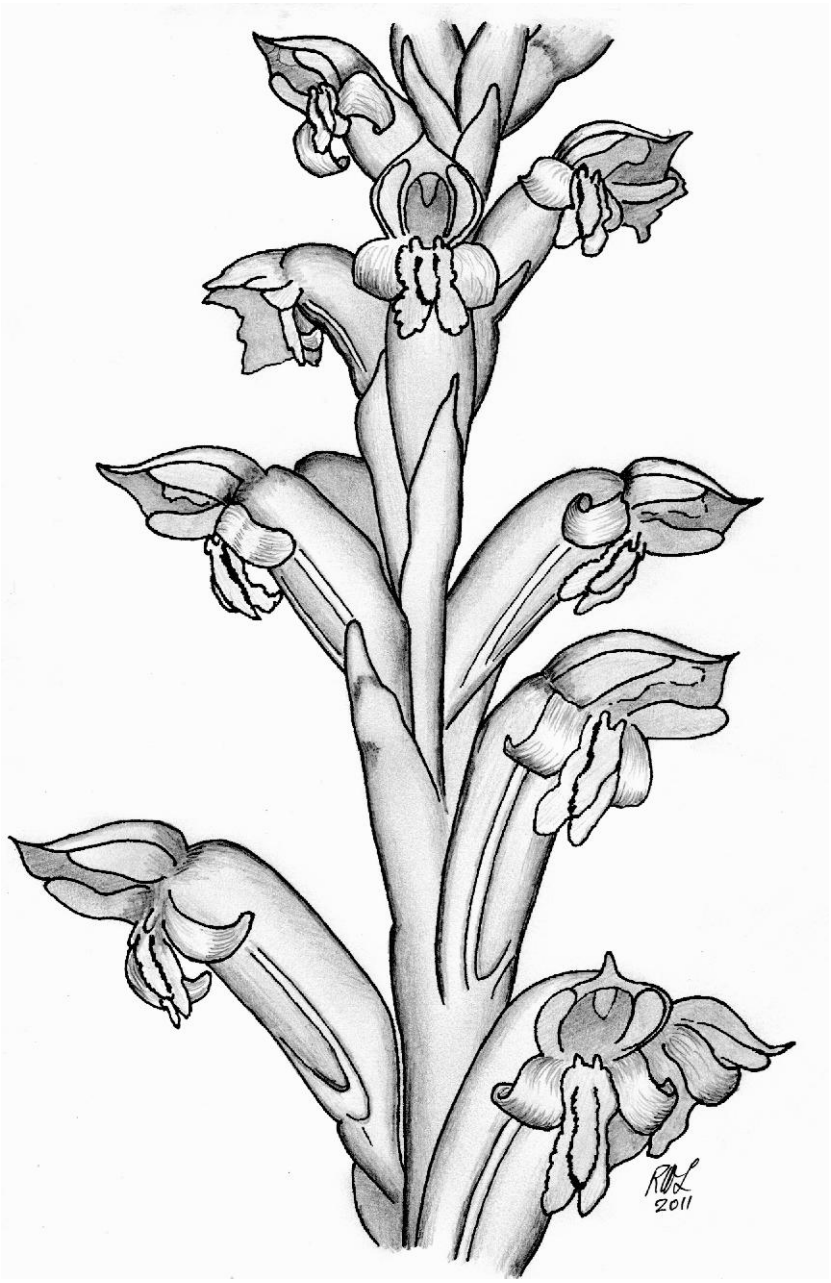
Journal
of the
Native Orchid Society
of
South Australia Inc



Print Post Approved
PP 543662/00018

Volume 35 N° 6
July 2011

NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA

PO BOX 565 UNLEY SA 5061

www.nossa.org.au.

The Native Orchid Society of South Australia promotes the conservation of orchids through the preservation of natural habitat and through cultivation. Except with the documented official representation of the management committee, no person may represent the Society on any matter. All native orchids are protected in the wild; their collection without written Government permit is illegal.

Journal Cost $2. per issue. Family or Single Membership with subscription $20.00*
*Postal Mail full year $20.00. Email full year $15.00.
Pro-rata rates for third quarter $10.00 and last quarter $5.00
Students $10.00 per year. Juniors $5.00

Front cover from an original drawing of *Microtis arenaria* by Robert Lawrence. Used with his kind permission.

JOURNAL OF THE NATIVE ORCHID SOCIETY OF SOUTH AUSTRALIA INC.

JULY 2011 VOL. 35 NO 6

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The Native Orchid Society of South Australia meets every 4th Tuesday of the months February -November

NEXT MEETING 23 AUGUST 2011

Tuesday, 23 August, **St Matthew's Hall, Bridge Street, Kensington. Meeting starts at 8:00 p.m. Doors to the hall will be open from 7:15 p.m. to allow Members access to the Library and trading table.** The Speaker for the July meeting will be **Dick Thomson** who has been growing terrestrial orchids for about 20 years, developing an interest from seeing their flowers when bushwalking. He has an interest in growing them from seed, particularly the more fungi dependent ones. Dick and his wife Marion enjoy spending time on orchid conservation, both in the bush and in growing plants for reintroduction, with a particular interest in seeing that there are techniques for germinating the seed of all genera. Dick is the ANOS Vic Conservation Coordinator and he coordinates the Terrestrial Seed and Propagation Group that meets monthly at their home. Dick and Marion are life members of ANOS Vic. They particularly enjoy the people who make up the orchid community.

DIARY DATES

Saturday 23 July	Myponga & Nixon Skinner CP
Sunday 14 August	Mt Crawford for Helmet orchids
Saturday 24th , Sunday 25th September	NOSSA SPRING SHOW

NEXT COMMITTEE MEETING

Tues, 2nd August. Meeting commences at 7:30 p.m. at the home of Robert and Rosalie Lawrence, Camden Park.

Judging results JUNE meeting

Epiphytes benched
Dendrobium Annes Rainbow Surprise; *Dendrobium* [(Aussie Child x *speciosum*) x Gav]; *Dendrobium* Colonial Campio; *Dendrobium* Hilda Poxon 'shorty'; *Dendrobium* Intense*; Dendrobium* Star Imp x Jesmond Sparkler; *Dendrobium* Tie-dye*; Dendrobium* unknown; *Dockrillia* [(linguiformis x racemosum) x pugioniforme].

Terrestrials benched
Acianthus pusillus (2 plants, 1 green form)*; Corybas fimbriatus; Diplodium doliochilum; Diplodium robustum* (2 plants); *Diplodium robustum* (red form)*; Urochilus sanguineas.*

Judging results

Epiphyte hybrid Open division	**Grower**
1st *Dendrobium* unknown	John & Bev Gay
2nd *Dockrillia* [(linguiformis x racemosum) x pugioniforme]	John & Bev Gay
3rd *Dendrobium* Colonial Campio	John & Bev Gay
Epiphyte species Open division	
None benched	
Epiphytes Species 2nd division	
None benched	
Epiphytes Hybrids 2nd division	
1st *Dendrobium* Star Imp x Jesmond Sparkler	Bill Dear
2nd *Dendrobium* Aussie Child	Jan Adams
3rd *Dendrobium* Tie-dye	Bill Dear
Terrestrial hybrids Open division	
None benched	
Terrestrial species Open division	
1st *Diplodium robustum* (red form)	L Nesbitt
2nd *Diplodium robustum*	L Nesbitt
3rd *Urochilus sanguineus*	L Nesbitt
Terrestrial species 2nd division	
1st *Corybas fimbriatus*	Kris Kopicki
2nd *Diplodium doliochilum*	Kris Kopicki
3rd *Diplodium robustum*	Bill Dear

Popular vote results

Terrestrial Species Open division	
Diplodium robustum	L Nesbitt
Terrestrial Species 2nd division (No 2nd division terrestrial hybrids)	
Corybas fimbriatus	Kris Kopicki
Epiphyte Hybrid open division	
Dendrobium Colonial Campio	John & Bev Gay
Epiphyte Hybrid 2nd division	
Dendrobium Annes Rainbow Surprise	Jan Adams
Plant of the night	
Dendrobium unknown	John & Bev Gay

Plant commentary on terrestrials given by Les Nesbitt & on epiphytes by Graham Zerbe.

June Speaker

Richard Fishlock was the speaker at the June meeting with a powerpoint show and talk on virus in orchids. Members who were present I am sure would all agree that they learnt a lot from this talk on a subject we should all be aware of. Richard has provided notes from his talk and Les Nesbitt has written on his experiences with virus in terrestrials and both articles are included in this month's journal.

FOR YOUR INFORMATION - NOSSA NEWS

FIELD TRIPS

Saturday 23 July Myponga & Nixon Skinner. Meet 10:00am at the Myponga shops.
Details were in the June journal Enquiries Cathy Houston.

August trips.

Cromer CP and Mt Crawford for Helmet orchids Aug 14th Sunday, meet Williamstown under big gum opposite shop at 10 am. Enquiries to Bob Bates.
Late August trip to Monarto area. See later journal

NB: Please check the NOSSA website for any changes to field trip schedules. www.nossa.org.au

NEXT JUDGES MEETING

Aug. Saturday 6th at Les Nesbitt's, 18 Cambridge St Vale Park commencing at 9:30.

PHOTO COMPETITION Reminder

NOSSA Common Orchids of South Australia Brochure (by Geoff Borg)

You will recall in the May NOSSA Journal that all NOSSA members are invited and encouraged to submit their photos of the 20 Common Native Orchids of South Australia for the chance to be included in a brochure of the same name.

SUBMIT ENTRIES WITH NAME & CONTACT DETAILS TO:

- General Meeting 23 August 2011 OR ...
- e-mail to nossa.treasurer@hotmail.com

Entries will be received from Members or their families. Family members are encouraged to enter (grandchildren especially).

The competition will be judged by Cathy Veide, Artist and Convenor of the Friends of the Botanical Gardens Art Group.

The final decision will rest with the Executive and Sub-editing Committee and will be non negotiable.

Good luck and good designing!

ENTRIES CLOSE **August General Meeting – 23 August 2011**

ARTICLES / ITEMS FOR NEXT JOURNAL

Articles / items for the August journal need to reach the Editor by Friday Aug 5th.

Margaret Fuller Trophies

Margaret Fuller's aim in donating these two trophies was to encourage the culture of species orchids by new growers and for these plants to be exhibited at the NOSSA Spring Show.
The trophies are awarded for the best Terrestrial species and the best Epiphytic species entered by a novice grower at the NOSSA Spring Show.
They are perpetual trophies that are held for a year and then handed back before the next show.

The following rules apply:

1. Trophies can be awarded to a second division grower who is also a new grower. (ie. has not won major prizes at other clubs).
2. Each trophy can be won only once.
3. A novice grower who has already won one trophy is not eligible for the other trophy.
4. The NOSSA judging panel has the final decision on whether to award the trophies at each annual show.
5. The Registrar of Judges to keep a record of past winners.

Woodside Property Survey 1-07-2011 Cath & Malcolm Houston

The authors were part of a group that surveyed a private block in the upper Onkaparinga near Woodside. The area of 130 acres consists of 100ac intact native vegetation with a very high biodiversity rating, and 30ac cleared land. There are several vegetation types involved, viz. Messmate Stringybark (*Eucalyptus obliqua*) open forest, Candlebark Gum (*E. dalrymple*) and Smooth barked Manna Gum (*E. viminalis* ssp. *viminalis*) open forest, Pink Gum (*E. fasciculosa*) with the Messmate Stringybark and Blue Gum (*E. leucoxylon*) grassy woodland. The location of course dictates country of a hilly nature with some deep gullies and a watercourse. A considerable amount of work has been done to manage weeds, mainly Blackberry, Montpellier Broom and Gorse.

There are a significant number of threatened species identified on the property, the most significant perhaps being *Glycine latrobeana* (Clover Glycine) listed as vulnerable in Australia under the Environment Protection and Biodiversity Conservation Act (1999). The Candlebark Gum habitat found here in the gullies, is almost all cleared in the Mount Lofty Ranges. Some other plants of interest (species with a rating because of rarity) include *Oreomyrrhis eriopoda* (Australian Caraway), *Mentha diemenica* (slender mint), *Veronica gracilis* (Slender Speedwell) and *Juncus amabilis*.

Orchids seen are typical of Adelaide Hills species, particularly those found in grassy woodlands. At this time of year there were few in flower, but there was enough evidence to show the whole area is saturated with *Pterostylis nutans*, with noticeably short stems. Few had started flowering but many were in bud at all stages, suggesting they will be flowering over a long period. *P. curta* was seen in leaf and apparently forms large colonies in some gullies. *Bunochilus viriosus* had commenced flowering on one hilltop. Plants were quite variable in stature, being mainly shorter, but a few were about knee height. Flowers exhibited the usual trigger labellum mechanism, a point that always fascinates others in the group when they are shown this intriguing pollination strategy. In this grassy habitat dominated by *Microlaena stipoides*, it was often difficult to locate ground-hugging leaves, such as those of *Cyrtostylis reniformis* and *Acianthus/Nemacianthus* spp. Both of the latter were eventually found, *A. pusillus* having finished flowering and *N. caudatus* in bud. Surprisingly there was only one small colony of *Linguella longiseta* located; a few buds were well advanced.

This remarkable remnant of Adelaide Hills bushland is on the market for conservation minded buyers (probably a consortium of such). An open day will be held at the end of this month (31st July), when any interested parties can have a look. The current owners stress that anyone who would like to have a look at the property is welcome, not just anyone who may consider themselves a prospective investor. To learn more about this please keep in touch with the Cath Houston.

Orchids seen at the Woodside property;

Nemacianthus caudatus	Mayfly orchid	b
Acianthus pusillus	Mosquito orchid	f, p
Corysanthes sp.	Helmet orchid	b
Cyrtostylis reniformis	Spring Gnat orchid	l
Diuris orientis	Wallflower Donkey orchid	l
Eriochilus cucullatus	Parsons bands	p
Glossodia major	Waxlip orchid	l
Leptoceras menziesii	Rabbit ears	l
Microtis sp.	Onion orchid	l
Linguella longiseta	Dwarf greenhood	b
Pterostylis curta	Blunt greenhood	l
Pterostylis nutans	Nodding greenhood	f, b
Pterostylis pedunculata ?	Maroon greenhood	b
Bunochilus viriosus	Tall greenhood	f, b
Thelymitra spp.		l

[A photo of the Woodside property woodlands is included in the electronic journal. Ed.]

Dry Start to South Australia's 2011 orchid growing season. **R.J. Bates**

The wild orchid growing season in South Australia is generally considered to run from April to November as rainfall outside of those months will have little bearing on wild orchids in SA. Due to an emerging el Nino system it can be predicted that there will be below average rains in South Australia in the 2011 season.
I wrote earlier that Adelaide in April had less than half its long term average rainfall.
Well in May rainfall this was not reversed as rain that month was only average.
In June Adelaide's and in fact much of the state saw well below average rainfall.
Many people I have talked to believe that it has been a wet orchid season but the Bureau of Meteorology records say otherwise.
Let's hope that whatever rain falls now is enough to give an average orchid season.

Morialta field trip report June 18th 2011 R. Bates with images by Leo Davis.

During an ash cloud fallout from Chilean volcanoes five NOSSA members met at the bridge over Morialta and walked around the lookout track in very cold but sunny conditions. Greenhoods were plentiful especially the slender Hills shell orchid with almost 100 seen in flower and few with swollen seed capsules. The species is easily recognised from its tall slim stems to 25 cm high, single narrow flower in tones of white, grey, pink and green. The tongue is hardly visible and the hood or galea has a blunt apex.
The similar dumpy shell orchid *Diplodium robustum* is a shorter plant with a plump green flower and a long point to the galea apex. About thirty were seen. Leo noted that most of the flowers were facing away from the track and it was surmised that this kept the opening to the galea protected from rain and wind and made it easier for pollinators to enter. Other greenhoods in flower included the blood red *Urochilus sanguineus* to 30 cm tall with a few to many flowers.
Mosquito orchids *Acianthus* were in late flower and seen but gnat orchids *Cyrtostylis reniformis* were in early bud. There were many thousands of them. In contrast the *Cyrtostylis robusta* had all been destroyed by track widening and despite it being their flowering season none were seen either red or green.
Many rosettes of other greenhoods, sun orchid and spider orchid leaves rounded out the tally. We removed a lot of young boneseed and kept busy taking pictures. [image is in electronic version. Ed.]

VIRUS IN ORCHIDS
Richard Fishlock

- There are 25+ know viruses in Orchids around the world.
- In Australia the two main ones are:- Odontoglossum Ring Spot Virus (ORSV) & Cymbidium mosaic virus (CyMV)
- Virus is a very small pathogen and can only be seen using an electron microscope with magnification of tens of thousands.
- The infectious portion or pathogen of a virus is surrounded by a protected protein coat. This protein coat affords the virus to be viable and can also survive outside of the plant itself. It can remain this way for up to seven months on benches, in pots and in dead leaves.
- The particles do need a living plant to multiply.
- The techniques to diagnose orchid viruses are several but not available to the average orchid grower because they are too expensive.
- Particular viruses produce various leaf symptoms, not all the same. The same strain of a virus can produce a different leaf pattern in various orchid genera.
- In Cymbidiums the streaks and patterns are in the leaves as the new growth starts.
- Flower symptoms are a little easier to recognise. Any flowers affected with CyMV can show necrotic streaks within 2-3 days of the bud opening but generally this is 10-12 days after opening.
- Cattleya lavender flowers are the easiest to see the infection with sunken orange/red/brown spotting and streaking. The intensity can vary.
- Flowers that show some white streaking or blotching immediately the flower opens in generally genetic and gradually reduces and fades away as the flower ages. This is not virus.
- CyMV retards plant growth. ORSV is a greater threat because it can go undetected for some time particularly in cymbidiums.
- Test is by these methods:- Transferring sap from test plant to a another species that shows definite virus. After a period of time if the test plant is virused the inoculated plant will show signs of yellow/brown streaking and spots. This is called Bio-assay.
- Electron Microscopy – Government bodies & Universities – Cost $50 – $60,000 for equipment.
- The last is ELISA (Enzyme Assay) Requires expertise and expensive equipment.
- Transmission of virus – By sap, by insects feeding on the plants, scale (but not proven), nematodes (worms), seed or pollen and vegetative propogation.
- Virus can be transferred via the smallest wound on a leaf surface, cutting the end of the leaf with infected cutting tools, on your fingers and when cutting bulbs & roots during dividing. (Paphs)
- Aphids, beetles, cockroaches and grasshoppers. – No real proof here but possible. Scale is said to infect plants with Orchid Fleck Virus.
- Nematode (worms) transmission is common in terrestrial orchids. Rare in epiphytic orchids.
- Seed & Pollen: Green pod technique – cutting (Pod Virused). Transferring pollen & damaging the tissue around the stigma.
- Dividing plants if infected the Virus goes with each division.
- You **DO NOT NEED** to identify which virus you have. If it shows symptoms then assume it is ? virus and get rid of the plant. Some fertilisers show funny leaf patterns. Put plant aside.
- Have good sanitation in your growing area. Most viruses survive in pots, on benches & cutting tools for up to seven months.
- Soak all tools in saturated tri-sodium orthophosphate or flame them. Soak for a minimum of 10 minutes between uses. Rinses in fresh water before using.
- Cover your bench with clean newspaper and re-pot on this. Wrap all bark in the paper and 'bin it'. Put down fresh paper for the next plant.
- Wash your hands thoroughly between dividing plants.
- Place plants well apart to avoid leaves contacting the plant next door.
- Make sure there is no build up of insects such as aphids, scale, mealy bug etc.
- Do not reuse your old potting media.
- Destroy any virus-infected plants – place in a plastic bag and dump.
- Avoid handling plants at Meetings & Shows – Respect other growers property.

Virus in Terrestrial Orchids **Les Nesbitt**

These notes follow from Richard Fishlock's address last meeting.

No terrestrial orchids have been tested for virus to my knowledge so we can only say suspected as having virus although I am 99% sure some are virused. Bear in mind that there are many viruses that have been found to affect orchids. Testing is only available for 3 viruses in Australia (*Odontoglossum* ringspot, orchid fleck and *Cymbidium* mosaic.).

I dump any plant with virus symptoms as sap sucking insects and poor hygiene can quickly spread the virus to other plants in a collection.

In greenhoods, suspect plants have mottled leaves, emerge later than healthy plants and often the edges of the leaves are turned up. These conditions are obvious.

Virus in diuris is often hard to see as the leaves are long and narrow. The most obvious is a plant that has curved leaves with mottling on emergence in Autumn. Another giveaway is kinks or thickenings in normally straight, parallel sided leaves. Dark markings can appear in old leaves in late Spring just before they die down but this is not conclusive as it can be caused by other factors (fertilizer overdose, weed spray drift, fungal attack). Isolate suspect plants. I have isolated *Diuris* plants with these dark markings and often they look OK the next year.

Other terrestrial genera show similar markings to these two conditions.

Symptoms do not show in leaves infected during the growing season but become obvious when the next year's leaves appear. This is similar to markings appearing in the new growths in cymbidiums and other epiphytic orchids.

All the usual hygiene procedures apply to terrestrials just the same as with other orchids although cutting instruments are not used with terrestrials. eg. when repotting during dormancy, sterilizing sieves and pots, washing hands or gloves before working on the next pot, using a new sheet of newspaper to knock out the next pot onto. Judy Penny can get you a small bag of sterilizing salt for cutting tools for a small fee.

If using a sieve avoid rolling the tubers around as this is just like sandpapering each tuber. Pick the visible tubers out and gently crush the lumps of mix until all the tubers are found. The fastest way to spread virus is to sandpaper an infected tuber and then sandpaper a healthy tuber with the same paper.

If I have a pot of terrestrials that I suspect may contain a virused plant:

- I either dump the lot if a fast multiplier like *Pterostlis curta*.
- Or I use a wire tool with a hook on the end. Push it down alongside a suspect plant, rotate so the hook is under the tuber and lift the whole plant out of the pot.
- or I plant individual tubers in small tubes over summer and dump only those showing virus symptoms when they shoot in Autumn. I use this method for important orchids that I do not want to lose.
- Another method I have heard of is to self pollinate a flower on the virused plant and sow the seed in flask. Some seed may be virus free although it may take years to confirm if the seedlings are clean. Taking mericlone tissue is another method used on valuable plants as the virus may not have yet reached the meristematic tissue.

Learn to recognize the signs of virus. Eternal vigilance is required as there are bound to be garden plants with virus nearby and those sap-sucking thrips and aphids keep on flying over the fence.

A sealed leaf sample can be sent to Tasmania for virus testing. For a small fee, the sample is examined under an electron microscope for virus particles. A written report is provided.

Scott Cons Park field trip May 2011 report **R. Bates**

Fourteen members and friends attended this excursion on May 5th in warm sunshine.

Our guides were Barbie and Ken Bayley. They took us on a drive through the Park and at the very first stop we saw many very fresh flowers of *Leporella fimbriata* growing in loose white sand. This is the only species of plant in the world to have flowers which sexually attract male ants for pollination. (see Orchids of SA pink book or DVD).

Our second stop by the Deep Creek which cuts thru the park yielded large colonies of mossie orchids *Acianthus pusillus* some in good flower. There were dozens of midge orchids in seed but we could not determine the species. There was more luck with the bunny orchids; after dozens of leaves and spent flowers we found some fresh ones, sparkling white, the leaves ribbed above and purple below showing that these belonged to *Eriochilus* species Hills.
At the third stop Cathy and Barb found leaves which looked at first glance to be *Eriochilus*. But as they were green with parallel veins underneath and glandular hairy above we decided they were the early flowered race of waxlips *Glossodia* major despite being somewhat ovate. Very few people know that there are two races of *Glossodia major*.
Many remains of last years orchids were obvious, many sun orchids with dry capsules. One of these turned out to be the horned orchid *Orthoceras strictum*, dry land form.
Lots of fun was to be had here and the photographers were busy imaging a surprising number of delightful autumn wildflowers including the quaint *Prostanthera chlorantha*. The species name refers to its iridescent green flowers. Imagine our surprise when we found a yellow flowered plant right next to a blueish flowered one.
There were dozens of *Styphelia* in the bush here with their pure white densely fringed flowers. This was a new one for many of us.
More familiar were the two toned correas *C. reflexa* ssp *scabridula*. These wildflowers are a real bonus on our orchid walks.
Lunch was had in a grove of Kangaroo thorn bushes back at the gate and bush walkers must have thought us quite quaint laughing away at our chairs and tables on the actual road in. For those who dared walk beyond the prickly wattles there were hundreds of leaves of four orchids *Pyrorchis nigricans* and many blood greenhoods *Urochilus sanguineus*, most in bud. Other orchids seen included many greenhoods still only rosettes and a few *Diuris orientis* also just leaves.
Some members stopped at Knott Hill on the way back to Adelaide and guess what they found? The same orchids we had seen at Scott CP.

PREPARATION FOR THE NOSSA SPRING SHOW - Saturday 24th & Sunday 25th September
Notes from **Les Nesbitt**

A few things that I do well before a show are:
Select plants that may be out at show-time and move them under cover to keep the buds in clean condition. (Keep a list of previous year's show plants.)
Spread snail bait on the pots to eliminate slugs and snails.
Clean up the plants, remove dead canes and leaves.
Pull off moss and weeds.
Add fresh mix on top of pot if required.
Watch out for spikes getting caught up under leaves.
Stake wayward canes to balance the plant. Remove these before judging if possible. Remember that you are not permitted to stake native flower spikes, you can only stake the canes.
Fertilize with weak blossom booster liquid fertilizer each fortnight.

Show Schedule and Conditions will be in the August journal.

Field Trip Report: Mount Billy Conservation Park: Sunday June 5, 2011 Clive Chesson

The fieldtrip was attended by eleven members, including the trip leaders Barb and Ken Bailey. We met at gate 2 (counting from the Victor Harbor end) at 10:30AM. Our target species was *Diplodium bryophilum,* the Hindmarsh Valley Greenhood.


NOSSA members 'on the job'

Orchids in flower on the day were: *Acianthus pusillus* the Mosquito Orchid, *Diplodium bryophilum,* the Hindmarsh Valley Greenhood (gates 1&2), and *Leporella fimbriatum* the Fringed Hare Orchid (gate 4). Rosettes or basal leaves were seen for the following species *Pterostylis curta, Pterostylis nutans, Glossodia major* and *Leptoceras menziesii* (gates 1&2).
The good rainfall this season meant that ground flora, particularly grasses and herbaceous weeds, were quite thick in 'the gully' but we had little trouble finding the target species. However, the bryophilums appeared to be smaller in size and fewer in number than last year. We were surprised to find many *Leporella*'s still in flower up in the sandy section of the Park (gate 4). We expected to find most if not all plants of this species with swollen ovaries going to seed. A bonus for the photographers.
Overall, the flora of the Park appeared to be benefitting from the good rains this season but the weather on the day was quite kind to us with the showers being light and infrequent allowing good observation and photography.

Acianthus pusillus
Mosquito Orchid

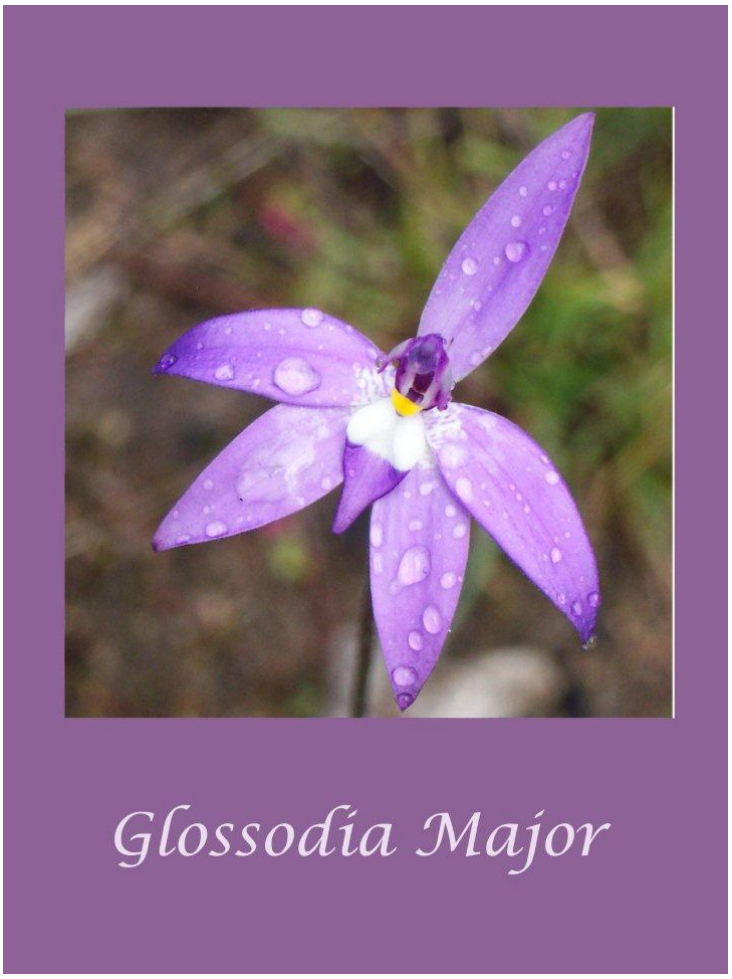
Diplodium bryophilum
Hindmarsh Valley Greenhood

Leporella fimbriata
Fringed Hare-orchid

All photos by Leo Davis

Winners of the photographic competitions from the May and June meetings

May Winner Robert Lawrence Diuris orientis

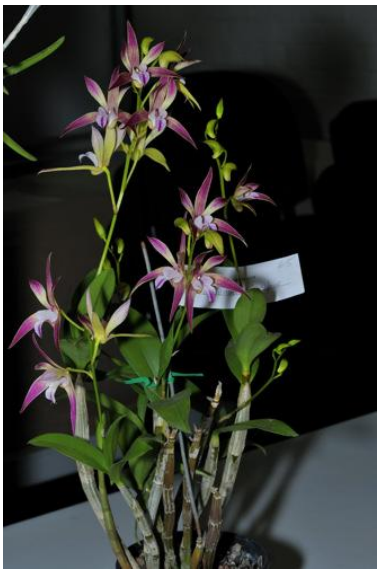


June Winner Marj, Sheppard Glossodia Major

ABOVE: Woodside property

LEFT: *Diplodium* sp.
Morialta photo: Leo Davis

Dockrillia ([linguiforme x racemosum] x pugioniforme)



Dendrobium Annes Rainbow Surprise

Dendrobium Colonial Campio

Dendrobium unkown

Dendrobium Intense

Dendrobium Tie-Dye

Dendrobium Hilda Poxon

Dendrobium Star Imp
x Jesmond Sparkler

Dendrobium Aussie Child
x speciosum

Acianthus pusilla (green)

Corybas fimbriatus

Cover over pot to retain moisture

Diplodium doliocochilum

Diplodium robustum

Urochilus sanguineus