



Journal
of the
Native Orchid Society
of
South Australia Inc



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.

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Front cover from an original drawing of *Caleana major* by Helen Lawrence. Used with her kind permission.



**JOURNAL OF THE
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MAY 2012 VOL. 36 NO 4

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**The Native Orchid Society of South Australia meets every
4th Tuesday of the months February -November
NEXT MEETING 22 MAY 2012**

DIARY DATES

Tuesday, 22 May **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.**

Tim Jury is the speaker for the May meeting. Tim is with the Threatened Plant Action Group (SA) and has contributed to draft recovery plans for threatened flora.

DIARY DATES

Sat, May 19	Mt Billy CP. <i>Pterostylis bryophila</i>
Sunday May 27	<i>Leporella</i> study excursion. Scott Creek CP
Sat 23 June	Brentwood ; 9:30a.m. onwards
Sun, June 24	Placid Estate & Monarto. Mallee greenhoods
Wed, July 11	Moritalta CP. Adelaide Hills greenhoods
25th November	Annual NOSSA BBQ, Myponga

**NEXT COMMITTEE MEETING
Tues, 29th May. Meeting commences at 7:30 p.m.**

Judging results for April

Plants Benched: Terrestrials; *Diplodium laxum*, *D. truncatum*, *Eriochilus cucullatus*.
Epiphytes; *Dendrobium biggibum*, *D. schneiderae*, *D. wasselli*.

Results.

Open Terrestrial species,

1st *Diplodium laxum*,

Les Nesbitt

2nd *Diplodium truncatum*

Les Nesbitt

3rd *Eriochilus cucullatus*

Les Nesbitt

Open Epiphyte species,

1st, *Dendrobium wasselli*.

Noel Oliver

2nd *Dendrobium biggibum*

Bodo Jensen

3rd *Dendrobium schneiderae*

Bodo Jensen

Plant of the night, *Dendrobium wasselli*.

Noel Oliver

Popular vote,

Terrestrial species *Diplodium laxum*,

Les Nesbitt

Epiphyte Species *Dendrobium wasselli*.

Noel Oliver

Commentary by Noel Oliver on Epiphytes and by Graham Zerbe on Terrestrials.

April Speaker s

Jane Higgs gave a powerpoint presentation on the Singapore World Orchid Conference. The displays often included features such as traditional style dwellings, ponds and waterfalls.

Graham Zerbe spoke about the occurrence and characters of Orchid Fleck Virus and how to combat it. It is hoped Graham will produce an article in the near future

FOR YOUR INFORMATION - NOSSA NEWS

FIELD TRIPS

Weeding at Long Gully, Belair National Park

Sat 12 May Belair N. Park; 9:30a.m. Meet at the information centre. If later than 9:30 proceed to Long Gully as far as the old tank site & make your way up the hill. (For entry through the gate please mention you are attending T.P.A.G. weeding). Bring gloves, secateurs, loppers. A weeding activity for improvement of habitat for the threatened orchid *Pterostylis cucullata*. Many people make it a half day activity. Cath Houston 83567356

Working bee at Brentwood Cemetery

Forward notice is given here about a planned working bee at Brentwood Cemetery,

Sat 23 June Brentwood ; 9:30a.m. onwards. It is recognised that this is very early for anyone attending from Adelaide & further afield. Come when you can, leave when you have to. We have been offered lunch provided if we notify the locals of numbers of people attending. Please let me know by Wednesday 20th June if you wish to avail yourself of their hospitality. Weeds of interest are Bridal Creeper, Boxthorn, Freesias & annual introduced grasses (maybe Coastal Wattle). Bring gloves, secateurs & maybe loppers.

Cath Houston 83567356

Upcoming Field Trips

Date	Site	Species	Meeting Place
Sat, May 19, 2012	Mt Billy CP	Pterostylis bryophila	10 am, Memorial Hall, Myponga
Sun, June 24, 2012	Placid Estate & Monarto	Mallee greenhoods	10am, meet beside Water Treatment Plant on Taillem Bend-Meningie Rd, (Princess Hwy) just off Dukes Hwy, south of Taillem Bend
Wed, July 11, 2012	Morialta CP	Adelaide Hills greenhoods	10am, Morialta Falls Car Park at end of Morialta Falls Rd
Sat, July 28, 2012	Sandy Creek & Altona	Corysanthes	10am, meet corner Barossa Valley Way and Williamstown Rd, Sandy Creek

Reminder One: We still require members as field trip leaders. Could you contact Rosalie Lawrence on 8294 8014 or email nossaorchids@hotmail.com if you are able to assist. Listed are the field trips requiring leaders.

Date	Location
Sat, Sept 15	Bassnett Road
Sun, Oct 7	Sandy Creek
Sat, Oct 30	Scott Creek
Sun, Jan 6	Adelaide Hills
Sun, Mar 24	TBA

Reminder Two: We still require members for helping the field trip leaders. Could you contact Rosalie Lawrence on 8294 8014 or email nossaorchids@hotmail.com if you are able to assist. See the website or the April Journal for details of dates and locations.

Thank You

Leporella study excursion

When : Sunday May 27th

Where: meet Almanda mine car park Scott Creek CP at 10am

We will visit several sites in this park, Kuitpo and Scott CP to check why plants at some sites flowered as early as March while at other sites there are no leaves or buds at the time of writing this ie late April.

Contact: Bob Bates

NEXT JUDGES MEETING

June Saturday 2nd at Les Nesbitt's, 18 Cambridge St Vale Park commencing at 9:30.

2012 MEMBERSHIP NOTICE

Members who wish to pay 2012 Membership Fees electronically should e-mail NOSSA Treasurer on

nossatreasurer@hotmail.com

You will receive banking details so that you can complete your subscription. Please remember to include in your e-mail any change of address details. Marj Sheppard, Treasurer"

ARTICLES / ITEMS FOR NEXT JOURNAL

Articles / items for the June journal need to reach the Editor by Friday June 8th.

Dendrobium EDDA

Brian Gerhard

Dendrobium EDDA evidently has recently caused some eyebrows to be raised and questions asked. May I place the facts before the membership for future reference?

The parents of *Dendrobium* Edda are *Dendrobium bifalce* crossed with *Dendrobium tetragonum*.

The registrants name was Russell Job and the breeder/ Originator Karen J. McFarlane and registered with the Royal Horticultural Society (RHS) on the 29th January 1992.

Dendrobium bifalce also has the common name of: The Two Sickles *Dendrobium* and The Native Bee Orchid.

Flower Size 4", found in the Lesser Sunda Islands, Moluccas, the Bismark Islands, New Guinea, the Solomon Islands and Queensland, Australia in coastal or riverine forests at elevations of sea level to 800 meters.

According to the reference in Jays Internet Orchid Species it has had various species identities / Synonyms, these being; *Bulbophyllum oncidiochilum* Kraenzl. 1894; *Callista bifalcis* (Lindl.) Kuntze 1891; *Dendrobium breviracemosum* F.M.Bailey 1899; to name but a few. Concluding with *Leioanthum bifalce* (Lindl.) M.A.Clements. & D.L.Jones 2002.

Given the broad area of locations that this particular species is found, it can in fact be benched in Shows in both categories of Australasian or Australian *Dendrobium*. This would be predicated by the individual benching the *Dendrobium* Edda knowing which place the parent originated. Naturally if the *Dendrobium bifalce* used in the hybridisation was found in Queensland, I would suggest that it should be benched in the Hot/Cold or Tropicool® category. If where the parent came from is not known, then the individual has a choice as to where to place the plant for judging.

I hope that this does clear up the possibility of any future problems that may arise at any future Shows. I welcome any further discussion/input on the subject.

[Editors Note: I have lost track of the journal this article first appeared in.]

I partially covered this in an article on the segregate genera of super genus *Pterostylis* in the April 2012 issue of the NOSSA Journal.

This article is devoted to *Bunochilus* Jones and Clements and includes further references.

As pointed out by Clements et al in 2010, DNA studies show that the thirty or so *Bunochilus* species form a group of very closely related taxa with no aberrant members and therefore provide a very neat example of what constitutes a genus.

The morphology, habit and habitat preferences are similar in all species and likewise the genus provides a neat example of restricted phylogeography as all species occur in South-Eastern Australia. There are none in WA or in NZ or anywhere else.

The flowering season is constant too. There are no summer/autumn flowering species only winter/spring.

Morphologically *Bunochilus* differs from *Pterostylis* in being multiflowered, the scape with cauline or stem leaves and not emerging from a basal rosette. All species of *Bunochilus* are non clonal, so do not produce large colonies as in all true greenhoods.

The labellum of *Bunochilus* is set outside the flower, below the galea, is highly mobile and sensitive to touch suggesting a different pollination strategy to that of *Pterostylis* and is just one reason why there are no hybrids between the genera.

The lateral sepals of *Bunochilus* are depressed or pendulous while in *Pterostylis* they are erect and adpressed to the galea.

In the original description of the genus by Clements and Jones in 2002 they give many more differences in morphology and cytology. The very name *Bunochilus* means there is a bun or knob on the labellum of these striated greenhoods, a knob which is absent from all *Pterostylis* labella. The trilobed labellum of *Bunochilus* is also very distinct. Vegetatively *Bunochilus* lacks the long dropper roots of *Pterostylis* and possesses only filamentous rootlets. Clements and Jones give further distinctions in Jones and Clem 2006.

While *Pterostylis* plants are monomorphic *Bunochilus* are dimorphic meaning sterile and fertile plants look totally different. The sepals of *Bunochilus* are covered in bubble like micropapillae which are absent in true greenhoods. Clements and Jones list several more differences and since then even more have been noted.

Bunochilus and *Pterostylis sensu stricto* are as treated here medium sized genera unlike many of the world's very large genera such as *Eucalyptus* which has now been divided into *Angophora*, *Corymbia* and *Eucalyptus*.

We can be fairly confident that *Bunochilus* will not be broken up further as Clements and Jones were smart enough to remove the similar looking *Urochilus* at the same time as they separated *Bunochilus* from the true greenhoods. No-one prior to 2002 expected that would happen although most field workers suspected that the striated greenhoods were not true greenhoods at all. On the other hand many of us had noted that *Bunochilus* and *Urochilus* sometimes occurred in mixed clumps but never formed hybrids despite their identical pollination strategy.

The research of Warcup (1980) Clements et al 2011 and others shows that the mycorrhizal fungi associated with *Bunochilus* are not those preferred by *Pterostylis*. Warcup pers comm 1980 pointed out that *Bunochilus* spp. are much fussier in their choice of soil fungi than any *Pterostylis sensu stricto*.

It is quite amazing to think that until 1990 all *Bunochilus* species were treated as a single species ie *Pterostylis longifolia*, a very unsatisfactory situation conservation wise as it meant that many threatened species had no protection at all as they had not been recognised. Placing *Bunochilus* species back into *Pterostylis* would much reduce both their conservation protection and studies of the individual taxa.

Bunochilus is a genus of two named sections quite a useful way to subdivide a genus of its size.

Taxonomically mid-sized genera are much easier to work with, the average orchidologist will be able to remember the names of all species and have a picture in 'their' mind of what each looks like and where it grows. This would be beyond most people if *Bunochilus* were lumped under *Pterostylis*.

References:

Jones & Clements Australian Orchid Research Volume 4, 2002

Jones & Clements *Towards a Revision of Bunochilus* AOR Vol 5, 2006

Above; *Bunochilus* flower SE by June Niejalke

Clements et al. Australian DNA studies in the Pterostylidinae, Australian Systematic Botany vol 12 2010



March 2012 Photo Competition Winner by Helen Lawrence.



The other photos were a Moose Orchid by RWLawrence, a Hyacinth Orchid by M Houston and a single helmet orchid by E Shepherd. To enter contact Rosalie at nossaorchids@hotmail.com or by mail. The photos are printed at A4 size for judging.

April 2012 Winning Photo

There were six photos entered this month. Four were emailed to the Secretary for printing.



Rosalie Lawrence

We thank those members who did send a photo and would continue to encourage others to do likewise. There were two joint winners this month – Malcolm Houston and Clive Chesson.

Malcolm's photo was *Arachnorchis macroclavia* (synonym *Caladenia macroclavia*), common name Tall Bayonet Spider Orchid. This spring flowering endemic orchid is listed as endangered in South Australia. Its favoured habit is fertile shallow loams with mallee-broombush associations. (Information for these two species is in *South Australia's Native Orchids* DVD-ROM, which can be purchased from the Secretary)

Clive's *Paracaleana minor* (synonym *Caleana minor*) is commonly called Small Duck Orchid. Though found throughout the eastern and south eastern regions of Australia, in South Australia it is listed as vulnerable with restricted locations. Flowering is in late spring to summer; it occurs in the same

habitats as the large duck orchid, i.e. sandy soils in woodland with bracken and banksias. The species forms small colonies which flower more freely in disturbed sites, i.e. around sand quarries and along old tracks.



POST FIRE SURVEY – FAIRVIEW and BIG HEATH CONSERVATION PARKS, 2011

Cathy Houston

Conducted by the Conservation group of the Native Orchid Society of South Australia Inc. for the Department of Environment and Natural Resources.

Members of the Native Orchid Society of South Australia conducted single day orchid surveys of both Fairview Conservation Park and Big Heath Conservation Park, following prescribed burns that took place in autumn 2011.

The surveys were undertaken on Wednesday 5th October in Fairview Conservation Park and on Thursday 6th October in Big Heath Conservation Park. The number of participants was low for various reasons beyond our control. Participants worked in pairs (or threes if numbers dictated such) and conducted ramble surveys in the burnt habitat. Some other vegetated areas were visited as well. A short follow-up visit was made to Fairview Conservation Park on 2nd November.

Observations were taken of species present, abundance, GPS locations and any other detail of note. A numbering code was used for species abundance.

FAIRVIEW CONSERVATION PARK

The area burnt in Fairview Conservation Park did not consist of many habitat types, the main area being Stringybark/heath/bracken association. This occurs widely in the South East of the state and is usually associated with poor quality white sands. As such it is not a habitat in which a wide diversity of orchid species exists.

Predictably for this habitat the most common orchid was *Pyrorchis nigricans*, with *Leporella fimbriata* being the next most encountered species. Both these species reproduce vegetatively so are well represented in the park. However *Pyrorchis nigricans*, an orchid stimulated to flowering by fire, had not flowered/attempted to flower. This was in stark contrast with Messent Conservation Park that was surveyed a month earlier, where at least half the population was flowering. Similarly, *Prasophyllum elatum* was not flowering either. Only one small colony of these was located in the burn area. This species would have been expected to occur more often in this habitat, but it has been noted throughout the State that 2011 was a poor year for the emergence of *Prasophyllum* in general.

Other species common to this habitat are *Caladenia carnea*, *Glossodia major* (seen only in very low numbers), *Microtis* sp., *Thelymitra antennifera*, *T. ixioides/juncifolia* and *T. rubra*. These were present in varying numbers but usually encountered as small groups or singly scattered throughout the burnt area. *T. alcockiae* (a member of the *T. nuda* complex) was also found to be relatively common. In unburnt heath this species was sometimes numerous.



MH, *Prasophyllum* sp. Gum Lagoon
in burn area

Once again the limestone rises with mallee associations had a greater diversity of orchid species. Here were *Prasophyllum* sp. Gum Lagoon, *Plumatichilos (Pterostylis) tasmanicum*,

Cyrtostylis robusta, *Caladenia carnea* and numerous *Thelymitra* species, some unidentifiable because of the under-developed buds. *Arachnorchis necrophylla*, a species rated as rare, was in early bud. A single green-comb spider orchid was seen in this habitat. Unfortunately it had only just opened so identification was difficult, since the flower had not assumed its “normal” habit. At this early stage it appeared to be *C. tentaculata* although *C. tensa* would be more likely for the habitat. It would be significant if it turned out to be the latter since this is a nationally endangered EPBC listed species. The only *Microtis* seen in flower was in this area, *M. arenaria*.

As always one of the most significant orchid habitat areas was the trackside. In this park the boundary to the burn was one of the internal tracks in the northern end of the park and this had a several-metre slashed edge. This is favoured by orchids because of the openness, amount of light entering and lack of high competing vegetation. This was where several significant orchid sightings were made. The very tiny *Caladenia pygmaea* was located at the edge of the slashed area. This tiny pink finger orchid is characterised by the green buds/sepal backs. There were numerous seed capsules setting due to its self pollinating nature. This species was also located in a small strip of relatively unburnt open heath amidst the burn area. A couple of plants of a sister species, *C. pusilla*, also grew along the track. Here too were the only two records of *Arachnorchis colorata*, the nationally endangered Coloured Spider Orchid. It was growing alongside *A. sp.* South-East, a considerably larger and less



MH, *Arachnorchis colorata* growing at track edge

colourful spider orchid. It was a perfect chance to make comparisons between the species. The latter species was found predominantly along the trackside and rarely in the interior of the burn area. They occurred as single plants or in very small groups.

Another significant habitat was the swamp on the northern edge of the park. This had been burnt but the effect in some areas was patchy. Here was the greatest concentration of lovely *Arachnorchis sp.* South-East; some very large, tall, two-flowered specimens were seen here. *Corysanthes sp.* were plentiful here, together with *Cyrtostylis robusta*, *Microtis* and many *Thelymitra*. A naturally occurring hybrid *T. X macmillanii* was present here. A few more *A. necrophylla* were seen in early bud. Usually in small numbers, this late flowering spider orchid was spread throughout the areas surveyed, but was not plentiful.

The follow-up visit in November was to the swamp area mentioned above. The late green-comb spider orchids were now in flower and showed to be *Arachnorchis dilatata*, a species found in the wetter habitats of the South-East. In this habitat they were localised but numerous. Some leaves were senesced in exposed areas but still quite green where there was overhead protection. A *Plumatichilos* had flowered but not set seed. This almost certainly means it would be of the *P. plumosum* group, not *P. tasmanicum* since the latter is self-pollinating.

DISCUSSION

The timing of the burn appeared to be too late to benefit fire-stimulated orchid species. *Pyrorchis* and *Prasophyllum elatum* had made no attempt to flower. Again, the winter flowering species were conspicuous by their absence. One would have to speculate if this is due to the timing of the burn relative to their emergence time or if it is heat related to the depth of tubers? *Pterostylis* species as *Diplodium*, *Bunochilus* or *Urochilus* were conspicuous by their absence. The only winter-flowering *Pterostylis* encountered was *Linguella* sp. Mallee, one of the *Linguella nana* group. *P. pedunculata*, a spring flowering species, was in flower during the survey and similarly was only found in unburnt areas. *Corybas*, another winter flowering species, was only seen in unburnt areas (although embedded within the burn area) or in the swamp where presumably because of the wet underneath it did not burn or the soil did not heat up during the burn.

Again it needs to be stressed about the high value of areas such as open locations created by tracks with slashed vegetation alongside. The mild disturbance of areas beside the track and the openness benefits orchids in general.

The main threats within the burn area will come from weed invasion. Weeds in the form of Bridal creeper (*Asparagus asparagoides*) and Coastal Wattle (*Acacia sophorae*) are well established near/around the old quarantine area and the camping area and down towards the burn. Since the wattle is well established immediately adjacent to the burn it is likely it may be an opportune coloniser of the area.

In the swamp area next to the northern boundary Coastal Wattle is already a threat. It is establishing well within the swamp and could be dealt with relatively easily before it becomes dominant. This is such a diverse area it would be a shame to have the quality of vegetation degraded by invasive wattle.

CONTINUED NEXT JOURNAL



Eriochilus cucullatus

Diplodium truncatum



Diplodium laxum



Dendrobium biggibum





Dendrobium wasselli



Bulbophyllum exiguum
Above & Below



Cadetia taylori



Dendrobium schneideri

