

מצנות  
קלריסה ואפרים

# Micro Orchids

# Microorquídeas

מצגת זו מוקדשת לעולם המופלא של הסחלבים הקטנים שבטבע.  
ישנם מינים שכל גודלם סנטימטר אחד- השתיל והפרחים יחדיו.  
חלק גדול מהסחלבים צולמו על גבי אצבע אחת- כקנה מידה לגודלם האמיתי.  
יש סחלבים שהפרי שלהם מכיל מיליוני זרעים, כאבק שנמדד במיקרונים.  
אין ספק שצילום סחלבים אלה דורש מיומנות ומצלמות מיוחדות כדי לקבל את תמונת  
הסחלב במלוא הדרה. אנו מסירים לכן את הכובע בפני הצלמים על עבודתם יוצאת הדופן.



*Platystele stenostachya*

## *Bulbophyllum minutissimum*

*Everyone knows that orchids come in a myriad shapes and sizes, but this little fellow is in the running for the smallest of them all. Bulbophyllum minutissimum, given the rather unflattering common name “Squat Moss Orchid” by some, is native to the monsoonal forests of eastern Australia where it slowly expands over trees or rocks, often near watercourses.*



BULBOPHYLLUM MINUTISSIMUM  
©2008 JON WAGNER



*Bulbophyllum minutissimum*

***This epiphytic or lithophytic orchid grows on rocks in open forests around Brisbane. It grows on north facing rock faces with little or no protection from the sun. Its tiny bulbs can easily be confused with moss. It consists of strings of crowded flattened spherical pseudobulbs 2 to 3mm diameter. The pseudobulbs are green where the plant grows in shade but red when growing in full sun.***

***The pseudobulbs have tiny leaves 1 to 2mm long on young bulbs which die on the older bulbs. The plant has short stubby roots 1mm long which are only just long enough to secure the pseudobulbs to the rock.***

***The flower stem is 2 to 3 mm topped by a single flower about 3mm across which is cream with red stripes.***





*Bulbophyllum moniliforme*



*Specklinia* sp. var. *labelo vinho*



***Orchids are dizzying in their diversity. Over the past 80 million years, some 25,000 wild species have taken root on six continents, in nearly every kind of habitat. Representing a full fourth of the world's flowering plants, there are four times as many orchid species as mammals, and twice as many as birds.***



***Bulbophyllum napellii (1842)***



*Catasetum gnomus*



*Catasetum fimbriatum*



*Catasetum cernuum*



*Campylocentrum grisebachii*



*Capanemia micromera*



***Lepanthes* (from Greek "scaled-flower") is a large genus of orchids with about 1000–1300 species, distributed in the Antilles and from Mexico through Bolivia (with very few species in Brazil). The genus is abbreviated in horticultural trade as *Lths.* Almost all the species in the genus are small and live in cloud forests.**



***Lepanthes fiskei***



*Lepanthes calodictyon*



*Lepanthes saltatrix*



*Pleurothallis (Acianthera) crinita*



*Acianthera crinita*





*Centroglossa  
macroceras*

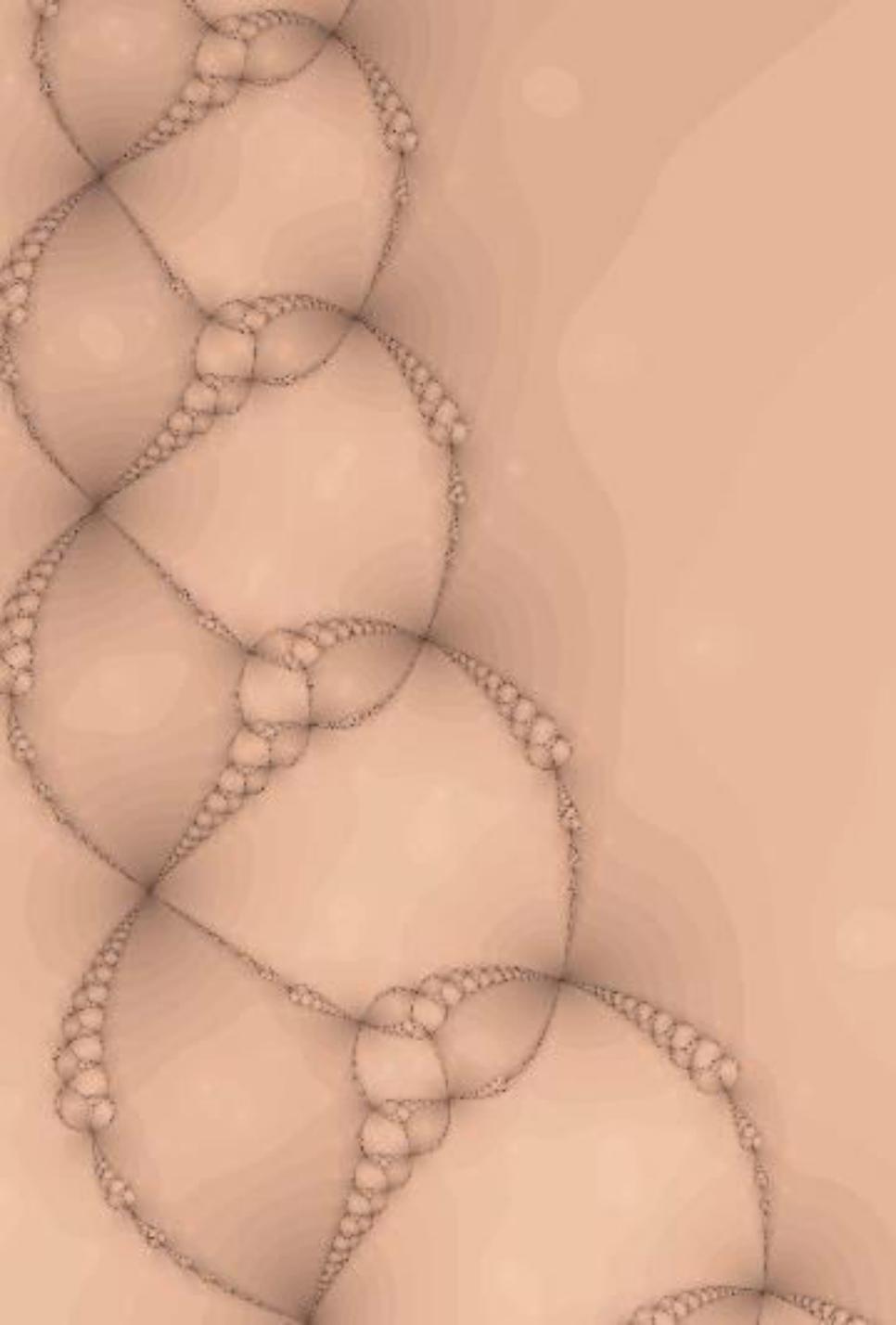


*Aspidogyne argentea*



***The orchid genus Dracula, abbreviated as Drac in horticultural trade, consists of 118 species. The strange name Dracula, literally means "little dragon", referring to the strange aspect of the two long spurs of the sepals. They were once included in the genus Masdevallia, but became a separate genus in 1978. This genus has some of the more bizarre and well-known species of the subtribe Pleurothallidinae.***





*Dracula simia*



*Masdevallia zahlbruckneri*



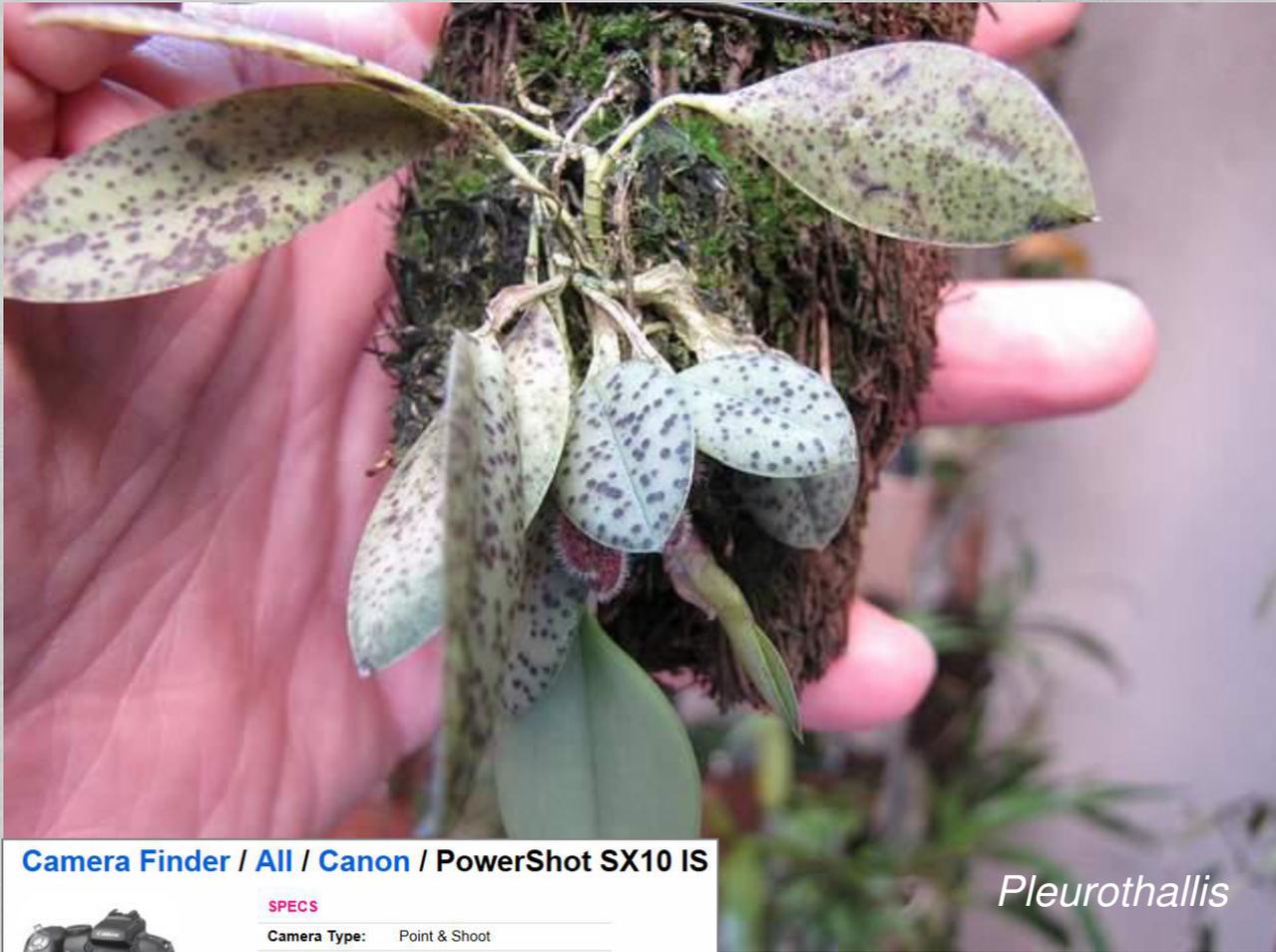


*Gomesa crispa*

***The world's smallest known orchid just over 2 millimeters across and nearly see-through—has been discovered nestled in the roots of another flower in Ecuador, scientists announced this week.***  
***Lou Jost, has studied the plants of the South American country's mountainous forests for 15 years.***

***A close-up of the world's smallest orchid, at just over 2mm from petal tip to petal tip.***





*Pleurothallis*

Camera Finder / All / Canon / PowerShot SX10 IS



**SPECS**

Camera Type:	Point & Shoot
Megapixels:	10
Optical Zoom:	20 X
LCD Size:	2.5 in
Media Type:	SDHC Memory Card, MultiMediaCardplus, MultiMediaCard, Secure Digital (SD) Card

*This photo was taken on February 15, 2012  
using a Canon PowerShot SX10 IS.*

***A continuacion podran ver los detalles de la forma en que se fotografio esta foto!***

***בהמשך תוכלו לקרוא הנתונים הטכניים של המצלמה וכל פרטי צורת הצילום!***



## What is Exif data?

Exif data is a record of the settings a camera used to take a photo or video. This information is embedded into the files the camera saves, and we read and display it here.

Taken on	February 15, 2012 at 4.07pm BRST
Posted to Flickr	February 15, 2012 at 1.28PM PDT
<b>Exif data</b>	
Camera	Canon PowerShot SX10 IS
Exposure	0.005 sec (1/200)
Aperture	f/2.8
Focal Length	5 mm
ISO Speed	400
Exposure Bias	0 EV
Flash	Off, Did not fire
Orientation	Horizontal (normal)
X-Resolution	180 dpi
Y-Resolution	180 dpi
Date and Time (Modified)	2012:02:15 16:07:45
YCbCr Positioning	Co-sited
Date and Time (Original)	2012:02:15 16:07:45
Date and Time (Digitized)	2012:02:15 16:07:45
Compressed Bits Per Pixel	3
Max Aperture Value	2.8
Metering Mode	Multi-segment
Color Space	sRGB

Focal Plane X-Resolution	15136.92946 dpi
Focal Plane Y-Resolution	15116.0221 dpi
Sensing Method	One-chip color area
Custom Rendered	Normal
Exposure Mode	Auto
White Balance	Auto
Digital Zoom Ratio	1
Scene Capture Type	Standard
Macro Mode	Macro
Self Timer	Off
Quality	Fine
Canon Flash Mode	Off
Continuous Drive	Single
Focus Mode	Single
Record Mode	JPEG
Canon Image Size	Large
Easy Mode	Full auto
Digital Zoom	None
Contrast	Normal
Saturation	Normal
Sharpness	0
Camera ISO	Auto High
Metering Mode	Evaluative
Focus Range	Macro

AFPoint	Manual AF point selection
Canon Exposure Mode	Easy
Lens Type	Unknown (-1)
Short Focal	5 mm
Focal Units	100/mm
Max Aperture	2.8
Min Aperture	9
Flash Activity	0
Flash Bits	(none)
Focus Continuous	Continuous
AESetting	Normal AE
Image Stabilization	On
Zoom Source Width	3648
Zoom Target Width	3648
Spot Metering Mode	Center
Manual Flash Output	n/a
Focal Type	Zoom
Focal Plane XSize	6.27 mm
Focal Plane YSize	4.70 mm
Auto ISO	400
Base ISO	100
Measured EV	4.31
Target Aperture	2.8
Target Exposure Time	1/202

## Camera Finder / All / Canon / PowerShot SX10 IS



### SPECS

<b>Camera Type:</b>	Point & Shoot
<b>Megapixels:</b>	10
<b>Optical Zoom:</b>	20 X
<b>LCD Size:</b>	2.5 in
<b>Media Type:</b>	SDHC Memory Card, MultiMediaCardplus, MultiMediaCard, Secure Digital (SD) Card

White Balance	Auto
Slow Shutter	Off
Sequence Number	0
Optical Zoom Code	0
Flash Guide Number	0
Flash Exposure Comp	0
Auto Exposure Bracketing	Off
AEBBracket Value	0
Control Mode	Camera Local Control
Focus Distance Upper	0.13
Focus Distance Lower	0
Bulb Duration	0
Camera Type	Compact
Auto Rotate	None
NDFilter	Off
Self Timer2	0
Flash Output	0
Canon Firmware Version	Firmware Version 1.01
File Number	103-7085

Canon Model ID	PowerShot SX10 IS
AFMode	Single-point AF
Num AFPoints	9
Valid AFPoints	1
AFArea Widths	18 0 0 0 0 0 0 0 0
AFArea Heights	18 0 0 0 0 0 0 0 0
Primary AFPoint	0
Super Macro	Off
Date Stamp Mode	Off
My Color Mode	Off
Firmware Revision	1.01 rev 1.00
Categories	(none)
Image Unique ID	e2ca2a25b9d65862e108f2b379eba1b8
VRDOffset	0
Related Image Width	3648
Related Image Height	2736
Compression	JPEG (old-style)

*Panmorphia* sp





*Oncidium crispum* var.  
*grandiflorum*



*Oncidium forbesii*



*Oncidium varicosum var. Rogersii*



*Pleurothallis sarracenia*



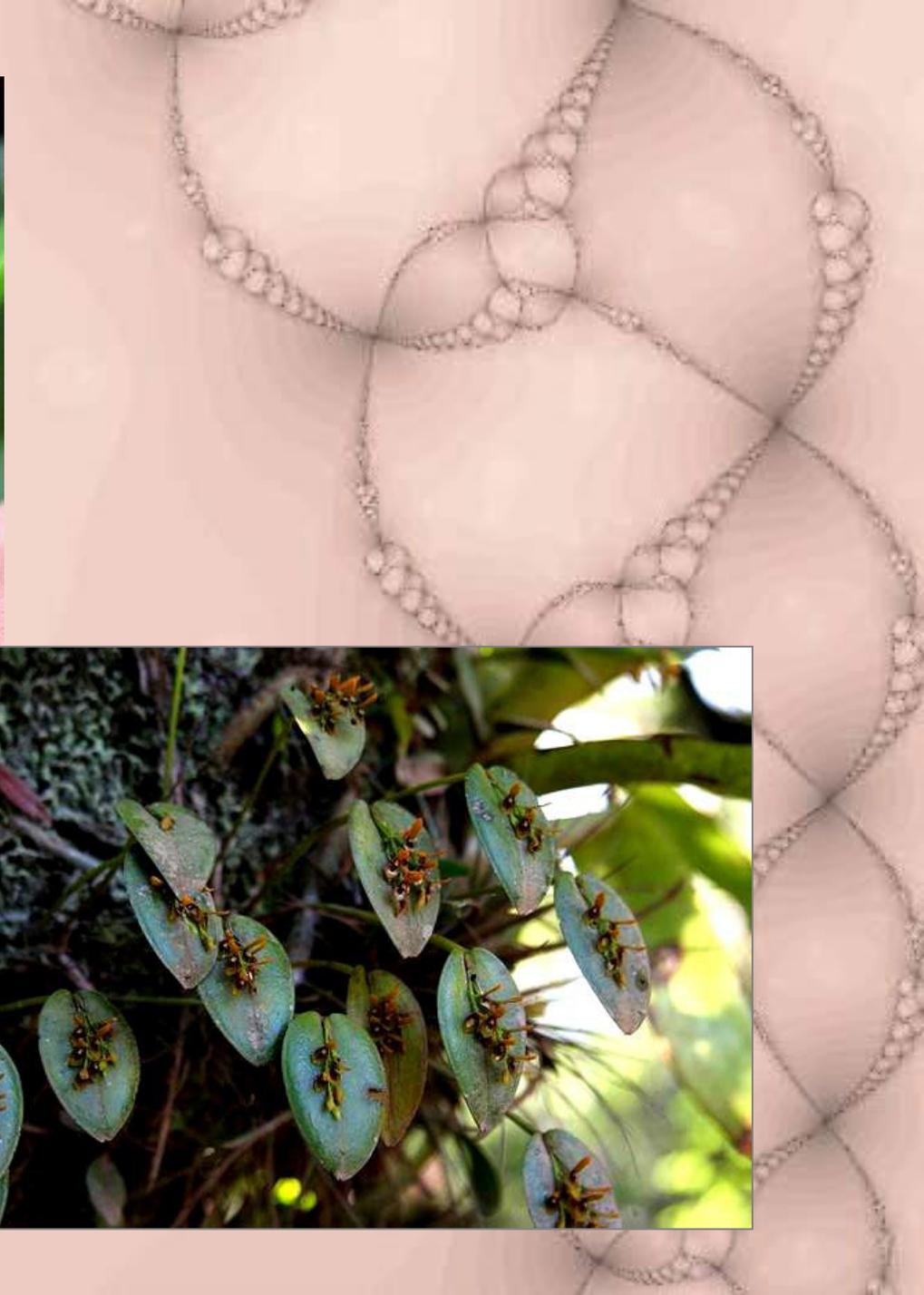
*Rodrigueziopsis eleutherosepala*

*Phaius tankervilleae*





*Pleurothallis (Acianthera)  
exarticulata*





*Acianthera sp*





*Acianthera* sp var.



*Bifrenaria atropurpurea*





*Eurystylis cotyledon*



*Colmanara Wild Cat Great Tiger*





*Constantia microscopica*



*Cryptophoranthus similis*





*Specklinia viridiflora*



*Octomeria concolor*

Species Identification Task Force - Information Form

Judging Center: West Baylston Award Number: 20097932 Date: 10/30/09

Awarded as: CBR

**ALL MEASUREMENTS IN CENTIMETERS OR MILLIMETERS ONLY.**

NOTE: LENGTH GIVEN FIRST AS PER STANDARD BOTANICAL PROTOCOL.

**PLANT**

Overall length of growth/cane: <u>35 cm</u>			
Leaf	number of leaves per growth or cane: <u>+5</u>		
length: <u>15 cm</u>	width: <u>2.8 cm</u>	margin: <u>smooth</u>	
shape: <u>lanceolate</u>		petiole length (apex of pseudobulb or stem to leaf base proper):	
Pseudobulb/Growth/Ramical	length: <u>20 cm</u>	diameter: <u>3 mm</u>	shape: <u>cylindrical</u>
distance between growths along rhizome: <u>none</u>			
root tip color if visible:			

**INFLORESCENCE**

overall length: <u>0 cm</u>	arrangement: <u>"congested"</u>		
distance from base of inflorescence to first bud or branch: <u>0</u>			
distance between flowers along inflorescence: <u>0</u>			
distance from inflorescence to base of sepals (on an individual flower), OR if possible, distance from inflorescence to ovary (pedicel):			
Floral bracts	length: <u>9 mm</u>	width: <u>±0.5 mm</u>	
Ovary	length: <u>same</u>	width: <u>same</u>	shape: <u>cylinder</u>
color: <u>pale yellow</u>		texture: <u>smooth</u>	

Continued over...

*Octomeria concolor* Award Number 20097932 West Baylston

**FLOWER (Include caudae length in individual segment measurements if present)**

Natural spread	length: <u>1.3 cm</u>	width: <u>6.8 cm</u>			
Dorsal sepal	length: <u>8 mm</u>	width: <u>2-3 mm</u>	Cauda	length:	width:
Lateral sepals or synsepal	length: <u>8 mm</u>	width: <u>2-3 mm</u>	Caudae	length:	width:
Petals	length: <u>7 mm</u>	width: <u>2-3 mm</u>	Caudae	length:	width:
Lip or pouch	length: <u>0.4 cm</u>	width: <u>2 mm</u> <u>0.2 cm</u>			
characters of lip (calli, spurs, keels, etc.):					
Column	length: <u>0.2 cm</u>	width: <u>0.5 mm</u>	color: <u>yellow</u>		
Anther cap	color: <u>yellow</u>				

Vendor and origin of plant, if known:

Brazilian

General comments or significant features not covered above:

Strong aroma

Reference material consulted:

① Internet Search Images → *Octomeria concolor*  
 ② Pabst & Dungs Orchidaceae Brasiliensis Vol 2, p 366, Iteu 1469, Brucke-Verlag, Kurt Schumacher Hildesheim

Judging Chair: Please keep this record on file in the event that we need to retrieve information.

Species identification-task force information form: *Octomeria concolor*

טופס לזיהוי מיני הצמחים



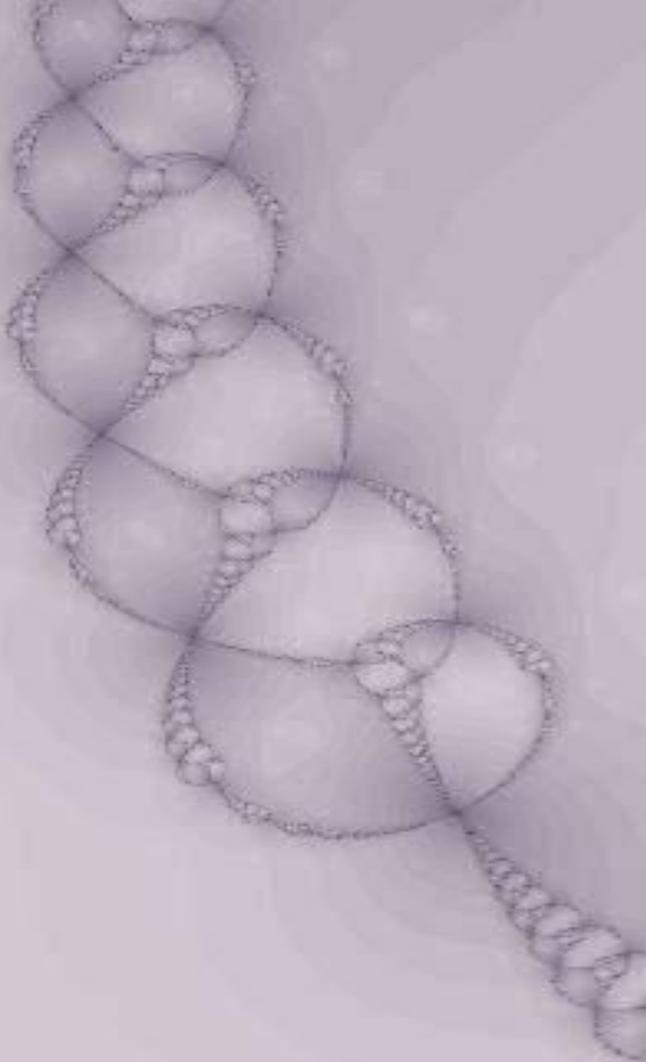
*Dichaea cogniauxiana*



*Dryadella liliputiana*



*Lonopsis utricularioides*



*Lepanthopsis floripecten*



*Lepanthopsis densiflora*



*Baptistonia sarcodes*





*Stelis eublepharis*



Hno. Jorge de la Cruz



*Pleurothallis sarracenia*







*Pleurothallis adamantinensis*





*Barbosella cucullata*



*Pleurothallis melanosticta*

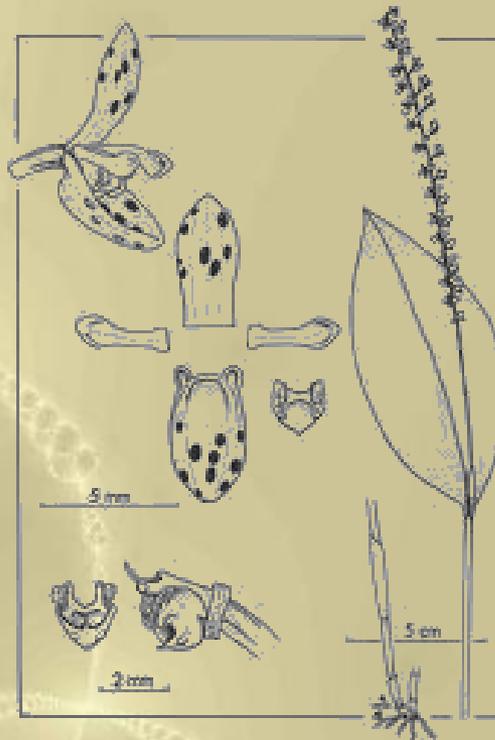


Fig. 19. *Pleurothallis melanosticta*





*Pleurothallis teaguei*



*Pleurothallis  
truncata*



*Specklinia seriata*



*Zygostates obliqua*

*The orchid family (Orchidaceae) is the second largest family of flowering plants with approximately 25,000 described species and many thousands of cultivars (cultivated varieties). The family includes terrestrial and epiphytic species, mostly native to tropical regions of the world. Some species are mycotrophic, living off of mycorrhizal soil fungi which is attached to the roots of neighboring trees and shrubs. Orchids have three sepals and three petals. The perianth segments are showy and colorful because orchids are typically pollinated by insects. One of the petals (called the lip or labellum) is very different from the other two, and plays an important role in pollination. It often serves as a landing platform for insects. The number of stamens (anthers) is reduced to one or two, and the androecium is adnate to the stigma and style, forming a compound structure called the column. The column is also referred to as the gynandrium. A beaklike structure called the rostellum separates the anther from the functional stigma on the column of single-anthered orchids. The sticky (viscid) stigma is situated below the rostellum. A cap-like structure called the anther cap sits on the anther portion. The anther cap is readily detached and is a nice adaptation to prevent self pollination*

*When the anther cap is dislodged by a pollinator, the anther is exposed to the insect's body. Two pollen masses (called pollinia) are attached to a sticky (viscid) padlike structure called the viscidium (also called viscidulum in some references). The viscidium readily adheres to the bodies of insects. When insects visit anther orchid blossom, the pollinia are transferred to the sticky stigmatic surface just below the rostellum. Following pollination, the epigynous ovary develops into a many-seeded capsule. The seeds are microscopic, and some orchids produce more than a million seeds per capsule.*



*Certain epiphytic orchids of the tropical rain forest produce the world's smallest seeds weighing only one 35 millionths of an ounce (1/35,000,000) or 0.81 micrograms. They are dispersed into the air like minute dust particles or single-celled spores. The seeds of some species are no larger than fungal spores and occur in a loose cellular sheath. Since the seeds have no endosperm and underdeveloped embryos, there are practically no food reserves. In order to germinate under natural conditions, they must establish a symbiotic relationship with a compatible mycorrhizal fungus.. Later the orchid may become fully independent, or it may retain its mycorrhizal relationship throughout its life. The coral-root orchid seed (**Corallorhiza**) grows into a nonphotosynthetic mycotrophic wildflower. Orchid seeds are also grown under aseptic conditions in nutrient agar, similar to bacterial and fungal cultures.*

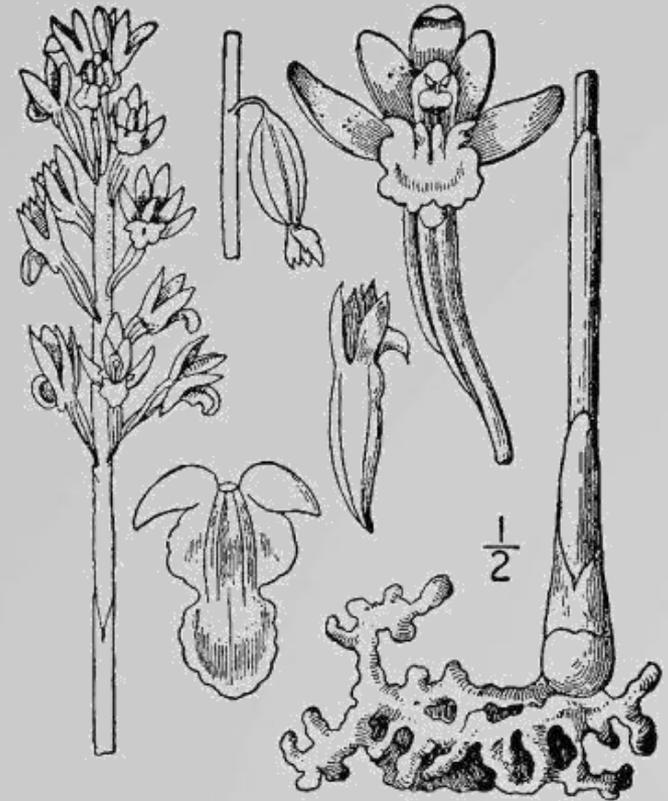


*Corallorhiza maculata*

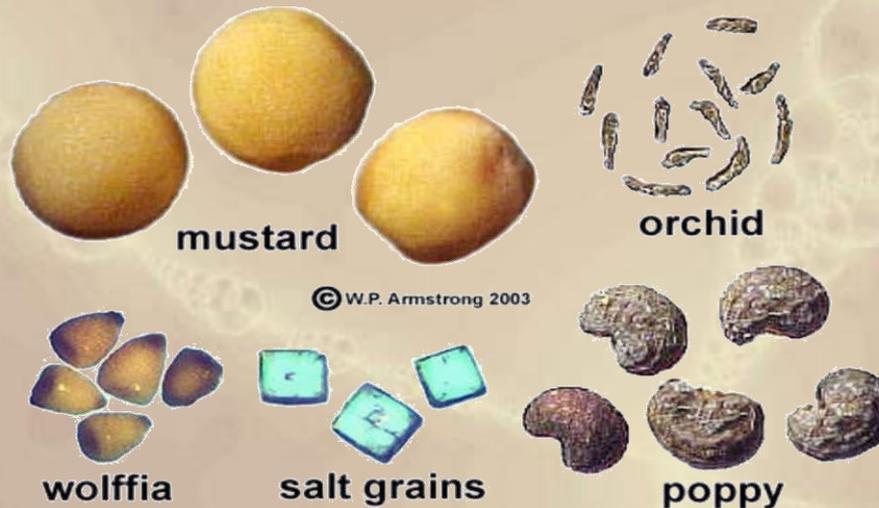


*The ripened ovary (capsule) of an unknown orchid cut lengthwise (longitudinally) into two halves. The capsule is composed of three carpels and contains more than one million minute seeds. The withered flower (perianth) is attached to the top of the ovary, a condition known as epigynous (above gynoecium). Epigynous also refers to flowers with an inferior ovary. The term inferior does not refer to a lesser rank or degree. In fact, flowers with inferior ovaries are considered more advanced on the evolutionary scale, culminating in the orchids. The U.S. penny is shown as a size relationship. It has a diameter of 19 mm and a circumference of 59.7 mm. [One inch = 25.4 millimeters.]*

Coral-root orchid (***Corallorhiza maculata***), an interesting mycotrophic wildflower that grows in the shady conifer forests of San Diego County. The stem develops from a fleshy mass of fungal hyphae and tree roots deep in the ground, and resembles a clump of soft corals. As with most orchids, the germinated seed of this species starts out in a mycorrhizal relationship with a compatible soil fungus. It continues this symbiotic relationship with a fungus throughout its entire life. Since it is heterotrophic and nonphotosynthetic, it absorbs carbohydrates and minerals from its fungal partner, which in turn absorbs these vital nutrients from the roots of nearby trees.



***Certain epiphytic orchids of the tropical rain forest produce the world's smallest seeds, up to 35 million per ounce. One seed weighs about one 35 millionths of an ounce (1/35,000,000) or 0.81 micrograms. Some seeds are only about 1/300th of an inch long (85 micrometers). [The resolving power for an unaided human eye with 20-20 vision is just under 0.1 mm.] Orchid seeds are dispersed into the air like minute dust particles or single-celled spores, eventually coming to rest in the upper canopy of rain forest trees.***



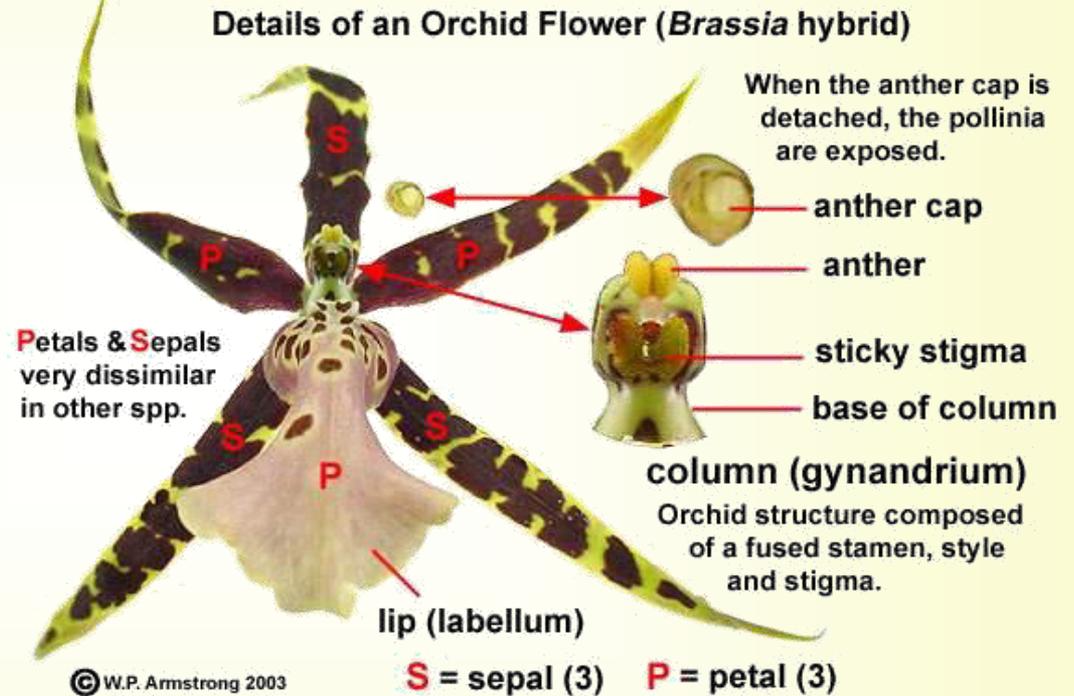
*Since the seeds have no endosperm and underdeveloped embryos, there are practically no food reserves. In order to germinate under natural conditions, they must establish a symbiotic relationship with a compatible mycorrhizal fungus. During early stages of development, the fungus supplies critical nutrients to the orchid seedling. Later the orchid may become fully independent, or it may retain its mycorrhizal relationship throughout its life. The above coral-root orchid seed (Corallorhiza) grows into a nonphotosynthetic mycotrophic wildflower. It absorbs carbohydrates and minerals from its fungal host, which in turn absorbs these vital nutrients from the roots of nearby forest trees. Orchid seeds are also grown under aseptic conditions in nutrient agar, similar to bacterial and fungal cultures.*



## The Remarkable Bisexual Orchid Blossom



*Brassia gireoudiana*



Detailed view of the blossom of a spider orchid (*Brassia* hybrid) showing the major perianth segments and central column.

*Platystele umbellata*



[www.orchidstudium.com](http://www.orchidstudium.com)

*Platystelele umbellata*



© Patricia Harding



*Platystelele ovatilabia*



*Brassavola cucullata*  
Amerin 0606



*Brassavola cucullata*

*Dracula brangeri*



<http://www.loujost.com/Lates>

<https://www.google.co.il/search?hl=>

[/ http://www.flickr.com/photos](http://www.flickr.com/photos)

<http://orchid-nord.com/pleurothallids>

<https://www.google.co.il/search?hl=>

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