



July 2005 - Volume 2 Number 7

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## President's Message

Dear SFOS members,

I am very proud and honored to begin my 2005-6 term as your new President. The next few years will be a very exciting time for our Society as we work toward the 19th World Orchid Conference as joint sponsors of this fabulous global event.

Our Society has a very long and very rich history of orchid service in South Florida. We have long been leaders in education and service to the orchid community. I also have a long personal history of involvement with the Society, having placed my first exhibit in a Miami Show in 1959 and joining SFOS in 1960. During the many intervening years I have seen South Florida weather many storms and yet continue steadfastly as the premier orchid society of our area. I am sure that we will only continue to strengthen this tradition in the years to come.

Now is the time for all of us to pull together to make our Society as strong and energetic as can be. You have elected a truly great team of officers and directors and to augment that leadership, I have appointed to following Committee Chairs for the coming year:

House Committee..... Michael Coronado  
Library Committee..... Helen Lloyd  
Membership Committee..... Richard Brandon  
Publication Committee..... Carol DeBiase  
Program Committee..... Michael Coronado  
Refreshment Committee..... Marlene Clark

*Continued on next column*

Research Committee..... Sandy Schultz  
Show Committee..... Richard Brandon  
Hospitality Committee..... Christa Collins  
Raffle Committee..... Shelia O'Dea  
Awards Committee..... Carol DeBiase  
Website Committee..... Eduardo Marcellini  
AOS Liaison..... Carol DeBiase  
AOS Affiliated Societies Council..... Carol DeBiase; Richard Brandon

Each of these people are very competent and committed leaders in their respective volunteer capacities. I am sure that many of them would appreciate assistance of member volunteers, be it in setting up equipment at monthly meetings (House Committee), assisting with refreshments or hospitality when Chairs are absent (Refreshment Committee and Hospitality Committee), writing articles for the Newsletter (Publications Committee), etc. So, please, if you have time and inclination to give some time and energy to YOUR society, contact the appropriate committee chair and volunteer.

I look forward to seeing all of you at our coming meeting to hear a wonderful presentation by Nina Rach, and to see the excellent selections that I know Carib Plants will provide for our plant table.

With best regards,

Robert Fuchs, President

## July Program: "Orchids in the Andes of Ecuador"

*presented by Nina Rach*

Nina Rach from Houston, Texas will be our guest speaker for July. She will begin our visit to the Andes of Ecuador at an orchid show in Quito at around 9,300 ft. elevation. Following will be field slides of areas ranging from 4,000 to 9,000 ft. elevation, from Cuicocha crater lake in the Cotacachi-Cayapas Reserve in the paramo (high altitude grasslands north of Quito), to the cloud forest and subtropical areas near Podocarpus National Park in southern Ecuador. The native orchid species of the area include *Cattleya maxima* as well as many *Elleanthus*, *Epidendrums*, *Maxillarias*, *Pleurothallis*, *Sobralias*, and *Stellis*.

Nina is an Accredited American Orchid Society judge affiliated with the Houston Judging Center and a past-president of the Houston Orchid Society. She maintains websites for the Houston Orchid Society and the Houston Judging Center, in addition to The Stanhopea Pages and The Sobralia Pages.

She maintains a varied collection of orchids, predominantly species, in a twin-wall polycarbonate greenhouse and a shade house on the Gulf Coast of Texas.

This will be Nina's second presentation to the SFOS and I'm really looking forward to having her back with us. She gave a great talk last time and I expect this one to be even better.

Members Robert and Diana Randal of Carib Orchids will be supplying the raffle table plants for the meeting. This will be a rare treat for us and I know we're all looking forward to taking a chance to win the fabulous plants they'll bring.

All in all, it promises to be a great evening. So be on hand as we kick off the new SFOS year at our July meeting!

Michael Coronado  
Program Chairman



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## SFOS Speakers' Day Program Announced

Speakers' Day has been a highlight of the South Florida Orchid Society's calendar for nearly two decades, and this year's event will again bring a slate of prestigious orchidists to Miami for a day-long seminar on Sunday, October 2, 2005. The event will include lectures from five well-known experts, American Orchid Society judging and a judges' panel discussion, plant sales, continental breakfast and lunch. SFOS Speakers' Day also qualifies for AOS Judge Training credits.

Speakers for the event include:

**Joyce Stewart** (Great Britain) will speak on *Angraecoid* orchids

**David Banks** (Australia) will speak on lesser-known genera in the *Sarcanthinae*

**Alex Hirtz** (Ecuador) will speak on habitats and new species in Ecuador

**Art Chadwick** (Virginia, USA) will speak on large-flowered *Cattleyas*

**Ken Roberts** (Florida, USA) will speak on new *Paphiopedilum* species

The registration fee of \$45.00 includes all lectures, breakfast and lunch, and access to the sales area. Non-registrants may submit plants for AOS judging only. Speakers' Day will be held at the Fire Fighters' Memorial Building, 8000 NW 21 St., Miami, 33122, starting at 8:00am with breakfast; the main program begins promptly at 9:00am. For more information and to register, please contact the South Florida Orchid Society, Inc., 10801 SW 124 St., Miami 33176.



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## Orchids at the Miami Metrozoo

The EALOC has been putting orchids up at the Metro Zoo since before Hurricane Andrew. In fact, we've been beautifying the zoo since it opened. We have expanded our scope by adding irrigation into the trees. This will increase the viability of our orchids.

We would like to continue putting in irrigation, but we have an orchid house full of orchids!!

**WE NEED HELP!** We need volunteers to help place the orchids in the trees. We work off 6 & 8 ft. stepladders and each ladder worker benefits from having a helper. Ladder workers need to have good balance for safety reasons. This year we have set workdays – the 2<sup>nd</sup> Wednesday and the 3<sup>rd</sup> Saturday of May, June, July and August. Our "work day" is 9am to 12 noon. If you can help, we would love to have you. Please call Danny Lutz for more information at 305-448-8057

### MARK YOUR CALANDERS



December 4, 2005  
South Florida Orchid Society  
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**Please keep Jeanne Wilson in your  
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## Orchid Growing Tips

Orthene will prevent thrips. A preventative spraying of Orthene 75%, wettable powder or in aerosol, on maturing flower buds will prevent thrip damage, as well as aphids and ants. If insects are found on the open flowers, the same chemical can be used to eradicate the infestation, without damaging the flowers. Other insecticides WILL damage the flowers and should not be used. Use Orthene spray as recommended on the label. If using the aerosol, spray from at least a foot away from the flowers. In addition, Orthene 75% does not leave any unsightly residue.

Remove dried sheaths from Cattleya Alliance orchids. Always remove the dried sheathing from pseudobulbs to prevent buildup of moisture, and as a hiding place for insects. This also provides more surface for photosynthesis activity. Insects, particularly scale insects, find Cattleya Alliance plants attractive.

Cut open bud sheaths to eliminate flower bud rot. Bud sheaths often collect water inside causing the new buds to rot. Cut the top off the sheath will to eliminate this problem. Sometimes, a sheath will form without a bud ever forming, or due to breeding some orchids, will form a sheath, then many months later form the flower buds.

Soak used pots in water and bleach to kill viruses and diseases. Recycle used pots by soaking in a strong bleach solution for at least twenty minutes to kill any viruses or diseases. Use ½ cup bleach per gallon of water.

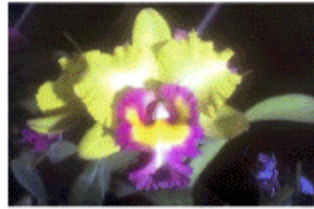
Take problem plants out of their pots and put in an empty clay pot. Water and fertilize as normal. This will force any eyes that are on the plant to grow and make new roots. Then the plant can be repotted. This will save you the time and expense of using mix on a plant that will never make it.  
*(Thanks to AOS Forum, Orchid Dreams Forum and the Houston Orchid Society for the tips they contributed)*



## SFOS Medals from June 2004 – May 2005

### June 16, 2004

*Schomburgkia tibicinis* 'Miami Sunset' BM 77 points  
Fred Rivera



'Sun #16'

### September 15, 2004

Blc. Apache Sunrise 'Valerie' SM 81 points  
Valerie & David Foster

### October 21, 2004

V. Gina Marie 'Eric' BM 79 points  
(Deva x D. Anek)  
V. Victoria's Glory 'Eric' BM 79 points  
(Red Ball x Dr. Anek)  
Eric Schue



'Parfum'

### November 17, 2004

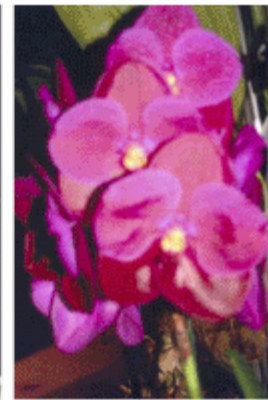
*Catasetum incurvum* 'Sheila' BM 78 points  
Mike & Sheila O'Dea

Paph. Paul Parks 'Kiora' SM 80 points

(*P. sanderianum* x *P. adductum*)  
Sandy Schultz/Georgia Tasker



'Kiora'



'Eric'

### January 19, 2005

Lcna. Renate 'S & W' HCC/AOS SM 82 points  
(Lc. Frenchy's Cheek-La x Ctna. Why Not)  
Dave & Valerie Foster

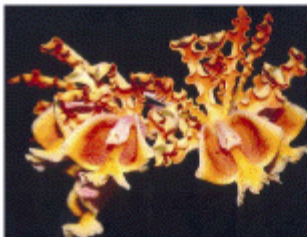
Blc. Merrily Murrison 'Parfum' BM 79 points  
(Blc. Mem. Roselyn Reisman x Lc. Lavender Mist)  
Lore Wigley

Blc. Young Kong 'Sun #16' HCC/AOS SM 82 points  
(Blc. Green Fantasy x Blc. Tassie Barbero)  
Lore Wigley

*Photo's courtesy of Grant Hawk*

### February 16, 2005

Ascda Ben's Delight 'Tammy Sue' SM 80 points  
(Ascda Duang Porn x V. Soontharee Red)  
Mike & Ann Pitiriciu



'Miami Sunset' 4



'Tammy Sue'



'Sheila'

## SFOS Perpetual Trophies for 2005

**Fennell Cultural Award** - presented to Krull Smith for Paphiopedilum Satchel Paige

**Jones & Scully Award** - presented to Lore Wigley for Ble Young Kong 'Sun #16' Silver Medal 82 points and David & Valerie Foster for Letna Renata 'S&W' Silver Medal 82 points

**Del-Ora Award** - presented to Mike & Angie Pitiriciu for Aseda Ben's Delight 'Tammy Sue' Bronze Medal 78points

**Norman B. Merkel Award** - presented to Sandy Schultz & Georgia Tasker for Paphiopedilum Paul Parks 'Kiora' Silver Medal 80 points

**William H. Sparks Award** - presented to Judy Mezey for Dendrobium Thong Chai Gold 'Monion' JC/AOS at the 60<sup>th</sup> Miami International Orchid Show

**The Fields Award** - presented to Whimsy Orchids for Tolumnia Calypso Bay 'Carol' AM/AOS at the 60<sup>th</sup> Miami International Orchid show

**SFOS Award** presented David & Valerie Foster for the exhibitor whose flowers or plants received the highest number of total points in the fiscal year at an SFOS judging event

### RIBBON AWARDS 2005

Highest number of accumulated points:  
Sandy Schultz & Georgia Tasker

Highest Number of Cultural Ribbons 2005:  
(three-way tie)  
David & Valerie Foster  
A. Leigh Elliott  
Eleanor San Filippo



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## SCALE INSECTS ON ORCHIDS

PAUL J. JOHNSON, PH.D.  
INSECT RESEARCH COLLECTION,  
BOX 2207A, SOUTH DAKOTA STATE UNIVERSITY,  
BROOKINGS, SD 57007

*This note is written for the orchid keeper or grower in northern states of the U.S., and Canada, that generally has a small to medium sized indoor collection. The keeper or grower in southern states enjoys the potential of many more scale problems because of outdoor growing, but also benefits from natural environmental population management by the weather, and predatory and parasitic enemies of scales!*

### Sources and Identification

Scales are probably the most important insect pests of cultivated orchids in northern climates. Mealybugs and aphids may tie for second in importance and are controllable with the same methods. According to a 1976 publication from the Florida Department of Agriculture and Consumer Services, there are no fewer than 27 species of scale identified from cultivated orchids. Fortunately, few hard or armored scales, but mostly soft scales, usually referred to as brown soft scales or hemispherical scales, regularly survive in the north on indoor or greenhouse plants. Especially common is the brown soft scale (*Coccus hesperidum*) shown above, and possibly the similar elongate soft scale (*Coccus longulus*). Boisduval's scale (*Diaspis boisduvali*)



the scourge of the southern orchidists, is rarely encountered in northern home collections and apparently does not survive well here, except in the largest greenhouses. However, when introduced on infected plants it can spread quickly to a variety of orchids and be extremely difficult to control. Boisduval's scale will also seriously debilitate or kill orchids.

The more common species of these odd insects that infest orchids are immediately recognized in the adult stage by the light yellowish to greenish-brown,



tan, or dark brown, oval to circular, objects that show-up on leaves, petals, sepals, petioles, pseudobulbs, and sometimes rhizomes and roots. Mature females of Boissieu's scale are a rather typical rounded and light-colored scale type, while males are easily recognized by the cottony appearance of aggregated males, and these may be confused with mealybugs if not examined closely. The immatures, or crawlers (above far-left), of all scale species are tiny and yellowish to pinkish, and not easily seen without a magnifier.

In the home orchid collection scales are acquired by plants in some combination of three sources. The most common way of acquiring scales is by purchasing an infested plant. On plants at home scales are easily transmitted from infested to clean plants when your plants touch each other and the crawlers to move from plant to plant. The final source is colonization of your plants by windblown crawlers. Colonization is usually done during the summer when your plants are outdoors, but it can also occur indoors in greenhouses and sunrooms by floating on currents produced by circulating and heater fans. This occurrence appears to produce the odd effect of having pockets of infestation when the crawlers settle on plants where the air currents are the weakest and early during a spreading infestation. Similar effects are found with aphids, mealybugs, whiteflies, and spider mites.

#### **Life Cycle**

Scale insects have a three-stage life history: egg, larva (or nymph), and adult. Eggs are laid by females, with the eggs usually retained in the body and under the outer "scale" covering when the female dies. These hatch into the mobile nymphs, called crawlers. The crawlers are the active stage that can move between plants. After finding a suitable place for feeding, the crawler will settle and begin feeding, and transform into the next nymphal stage. At this point the female begins to form the hard protective "scale" covering. The covering enlarges as the insect grows. Nymphs often have a light yellowish scale, which darkens to tan or brown as the insect matures. Males of soft scales do not form the hard coating or scale, but are small winged creatures whose primary, if not sole, role is to mate and die.

Scales have short life cycles, but may have generations many times a year. In a warm greenhouse or indoors the life cycle may be accelerated, though typically a month or more is required for completion of a generation. It is the overlapping of genera-

tions that creates the biggest scale management problem. All control methods are at their greatest effectiveness against the the crawlers. By the time the scales have formed the hardened cover (the scale), it is too late to easily kill those adults with chemicals. Also, the large dry brown scales are already dead and the "shells" may be full of eggs which will spill when the shell is ruptured.

#### **Management**

Scale management is usually a protracted and serious effort, and never much fun. Light infestations restricted to one or a few plants can usually be treated with household products rather than concentrated insecticides. When possible, immediately isolate infested plants from others to prevent the crawlers from moving amongst them.

Because the life cycle of scales can be so short combined with the overlapping of generations, in order to bring a serious problem under control you will need to do a treatment every 2-5 weeks, depending on the life cycle period of your particular problem scale species. Consequently, the key to scale control is persistence.

Management methods that are the least toxic to people, pets, and plants, are the most time consuming and laborious. Insecticidal methods, including horticultural oils, soaps, and synthetic insecticides are progressively more toxic (to both the insects and humans!) and more expensive, but less work. Re-

*Continued on page 7*

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ardless of method or chemical used, you must remain vigilant and expect to make at least 2-3 applications 10-16 days apart.

Because of plant costs, personal attachment to orchids by owners, and the over-riding desire to avoid insecticides whenever possible a number of effective "home remedies" for scale control are available. Be aware that non-insecticidal treatments may not be highly effective for elimination of scales. Thus, they should be viewed as controls, not eradicators. Also, many common home chemicals are extremely toxic to humans, pets, and plants even in diluted forms, often being proportionately more toxic than the feared insecticides.

### **Rubbing Alcohol**

Probably the most popular home remedy is to swab and daub plants with a Q-tip or ball of cotton dipped in isopropyl (rubbing) alcohol. Do not use other alcohols, such as ethanol or methanol, that can penetrate the plant tissues rapidly and cause considerable damage! The concentration of the isopropyl seems to make little difference; the common 70% available in stores is satisfactory. On hard-leaved plants, gentle rubbing with the fingers or a soft toothbrush is effective, with or without the alcohol. Remove all scales, large and small. Afterwards, you will still need to repeat the alcohol treatment to remove the tiny yellowish spots which are the recently hatched crawlers. Pay particular attention to the midrib, other veins, and leaf edge areas. Closely monitor your plants to get an idea of the life cycle of the particular species of scale that is your problem, but expect to repeat treatment against the immatures every 1-2 weeks.

A common alternative to the swab and daub method is to spray alcohol with a misting bottle or small pump sprayer. Many home growers will also mix-in a small amount of mild liquid dish detergent, and sometimes mineral oil, neem oil, or horticultural oil. One recipe for a 1.5 liter spray bottle is to mix a 50:50 solution of isopropyl and water, with a few drops of liquid soap to act as a spreader, and 1/4-1/2 teaspoon of one of the oils. But, it seems that every grower has their own proportions of these ingredients, none of which seem to work significantly better than another. Caution is urged, however, as excessive amounts or too strong of a detergent, or use of an ammonia-based chemical cleaner may damage your plants, especially buds and flowers. This is particularly true of dish-soaps and household detergents that could remove natural protective waxes from plant tissues. Also, alcohol sprays are not ef-

fective against eggs protected by the scale covering, hence the physical removal of the scales by hand is more effective and provides more rapid control.

A potential problem with alcohol treatment that is occasionally reported may be chilling of the plant. The rapid evaporation of alcohol cools the plant tissues. Especially with air movement that increases evaporative cooling, this chilling is suspected of over-cooling tissues and creating zones of dead cells that may become necrotic from bacteria or fungi. On warm or breezy days consider wiping any residual alcohol with a tissue instead of permitting it to evaporate off the plant. Such problems and tissue drying are found particularly on soft or thin-leaved orchids (e.g. *Oncidiinae*).

### **Repotting**

Given an extreme infestation you may see scale developing on the roots and rhizomes. At this time, or anytime you observe a heavy infestation, then you may need to consider replacing the potting medium. The potting medium can harbor eggs and crawlers, so dispose of it in a compost pile or in the garbage. When repotting, a close inspection and if necessary a very gentle cleaning of scale and spraying of the roots before repotting is essential. Use care with the cleaning of roots because of the fragility.

### **Oils, Soaps, and Sterilants**

Horticultural oil, neem oil, mineral oil, insecticidal soaps, and sterilants form the next stage of chemical control of scale insects. The oils and soaps are often regarded as "organic" or non-chemical methods, but this is a misconception or an extremely broad concept of "organic." Indeed, neem oil is extracted from the neem tree, but horticultural oils and mineral oil are petroleum distillates. Likewise, insecticidal soaps are a solution of synthetic pyrethroids mixed with a detergent (soap) that is made from petroleum products. Sterilants are anti-bacterial and anti-fungal chemicals that are also often effective on algae. However, all of these solutions are generally considered safer for humans, pets, and plants than usual insecticides. None provide absolute control over pests, but frequent use during the presence of pests frequently reduce insect populations to below self-sustainable levels in small orchid collections.

Horticultural, mineral, or neem oil solutions smother the insects, so complete coverage of all sprayed plants is essential. These oils are mixed with water and usually a plant-safe detergent for enhancing the spreading and sticking of the oil. The main caution with these oil solutions is that they should never be

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applied to plants on hot days (>85 degrees F) or in direct sunlight, as to prevent burning of tissues. Leave the plant in shade until the application has dried.

Insecticidal soaps are usually solutions of a synthetic pyrethrin, piperonyl butoxide as a synergist (to enhance the effectiveness of the pyrethrin), and sometimes a plant-safe detergent. As with oils the detergent acts as a surfactant and spreader for dispersing the pyrethrin evenly, and as a mild caustic against the insects. Also, to prevent sunburn apply the chemical and allow it to dry in shade. Pyrethroids are synthetic analogs of pyrethrum, the natural extract from certain Asteraceae. Caution should be urged with so-called "safe" insecticidal soaps as some plants are sensitive, particularly tender new tissues, and when mixed with hard water. Some non-orchid ornamentals will drop leaves and abort flowers when sprayed with insecticidal soaps, so caution is urged with prized orchids. Though piperonyl butoxide is usually regarded as safe for plants, it can cause allergies and respiratory problems for users and may contribute to phytotoxicity problems.

Sterilants are usually Physan 20, RD20, or Consan 20, and these are used as anti-bacterial, anti-algal, and anti-fungal agents. These solutions are all composed of isomer cocktails of ammonium chloride and all have the same antibiotic activity. These chemicals can be used in diluted form, according to label directions, usually for controlling bacterial and fungal diseases on orchids. However, at these same dilutions there is some limited effectiveness on scale crawlers and other delicate insects. Frequent use of sterilants for insect control is not recommended, due particularly to potential damage on new growth, buds, and flowers, and should be done under shade to prevent sunburn.

### **Insecticides**

Persistent populations of scale or infestation in many plants often demand the need for use of synthetic insecticides. There are few insecticides specifically registered for use on orchids, but there are several common, inexpensive, home-and-garden chemicals labeled for ornamental plants. Insecticide formulations not labeled for ornamental plants are often mixed with solvents that aid in the application of the active ingredient for specific purposes. These solvents, not necessarily the insecticide itself, often produce phytotoxicity and may seriously damage or kill plants. Thus, never use any insecticide that is not specifically labeled for ornamental plants.

There are many insecticides available for ornamental plants, but some are not tested on orchids, and others are generally too expensive or otherwise readily available for the small keeper or grower. Some of the more available and effective insecticides that come in various brand names are acephate (e.g., orthene [wetttable powder or liquid]), malathion (liquid), and carbaryl (water-based emulsifiable concentrate). A current garden center insecticide mixture of acephate and the miticide fenbutatin-oxide is effective for many common orchid pests. Fertilizer/systemic combinations for roses and other ornamentals, usually with disyston or disulfoton, may be effective but are not widely tested on orchids. Also, caution should be given to the fertilizer effect on your plants in combination with other nutrients. Of course, always follow label directions and never, never, never exceed the minimum recommended concentration given in mixing directions! Recommended solutions are based on extensive testing for selected pests and plants. Orchids are tough plants, but many are sensitive to various chemicals, particularly under direct sunlight or high heat, and while certain species may not react to a given formulation others may, so testing is justifiable.

Some insecticides are occasionally discontinued for use because of some discovered hazard. For example, Cygon used to be available, but it no longer recommended and labeled for orchids because it will damage many plants, especially the buds and flowers, and is extremely hazardous to use. As of late 31 December 2004 diazinon is also no longer available for use, even for non-commercial outdoor use. Although most insecticides with discontinued labels are legally allowed to be "used up", it may be best to dispose of such chemicals rather than continue their use and risk damage or loss of plants, or increase your own health hazard.

Most home orchid keepers and growers in northern states that need to apply insecticides during inclement weather need special care for applications. If you cannot spray out of doors, place your plant(s) inside a large plastic bag (remove the bag after the spray has settled!) and let the plant ventilate where the fumes will not be wafted around the house or work area. Again, you may have to consider removing the potting medium, spraying the plant, and repotting it with new media in a clean pot when the spray has dried.

### **Growth Regulators and Chitin Inhibitors**

Research on the use of insect growth regulators, botanical insecticides, and their application to or-



namental plants is increasing, but incomplete. Insect growth regulators, such as kinoprene (tradename = Enstar II), are synthetic forms of juvenile hormone which is highly important in insects at critical stages of their metamorphosis. The use of growth regulators interrupts the normal development of the insects, including orchid pests such as scales, mealybugs, aphids, and whiteflies. Apparently, there is little good and reliable information on their use on orchids, but an increasing number of growers are reporting satisfactory results with Enstar II and there does not seem to be any plant health problems noted thus far. Also, they are regarded as safe for humans and pets. Kinoprene does not work on adult insects and so should never be used to eradicate a pest population, but is best used on incipient infestations and maintenance sprays.

Azadirachtin (tradenames = Azatin and Neemazad) is a plant derived (neem tree) chemical, or botanical insecticide, that is a chitin inhibitor. Chitin is a primary component of the insect integument, or exoskeleton. Azadirachtin reduces the insects' ability to properly develop its integument and causes mortality through incomplete development. There is little information available on this chemical for use on orchids, but it is available on a wide variety of ornamentals and is labeled for greenhouse applications.

#### **Final Considerations**

Heavy infestations of scale, especially on many plants may require severe control methods. In such situations, you may need to consider the use of a synthetic insecticide. On the extreme side if you have a plant showing signs of decline from scale you may have to seriously consider destroying that plant, as the low likelihood of rejuvenating that plant may not justify the expense and effort of continued treatments. After all, the destruction of a sick plant can be used to justify the purchase of a new and healthier plant!

If you are battling scale for long periods of time (e.g., >9 months) and have been using the same insecticidal control method then you may have built a bigger problem that you started with. Depending on the length of time of your problem and the intensity of chemical use you could have selected a population of resistant scales. The best resolution to this is to change methods and chemicals occasionally; that is, do not use the same chemical mix more than 3-4 times sequentially. After isolating infested plants give them a thorough application of something different from what you have been using. For example,



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if you used insecticide then switch to an oil, soap, or different insecticide.

Generally, never use an insecticide not labeled for ornamental plants. Whenever using oils, soaps, and insecticides, be thorough, change formulations frequently, and do not use less than the minimum concentration of mixture. Too little of a chemical enhances resistance, while too high of a concentration may damage the plant. Never use hard chemicals prophylactically, that is do not routinely use chemicals as a preventative as it is a waste of chemical (and money!) and such use allows resistant scales to develop. Finally, keep up the manual removal of all scales, if possible. Removing the egg laying adults is as important as killing the nymphs. Again, you need to monitor the cycling of your scales to optimize spray effect and minimize total number of sprays.

### Congratulations New Board Members:

**Judy Mezey**

Term Expiring 2006

**Sally Taylor**

Term Expiring 2007

**Micheal O'Dea**

Term Expiring 2007

### Your members having fun in Machu Picchu



Bob Mezey, Jean Guilliand, Ed Guilliand, Charlie Clark, Marlene Clark, Michael Coronado, Judy Mezey and Gene Stevens



Bob Fuchs and Michael Coronado admiring a wonderful specimen of *Phrag. caudatum*



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General Email: [TheAOS@aos.org](mailto:TheAOS@aos.org)  
Web site: [www.aos.org](http://www.aos.org)

## Summer Orchid Classes

### Special Offer

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### Join the AOS



You are cordially invited to join the American Orchid Society. Membership offers many privileges to beginners and experts alike. Click [here](#) for more information or to join [now](#)!

### Growing Orchids



This popular book, published by the American Orchid Society, was written by experts on cultivation of popular orchid genera, growing areas, pests and diseases, nomenclature and more.

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### Dear Orchid Lover,

Become a better orchid grower by taking orchid classes at the American Orchid Society Visitors Center and Botanical Garden. The new class schedule for July through September of 2005 has just been released and we are currently taking registrations. Classes are taught by qualified instructors. Additional benefits for attending each class are listed below.

### July - September 2005 Classes

#### July

9th - Repotting Orchids  
16th - Growing Vandas  
23rd - Dendrobiums  
30th - Potting and Mounting Orchids

#### August

6th - Orchids 101  
13th - Orchids in the Garden  
20th - Roots and Why Orchids Need Them

#### September

3rd - Ferns for Home and Garden  
10th - How to Care for and Grow Cattleyas  
17th - Right Plant, Right Place  
24th - Paphiopedilums

*When: All classes meet on Saturdays from 10am - 12:30pm*

#### Each Student Receives:

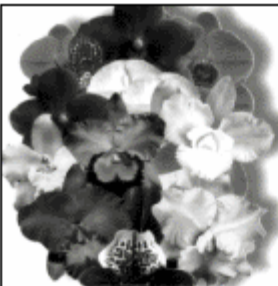
Free Orchid Plant.  
Class instruction from horticultural experts.  
Question-and-Answer time with experts.  
Free admission to the [garden](#) on the day of the class.  
10% discount on all purchases - including plants - on the day of the class.  
Free copy of *Orchids* Magazine.

#### Registration:

Advance Registration Required.  
Refunds given up to 7 days prior to class.  
Cost: \$25 for AOS Members; \$35 for Nonmembers.  
Call: 561-404-2033  
Email: [galarkon@aos.org](mailto:galarkon@aos.org)  
Mail to: Class Registrar, 16700 AOS Lane, Delray Beach, Florida 33446  
[Directions](#)

[Click here for in-depth class descriptions or to learn more.](#)

Bring a friend to class and double your enjoyment of learning about orchids and plants! Afterward, you'll love your time visiting the botanical garden and greenhouse!



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## SFOS Meeting Schedule

Wednesday, July 20th, 2005

**Fire Fighters Memorial Building**  
**8000 N.W. 21st Street**  
**Miami, Florida 33122**

- 7:30 pm - Registration & Judging of Plants
- 7:45 pm - Announcements
- 8:00 pm - Program
- 8:45 pm - Orchid Clinic & Refreshments
- 9:00 pm - Awarded Plants Discussed
- 9:15 pm - Raffle