

www.aos.org

# ORCHIDS

THE BULLETIN OF THE AMERICAN ORCHID SOCIETY

VOL. 89 NO. 1 JANUARY 2020



THE 2020  
TAMIAMI  
INTERNATIONAL

# ORCHID FESTIVAL

"the largest winter  
orchid event in the  
United States"  
The Boston Globe



01 / 17 / 20

01 / 19 / 20

DADE COUNTY FAIRGROUNDS EXPO CENTER • MIAMI, FLORIDA

[WWW.ORCHIDFESTIVAL.COM](http://WWW.ORCHIDFESTIVAL.COM)

**RON MCHATTON**  
Chief Education and Science Officer  
Editor, *Orchids* Magazine  
rmchatton@aos.org

**AWARDS REGISTRAR**  
Laura Newton  
laura@aos.org

**ADVERTISING**  
Kevin Hall  
Advertising Sales Executive  
Allen Press  
810 East 10th Street  
Lawrence, Kansas 66044  
khal@allenpress.com  
785-865-9143

**SUBSCRIPTIONS AND MISSING ISSUES**  
Membership Services Department  
Tel 305-740-2010 Fax 305-747-7154  
membership@aos.org

**EDITORIAL BOARD**  
Jean Allen-Ikeson, Chair  
Greg Allikas, Kathy Barrett, Sue Bottom,  
Mark Chase, Phillip Cribb, Nile Dusdieker,  
Wes Higgins, Carol Klonowski, Larry Sexton  
Send electronic submissions to jean.ikeson@gmail.com or  
rmchatton@aos.org

**PROOFREADERS**  
Laura Newton, Olga Skoropad,  
Larry Sexton, Susan Wedegaertner

**FORMER EDITORS**  
Dr. David Lumsden (1932–1940), Dr. Louis O.  
Williams (1940–1943), Gordon Dillon (1943–1967;  
1970–1973), Merle Reinikka (1968–1969),  
Richard Peterson (1973–1984), Stephen R. Batchelor  
(1984), Alec Pridgeon, PhD (1984–1988;  
1989–1991), Chuck McCartney (1988–1989),  
James B. Watson (1991–2013)

Volume 89, Number 1 January 2020 *Orchids* (ISSN 1087-1950) is published monthly by the American Orchid Society, Inc., at Fairchild Tropical Botanic Garden Editorial Office: 10901 Old Cutler Road, Coral Gables, Florida 33156 (telephone 305-740-2010; fax 305-747-7154; email theaos@aos.org; website www.aos.org). ©American Orchid Society, Inc. 2017. Printed by Allen Press, 810 East 10th Street, Lawrence, Kansas 66044. Subscription price of *Orchids* is \$79 a year within the US, \$99 Canada and Mexico and \$119 for all other countries. Single copies of current issue cost \$8.50 (plus shipping and handling). Prices are subject to change without notice. Although *Orchids* endeavors to assure the reliability of its advertising, neither *Orchids* nor the American Orchid Society, Inc. can assume responsibility for any transactions between our advertisers and our readers. Periodical postage paid at Miami, FL and additional offices. POSTMASTER: Send address changes to: *Orchids*, PO Box 565477, Miami, FL 33256. The American Orchid Society follows the *World Checklist of Selected Plant Families* with regard to questions of botanical nomenclature and synonymy in orchid species names and the International Orchid Register for hybrid nomenclature and parentage in editorial. The opinions and recommendations that appear in *Orchids* regarding the selection and use of specific plant-care products, including but not limited to pesticides, fungicides and herbicides, are those of the individual authors, and not those of the American Orchid Society, which neither adopts nor endorses such opinions and recommendations and disclaims all responsibility for them. When selecting and using such products, readers should seek and obtain the advice of the manufacturer and of responsible government agencies. Mail date: December 30, 2019.



Printed on 10 percent post-consumer recycled paper.



28



38



48



52

## FEATURES

### 38 ONE HUNDRED YEARS OF ORCHIDS

*Robert Fuchs*

### 46 SPOTLIGHT

*Artist Martin Johnson Heade*  
*Arthur E. Chadwick*

### 48 THE GENUS LOEFGRENIATHUS

*and Alberto Löfgren*  
*Rudolf Jenny*

### 52 ORCHIDS OF BHUTAN

*Pholidota recurva*  
*Kinley Rabgay and Stig Dalström*

## DEPARTMENTS

### Tom's Monthly Checklist 12

*January: The Month of Coqui*  
*Thomas Mirenda*

### New Rufugium Botanicum 14

*Dendrobium macrophyllum*  
*Noelia Belfort-Oconitrillo and Franco Pupulin*  
*Watercolor by Sylvia Strigari*

### Orchids of the World 18

*Into Africa, Part 1*  
*Thomas Mirenda*

### For the Novice 20

*Selecting New Plants*  
*Sue Bottom*

### Conservation Committee 23

*Philip E. Keenan*  
*David Nixon*

### Orchids Illustrated 28

*Cypripedium*  
*Peggy Alrich and Wesley Higgins*

### Awards Gallery 56

## In This Issue

AOS MEMBERSHIP INFORMATION 2

AOS DIRECTORY OF SERVICES 2

PRONUNCIATION GUIDE 3

AOS NATIONAL VOLUNTEERS 4

GIFTS OF NOTE 6

CALL FOR CONSERVATION GRANTS 7

PRESIDENT'S MESSAGE 8

AOS WEBINARS 17

SELECTED BOTANICAL TERMS 17

CALENDAR 72

ORCHID MARKETPLACE 77

ORCHIDS CLASSIFIEDS 79

AD INDEX 79

PAST, PRESENT, FUTURE 24

*Growing Orchids in a Retirement Community*  
*Alan L. Kaitz, MD*

BOOK REPORT 80

*Rankafu: Orchid Print Album*  
*Wesley Higgins*

## FRONT COVER

*Perreiraara* Hot Lips 'Copper Bird' AM/AOS (*Vandachostylis* Blue Rajah × Bangkok Sunset), registered by R.F. Orchids, Inc., received its AM on August 26, 2017. The plant, exhibited by R.F. Orchids and expertly photographed by Tom Kuligowski, went on to receive the Roy T. Fukumura Award for the most outstanding vandaceous orchid awarded that calendar year.

# AMERICAN ORCHID SOCIETY

A 501(c)(3) Nonprofit Organization Founded in 1921

## MISSION

The mission of the American Orchid Society is to promote and support the passion for orchids through education, conservation and research

## VISION STATEMENT

The American Orchid Society provides leadership in orchids

## Membership Information and Rates

Membership in the AOS includes a subscription to *Orchids* magazine that begins with the next available issue at the time of enrollment. For information on membership, please call 305-740-2010, email [theaos@aos.org](mailto:theaos@aos.org) or join online at [www.aos.org](http://www.aos.org).

Payments must be made through a US bank in US funds or by International Money Order. MasterCard, American Express, Visa and Discover are accepted. Prices are subject to change without notice and memberships are nonrefundable or transferable. *Orchids* is distributed via periodicals-class mail. First-class delivery is available in the United States for an additional \$30 per year.

Membership Type	Silver		Gold	
	(Digital Only)	US Destination (Digital and Print)	Canada and Mexico (Digital and Print)	All Other Countries (Digital and Print)
<b>Individual or vendor</b>				
one year	\$54.00	\$79.00	\$99.00	\$119.00
two years	\$103.00	\$153.00	\$193.00	\$233.00
<b>Joint, one year*</b>	\$69.00	\$94.00	\$114.00	\$134.00
<b>Joint, two years*</b>	\$133.00	\$183.00	\$223.00	\$263.00
<b>Youth, one year**</b>	\$39.00	\$54.00	\$74.00	\$94.00
<b>Youth, two years**</b>	\$73.00	\$103.00	\$143.00	\$183.00
<b>Society, one year***</b>	N/A	\$79.00	\$99.00	\$119.00
<b>Society, two year***</b>	N/A	\$153.00	\$193.00	\$233.00

\* Joint membership is for two individuals residing at the same address and includes only one subscription to the monthly magazine *Orchids*.

\*\* Youth members must be under the age of 25

Valid proof of age required at time of application.

\*\*\* Affiliated Societies must appoint an AOS Representative who is also an AOS member.

## Membership Benefits

*Orchids* — The Bulletin of the American Orchid Society

AOS *Orchid Source Directory* (growers, affiliated societies, judging centers)

Members-Only section of [www.aos.org](http://www.aos.org)

Unlimited access to educational webinars

Discounts at select gardens and arboreta in the United States (see [www.ahs.org](http://www.ahs.org))

10 percent discount on AOS publications

First-time members receive a free copy of *Your*

*First Orchid* and 15 percent off additional

AOS-produced books (plus shipping)

*OrchidPro*

## *Orchids* — Replacement Copies

Any member who does not receive a scheduled issue of *Orchids* should notify the Membership Services Department (tel 305-740-2010; email [membership@aos.org](mailto:membership@aos.org)) within 60 days (US residents) or 90 days (nonUS residents) of date of issue to receive a replacement copy at no charge.

## Membership Policy

Membership in the American Orchid Society is open to all individuals without regard to race, color, ethnicity, national origin, religion, gender, sexual orientation, disability or age. All activities of the American Orchid Society are conducted in accordance with the principles of nondiscrimination and mutual respect. Further, the American Orchid Society does not condone or endorse any conduct that is not in accord with these principles.



American Orchid Society  
Education. Conservation. Research.

AMERICAN ORCHID SOCIETY  
at Fairchild Tropical Botanic Garden

10901 Old Cutler Road, Coral Gables, Florida 33156  
Mailing address: PO Box 565477, Miami, Florida 33256  
Tel 305-740-2010

Email [theaos@aos.org](mailto:theaos@aos.org) Website [www.aos.org](http://www.aos.org)  
Main Office Monday–Friday (by appointment only)



# SERVICES

**Ron McHatton, PhD** ([rmchatton@aos.org](mailto:rmchatton@aos.org))  
**Chief Education and Science Officer (305-740-2010 ext 106)**

Education

Nomenclature

Orchid Information

*Orchids* — Editorial

Publications — Books, Calendar, *Orchid*

*Source Directory*

**Naya Marcano** ([naya@aos.org](mailto:naya@aos.org))

**Director of Administration and Member Services (305-740-2010)**

Administration

AOS Policy Information

Business Operations

**Accounting** ([victor@aos.org](mailto:victor@aos.org))

**Victor Parera (305-740-2010 ext 104)**

**Advertising** ([khall@allenpress.com](mailto:khall@allenpress.com))

**Kevin Hall – Advertising Sales**

**Manager, Allen Press, Inc. (785-865-9143)**

*Orchids*, *Orchid Source Directory*

**Affiliated Societies** ([bwalsh@aos.org](mailto:bwalsh@aos.org))

**Bill Walsh (305-740-2010 ext 107)**

Committee Volunteers

Shows

Contact Updates

Website listings

**Awards Registrar** ([laura@aos.org](mailto:laura@aos.org))

**Laura Newton**

Award issues and questions

Certificates

**Development** ([theaos@aos.org](mailto:theaos@aos.org))

Annual Giving

Bequests

Major Gifts

Planned Giving

**Librarian** ([jenniferv@aos.org](mailto:jenniferv@aos.org))

**Jennifer Vina (305-740-2010 ext. 105)**

**Membership Associates**

**Sandra Kurzban** ([sandra@aos.org](mailto:sandra@aos.org))

**Daniella Estrada** ([daniellae@aos.org](mailto:daniellae@aos.org))

*OrchidPro*

Membership renewals

Gift Memberships

Back Issues — *Orchids*

Book Sales

Change of Address

Damaged and Missing Issues

Membership Brochures and Benefits

Membership Questions

Remove Name from Mailing List

Website (login and password issues)

**Information Technology (305-740-2010)**

Website functionality

*OrchidPro* functionality

**For questions not addressed above please contact [theaos@aos.org](mailto:theaos@aos.org) or call 305-740-2010**

## PRONUNCIATION GUIDE

Pronunciation of orchid names can be daunting for the novice and experienced grower alike. Presented below is a simplified pronunciation guide specific to the names found in this issue of *Orchids* magazine. An attempt has been made to represent each syllable using easily recognized sounds or words separated by hyphens and not standard phonetic symbols. Check out the Orchidist's Glossary on our website at <https://www.aos.org/orchids/orchidists-glossary.aspx>.

*acaule* (a-KAW-lee)  
*adenochila* (a-dee-noh-KYE-la)  
*alaskanum* (a-lass-KAN-um)  
*andrewsii* (an-DREW-zee-eye)  
*arietinum* (air-ee-a-TEE-num)  
*aromatica* (air-oh-MAT-ih-ka)  
*articulate* (are-tik-yew-LAY-ta)  
*atroglossa* (at-roh-GLOSS-sa)  
*barbozae* (bar-BOZ-ee)  
*blanche-amesii* (blanch-AMES-ee-eye)  
*Brassavola* (brass-AH-vol-lah)  
*Calceolus* (kal-see-OH-luss)  
*Callista* (KAL-liss-ta)  
*californicum* (kal-ih-FOR-nih-kum)  
*candidum* (KAN-dee-dah)  
*Catasetinae* (kat-a-SET-ih-nee)  
*Catasetum* (kat-a-SEE-tum)  
*Cattleya* (KAT-lee-a)  
*Coelogyne* (see-LOJ-ih-nee)  
*columbianum* (koh-lum-bee-AY-num)  
*conzattianum* (kon-zat-tee-AY-num)  
*coqui* (KOH-kee)  
*Criosanthes* (krye-oh-SAN-theez)  
*cryptophoranthoides* (kryp-toh-for-an-THOY-deez)  
*Cymbidium* (sim-BID-ee-um)  
*Cypripedium* (sip-rih-PEED-ee-um)  
*Cyrtopodium* (sir-toh-POH-dee-um)  
*Darlingtonia* (dar-ling-TONE-ee-a)  
*Dendrobium* (den-DROH-bee-um)  
*dickensonianum* (dik-en-son-ee-AY-num)  
*Dracula* ((DRAK-yewl-ah)  
*Eleutherodactylus* (ee-lew-ther-oh-DAK-til-us)  
*Epidendrum* (ep-ih-DEN-drum)  
*exiliens* (eks-ILL-ee-enz)  
*fasciculatum* (fas-sik-yew-LAY-tum)  
*Fissipes* (FIS-ih-pee-z)  
*fuchsia* (FEWKS-ee-a)  
*gomezianum* (goh-mez-ee-AY-num)  
*Gongora* (gone-GORE-a)  
*griffithii* (grif-ITH-ee-eye)  
*guttatum* (gut-TAY-tum)  
*herae* (HARE-ee)  
*humile* (HEW-mill-lee)  
*imbricata* (im-brih-KAY-ta)  
*irapeanum* (ih-rap-ee-AY-num)  
*kentuckiense* (ken-tuk-ee-EN-see)  
*labiata* (lab-ee-AY-ta)  
*Laelia* (LAY-lee-a)  
*langeana* (lang-AY-na)  
*Latourea* (la-TOUR-a)  
*Latourorchis* (la-tour-ORE-kis)  
*Leptotes* (lep-TOE-teez)  
*leucosepala* (loo-koh-SEEP-a-la)

*Loefgrenianthus* (loof-gren-ee-AN-thus)  
*longifolia* (lon-jih-FOLE-ee-a)  
*luzmarianum* (looz-mar-ee-AY-num)  
*Lycaste* (lye-KASS-tee)  
*macrophyllum* (mak-roh-fiLL-um)  
*maculata* (mak-yew-LAY-ta)  
*magnicalcarata* (mag-nih-kal-kar-AY-ta)  
*makasin* (MAH-kah-sin)  
*Masdevallia* (mas-deh-VAIL-lee-a)  
*Maxillaria* (maks-ill-AIR-ee-a)  
*molle* (MALL-lee)  
*montanum* (mon-TANE-um)  
*Myrmecolaelia* (mir-meh-koh-LAY-lee-a)  
*nobile* (NOE-bih-lee)  
*nodosa* (noe-DOH-sa)  
*ochracea* (oh-KRAY-see-a)  
*orientale* (ore-ee-en-TAL-lee)  
*pallida* (PAL-ih-dah)  
*Paphiopedilum* (paf-ee-oh-PED-ih-lum)  
*Paranaea* (par-AN-ee-a)  
*parviflorum* (par-vih-FLOR-um)  
*paspaliformis* (pas-pal-ee-FOR-miss)  
*passerinum* (pass-er-EYE-num)  
*Phalaenopsis* (fail-en-OP-sis)  
*Pholidota* (foh-lih-DOH-ta)

*Phragmipedium* (frag-mih-PEED-ee-um)  
*Pleurothallid* (plur-oh-THAL-id)  
*Pleurothallis* (plur-oh-THAL-liss)  
*psilanthemum* (sy-LAN-the-mum)  
*pubescens* (pew-BESS-enz)  
*punctatum* (punk-TAY-tum)  
*pusillum* (pew-SILL-lum)  
*Quercus* (KWER-kus)  
*recurva* (ree-KUR-va)  
*reginae* (reh-JYE-nee)  
*Rodriguezia* (rod-rih-GUESS-ee-a)  
*Rubescens* (roo-BESS-enz)  
*Sayeria* (say-ER-ee-a)  
*Schomburgkia* (shom-BURG-kee-a)  
*Selenipedium* (sel-len-ih-PEED-ee-um)  
*simpliciglossa* (sim-plih-sih-GLOS-sa)  
*spectabile* (spek-TAB-ih-lee)  
*Stanhopea* (stan-HOPE-a)  
*susanae* (soo-ZAN-ee)  
*tridens* (TRY-denz)  
*Vanda* (VAN-da)  
*variabilis* (vair-ee-AY-bil-liss)  
*wendlandii* (wend-LAND-ee-eye)  
*yatabeanum* (yah-tab-ee-AY-num)


*Now Open!*  
**White Plains Orchids**  
  
 WHOLESALER/RETAIL  
 Phone (914) 948-2064  
 Email [whiteplainsorchids@gmail.com](mailto:whiteplainsorchids@gmail.com)  
 Website [www.whiteplainsorchids.com](http://www.whiteplainsorchids.com)  
 @WhitePlainsOrchids  
 Address: 1485 Mamaroneck Ave.  
 White Plains, NY



*Don't Miss The*  
**40th Annual Paphiopedilum Forum**  
 Hosted by the National Capital Orchid Society  
**January 25, 2020**  
 An all-day event exclusively focused on slipper orchids  
 at the U.S. National Arboretum in Washington, DC

- AOS award and ribbon judging
- World-class speakers & vendors
- Door prizes and other drawings

**More info at [www.ncos.us/paph-forum/](http://www.ncos.us/paph-forum/)**



# AMERICAN ORCHID SOCIETY NATIONAL VOLUNTEERS

## Officers

Susan Wedegaertner  
President

Robert Fuchs  
Jean Hollebone  
Vice Presidents

Cheryl Erins  
Secretary

Graham Wood  
Treasurer

Doris Asher  
Assistant Treasurer

George Hatfield  
Immediate Past President

## Trustees

### 2017–2020

William Bodei, Theresa Kennedy,  
Phyllis Prestia

### 2018–2021

Judy Bailey, James Heilig, PhD,  
Brandon Tam, Linda Wilhelm

### 2019–2022

Jay Balchan, Greg Filter, Joyce Medcalf, Jeff  
Saal

## Honorary Vice Presidents

Roger Brown, Donna Craig, Peter R. Furniss,  
Harry Gallis, MD, Ann Jesup,  
Taylor Slaughter

## Past Presidents

Albert C. Burrage, F. Eugene Dixon, Wharton  
Sinkler, Rodney Wilcox Jones, Frederick T.  
Bonham, George W. Butterworth Sr., Frank J.  
Lind, Robert M. Scully Sr., G. Ferguson Beall,  
Walter Slagle, Lewis C. Vaughn, Keith Shaffer,  
Dr. Jonathan W. Williams, Norman B. Merkel,  
Dr. Lawrence L. Vance, Merritt W. Huntington,  
Raymond McCullough, William E. Farrell, Paul  
B. Moore, Dr. David H. Brown, FL Stevenson,  
Dr. J. Woodson Phillips, Donna Craig, Mary  
Davidson Dunnell, Donald E. Herman, Peter R.  
Furniss, Marvin Gerber, Milton O. Carpenter,  
Roger Brown, Robert J. Griesbach, Art Moore,  
Carlos Fighetti, Chris Rehmann, Sandra Tillisch  
Svoboda, Franklin A. Smith, George Hatfield

## Affiliated Societies Committee

affiliated\_societies\_committee@aos.org  
Denise Lucero, Chair  
Deborah Bodei, Chad Brinkerhuff, Lois  
Dauelsberg, Melana Davison, Edna Hamilton,  
Eileen Hector (vice-chair), Candace Hollinger,  
Donna Petitt  
Staff liaisons: Naya Marcano, Laura Newton, Bill  
Walsh

## Audit Committee

audit\_committee@aos.org  
James Heilig, PhD, Chair  
Phyllis Prestia, Jeff Saal  
Consulting member: Nancy Mountford

## Conservation Committee

conservation\_committee@aos.org  
Tom Miranda, Chair  
Steve Beckendorf, David Horak, Ron Kaufmann,  
Dave Nixon, Mark Sullivan, Brandon Tam, Linda  
Wilhelm, Charles Wilson, Susan Wilson  
Advisory members: William Rhodehamel, Judith  
Rapacz

## Development Committee

development\_committee@aos.org  
Cheryl Erins, Chair  
Judy Bailey, Robert Fuchs (Centennial Task  
Force chair), Harry Gallis, MD, Doug Hartong,  
Jean Hollebone, John Ingram, Jennifer Reinoso,  
Marian Sheehan, Frank Smith, Charles Wilson  
(vice-chair)

## Education Committee

education\_committee@aos.org  
Phyllis Prestia, Chair  
Eron Borne, Cynthia Coty, Melana Davison,  
Cheryl Erins, Bernice Magee, Barbara Schmidt,  
Charles Wilson, Susan Wilson

## Executive Committee

executive\_committee@aos.org  
Susan Wedegaertner, Chair  
Doris Asher, Cheryl Erins, Robert Fuchs, George  
Hatfield, Jean Hollebone, Graham Wood

## Finance Committee

finanance\_committee@aos.org  
Graham Wood, Chair  
Doris Asher, Nancy Mountford  
—Investment Task Force  
Nancy Mountford, Chair  
Doris Asher, Ron McHatton, Susan  
Wedegaertner, Graham Wood  
—Awards Task Force  
Nancy Mountford, Chair  
Robert Fuchs, Jean Hollebone

## Governance Committee

governance\_committee@aos.org  
Jean Hollebone, Chair  
Judy Bailey, Cheryl Erins, Harry Gallis, MD,  
James Heilig, PhD, Theresa Kennedy, Taylor  
Slaughter

## Information Technology Committee

information\_technology\_committee@aos.org  
Jay Balchan, Chair  
William Bannon, Howard Bronstein, David  
Edgley, Greg Filter, Ted Kellogg, Frank  
Slaughter  
Staff liaison: Laura Newton

## Judging Committee

judging\_committee@aos.org  
Taylor Slaughter, Chair  
Jean Allen-Ikeson, Nathan Bell, Howard  
Bronstein, Lois Cinert, Judy Cook, Jim Davison,  
David Edgley, Robert Fuchs, Alison Gallaway,  
Doug Hartong, Marilyn Holloway, Bill Jasen,  
Karen Kimmerle, Japheth Ko, Valerie Lowe,  
Joyce Medcalf, Alexa Noel, Sarah Paterson,  
Ian Rich, Julio David Rios, Abu Salleh, Bill  
Sanders, Dennis Seffermick, Bev Tall, Al Taylor,  
Max Thompson, Mark Werther, Robert Winkley  
Staff liaisons: Ron McHatton, Laura Newton  
—Species Identification Task Force (SITF)  
awardid@aos.org  
Randall Bayer, Joe Bryson, Marc Hachadourian,  
Ron McHatton, Laura Newton, Jay Norris,  
William Pinnix, Ken Roberts, Jean Stefanik,  
Charles Wilson

## Library/Archives Committee

library\_committee@aos.org  
Doris Asher, Cheryl Erins, Carlos Fighetti,  
Robert Fuchs (vice-chair), Gail Furniss, Claire  
Garrett, Catherine Higgins, John Ingram, Chris  
Rehmann, Dr. Kristen L. Uthus, Katherine  
Weitz  
Staff liaison: Laura Newton

## Membership and Marketing Committee

wbodei@aos.org  
William (Bill) Bodei, Chair  
Judy Bailey, Deb Bodei, Virginia Clark, Eileen  
Hector, Candace Hollinger, Graham Ramsey,  
Jeff Saal, David Toyoshima, Linda Wilhelm  
Staff liaison: Laura Newton

## Nominating Committee nominating\_committee@aos.org

Alan Koch, Chair  
Judy Bailey, George Hatfield, Joyce Medcalf,  
Bev Tall, Robert Winkley, Graham Wood

## Research Committee

research\_committee@aos.org  
Dr. Daniel L. Geiger, Chair  
Dr. Andy Cameron, Dr. Ken Cameron, Dr. R.J.  
Griesbach, Dr. James Heilig, Dr. John Stommel  
(vice-chair), Dr. Cynthia van der Wiele

## Special Funding Committee

special\_funding\_committee@aos.org  
Jennifer Reinoso, Chair  
Alan Koch, Marian Sheehan



The Only Complete Plant Nutrition Solution for Orchids



www.dyna-gro.com



## Orchid Conservation Alliance

### Conserving Orchids by Conserving Orchid Habitat

The OCA conserves orchids by funding habitat preservation. Since inception in 2005 we have helped with the purchase of over 3000 acres of orchid habitat, protecting hundreds of orchid species in Brazil, Ecuador and Colombia. Many species of rare birds, trees, frogs, mammals also find refuge in these reserves.



Dracula



Dracula



Ventanas



Ventanas

*Dracula gigas* (L), *D. trigonopetala* (R)  
Dracula Reserve, Ecuador

*Dracula lemurella* (L), *Lepanthes escifera* (R)  
La Selva de Ventanas Reserve, Colombia

We hope you will join us in promoting this important work. We invite you to become a member of the OCA, to make a donation, to take a trip with us to see Orchids in the Wild®, and to purchase merchandise through our website. Since we have no paid staff, all proceeds support orchid conservation. The OCA is a non-profit 501(c)(3) corporation.

For more information: [www.orchidconservationalliance.org](http://www.orchidconservationalliance.org)

# Orchiata™

The premium orchid growing substrate for consistently superior growth

- AOS Preferred Choice provider
- Beneficial micro-organisms
- Ready to use straight from the bag
- Re-wets easily & dries consistently
- Excellent water & nutrient delivery
- Promotes optimal health & growth
- Stable, hard structure gives long life

Repot with Orchiata for the world's most admired orchids.

Product of New Zealand



Made from Pinus Radiata bark

Natural | Sustainable | Renewable



Acadian Supply, Inc.  
Tel: 770 271 0859  
www.acadiansupply.com

Crop Production Services  
Hilo: 808 935 7191  
Kunia: 808 935 7191  
www.cpsagu.com

Just Moss Canada  
Tel: 604 253 6679  
www.justmossCanada.ca



## *Gifts of Note*

*In addition to vital support through membership dues, the American Orchid Society relies on grants, bequests and other gifts to support its programs. We would like to thank the following donors for gifts received between November 1, 2019 and November 31, 2019.*

Anonymous (5)  
Sharon Harwood  
Virginia Long  
Network for Good  
Alexander Vidal-Barquero  
Mary Ann Wharton  
Steven Wilson  
Jeanette O. Woloszyn

**In honor of**

— **Greg Filter**  
Jean Allen-Ikeson (Technology)

**In Kind**

Jancy Lovell

**In lieu of a Speaker's Fee for**

— **Cheryl Erins**  
Cheryl Erins (Centennial Celebration)  
Kalamazoo Dunes Orchid Society  
(Centennial Celebration)

— **Esteban (Steve) Gonzalez-Costa**

Eastern Iowa Orchid Society  
Esteban (Steve Gonzalez-Costa  
(Centennial Celebration)  
Orchid Society of Minnesota (Centennial  
Celebration)

**In memory of**

— **Ramon Filter**  
Doris Asher (Technology)  
Joyce Medcalf (Technology)  
Phyllis S. Prestia, Ed.D.  
Susan Wedegaertner (Technology)

— **Fred Marquette**

East Alabama Orchid Society

— **Barry N. Reese**

Manatee Orchid Society

— **Kathleen (Kitty) Winkley**

Robert Fuchs and Michael Coronado  
(Centennial Celebration)  
Susan Wedegaertner

— **Sam and Barbara Wylie**

Connie Koehler

**Permanently restricted**

— **Conservation**

Doris Asher  
Carolyn Dewey  
Richard Humke  
Jane Swoboda  
Susan Wedegaertner  
Clark F. Weisner

**Temporarily restricted**

— **Annual Supplement**

Jean Allen-Ikeson

— **Centennial Supplement**

Jean Allen-Ikeson  
Flamingo Gardens Orchid Society  
Frank Francisco  
Greater Pensacola Orchid Society  
Great Lakes Judging Center  
North Carolina Piedmont Orchid  
Society  
Orchid Society of Minnesota  
Southwest Regional Orchid Growers  
Association, Inc.

— **Education**

Joyce Morabito

### **H & R NURSERIES - [www.hrnurseries.com](http://www.hrnurseries.com)**

A world leader for **excellent new, rare or hard-to-get nursery-grown species** and **innovative frequent-blooming hybrids**.

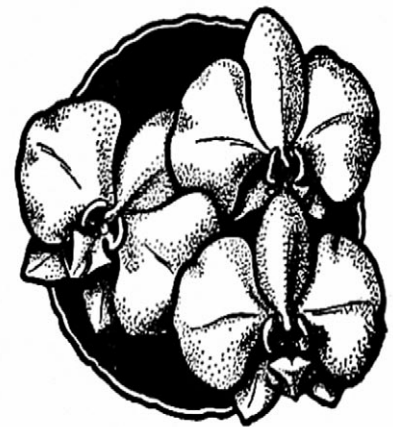
Foreign shipments OK. Three retail and wholesale price lists a year.

Call, fax, write or see our Web site. Assorted budded plants to US and US territories. (60-80 plants min.), for wholesale customers, groups or societies.

*Aerangis*. *Angraecum*. *Cattleya*: aclandiae; amethystoglossa; intermedia; lawrenceana; leopoldii; luteola; schilleriana; violacea; walkeriana. *Cynoches*: barthiorum; cooperi. *Dendrobium*: atrovioleaceum; johnsoniae; laevifolium; purpureum; spectabile. *Encyclia*. *Oncidium*: papilio; papilio v. alba; kramerianum. **MANY MORE!**

**41-240 Hihimanu St., Waimanalo, HI, 96795**

**PH: (808) 259-9626 FAX: (808) 259-5422**







## CALL FOR GRANT APPLICATIONS

AOS Conservation Committee Accepting 2020 Grant Applications  
By Thomas Miranda

IN ITS CONCERN for the protection of wild orchid species around the world, the AOS Conservation Committee announces that it is taking applications for conservation project grants for 2020. Please note that in recent years, the AOS has decided to separately fund conservation projects from research projects, allowing for some different types of projects to be considered. Although conservation research will still fall under the purview of the Research Committee, conservation grants are intended to encourage a more practical, hands-on grassroots approach. We are seeking applicants engaging in a wide range of projects that protect orchids and their natural habitats including, but not limited to:

- Studies that enhance our knowledge of crucial ecological information,
- Conservation assessments of specific orchids or regions,
- Seed propagation of rare or threatened species,
- Habitat restoration or reintroduction efforts,
- Raising public awareness regarding orchid conservation and encouraging public participation, and
- Providing education or outreach to present and future members of the conservation community.

All conservation-oriented projects, anywhere in the world, will be considered. Although an institutional affiliation is helpful, it is not required. An accurate, estimated budget is, however, required. Funds are limited; past grants have averaged about \$3,000.00. We REQUIRE projects be reported on annually, and that an article featuring your project be submitted for publication in *Orchids* magazine within six months of completion. Due to the nature of conservation projects, ongoing multiyear support is a possibility. The application period begins January 1, 2020. Applications must be received no later than March 15, 2020. Please see the AOS website for application and requirements or contact the AOS Conservation Committee directly at [Conservation\\_committee@aos.org](mailto:Conservation_committee@aos.org) for an application. Good luck! — *Thomas Miranda, Chair AOS Conservation Committee (email: conservation\_committee@aos.org).*



*Dendrophylax lindenii* photographed in-situ  
by Greg Allikas.

## PRESIDENT'S MESSAGE

THE AMERICAN ORCHID Society recently held our semiannual members meeting in Homestead, Florida. The East Everglades Orchid Society (EEOS) was our gracious host for this meeting.

On Wednesday afternoon the Board of Directors met for our planning meeting. We discussed plans for communication between several areas within the organization. We broke into groups of four and were given the task to "brain storm" our respective areas. I must say, each group came up with wonderful ideas and we are working to implement them as I write this message to you.

Thursday morning found all of the committees in meetings and although I try to visit all committees, I became involved in the Membership and Marketing Committee meeting. I just could not resist sitting down and throwing out my own ideas. You will hear more about what we came up with at a later date. Thursday afternoon all of the judges headed to R.F. Orchids, where the EEOS holds their show. Their show was fantastic with lots of beautiful orchids in among the RF landscaping displays and on table tops. Congratulations to all of the exhibitors and members of the EEOS for a show well done.

Friday was the usual meeting of the Board of Trustees where we heard from our committee chairs on what they have accomplished since our last meeting and what they plan to get resolved before our next meeting in April. We also voted on any action items that the chairs wanted to get approved.

Saturday was the town hall meeting for members. Each Committee Chair gave a shortened recap to the members in attendance and we also reviewed the special annual award winners for 2018. The AOS presented a silver medal to Jeanne Buchanan for her years of service to the American Orchid Society. The following is part of the nomination letter... "Jeanne has served two distinguished terms as a Trustee and more recently as Vice President...For several years Jeanne chaired the Audit Committee reviewing and ensuring implementation of audit recommendations made by the auditors. One of her major recommendations, in practice today is that financial deviations above 10% are reviewed monthly by the Board, so that corrective action, if needed, can be taken quickly and effectively. Jeanne was responsible for developing a new membership marketing initiative in 2013 in conjunction with MGI. This effort led to a new strategic marketing initiative that increased membership. In



- All photographs courtesy of Laura Newton.
- [1] Your AOS Board of Directors, Committee Chairs and Staff.
  - [2] Phyllis Prestia, Education Committee Chair, addressing the town hall meeting.
  - [3] Allison Gallaway, Chair of the Alamo Judging Center, accepts the AOS Silver Medal on behalf of Jeanne Buchanan.
  - [4] Jim Roberts (left) accepting the AOS Outstanding Hybridizer Award from President Susan Wedegaertner (right).

2015-17, Jeanne chaired the task force which developed the ‘preferred product program’ and oversaw the review and acceptance of the first product in that program. During her entire time on the Executive Committee, Jeanne’s skilled communications underscored many of my [George Hatfield] president’s messages and contributed to other important communications for the AOS...”

A hybridizer award was presented to Jim Roberts. This is part of the nomination letter for his award, “Jim Roberts of Florida SunCoast Orchids has been hybridizing orchids for several decades. Beginning in 2007 though, his hybridizing program really took off with a major focus on hybrids using the “nonstandard” parent species in the Cattleya Alliance. Jim has created 66 hybrids which have garnered 28 AOS awards, including one First Class Certificate and two Awards of Quality. In the process, two new hybrid genera have been named for him. These are *Robertsara* (Rbt), a combination of *Cattleya*, *Encyclia*, *Epidendrum* and *Guarianthe*, and *Jimrobertsara* (Jrb), composed of *Brassavola*, *Cattleya*, *Guarianthe* and *Myrmecophila*.”

The Fort Lauderdale Orchid Society (FLOS) was given a second Distinguished Affiliated Society Service Award (DASSA) as well. This is part of the letter of recommendation...”has continued to grow and maintain an active and interested membership..., in a time when many societies find their membership losing interest. The Fort Lauderdale Orchid Society was founded in 1951 and produced their first orchid show in 1957. The FLOS show is now the largest orchid show in South Florida area and continues to support the AOS with judging and an AOS membership/information booth at each event...In addition to offering their fabulous show to the public annually, FLOS provides many events and activities for their membership and the local orchid-growing community. Currently they are involved in Fairchild Tropical Botanic Garden’s Million Orchid Project and are installing native orchid species in various park and hammock areas in Broward County...”

At this meeting, I had the honor to present several President’s Awards. The first went to a group of people, Anthony Tanner, Greg Filter and Jay Balchan for their hard work and early detection stopping a ransomware attack that occurred on October 1, 2019. If it had not been caught so quickly, the AOS website and accompanying files would have been destroyed and have taken a long time to



5



6



7

- [5] Robert Fuchs accepting a Certificate of Appreciation from the AOS Board of Trustees on behalf of the East Everglades Orchid Society.
- [6] Presentation of AOS President’s Award for outstanding service — server attack. Left to right: Jay Balchan, Chair of the IT Committee, Greg Filter, IT Committee member and critical volunteer for IT operations and Susan Wedegaertner, AOS President (not shown: Anthony Tanner, Sterling Talon).
- [7] Joan Connor accepting the DASSA Award on behalf of the Fort Lauderdale Orchid Society.



an email from the United States Postal Service. They are releasing nine wild-orchid forever stamps and want to have their first day of issue ceremony with the American Orchid Society. This event is now scheduled for Friday, February 21, starting at 11:00 am in our library at the Fairchild Tropical Botanic Garden in Coral Gables, Florida. This is a very big event for the American Orchid Society! So, mark your calendars now to attend. I know you collect orchids and if you collect stamps, this is where two of your hobbies come together!

The Spring 2020 AOS Members' Meeting will be held in Sacramento, California April 15–19, hosted by the California-Sierra Nevada Judging Center. We will have information on wineries and microbreweries in our Gold Country areas (foothills) and other fun activities in which to participate, if you come out early or stay a few days after the Members' Meeting to relax. Old Town Sacramento has the best railroad museum and it is just a short walk from the hotel. The event will be held at the Embassy Suites on the Capitol Mall in Sacramento. They have a free shuttle to and from the airport, seven days a week, so a car rental will not be necessary.

Until next time, happy growing!

— Susan Wedegaertner, AOS President  
(email: [susan@aos.org](mailto:susan@aos.org)).

[8] Nancy Mountford (left) receives the AOS President's Award from Susan Wedegaertner (right) for outstanding assistance and support.

recreate. A big Thank you to the three of them, plus they received a standing ovation at this meeting for their hard work. Remember, they have normal 8 to 5 jobs and they spent many extra hours over several days to get this problem resolved for us.

The other President's Award went to Nancy Mountford. Nancy has been my proofreader and sometimes ghost writer for the president's messages I write here each month. It was my way of thanking her for help in writing better messages to you and because of her edits I have found I have become a better writer!

The members meeting finished up with a Tarzan-and-Jane themed banquet on the grounds of R.F. Orchids. In addition to the great food it was fun to see so many people in the conga line having a wonderful time!

There was even time after meetings on Friday and Saturday to visit the show and vendor area at R.F. Orchids and other nearby orchid nurseries to shop. It was a fun time to visit the local nurseries.

**EXCITING NEWS** Shortly after our members meeting concluded, we received



**Orchid Show & Sale**  
Venice Area Orchid Society Presents

*"Orchid Island"*  
**Feb 1-2, 2020**  
**Saturday, 10am - 5pm**  
(displays open at 11am)

**Sunday**  
**10am - 4pm**  
[www.vaos.org](http://www.vaos.org)

**Thousands of Blooming Orchids, Orchid Classes, Orchid Art & Supplies • Venice Community Center**  
326 S. Nokomis Ave. • Venice, Florida • Admission \$5 • (under 10 free)

# PLANTÍO LA ORQUÍDEA

Warm growing exotic species

Specializing in Schomburgkia  
and Brassavola hybrids



3480 Tallevast Road  
Sarasota, FL 34243  
ph: 941-504-7737

by appointment only  
[www.plantiolaorquidea.com](http://www.plantiolaorquidea.com)

## Newport Harbor Orchid Society Orchid Expo & Sale 2020

Westminster Mall  
Orange County, CA

February  
7, 8 & 9

Friday:  
10am-9pm

Saturday:  
10am-8pm

Sunday:  
11am-6pm

Contact:  
[info@nhosinfo.org](mailto:info@nhosinfo.org)



Re-potting Classes 2pm each day  
Orchid Displays • Vendor Sales

Now located on 2nd Floor (near Penney's wing)

[www.nhosinfo.org/orchidshow](http://www.nhosinfo.org/orchidshow)

design: Samuel Wantman  
orchid photos: Ron Parsons

[PacOrchidExpo.org](http://PacOrchidExpo.org)

68th  
Annual

Pacific  
Orchid  
Exposition

February 20 to 23  
Golden Gate Park  
County Fair Building

2020  
ORCHIDS IN FOCUS



premier sponsor  
oakville ranch  
winery  
napa valley

# January: The Month of the Coqui

By Thomas Miranda

TSUNAMIS, EARTHQUAKES, HURRICANES and eruptions of fountains and rivers of lava are some of the natural phenomena that orchid growers in Hawaii face. In fact, no matter where you live or grow your orchids, there are physical challenges thrown at us by Mother Nature. Among the blessings and curses of my new island home, is a massive population of a tiny frog: the Coqui (*Eleutherodactylus coqui*), onomatopoeically named for the high-pitched nocturnal mating call emitted from dusk till dawn by males looking for some lovin! While this sounds almost romantic, the sheer volume of sound, both quantity and quality due to the incredible density (double the density that occurs in their native Puerto Rico) of these little guys, can be deafening and disturbing. Indeed, they are an invasive species and considered a serious pest. I find them, and their egg masses, frequently in my orchids when I am repotting. This is how they and often other pathogens spread. Big Island orchid growers work very hard to prevent additional transfers of these and other things such as weeds, bugs and even viruses that may be hitching rides on your plants.



Thomas Miranda

I frequently recommend sharing the joy of orchids with friends and newcomers to the wonderful pursuit of orchid growing. But I have been somewhat remiss in my advice in that we must do so responsibly. Our good intentions are to share the joy of orchids, not the headaches and problems. Therefore, we must be vigilant in our collections and do our best to eradicate pests and pathogens. January is a great time of year to work on this.

**IT IS COLD OUTSIDE** The New Year is an excellent time to do an assessment of your collection. We spend a lot more time indoors as the rigors of your outdoor garden are reduced. Most of your orchids need less water and fertilizer now, and it is generally not a good idea to repot while plants are in semidormancy or in bloom, as many are this month. Look for plants with irregular growth, or flowers that are misshapen or display color break. Test such plants for virus or treat for fungal infections. Often insect pests such as



*Coelogyne ochracea* 'Emmett' CCM/AOS grown by Donna McDonnell. Photograph by Judith Higham.

mealybugs, scale or insidious mites will be proliferating, unseen on the undersides of your leaves right around now. Take some time to inspect each and every plant in your collection for such pests. Nip it in the bud now, before populations do more serious damage.

**IT IS NICE INSIDE** So many orchids are in bud or in bloom this month that it is a joy to be in the greenhouse. Short day lengths coupled with cooler nighttime temperatures have triggered phalaenopsis, cymbidiums, paphiopedilums, lycastes and many others to push out inflorescences this month, hence the many orchid exhibitions that occur in the winter. The anticipation of each new orchid opening in your collection can be downright delicious, though sometimes excruciatingly slow! If you are going to exhibit your plants, inspect them fully for pests and pathogens, remove any unsightly leaves with sterilized tools, and stake inflorescences if needed so the flowers are presented to their best advantage.

Be careful not to stake too late, as the flowers may orient upside down or have a messy arrangement. After working with your plants return them to the growing bench facing the same way or the spikes might take an abrupt turn toward the light source, which takes away from the graceful beauty of an inflorescence.

**SLEEPING INSIDE** While most orchids (in the northern hemisphere) need less water this time of year due to shorter photoperiod and cooler temperatures, there are many plants originating from seasonally dry forests that need extreme dryness now to perform their best. Among these are the many and varied plants in Catasetinae, and other deciduous plants from Latin America such as *Lycaste aromatica* and its sister species. Various Asian orchids also have similar requirements, including the noble dendrobiums and Himalayan coelogynes such as *Coelogyne ochracea* and its allies. It can be nerve wracking to watch their leaves fall and pseudobulbs shrivel,

sometimes alarmingly so, but it is often necessary for blooming to occur in these species. Some will rot away if watered heavily while dormant.

**COOLER INSIDE** Quite the opposite is true for many upper-elevation cloud forest plants. You may be finding your draculas, masdevallias and other pleurothallids putting on luxuriant growth this time of year, as the stresses of summer heat have subsided. While such orchids generally do not need too much feeding, very light applications of fertilizer to any plants that are putting on growth now are recommended while conditions are optimal for them to produce new leaves. Generally these plants prefer the purest possible water, and melted snow can be a wonderful boon to cloud forest plants. These plants can often be up-potted or divided now with minimal setback compared to the perils of doing so in the warmer months of the year.

— *Tom Mirenda has been working professionally with orchids for over three decades. He is an AOS accredited judge and is the chairman of the American Orchid Society's Conservation Committee (email: biophiliak@gmail.com).*

**The ultimate hobby-size fogging unit.**

Hydro SS 700 series

**Cool-Fog Units**

- Tropical Humidification
- Evaporative Cooling
- Plug-In and Go
- 4 GPH Fogging
- Low Energy Cost
- Made in U.S.A.

**AQUAFOG**  
1-888-889-4407 jaybird-mfg.com

**MAKE SURE PEOPLE CAN REACH YOUR AFFILIATED SOCIETY**

Our records are only as good as the information our affiliates provide. We recommend our affiliates update their AOS record periodically — at least after every annual election — using our online form:

<http://affiliatedsocieties.americanorchidsociety.org/update/>

Pay particular attention to:

- proper points of contact
- accurate society information — we use this for the Affiliated Societies search on our website and preparation of the annual Orchid Source Directory listings

Help us ensure the AOS Corner, renewal notices and important correspondence reach you.

# Orchids in Paradise

For the finest selection of quality orchids, exquisite gifts, stunning floral arrangements and more, visit R.F. Orchids, South Florida's oldest and most prestigious orchid firm. All of this awaits you in our tropical paradise.



**R.F. Orchids, Inc.**

28100 SW 182 Ave. • Homestead FL 33030  
T: 305-245-4570 • F: 305-247-6568 • [www.rforchids.com](http://www.rforchids.com)





*Sylvia strigari*



# *Dendrobium macrophyllum*

Text by Noelia Belfort-Oconitrillo and Franco Pupulin/Watercolor by Sylvia Strigari

Subfamily EPIDENDROIDEAE  
Tribe DENDROBIEAE  
Genus DENDROBIUM Sw.

*Dendrobium macrophyllum* A.Rich., *Sert. Astrol.* 22: Misc. 36. 1834.

SYNONYMS *Callista macrophylla* (A.Rich.) Kuntze, *Revisio Generum Plantarum* 2:655. 1891. *Latourea macrophylla* (A.Rich.) Brieger, *Schltr. Orchideen* 1 1(11–12):727. 1981. *Latourorchis macrophylla* (A.Rich.) Brieger, *Die Orchideen* 1(11–12):727. 1981. *Sayeria macrophylla* (A.Rich.) Rauschert, *Feddes Repertorium* 94(7–8):467. 1983

TYPE Nouvelle-Guinée (P).

H O M O N Y M *Dendrobium macrophyllum* Lindl., *Edwards's Botanical Register* 25(Misc.): 36. 1839.

Epiphytic, robust *plant* to 60 cm tall. *Roots* slender, flexuous, to about 2 mm in diameter. *Pseudobulbs* fusiform, homoblastic, of 2–4 internodes, fleshy, 21–43 × 0.9–2.7 cm, apically provided with (2) 3–4 leaves, partially covered with papyraceous sheaths eventually disintegrating with age. *Leaves* suberect, coriaceous, elliptic-oblong, 23–29 × 6.3–8.4 cm. *Inflorescence* terminal, elongate, erect to arching, with 5–20 fleshy and very long-lasting flowers; *peduncle* cylindrical, glabrous, green, 20–38 cm long. *Flowers* delicately and spicily fragrant, creamy white with purple spots or stripes on the lateral lobes of the labellum; the abaxial surface of the sepals hispid. *Dorsal sepal* triangular, acute, the apical margins frequently involute, green, 2.2–2.6 × 1.2 cm. *Lateral sepals* triangular-subfalcate, acute to subacuminate, green, 2.3–2.6 × 1.3–1.5 cm. *Petals* subrhombic-oblong from a obtuse base, acute, subporrect, the upper margin undulate, 2.3 × 1.2 cm, fleshy, white, the abaxial surface marked with scattered purple stains from the base to the middle along the midvein. *Lip* attached to the apex of the column foot, trilobed, fleshy, the midlobe abruptly geniculate-recurved, 2.6 × 1.6 cm; the lateral lobes broadly obovate-subrhombic, obtuse, yellowish green with radiating purple stripes;

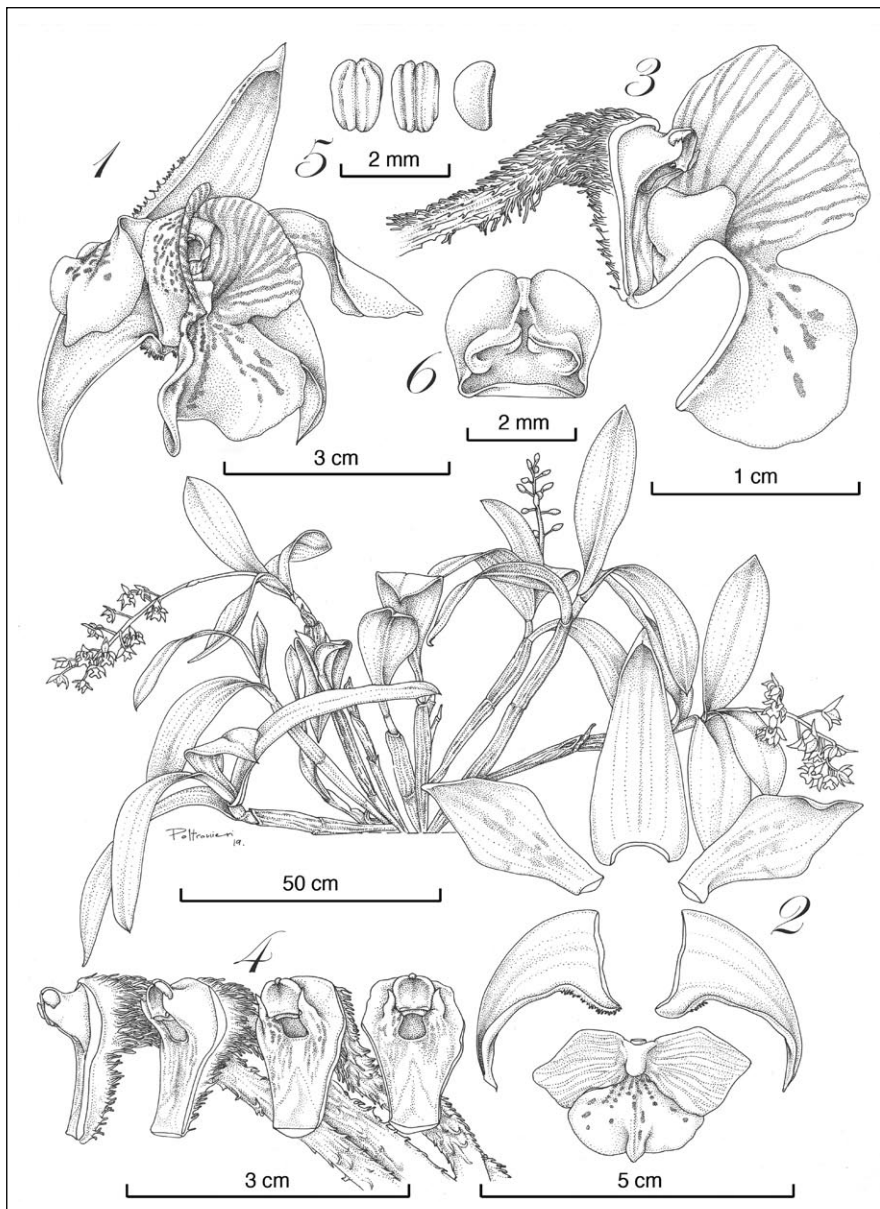
midlobe transversely elliptic-subreniform, greenish with scattered purple stains; disc provided with a high, subrectangular, white callus. Pedicellate *ovary* subclavate, hairy-tomentose, green. *Column* short, semiterete, apically provided with two small, digitate, upcurved arms, extended at the base into a long foot, ca. 1.5 cm long including the foot. *Anther cap* broadly ovate, truncate, deeply cucullate, bilocular, green with the white edges. *Pollinia* two, compact, semirounded, laterally flattened, yellow-orange. *Fruits* not seen.

The highly diverse genus *Dendrobium* Sw. was created in 1799 by the Swedish botanist and orchid taxonomist, Olof Swartz (1760–1818), to segregate several species that did not fit within *Epidendrum* (Swartz 1799). The generic name derives from the Greek *dendron*, meaning tree, and *bios*, meaning life, referring to the epiphytic habit common to most species in the genus. Since time immemorial, species of *Dendrobium* have gained ethnobotanical importance, for some taxa have been used in traditional Chinese medicine, while indigenous people from Asia and Australia have used different species for decorative, medicinal, ceremonial, and aromatic purposes. The phytochemical compositions of several species have been described in detail, the alkaloids, sesquiterpenoids, and stilbenoids being the more frequent components, although many other substances have also been found (Pridgeon et al. 2014).

The proposals of systematic arrangement in such an enormous genus encompassing more than 1,000 species date from the early 1800s, and the DNA-based phylogenetic studies date from the early 1990s although, to date, finding an agreement between different authors as to the genus' circumscription and the infrageneric relationships has not been simple. What seems to be a clue is the biogeography of the genus, with three main clades showing clear distributional patterns. The first clade, which represents the sister clade of the other two, is centered in Malaysia and comprises *Dendrobium* sect. *Sarcopodium* (*Epigeneium*). Another

group is the large northern or Asian clade, which is poorly represented in Australia and New Caledonia, and that can also be further subdivided into western and eastern sections. It encompasses *Dendrobium* sections *Amblyanthus*, *Aporum*, *Calyptrochilus*, *Conostalix*, *Dendrobium*, *Distichophyllae*, *Formosae*, *Fytchianthe*, *Pedilonum*, and *Stachyobium*. And finally the southern or Australasian clade comprises taxa that are well-represented in Australia and New Caledonia such as *Dendrobium* sects. *Biloba*, *Brevisaccata*, *Cadetia*, *Crinifera*, *Dendrocoryne*, *Diplocaulobium*, *Eleutheroglossum*, *Fugacia*, *Grastidium*, *Herpethophytum*, *Latouria*, *Lichenastrum*, *Macrocladium*, *Microphytanthe*, *Monophyllaea*, *Phalaenanthe*, *Pleianthe*, *Rhizobium*, and *Spatulata* (Pridgeon et al. 2014). Relationships between and within these sections require further investigation.

*Dendrobium macrophyllum* A.Rich. belongs to section *Latouria*, distributed in Papua New Guinea and the surrounding islands. Species belonging to this section can be easily recognized by their greenish flowers with a large and contrasting lip (Soon 1980). The type for the section, *Den. macrophyllum*, was collected in New Guinea during the research expedition to Melanesia commanded by Jules-Sébastien-César Dumont D'Urville (1790–1842), a French naval officer, geographer and botanical collector with a passion for great expeditions. D'Urville sailed from Toulon on April 22, 1826, on his first ocean navigation as the commander of a scientific expedition, and spent four years (between 1826 and 1830) exploring Oceania and the southern seas with the aim of collecting scientific information. As a curious fact, a side interest of the royalty in the expedition was the possibility of finding traces of Jean-François Galaup de La Pérouse (1741–1788), a French sailor whose expedition sank completely in 1788 in Vanikoro, the southernmost of the Santa Cruz Islands, part of the Solomon Islands archipelago. Indeed, D'Urville's expedition found and collected remains



important botanists of his time. The second part, *Sertum Astrolabianum*, was published by A. Richard alone in 1834 to include the botanical descriptions of new species of plants and of those that were still poorly known. The protologue of *Den. macrophyllum* A.Rich is included in the *Sertum Astrolabianum*, as well as the descriptions of *Dendrobium calcaratum* A.Rich., *Dendrobium hispidum* A.Rich., *Dendrobium lancifolium* A.Rich., and *Dendrobium macranthum* A.Rich. The type specimen of *Den. macrophyllum* was deposited at the National Museum of Natural History in Paris, France. It is included in the digital collections of the museum, but there, it appears to lack a collecting number (s.c.) (Muséum National d'Histoire Naturelle 2019). However, in Richard's description of *Den. macrophyllum* he indicated that the specimen was collected by D'Urville (Richard 1834), although other sources indicates that it was collected by A. Lesson (Lewis and Cribb 1989).

Five years after Richard's description, a homonym, *Dendrobium macrophyllum* Lindl., was created by John Lindley (1799–1865) while attempting to describe a new species in the *Edwards' Botanical Register*. The specimen was found by "The prince of collectors" Hugh Cuming (1791–1865) in Manila, who sent it to the English firm of Loddiges for cultivation. The plant was described by Lindley as "the handsomest of Dendrobia" as annotated in his description (Lindley 1839). This name proposed by Lindley is illegitimate and currently considered as a later homonym of *Den. macrophyllum* A.Rich.

*Dendrobium macrophyllum* is widespread from the Malay archipelago to New Guinea and Bougainville, the Solomon islands, Fiji and Samoa (Lewis and Cribb 1989), and can be found between 600–2,000 meters (Pridgeon et al. 2014).

The presence of a strong and spicy fragrance, together with a massive display of flowers, suggests bees as the most probable pollinators of *Den. macrophyllum*. Reports on melittophily (pollination by bees) have been documented in other species of *Dendrobium* (van der Cingel 2001), therefore there is a high probability that this pollination mechanism will be proven in *Den. macrophyllum* in the future.

*Dendrobium macrophyllum*. The plant.

1. Flower.
2. Dissected perianth.
3. Column and lip dissected, lateral view.
4. Column, several views.
5. Pollinarium, ventral, dorsal and lateral views.
6. Anther cap.

All drawn from JBL-28192 by Sara Díaz Poltronieri.

from the wrecks in early 1828 (Solomon Association 2016). D'Urville's frigate was named the *Astrolabe* (formerly, during the previous navigation in which he served as the second in charge, the ship name was the *Coquille*) honoring La Pérouse, and the discoveries of the expedition were published in the *Voyage de l'Astrolabe*, a book that included several volumes on the history of the expedition, hydrography, botany, and zoology. *Botanique* was the second division of the book that included the botanical discoveries. It consisted of two parts: the first one included the flora from New Zealand, and was published in 1832 by the French surgeon onboard the expedition, Pierre-Adolphe Lesson (1805–1888) together with Achille Richard (1794–1852), a French doctor so interested in botany that he became one of the most

## BELFORT-OCONITRILLO AND PUPULIN

### Literature cited

- Lewis, B. and P.J. Cribb. 1989. *Orchids of Vanuatu*. Royal Botanic Gardens, Kew.
- Lindley, J. 1839. *Dendrobium macrophyllum*. *Edwards's Botanical Register* 25(Misc.): 36.
- Muséum National d'Histoire Naturelle. 2019. Collection: Vascular plants (P), Specimen P00328889. Paris, France. Retrieved from <http://coldb.mnhn.fr/catalognumber/mnhn/p/p00328889>. Last accessed on November 15, 2019.
- Pridgeon, A. M., P.J. Cribb, M.W. Chase and F.N. Rasmussen, (eds.). 2014. *Genera Orchidacearum, volume 6, Epidendroideae (Part Three)*. Oxford, USA: Oxford University Press.
- Richard, A. 1834. *Botanique. II. Sertum Astrolabianum*. In: J. Dumont D'Urville, *Voyage de l'Astrolabe*, vol. 7:22–24. Paris: J. Tastu.
- Solomon Association. 2016. La Pérouse's story. Retrieved from <https://www.collection-laperouse.fr/en>. Last accessed on November 15, 2019.
- Soon, T. E. 1980. *Asian orchids*. Singapore: Times Books International.
- Swartz, O. 1799. *Dianome Epidendri Generis Linn*. In: *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, volume 6 (61–88).
- van der Cingel, N. A. 2001. *An Atlas of Orchid Pollination. America, Africa, Asia and Australia*. Rotterdam: A. A. Balkema Publishers.

## Webinars-Coming Attractions!



When	January 09, 2020 8:30pm EST Thursday	January 16, 2020 8:30pm EST Thursday	February 11, 2020 8:30pm EST Tuesday	February 18, 2020 8:30pm EST Tuesday
Topic	Orchid Travels in Peru	Greenhouse Chat (Orchid Q&A) <i>Send in your Questions!</i>	Large Flowered Cattleyas	Greenhouse Chat (Orchid Q&A) <i>Send in your Questions!</i>
Presenter	Ken Jacobsen Accredited AOS Judge	Ron McHatton Chief Education and Science Officer	Art Chadwick Founder Chadwick & Son Orchids Inc.	Ron McHatton Chief Education and Science Officer

**REGISTRATION REQUIRED:** <http://www.aos.org/orchids/webinars.aspx>

Cannot make it on the scheduled date or time? No need to worry. Register anyhow!

We digitize the webinars and they are available to view at your leisure.

Webinars are also indexed by topic for future viewing.

Webinar announcements are posted to Facebook,

Instagram and in the AOS Corner of your affiliated society's newsletter.

Send your Greenhouse Chat questions and photos to: [greenhousechat@aos.org](mailto:greenhousechat@aos.org)

### Selected Botanical Terms

abaxial - lower surface of a leaf  
 acuminate - tapered to a point  
 acute - pointed  
 adaxial - upper surface of a leaf  
 bilobed - having two parts  
 bilocular - having two chambers  
 circumscription - definition of a group of related organisms  
 column foot - extension of the basal part of the column  
 concave - bowl-shaped  
 convex - curved outward like the surface of a sphere  
 coriaceous - leathery  
 cucullate - hooded  
 cuneate - wedge-shaped  
 digitate - having fingerlike projections  
 epiphyte - growing on another plant for support and not as a parasite  
 erose - irregularly notched  
 falcate - sickle-shaped  
 flexuous - curved or full of curves  
 fusiform - spindle-shaped  
 geniculate - bent at a sharp angle  
 glabrous - smooth  
 hispid - covered with stiff hairs or bristles  
 homoblastic - changing little in shape with age

internode - space between joints or successive leaves  
 infrageneric - within a genus; subclassification of a genus  
 involute - curled  
 obtuse - blunt or rounded  
 ovate - egg-shaped with the narrow end up  
 papyraceous - papery  
 pedicel - a stem carrying a single flower  
 peduncle - the lower part of the inflorescence below the first bud  
 phenology - seasonality, especially flowering or growing cycles  
 phylogenetic - relating to the evolutionary development of a group of organisms  
 phytochemical - any biochemically active compound found in plants  
 plicate - pleated  
 porrect - held forward  
 recurved - bent or curled backward  
 reflexed - bent backward

reniform - kidney-shaped  
 revolute - rolled backward or inward  
 rhombic - diamond-shaped  
 staminode - sterile or abortive stamen; in Cyripedioidea, the flat structure that covers the two fertile anthers  
 stipe - a small stalk  
 sub - prefix meaning nearly or almost as in subpyriform - almost pear-shaped  
 synsepal - partial or complete fusion of two sepals to form a single structure  
 terete - cylindrical or pencil-shaped  
 tetralocular - four-chambered  
 tomentose - covered with densely matted woolly hairs  
 trilobed - having three parts  
 triquetrous - triangular in cross-section  
 truncate - abruptly terminated as if cut off  
 type - specimens on which a description is based  
 viscidium - the sticky pad on the caudicle or stipe of the pollinarium that attaches the pollinarium to a pollinator

# Into Africa, Part 1

Text and photographs by Thomas Mirenda

WHEN IT COMES to orchids, the African continent has been somewhat underrepresented. Sure, Madagascar, as a true botanical hotspot and an island with extreme endemism, boasts an exceptional array of species, but if hard-pressed the average orchidist would have a difficult time coming up with a list of 10 orchids from the continent. This is unfortunate as there is a great variety of impressive species native to Africa and for the species enthusiast, an astounding array of interesting and elegantly lovely botanicals that are starting to trickle into many collections around the world due to the actions of certain intrepid specialist growers such as Cal-Orchid in California, Botanica, Ltd. in Montana and Afri Orchids in South Africa.



Thomas Mirenda

I was thrilled to be invited to judge the Kenya Orchid Society show in Nairobi this past October and got a crash course in African orchids. First of all, let me say that Nairobi is not at all what I was expecting. It is a lush and temperate climate rather similar to Hawaii's Big Island where I currently reside. Many of the same trees and tropical plants grow and thrive luxuriantly.

Beyond this, the show itself was a marvel of fantastically grown plants and innovative and very professional looking displays, not to mention some of the kindest, most generous, knowledgeable and passionate people on earth. The show had a most clever theme: "Vintage" which allowed all the exhibitors to display some of their prized antique collectibles alongside their spectacular orchids. Everything from feathered ladies' hats, to liqueurs and old vinyl recordings, even classic cars were in these eye-catching displays.

But of course, the orchids took center stage. Although there were magnificent specimens from around the world and many popular cattleya, dendrobium, oncidium, phalaenopsis, vanda and lycaste hybrids that kept the displays rather colorful, it was the many subtleties of the local species that really stole my heart. Grown in what is basically their natural habitat, these West African species performed exceptionally well in the show and in peoples gardens I got to visit around Nairobi. Strange and wonderful African representatives



1

of genera such as *Polystachya*, *Calanthe*, *Bulbophyllum* and of course, *Ansellia* were truly a delight to see.

Large specimens of angraecoids such as *Jumellea*, *Diaphananthe*, *Aerangis*, *Angraecum*, *Angraecopsis*, *Rhipidoglossum* and *Tridactyle*, genera we scarcely see in American shows, were proudly exhibited and enjoyed by the visiting public, especially me! Perhaps the highlight though, at a cocktail party a week before the show at the lovely home and garden of Dimitri and Alexandra Kontos, was a specimen of *Rangaeris amaniensis* that was mind-blowingly bloomed. I never imagined this species could be so

[1] An incredible specimen of *Rangaeris amaniensis* growing in the garden of Dimitri and Alexandra Kontos.

[2] This red form of *Polystachya paniculata*, exhibited by Anand Savani, received a Certificate of Cultural Merit from the Kenya Orchid Society judges.

[3] *Tridactyle bicaudata* subsp. *bicaudata* is found from Sierra Leone eastward to Ethiopia and southward into South Africa.

[4] Even classic cars find themselves incorporated into the eye-catching displays at the Kenya Orchid Society annual show.



2



3



4

THOMAS MIRENDA

spectacular. Apparently once common in the local forests, this species has unfortunately been poached extensively and now generally only seen in gardens or inaccessible habitats, despite the efforts of the Kenya Orchid society to reintroduce it locally. This is a great example of a plant,

if seed propagated and mass-produced, would be a fantastic addition to our collections, and a precious legacy of East Africa that belongs to the forests there for perpetuity.

— Tom Mirenda has been working professionally with orchids for over three

decades. He is an AOS accredited judge and is the chairman of the American Orchid Society's Conservation Committee. He recently coauthored *The Book of Orchids: A Life-Size Guide to 600 Species From Around the World* (email: [biophiliak@gmail.com](mailto:biophiliak@gmail.com)).

## All that's new in orchids from the world's oldest authority



*The Orchid Review* is essential reading – it is the world's oldest, most influential orchid magazine. Published by the RHS four times a year, each issue is packed with inspiring articles such as:

- Profiles of orchid genera, species and hybrids
  - Orchids in the wild, and conservation projects
  - The first descriptions of new orchid species
  - RHS awarded orchids, with tips from the growers
  - Orchid advice, the latest news, book reviews & events
- Four issues with the Orchid Hybrid List, UK £34, overseas airmail **£44**  
 • Four issues without Orchid Hybrid List, UK £29, overseas airmail **£37**  
 Subscribe online or by telephone



Quarterly supplements to Sander's List of Orchid Hybrids, supplied by the Royal Horticultural Society as International Cultivar Registration Authority, can be included for a small annual fee.



Sharing the best in Gardening

Website: [www.rhs.org.uk/orchidreview](http://www.rhs.org.uk/orchidreview)

Tel: 00 44 20 7821 3401

Email: [membership@rhs.org.uk](mailto:membership@rhs.org.uk)

# Selecting New Plants

Text by Sue Bottom/Photographs by Terry Bottom

YOU HEAR ALL kinds of suggestions for how to select an orchid to bring home. Buy the largest plant you can afford, only buy blooming plants, buy a blooming plant each month to have flowers year-round, and on and on. There are so many different approaches to buying orchids. Which is best for you?



Sue Bottom

Some orchid growers love species, finding perfection in nature's beauty. Hobbyists and commercial growers line breed: self, sib and outcross species to change flower size, form, stem arrangement and other desirable qualities. Seedlings of species available today are often better, with respect to judging standards, than those found in the wild. Purists, however, believe these line-bred species are more accurately called hybrids.

Technically, hybrids are produced when two different species or hybrids are used to produce seedlings. Each seedling contains a unique combination of genes, so each seedling produced is, to some degree, unique, with variable growth habits and flowers. No one can predict exactly what the flowers on a new hybrid will look like, but experienced hybridizers have a goal for each hybrid and usually provide a range of expectations for seedlings of a new hybrid. Blooming a seedling for the first time is one of the great pleasures of growing orchids.

Sometimes a flower is so extraordinary that it is cloned to produce an exact genetic replica, a mericlone. Mericlones are often given a cultivar name that follows the hybrid name within single quotation marks. Awards to the clone follow the clonal name. Some desirable cultivars may be unavailable or extremely expensive, but a mericlone of that exact plant may be commercially available and relatively inexpensive.

Tetraploids, denoted as 4n on the plant tag, have twice the number of chromosomes than nature intended. Tetraploids are desirable because even though they may grow a little more slowly, the flowers are larger and have more substance and deeper color saturation than their 2n counterparts. Hybridizers use tetraploid parents in their breeding



program for specific purposes. When only one parent is tetraploid, the progeny will have two sets of that parent's genes versus one set from the 2n diploid parent. The tetraploid parent asserts double the influence. When both parents are tetraploid, the offspring will all be tetraploids, and more uniform.

**MATURE PLANTS** New growers are often told to buy blooming-sized plants, because it is easier to keep a mature plant healthy than it is to raise a seedling to blooming size. Plus, you know exactly what to expect when it reblooms next year. This is easier if your new orchid is

- [1] Vandas with their vibrant colors are almost irresistible. The best grown plants have leaves all the way down the stem and lots of thick white roots
- [2] Orchid shows are a great place to find seedlings and blooming-sized plants from a variety of vendors, offering plants not seen in the big box stores.
- [3] Make sure the plants you buy are healthy and well established as well as having beautiful flowers.
- [4] Look for wider, bigger leaves on phalaenopsis, with no signs of wrinkling or dehydration.

## BOTTOM

healthy, particularly if you are just learning how to take care of orchids. Once you have decided on the plant with irresistible flowers, it is time to ignore the flower and inspect the plant to make sure it will not require any special attention in the near term. Be aware that plants in flower as well as seedlings are often ready to be repotted. Repotting is a major expense for commercial growers, so expect many orchids for sale to require repotting within a year.

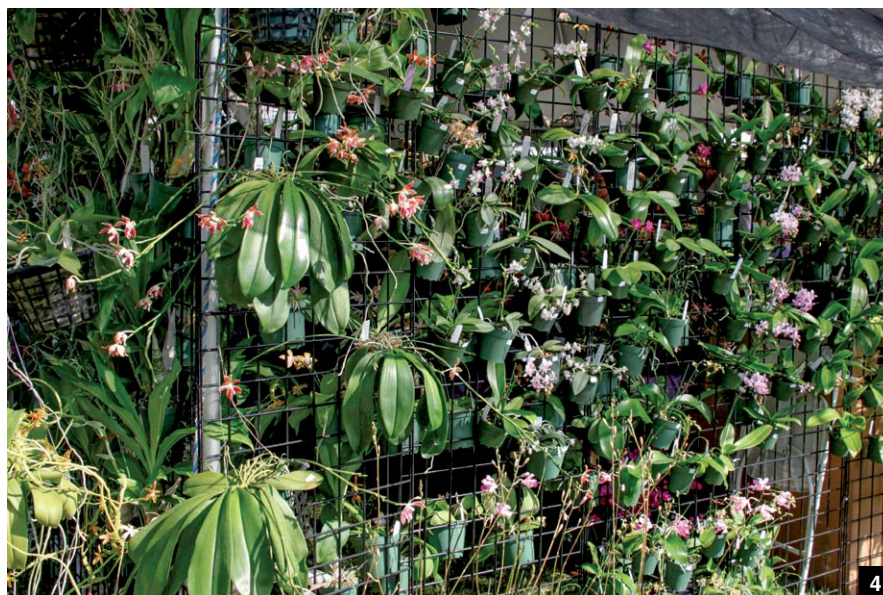
**WELL ROOTED** Your new plant should be established in the pot, with healthy roots. You should be able to lift the plant up by its leaves, pot and all. If the plant is wobbly in the pot, you might suspect it was either recently repotted and the roots have not yet recovered, or the potting mix is starting to break down and the roots are suffocating. A good root system is critical for your plant to thrive and provide you with future blooms. If you decide you want to rehab an ailing plant, accept the possibility that this may push the next blooming date back by a year or two. Many experienced hobbyists repot all orchids they purchase. This ensures that a new plant is in the medium that works best for the grower and eliminates any uncertainty about root health.

**CLEAN AND GREEN LEAVES** Healthy orchid leaves are green, occasionally with purplish freckling, and some have natural silvery markings. Beware of brown and black markings, brown leaf tips, yellow chlorotic spots or soft and sunken areas. These blemishes are danger signs. Leaves should be thick and turgid. Do not buy plants with wilted leaves, which can be a sign of abuse, root damage or disease.

**PLUMP PSEUDOBULBS** The pseudobulbs or canes should be full and hard, without soft spots. On many orchids, including cattleyas, you might notice brown papery sheaths on the outside of the pseudobulb. These are protective tissues that protect emerging growth as it develops. These brown to black sheaths should be dry. If the tissue looks wet, rot could be a problem, so make sure the underlying tissue is hard.

**PLANT TAGS** Make sure there is an identifying plant tag in the pot — one that you can read! That ugly little plant label tells you the plant's name, from which you can learn many things. The plant name includes the type of orchid you have, so you can determine how best to care for it. From a plant name you can find its parents, grandparents, etc. dating back to the early days of orchid hybridizing.

**SEEDLINGS** As you become more



confident in your growing skills, you may find you are attracted to seedlings. They are less expensive, take up less space, and you will be the first to see it bloom, unless it is a mericlone. Some people buy multiples of seedlings of the same hybrid, so they can see how much variation there is in a cross. They keep their favorites and give others to friends or their club's raffle table.

If you are at an orchid show or club meeting, you will often see a whole tray of seedlings offered for sale. Which one should you select? Pick out the one you think best, and then, if the sales booth is not too busy, ask the vendor which one they think you should buy. Then ask why. Some of the interesting insights I have heard follow here.

**STRONG GROWTHS** Find plants with strong new growths or leaves. You

may gravitate to plants with lots of new growths, but a plant with multilead growths may tend to put its energy into vegetative growth rather than blooms. For cattleyas, a better plan is to look for single or double lead growths, where each new growth is substantially larger than the older growth. These vigorous growers mature more quickly and bloom sooner than plants with clusters of small growths.

**HEALTHY RUNTS** Select one of the runts, as long as it looks healthy. It may be one of the slower-growing tetraploids that will have larger flowers and more substance once it finally matures.

**WIDE LEAVES** Look for wide and thick leaves. Greater leaf surface area means these will be able to generate more energy reserves than one with narrow leaves. Wider and thicker leaves

may also suggest a tetraploid. When there is a lot of variation in the leaf morphology, choose a few plants that have different characteristics to see the range of variation that might be exhibited in some of the more complex hybrids.

**UNBLOOMED** Buy one that has not yet bloomed. You might end up with an incredible flower, or a seedling that the grower might have discarded had he seen it bloom. Of course, previously bloomed seedlings can also be a sign of floriferousness or the flowers might all be of uniform good quality. Ask the vendor if he has bloomed any of the plants and what they looked like.

**VENDORS** Get to know your vendors. Some growers have stellar reputations for having healthy, well-grown plants, for making high-quality hybrids or having unusual plants. You will meet them at your local society and at orchid shows. Ask questions when you purchase a plant. When they are not busy, try to get some insight into their hybridizing or growing conditions. Learn the type of orchid in which they specialize, whether they do their own hybridizing and growing or purchase stock for resale. If you find a vendor whose plants grow and bloom well for you, patronize their sales booth. If they also sell on eBay, you can be comfortable making online purchases because you know the quality of their material.

Overseas vendors often bring bare-root plants for sale at orchid shows. These plants are often unusual, tempting the orchid hobbyist to purchase them. They can be a greater growing challenge, having just lost most of their root system. If they are from the Southern Hemisphere and you buy in July, the plant thinks it is winter. It can take a year or two to adjust to seasons in the Northern Hemisphere. Perhaps Southern Hemisphere plants are better purchased in January and February, so they will go through a double summer while they are adapting. This is particularly true of winter-dormant plants such as *Catasetinae*.

My approach to orchid buying these days is simple. Mericlones are bought when young and less expensive, as I know what the flowers will look like. Seedlings of desirable hybrids are bought, often in multiples, and bloomed. Wait for the second bloom before deciding if a plant is a keeper. Form often improves with a little age. Look at the sales booths of all vendors, but normally buy from your favorite vendors — the ones who have a great eye for hybridizing and whose plants have healthy root systems. Always



be on the lookout for some new alley to go down, whether it is trying new genera, collecting different color forms of a favorite species or just love at first sight. Acknowledgments

How can you go wrong when you have Courtney Hackney and Fred Clarke whispering in your ear?

**Additional Reading**

Clarke, F. 2012. Choosing a Healthy Plant. *Orchids* 81(4):200.

Gripp, P. 1965. Brief Look at Polyploidy. *Orchids* 34(2):135-138.

— Sue Bottom started growing orchids in Houston in the mid-1990s after her husband Terry built her first greenhouse. They settled into St. Augustine, Florida, Sue

[5] Imported plants may have to be pampered to recover from the trauma of root loss, treatments required when they enter the US and the radical change in season if from the Southern Hemisphere.

[6] Healthy *catasetums* will have a thick firm pseudobulb that is larger than the older growth, indicating plenty of energy reserves for flowering.

with her orchids and Terry with his camera and are active in the St. Augustine Orchid Society, maintaining the society's website and publishing its monthly newsletter. Sue is also a member of the AOS Editorial Board (sbottom15@gmail.com).



# Philip E. Keenan by David Nixon

His Award and Why You Need to Participate

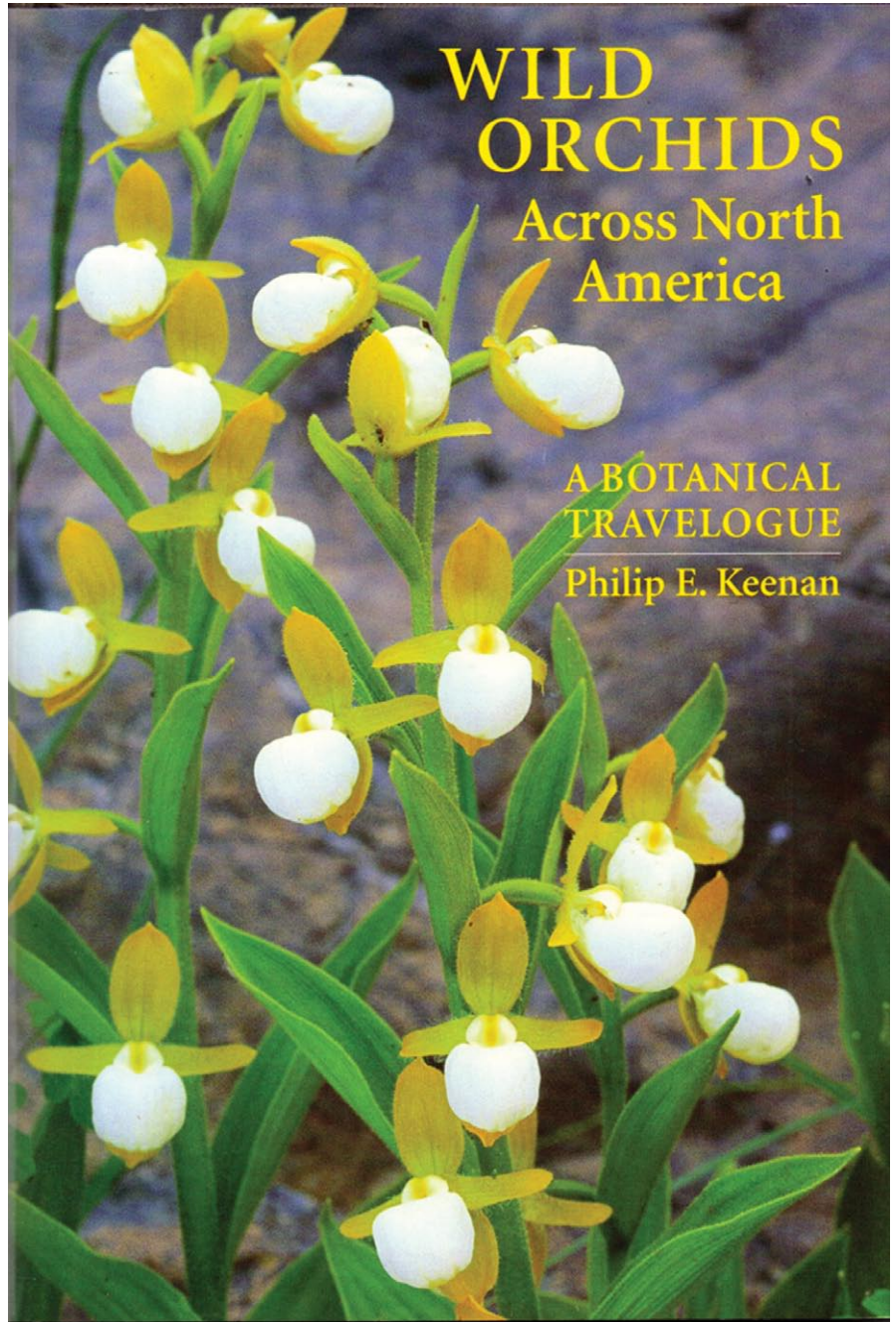
PHILIP KEENAN SPENT a lifetime driving and flying thousands of miles in pursuit of orchids in their native habitats. He was passionate about sharing his adventures of finding wild orchids with the world and an ardent advocate for preserving their natural habitat. He was a founding member of the North American Native Orchid Society and was actively involved in numerous conservation societies.

He contributed multiple articles and hundreds of photographs to *Orchids*, as well as publishing two books, one on orchids and the other on his other passion — native birds of North America. To quote from the flyleaf of his book, *The Wild Orchids of America*, “In describing the world of orchids, Keenan does not confine himself to individual plants but also comments on the wildlife, geology and important natural features associated with orchid habitats.” His book is a chatty account of his field trips in Canada and the United States to document many of our native species, but it also provides inspiration to explore the wealth of orchids and their habitats respectfully.

Why should you be concerned about native orchid conservation? Species orchids are the basis for all orchids that are available to the thousands of orchid growers around the world. Conservation of diverse orchid species and their habitat is paramount if we are to maintain a vibrant genetic pool from which to draw on. Just think of the impact the discovery of *Phragmipedium kovachii* has had.

In recognition of Keenan’s lifetime of work in the conservation field, a trust fund was established many years ago with the AOS to recognize and reward individuals, groups and Affiliated Societies for outstanding work in the field of orchid conservation. The Conservation Committee has a goal to award this every year to deserving individuals or projects; the committee can, in fact, grant two first-place awards (\$500 each) and two runner-up awards (\$250 each) each year.

You can do your part by contacting the Conservation Committee at [orchidconservation@gmail.com](mailto:orchidconservation@gmail.com) to



let them know of any projects, small or large, near or far, that promote orchid conservation or their habitats. It is hoped that we can feature these projects in regular articles in *Orchids* to spread the word, as well as letting the people involved in those projects know that they are important and recognized. Please do your part and become involved and be an advocate of conservation projects you are aware of.

The dust jacket of Philip Keenan’s book.

— David Nixon is the AOS Conservation Committee’s secretary ([conservation\\_committee@aos.org](mailto:conservation_committee@aos.org))

# Growing Orchids in a Retirement

By Alan L. Kaitz, MD/Photographs by Fran Bronzo

NOW THAT YOU are a senior do you think about moving to a retirement community but do not want to give up growing orchids? You do not have to give it up. You can grow orchids in a retirement community. You do need to be healthy enough to be living independently and you will need a spare bedroom for your plants. Read on to see how I did this.

My wife died of Alzheimer's disease in 2013. At age 89 I was not happy about living alone and moved to Carleton-Willard Village in Bedford, Massachusetts in December of 2016. My apartment has a spare 10- × 14.5-ft (3- × 4.4-m) bedroom just like the room where I was growing some orchids under fluorescent lights in our condo.

When I moved into my retirement apartment, I brought the furniture I was using for the orchids in the condo I left. There is a circular 4-ft (1.2-m) table in the center of the room and two 4- × 2-ft (1.2- × 0.6-m) folding tables side-by-side against the rear wall in front of two windows that face east. I have a total of about 60 plants that fit well in this size room. I also have a card table in a corner I use for record keeping, making labels and storing small items.

I quickly discarded the fluorescent plant lights. These bulbs need to be changed yearly, a nuisance for us seniors. I replaced them with the newer LED trough lights for plants. These need to be changed only about every 10 years—made for seniors. Three 4-ft (1.2-m) lights were purchased from the Noribachi Corporation in California, who also gave me helpful advice. An electrician from the retirement community hung them from hooks and chains from the ceiling. The two lights over the folding tables are connected to timers on an electrical strip under the tables. Your electrician will know how to get the power cord from the light over the central table to an on-off accessible control box such as my Intermatic 24-hour dial control switch Model T101.

These newer LED plant lights do not give off much heat, are energy saving, and the orchids love them. They are set to go on at 7 am and off at 7 pm.

For humidity control I use an evaporative humidifier set at a relative humidity of 60 percent. Cool mist humidifiers are not recommended, as the



- [1] Professionally installed central timer used to turn growing lights on and off at preset times.
- [2] Spare closet used to store growing supplies.
- [3] Author's desk provides a well-organized place to maintain records.
- [4] Portable humidifier helps to keep the atmosphere in the growing area humid.
- [5] Tables along the rear wall of the room provide ample growing space for the author's collection of plants.

# Community

moisture on the orchids dries and leaves a whitish residue. The water reservoir is brought to the sink for filling and each year seems to get heavier. Consider getting the newer easy-fill humidifiers where water from a pitcher is poured into an opening on top of the cooler. Keep a monitor in the room that displays temperature and humidity level and has a button to press to light up the screen when the room is dark. On each folding table are humidity trays, two 26 × 10 inch (66 × 25.4 cm) and one 14 × 10 inch (35.6 × 25.4 cm). These are refilled once a week when I remove the plants to water them.

Controlling the temperature in my orchid room was easy, as my apartment is in a building that does not have central temperature control; each room has a heater and air conditioner. I set the air conditioner to 65 F (18.3 C) at 7 or 8 pm and shut off at 7 or 8 am. An oscillating electric heater supplements the room heater and maintains the day temperature at 75–78 F (24–25.6 C).

If your apartment has central heating and air conditioning controls, temperature regulation in the orchid room becomes more difficult. You do not want to lower the temperature to 65 F (18.3 C) throughout your apartment at night. Temperatures below 68 F (20 C) may cause hypothermia in seniors according to the National Institutes of Health. Instead, leave the windows open at night in the orchid room and adjust the opening to maintain the nighttime temperature. If you live in a warm climate you may want to check with your facilities department to see if an air conditioner can be installed in the orchid room. An oscillating electric heater in the orchid room will easily keep the daytime temperature at 75–78 F (24–25.6 C). Orchids do not like stale air so I put an oscillating fan on the card table that runs continuously.

Most spare rooms have a closet like mine. This is a great place to store pots, potting medium, and a bucket to fill the humidity trays, and there is room for the cart on wheels.

My orchids are watered weekly, those on the center table on Saturday mornings and those on the folding tables on Sunday morning. Indispensable is a cart on wheels to bring the orchids to the kitchen sink. I bought my cart at Bed, Bath & Beyond and



6



7

it had to be assembled. I put it together myself about 6 years ago. Most retirement places have a facilities staff that is glad to do these tasks for residents without charge. Put several baking pans with sides on the cart to hold dripping water from the pots after watering and to help keep them from falling over. Take one plant at a time off the cart to the sink for inspection, watering, and fertilizing.

[6] The author at the sink. Watering time is a great opportunity to closely examine each plant thereby staying on top of any problems that might arise.

[7] The central table provides space for an ever-changing display of flowering plants.

For inspection, I bring my portable flexible lamp from the desk in the orchid room to the sink counter to get a good light on the plants. If I find mealy bugs I spray them with 70% isopropyl alcohol and remove and kill any large bugs. The only insecticide that I use is a miticide for Phalaenopsis mites, Bayers 3-1. Mites feed on the chlorophyll in the leaves and leave silvery spots that never go away. I take the plant outdoors to spray and I use the miticide on new phalaenopsis to kill any possible mites, but I do not believe it has any prophylactic value.

I water my plants using the spray nozzle in the sink and adjust the water temperature to be comfortable on my hand. I let the water on the surface drip through and repeat six times to wet all the roots. After watering I fertilize with a solution of MSU fertilizer every other week, alternating with a CalMag solution the opposite week.

Let the water just about stop dripping out of the pot and put it back in the pan on the cart.

Another comfort aid for seniors is a rotating bar stool. I use it when I am watering. While sitting on the stool I can easily reach each plant on the cart and inspect, water and fertilize. Without this bar stool prolonged standing causes my back to ache. The bar stool also lets me sit while repotting plants on top of the cart without any back strain. Keep the bar stool in a closet near where you will be watering, as it is clumsy to drag around.

I put orchids in flower or in spike on the central table. I like to print labels for plants in flower just as you see in show displays. I use the label maker that my Massachusetts Orchid Society (MOS) uses, Brother P-touch PT-D600 with white on black tape. Place the printed tapes on pieces of black construction paper 3½ × 2 inch (8.9 × 5 cm) for most labels. Plant holders for printed labels come in 18-inch (45.7 cm) and 9-inch (22.9-cm) lengths and are sold in hardware and flower shops.

Most residents in a retirement community love to see orchids in flower. Some come to see my orchids on display and ask questions about growing them. I leave a nice specimen on the reception desk in the lobby and occasionally set up a display of them on Main Street, the corridor to the main building, for a week. Residents often ask me questions about what to do with their phalaenopsis plant after it flowers. If the roots look good I refer them to a local florist who will repot it for a nominal fee.



I like to plan for the future. If I have an injury or illness and cannot take care of my plants for a couple of weeks, I have arranged for one of the companions here at my retirement community to water them and take care of the humidifier and will show her how to do this.

Finally it is inevitable that I will pass away someday. I have made arrangements for my plants to be donated to MOS. One of the trustees lives near me and has been to my orchid room. He will supervise getting the plants to an MOS meeting and carry out my wish that MOS members receive them, with beginners getting first choice. The LED lights and all related orchid items in the orchid room will also be donated to MOS for an auction, with the proceeds going to the society.

If you do decide to move to a retirement community and continue growing orchids you might consider a

[8] The author (left) and Lois Young, Director of Assisted Living, admiring a display of the author's orchids.

similar plan with your local orchid society for when your time runs out. Please feel free to contact me by email if you have any questions.

— Alan L. Kaitz, MD, 108 Badger Terrace, Bedford, MA 01730 (email: alan.kaitz@gmail.com).

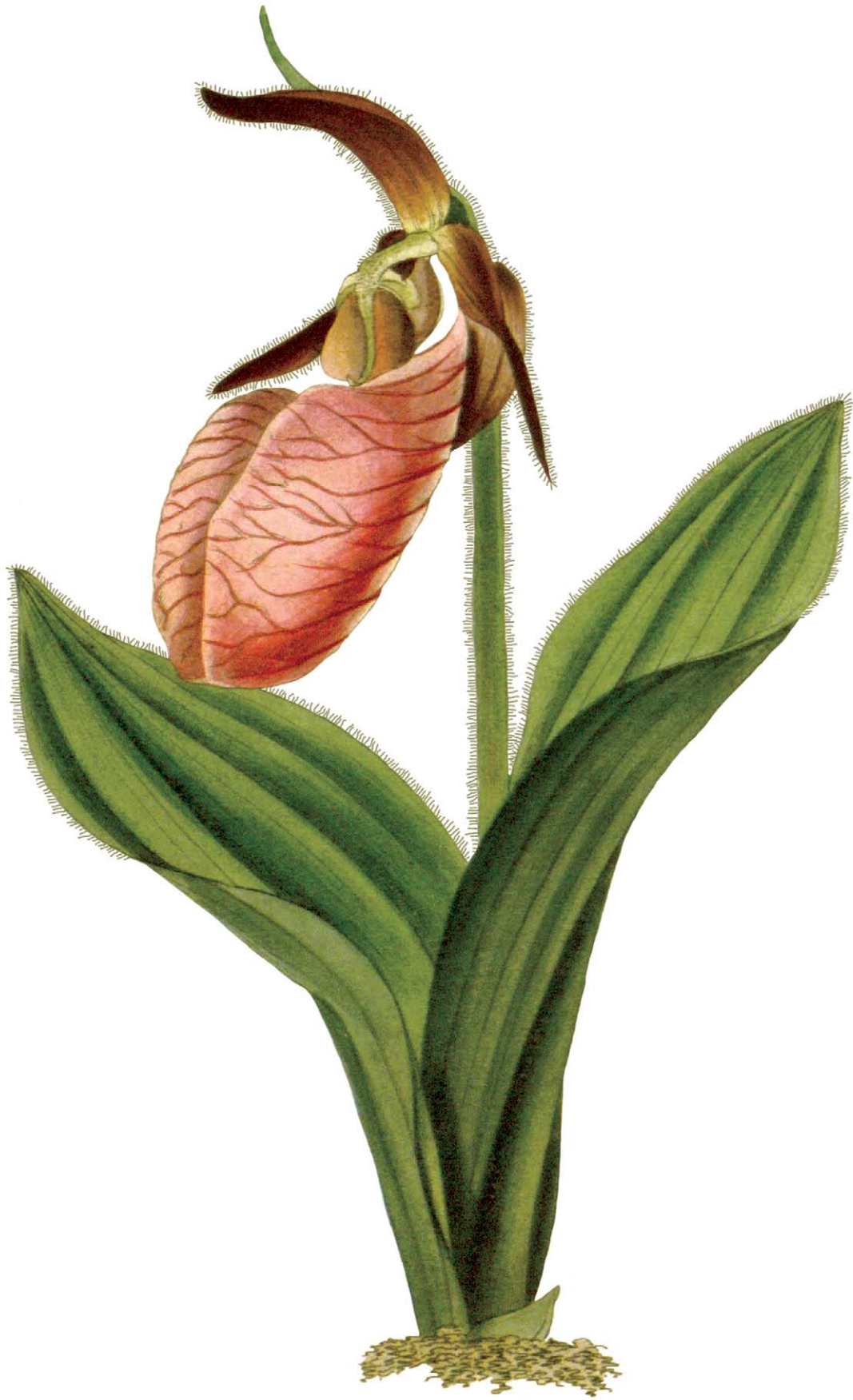
**TIOS 2020**  
**TAIWAN INTERNATIONAL**  
**ORCHID SHOW**

*Enrich100*

3.7 (FRI.) > 3.16

WEBSITE: [WWW.TIOSTW.COM](http://WWW.TIOSTW.COM)  
VENUE : TAIWAN ORCHID PLANTATION,  
TAINAN, TAIWAN

EMAIL : [tioscontact@gmail.com](mailto:tioscontact@gmail.com)  
TEL : +886-6-6830304  
FAX : +886-6-6830625



**Cypripedium humile.**

*G. Loddiges, del.*

# *Cypripedium* by Peggy Alrich and Wesley Higgins of North America (Canada, United States and Mexico)



# CYPRIPEDIUM

Linnaeus

*Sp. Pl.* (Linnaeus), ed. 1, 2:951 (1753).

**ETYMOLOGY** From the Greek for Aphrodite (*kypris*) and slipper or sandal (*pedilon*); it literally means Aphrodite's slipper.

Or from Greek mythology: Aphrodite (Venus) was a Greek goddess of love, born on the sacred island of Cyprus (located in the eastern Mediterranean Sea).

The lady's slippers number about 64 species and natural hybrids that are widespread in seasonally dry to wet, middle to upper elevation, bogs, marshes, scrub and montane forests. These uncommon, terrestrial species are found from Norway to eastern Russia (Amur to Primorye), Britain to Turkey, and Ukraine to Japan, Korea, northern Pakistan, Bhutan, Nepal to Myanmar

(the largest diversity throughout China), the United States and Canada, with a few species extending into Mexico and Guatemala. There are 12 species, three natural hybrids, and four varieties of *Cypripedium* native to the United States.

These erect perennial herbs have short to elongate fleshy rhizomes forming clumps with roots closely to widely spaced. The plants have short to long, smooth to often hairy, unbranched stems, each with prominently veined, deciduous leaves; alternating, in a single pair, or subopposite near the midpoint of the stem, ascending to spreading, plicate, with bases sheathing the stems. The slender, solitary to few-flowered inflorescence has yellow-green, white, deep maroon-purple to pink resupinate flowers. The erect dorsal sepal has an entire or wavy margin, the lateral sepals are united forming the synsepal (held behind the lip), and the spreading,

narrow petals are usually more or less twisted.

The inflated sac-shaped lip with an adaxial orifice, colored differently from the other segments, has an upper inrolled margin and is somewhat grooved along the veins. The flowers have a short, stalked column, loose granular pollen in two lateral stamens, dorsal anther a large subapical staminode. Stigma, bi- to trilobed; capsules ellipsoid to oblong-ellipsoid.

**NOTE** This genus name was originally used by early authors to include all species of orchids that had a slipper-shaped lip; these included species now considered distinct and included in *Paphiopedilum*, *Phragmipedium* and *Selenipedium*.

**CULTURE** Many of the species are quite hardy and should be planted in semishade on damp acid soils rich in decaying leaf litter. Others are less hardy and need to be planted in damp...

Plate 1: *Cypripedium acaule* as *Cypripedium humile*, *Botanical Cabinet*, 2:t.130 (1827).



## CYPRIPEDIUM ACAULE

Aiton, *Hortus Kew* 3:303 (1789).

Central and eastern Canada to northcentral and eastern United States.

SYNONYM *Fissipes acaulis* (Aiton) Small (*Cypripedium acaule* Aiton), *Flora of the Southeastern United States*, 311 (1903).

ETYMOLOGY From the Greek (*a*) for without and Latin (*caulis*) stalk or stem, referring to the leafless stem that arises between a pair of basal leaves.

*Cypripedium acaule* was first described in 1789 by Scottish botanist William Aiton. It is commonly referred to as the pink lady's slipper, stemless lady's slipper or moccasin flower. The pink lady's slipper is the provincial flower of Prince Edward Island, Canada and the state wildflower of New Hampshire, United States.

*Cypripedium acaule* has two basal, pleated leaves from which emerge a hairy flowering stem carrying but a single flower. The sepals are usually yellow-green with purplish veins. The pouchlike lip is mauve to magenta and has a split in the front instead of the usual round opening. The hairy edges fold inward. The ovate staminode is greenish to purple and is quite sticky and slightly grooved.

The plants usually grow in mixed hardwood coniferous forests of pine and hemlock on rocky or mossy slopes in semiopen or in deep humus and acidic but well-drained soil under birch and other deciduous forests.

Flowering begins in April in the south and through July in the north.

Plate: *Cypripedium acaule*  
*Beautiful Wild Flowers of America*, (1882).



## CYPRIPEDIUM ARIETINUM

R. Brown, *Hortus Kewensis* 5:222 (1813).

Central and eastern Canada to northeastern United States.

SYNONYM *Criosanthes arietina* (R.Brown) House (*Cypripedium arietinum* R. Brown), *Bull. Torrey Bot. Club* 32:374 (1905).

ETYMOLOGY From the Latin (*arietinus*) for of a ram, referring to the flower's resemblance to the head of a ram complete with horns.

*Cypripedium arietinum*, the ram's head lady's slipper, is a rare orchid that grows in lightly shaded areas with calcareous soils. It is characteristic of the limestone plain around the Great Lakes in North America, as well as New England. In Canada, it is found from Quebec to Saskatchewan, plus an isolated population in Nova Scotia, where it grows on gypsum-based soils, 206 miles (330 km) away from the nearest population in Maine.

*Cypripedium arietinum* is a small plant with usually a few plicate leaves that spiral around the slender stem. The species is distinguished by the single flower on each flowering stem that has divided lateral sepals. The distinctive pouch is shaped like an inverted, hairy, conical hat covered with crimson varicose venation and white at the lip. The staminode is greenish.

The plants grow in cool, moist woodlands and coniferous forests among tamaracks and spruce or cedar with a preference for moist, mossy bogs. However, it also can be found in shady roadside ditches.


Flowers May to June.

Plate: *Cypripedium arietinum* *Flore des Serres et de Jardins de l'Europe*, 20: t.2095 (1874).

CYPRIPEDIUM ARIETINUM Brown.  
2. Amér. Nord Plein air.







7188.

**CYPRIPEDIUM CALIFORNICUM**

A.Gray, *Proceedings of the American Academy of Arts and Sciences* 7:389 (1868).

Coastal southwestern Oregon to northern California.

ETYMOLOGY Named for the state of California where the type species was first collected.


*Cypripedium californicum* often grows in very large clumps and each long stem can bear up to 21 flowers. This hairy plant can grow to be up to over 39 inches (1 m) in height and has alternate, plicate leaves the length of the stem. The sepals and petals tend to be greenish brown and the small pouch is pure white with occasional pink spots. The margins of the lip are inverted. The arching concave staminode is white with green markings.


The species has a very restricted range and can only be found in the mountains of southwestern Oregon (Kalmiopsis Wilderness) and northern California. It prefers the margins of woodland streams in open coniferous forests.

*Cypripedium californicum* grows in the damp understory of coniferous forests near streams, and is often found growing near the rare California pitcher plant (*Darlingtonia californica*).

Flowers May through July.

Plate: *Cypripedium californicum*  
*Botanical Magazine*, 117: t.7188 (1891).





5855.

**CYPRIPEDIUM CANADIDUM**

Muhlenberg ex Willdenow, *Species Plantarum*, ed. 4, 4:142 (1805).

Southern Canada to north-central and eastern United States.


ETYMOLOGY From the Latin (*candidus*) for shining white referring to the bright, white lip of the species.

*Cypripedium candidum*, the white lady's slipper, was originally collected by Muhlenberg around Lancaster, Pennsylvania. This small-sized species occurs in Ontario, Canada and in the eastern and central United States from New York west to North Dakota and from Minnesota south to Missouri and Kentucky. This is a prominent species of the Midwestern National Tallgrass Prairie in Illinois. The sparsely hairy plants rise quickly in the early spring, with the flowers unfolding before the dark green leaves have completely unwrapped from around the stout stem. The petals are not as strongly twisted as they are on this plant's yellow relatives. The pouchlike lip is glossy white with a few specks of purple. The staminode is a bright golden yellow with a few purplish spots.

*Cypripedium candidum* grows in prairies where there is moisture but full sunlight. It can be found in limestone barrens and on forest edges. Its favorite haunt is along railroad tracks and it is occasionally locally abundant when conditions are most favorable.

Flowers from April into June.

Plate: *Cypripedium candidum*  
*Botanical Magazine*, 96: t.5855 (1870).



7275

## CYPRIPEDIUM FASCICULATUM

Kellogg, *Pacific Rural Press* 1879:354 (1879).

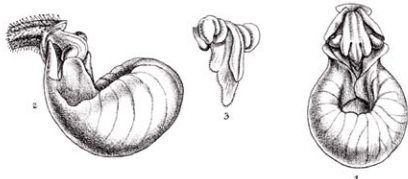
Western and west-central United States (California to Washington and Idaho to Wyoming).

SYNONYM *Cypripedium pusillum* Rolfe, *Bull. Misc. Inform. Kew* 1892:211 (1892).

ETYMOLOGY From the Latin (*fasciculus*) for little bundle, referring to the clustered inflorescence.

*Cypripedium fasciculatum*, clustered lady's slipper, occurs in eight western states from the Pacific Northwest to California, north to Montana and east to Colorado and Wyoming. *Cypripedium fasciculatum* is a small, hairy plant with two broad, opposing, pleated leaves. The short flowering stem may bear 1–9 drab-colored, purplish flowers that droop. The heavily veined sepals are purplish brown. The roundish lip is streaked or mottled with purple, especially around the aperture's inverted margins. The staminode is a pale yellow–green. The small flower is pollinated by a tiny wasp. When the flower goes to seed, a capsule forms and the stem becomes erect. The plants prefer moist to dry coniferous forests and thickets in moderately high elevations where winters are not too severe.

Flowers April through July.



M.S. del. J.N. Pritch. lith.

L. Reeve & Co. London.

Vincent Brooks Day & Son. Imp.

Plate: *Cypripedium fasciculatum*  
*Botanical Magazine*,  
119: t.7275 (1893).



## CYPRIPEDIUM GUTTATUM

Swartz, *Kongl. Vetensk. Acad. Nya Handl.* 21:251 (1800).

European Russia to Korea, Japan (Honshu) and Alaska (United States) to the Yukon (Canada).

SYNONYM *Cypripedium orientale* Sprengle, *Syst. Veg.* 3:746 (1826).

ETYMOLOGY From the Latin (*guttatus*) for speckled or spotted, referring to the purple spots on the flowers' parts.

*Cypripedium guttatum*, the spotted lady's slipper, is found on three continents. It is native to Belarus, Russia (European Russia, Siberia and Russian Far East) as well as China, Korea, Mongolia, Bhutan, Alaska (including the Aleutians) and northern Canada (Yukon and Northwest Territories).

*Cypripedium guttatum* has two clasping leaves and a stem that bears a single flower. The distinctive flower is purple–brown and white. The lip is pitcher-shaped with an out-turned mouth and is magenta–purple with white splotches, as are the petals. The broad dorsal sepal tilted over the lip is white with a purple border and veined with magenta on its underside. The lateral sepals are united behind the lip. The staminode is ovate, finely grooved and yellow with purple spots. It is found flowering in the spring in cold northern woods and meadows and prefers moist to dry open deciduous and spruce forest, tundra and open meadows. Can be locally abundant, often forming large colonies.

Flowers June through July.



*Cypripedium guttatum*

Plate: *Cypripedium guttatum*  
*Revue Horticole*, 5: t.11 (1851).





## CYPRIPEDIUM KENTUCKIENSE

C.F. Reed, *Phytologia* 48:426 (1981).

Oklahoma to central and eastern United States (Texas to Virginia).

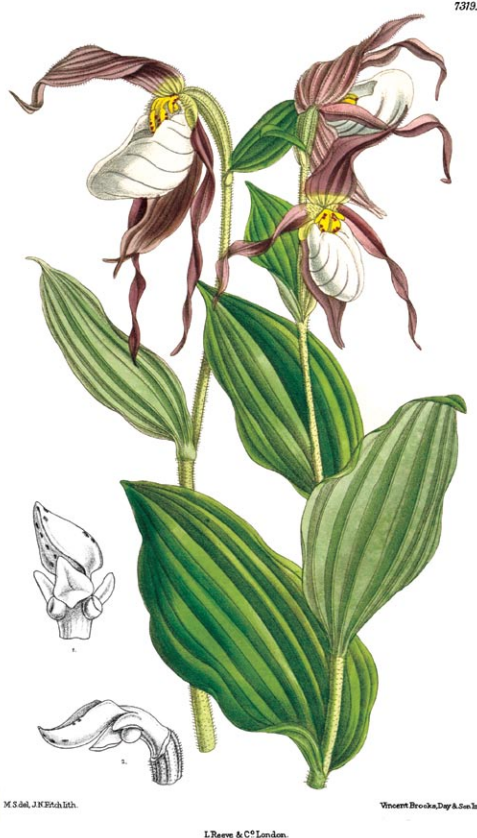
**ETYMOLOGY** Honoring the state of Kentucky located in the east south-central region of the United States.

*Cypripedium kentuckiense*, Kentucky lady's slipper or southern lady's slipper, was originally thought to be an aberrant form of *Cypripedium parviflorum* var. *pubescens*. But the morphology of *Cyp. kentuckiense* suggests that it is a species of its own. However, molecular evidence suggests that it is more closely related to *Cypripedium parviflorum* var. *parviflorum* than it is to *Cypripedium parviflorum* var. *pubescens*. *Cypripedium kentuckiense* has the largest flower in the genus *Cypripedium*. The sepals and petals are greenish, striped and mottled with purple, and the very large lip, or pouch, is a creamy ivory or pale yellow. The tall plant has bractlike leaves and each plant is usually single-flowered.

*Cypripedium kentuckiense* is found in a large swath through the central portion of the United States including Texas, Mississippi, Kentucky, Ohio, Missouri, Arkansas, Oklahoma, Louisiana and Tennessee, and there is a small patch in Lancaster County, Virginia. However, the range of this species is not continuous; it mostly consists of relatively isolated patches. It grows in southern hardwood forests in damp, low-lying areas near springs and deep ravines, and in flood plains in acidic, sandy and well-drained sandstone soils.

Flowers in late May.

Photo Credit: Alan Cressler



## CYPRIPEDIUM MONTANUM

Douglas ex Lindley, *Genera and Species of Orchidaceous Plants* 528 (1840).

Alaska to California and Montana, United States and southwestern Canada (British Columbia).

**ETYMOLOGY** From the Latin (*montanus*) "of or relating to mountains," referring to the mountainous habitat of the species.

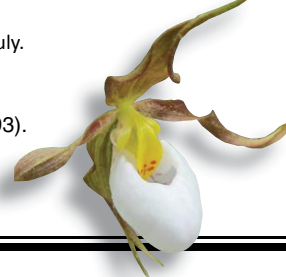
*Cypripedium montanum* is commonly known as large lady's slipper, mountain lady's slipper, white lady's slipper as well as moccasin flower in widely separated populations.

*Cypripedium montanum* grows individually or in clumps. The hairy plant's stem has a few leaves and at maturity bears just a few flowers. The green sepals and petals are deeply suffused magenta-brown. The white lip is suffused and veined with magenta and spotted purple on the inside. The staminode is yellow with purple spots. Pollinators are small native black bees.

*Cypripedium montanum*, as its name suggests, is a montane species, growing in a variety of canopy conditions and soils. Its primary habitat is semishady-to-open-edge forests and it can be found under or near coniferous trees or hardwoods such as aspen or dogwood. It tolerates drier conditions than many of the other species in the genus. Its association with Douglas fir and shrubs such as ninebark and snowberry indicates it has existed for centuries in a habitat shaped by wildfire.

Flowers from May through July.

Plate: *Cypripedium montanum*  
*Botanical Magazine*, 119: t.7319 (1893).



## CYPRIPEDIUM PARVIFLORUM



Salisbury, *Transactions of the Linnean Society of London* 1:77 (1791).

Canada and northern Alaska to northern Georgia (United States).

SYNONYM *Criosanthes parviflora* (Salisbury) Rafesquine, *Fl. Tellur.* 4:46 (1838).

ETYMOLOGY From the Latin (*parvus*) for small and flower (*flos*), referring to the small flowers of the typical variety.

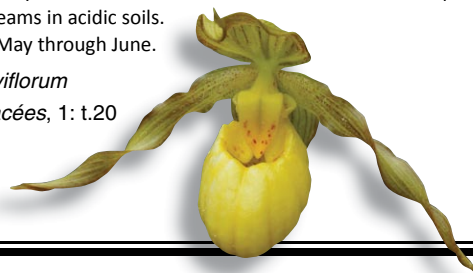
*Cyripedium parviflorum*, commonly known as yellow lady's slipper or moccasin flower, is a lady's slipper orchid native to North America. It is widespread, ranging from Alaska south to Arizona and Georgia. Occurrence is infrequent in far western and southwestern United States.

Both varieties of *Cyripedium parviflorum* grow in multistemmed clumps. Plants at maturity bear one or two flowers with a few leaves on each stem. The sepals and petals range from pale to deep magenta–brown, and the lip is intense yellow with reddish spotty venation in its interior. The staminode is bluntly triangular and deep yellow, with a few purple spots. *Cyripedium parviflorum* var. *parviflorum* tends to be smaller in size and less hairy than var. *pubescens*.

*Cyripedium parviflorum* grows in a variety of habitats from shady, damp forest understory of mixed deciduous and coniferous forests to open meadows and along streams in acidic soils.

Flowers May through June.

Plate: *Cyripedium parviflorum*  
(as *flavescens*) *Les Liliacées*, 1: t.20  
(1805).



*Cyripedium Flavescens*

*Sabot à fleur jaune!*

## CYPRIPEDIUM PASSERINUM



Richardson, *Botanical Appendix* ed. 2:34 (1823).

Northern to eastern Canada and Alaska to Montana (United States).

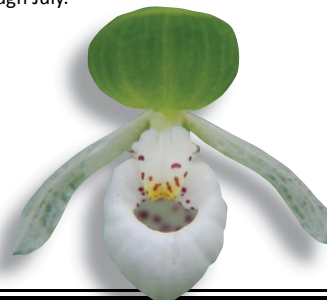
ETYMOLOGY From the Latin (*passerinus*) for relating to a sparrow, as the lip resembles a sparrow's egg.

*Cyripedium passerinum*, commonly known as the sparrow's egg lady slipper, is found throughout the interior of Alaska, across Canada to Hudson Bay and south to northern Montana. The small plant is quite hairy, produces one or two small flowers on a leafy stem and has pleated, light green leaves subtending the stem. The little white flower has straight petals and a green, concave dorsal sepal covering the egg-shaped lip that has enfolded margins. Tiny purple spots appear on the lip's base, orifice and interior wall. The staminode is white with a yellow tip and is often spotted purple. The stigma and anther develop in such a way that they are in contact with each other.

*Cyripedium passerinum*, unlike other lady's slippers, is self-fertilizing and does not require a pollinator for reproduction. This orchid grows in moist pine forests, mixed woodlands, sphagnum bogs, thickets, stream banks and lake margins.

Flowers June through July.

Plate: *Cyripedium passerinum*  
*North American Wild Flowers*, 2: t.91  
(1925).



1666.



## CYPRIPEDIUM REGINAE

Walter, *Flora Caroliniana* 222 (1788).

Central and eastern Canada to northcentral to eastern United States.

SYNONYM *Calceolus reginae* (Walter) Nieuwl. *Am. Midl. Naturalist* 3:117 (1913).

ETYMOLOGY From the Latin (*regina*) for queen. Refers to the regal quality of the flower.

*Cypripedium reginae* is known as the showy lady's slipper, pink-and-white lady's slipper or queen's lady's slipper. This rare lady's slipper orchid is native to northern North America, south central Canada, Manitoba to Newfoundland, and it is the state flower of Minnesota. Although never common, this plant has vanished from much of its historical range because of habitat loss. *Cypripedium reginae* occurs from the northeastern seaboard, west to Minnesota and south to Arkansas in widely scattered colonies. Throughout its entire range, it is listed as threatened or endangered in almost every state where it still exists.

*Cypripedium reginae* is a large, multistemmed plant and has a few leaves per stem. The robust, mature plant will have one to three large, hairy flowers. The flower has a rosy lip (color is variable and often streaked with white), with mostly white sepals and oblong petals. The staminode is white with purple spots. *Cypripedium reginae* grows in hummocky, damp deciduous forests and on rocky outcrops with rich organic soil that may be alkaline or limestone based, and requires well-drained soil.

Flowers late May through June



Plate: *Cypripedium reginae*  
(as *spectabile*) *Botanical Magazine*,  
20:t.1666 (1835).

Miss Drake del. Del by J. Redgway. 189. Remodelled Apr. 1, 1834. J. Walp. sc.

Plate 6



## CYPRIPEDIUM YATABEANUM

Makino, *Botanical Magazine (Tokyo)* 13:91 (1899).

Eastern Russia (Kamchatka to Kruil Islands), northern Japan, and the Aleutian Islands to Alaska (United States).

SYNONYM *Cypripedium guttatum* var. *yatabeanum* (Makino) Pfitzer in Engler's *Pflanzenr.* IV 50:33 (1903).

ETYMOLOGY Named in honor of Riokichi Yatabe (1851–1899) who was the first Japanese student to receive a Bachelor of Science at Cornell that went on to become the curator of the botanic garden at the University of Tokyo. He was active from the closing days of the Tokugawa regime to the Meiji period.

*Cypripedium yatabeanum*, known as the spotted lady slipper or palomino lady's slipper, is a native to Alaska (including the Aleutian Islands), far eastern Russia (Kamchatka and the Kuril Islands) and northern Japan. This slipper can be distinguished from the closely related *Cyp. guttatum* by its yellow-green flower color and its narrower, longer lip. It grows in mesic tundra, swales, marsh borders, hillsides, and sand dune beach meadows, found on the Alaska Peninsula and in coastal southcentral Alaskan bogs. This erect plant has two leaves on the middle half of stem that are wide-spreading. Flowers are solitary; sepals white to yellowish or greenish with brownish or tan markings; petals spreading, same color as the sepals (constricted near the middle), flat, much shorter than lip, with wavy margins, lip similarly colored and oblong staminode is yellow.

Flowers from June to August.

Plate: *Cypripedium guttatum*  
var. *yatabeanum*

*Wild Orchid of Japan in colour*, t.6 (1971).



キバメノアツモリソウ  
Kibananoatsumorisô

# THE OTHER CYPRIPEDIUMS

## *Cypripedium konzattianum*

R. González and Lizb. Hernández,  
*Orquídeas del Occidente de México* 1:18 (2010).  
Southwestern Mexico (Colima).

**ETYMOLOGY** Named for Cassiano Konzatti (1862–1951) an Italian-born Mexican botanist, pteridologist, director of the Oaxaca Botanical Garden and author of *Flora Taxonómica Mexicana*.

*Cypripedium konzattianum* inhabits pine–oak forest in soils of tectonic origin of southwestern Mexico. The erect, hairy plant has a few, plicate, hairy leaves clasping the slender stem. The few-flowered inflorescence has short-lived, pale-yellow flowers, the lips of which have two shallow, concave auricles. The soft, forward-bent, smooth-textured, small conical lip is adorned with red spots or blotches. The flowers have a faint fragrance that usually appears at sunset.

Flowers in August.

## *Cypripedium dickinsonianum*

Hågsater,  
*Orquídea (Mexico City)* n.s. 9:209 (1984).  
Mexico (southern Chiapas) to Guatemala.

**ETYMOLOGY** Named for Stirling Dickinson (1909–1998), an American-born artist who spent much of his life in Guanajuato, Mexico.

*Cypripedium dickinsonianum* is a small, hairy plant with very small, equally hairy, bright yellow flowers, only a few per shoot. The dorsal sepal has a length of less than  $\frac{3}{4}$  of an inch (2 cm) and the slender petals droop over the lip. The long, slender lip has an elongated shape and is less bloated than with the other species and is sprinkled with a few red spots. The equally bright yellow staminode is wider than it is long. The species is self-pollinating.

*Cypripedium dickinsonianum* often colonizes pine–oak–juniper forests and then mostly open, only slightly difficult places among pasture grass. The species is found at middle elevations.

Flowers in June through August.

## *Cypripedium gomezianum*

R. González and Lizb. Hernández,  
*Orquídeas del Occidente de México*  
1:14 (2010).

Southwestern Mexico (Colima).

**ETYMOLOGY** Named for Francisco Medina Gómez (1954–) director of the State Council of Sciences and Technology in Guadalajara, Jalisco, México.

*Cypripedium gomezianum* is a small, hairy plant with very small, equally hairy, bright yellow flowers, only a few per shoot. The tiny, slender plants have a dorsal sepal with a length of less than  $\frac{3}{4}$  inch (2 cm) and the slender petals droop over the lip. The long, slender lip has an

elongated shape, is less bloated than the other species and is sprinkled with a few red spots. The equally bright yellow staminode is wider than long.

*Cypripedium gomezianum* colonizes pine–oak–juniper forests and grow in mostly open, slightly difficult places among pasture grass. The species is self-pollinating and occurs at middle elevation.

Flowers in June through August.

## *Cypripedium irapeanum*

La Lexarza, *Novorum Vegetabilium Descriptiones*, 2(Orchid. Opusc.):10 (1825).  
Mexico (Durango to Chiapas) to Honduras.

**ETYMOLOGY** Named for the town (*Irapana*) in the Mexican state of Michoacán.

*Cypripedium irapeanum*, the pelican orchid, is found from central Mexico south to Guatemala and Honduras in mixed pine–oak forests on well-drained limestone slopes and in areas with volcanic-clay soils that are rich in metals. It is often found growing in very large groups. The tall, hairy plant has clasping narrow leaves on a single stem. The bright yellow flowers open from bottom to top in a raceme of one to eight flowers. The balloon-shaped lip has a fine net pattern and an open bowl with an enrolled margin. There are purple-brown spots toward the rear of the bowl. They plants propagate both by rhizomes and from many minute seeds that are propelled from a capsule that erupts from the inferior ovary. Some people have reported a contact dermatitis after handling these plants, and they are extremely difficult to cultivate, as they rely on a symbiotic fungus for their nutrients.

Flowers early June to late July.

## *Cypripedium luzmarianum*

R. González and R. Ramírez, *Boletín del Instituto de Botánica, Universidad de Guadalajara*  
1(2):64 (1992).

South central Mexico (Jalisco, Michoacán).

**ETYMOLOGY** Named for Luz María Villarreal de Puga (1913–2013), a Mexican botanist and teacher at the University of Guadalajara.

*Cypripedium luzmarianum* is a multistemmed plant originating in middle-elevation forests of the Sierra del Alo (part of the Sierra Madre del Sur) in Jalisco and Michoacán. Closer scrutiny and molecular work suggests that the isolated northern (western) and southern (eastern) populations of this orchid do indeed represent different taxa. The plant grows in small, dense clumps at the base of deciduous trees. The equally hairy, plicate leaves clasp the slender, erect stem. The small pale yellow flower has an elliptical, smooth-textured lip, and the short,

yellowish staminode ends abruptly in a small distinct point. The flowers have a faint fragrance of lemons.

Flowers in June.

## *Cypripedium molle*

Lindley, *Plantas Hartwegianas imprimis Mexicanas* 72 (1840).

South central Mexico (Puebla, Oaxaca).

**ETYMOLOGY** From the Latin (*mollis*) for soft, referring to the texture of the plant.

*Cypripedium molle* is only found in very restricted soil types rich in iron and aluminum in open, sunny, middle-elevation oak forests of Oaxaca and Puebla. This erect, multiple-stemmed, cool- to cold-growing plant is widely scattered in areas throughout the border regions of both states. It is nearly impossible to grow and is a very rare species. The slender stems are subtended by a few basal, overlapping sheaths with the few leaves spread in a spiral all along the stem. The concave, narrow, green leaves are conspicuously nerved and densely hairy beneath. The erect, lax, few-flowered inflorescence has pale yellow flowers with a few opening at once. The oblong lip is a slightly darker yellow than that of the sepals and petals. The staminode is yellow.

Flowers June through August.

## *Cypripedium susanae*

R. González and Lizb. Hernández,  
*Orquídeas del Occidente de México* 1:7 (2010).  
West central Mexico (Nayarit).

**ETYMOLOGY** Named for Susana Ibarra, a Mexican orchidologist who first collected the species.

*Cypripedium susanae* is found in humid, low-elevation oak–pine forests of central western Mexico (Nayarit–Tepic). A few, very disturbed plants were found growing in a livestock pasture among various vegetation during the wet season. The erect, slender stems are subtended by a few basal, overlapping sheaths and the nerved, green leaves have wavy margins. The erect, few-flowered inflorescence has pale yellow flowers with hairy, oblong sepals and petals. The oblong lip has an oblong dent down the front portion and has inrolled margins. The arched staminode is yellow.

Flowers in August.

## *Cypripedium × alaskanum*

P.M. Brown, *North American Native Orchid Journal* 1:199 (1995).

Northwestern United States (Alaska).

**ETYMOLOGY** Named for Alaska, the northernmost and westernmost state in the United States.

The flower structure and color of this

natural hybrid are intermediate between its parents, *Cyp. guttatum* and *Cyp. yatabeanum*. Plants of this hybrid are usually found growing on Kodiak Island, southern Alaska and the Aleutian Islands.

***Cypripedium × andrewsii***

A.M. Fuller, *Rhodora* 34:100 (1932).  
South central Canada (Ontario), north central United States (Wisconsin to Michigan).

ETYMOLOGY Named for Edward Palmer Andrews (1874–1954), an American doctor from Portage, Wisconsin.

This natural hybrid has a small, glossy flower with a pale yellow pouch; it is intermediate in color between the parents, *Cyp. parviflorum* and *Cyp. candidum*. The lip sometimes has pale rose-purple veining. Greenish yellow sepals and petals are often flushed with maroon lines or streaks. The flowers always have a pleasant peony- or rose-like fragrance. This natural hybrid blooms in late spring, is rather easy to grow in moist alkaline soils and really likes lime! Requires three hours of direct morning or afternoon sun and light shade during the hottest parts of the day.

***Cypripedium × columbianum***

Ewacha and Sheviak, *American Orchid Society Bulletin* 61:558 (1992).

Southwestern Canada (British Columbia) to northwestern United States (Washington).

ETYMOLOGY Named for British Columbia, Canada, where the type species was collected.

A natural hybrid found in the Pacific Northwest that is usually off-white to pale yellow, intermediate in color between the parents, *Cyp. parviflorum* and *Cyp. montanum*. Prefers cooler conditions and a well-draining compost nearly neutral in reaction. Not widely grown, but reported to be much easier than *Cyp. montanum*.

***Cypripedium × herae***

Ewacha and Sheviak, *Orchids (West Palm Beach)* 73:296 (2004).  
Western Canada (Manitoba).

ETYMOLOGY Named for Hera, a goddess of women, marriage, family and childbirth in ancient Greek religion and myth, one of the Twelve Olympians and the sister-wife of Zeus.

A natural hybrid between *Cyp. parviflorum* and *Cyp. reginae*. An unusual natural hybrid and even very rare in the wild. Probably fairly easy to cultivate.

***Cypripedium parviflorum var. exiliens***

Sheviak, *Native Orchid Conference Journal* 7(2):5 (2010).  
Northern Alaska (United States).

This plant is restricted to northern Alaska, where it is considered rare and imperiled; it also extends into northwest Canada (Yukon). Has small dull green-tan flowers with small clusters of rust-colored spots and has an intense sweet fragrance.

***Cypripedium parviflorum var. makasin***

(Farwell) Sheviak, *American Orchid Society Bulletin* 62:403 (1993).

Subarctic America, Canada (Yukon to Newfoundland ) to northern and northeastern United States (Alaska to Vermont).

This plant has small, slightly hairy flowers with dark reddish brown or reddish sepals and petals, often spotted or blotched. The flowers have an intense, sweet fragrance. This is relatively easy to grow and is a very rewarding plant for a moist woodland garden. The plant prefers high open shade, but a little direct sun in early morning is welcomed. Can grow into large clumps when cultivated under favorable conditions. Easy to grow in a well-drained, gritty

compost with a fair amount of organics.

***Cypripedium parviflorum var. parviflorum***

Northcentral to eastern United States (Nebraska to Georgia).

This variety is limited to portions of the eastern United States and is considered rare in many states. The pouch is smaller and paler compared to the more robust var. *pubescens*, which is widespread throughout North America. The small flowers have densely and minutely spotted reddish brown sepals and petals. Flowers have a moderate to faint rose or musty fragrance. This variety is found on rather dry, acidic soils and has been more difficult to maintain than the northern forms. A little bit more difficult to acquire, but still very available.

***Cypripedium parviflorum var. pubescens***

(Willdenow) O.W. Knight, *Rhodora* 8:93 (1906).  
Northern Canada (Yukon to Newfoundland),  
Alaska to northern United States  
(Washington to Virginia).

This plant has a more southerly range than *Cyp. parviflorum* var. *makasin* and larger flowers than *Cyp. parviflorum* var. *parviflorum*. The flowers have unmarked to spotted, striped, or marked with reddish brown and a moderate to faint rose or musty fragrance. This plant is one of the easiest of all the lady's slippers to grow and thrives in woodland gardens with open shade, but tolerates early morning sun. Plants can withstand cold northern winters even when there is little snow on the ground. This is a widely grown and very available plant for people inexperienced in cypripedium culture. Many thousands of plants are grown and sold each year throughout the world. They seem to prefer near neutral conditions, but can easily handle fairly acidic soils.

...but well-aerated soils also rich in organic matter and protected from sun and heavy frosts. Sadly, the majority of cypripediums sold in the United States are dug from the wild. However, nursery-propagated plants are available from reputable nurseries.

References

Coleman, R.A. 2018. The Cypripediums of the United States and Canada. *Orchids* 87:356–366 and 430–435.  
Cribb, P.J. 1997. *The Genus Cypripedium*. Timber Press, Portland, Oregon.  
Sheviak, C.J. 1992. Natural Hybridization Between *Cypripedium montanum* and Its Yellow-Lipped Relatives. *American Orchid Society Bulletin* 61:546–559.

— Peggy Alrich is a freelance graphic designer (sunflowerltd@earthlink.net).

— Wesley Higgins is an AOS accredited judge (wesley.higgins@comcast.net).



# One Hundred Years

BY ROBERT FUCHS

R.F. ORCHIDS will celebrate our 50th anniversary in 2020, but the history of the nursery, and the Fuchs family in Homestead, actually goes back more than 100 years.

My great-grandfather Charles ("Papa") emigrated as a teenager from Germany in 1880, living first in New York and later in Milan, Tennessee, where my grandfather, Fred Fuchs, was born in 1900, the second of three sons. The family eventually moved to Homestead, Florida, in 1912. Papa began a bakery business, and purchased 160 acres (256 ha) of undeveloped land for the huge sum of \$4,600. Later Papa would give 10 acres (16 ha) to each of his five children, for their own homesteads. Charles Jr., the eldest son, took over the Fuchs Baking Company, which grew and later became the Holsum Bread Company, one of the largest bakeries in the southeastern United States.

Papa's middle son, my grandfather Fred Fuchs, grew up in Homestead. He was more interested in horticulture than baking, and developed a great love for the outdoors and the Everglades, where he explored and found many exotic plants, including native orchids. Local government awarded tax breaks to homesteaders for "improving" their land, which meant clearing it for farming. As land was cleared, Grandpa became interested in the strange little plants growing attached to the trees; these were soon identified as orchids. In 1920 Grandpa and his bride Louise ("Weesie") Murphy received a 10-acre (16 ha) parcel of land from Papa as a wedding gift. R.F. Orchids is today located on that land.

Grandpa became so interested in the orchids that he replanted some of the native hardwood trees (mostly mahogany and live oak) on his own cleared land in order to grow them himself. He later purchased 20 acres (32 ha) of virgin hammock (hardwood tree island) nearby in order to establish orchids. This land became known as "Fuchs Hammock" and decades later, my grandmother Louise





# of Orchids

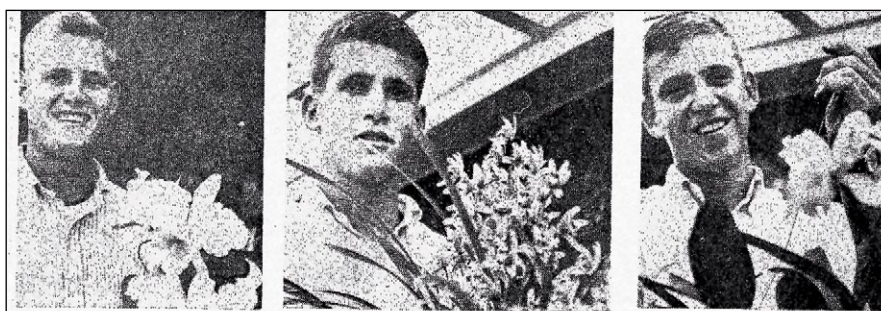
sold it to the Nature Conservancy in order to preserve it against land development pressures. The nearly 40-acre (64-ha) Fuchs Hammock is preserved today and managed by the Miami-Dade County Parks and Recreation Department. An estimated 20 of Florida's nearly 100 native orchid species can be found there.

Grandpa collected orchids and grew them in a small greenhouse and around the property. He became well known as an expert on the local, native orchids, and was interviewed several times by Miami newspapers. In time, he had a small orchid nursery on the property, Orchids Buy Fuchs. Unfortunately the business was not very successful...every orchid that bloomed under his care immediately became "a keeper."

My father, Fred Jr. ("Freddie") married Barbara Williams in 1944, while he was in the military. In 1945, a hurricane destroyed my grandparents' frame house. They rebuilt with concrete block, reinforcing it with steel rod and poured concrete, creating a small "bunker" of a house that stands today. My Dad returned home in 1946 after military service, went to work for the U.S. Post Office and in time became Postmaster of Naranja, a railroad stop just north of Homestead.

Dad picked up the orchid bug, too, and opened his own nursery, Fuchs Orchids, adjacent to his house in Naranja. He became an orchid judge, organized and escorted orchid collecting trips to Central and South America, and encouraged several of his children to get involved. By the late 1950s the entire family was participating in orchid shows, and in 1966 the Miami *Herald* ran a story featuring the "Green Thumb" brothers — myself and my three brothers, Charles, Bill and Dick — as we prepared for the upcoming Miami International Orchid Show. It was far from our first show; we had been helping with the Fuchs Orchids exhibits for several years, and in 1959 we entered our own exhibit as "The Fuchs Boys."

Charles, Bill, Dick and sister Susan all went on to successful careers that had



BOB, Miami-Dade Student

BILL, Senior At South Dade High

DICK, Redlands' 9th Grader

## 'Green Thumb Brothers' Get Ready 3



nothing to do with orchids. I continued the family tradition, and in 1970 opened R.F. Orchids on a portion of Fred Sr.'s property. I taught school during the day and ran the nursery on weekends. I joined Dad and my mother, Barbara, on the orchid-collecting trips, began to exhibit my own orchids and received my first American Orchid Society award in 1970, a Certificate of Cultural Merit (CCM) on *Maxillaria variabilis* 'Amy Marie Fuchs'. This award recognizes excellence in orchid culture. I had collected this plant in Nicaragua

- [1] Fred Fuchs, Sr., in 1939 with *Cyrtopodium punctatum* on his property.
- [2] Charles and Robert Fuchs, 1949, with a family dendrobium.
- [3] Three of the Green Thumb Brothers, 1963, Bob, Bill and Dick Fuchs.
- [4] R.F. Orchids' sign. That's Bob poking up behind the sign. Photograph from 1975.

# FUCHS

several years earlier (in those days CITES had not been enacted and collecting was legal in most areas of the world).

I was only 14 when I went on my first international collecting trip, accompanying my father and Marlow Jacobson, a Homestead neighbor, to the Dominican Republic in 1960. Our charter flight plan listed Santo Domingo as the port of entry, but the aircraft ran short of fuel and the pilot needed to land at Santiago instead. There was no answer from the Santiago tower, but, low on fuel, the pilot landed anyway. Armed soldiers met us on the runway, waving machine guns. My Dad's peace offering, a bucket of Kentucky Fried Chicken, seemed to resolve this international incident without any shots being fired. After meeting with Dominican authorities, Dad, Marlow and I were allowed to collect orchids for three days. We remained in the Santiago area and collected many plants of *Oncidium* (now *Tolumnia*) *henekenii*.

My parents began a business, Orchid Collectors, Inc., in the 1960s with Marlow and Millie Jacobson. They organized collecting trips for orchid growers, and the response was good. Their itineraries typically visited locations in Central and South America, particularly Nicaragua and Bolivia, but other destinations were on the list, too. My father's orchid connections there assisted with the travel arrangements.

Nicaragua was high on the list of preferred destinations. Hubert Cross, Nicaragua's largest automotive dealer, invited my Dad to collect orchids on land being cleared for roads and farming. I accompanied him on many of these collecting trips, and we rescued large quantities of orchids from the trees felled by the land-clearing crews. In 1967, I found the specimen plant of *Brassavola nodosa* which would, three years later, receive the AOS's highest award for flower quality, the First Class Certificate (FCC). *Brassavola nodosa* 'Susan Fuchs' FCC/AOS, was my first FCC.

Three orchids bear the Fuchs name, discovered by the Fuchs men during these collecting expeditions.

I discovered *Myrmecolaelia* × *fuchsii*, a natural hybrid of *Myrmecophila* (*Schomburgkia*) *wendlandii* and *Laelia rubescens*, in 1978, in Nicaragua, near Esteli. Among other orchid connections in Perú, Dad sometimes stayed at Lee Moore's ("the adventurer") bed and breakfast near Tingo Maria on the eastern flank of the Andes. There, Dad discovered *Masdevallia fuchsii*, high in the cloud



5

AOS ARCHIVES



6

AOS ARCHIVES



7

JAY NORRIS



8

AOS ARCHIVES



9

THANG DAM

forest.

A special connection was Dr. Luis Moreno in Santa Cruz, Bolivia. Many

- [5] *Maxillaria variabilis* 'Amy Marie Fuchs' CCM/AOS, March 7, 1970. Photograph from the AOS award archives.
- [6] *Brassavola nodosa* 'Susan Fuchs' FCC/AOS, April 11, 1973. Photograph from the AOS award archives.
- [7] *Masdevallia fuchsii* 'Jean-Louis' CCM/AOS exhibited by André Levesque.
- [8] *Myrmecolaelia* × *fuchsii* 'Robert' CCM/AOS exhibited by R.F. Orchids. Photograph from the AOS award archives.
- [9] *Catasetum fuchsii* 'Jardin botanique de Montréal' HCC/AOS exhibited by the Jardin botanique de Montréal.

# FUCHS

collecting trips were organized around this area of northeastern Bolivia. On one of them, Dad and I discovered a new species of *Catasetum* near Santa Cruz, and the plant was named *Catasetum fuchsii* in Dad's honor.

Among the cardinal rules of collecting was to take only a portion of the plants that you found. Never, ever take the whole clump, unless it was growing on a tree that would be burned for land clearing. If it was growing on an uncut tree, leave enough of it to continue growing.

My grandfather, Fred Sr., passed away in 1967. His health had deteriorated, and he had been unable to maintain Orchids Buy Fuchs, his small orchid nursery business. The houses were in disrepair and the plants were in bad shape. Grandmother Louise ("Weesie") Fuchs offered me these shade houses for my personal collection of orchids and as the start of my own fledgling orchid business. A lot of work followed, to clean up the houses, build new benches and get things set to rights.

I graduated Florida State University in 1970, and began teaching at Homestead Jr. High (now Homestead Middle School), eventually becoming chairman of the school's Enrichment Department. I continued to travel to South and Central America to explore and collect orchids, during summers and school breaks. Sometimes I joined one of my father's collecting trips, sometimes I went on my own, and my personal collection of orchids continued to grow.

My new orchid business, R.F. Orchids, opened in December 1970, for a weekend "open house and sale." A few customers came, mostly out of curiosity to compare my small nursery with my father's better-known operation Fuchs Orchids in Naranja, a few miles away. The business was open only on weekends at first, and whatever proceeds came in from plant sales, I turned them right back into the nursery.

My interest in vandas and related orchids continued to grow. Grandpa Fuchs had grown many vandas, importing plants from Hawaii, and I became intrigued by these beautiful orchids. So I imported seedlings from Hawaii, took divisions of selected plants from both my grandfather's and father's collections, and added them to my nursery. I also imported plants from Thailand's Boonchoo Orchid Nursery and T Orchids, to use in my fledgling breeding program.

As the business began to grow slowly, I hired some local students (in the school



[10] Fred Fuchs, Jr. and Susan Fuchs collecting in Honduras, 1981.

[11] Bob collecting orchids from a fallen tree in Nicaragua, 1981.

[12] Bob in the Thai forest, looking for terrestrial orchids.

[13] Robert Fuchs at 12WOC, Tokyo, 1987.

[14] *Vanda* Deva 'Robert', Grand Champion of the 11WOC.

"Earn and Learn" program) to help with the continuing project of cleaning up and updating the shade houses, building new benches and whatever else needed to be done. I continued to teach school, earning a salary of \$3,200 a year.

In 1972, my brother Richard ("Dick") built the structures that would become the business office and "sale house" area of the nursery, and Grandmother Weesie

gave me the 2 acres (3.2 ha) of land where the nursery is located today.

The nursery was open on weekends only at that time. I took a part-time weekend job at the Snook Family Flower Farm, located at the north end of Green Thumb Nursery in South Miami, and began to build a clientele from Green Thumb's South Miami and Coral Gables patrons. R.F. Orchids continued to grow,

## FUCHS

staffed by a skeleton crew of students and friends who held the fort on weekday afternoons and Saturdays.

In 1977 Michael Coronado started working at the nursery, and over time he would take over running R.F. Orchids in the afternoons and on weekends, while I continued working in South Miami on Saturdays. Meanwhile, I had been making my own hybrids and some of those orchids began to flower.

Weesie Fuchs passed away in 1980, and I was able to purchase the 3 acres (4.8 ha) of property fronting Robert's Road. Dad had sold the west 5 acres (8 ha) to the Rutzke family, and some years later I was able to buy back those 5 acres (8 ha), reuniting the pieces of the original 1920 10-acre (16-ha) parcel. With the additional land, R.F. Orchids was able to grow. I continued to import vandaceous orchids from Asia and species from South and Central America, and to grow our own hybrids.

I traveled to France in 1982 to visit Marcel Lecoufle, of the renowned French nursery Vacherot & Lecoufle, and I brought back some of their famous spotted phalaenopsis hybrids. I continued to represent Vacherot & Lecoufle in the United States for several years.

In 1983, Michael and I, John and Vivian German, Dorothy Bennett and Barbara Ansley, planned a trip around the world on the legendary Pan American Airlines flights 1 and 2. We left Miami for London, flew on to New Delhi and Bangkok. Then it was on to Manila and Honolulu before returning to the United States. In Bangkok, we spent time with several well-known Thai orchid growers, including Kasem Boonchoo, Thonglor Rakpaibulsombat of T Orchids and Keeratikul Sophonsiri of Kultana orchids. The Thai growers were generous with their ideas about hybridizing, and it was quite a learning experience for both Mike and me. While in Hawaii, we visited a number of prominent growers including Ben Kodama, Richard Takafuji and Roy Fukumura, and spent some fascinating time sitting under Roy's mango trees talking about vandas. I became good friends with these legendary Hawaiian orchid growers.

Also in 1983, I was a Vice President and Show Chairman for the South Florida Orchid Society (SFOS). Ken Kone was SFOS President. That year, SFOS moved the location of its annual Miami International Orchid Show from Miami's Bayfront Auditorium to the Coconut Grove Exhibition Center (locally known as



the "Dinner Key Auditorium") in Coconut Grove, in anticipation of the 11th World Orchid Conference in 1984. The 1983 Miami International Orchid Show was a rehearsal for the 11th World Orchid Conference the following year. SFOS had been working on preparations for 11WOC for years.

The Exhibition Center had 2.5 acres (4 ha) — more than 100,000 square feet (9,290 sq m) of floor space for the show,

[15] Michael Coronado under the remains of a shade house after hurricane Andrew, 1992.

[16] Downed royal palms, planted in 1922, in front of the nursery after hurricane Andrew.

[17] Michael Coronado with hurricane Andrew damage, 1992.

[18] Florida Agricultural Hall of Fame induction, 2012.

## FUCHS

as well as about 7,000 square feet (650 sq m) of additional space in a mezzanine for ancillary exhibits and competitions. SFOS staged the 11WOC show in this massive space, landscaping the hall with more than 1,000 trees. When the installation was complete, there were more than 100 orchid exhibits from commercial growers, individuals and orchid societies from around the world.

More than 300 American Orchid Society and international judges evaluated the exhibits and the individual orchids. 11WOC judges granted 40 trophies and 175 medals to individual blooming orchid plants, as well as dozens of trophies and medals to orchid exhibits entered by commercial firms, orchid societies and individual growers. R.F. Orchids' display was honored to receive a Silver Medal, and the trophy for the best 300–square-foot (28–square-meter) exhibit, as well as six Bronze Medals and three Silver Medals on individual plants. Additionally three plants received Best-in-Class Trophies. Among those was the magnificent *Vanda Deva* 'Robert', which was voted Best *Vanda* as well as the 11WOC Grand Champion.

At the time of the 11WOC, I was an AOS student judge. I did not participate directly in the show judging, as only accredited judges were credentialed, but I, and many other student judges, participated as clerks. The student judge clerks were required to stay late after judging in order to finalize the judging scoresheets, as many teams had submitted paperwork without properly tallying and averaging the scores for awards granted by that team. I nearly missed the WOC party that evening as a result.

Professional jealousy among the commercial growers was rampant when all the awards were announced. The Grand Champion award was particularly controversial among the established commercial growers in South Florida — with so many of them represented at 11WOC, how did an upstart nursery like R.F. Orchids win this award? I, and the nursery, became an instant target for this resentment.

During the show, I approached the WOC Show Chairman to congratulate him on the Gold Medal that Jones & Scully's exhibit had received. He returned the compliment, and stated "winning the Grand Champion at a World Orchid Conference will catapult you onto the international stage, a position you will obviously not be able to handle." Then he turned and walked away. I was flabbergasted, to say the least.



But R.F. Orchids was enjoying success elsewhere, too. In the years 1983–1984, the nursery had received 59 flower quality awards from the American Orchid Society.

In 1985, the year after 11WOC, R.F. Orchids' display at the Miami International Orchid Show won the coveted AOS Show Trophy for its best-in-class 300–square-foot (28–square-meter) display, beating out the 500–square-foot (46.5–square-meter) displays from several older, more established nurseries such as Jones & Scully and Fennell's Orchid Jungle. These two firms had dominated the exhibit awards at the Miami show for years.

With my background in art, I took pride in designing and installing exhibits. It was the best advertising for my business.

The year 1985 marked the end of my career as a schoolteacher. I retired from teaching at the end of the 1984/85 school year, to devote myself full-time to R.F. Orchids. The recognition at 11WOC had indeed caught the attention of orchid growers around the world, and the business was growing in leaps and bounds.

In 1992, Homestead was ground zero for Hurricane Andrew. We were in Hawaii at the time and rushed to get back when we got the warnings about the storm. We could not return to Miami, so we flew to Orlando and rented a car. The devastation got worse the further south we drove, and by the time we got to Homestead, we knew the news would be bad. It was worse than we feared. Although the house, including Grandpa Fuchs' "bunker," was mostly unscathed, the nursery itself and gardens were flattened. Without power



for two and a half months, we had no fans and no pumps. The cleanup and recovery would take many months. We set a goal to be open for the Christmas holiday and got to work.

We rose from the devastation determined to be better than before. The nursery grew steadily in the following years, and we garnered even more recognition for our orchids and our show exhibits, in the United States and internationally as well. In the years we were active in shows, R.F. Orchids won 52 AOS Show Trophies, 31 Gold Medal Certificates, 6 Silver Medal Certificates and 17 Artistic Certificates. We participated in a number of shows in the United Kingdom, including the Chelsea Flower Show, and were honored with a total of 22 awards from the RHS. Other international recognition came from shows in South Africa, El Salvador, Guatemala, Colombia, Ecuador, Perú and more, and we have the honor of 71 World Orchid Conference medals on our orchids and exhibits at WOCs from New Zealand, Brazil, Canada, France, Malaysia, the United States, Singapore and South Africa.

Since I began entering orchids for AOS judging in 1970, we have received more than 1,200 AOS awards and have been honored to receive several of the AOS's annual awards multiple times. These

## FUCHS

include six Roy T. Fukumura Awards for the Best Vandaceous Orchid, and three Merritt Huntington Awards, granted to the most outstanding example of the AOS's highest award for flower quality, the First Class Certificate.

In 2001, I was honored as Miami-Dade County's Agriculturalist of the Year, recognizing our achievements and my deep roots in the agriculture community here in the Homestead area.

In the early 2000s several south Florida orchid clubs began discussing bringing the World Orchid Conference back to Miami, and the South Florida Orchid Society and Ft. Lauderdale Orchid Society agreed to jointly sponsor the effort. We prepared a bid and were granted the 19WOC dates, in January of 2008. I was elected President of the 19WOC Corporation, and co-chair of the 19WOC itself, with Col. Ken Kone of the Ft. Lauderdale Orchid Society.

It was a huge amount of work, but we had a great team, and worked tirelessly to make the WOC happen in spite of issues with the venue. We no longer had the Coconut Grove Exhibition Center for staging the show — the City of Miami had slated the facility for demolition. But we managed to find another location near the airport, and response was terrific. When the show opened we had 100 commercial, society and individual exhibits from 40 countries and 46 states, dozens of US and international vendors, a full program of lectures and symposia, and fabulous attendance. We had 2,000 registrants and tens of thousands of show attendees. 19WOC was a resounding success. More than 300 AOS and internationally accredited judges presented hundreds of medals, ribbons and trophies. R.F. Orchids was honored with 10 medals on our orchids, nine best-in-show trophies and a gold medal for our magnificent exhibit, "On The Road to Mandalay," which was voted the Grand Champion Exhibit of the show.

In February, 2012, I was inducted into the Florida Agricultural Hall of Fame, the first orchid grower to be so honored.

We were recognized by the Florida Nursery, Grower and Landscape Association (FNGLA) when we received — for the second time! — their very prestigious S.J. Blakely Award for landscape excellence, for the beauty of the landscaping at the nursery. The competition for this award is very high, and we were honored to receive it two times, in 2009 and again in 2013.

I was honored to be appointed, by unanimous vote of the American Orchid



19



20



21

[19] R.F. Orchids exhibit, Miami International Orchid Show, 2006.

[20] R.F. Orchids exhibit, Miami International Orchid Show, 2007.

[21] R.F. Orchids' Gold Medal and Grand Champion Exhibit, 19WOC.

[22] Custom pottery design, Thailand.

[23] *Rechingerara* Honky Tonk Woman '(*Laelia undulata* × *Rhyncattleanthe Bouton D'Or*), winner of the first Paul and Mary Storm annual award.

# FUCHS

Society's Board of Trustees, as a Trustee of the World Orchid Conference in the summer of 2014. This Trust includes two members from the AOS, and two members from the Royal Horticultural Society in the United Kingdom. Its mission is to support and promote the triennial WOC events in different parts of the world. I was greatly honored by this appointment. The following year, I was elected as a Trustee of the American Orchid Society. I had served two terms on the AOS Board of Trustees before, from 1987 to 1995. As a result of the press of AOS business, I reluctantly resigned from the WOC Trust. In 2018, I was elected a vice-president of the American Orchid Society, and appointed Chair of the AOS's Centennial Celebration Committee. AOS will celebrate its 100th anniversary in April 2021, and I am honored to be coordinating this signature event.

It has been one heck of a ride, this past 50 years, with many highs and a few lows. I have been a dedicated orchid grower and AOS member more than 50 years (the membership was originally a graduation gift from my grandparents). I am very proud of Mike's and my accomplishments, and look forward to many more years of orchids, and service to the AOS.

— Robert Fuchs, President, R.F. Orchids, Inc., 28100 SW 182 Avenue, Homestead, FL 33030 (phone 305-245-4570, website www.rforchids.com).



22



24



23

TOM KULIGOWSKI



25

TOM KULIGOWSKI



26

NICK NICKERSON

- [24] Michael Coronado and Robert Fuchs with R.F. Orchids' display, San Salvador.
- [25] *Vanda* Fuchs Blue 'Redland Sky' FCC/AOS, winner of the 2016 AOS Fuchs Family Award for the most outstanding example of the genus *Vanda*.
- [26] *Vanda* Frances Lindner 'Crownfox Orange Glow' FCC/AOS (Ellen Wells x Crownfox Keylime), winner of the 2014 Merritt W. Huntington Award for the most outstanding FCC.

# Artist Martin Johnson Heade

Arthur E. Chadwick

RECENTLY, WHILE ATTENDING an orchid symposium in Iowa, I was fortunate to win a raffle prize of fancy note cards depicting cattleyas in old-time jungle scenes. The images were familiar as they are regularly found in art museums and botanical gift shops but the artist is largely unknown. The material dates back 150 years and was avant-garde in its day.

Martin Johnson Heade was not famous during his lifetime (1819–1904) but was “rediscovered” in the mid-20th century. His early work was landscapes in New England but, after he traveled to South America in the 1860s, his subjects changed to plants and birds of the Amazon. From a single oil sketch in Brazil, Heade returned home and made dozens of paintings showing orchids and hummingbirds in dense cloud forests.

In order to capture the intricate detail of each orchid, Heade visited private collections and commercial nurseries in the Northeast. “I have painted nothing but orchids this summer and Summit [New Jersey] is the best place in the country for that,” he wrote to a friend. Summit is the town where famed grower Frederick Sander, of Britain, had a range of greenhouses.

This typical Heade painting features the lavender form of *Cattleya labiata* in amazing detail. This Brazilian species is shown at the peak of freshness and without a single blemish. The flowers are unusually large and are cast in a light that reveals the delicate feathering and ruffled edges of the petals.

Behind them are puffy buds waiting to open. They seem to have motion because there is visible color between the cracks. Heade’s illusion is aided by his use of artistic liberty in the exaggerated foot-long curvy flower stem that resembles a serpent about to strike. Viewers cannot help but



think that if they watch long enough, one of those buds will actually unfurl.

The cattleya foliage is just as precise as the flowers, but the subjects are weathered and ratty as one would expect in the wild. The pseudobulbs are wrinkled and some have sunburned or missing leaves. Clearly, the plants have gone through the wet and dry seasons of the jungle and have managed to rally in time for the blooming season.

The juxtaposition of awe-inspiring and glistening blossoms emerging from half-dead plants that are shrouded in heavy fog evokes a feeling that something magical is happening. Here, in this remote part of the world, at this very moment, we are witnessing one of nature’s great secrets — the blooming of a cattleya.

For enthusiasts hoping to see Heade’s originals, they can be found at major public institutions around the country including the Museum of Fine Arts in Boston, The New York Historical Society, the National Gallery of Art, the Philadelphia Museum of Art and

the Cleveland Museum of Art. The titles are straightforward: “Cattleya Orchid and Three Hummingbirds” (1871), “Orchids in a Jungle” (1871–1874) and “Study of an Orchid” (1872). Reproductions are available in a wide variety of formats including my new favorite, note cards. [www.martin-johnson-heade.org](http://www.martin-johnson-heade.org). — Arthur E. Chadwick ([art@chadwickorchids.com](mailto:art@chadwickorchids.com))

**ABOVE:** *Cattleya labiata* is the subject of most of Martin Johnson Heade’s orchid paintings. It is believed that he saw one while on a trip to South America in the 1860s. The species is native to Brazil where it produces up to four flowers annually. Shown is *Cattleya labiata* ‘Everest’. Photograph by Arthur Chadwick.

**RIGHT:** Martin Johnson Heade’s “Orchid Blossoms” (1873) features *Cattleya labiata* in a dense jungle with one large flower and a bud just opening. He took considerable artistic liberty with the plant anatomy in order to evoke a sense of motion. Photograph courtesy of the Cleveland Museum of Art.





# The Genus *Loefgrenianthus*

and Alberto Löfgren

BY RUDOLF JENNY



*LOEFGRENIANTHUS BLANCHE-AMESII* (Loefgren) Hoehne. *Boletim do Instituto Brasileiro de Ciencias* 2:352 (1926).

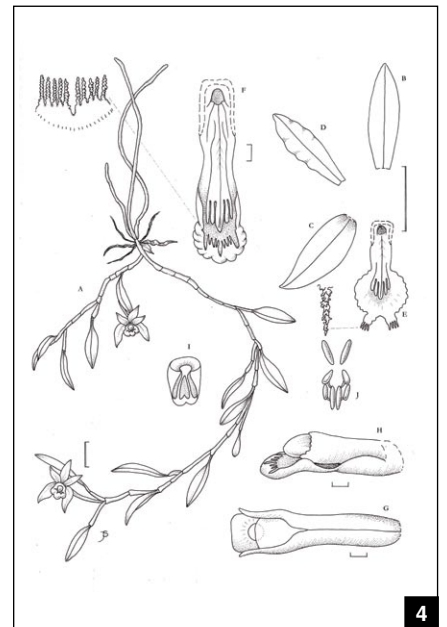
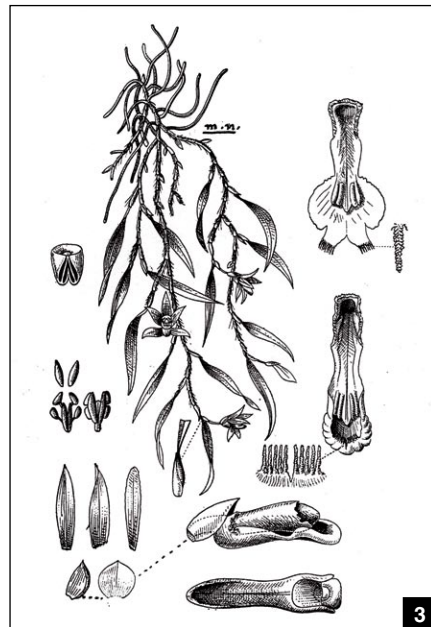
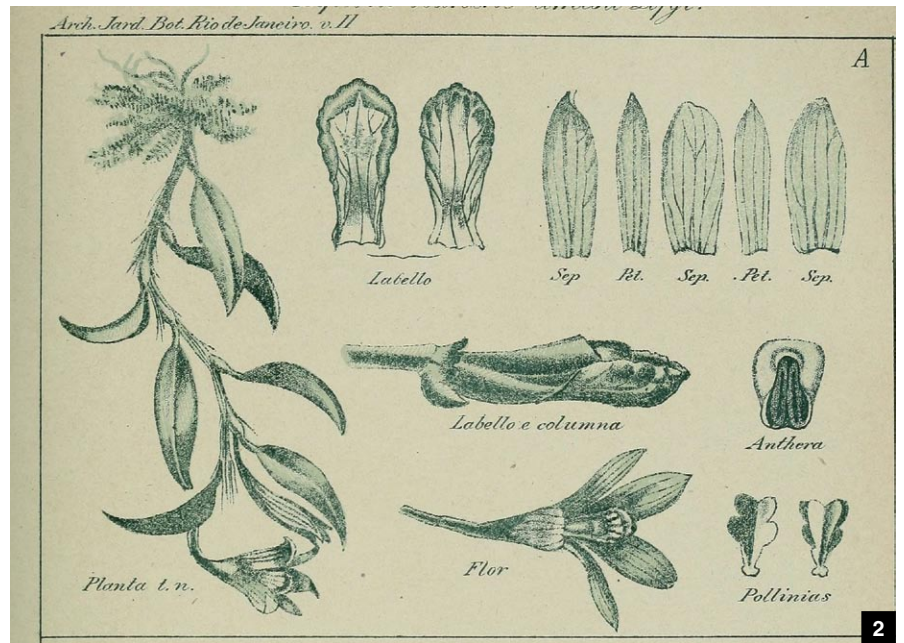
SYNONYMS *Leptotes blanche-amesii* Loefgren. *Archivos do Jardim Botânico do Rio de Janeiro* 2:58–59 (1917).

*Paranaea* Dusen ex Schlechter, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7(88):586 (1926) (*nomen nudum*).

The history of the monospecific genus known today as *Loefgrenianthus* began in 1917. Alberto Löfgren described and illustrated in his paper, "Novos Subsídios para a flora Orchidacea do Brasil," published in *Archivos do Jardim Botânico do Rio de Janeiro*, a number of new orchid species from Brazil. One of his new species was *Leptotes blanche-amesii*, dedicated to Blanche Ames, wife of Oakes Ames. The drawing of plant and flower was prepared after living material by L. Cordeiro and Löfgren himself. Löfgren collected it for the first time in November 1896 in the Campos de San Francisco da Serra de Mantiqueira, Minas Gerais, but the plant died in cultivation. Oakes Ames recollected it in 1916 together with Paulo de Campos Porto during an expedition to the Itaitaya region.

Frederico Carlos Hoehne created in 1926 in *Boletim do Instituto Brasileiro de Ciencias* the new genus *Loefgrenianthus* and recombined *Leptotes blanche-amesii* to *Loefgrenianthus blanche-amesii* — so far the only known species of the genus. Hoehne visited the area of Campos de Jordao in September 1923 and collected several orchids; one of them flowered later in the Botanical Garden Oswaldo Cruz at Butantan (today spelled Butanta), a Brazilian biologic research center located in the western part of the city of São Paulo. A year later, in 1927, Hoehne reprinted his article from 1926 with the description of *Loefgrenianthus* in *Archivos de Botanica do Estado de Sao Paulo* adding an illustration of plant and flower details, done by himself. The same line drawing, together with a low-quality photograph, was published by Hoehne in 1946 in his *Iconografia de Orchidaceas do Brasil*.

Another generic name for the plant — *Paranaea* — was listed but not formally described by Rudolf Schlechter in *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* in 1926. Schlechter mentioned the Swedish civil engineer, botanist and explorer Per Karl Hjalmar Dusen as author for *Paranaea*, but he did not explain where Dusen used it. However, *Paranaea* has to be treated as *nomen nudum*. Rudolf Mansfeld



stated in 1938 in *Repertorium Specierum Novarum Regni Vegetabilis* that *Paranaea* was based on a specimen collected by Dusen (Brazil, Parana, Serra do Mar, Monte Alegre, 900 m, January 31, 1914), and that the name should therefore be cited as *Paranaea* Dusen ex Schlechter. The specimen Mansfeld refers to was destroyed during the war in 1943 when the Berlin herbarium was hit by bombs and burned down completely. Other material of the species, probably from the same collection, was named *Leptotes langeana* and (on the same sheet) also *Paranaea langeana* by Dusen; three specimens are kept in the collection of the Swedish Museum of Natural History Department of Botany in Stockholm (S). Also *Paranaea*

- [1] Plant and flower of *Loefgrenianthus blanche-amesiae* 'Bryon' CBR/AOS grown by Bryon K. Rinke. Photographs by Bryon K. Rinke.
- [2] Drawing of *Loefgrenianthus blanche-amesii* as *Leptotes blanche-amesii* by Loefgren (1917).
- [3] Drawing of *Loefgrenianthus blanche-amesii* by Hoehne (1927).
- [4] Drawing of *Loefgrenianthus blanche-amesii* courtesy of Judi Stone.

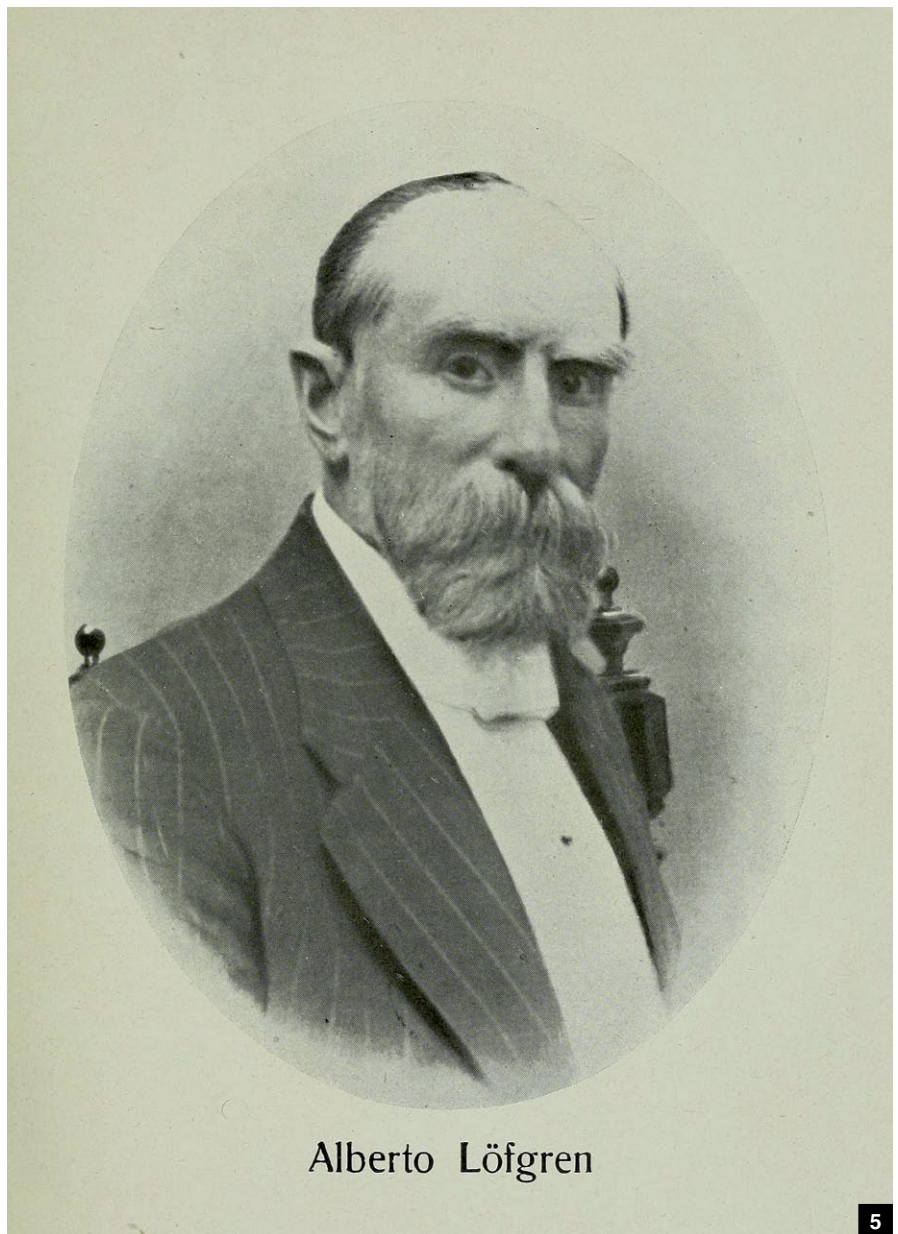
*langeana* is not a valid binomial, it never was formally published but used only on herbarium specimens.

*Loefgrenianthus blanche-amesii* is very seldom seen in cultivation; it seems to be difficult to get and to establish the plants, and even more difficult to keep them alive. The species is distributed in the Mata Atlantica in the states of Rio de Janeiro, Minas Gerais, Sao Paulo and Parana.

Alberto Löfgren was born on September 11, 1854 in Stockholm, Sweden. He studied at the University of Stockholm, but left before he got his Ph.D. Löfgren joined the expedition of André Regnell to southern Brazil (Sao Paulo and Minas Gerais) in the years 1874–1877. He was appointed assistant to Hjalmar Mosen, leader of the expedition. When the expedition team left the country, Alberto stayed in Brazil and was employed by the Paulista Railway Company. From 1880 to 1886 he then worked as a teacher in Sao Paulo before he was appointed botanist and meteorologist for the Geographical Commission of the Sao Paulo State (Commissao Geographica e Geologica do Estado de Sao Paulo).

In 1898 Löfgren founded the botanical garden in Sao Paulo and acted for some time as its director. Later on he was appointed botanist on the Commission for Investigation of the Dry Zone of Brazil and, in this position he traveled through most of the northeastern states of the republic. In 1913 he was appointed Chief of the Section of Vegetable Physiology of the Rio de Janeiro botanical garden. Alberto Löfgren died in Rio de Janeiro on August 30, 1918 at the age of 64. Although he did not publish many papers, he was, in his time, one of the important botanists in Brazil. He is author of *O genero Rhipsalis*, published in 1915 and of some parts of the *Flora Paulista* (Compositae), 1897. It is said that he was fluent in no less than nine languages; he even spoke Russian.

A number of orchids have been dedicated to Löfgren, most of them described either by Alfred Cogniaux or Otto Porsch, many of them subsequently moved to other genera or declared as synonyms. Loefgren was not especially interested in orchids; he himself authored only one paper about Orchidaceae in 1917 as *Novos Subsídios para a flora Orchidacea do Brasil*, with a few new orchid species. Beside *Leptotes blanche-amesii* — the later *Loefgrenianthus blanche-amesii* — he described *Pleurothallis leucosepala*, *Pleurothallis simpliciglossa*, *Pleurothallis magnicalcarata*, *Pleurothallis cryptophor-*



Alberto Löfgren

5

[5] Portrait of Albert Loefgren from *Archivos do Jardim Botânico do Rio de Janeiro* (1922).

[6] Award photograph of *Loefgrenianthus blanche-amesiae* 'Bryon' CBR/AOS photographed by Bryon K. Rinke.

*anthoides*, *Pleurothallis paspaliformis*, *Pleurothallis atroglossa*, *Pleurothallis adenochila*, *Pleurothallis tridens*, *Epidendrum psilanthemum*, *Maxillaria barbozae*, and *Rodriguezia maculata* var. *longifolia*. Löfgren's herbarium is mainly kept in Sao Paulo and Rio de Janeiro with duplicates in Stockholm, Copenhagen, Berlin and in the Glaziou collection. — Rudolf Jenny (email: rjorchid@gmx.ch).

#### REFERENCES

- Anonymous. 1898. *Allgemeine Botanische Zeitschrift* 4:104.  
 Anonymous. 1918. (author E.Bn.). *Physis* 4:380–381.  
 Anonymous. 1919. (author J.C.W.). *Proceedings of the Linnean Society of London* 131:57–58.  
 Anonymous. 1922. *Archivos do Jardim Botânico do Rio*

*de Janeiro* 3:I–IV.

- Campacci, M.A. 2001. *Boletim CAOB* 43:8–10.  
 De Barros, F. 1996. *Orquidario* 10(1):11–12.  
 Hoehne, F.C. 1926. *Boletim do Instituto Brasileiro de Ciencias* 2:349–354.  
 Hoehne, F.C. 1927. *Archivos de Botanica do Estado de Sao Paulo* 1(2):589–595.  
 Hoehne, F.C. 1941. *O Jardim Botânico de Sao Paulo* 126–128.  
 Hoehne, F.C. 1946. *Arquivos de Botanica do Estado de Sao Paulo* 2(3):33–35.  
 Hoehne, F.C. 1949. *Iconografia de Orchidaceas do Brasil* 1:212 and 2:t.129.  
 Löfgren, A. 1917. *Archivos do Jardim Botânico do Rio de Janeiro* 2:58–59 and Fig. A.  
 Mansfeld, R. 1938. *Repertorium Specierum Novarum Regni Vegetabilis* 44:56–60.  
 Schlechter, R. 1926. *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7(88):586.  
 Withner, C.L. 1993. *The Cattleyas and Their Relatives*, Vol. 3. Timber Press, Portland, Oregon. p. 99–100.



# Orchids of Bhutan

*Pholidota recurva*

BY KINLEY RABGAY AND STIG DALSTRÖM



*PHOLIDOTA RECURVA* LINDL. was described in 1830 by John Lindley based on a dried specimen that Nathaniel Wallich sent to England from the botanical garden in Calcutta in 1825. Lindley writes this in the original description:

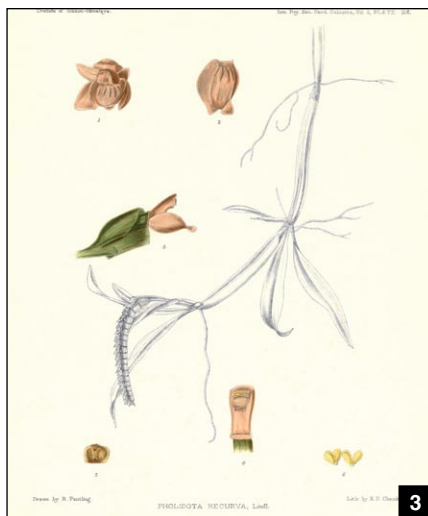
“I know this very remarkable species by specimens given me several years since by Mr. Lambert. It came to England with some of Dr. Wallich’s earliest Nipal [sic] collections. Its intricately unilateral recurved spikes characterize it well, and distinguish it from *P. articulata*, which besides has the joints of the rhizome twice as long, and the bracteae of a different figure.” (Lindley 1830).

*Pholidota recurva* was then scientifically documented in *The Orchids of the Sikkim-Himalaya*, by George King and Robert Pantling (1898). They write that this species is found at elevations from 2,000 to 4,000 feet (611–1,221 m), and is in flower during August and September. Their record was based on Pantling’s collection no. 93. They also mention that *Pho. recurva* is distributed westward to Nepal and eastward to Bhutan. Since then no actual specimens of this species have been documented or recorded from Bhutan (Pearce and Cribb 2002). Not until very recently that is.

Author Kinley Rabgay was introduced to orchids as a young boy by his family and friends in the village of Zheingosa, which is in the Goenshari Gewog of the Punakha District in central Bhutan, where he grew up. Orchids were used for religious ceremonies, as vegetables and for their sheer beauty. And since his village was surrounded by moist and cool broad-leaved forest, the orchid flora was rich and diverse. While working on his graduation diploma in forestry at the College of Natural Resources in nearby Lobesa, he initiated a small project in 2006–2007, studying the orchid diversity surrounding his home village. Kinley Rabgay’s interest was further inspired by joining a Facebook group named “Orchids of Bhutan,” created by the main orchid authority in Bhutan, Dr. Dhan Bdr. Gurung. This spurred Kinley Rabgay to increase his orchid studies to include his working area in the Shongphu Gewog in the Trashigang District of eastern Bhutan. His methodology is simple and practical, bringing his camera along wherever he goes to document orchids, their hosts and the particular environment they live in. He also brings plants without flowers back to his office backyard in Rangjung, a small town along the Gamri Chhu River



KINLEY RABGAY



where he is currently stationed. Plants are then cultivated until they flower and their identities can be revealed, and that is how he discovered *Pho. recurva*. A cultivated plant began flowering on August 6, 2018. He then returned to the collection site in Changmey where he noticed that the wild plants were also in bloom.

*Pholidota recurva* grows naturally as an epiphyte on oaks and most commonly on *Quercus griffithii* (J.D. Hooker and Thomson ex Miquel) Schottky. But plants can also be found on rocks where their scrambling thick mats of elongated fleshy stems sometimes cover the entire surface. Since the discovery of this previously unverified orchid, (not included in *Orchids of Bhutan* by Pearce and Cribb [2002]), it has been found in three different locations by Kinley Rabgay,

- [1] Close-up of the flowers of *Pholidota recurva*. [Kinley Rabgay]. *Pholidota recurva* grows epiphytically primarily on oaks where large bundles can be seen from a distance (upper inset). The creeping stems of *Pholidota articulata* and *Pho. recurva* make them rather unsuitable for greenhouse cultivation unless plenty of space can be provided (lower inset). Photographs by Kinley Rabgay.
- [2] *Pholidota articulata* is a common orchid in Bhutan.
- [3] *Pholidota recurva* in *The Orchids of the Sikkim-Himalaya*, by George King and Robert Pantling (1898).
- [4] *Pholidota articulata* in *The Orchids of the Sikkim-Himalaya*, by George King and Robert Pantling (1898).



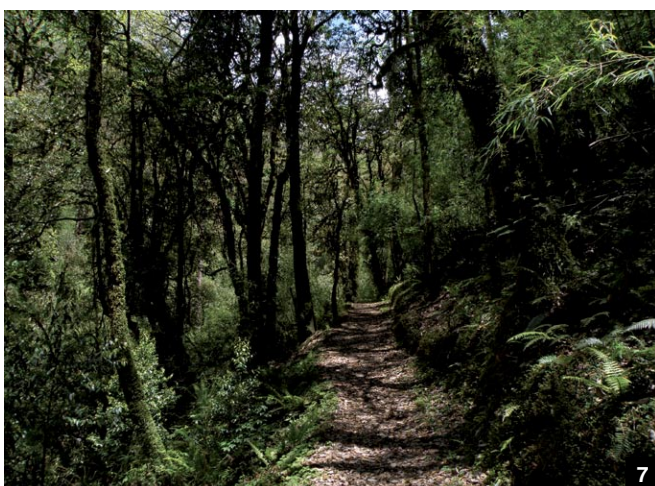
5

STIG DALSTRÖM



6

STIG DALSTRÖM



7

STIG DALSTRÖM



8

STIG DALSTRÖM

- [5] *Pholidota pallida* differs from *Pho. recurva* in having abbreviated pear-shaped pseudobulbs.
- [6] The scenic beauty of eastern Bhutan is very pastoral, where remote valleys promise new botanical discoveries for bold explorers.
- [7] In the lower valleys the humid and lush subtropical forests of eastern Bhutan are teeming with botanical surprises.
- [8] The growing season for life-supporting rice is short and labor intense. The high-quality organic rice from Bhutan is sold to India, and low-quality rice is imported for consumption.



## KINLEY RABGAY AND DALSTRÖM

ranging from an elevation of about 4,500 feet (1,500 m) to almost 6,000 feet (2,000 m) in moist oak forests in the Trashigang District of eastern Bhutan.

The growth habits of *Pholidota articulata* and *Pho. recurva* differ significantly from that of the more commonly cultivated *Pholidota pallida* Lindl., and the confusingly similar *Pholidota imbricata* Hook., in having a distinctly creeping habit with elongated, almost vine-like, swollen stems, as opposed to the abbreviated pear-shaped pseudobulbs of the latter species. This elongated habit renders the cultivation of both *Pho. articulata* and *Pho. recurva* rather impractical and really not to be recommended, unless you can provide plenty of space. Cultivation of the more compact *Pholidota* species is quite easy though. Any regular airy epiphyte compost will do, or rather, mount the plant on a piece of driftwood or in a basket and hang it in a semishady location with plenty of air circulation, similar to the conditions for *Stanhopea* J.Frost ex Hook., and *Gongora* Ruiz & Pav. Water and feed frequently during the growing season, approximately from May to October–November, and keep the plant rather dry and cool, although in a moist environment, during the rest of the year. A well-cultivated plant will reward the grower with plenty of attractive and pendent necklace-shaped inflorescences that are relatively long-lasting.

The main conservation threat to *Pho. recurva* and its relatives comes from local people collecting firewood. The favorite fuel is the wood from *Quercus griffithii*, which happens to be the favorite host for many orchids as well, including *Pho. recurva*.

### References

- King, G. and R. Pantling. 1898. *Pholidota recurva*. In: *The Orchids of the Sikkim-Himalaya*. Annals of the Royal Botanic Garden, Calcutta 8, The Bengal Secretariat Press, Calcutta, India.
- Lindley, J. 1830. *Pholidota recurva*. In: *The Genera and Species of Orchideous Plants, Part 1*. Treuttel and Co., Soho Square, and Ridgways, Piccadilly, London, England. p. 37.
- Pearce, N.R. and P.J. Cribb. 2002. *The Orchids of Bhutan*, as part of *Flora of Bhutan* Vol. 3, Part 3. Royal Botanic Garden Edinburgh in collaboration with the Royal Government of Bhutan, Edinburgh, United Kingdom.

—Kinley Rabgay is a Senior Forest Ranger, Trashigang Forest Division, Department of Forests and Park Services, Ministry of Agriculture and Forests, Royal Government of Bhutan (knlyrbg@gmail.com).

—Stig Dalström lives at 2304 Ringling Boulevard, unit 119, Sarasota Florida 34237, USA; Lankester Botanical Garden,



KINLEY RABGAY

9



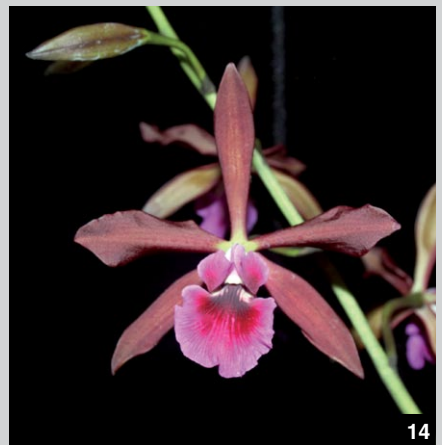
THOMAS HÖJER

10

University of Costa Rica, Cartago, Costa Rica; National Biodiversity Centre, Serbithang, Bhutan (stigidalstrom@gmail.com).

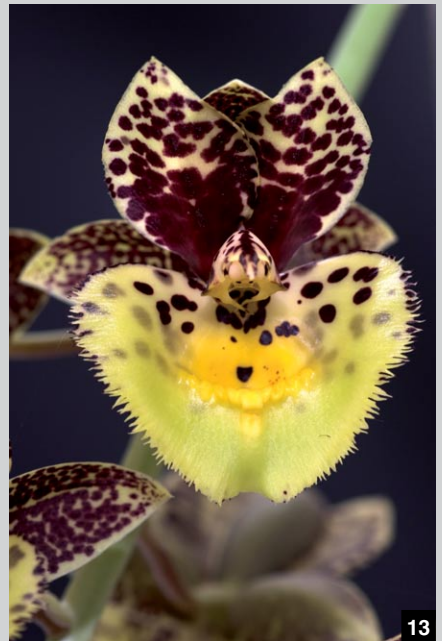
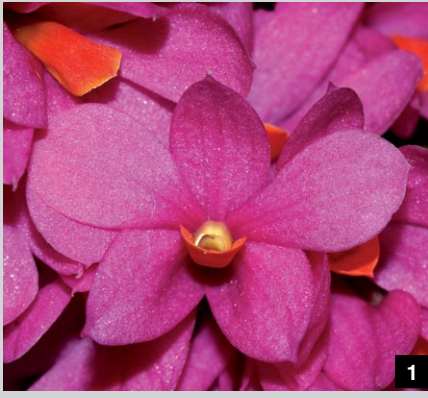
[9] From the left: Mr. Sadruddin, botanist and lecturer at the Sherabtshe College, Kanglung, Bhutan, discusses orchid flower dissection and measurements with author Kinley Rabgay and Sonam Lhendup to the right.

[10] The sun-baked soil has become hard and impenetrable during the dry season and needs to be tilled and fertilized before the monsoon rain arrives.





- [1] *Paphiopedilum* Gyorgy Nagy 'Memoria Vickie Nagy' (Black Buddha x *superbiens*) HCC/AOS 76 pts. Exhibitor: Gyorgy Nagy; photographer: Katie Payeur. Great Lakes Judging Center
- [2] *Cattleya pumila* 'Dark Knight' AM/AOS 83 pts. Exhibitor: Orchid Eros; photographer: Glen Barfield. Hawaii Judging Center
- [3] *Cattleya praestans* (Concolor) 'Orchid Eros' AM/AOS 82 pts. Exhibitor: Orchid Eros; photographer: Glen Barfield. Hawaii Judging Center
- [4] *Cattleya labiata* var. *coerulea* 'Magic World' AM/AOS 82 pts. Exhibitor: Tropical Orchid Farm; photographer: Michael Blietz. Hawaii Judging Center
- [5] *Paphiopedilum* Magical Peacock 'Slipper Zone Who'd A Thunk' HCC/AOS (Presidential Magic x Petula's Peacock) 77 pts. Exhibitor: Lehua Orchids; photographer: Glen Barfield. Hawaii Judging Center
- [6] *Cattleya bicolor* 'Lady with a Fan' AM/AOS 80 pts. Exhibitor: Orchid Eros; photographer: Glen Barfield. Hawaii Judging Center
- [7] *Paphiopedilum* Delightfully Macabre 'Slipper Zone Why' HCC/AOS (Luna Magic x Macabre Delight) 78 pts. Exhibitor: Lehua Orchids; photographer: Glen Barfield. Hawaii Judging Center
- [8] *Paphiopedilum* Luna Hijinks 'Slipper Zone Three's a Charm' HCC/AOS (Luna Magic x Luna Shadow) 77 pts. Exhibitor: Lehua Orchids; photographer: Glen Barfield. Hawaii Judging Center
- [9] *Paphiopedilum* Satin Cream 'Slipper Zone Freckled Cream' AM/AOS (Cinnamon Cream x Satin Veil) 82 pts. Exhibitor: Lehua Orchids; photographer: Glen Barfield. Hawaii Judging Center
- [10] *Paphiopedilum* Magically Wood 'Slipper Zone Pink Syn' AM/AOS (Magic Pops x Wood Wonder) 84 pts. Exhibitor: Lehua Orchids; photographer: Glen Barfield. Hawaii Judging Center
- [11] *Habenaria dentata* 'M and B' HCC/AOS 78 pts. Exhibitor: Max Thompson and Bryon Rinke; photographer: Bryon Rinke. Great Plains Judging Center
- [12] *Habenaria* Pegasus 'Honoli'i' Wings' HCC/AOS (*carnea* x *medusa*) 78 pts. Exhibitor: Sandra Dixon; photographer: Ed Cott. Great Lakes Judging Center
- [13] *Paphiopedilum* Flatteringly Wood 'Slipper Zone Majesty' HCC/AOS (Macbeth's Ghost x Captivatingly Wood) 79 pts. Exhibitor: Lehua Orchids; photographer: Glen Barfield. Hawaii Judging Center
- [14] *Catyclia* Maui Chocolate 'Valley Isle' AM/AOS (*Cattleya tenebrosa* x *Encyclia phoenicea*) 82 pts. Exhibitor: Exotic Orchids of Maui, Inc.; photographer: Glen Barfield. Hawaii Judging Center
- [15] *Habenaria medusa* 'Bryon Rinke' CCM-AM/AOS 87-84 pts. Exhibitor: Bryon K. Rinke; photographer: Bryon K Rinke. Great Plains Judging Center
- [16] *Rhynthonleya* Raspberry Lemonade 'Syzygy 2' AM/AOS (*Cattleytonia* Maui Maid x *Rhyncholaeliocattleya* Doctor Joe Walker) 81 pts. Exhibitor: Pete Ostlund; photographer: Ed Cott. Great Lakes Judging Center





14



15



16

- [1] *Dendrobium* Hibiki 'Pauwela Passion' AM/AOS (*bracteosum* x *laevifolium*) 83 pts. Exhibitor: Exotic Orchids of Maui, Inc.; photographer Michael Blietz. Hawaii Judging Center
- [2] *Rhyncholaeliocattleya* Sorpresa en Oro 'Maui Glow' AM/AOS (Fort Watson x Chia Lin) 80 pts. Exhibitor: Exotic Orchids of Maui, Inc.; photographer Michael Blietz. Hawaii Judging Center
- [3] *Ceratostylis* *retisquama* 'Makawao Alani' HCC/AOS 78 pts. Exhibitor: Andrew Okada; photographer: Michael Blietz. Hawaii Judging Center
- [4] *Paphiopedilum* Hsinying Alien 'Doug Flora' AM/AOS (Raisin Pie x Supersuk) 81 pts. Exhibitor: David Bird; photographer: Matthew Nutt. Mid-America Judging Center
- [5] *Phragmipedium* Eumelia Arias 'Pastor Brad Bray' HCC/AOS (*kovachii* x *schlimii*) 79 pts. Exhibitor: David Bird; photographer: Matthew Nutt. Mid-America Judging Center
- [6] *Rhyncholaeliocattleya* Shared Delight 'Easter Cheer' AM/AOS (*Cattleya* Mari's Song x Love Song) 81 pts. Exhibitor: Exotic Orchids of Maui, Inc.; photographer Michael Blietz. Hawaii Judging Center
- [7] *Prosthechea* *cochleata* (Alba) 'Aloha Aina' HCC/AOS 78 pts. Exhibitor: Aloha Aina Orchids; photographer: Michael Blietz. Hawaii Judging Center
- [8] *Paphiopedilum* Oriental Spring 'Bryon' HCC/AOS (Spring Moonbeam x Oriental Jewel) 78 pts. Exhibitor: Bryon K. Rinke; photographer: Bryon Rinke. Mid-America Judging Center
- [9] *Prosthechea* *cochleata* (Alba) 'Rogan's Gold' CCM/AOS 81 pts. Exhibitor: John Rogan; photographer: Maurice Marietti. Mid-Atlantic Judging Center
- [10] *Adenoncos* *parviflora* 'NWO Little Bee' CBR/AOS. Exhibitor: New World Orchids; photographer: David Taylor. Mid-America Judging Center
- [11] *Trichocentrum* Ella Fitz 'Reverend James Evans' HCC/AOS (*Splenku* x *lanceanum*) 77 pts. Exhibitor: Dennis Wollard; photographer: Malcolm McCorquodale. Houston Judging Center
- [12] *Psychopsis* Mendenhall 'Rogan's Gold' AM/AOS (*Butterfly* x *papilio*) 82 pts. Exhibitor: John Rogan; photographer: Maurice Marietti. Mid-Atlantic Judging Center
- [13] *Clowesetum* Lou Lodyga 'Andrew Caldwell' AM/AOS (Jumbo Lace x *Catasetum* Susan Fuchs) 82 pts. Exhibitor: William Caldwell; photographer: Malcolm McCorquodale. Houston Judging Center
- [14] *Phalaenopsis* *cornu-cervi* 'Red' CCM-AM/AOS 89-84 pts. Exhibitor: Exotic Orchids of Maui, Inc.; photographer Michael Blietz. Hawaii Judging Center
- [15] *Angraecum* *distichum* 'Valley Isle' CCE-AM/AOS 92-85 pts. Exhibitor: Exotic Orchids of Maui, Inc.; photographer Michael Blietz. Hawaii Judging Center
- [16] *Dendrobium* Enobi Purple 'Splashy' CCE-AM/AOS (Enobi Komachi x Laguna Princess) 92-88 pts. Exhibitor: Exotic Orchids of Maui, Inc.; photographer Michael Blietz. Hawaii Judging Center





12

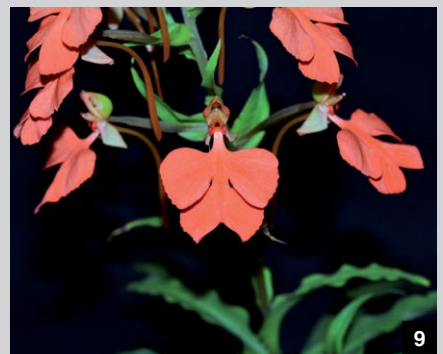


13

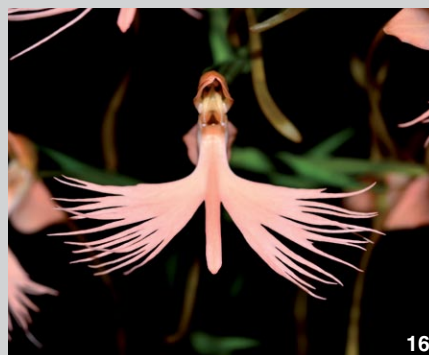


14

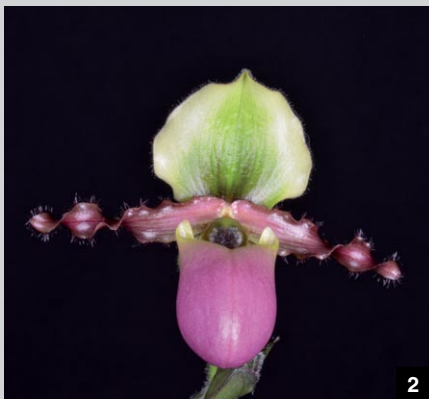
- [1] *Phragmipedium* Perufflora's Cirila Alca 'Anaïs Michaud' HCC/AOS (*kovachii* x *dalessandroi*) 79 pts. Exhibitor: Norman Michaud; photographer: Thang Dam. Toronto Judging Center
- [2] *Phalaenopsis cornu-cervi* f. *chattaladae* 'Ezra James' CCM/AOS 83 pts. Exhibitor: Michael Kauffman; photographer: Charles Ufford. Toronto Judging Center
- [3] *Phalaenopsis* Matthew Chen 'André's Favorite' HCC/AOS (Penang Girl x *violacea*) 77 pts. Exhibitor: Andre Couture; photographer: Thang Dam. Toronto Judging Center
- [4] *Phalaenopsis buyssoniana* 'Skyscraper' AM/AOS 84 pts. Exhibitor: Robert Griesbach; photographer: Julie Rotramel. National Capital Judging Center
- [5] *Habenaria rhodocheila* subsp. *rhodocheila* 'Deirdre' HCC/AOS 79 pts. Exhibitor: Dee and Bill Elbert; photographer: Bryan Ramsay. National Capital Judging Center
- [6] *Catasetum fuchsii* 'Jardin botanique de Montréal' HCC/AOS 79 pts. Exhibitor: Jardin botanique de Montréal; photographer: Thang Dam. Toronto Judging Center
- [7] *Paphiopedilum* Shadow Walker 'Blood Moon' AM/AOS (*liemianum* x Johanna Burkhardt) 83 pts. Exhibitor: Marc Kiriou; photographer: Bryan Ramsay. National Capital Judging Center
- [8] *Paphiopedilum* Fajen's Bold Helen 'Olive Klein' HCC/AOS (*helenae* x Doll's Kobold) 77 pts. Exhibitor: Joel Graham; photographer: Bryan Ramsay. National Capital Judging Center
- [9] *Bulbophyllum odoratissimum* 'Jardin botanique de Montréal' CCE/AOS 93 pts. Exhibitor: Jardin botanique de Montréal; photographer: Thang Dam. Toronto Judging Center
- [10] *Phalaenopsis pantherina* 'Golden Eagle' AM/AOS 80 pts. Exhibitor: Robert Griesbach; photographer: Julie Rotramel. National Capital Judging Center
- [11] *Habenaria rhodocheila* subsp. *rhodocheila* 'Deirdre' HCC/AOS 79 pts. Exhibitor: Dee and Bill Elbert; photographer: Bryan Ramsay. National Capital Judging Center
- [12] *Dendrobium glomeratum* 'Jardin botanique de Montréal' CCM/AOS 85 pts. Exhibitor: Jardin botanique de Montréal; photographer: Thang Dam. Toronto Judging Center
- [13] *Pectabeneria* Western Tanager (*Habenaria* Conure 'Judy' AM/AOS x *Pecteilis hawkesiana* 'Whatchamacallit') AQ/AOS. Exhibitor: Leon Glicenstein; photographer: Julie Rotramel. National Capital Judging Center
- [13 inset] *Pectabeneria* Western Tanager 'Judy' HCC/AOS (*Habenaria* Conure x *Pecteilis hawkesiana*) 78 pts. Exhibitor: Leon Glicenstein; photographer: Julie Rotramel. National Capital Judging Center
- [14] *Sobralia decora* 'Jardin botanique de Montréal' CCE/AOS 92 pts. Exhibitor: Jardin botanique de Montréal; photographer: Thang Dam. Toronto Judging Center







- [1] 'She Took Columbus Day' CMA/AOS. Exhibitor: Sarah Hurdel; photographer: Bryan Ramsay. National Capital Judging Center
- [2] *Fredclarkeara* Providence 'Brittane Stender' (*Mormodia* Jumbo World x *Catasetum pileatum*) AM/AOS 85 pts. Exhibitor: William Stender; photographer: Maurice Garvey. Northeast Judging Center
- [3] *Habenaria rhodocheila* '525,600 Minutes' HCC/AOS 78 pts. Exhibitor: James Heilig; photographer: Ken Jacobsen. Pacific Central Judging Center
- [4] *Paphiopedilum helenae* 'Judy Bouchard' CCM/AOS 84 pts. Exhibitor: Elizabeth Marinelli; photographer: Maurice Garvey. Northeast Judging Center
- [5] *Acianthera purpleoviolacea* 'Susan' CHM/AOS 82 pts. Exhibitor: Chuck and Sue Andersen; photographer: Robert Hesse. Northeast Judging Center
- [6] *Habenaria* True Colors 'All That Glitters' HCC/AOS (*roebbelenii* x *erichmichelii*) 79 pts. Exhibitor: James Heilig; photographer: Ken Jacobsen. Pacific Central Judging Center
- [7] *Paphiopedilum* x *hermannii* 'Sophia' CHM-HCC/AOS (*helenae* x *hirsutissimum*) 82-77 pts. Exhibitor: Fred Allen; photographer: Maurice Garvey. Northeast Judging Center
- [8] *Polystachya greatrexii* 'Lourens and Jolisa' CBR/AOS. Exhibitor: Chen Hao Hsu; photographer: Ken Jacobsen. Pacific Central Judging Center
- [9] *Habenaria* Hampson 'Ocqueoc' HCC/AOS (*rhodocheila* x *roebbelenii*) 79 pts. Exhibitor: James Heilig; photographer: Ken Jacobsen. Pacific Central Judging Center
- [10] *Cattleya* Sandra Spots 'Pink Sprinkles' (Orchidom Leopard x Mark Jones) HCC/AOS 78 pts. Exhibitor: Japheth Ko; photographer: Ken Jacobsen. Pacific Central Judging Center
- [11] *Habenaria* Pegasus (*carnea* 'Winter Haven' x *medusa* '1') AQ/AOS. Exhibitor: James Heilig; photographer: Ken Jacobsen. Pacific Central Judging Center
- [12] *Habenaria* Raingreen's Pink Paw 'Mona Berry' HCC/AOS (Tracey x *carnea*) 78 pts. Exhibitor: James Heilig; photographer: Ken Jacobsen. Pacific Central Judging Center
- [13] *Habenaria* Tanager 'Munising' HCC/AOS (*xanthocheila* x *rhodocheila*) 77 pts. Exhibitor: James Heilig; photographer: Ken Jacobsen. Pacific Central Judging Center
- [14] *Habenaria* Raingreen's Pink Paw 'Oscoda' HCC/AOS (Tracey x *carnea*) 77 pts. Exhibitor: James Heilig; photographer: Ken Jacobsen. Pacific Central Judging Center
- [15] *Habenaria* Pegasus 'Rick Stier' HCC/AOS (*carnea* x *medusa*) 78 pts. Exhibitor: James Heilig; photographer: Ken Jacobsen. Pacific Central Judging Center
- [16] *Habenaria* Sunrise Plumes 'Good Job Marni' AM/AOS (*roebbelenii* x *medusa*) 84 pts. Exhibitor: James Heilig; photographer: Ken Jacobsen. Pacific Central Judging Center





- [1] *Paphiopedilum* Hawaiian Peacock 'Slipper Zone Jacob's Coat' HCC/AOS (Hawaiian Illusion x Petula's Peacock) 77 pts. Exhibitor: Lehua Orchids; photographer: Chaunie Langland. Pacific Central Judging Center
- [2] *Paphiopedilum victoria-mariae* 'Tavel' HCC/AOS 75 pts. Exhibitor: Dave Sorokowsky; photographer: Chaunie Langland. Pacific Central Judging Center
- [3] *Stanhopea* Aidan 'Arya' HCC/AOS (*tricornis* x Newberry Stargazer) 76 pts. Exhibitor: William Jasen; photographer: Tim Morton. Pacific Northwest Judging Center
- [4] *Cymbidium erythrostylum* 'Mar Vista' AM/AOS 81 pts. Exhibitor: Robert Culver; photographer: Mike Pearson. Pacific Northwest Judging Center
- [5] *Guaricyclia* Rosy Ochoa 'Wolf Bay' HCC/AOS (*Plicaboa* x *Guarianthe bowringiana*) 76 pts. Exhibitor: Joff Morgan; photographer: Mike Pearson. Pacific Northwest Judging Center
- [6] *Phalaenopsis* Yaphon Red Pearl 'Arnie's Red' HCC/AOS (Samera x Shinger Pure Love) 78 pts. Exhibitor: Arnold Gum; photographer: Arnold Gum. Pacific South Judging Center
- [7] *Cattleya labiata* f. *rubra* 'Caley Madison Burzell' AM/AOS 82 pts. Exhibitor: Linden Burzell; photographer: Arnold Gum. Pacific South Judging Center
- [8] *Paphiopedilum* Jeweled Venus 'Slipper Zone Glowing Green' HCC/AOS (Jewel Green x Parisienne Venus) 76 pts. Exhibitor: Lehua Orchids; photographer: Chaunie Langland. Pacific Central Judging Center
- [9] *Eria scabrilinguis* 'My Pride' CBR/AOS. Exhibitor: Janeil Payne; photographer: Tim Morton. Pacific Northwest Judging Center
- [10] *Miltonia* Anne Warne 'Ruth Kelly' CCM/AOS (*Bluntii* x *spectabilis*) 87 pts. Exhibitor: George Pflaum; photographer: Arnold Gum. Pacific South Judging Center
- [11] *Vanda roeblingiana* 'Burning Bush' AM/AOS 81 pts. Exhibitor: Jack Li; photographer: Arnold Gum. Pacific South Judging Center
- [12] *Specklinia glandulosa* 'Flying Bike' CBR/AOS. Exhibitor: Mike Pearson; photographer: Mike Pearson. Pacific Northwest Judging Center
- [13] *Bulbophyllum* Doris Dukes 'Ever Special' (*fascinator* x *rothschildianum*) HCC/AOS 75 pts. Exhibitor: Marcia Romick; photographer: Mike Pearson. Pacific Northwest Judging Center
- [14] *Fredclarkeara* Beverly Danielson 'Corn!' AM/AOS (After Midnight x *Catasetum* Orchidglade) 82 pts. Exhibitor: Dan Forbes; photographer: Arnold Gum. Pacific South Judging Center
- [15] *Epidendrum peperomia* 'Big Beetle' AM/AOS 81 pts. Exhibitor: Deborah Halliday; photographer: Arnold Gum. Pacific South Judging Center
- [16] *Bulbophyllum phalaenopsis* 'Skeksis' AM/AOS 80 pts. Exhibitor: Alfred Hockenmaier; photographer: Arthur Pinkers. Pacific South Judging Center





11



13



14



12

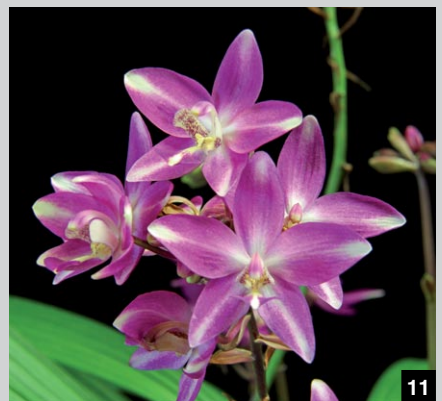


15



16

- [1] *Cattleya velutina* 'Gayle' AM/AOS 82 pts. Exhibitor: Gayle Brodie; photographer: Arthur Pinkers. Pacific South Judging Center
- [2] *Encyclia* Golden Sunset 'RB Golden Lila' HCC/AOS (Renate Schmidt x *aspera*) 75 pts. Exhibitor: Arthur Pinkers; photographer: Arthur Pinkers. Pacific South Judging Center
- [3] *Dendrobium* Aridang Blue 'Sarah's Jewel' AM/AOS (Singapore White x Burana Angel) 82 pts. Exhibitor: Deanna J DeLong; photographer: José A. González Pérez. Puerto Rico Judging Center
- [4] *Pseudolaelia corcovadensis* 'Memoria Luis Rivero' CHM/AOS 82 pts. Exhibitor: Jesús A. Mercado; photographer: José A. González Pérez. Puerto Rico Judging Center
- [5] *Dendrochilum latifolium* 'Beetle' HCC/AOS 78 pts. Exhibitor: Gene and Sandy Collins; photographer: Arthur Pinkers. Pacific South Judging Center
- [6] *Cymbidium* Doctor Seton 'Christmas' HCC/AOS (*Fifi* x *ensifolium*) 76 pts. Exhibitor: Duy Nguyen; photographer: Arthur Pinkers. Pacific South Judging Center
- [7] *Phalaenopsis* Tiannong Yellow Nice 'Morongo Fest' HCC/AOS (Taisuco Date x Sin-Yaun Golden Beauty) 77 pts. Exhibitor: Gubler Orchids; photographer: Arthur Pinkers. Pacific South Judging Center
- [8] *Paphiopedilum* Hsinying Alien 'Rolinda' HCC/AOS (Raisin Pie x Supersuk) 77 pts. Exhibitor: Ron and Linda Lang; photographer: Arthur Pinkers. Pacific South Judging Center
- [9] *Cattleya* Day Tripper 'Fuerte' AM/AOS (Tripp Johnston x Penny Kuroda (Caudebec Group)) 82 pts. Exhibitor: Outhay Viengkhou; photographer: Arthur Pinkers. Pacific South Judging Center
- [10] *Cattleya bicolor* subsp. *brasiliensis* 'RB Mega SanBar Bronze' HCC/AOS 77 pts. Exhibitor: Arthur Pinkers; photographer: Arthur Pinkers. Pacific South Judging Center
- [11] *Vandachostylis* Lou Sneary 'Alfred's Delight' CCM/AOS (*Vanda falcata* x *Rhynchostylis coelestis*) 83 pts. Exhibitor: Alfred Hockenmaier; photographer: Arthur Pinkers. Pacific South Judging Center
- [12] *Aranda* Christine 'White Spot' AM/AOS (*Arachnis hookeriana* x *Vanda Hilo Blue*) 82 pts. Exhibitor: Ramonita Vargas Nuñez; photographer: Irma Saldaña. Puerto Rico Judging Center
- [13] *Cattlianthe* Portia 'LM's Blue Fairy' AM/AOS (*Guarianthe bowringiana* x *Cattleya labiata*) 80 pts. Exhibitor: Lisa Marie Basilio; photographer: Arthur Pinkers. Pacific South Judging Center
- [14] *Cattleya* Rivermont Imperial 'Firma' CCM/AOS (Bow Bells x *Ioddigesii*) 83 pts. Exhibitor: Francisco Rodríguez Vargas; photographer: José A. González Pérez. Puerto Rico Judging Center
- [15] *444richoglottis atropurpurea* 'Paraíso Tropical' CCE/AOS 91 pts. Exhibitor: Carlos Fighetti; photographer: Irma Saldaña. Puerto Rico Judging Center
- [16] *Vanda falcata* 'Paul Gripp' CCE-FCC/AOS 95-91 pts. Exhibitor: Santa Barbara Orchid Estate; photographer: Larry Vierheilg. Pacific South Judging Center





12



13



14



15



16

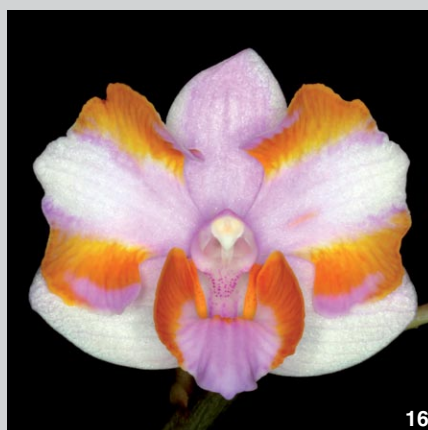


17

- [1] *Paphiopedilum* Yongala 'Pikes Peak' AM/AOS (Transvaal x *chamberlainianum*) 80 pts. Exhibitor: Lois Dauelsberg; photographer: J. Bruce Embury. Rocky Mountain Judging Center
- [2] *Phragmipedium* Bethewa 'Fairy Tails' HCC/AOS (*caudatum* x *pearcei*) 77 pts. Exhibitor: Marion Allen; photographer: J. Bruce Embury. Rocky Mountain Judging Center
- [3] *Paphiopedilum* Dreams of Venus 'Louisiana' HCC/AOS (Dreaming Mele x *venustum*) 78 pts. Exhibitor: Al Taylor Photographer: Charlie Riner. Shreveport Judging Center
- [4] *Paphiopedilum* Macabre Pops 'CAD's Burgundy Whopper' AM/AOS (Macabre Magic x Magic Pops) 83 pts. Exhibitor: David Bryan; photographer: Ed Cott. Toronto Judging Center
- [5] *Phragmipedium* Manzur la Aldea 'ThienNgo Le' HCC | AOS (*schlimii* var. *manzurii* x *besseae*) 77 pts. Exhibitor: ThienNgo Le; photographer: J. Bruce Embury. Rocky Mountain Judging Center
- [6] *Epidendrum* *difforme* 'Dixie Gem' CCM/AOS 88 pts. Exhibitor: Mary Mancini; photographer: Charlie Riner. Shreveport Judging Center
- [7] *Paphiopedilum* *stonei* f. *luteoalbum* 'Hilo Lemon-n-Lime' CHM/AOS 82 pts. Exhibitor: John Doherty; photographer: Ed Cott. Toronto Judging Center
- [8] *Paphiopedilum* Magical Peacock 'Jessie and Ron' AM/AOS (Presidential Magic x Petula's Peacock) 84 pts. Exhibitor: Charles Spinelli; photographer: Kurt Keller. Rocky Mountain Judging Center
- [9] *Paphiopedilum* Patricia Roberts Monahan 'Rayz Amaz' AM/AOS (Sander's Pride x Susan Booth) 83 pts. Exhibitor: Ray Smith; photographer: Kurt Keller. Rocky Mountain Judging Center
- [10] *Cattleytonia* Jamaica Red 'Sentinel' AM/AOS (*Broughtonia sanguinea* x Keith Roth) 80 pts. Exhibitor: William K Parker, Jr.; photographer: Charlie Riner. Shreveport Judging Center
- [11] *Spathoglottis* *plicata* 'Banana Berry' JC/AOS. Exhibitor: David James Medus; photographer: Charlie Riner. Shreveport Judging Center
- [12] *Platystele* *reflexa* 'Ethan Orion' CCM/AOS 85 pts. Exhibitor: George Oberst; photographer: Kurt Keller. Rocky Mountain Judging Center
- [13] *Vandachostylis* Viboon Velvet 'Cobalt Treasure' AM/AOS (*Vanda* Tubtim Velvet x *Rhynchostylis coelestis*) 80 pts. Exhibitor: Doug and Terry Kennedy; photographer: Ed Cott. Toronto Judging Center
- [14] *Clowesetum* Upper Echelon 'B-C' AM/AOS (Jumbo Lace x *Catasetum* Orchidglade) 82 pts. Exhibitor: B. Butts - C. Lefaive; photographer: Ed Cott. Toronto Judging Center
- [15] *Trichocentrum* Ella Fitz 'Bernie Medlin' HCC/AOS (Splenu x *lanceanum*) 75 pts. Exhibitor: Dennis Wollard; photographer: Charlie Riner. Shreveport Judging Center
- [16] *Catasetum* Calcasieu 'Rare Earth Orchids' HCC/AOS (*cirrhaeoides* x *rectangularis*) 77 pts. Exhibitor: Steve Moffitt; photographer: Charlie Riner. Shreveport Judging Center
- [17] *Vanda* Donna Cohen 'Purple Passion' HCC/AOS (Golamco's Blue Classic x Ken Slump) 77 pts. Exhibitor: Carol Stauder; photographer: Charlie Riner. Shreveport Judging Center







- [1] *Brassocattleya* Lee's Ruby 'Georgia Grandson's Glory' HCC/AOS (*Cattlianthe* Chocolate Drop x *Rhyncattleanthe* Martha Clarke) 79 pts. Exhibitor: Wayne Parrish; photographer: Ralph Zebelin. West Palm Beach Judging Center
- [2] *Renanopsis* Lena Rowold 'Joden's Delight' AM/AOS (*Renanthera storiei* x *Vandopsis lissochiloides*) 82 pts. Exhibitor: Joe Ortlieb; photographer: Tom Kuligowski. West Palm Beach Judging Center
- [3] *Dendrobium lasianthera* 'Dieu' AM/AOS 82 pts. Exhibitor: So Orchids; photographer: Tom Kuligowski. West Palm Beach Judging Center
- [4] *Cattleya* Fuchsia Doll 'Harborcrest' AM/AOS (*sincorana* x Sierra Doll) 87 pts. Exhibitor: Jill Livesey; photographer: Judith Higham. Western Canada Judging Center
- [5] *Clowesetum* Jumbo Circle 'B-C' AM/AOS (*Clowesia* Jumbo Grace x *Catasetum cirrhaeoides*) 82 pts. Exhibitor: B. Butts - C. Lefaive; photographer: Ed Cott. Toronto Judging Center
- [6] *Ceratostylis retisquama* 'Pumpkin' CCM/AOS 83 pts. Exhibitor: Peter and Sherry Decyk Photographer: Jay Norris. Toronto Judging Center
- [7] *Masdevallia* Confetti 'Spikenard' CCE/AOS (*strobilii* x *glandulosa*) 90 pts. Exhibitor: Rick Rancourt; photographer: Judith Higham. Western Canada Judging Center
- [8] *Phalaenopsis pulcherrima* f. *caerulea* (Champornensis) 'Dilithium' CHM/AOS 81 pts. Exhibitor: Drew Goddard; photographer: Jay Norris. Toronto Judging Center
- [9] *Phragmipedium* Sorcerer's Apprentice 'Patricia's Giant' CCM/AOS (*longifolium* x *sargentianum*) 83 pts. Exhibitor: Doug and Terry Kennedy; photographer: Jay Norris. Toronto Judging Center
- [10] *Dendrobium* Hibiki 'TG's Lava Bouquet' CCM/AOS (*bracteosum* x *laevifolium*) 85 pts. Exhibitor: Calvin Wong and Tropical Gardens Orchids; photographer: Judith Higham. Western Canada Judging Center
- [11] *Paphiopedilum* Sander's Pride 'Memoria L. I. Glizer' AM/AOS (*sanderianum* x *stonei*) 88 pts. Exhibitor: Silvia Fabry; photographer: Judith Higham. Western Canada Judging Center
- [12] *Lepanthes sijmii* 'Hill Island' CCM/AOS 87 pts. Exhibitor: Joyce Medcalf; photographer: Ed Cott. Toronto Judging Center
- [13] *Paphiopedilum* Joseíto 'Crystal Star' AM/AOS (Nike's Sunny Delight x Pinocchio) 82 pts. Exhibitor: Crystal Star Orchids Ellen & Eric Lee; photographer: Ed Cott. Toronto Judging Center
- [14] *Paphiopedilum wilhelminae* 'Ibn's Magic Touch' FCC/AOS 90 pts. Exhibitor: Sasha Kubicek; photographer: Judith Higham. Western Canada Judging Center
- [15] *Paphiopedilum* Macabre Illusion 'Memoria Glenda Lask' HCC/AOS (Hawaiian Illusion x Macabre Contrasts) 79 pts. Exhibitor: Gyorgy Nagy; photographer: Katie Payeur. Great Lakes Judging Center
- [16] *Phalaenopsis pulcherrima* 'Alex Basisk's Battle' AM/AOS 81 pts. Exhibitor: Dennis Seffernick; photographer: Katie Payeur. Great Lakes Judging Center

JANUARY

**4–5—Sarasota Orchid Society Show “Orchids in Paradise,”** Sarasota Municipal Auditorium, 801 N. Tamiami Trail, Sarasota, FL; Contact: Marta Hudson, 941–376–7630; martadiazhudson@gmail.com  
 michaelshaberl@comcast.net

**10–12—Fort Lauderdale Orchid Society Show “The 20/20 Orchid Vision,”** The Greater Fort Lauderdale Broward County Convention Center, 1950 Eisenhower Boulevard, Fort Lauderdale, FL; Contact: Michael Schaberl, 954–683–9615; michaelshaberl@comcast.net

**11–12—Florida West Coast Orchid Society Show,** Seminole Recreation Center, 9100 113th Street, Seminole, FL; Contacts: Bill Nunez, 727–239–2700; biddison22@aol.com

**16–19—Sociedad de Orquidistas del Caribe “Guayama Vive el encanto,”** Guayama Centrico, Carr 3, Guayama, PR; Contact: Dr. Julio David Rios, 787–649–2655; david1156@hotmail.com

**17–19—Miami Orchid Society’s “Tamiami International Orchid Festival,”** Dade County Fairgrounds Expo Center, Fuchs Pavilion, 10901 Coral Way (SW 24 St.), Miami, FL; Contact: Martin Motes, 305–282–7520; martinmotes@gmail.com

**17–19—North Jersey Orchid Society Show and Sale,** Rutgers University, Douglass Cook Student Center, 100 George St., New Brunswick, NJ; Contact: Carrie Buchman, 201–410–3089; cbuchman@tncc.net

**24–26—Gulf Coast Orchid Society Show & Sale,** Gautier Convention Center, 2012 Library Lane, Gautier, MS; Contact: Jo Ann Vaz, 601–530–8778; joannvaz@bellsouth.net

**25—National Capital Orchid Society “40th Annual Paphiopedilum Forum,”** U.S. National Arboretum, 3501 New York Avenue NE, Washington, DC; Contact: Roddy Gabel and Jay Tullos, 301–646–3657; former\_zygote@hotmail.com

**25–26—Cape and Islands Orchid Society Annual Show,** The Resort and Conference Center, 35 Scudder Ave., Hyannis, MA; Contact: Tina Balog, 508–540–5006; tina@plaid.wholedu

**25–26—Grand Valley Orchid Society Show,** Frederick Meijer Gardens & Sculpture Park, 1000 East Beltline NE, Grand Rapids, MI; Contact: Mei Ling Clemens, 231–557–2647; meilingclemens@gmail.com

**25–26—Orchid Society of Minnesota “St. Paul Winter Carnival Orchid Show,”** Marjorie McNeely Conservatory, 1225 Estabrook Drive, St. Paul, MN; Contact: Michael Dyda, 612–223–4059; michael1027us@yahoo.com

**25–26—Peninsula Orchid Society Show**

**& Sale,** Community Activities Building, 1400 Roosevelt Ave., Redwood City, CA; Contact: Mike Drilling, 650–692–8998; mike.drilling@gmail.com

**29—February 2—Asociacion de Orquidistas del Sur “2020 PR First Orchids Festival,”** Plaza del Caribe Mall, 2050 Ponce By Pass, Suite 111, Ponce PR; Contact: Francisco Martinez, 787–487–1917; francisco.martinez@hilton.com

**31—February 2—Central Vancouver Island Orchid Society Annual Show & Sale,** Nanaimo North Town Centre, 4750 Rutherford Road, Nanaimo, BC, Canada; Contact: Darlene Rathwell, 250–753–4208; Islandar@telus.net

**31—February 2—Susquehanna Orchid Society Show “For the Love of Orchids,”** Milton and Catherine Hershey Conservatory at Hershey Gardens, 170 Hotel Road, Hershey, PA; Contact: Lorna Deibert, 717–825–7827; lornadeibert@aol.com

FEBRUARY

**1–2—Madison Orchid Growers Guild “Orchid Quest,”** Olbrich Botanical Gardens, 3330 Atwood Ave., Madison, WI; Contact: Terri Jozwiak, 608–592–7906; lodijoz@charter.net

**1–2—Orchid Society of Greater St. Louis “Orchids on Safari,”** Missouri Botanical Garden, 4344 Shaw Blvd., St. Louis, MO; Contact: Erin Vasconcelles, 217–725–7749; showchair@osogsl.org

**1–2—Venice Area Orchid Society Annual Show & Sale,** Venice Community Center, 326 S. Nokomis Ave., Venice, FL; Contact: Carol Wood, 941–497–4995; cwood12@msn.com

**6–9—Deep Cut Orchid Society Show & Sale,** Dearborn Market, 2170 Route 35 South, Holmdel, NJ; Contact: Brenda Pauwels, 732–687–7805; dcos.show.chair@gmail.com

**7–9—Newport Harbor Orchid Expo and Sale “Orchids on Parade,”** Westminster Mall, 1025 Westminster Mall, Westminster, CA; Contact: Richard Hara, 714–651–9970; worknut49@aol.com

**8–9—Boca Raton Orchid Society Show “In Love With... Orchids,”** Safe Schools Institute, 1790 NW Spanish River Blvd., Boca Raton, FL; Contact: Carla Lacher, 561–843–6134; cmlacher@hotmail.com

**8–9—Southern Ontario Orchid Society Orchid Show & Sale,** Toronto Botanical Garden, 777 Lawrence Avenue East, Toronto, Ontario, Canada; Contact: Cathy Dunn, 416–697–8747; show@soos.ca

**13–16—Sociedad Dominicana de Orquideologia “Orquifiesta 2020,”** National Botanical Garden of Santo Domingo, Av. Republica de Colombia, Av

de Los Proceres, Santo Domingo, Rep. Dominicana; Contact: Maritza Camacho, 809–707–0644; maritzacamacho05@yahoo.com

**14–16—Asociación Orquideologica de Escazú “Festival de Orquideas Escazú 2020,”** Avenida Escazú, Escazú, San Jose, Costa Rica; Contact: Gabriel Antich Artavia, (506) 8874–5558; di.rbzam@gmail.com

**14–16—Batavia Orchid Society Show,** DuPage County Fairgrounds, 2015 Manchester Rd., Wheaton, IL; Contact: Larry Sexton, 630–406–8460; orkiddoc@aol.com

**14–16—\*Greater Orlando Orchid Society Annual Show & Sale,** Orlando Garden Club Inc, 710 East Rollins Street, Orlando, FL; Contact: John Meyer, 407–695–2122 or David White, 407–712–3818

**15–16—Greater Cleveland Orchid Society 2020 Spring Show & Sale,** Cleveland Botanical Garden, 11030 East Blvd., Cleveland, OH; Contact: Marc Pollack, 440–565–7529; marcpoll@sbcglobal.net

**15–16—Miami Valley Orchid Society Show,** Cox Arboretum MetroPark, 6733 Springboro Pike, Dayton, OH; Contact: Kristen Mason, 513–502–5408; orchidbiochem@aol.com

**15–16—Orchid Society of Highlands County “Orchids From the Heart,”** Agri-Civic Center, 4509 George Boulevard, Sebring, FL; Contact: Susie Whitehead, Lori Coon, Marlen Martinez, 863–446–0189; cmghmartinez@gmail.com

**15–16—Port Saint Lucie Orchid Show “Orchid Jungle Book,”** Port Saint Lucie Botanical Gardens, 2410 SE Westmoreland Blvd., Port Saint Lucie, FL; Contact: Claudia Young, 757–879–2142; oma.young@ymail.com

**19–23—Asociación Guatemalteca de Orquideologia National Show,** Salón Sicial José Mariano Arzú Castillo, Cerveceria Centro Armerican, SA. 3g Avda. 17–16 Finca El Zapote, Zona 2, Gautemala City; Contact: Julio Fonseca, 502–5411–0694; jfonsecaorchids@gmail.com

**20–23—San Francisco Orchid Society “Pacific Orchid Exposition,”** Hall of Flowers at Golden Gate Park, 1199 9th Avenue, San Francisco, CA; Contact: James Carmichael, 415–307–1442; dexdah@yahoo.com

**21–23—St. Croix Orchid Society Show “20/20 A Vision of Orchids,”** St. George’s Botanical Gardens, 127 Estate St. George, Frederiksted, USVI; Contact: Michelle Thurland–Martinez, 340–690–1330; mmthurland@gmail.com

**21–23—Virginia Orchid Society Show “PICTURE THIS,”** Strange’s Florists, Greenhouses and Garden Center, 12111 West Broad Street, Richmond, VA; Contact: Gary Marshall, 412–521–2877;

g.marshall@chatham.edu

**22-23—Amherst Orchid Society Show,** Smith Vocational and Agricultural High School, 80 Locust St. (Rt. 9), Northampton, MA; Contact: Marc D. Gray, 802-348-7926; bulbophyllum@myfairpoint.net

**22-23—Greater Lansing Orchid Society Orchid Show,** Michigan State University, Plant & Soil Sciences Bldg., 1066 Bogue St., East Lansing, MI; Contact: Peter Ostlund, 517-449-5248; p.ostlund@yahoo.com

**22-23—Naples Orchid Society Show,** Naples Botanical Garden, 4820 Bayshore Drive, Naples, FL; Contact: Richard Pippen, 239-775-5220; rpippen@comcast.net

**28—March 8—Pennsylvania Horticultural Society “2020 Philadelphia Flower Show,”** Pennsylvania Convention Center, 1101 Arch Street, Philadelphia, PA; Contact: Betty Greene, 215-988-8826; bgreene@pennhort.org

**29—March 1—Greater Cincinnati Orchid Society Spring Show & Plant Sale,** Krohn Conservatory, 1501 Eden Park Drive, Cincinnati, OH; Contact: Cheryl Jaworski, 812-438-2898; jaworchid@gmail.com

**29—March 1—Orchid Society of the Royal Botanical Gardens “39th Annual Orchid Show,”** Royal Botanical Gardens, 680 Plains Road West, Burlington, ON, Canada; Contact: Ben Boers, 905-979-4886; bmboers@hotmail.com

**29—March 1—Victoria Orchid Society Spring Show & Sale,** Our Lady of Fatima Hall, 4635 Elk Lake Dr., Victoria, BC; Contact: Alida Bower/Cat Fruitiger Co Chair, 250-514-2965; ledaboyes@hotmail.com

## MARCH

**6-7—Greater North Texas Orchid Society Show “Orchid Majesty,”** Richardson Civic Center, 411 W Arapaho Rd., Richardson, TX; Contact: Linda Horton, 972-977-6969; henry.horton4@verizon.net

**6-8—Central California Orchid Society Spring Show,** Fresno Home and Garden Show, Fresno Fair Grounds, 1121 S. Chance Ave., Fresno, CA; Contact: Gordon Wolf, 209-999-0181; gwsangca@yahoo.com

**6-8—Martin County Orchid Society Show,** Martin County Fairgrounds, Building G, 2616 SE Dixie Hwy., Stuart, FL; Contact: Debbie Wilson, 561-351-1515; davedebwilson@hotmail.com

**6-8—Maryland Orchid Society Show & Sale,** Maryland State Fairgrounds, 2200 York Road, Timonium, MD; Contact: Marc Kiriou, 443-509-0084; gothiclord01@yahoo.com

**6-8—Orchid Society of the Ozarks “10th Annual Orchids in the Garden,”** Botanical Garden of the Ozarks, 4703 North Crossover

Road, Fayetteville, AR; Contact: Stephen Marak, 479-841-4275; samarak@cox.net

**7-8—2020 Greater Akron Orchid Society Spring Show,** Rohr & Sons Nursery—Garden Center, 7211 Portage Street NW, Massillon, OH; Contact: Jane Bush, 440-429-5779; bushjj@juno.com

**7-8—Mount Baker Orchid Society Show & Sale,** Skagit Valley Gardens, 18923 Peter Johnson Road, Mount Vernon, WA; Contact: Elizabeth Pernotto, 360-647-1752; betsyp1045@gmail.com

**7-8—Northeastern Wisconsin Orchid Society Spring Show,** DoubleTree by Hilton, 150 Nicolet Road, Appleton, WI; Contact: Dave Bluma/Lorraine Heydon, 920-869-2247; lorrainesgems@yahoo.com

**7-8—Tampa Bay Orchid Society Show “Orchids 20/20 Perfect Vision,”** Tampa Scottish Rite Center, 5500 Memorial Highway, Tampa, FL; Contact: Eileen Hector, 813-368-7353; TampaBayOrchidSociety@verizon.net

**13-14—Englewood Area Orchid Society “Orchids by Lemon Bay,”** Englewood United Methodist Church, 700 E Dearborn Street, Englewood, FL; Contact: Mary Anne DiGrazia, 941-697-9237; tommaryanne@centurylink.net

**13-15—Orchid Society of Coral Gables Show,** Fairchild Tropical Botanic Garden, Garden Room, 10901 Old Cutler Road, Coral Gables, FL; Contact: Melana Davison, 760-212-8919; orchidiva@att.net

**14-15—Calcasieu Orchid Society “Easter Parade of Orchids,”** 1911 Historic City Hall Arts & Cultural Center, 1001 Ryan Street, Lake Charles, LA; Contact: Keith Joiner, 318-614-3516; kjoiner2000@yahoo.com

**14-15—Denver Orchid Society Spring Show & Sale “High on Orchids,”** Denver Botanic Gardens, 1007 York Street, Denver, CO; Contact: Shirlee McDaniels, 303-905-7014; shirlee5280@gmail.com

**14-15—Orchid Society of Western Pennsylvania Annual Spring Show “An Orchid Journey,”** Crowne Plaza Hotel, 164 Fort Couch Road, Pittsburgh, PA; Contact: Sheila Nathanson, 412-576-1704; mnsan@gmail.com

**20-22—Gulf Coast Orchid Alliance Show,** North Collier Regional Park, 15000 Livingston Road, Naples, FL; Contact: Jim Longwell, 239-340-5520; jlongwell1@comcast.net

**20-22—North Carolina Piedmont Orchid Society Show,** Daniel Stowe Botanical Garden, 6500 South New Hope Road, Belmont, NC; Contact: Linda T. Wilhelm, 704-393-1740; orchidfrau@bellsouth.net

**20-22—Windward Orchid Society Show,** Samuel Wilder King Intermediate School, 46-155 Kamehameha Highway, Kaneohe, HI; Contact: Susan L. Lim, 808-728-1014; slim@hawaiiantel.net

**21-22—Illowa Orchid Society Spring Show,** Quad City Botanical Center, 2525 4th Avenue, Rock Island, IL; Contact: Deno Kandis, 309-737-2672; emkandis@mchsi.com

**21-22—Jacksonville Orchid Society Show,** Garden Club of Jacksonville, 1005 Riverside Ave., Jacksonville, FL; Contact: Eric Cavin, 904-334-8519; dirt2021@yahoo.com

**21-22—Nutmeg State Orchid Society Show “Come See Our Bloomers,”** West Hartford Meeting & Conference Center, 50 South Main St., West Hartford, CT; Contact: Sandy Myhalik, 860-677-0504; myhalik@comcast.net

**27-29—Genesee Region Orchid Society Spring Show & Sale,** Rochester Museum & Science Center, Eisenhart Auditorium, 657 East Avenue, Rochester, NY; Contact: Jonathan Jones, 585-721-7150; jonathanjones2012@gmail.com

**27-29—Orchid Society of Alberta “Orchid Fair 2020,”** Enjoy Centre, 101 Riel Drive, St. Albert, AB, Canada; Contact: Darrell Albert, 780-903-2299; darrell.albert@albert-it.com

**27-29—San Diego County Orchid Society Spring Show “Orchid Magic,”** Scottish Rite Center, 1895 Camino del Rio South, San Diego, CA; Contact: Deborah Halliday, 858-756-3578; debhallid@gmail.com

**27-29—Terrebonne Orchid Society Show & Sale,** Southland Mall, 5953 West Park Ave., Houma, LA; Contact: Karen Breaux/Denise Mitchell, 985-709-6348; kfbreaux@bellsouth.net


**28-29—Central Florida Orchid Society Show “It’s Raining Orchids,”** National Guard Armory, 2809 S Ferncreek Ave., Orlando, FL; Contact: Teri Scott, 407-463-0274; teriscottfla57@aol.com

**28-29—Greater Omaha Orchid Society “33rd Annual Orchid Show & Sale,”** Lauritzen Gardens, 100 Bancroft St., Omaha, NE; Contact: Jim Pyszynski, 402-734-4112; jpyrzynski@cox.net

**28-29—Michigan Orchid Society Spring Show,** United Food & Commercial Workers Union Bldg., 876 Horace Brown Drive, Madison Heights, MI; Contact: Joe Peterson, 248-528-1453; jandjandabbey@aol.com

**28-29—Nature Coast Orchid Society Spring Show 2020,** VFW Post 8681, 18940 Drayton Street, Spring Hill, FL; Contact: Steve Mattana, 218-556-1895; stevemattana123@gmail.com

Events preceded by an asterisk (\*) in this listing will not be judged by the AOS.



**CYMBIDIUM  
SOCIETY  
OF  
AMERICA**

*A world of  
cymbidiums,  
paphiopedilums and  
phragmipediums*

\$35/year US  
\$55/year outside the US  
CSA Membership  
5710 Hollister Ave, #270  
Goleta, CA 93117

[www.cymbidium.org](http://www.cymbidium.org)

## Have Orchids Delivered

Give the gift of *Orchids* magazine every month, twelve issues  
(print and/or digital format)

U.S. Individual — one year \$65 • U.S. Joint — one year \$80  
Plus, access to special "members' only" educational opportunities



For American Orchid Society membership information and benefits, please go to [www.aos.org](http://www.aos.org), call the membership office at 305-740-2010 or email [TheAOS@AOS.org](mailto:TheAOS@AOS.org).



American Orchid Society  
Education. Conservation. Research.

## HOME REMEDIES

- Rather than expensive and potentially dangerous herbicides, spray full-strength vinegar to kill weeds between pavers and on greenhouse floors. (Do not spray on orchids.)
- Aspirin (just ¼ of one 325 mg tablet per gallon of water) helps protect plants from fungal and viral pathogens when used as a spray. More is NOT better. Do not exceed this amount.
- Homemade insecticide (mix in a 1 gallon [3.8 L] jug): 1 pint (0.5 L) rubbing alcohol, 1 pint (0.5 L) 409 spray cleaner, and 3 quarts (2.8 L) water. Apply as a spray.
- Isopropyl (rubbing) alcohol can be put into an empty spray bottle and used to treat scale, mealybugs, thrips, aphids, red spider mites and perhaps other pests. It works only while wet and must contact the insect.
- Neosporin has been reportedly used to treat orchid crown rot; remove rotted area of plant before treatment.



# MOW

MAUI ORCHID  
WHISPERER

## Live orchid sales

Every Saturday @12 noon  
Hawaii time

join us on facebook  
[@mauiorchidwhisperer](https://www.facebook.com/mauiorchidwhisperer)  
(808) 268-1227



**Too cold in the winter  
greenhouse?**

Stick one side of Velcro disks a foot apart onto the inside of the north side of the greenhouse to fit the shape of the foil-covered, bubble-wrap-type batts like the material used as jackets for hot water heaters. It can be purchased in rolls. The foil will reflect light back into the greenhouse and the bubble wrap will help insulate against the cold. It may also be used to insulate the west side of the greenhouse on the outside to help keep the greenhouse cool during the summer months.  
— Jean Allen-Ikeson



Friday,  
February 21  
through  
Sunday,  
February 23,  
2020

HUNDREDS OF  
ORCHIDS ON DISPLAY!  
\*  
ORCHIDS FOR SALE!  
\*  
EXCITING RAFFLES!

stcroixorchidsociety@yahoo.com

*The St. Croix Orchid Society, Inc.*  
49<sup>TH</sup> Annual Orchid Show  
*20/20 A Vision of Orchids!*

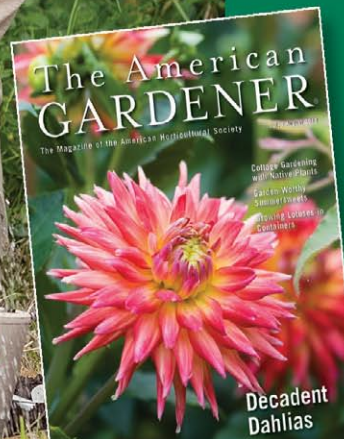
GREAT HALL  
THE BOTANICAL GARDEN OF THE VIRGIN ISLANDS  
Estate St. George, St. Croix, U.S. Virgin Islands



The American Horticultural Society (AHS) is a national membership organization that supports sustainable and earth-friendly gardening.

Member benefits include:

- Six issues of *The American Gardener* magazine
- Opportunity to participate in the annual AHS Seed Exchange program
- Access to members-only area of website
- Free admission and other discounts at 300 public gardens and arboreta



Join the  
American  
Horticultural  
Society

JOIN TODAY!  
Visit  
[www.ahsgardening.org/join](http://www.ahsgardening.org/join)

## THE AFRICAN VIOLET MAGAZINE

*A must for all  
African Violet Growers*

Six 64-page issues with color  
Full of Growing Information

USA – \$35.00 Canada – \$40.00  
International – \$60.00

**Order Today**

409-839-4725 \* 1-800-770-AVSA

The African Violet Society of  
America, Inc.  
2375 North Street,  
Beaumont, Texas 77702

*"We make growing ... easy!"*



## Join for Two Years and Receive a \$30 Orchid Certificate

Join the AOS for two years or renew  
your membership for two years and you'll  
receive a certificate good for \$30 off a retail plant  
purchase of \$100 or more at one of these nurseries:

- Carmela Orchids • Carter and Holmes • Exotic Orchids of Maui
- Gold Country Orchids • Hillsview Gardens • Indoor Gardening Supplies
- Kelley's Kerner Orchid Supplies • Krull-Smith • Little Brook Orchids • Mountain View Orchids
- New Earth Orchids • OFE International • Orchid Doctor • Orchid Inn • Ravenvision
- Orchids In Our Tropics • Piping Rock Orchids • Quest Orchids • R. F. Orchids
- Soraa Orchids • Sunset Valley Orchids • Tropical Gardens Orchids

You will receive your \$30 certificate in your new member/renewal packet. The certificate is good for six months. The certificate is not good for any advertised specials, taxes or shipping and handling charges.

**Don't delay! Act now!**

Email membership@aos.org • Website www.aos.org

American Orchid Society  
at Fairchild Tropical Botanic Garden  
10901 Old Cutler Road  
Coral Gables, FL 33156



American Orchid Society  
Education. Conservation. Research.

## Australian Orchid Review



Subscribe now to Australia's  
oldest orchid magazine (Est. 1935)

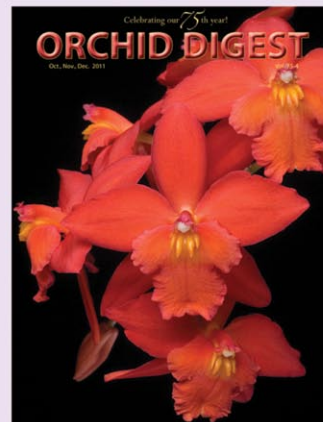
Six issues per year – large A4 color format  
Covers all genera, including Australian Natives,  
with a large section on cymbidiums in every issue.

**For more information**

Email [sales@australianorchidreview.com.au](mailto:sales@australianorchidreview.com.au)

Become a member of...

## Orchid Digest



Award winning  
orchid journalism  
for the  
*serious*  
grower.

Published  
quarterly in full  
color.

[www.orchiddigest.org](http://www.orchiddigest.org)

US addresses: \$39 per year  
Addresses outside the US: \$55 per year

Join online or mail check or credit card information in US funds only to:

Orchid Digest

PO Box 6966  
Laguna Niguel, CA 92607-6966

Visa, Mastercard accepted, please include your name as it appears on the card, card number and expiration date. The Orchid Digest is a 501(c)3 organization.

# ORCHID MARKETPLACE

**REXIUS**  
**ORCHID BARK**

[dans@rexius.com](mailto:dans@rexius.com)  
**888-4-REXIUS**  
*one pallet minimum*

**Heat-Treated Douglas Fir Bark**

**Gothic Arch Greenhouses**

**Catch the Sunshine!**

- Greenhouse Kits
- Equipment • Supplies

**800-531-GROW (4769)**  
[GothicArchGreenhouses.com](http://GothicArchGreenhouses.com)

*A new Wardian Case*

[www.Orchidarium.us](http://www.Orchidarium.us)

or call 612-298-6396 to order.

**REDWOOD OR ALUMINUM GREENHOUSES**

**America's BEST Values!**

[robsbg@aol.com](mailto:robsbg@aol.com) • [www.sbggreenhouse.com](http://www.sbggreenhouse.com)  
**FREE COLOR CATALOG (800) 544-5276**  
**SANTA BARBARA GREENHOUSES**  
721 RICHMOND AVE.-A, OXNARD, CA 93030

ORCHID HOUSE OF ARROYO GRANDE, CALIFORNIA

For reservations:  
Nipomo Grande Cymbidium and Dendrobium Orchid Nursery  
(805)203-5090  
Details @NGOrchids  
One Week Minimum Stay  
Sunday-Sunday

**KULTANA Orchids**

[www.orchid.in.th](http://www.orchid.in.th)  
Pricelist Available Upon Request

Thailand's Major Orchids Producer. Specialized in Vanda and Tropical Orchids

Tel: + 662 5655463  
WhatsApp: + 6681 6419901  
Email: [kultanaorchids@gmail.com](mailto:kultanaorchids@gmail.com)

American Orchid Society  
Education. Conservation. Research.

**AOS Affiliated Societies**

Automatically receive **50%** off all display advertising!

Advertising — [khall@allenpress.com](mailto:khall@allenpress.com)

The American Orchid Society is proud to endorse the following Better-Gro® products:

- 4 and 8 quart special orchid mixes
- 8 quart phalaenopsis mix
- 8 quart orchid bark
- 1/8 BU. vanda mix
- orchid moss
- 1 pound orchid plus fertilizer
- 1 pound orchid plus bloom booster

See [www.better-gro.com](http://www.better-gro.com) for a retail outlet in your area.

American Orchid Society  
Education. Conservation. Research.

American Orchid Society

**PREFERRED CHOICE**

[WWW.AOS.ORG](http://WWW.AOS.ORG)

**Orchiata™**

Preferred bark medium of the American Orchid Society

**American Orchid Society**  
**SPRING**  
**MEMBERS**  
**MEETING**  
 hosted by the  
**California Sierra Nevada Judging Center's**  
**20/20 Vision of Orchids Show**  
**April 15 - 19, 2020**  
 at the **Embassy Suites Sacramento Riverfront**  
 in Sacramento, CA

For more information  
 visit the News and Events page on  
**www.aos.org**  
 or contact us at **theaos@aos.org**






Discover a World of Diversity  
**American Begonia Society**  
[www.begonias.org](http://www.begonias.org)  
[amerbegmembership@gmail.com](mailto:amerbegmembership@gmail.com)

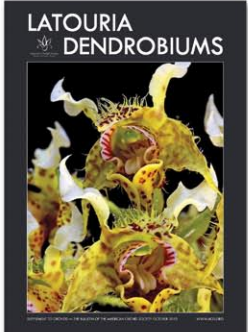
**Membership:** (Paper subscription) \$25;  
 (Digital subscription) \$15 US, Mexico, and Canada;  
 \$45 Overseas airmail except Mexico and Canada



  
 American Orchid Society  
 Education, Conservation, Research.

## Supplement your library with AOS specialist publications

**LATOURIA DENDROBIUMS**



**SARCOCHILUS**  
 Species and Hybrids




  
**CYCNOCHESES**  
 Species and Hybrids




  
**LOST TREASURES FROM THE GOLDEN AGE OF ORCHIDS**  
 Select Paintings From The Ben Singer Collection



  
**STANHOPEA**  
 Species and Hybrids



**A Handy Guide to Things You May or May Not Have Known About Growing Orchids**



Each year the AOS annual supplement provides an in-depth look at a particular subject. Written by experts, these publications are your resource on orchids and their culture. If you have missed any, complete the set. They make great gifts too! Available online at [www.aos.org/store/](http://www.aos.org/store/)

**CATTLEYA**





# ORCHIDS CLASSIFIEDS

## SALES

**BROWARD ORCHID SUPPLY** — we carry fertilizers, fungicides, pesticides, pots, baskets, growing media, tree fern, cork, wire goods, labels, pruners and more. For our complete product line, visit our website at [www.browardorchidsupply.com](http://www.browardorchidsupply.com). Call 954-925-2021 for our catalog or questions. AOS members receive a 10% discount. We cater to the hobbyist.

## SALES

**OLYMPIC ORCHIDS**—Pacific Northwest grower specializing in species, miniatures, seedlings and hard-to-find orchids. Quality plants at reasonable prices. Please visit our Website at <http://orchidfinders.com>.

**NEW VISION ORCHIDS** — Specializing in phalaenopsis: standards, novelties. Odontoglossums, intergeneric, lycastes and vandaceous. Russ Vernon — hybridizer. Divisions of select, awarded plants available. Flasks and plants. Tel.: 765-749-5809. E-mail: [newvisionorchids@aol.com](mailto:newvisionorchids@aol.com), [www.newvisionorchids.com](http://www.newvisionorchids.com).

## SALES

**SELLING MY PRIVATE** collection after 28 years; 2,500 sq ft of overgrown cattleyas and 500 sq ft of overgrown dendrobiums are available in Titusville, Fl. Contact: Kenny Yii @ 321-720-7337.

Classified ads are \$55 for five lines (45 characters/spaces per line) and \$15 for each additional line. \$25 for first three words in red. \$25 to include logo. The first three words can be in all caps, if requested.

## AD INDEX

African Violet Society.....	76	Maui Orchid Whisperer .....	74
American Begonia Society.....	78	Newport Harbor Orchid Society Show .....	11
American Horticultural Society .....	75	Nipomo Grande Cymbidium and	
American Orchid Society		Dendrobium Nurseries.....	77
Advertise.....	77	Orchiata.....	5, 77
BetterGro .....	77	Orchid Conservation Alliance.....	5
Centennial Celebration Save-the-Date.....	7	Orchid Digest.....	76
Classified Ads .....	79	Orchidarium.us.....	77
Easy Money .....	76	Orchid Review .....	19
Membership .....	74	Pacific Orchid Exposition .....	11
Past Supplements.....	78	40th Annual Paphiopedilum Forum.....	3
Spring 2020 Members' Meeting		Plantío La Orquídea .....	11
Save the Date.....	78	Rexius .....	77
Webinars .....	17	R.F. Orchids .....	13
Australian Orchid Review.....	76	Santa Barbara Greenhouses .....	77
Cymbidium Society of America.....	74	St. Croix Orchid Society Show .....	75
Deep Cut Orchid Society		Taiwan International Orchid Show .....	27
23rd Annual Show .....	Back Cover	Tamiami International Orchid	
Dyna-Gro Nutrition Solutions .....	5	Festival.....	Inside Front Cover
Gothic Arch.....	77	Venice Area Orchid Society Show .....	10
H&R Nurseries .....	6	White Plains Orchids .....	3
Jaybird Manufacturing .....	13	23rd World Orchid	
Kultana Orchids .....	77	Conference.....	Inside Back Cover

**For Advertising Information,  
Contact: Kevin Hall,  
[khall@allenpress.com](mailto:khall@allenpress.com)**

The American Orchid Society, in congruence with its stated conservation aims and with the full approval of the AOS Trustees, prohibits advertisements for wild-collected orchids and orchid-collecting tours in the pages of *Orchids*. By submitting advertisements for orchid species, vendors are thereby asserting that plants advertised are either artificially propagated (from seed or meristem) or are nursery-grown divisions of legally acquired stock. While *Orchids* endeavors to assure the reliability of its advertising, neither *Orchids* nor the American Orchid Society, Inc., can assume responsibility for any transactions between our advertisers and our readers.

### Submission of articles for *ORCHIDS* magazine

The AOS welcomes the submission of manuscripts for publication in *Orchids* magazine from members and non-members alike. Articles should be about orchids or related topics and cultural articles are always especially welcome. These can run the gamut from major feature-length articles on such topics as growing under lights, windowsills and thorough discussions of a species, genus or habitat to shorter, focused articles on a single species or hybrid to run under the Collector's Item banner. The AOS follows the World Checklist of Selected Plant Families with respect to species nomenclature and the Royal Horticultural Society Orchid Hybrid Register for questions of hybrid nomenclature. The AOS style guide and usage guides can be downloaded from <http://www.aos.org/about-us/article-submissions/style-guide-for-aos-publications.aspx>

Articles as well as inquiries regarding suitability of proposed articles should be sent to [jean.ikeson@gmail.com](mailto:jean.ikeson@gmail.com) or the editor at [rmchatton@aos.org](mailto:rmchatton@aos.org).

# Rankafu: Orchid Print Album

Stephen Kirby, Toshikazu Doi, and Toru Otsuka. 2018. Published by University of Chicago Press, June 2019, for sale in Canada, Mexico, and the USA only. 296 pages, 158 color prints, 22 halftones; 9 3/4 × 7 3/4 inches (24.8 × 19.7 cm). Cloth \$50.00. ISBN: 9781842466681.

AT FIRST GLANCE one might think that *Rankafu* is a beautiful coffee table book of primitive Japanese art. But this book is much more and it will intrigue the reader on many levels. The reader will gain the postmodern insight of a wealthy Japanese businessman, Shotaro Kaga; the beginnings of tropical orchid hybridization in Japan; and in-depth examination of the woodblock printing process. The story unfolds at a time of great global conflict (two world wars) and internal strife. The biographies of Kenkichi Goto (1895–1981), orchid grower and breeder; Zuigetsu Ikeda (1877–1944), watercolor artist; Saburo Shinmi (1912–2007), woodblock printer; and Johannes Jacobus Smith (1867–1947), orchid taxonomist, unite the story of some of the finest Japanese botanical woodblock prints ever produced.

Shotaro Kaga (1888–1954) was born during the Meiji Restoration, a time of turmoil in Japan when the old feudal system was being replaced with a new oligarchy. He inherited his family's securities business in 1911, which allowed his curiosity and love of nature to flourish. Around this time he purchased land in Oyamazaki (near Kyoto) to build his Oyamazaki Villa. Shotaro Kaga became enamored with orchids while mountain climbing in Java. He traveled to England visiting the Royal Botanic Gardens, Kew, where he saw extensive greenhouses filled with tropical orchids. He would purchase hundreds of plants over the coming decades from famous orchid nurseries such as Sander & Sons. With the help of his gifted orchid gardener, Kenkichi Goto, hundreds of spectacular orchid hybrids were developed. Shotaro Kaga devoted himself to collecting, growing and hybridizing orchids at his Oyamazaki Villa, which started a craze in Japan that continues to this day.

When Kaga decided to document his work in 1946, his Japanese aesthetic influences led him to choose woodblock prints as being best suited to illustrate the natural state of his plants and the beauty of his flowers. Each woodblock print required the collaboration of four experts: the designer, the engraver, the printer, and the publisher. Kaga commissioned leading botanical artist Ikeda Zuigetsu

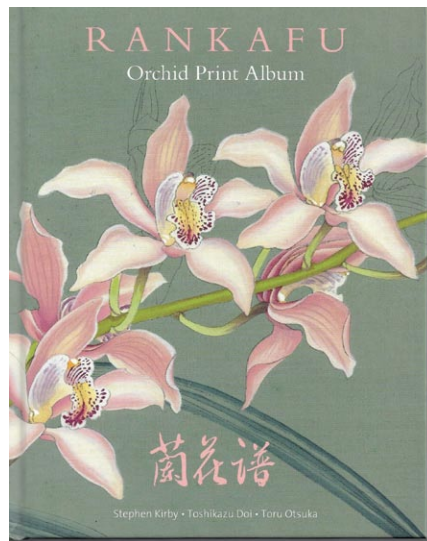
to paint watercolors of his orchids. The woodblocks were primarily carved by Okura Hanbei, III, the chief engraver for the *Rankafu* series. The printing was executed by artisans Saburo Shinmi (Tokyo) and Oiwa Gasendo (Kyoto).

In the general process of woodblock printing, the watercolor image is transferred to a thin, partially transparent paper and pasted to a wooden cherry block, which the carver chisels and cuts to create the original in negative (the lines and areas to be colored are raised in relief). The ink is applied to the surface of the woodblock; a piece of paper is laid over the top of the inked board and rubbed with a pad to produce the woodblock print. Polychrome prints require a separate carved block for each color and use a system of cuts on the edge of each block to serve as alignment guides.

The quality of the *Rankafu* prints is exceptionally notable for their painting-like appearance that at first glance appears to be indistinguishable from the original watercolor painting. Today, these prints are extremely rare. The series consisted of 104 images total; 80 were wood block prints and 24 were sketches reproduced in black and white. Only 300 sets were ever published; 100 were presented to leading universities and the remainder sold. It was sad to learn that only 12 surviving woodblock sets remain; the other blocks had been used for firewood to preserve the living collection during the extreme shortages of the post-war years.

This book is a refreshing read in that it reveals the compelling story of Shotaro Kaga, a wealthy businessman and a pioneering horticulturist. The English translation of Kaga's "A Preface to a Record of an Orchid Collection" provides insight into the man that inspired this masterpiece of botanical art, *Rankafu*, which truly is an Asian *Reichenbachia*. It is also stimulating to read about a history of orchid hybridization that is not Eurocentric. To say the least, the book *Rankafu: Orchid Print Album* allows the reader to appreciate the beauty of the original woodprints that they may never see in person.

ABOUT THE AUTHORS Stephen



Cover photograph

Kirby is a geophysicist at the US Geological Society. He also lectures and does research at Tohoku University in Sendai, Japan, and the University College, London. Tropical orchids have held his attention for nearly 20 years, both as an amateur grower and as a research associate investigating orchid biogeography at the Lankester Botanical Garden in Costa Rica.

Toshikazu Doi is a retired executive in the pharmaceutical division of the Kirin Beer Company. For 20 years he has been an active collector and researcher of Japanese woodblock prints of the late Meiji and Taisho eras (1870s–1926) and especially the Shin Hanga era (~1915–1960). He is a member of the Mokuhankan woodblock print shop team whose mission is to help sustain the art and practice of woodblock printing.

Toru Otsuka is a retired researcher, writer and interviewer who worked for NHK Broadcasting Company in Tokyo and Osaka. He has for four decades collected photographs, documents and other information relating to the *Rankafu* woodblock print story, amassing probably the largest privately held collection in Japan.

— Wesley Higgins, AOS Editorial Board  
(OrchidWes@gmail.com).

■ Exhibition Venue :  
Taichung Waipu  
Expo Site



*World Orchid* 23<sup>rd</sup>  
*Conference*  
2020 世界蘭花會議 Taichung

**Conference:  
March 9-12, 2020**

**Exhibition :  
March 9-18, 2020**



■ Conference Venue :  
Taichung Fullon  
Hotel



# DEEP CUT ORCHID SOCIETY'S 23RD ANNUAL ORCHID SHOW FEBRUARY 6-9, 2020



2170 Rt 35 South, Holmdel, NJ 07733

Thurs., Fri. & Sat., 9 AM - 6 PM; Sun., 9 AM - 4:30 PM

Exquisite Displays Filled with a Variety of Orchids • 50/50 Raffle • Exotic Orchid Plants & Supplies for Sale

Vendors: • *Ecuagenera* • *Fair Orchids* • *J&L Orchids* • *Kelly's Korner* • *Main Street Orchids* • *Marlow Orchids*  
• *New World Orchids* • *Orchidphile* • *Silva Orchids* • *Steve Arthur Orchids* • *Waldor Orchids* • *White Plains Orchids*

For more info: [deepcutorchidsociety.org/show](http://deepcutorchidsociety.org/show)

Phal zebrina • Photo is Courtesy of Cheryl Langseth

Prepared for download exclusively for Oval Orquidifils Valencians