Orchid Society of Santa Barbara

Meeting: Wednesday, June 13, 2001

MacKenzie Adult Building
at MacKenzie Park
3111 State Street (at Las Positas)
Meeting begins at 7:30 pm

PROGRAM

George Vasquez of **Zuma Canyon Orchids**
will speak about
Current Trends in Commercial and Hobby Phalaenopsis Breeding

Learn about what's new in the world of Phalaenopsis from an internationally recognized Phalaenopsis breeder. We in Santa Barbara are very lucky to live in a region that is home to a number of orchid experts, many of whom lecture both nationally and internationally. George Vasquez, owner of Zuma Canyon Orchids, is one of these experts. He is a long-time AOS judge, has been on the board of the American Orchid Society for almost 17 years, and is responsible for some of the most delightful phal hybrids available. Bring your wallets, because the raffle table will come from Zuma Canyon Orchids.

CALENDAR OF UPCOMING EVENTS

Santa Barbara Chapter Cymbidium Society Meeting Wednesday, June 20,

2001
Cymbidium Society of America judging at 7:15 pm, meeting at 7:45 pm, at Carpinteria Public Library.

Santa Barbara Orchid Fair July 20-22, 2001
The annual vendor extravaganza is approaching. See the announcements section.

Summary of the May 2001 Meeting

> President Sandy Svoboda welcomed guest Helen Wells and all guests and new members.

> AOS Report. Our AOS representative, Al Svoboda, reported on several issues of orchid conservation and commerce. For those who have been following the CITES enforcement revisions proposed by US Fish and Wildlife, all revisions are on hold with the change of administration. (CITES is the international treaty governing endangered plant and animal commerce.) Many orchid growers will be happy to hear that there is a move to remove all orchids from CITES, listing only those that truly are endangered. Also, he noted that the previously illegal paphiopedilum species from Viet Nam (over which many of us have lusted from afar) are beginning to show up legally in flask. Hurrah!

Program

Our May speaker was Butch Weckerle-Thrun, an AOS and CSA judge and grower for the Patricia Rowland Collection. He spoke to us about a topic of interest to space conscious growers – miniature cymbidium breeding.

Breeding lines for miniature cymbidiums revolve around a few species. One of the first hybrids made was with *Cym. devonianum*. This species is useful in breeding for its pendulous spikes, attractive to hobbyists, but difficult for commercial growers to transport. Its native habitat is in India along streambeds. In cultivation, plants are prone to salt damage, shown as browning leaf tips. To avoid this, the medium needs to be moist rather than dry and leached regularly. In addition, Weckerle-Thrun recommends repotting yearly around Groundhog Day.

Cym. devonianum breeding gained popularity in the last dozen or so years with a surge in interest in pendulous orchids. A second generation hybrid, *Cym.* Flamehawk 'Lipper' (Touchstone x Sensation) earned "ahs" from the membership for its plentiful red flowers. Japanese growers, when staking these arched-spike hybrids, place no ties above the lowest flower on the spike, producing a graceful cascade.

Cym. pumilum (according to taxonomists correctly *floribundum*) is the most important of the miniature parents. This dwarf from China has produced a number of famous progeny, many of which are famous parents themselves, such as *Cym.* Mimi. It is important to note that the tetraploid forms (4N) are usually much better parents than the diploid (2N) forms, such as 4N and 2N forms of *Cym.* Miss Muffett. Breeding has produced colors ranging from greens to reds, including the beautiful *Cym.* Ruby Eyes 'Red Baron'. Breeding for whites led to the enormously popular *Cym.* Snow Court. Unfortunately, crossing with standard cymbidiums has led to some hybrids that are lovely but on the large side.

Also native to China is the fragrant *Cym. ensifolium*. This species may impart on its progeny small plant size, heat tolerance and summer or early fall bloom. Unfortunately, it has a low tolerance of salt and a low flower count. One of the most

famous of its progeny is *Cym.* Golden Elf, a summer blooming hybrid made by our own Paul Gripp.

The last two species discussed by Weckerle-Thrun have far fewer hybrids. To their credit. The warm growing Australian *Cym. maddidum* has long sprays of half inch flowers. Unfortunately, it also has three foot leaves and bulbs to nine inches tall. Attempts to reduce the plant size have produced such interesting crosses as *Cym.* Little Black Sambo and *Cym.* Pee Wee. *Cym. sinense* has long been cultivated for its fragrance. It boasts triangular, two inch flowers and transmits the fragrance in the first generation of hybrids, like *Cym.* Taboo.

On culture, Weckerle-Thrun leaches (waters three times in one session) every three to four months to eliminate salts. He emphasized clean work surfaces and cutters to combat virus in one's collection.

Sex, Lies and Kidnapping

Or a Look at the Wild World of Orchid Pollination

By Heidi Kirkpatrick

Part 4

This month, I conclude my series on orchid pollination with tales of my favorite group of pollinators, the Euglossine bees of South America. Unlike honeybees, which are social and interested only in nectar for food, Euglossine bees are solitary. Females forage for food and nest construction materials. The males are vagabonds that live six months or more and are susceptible to orchid trickery.

Both play important roles in orchid activity. Several *Maxillaria* species produce waxy secretions that appear to be collected by bees for nest building. But more entertaining are the orchids that lead their pollinators into drunkenness and debauchery.

As with many orchid species, some South American blossoms exude a scent mimicking the sexual lure of the bee. Male bees are attracted by this scent and pollinate the flower while investigating. There is also some indication that bees of both sexes may rub against the scent producing regions of the flower to enhance their own desirability – bees wearing perfume!

The genera of *Catasetum, Coryanthes, Cycnoches, Stanhopea* and *Gongora* produce a scent that seems to intoxicate visiting male bees. The bees appear to lose some motor control and caution when visiting these flowers. The drunken bees (much like drunken humans!) are clumsy and stupid, therefore easily manipulated in often brutal ways by the tricky orchids. Even after receiving abuse, the bees will return for more; there are wonderful photographs of *Coryanthes* species with numerous male Euglossine bees vying for position on the flowers.

The genus *Coryanthes* contains some of the most unusually constructed flowers in the plant world. These large blooms have a complex lip that includes a liquid-collecting bucket below a waxy mass called the "hypochile." (The common name for this genus is "bucket orchid".) Male Euglossine bees are attracted by the scent of the hypochile and flock to it, scratching at the waxy surface to collect scent.

In their frenzy to visit the short-lived (a few days) flower, bees occasionally fall off the slippery hypochile and into the bucket. They cannot fly out because the bucket has collected liquid produced by special glands on the flower. With his wings sodden, a bee can only crawl out in one direction – past the pollinia. Pollination can only occur if the bee repeats his mishap in another flower, thereby depositing the pollen mass he has collected.

My favorite pollination story involves the genus *Catasetum.* Unlike most other orchid flowers, *Catasetum* blooms are either male or female, but rarely hermaphroditic. Female flowers of all species are very similar: greenish hooded structures with a scent to attract particular species of Euglossine bees. It is the males, however, that are both showy and fascinating.

At the back of a male flower lie sensitive antennae that act as triggers. As a visiting bee brushes against this pair of tendrils, the flower forcibly shoots the pollinia at the bee. If the flower is lucky, the pollinia hits the bee, sticking with a dab of quick-acting, natural glue. For a really lucky flower, the bee next will visit a female flower.

Darwin wrote, "I carefully described to Huxley the shooting out of the pollinia in

Catasetum, and received for an answer, 'Do you really think I can believe all that?'" This floral aggression seems amazing, but those inclined to test the action will find themselves with pollinia stuck to their fingers. A word to the experimentalist: the bloom begins to decay in as little as fifteen minutes, so wait until the flowers are about to fade to try this. Alternatively, wait for the flowers to fade; in a last gasp of desperation, they will shoot their pollinia out willy-nilly, leaving them on the dining room table or wherever you've set the plant while enjoying the flowers.

The next time you admire your orchid flowers, give a thought to the pollinator that evolved with them. We don't all need to be biologists, but knowing a little something about the wild world of orchid reproduction can only enhance our enjoyment of these complex plants.

References:
Darwin, Charles, **The Various Contrivances by Which Orchids Are Fertilsed by Insects**, 1890, John Murray, London.
Hansen, Eric, 1999,"Bee Bop," *Natural History*, pp.72-74.
Van der Pijl, L. and Calaway H. Dodson, **Orchid Flowers: Their Pollination and Evolution**, 1969, The Fairchild Tropical Garden and University of Miami Press, Florida.
Also various lectures from the 1999 World Orchid Conference.

Announcements

- **July Orchid Fair**

Orchid Fair time is just around the corner. Santa Barbara Orchid Estate and Cal-Orchid will be holding their respective open houses again this year, with plenty of guest vendors to tempt money out of our wallets. Santa Barbara Orchid Estate will be hosting over fifty vendors this year, including visitors from Brazil, Thailand, Mexico, New Zealand and Venezuela. Cal-Orchid will host vendors from South Africa, Japan, Australia and the East Coast, plus a maker of orchid jewelry. Though there is no show accompanying this event, it is almost as interesting as the Spring Show at Earl Warren and it is a fun orchid event during a season when there is little else going on in the orchid world. Show hours are:

Friday and Saturday, July 20 and 21 – 9-5
Sunday, July 22 – 10-4 at Santa Barbara Orchid Estate
9-4 at Cal-Orchid

If you have internet access and would like to learn more about this event check out the SBOE and Cal-Orchid websites.

www.sborchid.com
www.calorchid.com

- **Orchids for Sale**

Can't wait for the Fair? Eliane Martin is selling a number of her cymbidiums and other orchids. To find out more or get a list of plants, call her at work at 965-6330. (Note that the work number printed in the roster is not correct.)

See OSSB on the web at **www.west.net/~orchidsb**

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