

THE SPECIES ORCHID SOCIETY OF WA (INC)

[http://members.iinet.net.au/~emntee/species Newsletter.htm](http://members.iinet.net.au/~emntee/species%20Newsletter.htm)



Vol 27 No 3 August 2015



Cultural Award July 2014
Rhyncholaelia glauca
Tony & Mavis

NEWSLETTER

NEXT MEETING - TUESDAY 11 August

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MINUTES OF THE GENERAL MEETING

14 July 2015,

Please note that due an error in the booking, the venue was not available to the Species Orchid Society on the 14th July. Unfortunately, this was only brought to our Secretary's attention on Monday 13 July, too late to arrange a replacement venue. Graham confirmed that the hirer was in fact using the venue that evening, so that it was not available to us.

Given the late notification, the decision was taken to cancel the meeting rather than trying to find an alternative date and venue. This means that the silent auction originally scheduled for the July meeting will now be held at the August general meeting.

We sincerely apologise for any inconvenience caused by this error.

NOTES FROM YOUR COMMITTEE

- The next meeting is our fund-raising, and generally have a great time, **silent auction**. Please bring along spare species or hybrid orchids that you might have, other plants likely to be of interest to members and orchid paraphernalia such as books etc. Please refrain from watering plants donated on the day of the auction as the bids are impossible to read if they are wet. Donated items will be placed into groups and members will be invited to make the bids on slips that are placed under the lot. Once all the bids are lodged, they will be sorted with the highest bidder winning the lot. This is a great opportunity for new members to expand their collections.
- WAROO is staging a display at the 20th AOC in Mackay in September. Cut flowers will be needed, especially WA terrestrials. Further information will be provided at the August general meeting
- The display for the Inter Society Display and Workshop is well under way thanks to Gerda and Charly. As we did last year, those of you likely to be able to provide plants please let Ken know by 24 July what might be in flower so that he can prepare tags. If possible, plants for display should be

taken to Chris' home at Sorrento Ph 9246 3189 after 10.00am on Friday 31 July so that Chris and Tony can determine what plants are to be entered for judging.

If you are likely to have plants available, but are not able to attend the Intersociety Display and Workshop, they could be brought to the home visit at Ken & Chris home, or to 204 Park Street during the week 27-31 July.

- We are planning a further plant importation for November /December 2016. This will be discussed at the next general meeting when member's interest in participating will be assessed. Potential suppliers are:
 - * Ten Shin Gardens, Taiwan
 - * Mundiflora, Ecuador
 - * Ool Leng Sun Orchids, Malaysia
 - * Plantae Orchids, South Africa

We will make URLs and lists available on the Species Society website for members to view.

- Your annual membership is now due. Please pay the Treasurer at the next meeting. Should you see any members who may not regularly attend meetings, you might mention it to them.

Quiet Achievers

| | |
|------|----------|
| 2013 | Ian |
| 2014 | Chris |
| 2015 | Margaret |

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Committee:

| | |
|---------|--------|
| Chris | Sharon |
| Maxine | Paul |
| Michele | Tony |
| | Mavis |

Life Members

Barry (dec'd)

Gordon

Maxine

Ken

Joan (dec'd) & Ted (dec'd)

Trevor

Neville

Noel & Eva

Tony & Mavis

Barry (dec'd)

NOTICEBOARD

FORTH- COMING EVENTS

Home visits:

At 10 am on the Sunday after the fourth Thursday of each month. Please bring chairs and food to share.

- * 30 August - Graham & Margaret, Hamersley
- * 27 September - Maxine, Parkerville.
- * 25 October - Lynne, Eden Hill

FOR SALE/WANTED

Kevin Butler at Ezi-Gro Orchids was a participant in the Taiwan order, and now has a wide range of species plants that he has for sale. The genera include *Aerangis*, *Angraecum*, *Bulbophyllum*, *Cymbidium*, *Encyclia*, *Paphiopedilum*, *Renanthera*, *Rhyncholaelia*, and *Sobennikoffia*. Kevin's participation in this shipment helped to spread the fixed costs and enabled us to purchase plants at wholesale prices. Many of these are not readily available, so contact Kevin or his staff.



Imported plant news

The next quarantine inspection will be scheduled for mid-August to allow plants to make more growth, and for those plants released, hopefully to have warmer weather than mid-winter for their owners when they receive them..

Ken & Chris Jones

Hygiene tips to keep your orchids disease free.

“Thai Orchid Disease”

Guignardia and *Phyllosticta* are collectively known by the common name Thai Orchid Disease. The first plants discovered with this infection were strap-leaf Vanda hybrids from Thailand, although in common with fungal pathogens generally, there are many different species and some of these will infect other exotic and fruiting plants. This disease severely weakens the plant, and ultimately leads to its death. *Phyllosticta capitatus* is the most common species infecting orchids, however as Martin Motes writes, “in fairness to the Thais, it is in fact cosmopolitan. Amateur growers have exceptional difficulty controlling this disease largely because of a lack of understanding of its life cycle. An understanding of this fungus makes it no more difficult to control than any other of the leaf spotting fungi such as *Cercospora*.”

Although Martin Motes says that this disease is no worse than many other fungal pathogens, in an article published by the Rockhampton Orchid Society, the author says that “it is without doubt one of the worst pathogens of the group of plants we generally refer to as Vandas”. This is because this genus is relatively disease resistant, and often less closely observed than other species. Unless this infection is controlled, plants infected become weak and are then easy targets for other opportunistic pathogens.

The initial symptoms may appear on both upper and lower leaf surfaces as tiny, dark-purple, elongated streaks, oriented along the leaf parallel to the veins. As this streaking spreads, the infection creates elongated, diamond-shaped lesions that can be up to 3 cm in length. Over time, the lesions join together to form irregular areas that may cover a significant proportion of the leaf. The lesion may also be full leaf thickness. Over time, the centres of the lesions turn tan to dark brown, sometimes with a silvery overlay, while some lesions will remain dark purple in colour. The lesions adversely impact the plant’s photosynthesis process by reducing the leaf surface area available for this purpose. They are the site of spore production of the fungus which reproduces by both sexual and asexual spores. Initially, asexual spores (conidia) are formed in the fruiting bodies (pycnidia) that form in the lesions. The early mycologists who studied this pathogen named it as *Phyllosticta*.



Phyllosticta on *Dendrobium* leaves



Guignardia infection in orchid leaf

Photo source: <http://staugorchidsociety.org/culturepests-diseases-leafspots.htm>

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CULTURAL AWARD, August 2014
Dendrobium aemulum
Lorraine



CULTURAL AWARD, October 2014
Eulophiella elisabethae
Maxine

CULTURAL AWARD PLANTS 2014/15



CULTURAL AWARD, February 2015
Paphiopedilum dianthum
Howard



CULTURAL AWARD, March 2015
Aerangis articulata
Peter



CULTURAL AWARD, November 2014
Ansellia africana
Ian



CULTURAL AWARD, December 2014
Zelenkoa onusta
Tony & Mavis

CULTURAL AWARD PLANTS 2014/15



CULTURAL AWARD, April 2015
Comparettia speciosa
Tony & Mavis



CULTURAL AWARD, May 2015
Dendrobium fairchildiae
Graham & Margaret

The conidia are released when there is water on the leaf surface, and require water to germinate therefore; it is simpler to control if plant wetting from rain can be restricted by an impermeable roof. While this fungus attacks both new and old leaves, the infection can take several weeks or even months to be visible. Generally the lesions are most commonly present on mature leaves that can remain attached to the plant for several months and continue to produce spores spreading the infection. Accordingly, where practicable, diseased leaves should be removed and disposed of properly. Shortly after the pycnidia appear, the pathogen produces different fruiting bodies (peritheca) that produce packets of sexual spores. The mycologists who studied this part of the life-cycle of the fungus named it as *Guignardia*, however it is now recognised that *Phyllosticta* and *Guignardia* are in fact the same organism.

Phyllosticta infects a wide range of orchid genera including the *Cattleya* alliance, *Dendrobium* and the *Oncidium* alliance in addition to the *Vanda* alliance. Therefore, substantial steps must be taken to control this disease if it appears. While not all of us grow Vandas, the fact that this pathogen also infects other genera is of concern.

Phyllosticta seems to just suddenly present on otherwise healthy plants. Most often, this appears to occur following significant seasonal temperature change in late autumn/early winter/early spring that induces 'cold stress' in these tropical species. As advised earlier, the lesions are in fact the fruiting bodies of the fungus that has been present for some time. This presentation is analogous to the appearance of "fairy rings" of toadstools after a heavy rain. Like the mystery that surrounded the sudden appearance of toadstools, many orchid growers mistakenly believe that *Phyllosticta* is a systemic problem like a virus. It is not – it is a fungal disease of an individual leaf that spreads to other leaves via spore, often from the older leaves to the newer leaves as they form. While this disease is not inevitably fatal to the plant, it is extremely persistent and difficult to control requiring persistence and commitment from the grower to the control regime adopted.

The first step, as reinforced throughout this article is general cleanliness and effective plant hygiene. Keeping the shadehouse or hothouse pathogen-free is the starting point. Therefore newly purchased orchid plants should be carefully inspected to make sure they are disease free. Dead leaves, used potting mix and other spilt organic material should be promptly removed from the floor and benches and properly disposed of into the wheelie bin as they can be an ongoing source of infection. Perithecia may develop in fallen leaves and will continue to produce active spores for as long as they remain.

Control of infection in plants is the next step. If the orchid is not valuable, or has no special place in your collection, consign it to the wheelie bin. Otherwise, an effective fungicide program is required. Regular application of Mancozeb® will kill the fungal spores but will not deal with the pathogen present in the leaf tissue. This requires a systemic fungicide. A readily available systemic fungicide that is reasonably effective and has very low mammalian toxicity is Triforine (rose spray). A more effective systemic

is thiophanate-methyl, but this is not generally available from the usual supermarket outlets. Banrot 400WP® Broad Spectrum Fungicide for Ornamentals has thiophanate-methyl as an active ingredient. A combination product, Zyban WP that included Mancozeb® has been deregistered, so it would be wise to mix Banrot 400WP® with Mancozeb® to have a contact fungicide to kill the spores and so stop new infections and a systemic fungicide to kill the fungus. It should be applied at the recommended rate for ornamentals. Ridomil Gold® may be equally effective for this purpose. This regime will also address *Cercospora* and *Fusarium*.

Remember, once the plant is infected, disease-free status must be achieved and then maintained so that all newly emerging leaves remain disease free. This may take some years before you can confidently say that you have cured your plant(s). This reinforces the benefit of taking care initially to avoid introducing disease into your collection through adding diseased plants purchased at orchid shows, or by contact with diseased plants on display (where they act as a source of inoculum for other plants).

As I discovered some years ago, *Phyllosticta spp* can be almost impossible to control once it takes hold in a collection. We had more than 300 Vanda species and hybrids in quarantine, two of which exhibited an infection that resembled rust at a three monthly inspection. Naturally, this caused considerable concern with AQIS. Given the nature of our facility, we were unable to effectively isolate the vandaceous species and hybrids from the others in quarantine, and with AQIS assistance, we then commenced a program of approved control to endeavour to eradicate the infection. Despite nearly 18 months of effort, with controlled treatment removing all infected leaves, cover spraying plants and glasshouse floor, walls and roof with firstly Mancozeb® as a contact kill spray, and then strong NaOCl solution as a disinfectant on a rotating weekly basis for 8 weeks (4 weeks each) before observing the plants for 3 months for any signs of re-infection, we were unable to control this pathogen. We were given approval to use Rovral® as a systemic fungicide in place of the Mancozeb®, but this failed to halt re-infection and eventually all vandaceous species and hybrids were destroyed. However, this particular *Phyllosticta spp* was very specific to vandaceous species and hybrids and did not infect any other species that we had in quarantine at the time. The Plant Scientist at AQIS arranged DNA sequencing should this particular strain re-appear in future.

Botrytis commonly known as petal blight is another fungal infection which plagues orchids. To treat your orchid plant, it is important to remove the flowers which become infected. Spraying the contaminated plant as well as the surrounding ones with a good protectant fungicide also helps to reduce this infection. Since this is a very common fungus, there is no way to completely eliminate it, but proper care and sanitation, lower humidity, warm temperatures and improved air flow in the growing area can substantially reduce the damage caused by this pathogen. The spots may enlarge and cover the entire flower, and when ideal conditions exist, a grey fungal growth may also appear on severely infected flowers that will collapse as the infection takes hold. This pathogen is

always present and cannot be eradicated, only controlled. Infected flowers must be removed promptly as the infection will spread rapidly and infect other ornamental flowers. This fungal pathogen is particularly damaging to Dendrobium flowers (Phalaenanthes type) that are flowering in late autumn/early winter when the increased humidity allows this pathogen to flourish.



Botrytis cineria on Phalaenopsis flower

Photo source: <https://www.pinterest.com/kkorchid/orchid-pests-and-diseases/>

Botrytis spotting on *Laelia anceps*



Rhizoctonia is another common fungal infection

which debilitates the roots and in due course, the leaves. This root rot generally presents when the medium breaks down, drainage is poor and/or plants are overwatered. It can also infect your orchid arise when its roots are damaged by mechanical injury, salt build-up or over fertilizing. It is highly contagious disease and if not immediately controlled, orchid plants develop brown root rot and die. As above, *Rhizoctonia* is primarily a root disease although the symptoms can be observed on aerial parts of the plant as leaves and pseudobulbs become yellow, desiccated, thin and twisted and/or new growths become progressively smaller. Closer examination of the orchid roots will reveal a brown rot with white or brown fungal growth. In severe infections, this pathogen girdles and kills the plant. *Rhizoctonia* is a major source of plant loss in orchid seedlings as it rapidly invades the lower leaves and rhizomes of small seedlings (it is another one of the spectrum of pathogens loosely referred to as “damping off”) If possible, any roots and leaves infected should be removed and the plant immersed in a protectant fungicide such as Ridomil Gold WP ®. The growing area should be disinfected with a 10% NaOCl solution. This pathogen can be one of the silent killers as unless leaves become infected or the plant becomes visibly distressed, it cannot be seen. Therefore, regular repotting with sterilised media should form part of a protective regime to limit the impact of this disease. If you are using heavy flushing will help limit the build-up of harmful salts that can be seen as a white crust on the media surface, or around the drain holes of the pot.



Fungal root rot in *Cattleya*

Photo source: <http://staugorchidsociety.org/culturepests-diseases.htm>

Continued next month

ABOUT US

Monthly Meetings

Monthly meetings held on the 2nd Tuesday of each month (exc January) at Wilson Community Hall, Braibrise St, Wilson commencing 7.45 pm. Usually, the short formal meeting is followed by plant descriptions given by members. Supper follows to allow members time to socialise and discuss orchids.

All visitors are very welcome

Membership Fees

Family \$30 PA + 2 badges (1st year only) [Badges come in two versions. Pin fastening (\$11.50) or Magnet fastening (\$13.50) *Please indicate your preference.*]

Single \$20.00 PA + 1 badge (1st year only) [Pin fastening (\$11.50) or Magnet fastening (\$13.50)]

New members who don't live in Perth will not require name badges, therefore membership will be at the renewal fee only

Monthly Home Visit

On the weekend following the fourth Thursday of each month (generally on the Sunday morning), a home visit is held at a member's home. This gives members an opportunity to enjoy the fellowship that our mutual interest provides, and to see how others go about growing their orchids.

Monthly Plant Display

Given that the prime objective of the Society is to promote the cultivation of species orchids, only species or natural hybrids are acceptable for display. Since we all may be uncertain about the identification of a plant from time to time, we encourage members to bring plants along about which they are unsure since someone

may be able to identify them. There is no competition nor restriction on flower count, quality or length of ownership. We want members to be able to see species plants in flower. So even if your flowers are a bit past their best, bring them in as others may not have seen that species in flower.

Plant Sales

The Society provides an opportunity table for members to sell surplus plants and equipment, and for the Society to sell product from time to time. A commission of 10% is charged on all sales.

Plant Purchases

The Society endeavours to obtain a different species seedling for sale at each meeting, usually costing between \$6.00 and \$15.00. The Society makes a small profit on these sales which is invested in benefits to members. As it is always difficult to get new or different species, should members have 20 or more plants of one species which they feel might be suitable as a monthly plant, please contact a Committee member.

Raffle

The Society conducts a raffle each meeting and at home visits as a means of raising funds.

Plant Imports

The Society is able to use quarantine facilities provided by Ken & Chris to co-operatively import species orchids.

Management

In accordance with the Constitution, the Annual General meeting is held in May each year at which time the office-bearers and committee are elected. The majority of Committee members serve two year terms.

If unclaimed, return to
The Editor
204 Park Street, Henley Brook WA 6055

Next meeting Tuesday 11 August 2015