



The

Arizona Orchidist

Published monthly by
The Orchid Society of Arizona, Inc.
Founding Editor- Clarence S. Lindsten

1966

Volume 45

April 2009 Number 4

NEXT OSA MEETING

The next regular society meeting
will be **Monday April 6, 2009**
at **7:00 P.M.**

Meetings are held at the
Training Center
at the
Arizona State Veteran Home
4141 N. 3rd St., Phoenix.

OSA meetings are open to all
plant enthusiasts

Refreshments will be provided.

Beverages by

Bob MacLeod

Snacks by

Julie Rathbun and Wilella Stimmell

Refreshment Coordinators:

Barbara Parnell (480) 948-0714

Mary Gannon (623) 878-4173

Carol Erwin (602) 996-1696

Show Planning/ Board Meeting

**April 26th at noon at the
home of Julie Rathbun**

GROWER ON CALL

Joe Bacik

(602) 363-1598

bacikj@cox.net

April Program

ORCHID BIODIVERSITY MATTERS **Mind over Mined in Madagascar?**

Marge From, Head of the Laboratory for Rare and Endangered Plants at Omaha's Henry Doorly Zoo, will present a PowerPoint program devoted to the propagation and reintroduction work that she has been doing with Madagascar orchid species. Her program will include information about the mining operations threatening even more of the Malagasy forests.

Kathy Foccaforte, who works with Marge in the Plant Lab at HDZ, will also present a program about their cryopreservation project for Madagascar orchid species. (This is Kathy's first visit with us.)

Marge received her graduate degree in plant tissue culture from the University of Nebraska at Lincoln. She has conducted field biology work in North America, Costa Rica, and Madagascar. She is a member of the Orchid Specialist Group for IUCN, North American Region, and the Reintroduction Specialist Group for IUCN. (IUCN is an acronym for the International Union for the Conservation of Nature and Natural Resources. Since 1990, IUCN has also been known as "World Conservation Union", the world's largest conservation network. The Union is headquartered in Switzerland.) Marge's presentation will demonstrate that her work is about what could and should be done. Her work speaks for itself.

This is Marge's second visit to Arizona. She last spoke at OSA's November, 2005 meeting. Please extend a warm OSA welcome to Marge and Kathy.

Wilella Stimmell

IN THIS ISSUE

FROM THE PRESIDENT'S DESK	Julie Rathbun	Page 2
EASY POT CLIPS	Ray Barkalow	Page 3
FROM THE ARCHIVES 50 YEARS AGO	AOS Bulletin	Page 4
Observations on <i>Angraecum sesquipedale</i>		



From the President's Desk

Julie Rathbun

During our March 2 meeting, I thanked Joe Bacik for conducting our February 22nd board meeting. I was working at the Arabian Horse Show, so I couldn't attend the board meeting. Also I announced on March 2 that this is the first year that OSA could not participate in the Equestrian Special Olympics because at the last minute, the date was changed (NOT by the Western Saddle Club where the annual event is held) from March 14 to March 7. Since OSA had previously committed to participate in the Southwest Flower and Garden Show, we could not be in two places at the same time. And I announced one more date change: the first November show planning meeting will NOT precede the board meeting on March 29. Because our Show Chair, Lou Ann Remeikis, will not be in town on that date, we changed **the first show planning meeting** to noon on **April 26** at my home. The board meeting will follow the show planning meeting. (Board members who miss board meetings often discover that the next scheduled meeting will be held at the home of the board member who missed attending a board meeting. Barbara missed the January board meeting and later discovered that the March meeting would be held at her home, and I missed the February meeting and later discovered that the April board meeting would be held at my home! We try to schedule board meetings so that our general membership will have advance notice of board meetings and might note the date and attend the meeting. I think that it's sad that so few of our members show ANY interest in the necessary business that OSA conducts at board meetings.)

Thanks to **Bob MacLeod** for bringing plants to be repotted at our March 2 meeting. Bob also brought all the necessary potting supplies! And special thanks to **Aaron** who did an excellent job at explaining why, after examining the root structure of one of Bob's plants, it was not necessary to repot the plant.

The **First Southwest Flower and Garden Show**, March 6-8 was a HUGE FINANCIAL AND PUBLIC RELATIONS SUCCESS for OSA. **GUBLER ORCHIDS** made our financial success possible. **Thanks, Chris!!** And special thanks go to all of our members who devoted a **minimum of 5 hours** of their time staffing our booth and schlepping plants and tables from the stadium parking lot down the ramp and into the arena. We certainly got a healthy dose of exercise! Several of our members worked all day for 4 consecutive days! In newsletters, I usually don't thank myself, but this is an exception. I put my non-orchid life on "hold" for 4 days for this show and did as much work for the show as did **Sarah Heberling**, **Lou Ann Remeikis**, and **Wilella Stimmell**. Other dedicated members who staffed our booth for a **minimum of 5 hours** AND helped with special needs that arose at the last minute were: **Joe Bacik**, **Debra Hartill**, **Kimberly Levingston**, **Bob MacLeod**, **Diane Norman**, **Barbara Parnell** (Harry was ill and couldn't leave their home), and **Seelye Smith**. We also appreciated the time that Demitris was able to devote to helping out in our booth.

During the show, we made contact with several teachers who want OSA to present our hands-on repotting programs for their students.

Also, you might like to know that because OSA was one of the first "flower" groups to respond to the invitation to participate, we were assigned THE prime booth location at the show!

Many people who attended the show were NOT pleased that there were vendors displaying non-plant items for sale. The visitors had expected to see ONLY flowers and gardens. But perhaps next year more plant groups will participate. The location is ideal: it's indoors, and there is plenty of parking for both participants and visitors.

Our April 6 speaker is Marge From, Head of the Laboratory for Rare and Endangered Plants at Omaha's Henry Doorly Zoo, Omaha, Nebraska, and an authority on the orchids of Madagascar. Marge last spoke to us at our November, 2005 meeting, and we made such a good impression on her that she readily agreed to return to Phoenix. (Willie and I had a grand reunion with Marge at the 2007 International Orchid Conservation Conference III in Costa Rica.) Accompanying Marge will be Kathy Roccaforte, a graduate student who works with Marge in the Plant Lab. Kathy will also present part of the program. We have two speakers for the price of one! You won't want to miss this meeting!

See you on April 6!

Julie

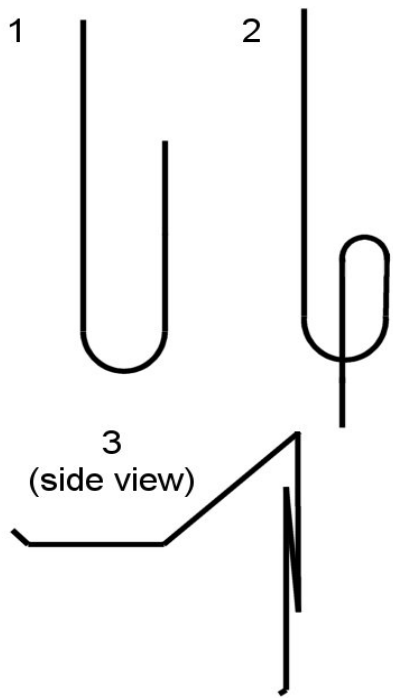
NEW MEMBER
PLEASE WELCOME
Karolyn Hall
TO THE OSA FAMILY

POT CLIPS TIP FROM FIRST RAYS ORCHIDS

After repotting a plant, it is often wise to "anchor" it firmly so it cannot wobble around.

One of the easiest ways is to use a "pot clip" or "rhizome clip" to hold the plant steady in the pot. Here's how to make your own (refer to the sketch below):

1. Using a straight piece of heavy wire, bend a deep "J", with the short part about 4" in length.
2. Bend the short part of the "J" back down through the middle of the first curve you made. Keep the wire as close to the original as possible, but you can always crimp it with pliers to "tighten" the grip.
3. Bend the long, upper part over so it would poke back down in the pot.
4. Flatten the length that will press down on the rhizome.
5. Press the "loopy" part of the clip over the lip of the pot with the single wire running down along the inside wall.



If you have a tall plant, you can stop at step 2 and tie it to the upright stake.

The Arizona Orchidist is published monthly by the Orchid Society of Arizona, Inc.

Direct Inquiries to our website at:

www.orchidsocietyaz.org

Or to any of the Board Officers or Trustees:

Board of Directors for 2009

President		(602) 843-0223
	Julie Rathbun	jandfent@aol.com
First Vice President		(480) 722-9328
	Aaron Hicks	ahicks51@cox.net
	In House Program Chairman	
Second Vice President		(480) 785-2251
	Joe Bacik	bacikj@cox.net
	Outside Speaker Program Chairman	
Secretary		(480) 948-0714
	Barbara Parnell	birdie552002@yahoo.com
Treasurer		(480) 947-8479
	Wilella Stimmell	willellas@worldnet.att.net
Librarian		(602) 803-6889
	Lou Ann Remeikis	remeikis@andiamo-tel.com
Editor		(505) 898-0975
	Keith Mead	kjkm@comcast.net
Trustees	Frank Bopp	(623) 937-0019 fgbopp@cox.net
	Carol Erwin	(602) 996-1696 nerwin2@cox.net
	Kimberly Levingston	(602) 843-6213 kimberlydahle@yahoo.com
	Seelye Smith	(602) 404-1013 sss3301@hotmail.com

The Orchid Society of Arizona, Inc. is a non-profit 501 (C) (3) organization dedicated to community service and the study of orchids. It is affiliated with the American Orchid Society, The Orchid Digest Corporation, the Arizona Federation of Garden Clubs, Inc. , and The Nature Conservancy.

FROM THE ARCHIVES – 50 YEARS AGO

American Orchid Society Bulletin,
Vol. 28, April, 1959, No. 4, pages 261-262.

Note: "Observations on Angraecum sesquipedale" was written by Charles Darwin and appeared in his book, ON THE VARIOUS CONTRIVANCES TO WHICH BRITISH AND FOREIGN ORCHIDS ARE FERTILISED BY INSECTS, 1ST ed., London, 1862, pages 197-203, and was reprinted in the AOS Bulletin in 1959.

Observations on *Angraecum sesquipedale*

...I must say a few words on the *Angraecum sesquipedale*, of which the large six-rayed flowers, like stars formed of snow-white wax, have excited the admiration of travelers in Madagascar. A whip-like green nectary of astonishing length hangs down beneath the labellum. In several flowers sent to me by Mr. [James] Bateman I found the nectaries eleven and a half inches long, with only the lower inch and a half filled with very sweet nectar. What can be the use...of a nectary of such disproportional length? We shall, I think, see that the fertilisation of the plant depends on this length and on the nectar being contained only within the lower and attenuated extremity. It is, however, surprising that any insect should be able to reach the nectar: our English sphinxes have probosces as long as their bodies; but in Madagascar there must be moths with probosces capable of extension to a length of between ten and eleven inches!

The rostellum is broad and foliaceous, and arches rectangularly over the stigma and over the orifice of the nectary: it is deeply cleft, with the cleft enlarged or widened at the end. Hence the rostellum pretty closely resembles that of *Calanthe* after the disc has been removed. The under surfaces of both margins of the cleft near its end are bordered by narrow strips of viscid membrane, easily removed; so that there are two distinct viscid discs. To the middle of each disc a short membranous pedicel is attached; and each pedicel carries at its other end a pollen mass. Beneath the rostellum a narrow, ledge-like, viscid stigma is seated.

I could not for some time understand how the pollinia of this Orchid were removed, or how it could be fertilized. I passed bristles and needles down the open entrance into the nectary and through the cleft in the rostellum with no result. It then occurred to me that, from the length of the nectary, the flower must be visited by large moths, with a proboscis thick at the base; and that to drain the last drop of nectar even the largest moth would have to force its proboscis as far down as possible. To effect this, whether or not the moth first inserted its proboscis by the open entrance into the nectary (as is most probable, from the shape of the flower, etc.) or through the cleft in the rostellum it would ultimately force its proboscis into this cleft, for this is the straightest course, and by slight pressure the whole foliaceous rostellum can be depressed: the distance from the outside of the flower to the extremity of the nectary can thus be shortened by about a quarter of an inch. Hence I took a cylinder, one-tenth of an inch in diameter, and pushed it down through the cleft in the rostellum: the margins readily separated, and were pushed downwards together with the whole rostellum. When I slowly withdrew the cylinder the rostellum rose from its elasticity, and the margins of the cleft were upturned and clasped the cylinder. Thus the viscid strips of membrane on the under sides of the cleft rostellum came into contact with the cylinder, and firmly adhered to it; and the pollen masses were withdrawn. By this means alone I succeeded in each case in withdrawing the pollinia; and it cannot, I think, be doubted that a large moth must thus act; namely, by driving its proboscis up to the very base, through the cleft of the rostellum, so as to reach the extremity of the nectary; and then withdrawing its proboscis with the pollinia attached to it.

Continued on page 5

I did not succeed in imitating the fertilisation of the flower so well as I did in withdrawing the pollinia, but I effected it twice. As the margins of the cleft rostellum must be upturned before the discs adhere to the cylinder, they become, during its withdrawal, affixed some little way from its actual base. The two discs did not always adhere at exactly corresponding points. Now, when a moth inserts its proboscis, with the pollinia affixed to it near the base, into the mouth of the nectary, the pollen masses will probably be first inserted beneath the rostellum; and during the final exertion, when the moth pushes its proboscis through the cleft of the rostellum, the pollen masses will almost necessarily be placed on the narrow, ledge-like stigma projecting beneath the rostellum. By acting thus with the pollinia attached to the cylinder the pollen masses were twice torn off and left glued to the stigmatic surface.

If the *Angraecum* in its native forests secretes more nectar than did the vigorous plants sent to me by Mr. Bateman, so that the nectary becomes filled, small moths might obtain their share, but they would not benefit the plant. The pollinia would not be withdrawn until some huge moth, with a wonderfully long proboscis, tried to drain the last drop. If such great moths were to become extinct in Madagascar, assuredly the *Angraecum* would become extinct. On the other hand, as the nectar, at least in the lower part of the nectary, is stored safe from depredation by other insects, the extinction of the *Angraecum* would probably be a serious loss to these moths. We can thus partially understand how the astonishing length of the nectary may have been acquired by successive modifications. As certain moths of Madagascar became larger through natural selection in relation to their general conditions of life, either in the larval or mature state, or as the proboscis alone was lengthened to obtain honey from the *Angraecum* and other deep tubular flowers, those individual plants of the *Angraecum* which had the longest nectaries (and the nectary varies much in length in some Orchids), and which, consequently, compelled the moths to insert their probosces up to the very base, would be best fertilised. These plants would yield most seed, and the seedlings would generally inherit longer nectaries; and so it would be in successive generations of the plant and the moth. Thus it would appear that there has been a race in gaining length between the nectary of the *Angraecum* and the proboscis of certain moths; but the *Angraecum* has triumphed, for it flourishes and abounds in the forests of Madagascar, and still troubles each moth to insert its proboscis as far as possible in order to drain the last drop of nectar.”

Glossary of some terms used in the above article: **foliaceous** = resembling a leaf in appearance or texture; **labellum (lip)** = the enlarged third petal of an orchid developed as a landing platform for pollinators; **nectary** = a gland which secretes and sometimes absorbs nectar; **pedicel** = the stalk supporting an individual flower, in *this* context, a stalk-like ovary; **rostellum** = the beak-like tissue separating the anther from the stigma; **stigma** = the apical unit of a pistil which receives the pollen and normally differs in texture from the rest of the style.

Editor's Note: During our June, 2005 meeting, we showed the Deep Jungle DVD in which biologist Phil de Vries of the University of New Orleans, filmed Darwin's moth pollinating an *Angraecum sesquipedale* flower. He sat patiently in the forest for 8 hours before the moth made its appearance. With the assistance of modern technology, infrared light, and a lot of patience, Phil filmed the moth which makes its appearance only at night. Darwin would be pleased that 140+ years after his prediction of the moth with the huge proboscis, the moth was captured on film. For those of you who missed our June, 2005 meeting, you can see the video of the moth pollinating the flower at <http://www.youtube.com/watch?v=OMVN1EWxfAU>

MARCH RAFFLE DONORS

THANK YOU FOR YOUR SUPPORT

Bob MacLeod, Diane Norman, Orchids Alive, OSA, and Wilella Stimmell

OSA April 2009 Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1  <i>Bob MacLeod</i> <i>John Lazar</i>	2  <i>August Lorenzini</i>	3	4
5	6 OSA Meeting 7:00 PM	7	8	9	10	11
12  <i>Sally Griffith</i>	13	14	15  <i>David Nunamacher</i> <i>Jeremy Smith</i>	16	17	18
19	20	21	22	23	24	25
26  <i>Mary Gannon</i> <i>Jan McVey</i>	27	28	29	30		



Orchid Society of Arizona

c/o Keith Mead

5425 Thomas Drive NE

Albuquerque, NM 87111

April 2009 Newsletter