

# Orchiflora

**Volume 11, Issue 6**  
**June 2021**

**\*Montly General Meetings** – held the 4th Wednesday of each month (except July, August and December)

***\*We will continue to hold virtual Meetings & Culture Classes for the foreseeable future.***

***You need to instal Cisco Webex on your computer, tablet or mobile phone to participate in our virtual meetings and culture classes.***

**\*Join a meeting/class in one of the following ways:**

Click on this link: <https://vancouverorchidsociety.my.webex.com/meet/vosexecutive> or open the Cisco Webex program and enter this meeting number 142 001 4949 in the Enter meeting information field, under Join a Meeting.

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## Culture Class – Tuesday, June 8 at 7 pm

- **Speaker: Ingrid Pike: Rescue Treatment for Rootless Orchids: “an interactive presentation”**

## **Monthly Meeting Wednesday, June 23 at 7:00pm**

**President’s welcome & general announcements, Annual General Meeting.**

- **Speaker: Pat van Adrichem will be giving a virtual tour of his greenhouse**

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## Next Culture Class – Tuesday, September 14 at 7 pm

- **Speaker: Margaret Prat will present on Terrestrial Orchids in the Pacific Northwest.**

## Next Monthly Meeting – Wednesday, September 22 at 7:00 pm

- **Speaker: Peter T. Li will present on Mini Orchids**

<b>INSIDE THIS ISSUE</b>	
President’s message	Pg 2
Minutes – May 26 Mtg	Pg 2-3
AGM	Pg 4
Happy Summer	Pg 4
Member Photos	Pg 5-18
Executive & Board	Pg 19
Social Media	Pg 19-20
Mites and their control	Pg 20-+

**\*\*AOS Judging - The Western Canada Judging Center (WCJC) meetings are cancelled until further notice\*\***

## *President's Message*

What is it about orchids that draws us to collect them with an obsession and why should we protect their habitat? To begin with, the orchid family is one of the largest flowering plant groups, encompassing more than 25,000 different species. Orchids grow nearly everywhere in the world. They grow in the coldest areas (near the Antarctic and Arctic circle), to the hottest, and driest countries. They thrive on streambeds and flourish on trees and in soil, on rocks, in air and even on rooftops to mention a few. Their sizes range from a fraction of an inch to 20 feet tall and their flowers are a fraction of an inch to some Paphiopedilums longer than 36". Scents range from rotten flesh, to enticing spice, to delicious chocolate. The amazing and unbelievable different shapes alone, such as, monkey faces, flying ducks, bees, doves and many more, are enough stir one's curiosity. Breathtaking floral displays make orchids highly desirable. The variety of exotic color combinations are enough to attract anyone, but the desire to have a flower last nearly 9 months, like some dendrobiums, steals one's heart.

Orchid lovers can also be found all over the world, but to all the members of the Vancouver Orchid Society who, over the years, have opened my eyes to the wonderful world of orchids, I thank you.

Successful growing all,

Evelyn Nash

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### **Minutes of virtual Meeting of the Vancouver Orchid Society – May 26, 2021, 7 pm**

Hosed virtually on Cisco Webex.

#### **Speaker Series:**

In June Pat van Adrichem will be giving us a virtual tour of his greenhouse

Peter T. Lin will be speaking in September on Mini Orchids

Ray Barkalow will be speaking on Understanding Orchid Nutrition in October

#### **Culture Class:**

Ingrid Pike will be presenting in June on rescuing rootless orchids.

Margaret Prat will be presenting in September on native terrestrial orchids of the Pacific Northwest.

## **AGM and Executive Election:**

If you would like to nominate anyone for the executive, please email Eugene [eugene.banziger@gmail.com](mailto:eugene.banziger@gmail.com). Eugene Banziger, Daniel Kwok and Don Harquail have agreed to be the nomination committee. Nominations will also be taken at the meeting in June from the (virtual) floor.

Evelyn Nash will be vacating her seat as president and Grant Rampton will be leaving his position as director and membership coordinator.

Jennifer Pell has accepted the nomination for president and Vivien Chung has accepted the nomination for director.

Members of the executive that have agreed to run for reelection are:

Barb Cable: 1st vice president

Ingrid Pike: 2nd vice president

Maureen Burke: treasurer

Conor Preston: secretary

Eugene Banziger, Gabrielle Carson, Giulia Comin, Andrew Wong, Keith Willett: directors

## **Treasurer's report:**

We are working with a slight deficit this month, but a big thanks to everyone who donated to the auction!

Maureen will present a detailed financial report with Erik's help at our AGM in June.

Eugene motioned to accept the Treasurer's Report. Daniel seconded the motion and the motion carried.

## **Other Business:**

Gold Country Orchids has had trouble with their documents and our order of plants will likely not be arriving until the middle of July.

Margaret Prat will be hosting an open greenhouse on June 26th from 9-2. Email Margaret at [margprat@gmail.com](mailto:margprat@gmail.com) to book your spot, as there is a limit of one person in the greenhouse at a time. Margaret and Wayne will both have plants for sale.

A spreadsheet of member contact information has been created. Due to concerns about privacy, an email will be circulated so that all members can update what information they would like to have shared.

## VOS Elections

Please be sure to join our virtual meeting to participate in our AGM and executive election.

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**NOTE:** There is no newsletter for the months of July and August.

Let us hope the decline in COVID-19 infections continues and most of the population will soon be fully vaccinated so we can all enjoy a more 'normal summer'.

May your garden spaces flourish and your orchids grow well.



# VOS Member Photos – Thank you for contributing to our virtual show table!

**Terry Lee**



**Cyp. reginae**

Photos of *Cypripedium reginae* growing in the woodlands of the Roseau River area in Manitoba. Plants are over 2 feet tall, many stems with two flowers.

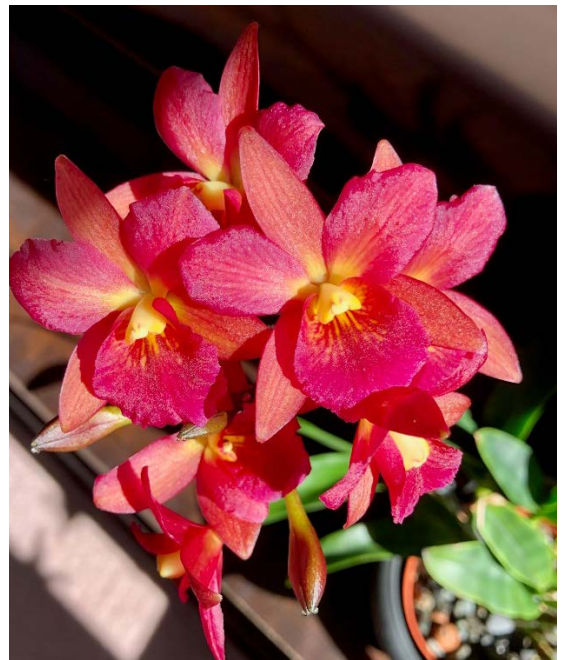
Growing conditions: dappled shade in poplar woodlands, leaf litter over calcareous clay, very moist in spring, usually located on a bank or slight hill so not always wet. Dries out by summer. Deep snow in winter, and very cold.

**Terry Lee**



*Cypripedium parviflorum pubescens*. Terry dug this clump up from her home in Winnipeg to bring with her to BC. Unfortunately, it did not adapt and slowly declined over a period of years until it died.

**Elizabeth Markus**



**Ctna. Why Not 'Roundabout' X Ctna. Orglade's Little Lover 'Jacks Hill'**

**Melanie Gallacher**



**Phal. No ID**

**Melanie Gallacher**



**Phal. No ID**



**Cattleya Skinneri – the National flower of Costa Rica**



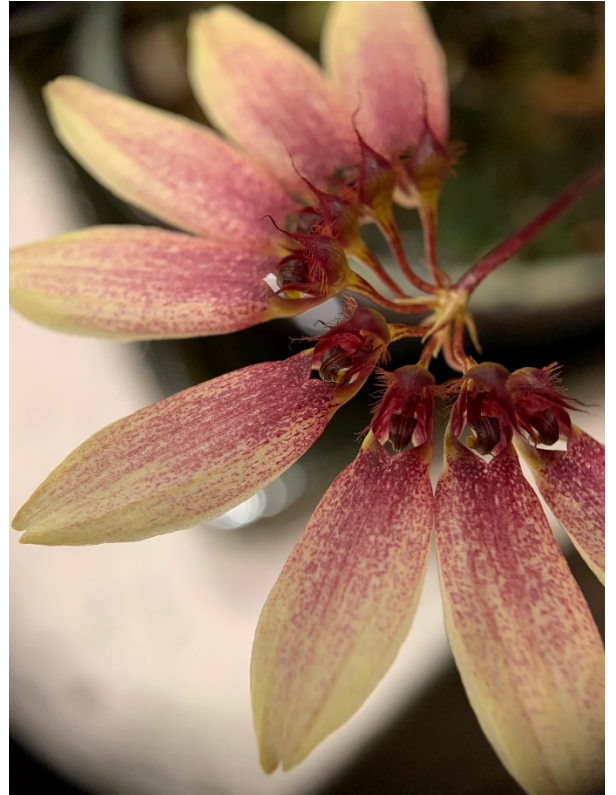
**Phal. Baldan's Kaleidoscope 'Golden Treasure' AM/AOS**

Vivien Chung



Dlc. Chantilly Lace 'Twinkle' - Lemony pledge scent.

Vivien Chung



Bulb. lepidum, first reblooming growing in pure sphagnum moss.



Phal. Alberla (pulchra x speciosa), first reblooming, 3 more buds developing.



Masd. Myck Santos x pachyura

**Marilyn Lew**



**C. mendellii**

**Marilyn Lew**



**C. trianae 'Mutation'**



**C. mossiae yellow lip x coerulea Pablo**



**C. intermedia alba 'Aquimi'**



**Carla & Bill Bischoff**



**Paph. Victoria Reginae**

**Carla & Bill Bischoff**



**Paph. Villosum**



**Laelia purpurata var. werkhauseri**



**Dactylorhiza in flower in the garden.**

Sasha Kubicek



**Paph. barbatum**

Sasha Kubicek



**C. iricolor**



**Corallorhiza maculata**

**Jim Poole**



**Laelia Purpurata Sanguiea**



**Laelia Purpurata Carnea**

**Jim Poole**



**Den. parishii**



**Laelia Purpurata Striata**

**Eugene Banziger**

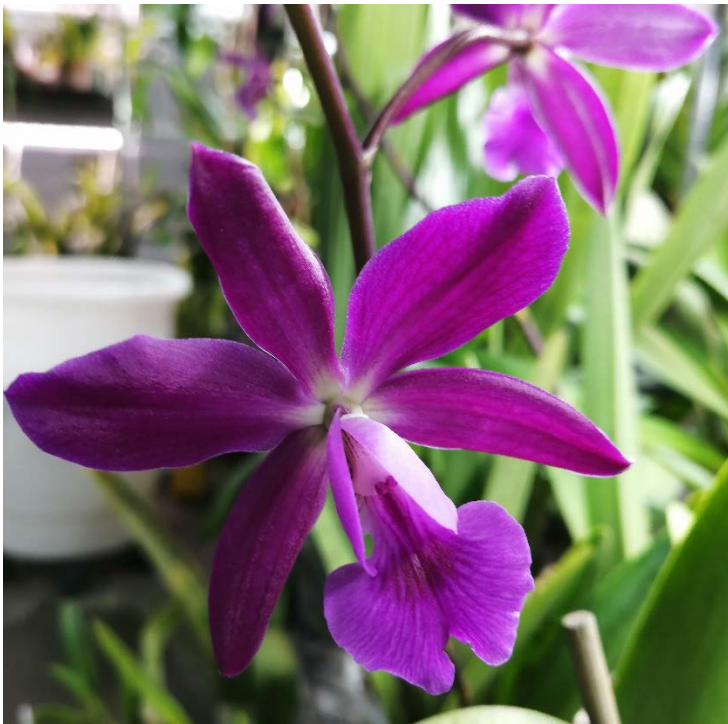


**Laelia purpurata 'Uba Tuba'**

**Eugene Banziger**



**Odontocidium Catatante 'Pacific Sunspots'**



**Epicattleya Rosita**

**Erin & Frank Skelton**



**Den. Ueang Pheung (lindleyi X jenkinsii)**

**Erin & Frank Skelton**



**Angraecum didieri**



**Cypripedium calceolus**



**Den. lindleyi**

**Chris Abel**



**Oncostyle Wildcat 'Boldin Red Star'**

**Chris Abel**



**Colmanara Masai Red**



**Odontocidium Cherry Fudge 'Carmela'**

**Lori Barrington**



**Phrag. caudatum**



**Zootrophion lappaceum**

**Lori Barrington**



**Den. cuthbertsonii pink, purple and white  
(growing on my kitchen windowsill)**



**Podangis dactyloceras**

Daniel Kwok



Masdevallia Vin Rouge

Daniel Kwok



Cyp. reginae



Den. crepidatum



Den. victoria reginae



**Don Bednarczyk**



**C. aelandiae**

**Don Bednarczyk**



**Laelia speciosa**



**Laelia purpurata var anelata**



**Laelia purpurata var schusteriana**

**Wayne Riggs**



**Cyp. Kentucky Pink**

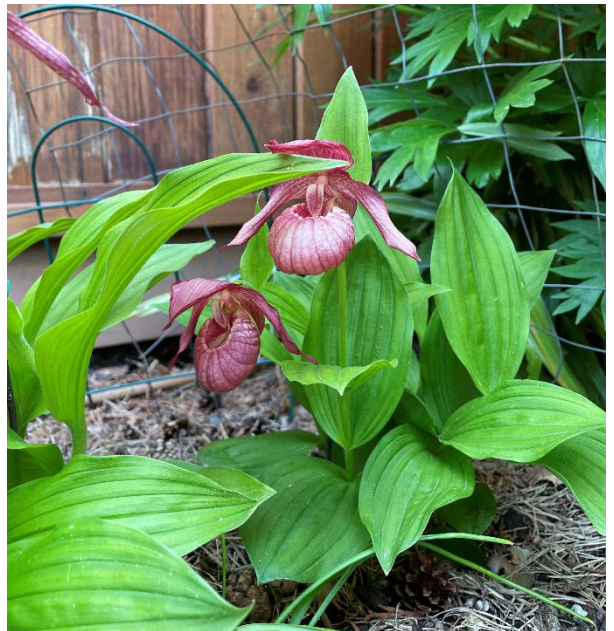
**Wayne Riggs**



**Cyp. pariflorum**



**Cyp. Memoriam Shawna Austin**



**Cyp. Vintri Pink**

All growing in our north facing yard. Receive filtered sunlight in the morning and evening.

### ***Executive and Board of Directors***

President – Evelyn Nash  
1st Vice President – Barbara Cable  
2nd Vice President – Ingrid Pike  
Treasurer – Maureen Burke and Erik Nilsen (Co-Treasurers)  
Secretary – Conor Preston  
Directors:  
- Eugene Banziger  
- Gabrielle Carson  
- Giulia Comin  
- Grant Rampton  
- Keith Willet  
- Andrew Wong

**NOTE: Contributions of photos or articles to the newsletter are welcome.** If you wish to write a short culture note or pass along some 'secret' growing tips that you find makes your orchids thrive and bloom well, please email to me so I can include in a future newsletter.

Send to Wayne Riggs:  
wayne.riggs66@gmail.com

The submission deadline is usually the 8<sup>th</sup> of each month. Items received after this date will appear in the next newsletter.

### ***Social Media:***

***Instagram*** - VOS member Conor Preston has established an Instagram account to generate public interest in growing orchids. Please visit:

<https://www.instagram.com/vancouverorchidsociety/>

If you would like to post photos of your flowering orchids, please get in touch with Conor at: [conorpreston88@gmail.com](mailto:conorpreston88@gmail.com)

***WhatsApp – VOS chatroom*** - Daniel Kwok has established Chatrooms for VOS members to post photos of their orchids, ask questions about plant health or growing tips. It is a great forum to learn from others and to share your plant photos and growing conditions.

We would like to encourage new VOS members, and current members who have not joined the VOS chatroom, to get in touch with Daniel at: [dkwok3580@gmail.com](mailto:dkwok3580@gmail.com) (Tel: 604 805-3866) to be added.

***Facebook***-You can also follow us on Facebook

<https://www.facebook.com/VancouverOrchidSociety/>

**Facebook/Instagram - Photos of your orchids needed**

Photos of your flowering orchids (and basic information on growing conditions) are needed for the VOS **Facebook Page and Instagram**. This is a great way to promote our love of orchids to other growers and the public. Send your photos to Jennifer Pell/Conor Preston at: [VOS\\_secretary@outlook.com](mailto:VOS_secretary@outlook.com)

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Over the years I have noticed that the hot, dry days of summer encourage spider mite populations to flourish. Within days these pests can wreak havoc particularly on thin leaf orchids (e.g., Mormodes, Catasetum, Clowesia and Cycnoches) leaving the leaves mottled and chlorotic. If the infestation is severe plants may die.

I have added an article on mite control by Dr. Paul Johnson from South Dakota State University to the end of this newsletter. It provides a good overview of the major mites that attack our orchids and offers some good suggestions for control. The key to success is to repeatedly apply the treatment you choose given the short reproductive cycle for these pests.



# Mites on Cultivated Orchids

Paul J. Johnson, Ph.D.

Insect Research Collection

Box 2207A, South Dakota State University

Brookings, SD 57007

Last update: 22 November 2008

Yellow speckles or browning of leaves on your orchids? Webbing of silk on various plant parts and no spiders to be seen? Consider mites as possible culprits. Mites are tiny creatures related to spiders and ticks, and are not insects. Plant-feeding mites can be thought of as plant parasites and are often amongst the most serious pests of cultivated orchids. Common orchid cultural conditions in homes and hobby greenhouses can favor mites, and the use of pesticides removes natural predators and allows development of resistant populations.

## Sources and Identification



Mite species that are pests on cultivated orchids generally fall into two main categories, spider mites, and flat mites. The latter are also called false spider mites, but the name flat mite is preferred as it is accurately descriptive and avoids confusion with spider mites. There are other pest species of mites, but they are generally of less importance.

The most common spider mite recognized as a persistent pest of orchids is the common two-spotted spider mite (*Tetranychus urticae*), but the carmine spider mite (*Tetranychus cinnabarinus*) may be an unrecognized pest species in North America. The spider mites are a yellowish-green and usually with two large dark areas on either side of the body at about midlength. They are active species that is easily seen wandering the plants. Spider mites received their name because of the silk webbing that they produce, not because they may appear like small spiders. The two-spotted is also known by other common names, including the “red spider mite” because of an orange-red over-wintering form. However, it is possible that in some cases the red form of the two-spotted may actually be the carmine spider mite. Both species are global, feed on many kinds of plants (polyphagous), and are easily transported on many kinds of plants.

Flat mites recognized as pests on orchids are the orchid mite (*Tenuipalpus orchidarum*), the phalaenopsis mite (*Tenuipalpus pacificus*) and the oncidium mite (*Brevipalpus oncidii*). *Tenuipalpus orchidifilo* was described recently and was reported as a pest of

*Arundina graminifolia* in Brazil, but there are apparently no reports of this species elsewhere. Three other species are recorded from orchids, *Brevipalpus phoenicis* (red and black mite), *B. californicus* (omnivorous mite), and *B. russulus*, but these reports are not verified and may represent misidentifications. Flat mites are native to tropical and subtropical habitats and hosts, and are moved globally by the plant trade. There are probably more species on orchids, but the taxonomy of tenuipalpid mites is poor as is accurate information about their occurrence on orchids. Flat mites are smaller than two-spotted spider mites, difficult to see without magnification, and move very slowly.



Other mites frequently found associated with orchid culture include predatory mites that feed upon pest mites. There are many innocuous mite species that feed on fungi, bacteria, and decaying organic materials. There are also a number of beneficial mites that are predators on plant-feeding mites, insect pests, and other critters. Oribatid mites that look like tiny round, dark-colored beetles feed on fungi on plant parts and decaying organic materials. A large diversity of yellowish to light brown mites are frequent in potting media and may occasionally be found on plants. These are usually large, >1.0 mm in length and easily seen.



The two-spotted spider mite is probably the most important mite pest of cultivated orchids in all areas, but flat mites are very common and are often not diagnosed properly. Both two-spotted and flat mites can become problems in greenhouses and homes. Because of the small size of these mites, and great similarity among related species, their accurate identification is difficult and often requires the help of an experienced entomologist with a high quality microscope. In general, two-spotted's and flat's are small sized, with two-spotted's reaching a grand 0.5 mm in length and flat's reaching a mere 0.3 mm in length. All of these mites are pale yellowish-green to

orange-red color and often with two or more black areas visible through their integument. All bear conspicuous pale hairs. Two-spotted spider mites spin networks of silk webbing that protects their colonies from predators and helps maintain high humidity near the leaf surface. This webbing is also protective against pesticide sprays. Flat mites do not spin this webbing.

Typically, mites are always present in low numbers. This makes managing cultural conditions important for mite control. Mites will readily move between plants, float on air currents, be introduced on new plants or those brought indoors from the garden, and the eggs or resting stages may be in potting media. Colonization of your plants by mites

can be done at any time, but severe problems may not show themselves until favorable environmental conditions are present. In the home and hobby greenhouse spider mites will readily move to orchids from other plants.

### **Damage**

All of these mites may be found on a wide variety of orchids. In addition, the two-spotted spider mite is known to feed on hundreds of different plant species. The larvae, nymphs, and the adults all feed by puncturing cell walls and sucking cell contents, particularly chloroplasts. The killing of individual cells or groups of cells produces the transparent, yellow, or tan patchwork of damage that indicates mite infestation. Feeding may be done on many plant tissues, but mostly on leaves and buds and can cause these to drop prematurely. Heavy feeding produces a patchy chlorotic appearance to leaves, and portions of or the entire leaf may turn dry and brown. This damage generally reduces the vigor of plants and may kill plants. Mites may also transmit certain viruses.



Flat mites often feed on the upper surfaces of leaves and this will create a pock-marked appearance from empty and collapsed leaf cells. This type of damage is particularly easy to see on infested *Phalaenopsis* leaves. Flat mite feeding on thin leaves, especially the underside, is similar to the stippling caused by spider mites, but there is no webbing. Mite damage is permanent, so it is best to manage mites at low populations than to experience heavy infestations. Thin or soft-leaved orchids are more susceptible to mite damage than those with thicker leaves, but no species or variety is immune.

### **Life Cycle**

Both two-spotted spider mites and flat mites have five life stages: egg, larva, protonymph and deutonymph (or nymphs), and adult. The larva has only six legs, but the nymphs and adults have eight legs. Eggs are laid by females on the surface of plant structures and are often hidden in crevices. Eggs and larvae are very tiny and are nearly impossible to discern without magnification. A good hand lens is useful for seeing even the adults.

Developmental rates of mites are dependent upon temperature. In general, the higher the temperature the shorter the life cycle. The egg may take upwards of three weeks to hatch for flat mites, but only 1-2 days for two-spotted spider mites, at standard indoor temperatures. While larval and nymphal stages usually take 5-6 weeks to reach adulthood for flat mites, it may take only 1-3 weeks for two-spotted spider mites. Optimum temperatures for development are 30-32°C (86-90°F). Both kinds of mites will have many generations per year under favorable conditions. While flat mites may take 6-9 weeks to complete a generation, the two-spotted spider mite can complete a generation in as little as 5 days in optimum conditions. Like other orchid pests the overlapping of generations creates a significant mite management problem.

### **Management and Control**

Pesty mites tend to increase in numbers during “rain-less” periods due to the lack of rain, fog-drip or other sources of free water on plants. It is the physical presence and force of impact of water that help keep plant-feeding mite populations low. Spider and flat mites require high relative humidity and occupy a thin static air layer next to plant integument.

Under `normal' conditions the mites are widely dispersed on and among plants. In dry conditions, the mites concentrate in the most protected areas in the static air layer next to the plant and between hairs. Further, the silk spun by spider mites acts as a tent to deflect air flow and hold humidity close to the plant. Low humidity and lack of free moisture is also bad for predatory mites and insects, important natural control factors for spider and flat mites. In-doors and in greenhouses, spider and flat mites become serious problems during the winter under the combination of reduced overhead watering and absence of predators, and use of insecticides. In the home, typical gentle misting methods simply are not effective on mites when dry air is circulating from furnaces and heaters. Overall, it is a rather delicate balance between high relative humidity, free moisture, a dry air source, breeziness, temperature, and the presence of predators that keeps mites well managed.

Two-spotted spider mites and flat mites are small and relatively delicate creatures. The easiest method for keeping mites under control is to regularly spray, or syringe, the plants with water. In the home placing your plants in a shower or using a sink sprayer is very effective. Mites are readily washed from the plants or are damaged by a heavy spray. In a greenhouse regular spraying and misting is effective.

Biological control of mites is feasible even in small hobby greenhouses. Numerous predatory insects attack mites, including lacewings, ladybeetles, and wasps. The use of predatory mites is particularly successful in greenhouses. Most of the predator mites that are sold by suppliers are from several genera. *Phytoseiulus persimilis* is a commonly used and readily available species. Of course, the use of insecticides and miticides when biological control agents are active is self-defeating, and mite problems can be exacerbated by use of general insecticides.

### **Rubbing Alcohol**

Light infestations restricted to one or a few plants can usually be treated with household products. When possible, immediately isolate infested plants from others to prevent the mites from moving amongst them. Probably the most popular home remedy is to spray plants with a mixture of isopropyl (rubbing) alcohol and liquid mild dish detergent, such as Ivory. Do not use other alcohols, such as ethanol or methanol, as these will penetrate the plant tissues and cause considerable damage! The concentration of the isopropyl seems to make little difference, the common 70% concentration available in stores is satisfactory. Alcohol treatment is effective against all the life stages of mites, except eggs.

A potential problem with alcohol treatment is the rapid evaporation of alcohol causing cooling of plant tissues. Especially with air movement that increases evaporative cooling, this chilling may over-cool tissues and create zones of dead cells that can become necrotic with bacterial or fungal infection. On warm days or in a breeze consider blotting residual alcohol with a tissue instead of permitting it to evaporate off the



plant. Alcohol and detergent solutions can also damage delicate buds and blooms, so caution is urged for prized plants.

Repotting is not very effective against mites. However, with an extreme infestation it may be worth repotting a plant as eggs and resting adults may be in the growing media.

Horticultural oil, neem oil, mineral oil, and insecticidal soaps are readily available, inexpensive, and effective against mites. Oil solutions smother the mites so a complete coverage of all sprayed plants is essential. These oils are mixed with water and usually a plant-safe detergent or commercial spreader-sticker should be used for enhancing the effectiveness of the oil. The main caution with these oil solutions is that they should never be applied to plants on hot days (>85°F/29°C) or in direct sunlight, as to prevent burning of tissues. Leave the plant in shade until the application has dried. Some plants or parts, such as buds and blooms, are sensitive to oils so due care and consideration is urged.

Insecticidal soaps are usually solutions of a synthetic pyrethrin and potassium salts of fatty acids, otherwise known as soaps. Pyrethrins are synthetic analogs of pyrethrum, the natural extract from certain Asteraceae, particularly certain species of *Chrysanthemum*. Caution is urged with so-called “safe” insecticidal soaps as some plants are sensitive, particularly tender new tissues. Piperonyl butoxide is a common enhancer of pyrethrins but can cause allergies in some people and may affect plants, too. Some non-orchid ornamentals will drop leaves and abort flowers when sprayed with insecticidal soaps, so again caution is urged with prized orchids.

Because the life cycle of mites is so short and there are overlapping of generations, to bring a serious problem under control you may need to do treatments every 1-3 weeks. The time period between control efforts will depend upon the growing conditions, especially temperature: greater frequency in a warm greenhouse, less inside a house. As with any pest, persistence is a key to success and correlating the control method to the mite species is important for effective management. Cultural conditions are a key to managing mite populations.

### **Insecticides and Acaricides**

Persistent populations of mite or infestation in many plants usually demand the need for synthetic pesticides. Mites are unrelated to insects and most common insecticides are not effective against mites. Pesticides designed for mite control are called miticides or acaricides. There are few miticides specifically registered for use on orchids, but there are many miticides for ornamental plants in general and several are available as inexpensive home-and-garden solutions. Miticide formulations not labeled for ornamental plants are often mixed with solvents that aide in the application of the active ingredient for specific purposes. These solvents, not necessarily the miticide itself, often produce phytotoxicity and may seriously damage or kill plants. Thus, never use any chemical that is not specifically labeled for ornamental plants.

Common insecticides are not effective against mites, though some do have some weak suppressive action, but will kill mite predators. Acephate (Orthene), malathion, and disulfoton (Di-syston) are labeled for mites but are not very effective. Resistance by mites to pesticides is a serious problem and is in part due to the excessive use and weak action from common insecticides. Dimethoate, diazinon, and chlorpyrifos were recently removed from the market in the U.S. for non-commercial applications due to excessive and careless use causing some serious health and environmental problems.

There are many miticides available for ornamental plants, but some are not tested on orchids, and others are generally too expensive or otherwise not readily available for the small-collection grower. Effective miticides for ornamental use include avermectin (Avid), bifenthrin (Talstar), dinofenothin (Pentac), fenbutatin-oxide (Vendex), and fluvalinate (Mavrik). Fenbutatin-oxide is mixed with acephate and sold in home-and-garden formulations. Avermectin is probably the least toxic of these chemicals to people and pets.

Of course, always follow label directions and never exceed the minimum recommended concentration given in mixing directions! Recommended solutions are based on extensive testing for selected pests and plants. Orchids are sensitive to many chemicals, particularly under direct sunlight or high heat, and while certain species may not react to a given formulation others may, so your own testing on plants before general application is recommended.

Home orchid keepers that need to apply miticides 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.

#### **Final Considerations**

Heavy infestations of mites, especially on many plants may require extensive control methods. Since the damage done by mites is permanent, constant management of the population more effective than control of a major infestation. On the extreme side if you have a plant showing signs of severe change or general decline from mites you may have to seriously consider destroying that plant, as the likelihood of rejuvenating that plant may not justify the expense and effort of continued treatments. Too, destruction of a sick plant can be used to justify the purchase of a new and healthier plant!

If you are battling mites for long periods of time (e.g., >2 months) and have been using the same miticide then you likely developed a resistant population of mites. Remember the short generation times of mites. The best resolution to this is to change methods and chemicals frequently; 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. Resistance is not a problem with alcohol, oils, and soaps as these suffocate or dessicate the mites.

Generally, never use a miticide not labeled for ornamental plants. Be thorough.

Prophylactic use of miticides is tempting but does little good as it is a waste of chemical and money, and allows resistant mites to develop.

Orchid growers with an entomological penchant and desiring detailed information are referred to the excellent book *Mites of Greenhouses: identification, biology and control*, by Zhi-Qiang Zhang (2003), CABI Publishing, Oxon (UK) and Cambridge (USA), ISBN 0 85199 590 X.

Image Credits: False spider mite and spider mite images are from the North Carolina Cooperative Extension Service and USDA-ARS, respectively. Other images are those of the author.