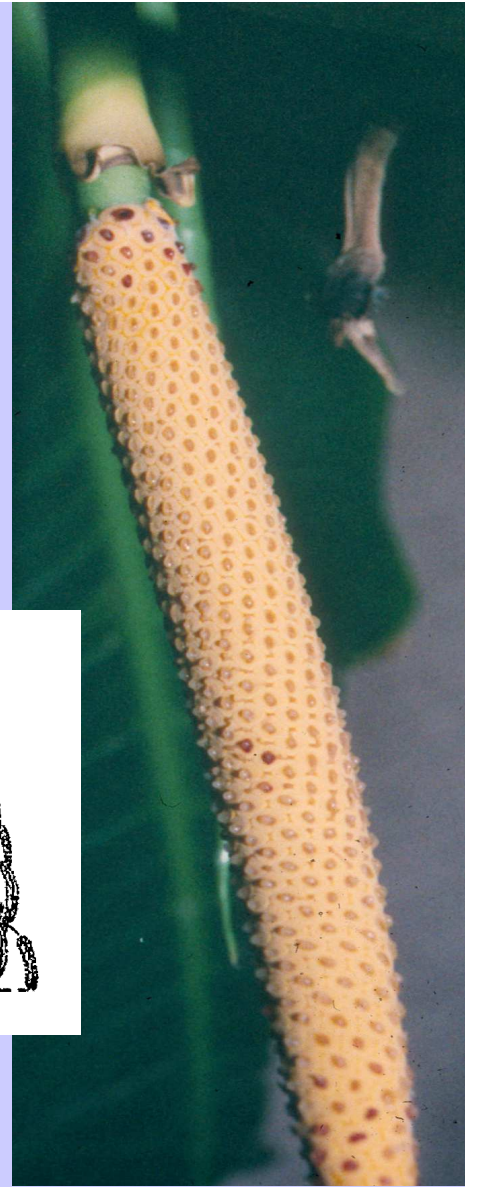
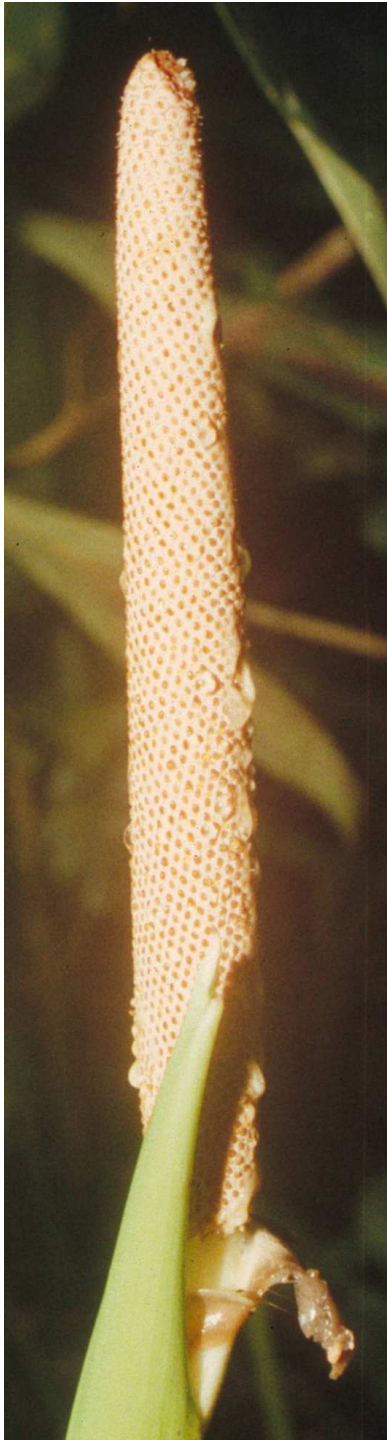


R. monsalvae

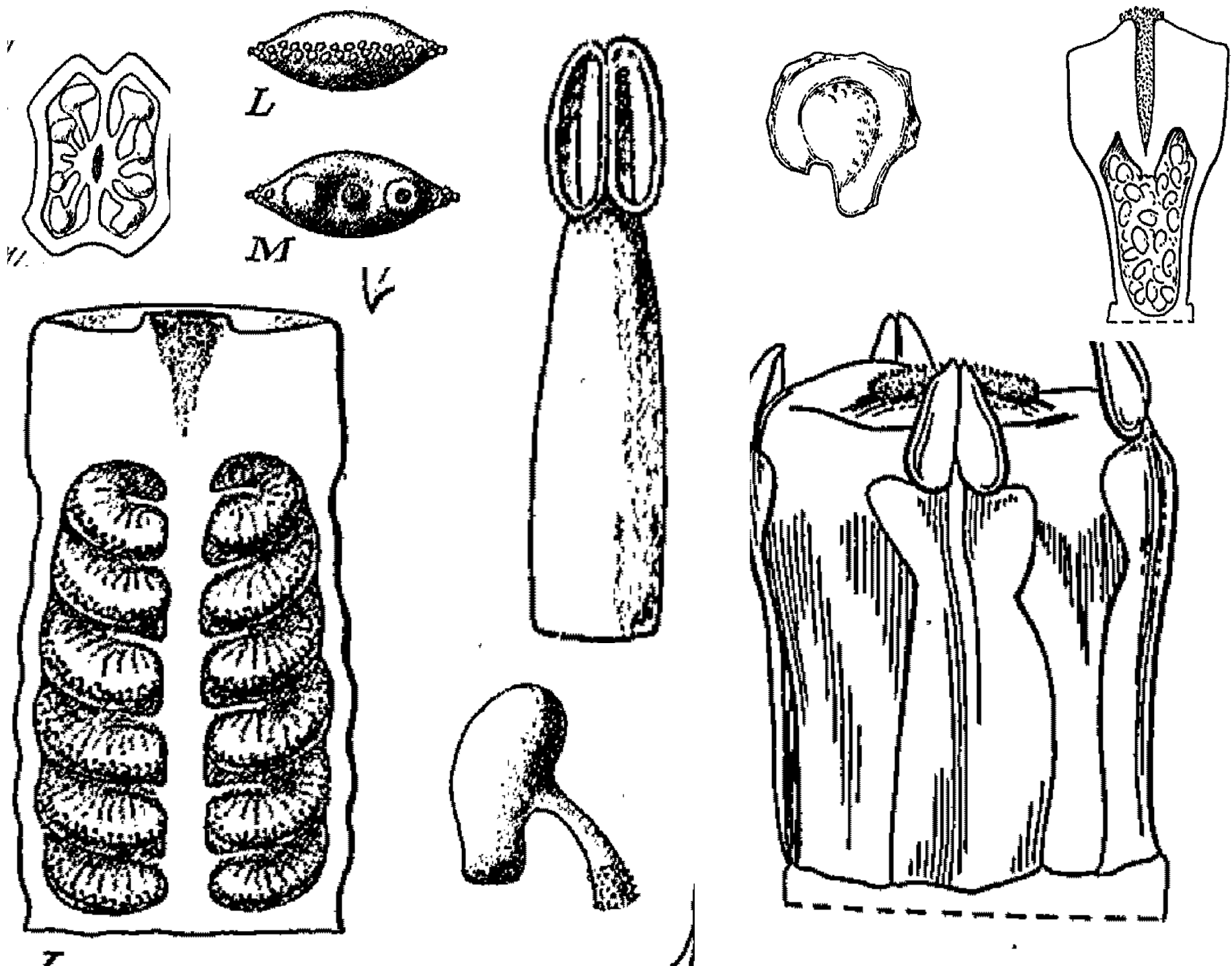


Fully opened
boat-shaped
+/- elliptic

Spadix



- cylindroid
- bisexual flowers
- typically white, red or purple



Key characters for recognition in the field

- Key characters are difficult
- Most useful:
 1. Degree the petiole sheath is deciduous or intact
 2. Color, texture & venation pattern of dried blades
 3. Appearance of dried stems
 4. Differences in spathe & spadix color
 5. Spathe and spadix size and shape

Ovules 1-locular

Alloschemone

Ovules 2-5-locular

Seeds globose to oblong, 6-22 mm long; raphe S-shaped; endosperm absent; ovules 2 per locule; leaf blades often perforated or pinnate.

Monstera

Seeds fusiform, claviform or lenticular, less than 3 mm long; endosperm present; ovules (2-)3-many/locule; leaf blade entire.

Placenta axile; seeds lenticular and flattened, strongly curved; leaf blades mostly thinly coriaceous; primary lateral veins prominent.

Rhodopatha

Placenta basal; seeds fusiform to claviform; leaf blades thickly coriaceous; primary lateral veins obscure.

Stenospermation

A selection of the species not yet seen in this presentation include....



R. falconensis

Northern

Venezuela



R. blanda

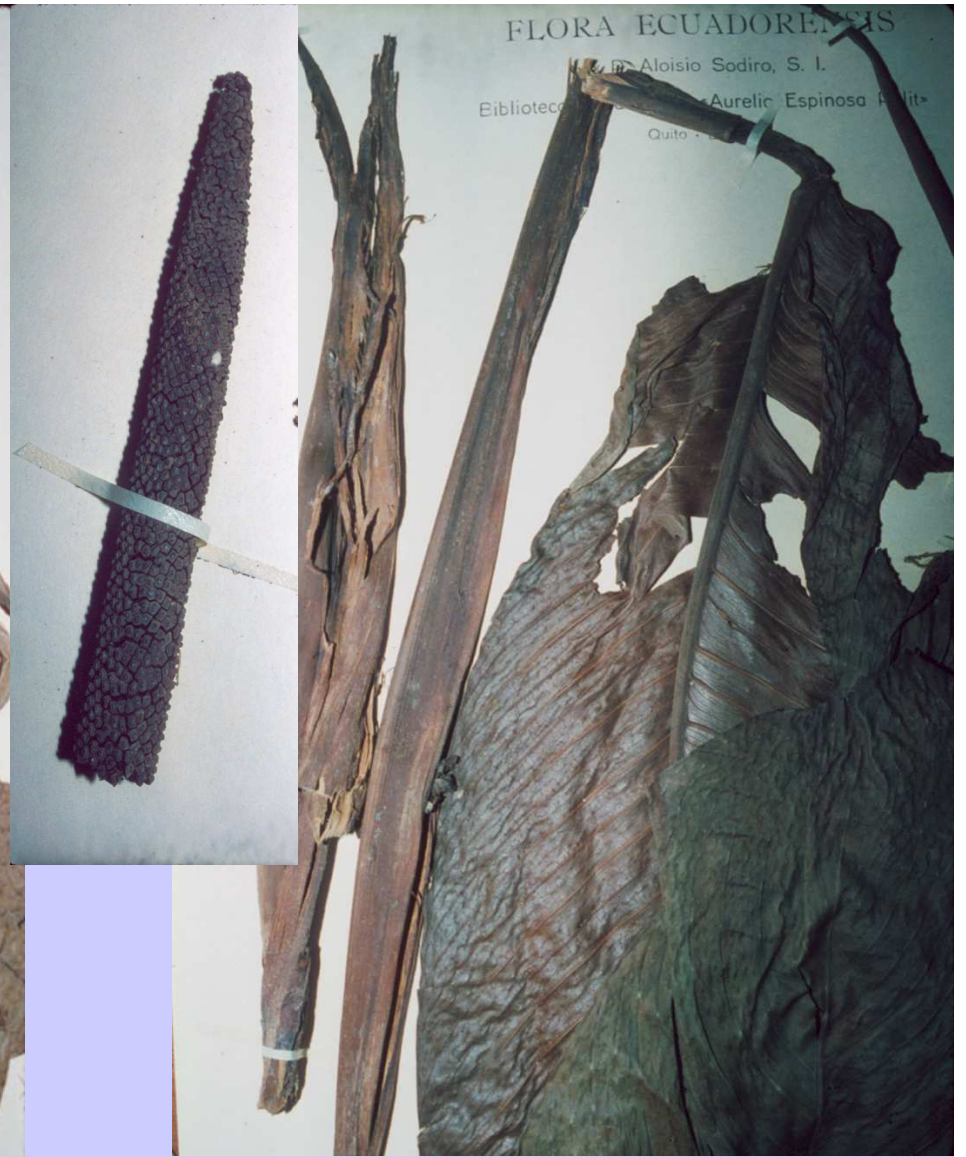


R. brachypoda



R. crebinervis





R. dammeri

A. P. Alvarado
Biblioteca Ecuatoriana «Aurelia Espinosa Pólit»
Quito - Ecuador



SPECIMIA FLORAE ECUADORENSIS.
Nov. 12. Trib.
Cec. 11/2 *Chorospatha dissidens* Salp.

R. dissidens



R. dodsonii



R. endesaense



R. falconensis



R. guanchensis



R. heliconifolia



R. kraenzlinii



R. macrophylla

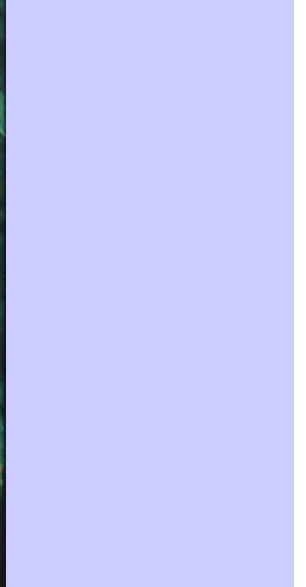
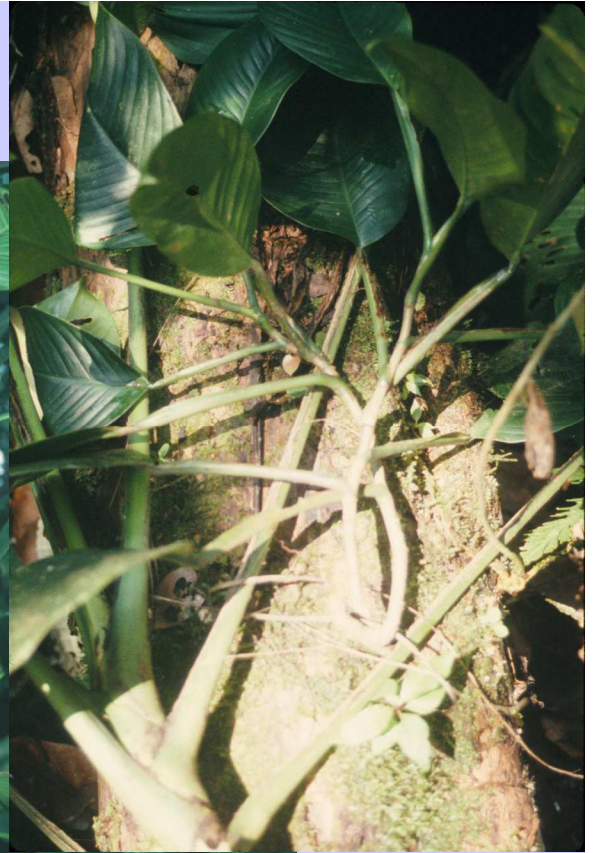


R. monsalvae



R. moritziana

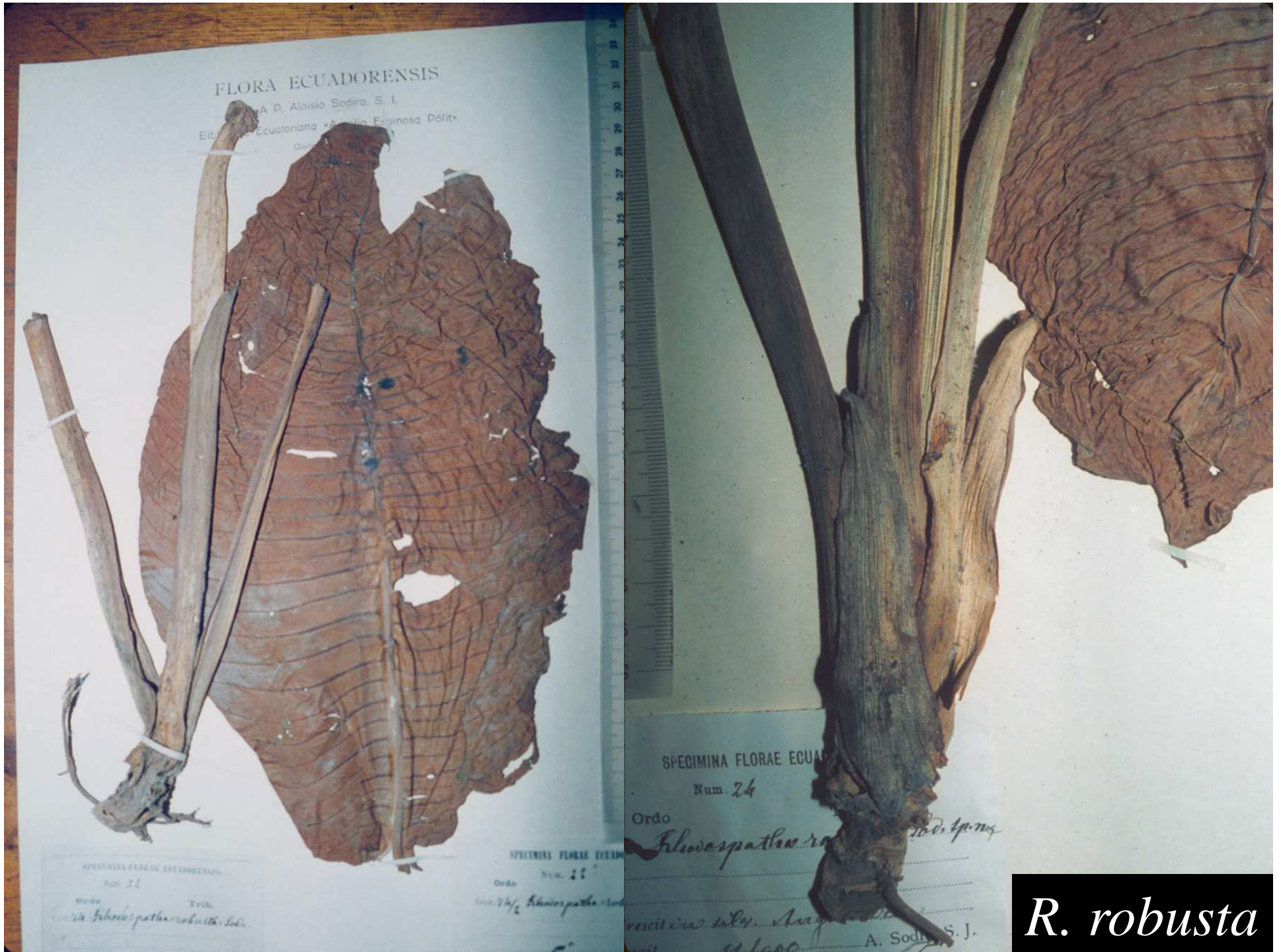




R. neillii



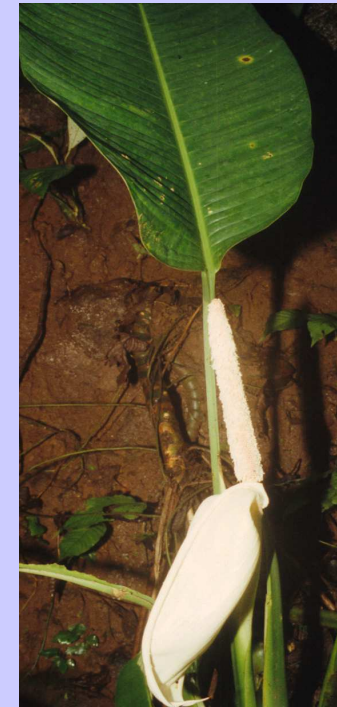
R. ovata



R. robusta



QUESTIONS???



Presentation by Emily Yates, Missouri Botanical Garden, August 2004