

Our SPOT

December 2009



Sex & the Single Orchid ...part 2 ~ hand & self-pollination

We are attracted to orchids because of their flower, and so are various pollinators. The flower's purpose is to facilitate reproduction.

Some orchid species attract very specific pollinators, so little hybridization occurs in the wild.

Scientists and orchid breeders took control of nature decades ago, and began pollinating by hand in efforts to "improve" color, scent or size in their flowers.

Orchid breeding is now a huge business, and new hybrids make up a large percentage of show entries each year.

Orchids in their natural habitat grow in unison with fungi. So, until 1903, all attempts at raising orchids from seed failed because this critical ingredient was missing.

In that year, a French man, Noel Bernard, was able to isolate the fungi in sterile flasks on an agar base, and the seeds germinated successfully. This discovery changed the orchid world forever, and raising orchids from seed became easy for commercial breeders.

But nature really has the last word, so breeders are still occasionally thwarted in attempts at crossing some species —

such as trying to breed the *Phragmipediums* to *Paphiopedilums* — due to the size difference in their chromosomes.

Most orchids must rely on a pollinator because they lack the means to self-pollinate.

Some of the few that can self-pollinate are:

- Vanilla
- *Pterygodium*
- *Ceratandra*
- *Disa*

The idea of reproducing their favorite orchids can be intriguing to many collectors. Without the right conditions, it can also be challenging, so let's take a closer look at pollinating by hand....

... continued on page 3

Barks :

- Get well wishes to Joanne Wilson & Mary Parsons
- Don't miss the Holiday Lunch and auction in Bangor at the Whig & Currier, Sat. 12/12 at 11AM!!

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"It seemed as if the breezes brought him

It seemed as if the sparrows taught him

As if by secret sign he knew

When in far fields the orchids grew."

Ralph Waldo Emerson



Hand pollinating a Vanilla orchid



Check out the EMOS website!

www.easternmaineorchid.society.org

Your user name is your first name plus your address number

The password is "our dog"

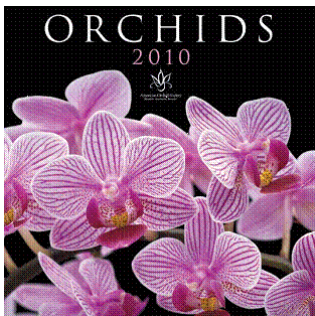


Don't miss the EMOS *Holly*day Party!

Wow, where did summer go? It's time for the EMOS holiday lunch and auction. Bring an item for the auction, and your wallet! Proceeds go to local charities.

Join us for a jolly good time at the Whig & Currier Pub in Bangor on Saturday Dec. 12th at 11 AM. Cheers!!

Growing the Best



Share the magic and joy of growing orchids with a gift of the AOS 2010 Calendar. The 12 superbly grown orchids pictured show the diversity in color, size, shape and fragrance found in the orchid family. Join author Ken Slump as he shares secrets for growing the best orchids and then offers advice for successfully cultivating and flowering a dozen choices suitable for the greenhouse, home and under lights.

**** \$2** from each calendar sold benefits orchid conservation

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Don't skip these!

Don't skip these!

11/14 - 11/23/11	20th World Orchid Conference, Singapore www.20woc.com.sg
11/14/09	EMOS meeting, Ellsworth—Tolumnias program with Janelle Delicata fmi: janelle@fairpoint.net
12/12/09	EMOS meeting, Bangor—Holiday lunch & auction 11 am at the Whig & Currier Pub fmi: janelle@fairpoint.net
1/9/10	EMOS meeting, Hermon—repotting workshop at Greencare fmi: greencare@gwi.net

Sex & the Single Orchid, part 2, cont'd

The orchid flower is the reproductive organ. The lip is designed to entice pollinators to land, and then directs them to the **column**.

The **column** contains the concave **stigma**, which is the "female" part of the flower, and the **stamen**, which is the "male" part.

The **anther** is the part of the **stamen** that contains the **pollinia**. It's found at the front top part of the **column** in most orchids, and under the **anther cap**. The **cap** also holds the **rostellum**, which is a membrane that bisects the **column** and separates the sticky **pollinia** from the (concave) **stigma**. Further down the column is the ovary. Behind the flower is a grooved stem that will swell to become a seed pod if pollination occurs.

Most orchids have two pollen masses (**pollinia**), joined by a thread to a sticky patch—insurance that the pollen will attach to a visiting pollinator.

The pollen masses are protected by the **anther cap**.

To pollinate an orchid by hand:

- ✓ Use a toothpick, or similar tool with pointed and flat ends.
- ✓ Lift away **anther cap** with flat end
- ✓ Touch sharp end to **pollinia**—the sticky patch will adhere
- ✓ Insert pollen into the concave **stigma**

Once pollination occurs, the flower will collapse, or change color because it has served its purpose.

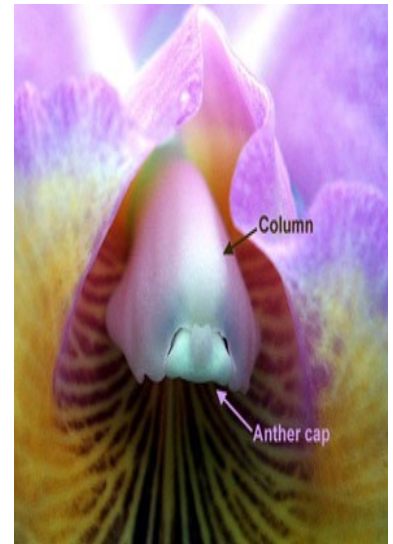
The **stigma** may swell and encase the **pollinia**, which means it recognizes the pollen. But many species will not respond to "self-pollination" and reject it.

Successful pollination will cause pollen tubes to form in the **stigma**, which will then grow into the ovary. The ovary will swell within days, and form a seed capsule (pod).

Breeders will transfer seeds to sterile flasks with the appropriate nutrients for germination.

When ready, young plants will be transferred to a growing medium, and flowering can often be expected in 3 to 5 years.

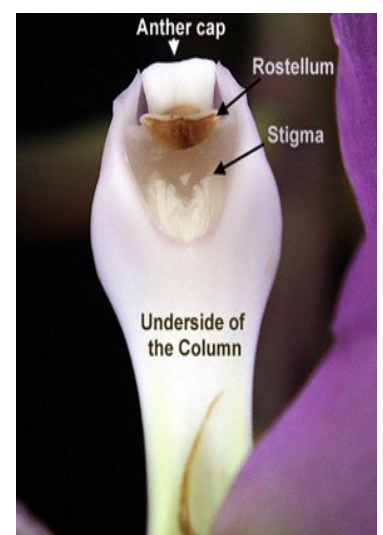
Size matters ... smaller orchids, like Masdevallias, need a magnifying glass to see pollinia. Cymbidiums are the easiest orchid to grow from seed.



Size matters!!

Cymbidiums are considered the easiest to pollinate..

Masdevallias may need a magnifying glass.



Photos from N.J. .Orchid Club



This is YOUR newsletter .. Your news, photos, and suggestions are welcome and encouraged. It's difficult to give you what you want or need unless you tell me! in2orchids@yahoo.com



Dee with her most prized "orchid" — the Best in Show winning Corgi BluWagn Masdevallia's Titan "Valor"

Meet EMOS member Dee LaCasce

Every club owes it's success to the many members who work tirelessly behind the scenes.....

Dee LaCasce and her husband moved to Ellsworth Maine over 45 years ago, when he was offered a position at the hospital there.

Both of them were in the medical profession in Boston — he in Internal Medicine, and Dee in Nursing Education.

Realizing the quality of life Maine had to offer, they chose to start a family here once they were settled in, so Dee's career took a recess.

She enjoyed her new life as a mom of three children, and became very involved in the local parent groups and the school committee. She also devoted many years doing volunteer work for the schools and various other organizations.

Once her last child went off to college, she picked up her career again, and accepted a position as a science teacher at Ellsworth High School.

She loved this new challenge and enjoyed helping students define their future goals. H.S. students were certainly a change of pace from her previous Nursing students!

Dee was first introduced to orchids while visiting friends in Key West, Florida. She toured an orchid nursery in Holmstead, and instantly became enchanted by the beauty of the plants.

Of course she bought one, and took it back to Maine in the middle of the winter. Of course it didn't survive.

But she had been bitten by the bug, and vowed to try again. An article about EMOS in the newspaper captured her attention.

She called the number listed, and reached member Louise Snow. Louise's passion and enthusiasm sold Dee on joining the club.

She has been a member of EMOS for six years, and appreciates the benefits she's gotten from the club. She especially enjoys the knowledge and tips she gets from each meeting that help improve her orchid growing skills.

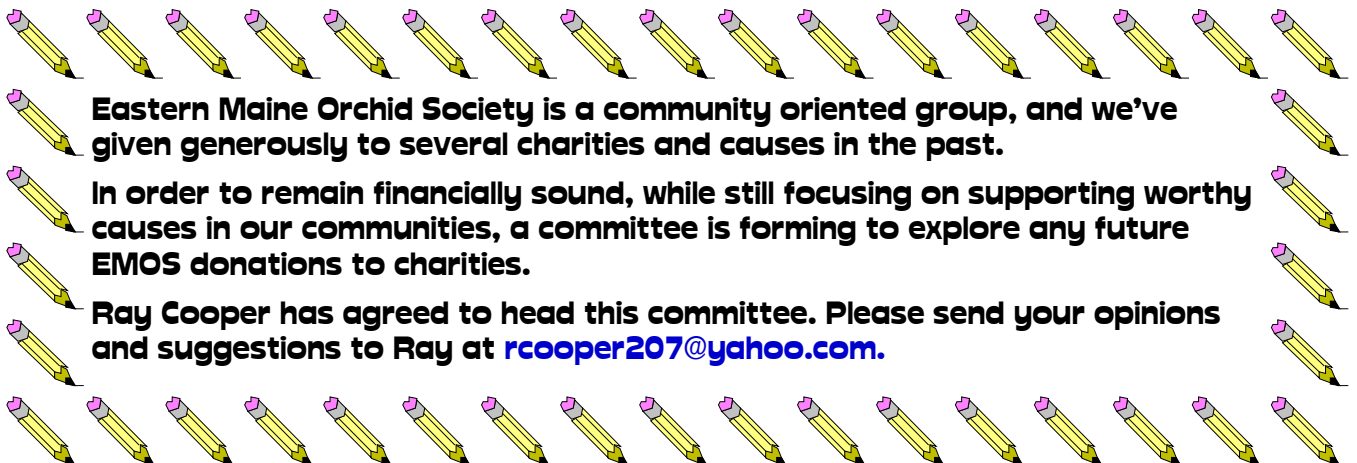
Her current collection is about 40 plants, which live mostly on her east-facing heated sun porch, as well as in her kitchen. She admits her favorite is the Miltoniopsis because it challenges her abilities.

She also cherishes the many close friends she's made among club members. But without question, she states that the best friend she's made from being an EMOS member is "Valor," her Corgi.

Valor is a retired show dog from the same orchid named litter that Sue Rudnicki's "Marty" is from.

We are fortunate to consider Dee a member of the EMOS family.

"Sharing successes and failures with other members has improved my own orchid growing skills."



Eastern Maine Orchid Society is a community oriented group, and we've given generously to several charities and causes in the past.

In order to remain financially sound, while still focusing on supporting worthy causes in our communities, a committee is forming to explore any future EMOS donations to charities.

Ray Cooper has agreed to head this committee. Please send your opinions and suggestions to Ray at rcooper207@yahoo.com.



Introducing Dracula

The tens of thousands of orchids in the world have something to offer even the most discerning collector's tastes. But few orchids compare to the fascinating Dracula.

The perfect orchid for Halloween and Maine growers.

When you envision the damp, dark, misty forests of Count Dracula's castle, you have the perfect growing conditions for this unique orchid!

Before DNA testing, Dracula was formally listed in the Masdevallia tribe. Their cup shaped flowers with long tails definitely resemble those of the Masdevallia. However, the Dracula flower has a personality all its own. It can be recognized by its scary "face" and mushroom shaped lip.

And, unlike the Masdevallia, the Dracula flowers from the bottom, so it needs to be potted in a hanging basket. The flowers are absolutely bewitching, with striking colors, and size - some often reaching 10" from tail tip to tip.

The Dracula lip is not exquisitely beautiful like in some orchids. It is shaped like a mushroom, with an unpleasant odor— functions to attract the fungus gnat pollinators.

They are found in the cool, moist forests from Mexico to Peru, as well as in Ecuador. So these conditions must be duplicated to grow Dracula successfully.

As mentioned, they require slatted baskets to allow them to flower from the bottom, and do best when potted in high quality moss.

Water regularly and fertilize lightly and often. Proper humidity is the most challenging condition to achieve with this species. Dracula prefer high humidity (60%+), so good air flow is also critical in order to prevent disease.

Once you meet one, you'll be truly captivated and want to own one. To quote a well-known Dracula breeder "Collectors who treasure them are almost always eccentric..." And who would know better???



Dracula chesteronii displaying the eerie "face" and mushroom lip this species is acclaimed for

"Collectors who treasure Dracula are almost always eccentric"

An AOS article about Fred Clarke, who bred the "DARling" orchid, named for Denis Roessiger.

Visit to Sunset Valley Orchids
By Calvin Starr

My son and his wife had promised to take two of our grandkids to San Diego this summer to visit the zoo, the beach and other attractions. Since they would be gone during my birthday they gave Beverly and me tickets to come along. We would miss the August meeting and the workshop so I decided to see what orchid nurseries were close by to provide my monthly orchid fix. Boy did I hit the Jackpot. Within 40 miles of our hotel were Sunset Valley Orchids and Andy's Orchids. Both require an appointment and I got lucky that the time slots I had available were also good for them. Sunset Valley Orchids is owned by Fred Clarke, our HOS speaker for November, and a highly regarded hybridizer. Fred is well known for his Cattleya hybrids and his widely acclaimed black Catasetum hybrid, Fredclarkeara After Dark (Mo. Painted Desert x Ctsm. Donna Wise). Five of Fred's After Dark hybrids have received FCC/AOS awards.

Sunset Valley Orchids consist of 4 modern greenhouses covering about 28,000 square feet and the space is optimized by using rolling benches. The greenhouses use water walls and swamp coolers for cooling and are also equipped with heaters for those occasional cool spells they have in Southern California. To water the plants Fred has a 1000 gallon per day Reverse Osmosis Water system and he hand waters all of the orchids twice a week. He uses a custom version of MSU fertilizer that is blended for hot weather. Fred says that watering is the most important part of successfully growing orchids.

Sunset Valley Orchids offers many of Fred's crosses in 3 inch pots at a very reasonable price. There were several of the 3 inch plants in bloom when we visited and the quality of the plants is excellent. If you like spotted cats, have a look at his web site, <http://www.sunsetvalleyorchids.com/>. I did not purchase any plants while I was there, but I have a list that I will be sending to Fred to bring to Houston when he comes in November. I would like to Thank Fred for the time he spent with us. The nursery visits were a highlight of the trip.

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