



# Native Orchid Society Of South Australia Inc.

## Journal



*Diuris calcicola*

One of new orchid species named in 2015

Photo: R. Bates

**February 2016**  
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# Native Orchid Society of South Australia

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The Native Orchid Society of South Australia promotes the conservation of orchids through preservation of natural habitat and 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** - photo Robert Bates, Dec. 2015 A newly named subspecies.

*Diuris calcicola* (R.J. Bates)

This new species was named in the October issue of the Orchid Review 2015 and reported in NOSSA's December journal. "It is a mallee species, growing across the limestone plains and rises from Victorian border as far as western Eyre Peninsula, often locally common. This bright yellow donkey orchid was previously included under *D. pardina*, a species restricted to the mountains from near Jamestown south to the Adelaide Hills. It was previously included under *Diuris* sp. Short Tails (NOSSA Journal Vol 39:11 p 128)



The Native Orchid Society of South Australia meets every fourth Tuesday of the months February to November at St Matthew's Hall, Bridge Street, Kensington. Meeting starts at 8:00 p.m. Doors to the hall open from 7:15 pm to allow Members access to the Library, Trading Table and Grower's Forum.

<b>Date</b>	<b>Event</b>
Feb 23 <sup>rd</sup> Tues	<b>General Meeting</b> Speaker : Noushka Reiter "Threatened Orchid Recovery Program"
Mar 1 <sup>st</sup> Tues	<b>Committee Meeting</b> at Robert Lawrence's place
Mar 4 <sup>th</sup> Fri	<b>Last day for March Journal articles</b>
Mar 5 <sup>th</sup> Sat	<b>Field Trip Planning Session 2 pm</b> see below for further information
Mar 22 <sup>nd</sup> Tues	<b>General Meeting AGM</b> Speaker : Renate Faast and student
Mar 29 <sup>th</sup> Tues	<b>Committee Meeting</b> TBA

### 2016 FIELD TRIPS - PLANNING SESSION + TEA

- Saturday 5<sup>th</sup> Mar – 2 pm followed by tea  
**Location:** Lawrence's - 24 Patricia St Camden Pk  
*Please bring a plate of food to share.*  
 PLEASE NOTE: Anyone is welcome to attend

### NEXT GENERAL MEETING FEB 2015

- Tues 23<sup>rd</sup> February - speaker Noushka Reiter "Threatened Orchid Recovery Program".

### 2016 AGM – MARCH 22

*Nomination Forms* accompany this journal and can be handed in at the next meeting or to a current committee member by Tuesday 1<sup>st</sup> March.

**Please note:** ANNUAL SUBSCRIPTIONS were DUE 1<sup>st</sup> January 2016 – Remember you need to be financial to vote at the AGM, and also receive journals.

### 2016 WEEDING

**Brentwood weeding** - Sat June 25th

Weeding dates for other sites to be advised in March journal. If requiring further information, please contact Thelma Bridle - Ph: 8384 4174

### SA WEED CONFERENCE

Weed Management of South Australia

4th & 5th May 2016 Plant Research Centre,

Waite Campus, Urrbrae

ENQUIRIES AND REGISTRATION:  
 wmsa@hotmail.com

### NOSSA DIARY DATES FOR 2016

- Sustainability Fair Feb 20 – volunteers required
- APS Autumn Show – April 30 & May 1
- NOSSA Spring Show – September 17 & 18
- APS Spring Show – October 8 & 9

### INTERNATIONAL ORCHID FAIRS FOR 2016

- Queensland – March 4<sup>th</sup> – 6<sup>th</sup>
- Castle Hill - April 17<sup>th</sup> & 18<sup>th</sup>
- Victorian – *On hold for now*

Further information at:

<http://orchidfair.com.au/index.html> OR  
[www.facebook.com/OrchidFairs](http://www.facebook.com/OrchidFairs)

### 8<sup>th</sup> Australasian Native Orchid Conference & Show

- 1st - 4th September 2016 Kempsey, NSW

### 11th FJC Rogers Seminar APS of Vic

*"Native Terrestrial and Epiphytic Orchids"*

Hamilton Victoria Sat 8th & Sun 9th October 2016

### On line Paper - ORCHID REINTRODUCTION

Noushka Reiter has published this paper on Orchid Reintroduction which is available for reading at:  
<http://link.springer.com/article/10.1007/s11258-015-0561-x>

### ARTICLES FOR NEXT JOURNAL

Articles need to reach the Editor no later than Friday 4<sup>th</sup> March 2016. Thank you.

# President's Annual Report for 2015

*Robert Lawrence*

## General comments

Again it was my pleasure and honour to be President of the Native Orchid Society of South Australia for the second year of my term. It is hoped that my term will be remembered as one which assisted conservationists and growers, particularly of terrestrial orchids, to come closer together toward common goals. highlights for me were Helen Richards' presentation and the summary of Paul Beltrame's visit, along with Ninah and two of their students, to Noushka Reiter where they witnessed the work of the Orchid Recovery Plan first hand.



## Member contributions

There would be no Society without the contribution of members and NOSSA is certainly no exception. I particularly want to thank Rosalie Lawrence for taking on the position of Secretary in 2015. This has been a demanding role which has complemented her Webmaster's role and her efforts were greatly appreciated. Gordon Ninnes unexpectedly continued into his third and final year as Treasurer. A new invoicing system has been established making it easier to manage membership subscriptions. John Badger has ably assisted in managing the membership register. Lorraine Badger has completed her second year as Journal Editor and has proved to be particularly competent in this role.

Les Nesbitt does whatever he can to advance the Society and the growing of orchids in particular. We are particularly indebted to him along with Jan Adams, John and Bev Gay, John and Joan Peace, Steve Howard, Jane and Don Higgs and Bob and Leslie Gunn for keeping the shows running. Special thanks are also due to Sandra Penny-Dimri for her effective publicising of this event through local newspapers, which appears to have been the key for a particularly successful spring show in terms of attendance and plant sales.

Bob Bates continues to be a valuable resource and is driving the publication of a field guide to the wild orchids of South Australia. Whilst Thelma Bridle has quietly contributed to her role of conservation. Jane Higgs has faithfully managed the tuber bank. Rob

and Jenny Pauley coordinated field trips for the year. These are but some of those who contribute. Space does not permit to list all member contributions for which I am sorry.

Regretfully, there are those who cannot continue in 2016. Gordon Ninnes is unavailable for the treasurer's role and Rob and Jenny Pauley are unavailable to coordinate field trips.

Sandra Penny-Dimri decided, as of the end of 2015, to resign from the NOSSA management committee. She has actively participated in NOSSA activities throughout the year and has worked on a revised constitution using a much more modern format which will be very useful to the new committee in 2016.

## Poster of common orchids

In the past year NOSSA worked with Jason Tyndall of Natural Resources, Adelaide and Mt Lofty Ranges to produce a poster, *Common native orchids of the Adelaide Hills*, which provided information for identification for 30 most common species. Many of the photographs were supplied by NOSSA members and assistance was given with the text. This is a well presented chart and I think we should be proud to promote its use.

## Sampson Flat

The Sampson Flat bushfire from 2-9 January set the scene for some of NOSSA's activities in 2015. Although there were no surveys planned through Forestry SA this year, surveys have been done in the burnt area. This affected, in particular, one of our members, Renate Faast who was in her final year of a post-doctoral fellowship, on the effects of prescribed burns. The effects of this unplanned summer burn was added to her study. We look forward to seeing her results compiled and published. Bob Bates' and Leo Davis efforts in monitoring orchids in the burn areas were particularly appreciated.

### Southern Lofty Block Threatened Orchid Recovery

Rosalie and I had the pleasure of attending our first meeting with this group on 9 December 2015 which proved to be quite a gathering with 23 participants. Rick Davies has taken on the role of Threatened Flora Ecologist from Joe Quarmby who left for Tasmania in July. Rick took over just in time for the monitoring of some of our most threatened orchids. A new dimension to this role has been to support

the Orchid Recovery Plan managed by Noushka Reiter.

In 2016 we hope to continue revising our Rules of Association, exploring opportunities for citizen science and to further our involvement in the propagation of threatened orchids in South Australia with Dr Noushka Reiter. Anyone interested in growing native terrestrial orchids will find plenty of assistance to get them started.

## 2015 Website Report

*Rosalie Lawrence*

A second full year with the new NOSSA website has been completed and continues to attract an increasing number of visitors. The chart below provides an insight into the viewings patterns over the two years.

	2014	2015
Views	15,016	22,770
Visitors	4,974	10,770
Views per Visitor	3.02	2.11
Number of Countries	91	114
Busiest Day	September 21 with 232 views	September 27 with 253 views

Naturally most viewers came from Australia, followed by USA, Brazil then UK. The most popular month for website activity was September followed by October then August.

Many queries come through the website – people requesting help with identification, surveys of private property, advice on growing orchids etc.

I endeavour to post a new blog every week. The subject matter ranges from light-hearted blogs such as poems, historical information, growing orchids,

conservation, news items to orchid research papers. Hopefully there is something for everyone.

In posting a weekly blog it means that there are fifty-two articles a year. If anyone knows of an interesting article or would like to write one then they would be considered for publishing. Writing articles is one way to learn about our orchids.

If anyone would like to help in maintaining the website, they are welcome to join. It is not necessary to be in Adelaide to be on the team.

## Nossa Library 2015

*Pauline Meyers*

Over 2015 the library continued to be open for all to use. It has recently received a significant donation of books which I hope to check for duplicates and incorporate into the library for borrowing as soon as possible. This year I need to do a stock take to see if any books are missing. I also hope to ensure that all the books have the NOSSA stamp on them and are clearly identified as to library number, author and title. I would appreciate it if members would take the time to look at the books available for

borrowing. If there are any suggestions as to books which would be useful in the library, let me know and I will approach the committee for funding.

**Editor's Note:** Our library has a very good collection of books covering a wide range of topics from growing orchids, to the native orchids of various states. Why not take a look at the library at the next meeting you attend. I thoroughly recommend it.

# Orchid Picture Competition

*Rosalie Lawrence*



This competition began in May 2011 with the only rule being that it must be an Australian orchid and it could be in any media – not just photos. Since that time the rules have not changed but the vast majority of entries have been photographs; primarily of terrestrial orchids *in situ* with the occasional cultivated terrestrial and even the odd epiphyte.

For the last couple of years, the November competition has had a theme but the Committee has decided to make the 2016 November competition the yearly winner from the monthly winners. The final winner is to be presented an award.

Over the years there have been some regular contributors with other individuals entering on odd occasions. Several members have said that they don't enter because they feel that their pictures are not good enough. Jill McPherson thought that others would have better pictures than hers but she came equal first in the September competition, so I would encourage others to enter.

Pictures can be entered by email, post or brought in to the meeting.

## 2015 Field Trip Coordinator Report

*Rob Pauley*

The Field Trip Coordinator role in 2015 has been a most rewarding experience and a huge learning curve. When Jenny and I nominated for the role we had been NOSSA members for only 9 months having, for some time, been interested in Native Orchids with only basic knowledge of names and where to look.

The field trips and the orchid loving members who assisted us in planning and locating the seasonal flowers enabled us to photograph and identify eighty one different orchids during what proved to be a dry season with low plant numbers. Imagine what we may find when, and if seasons return to normal.



The trips included, to name a few, Nixon Skinner, Mount Billy, Ferries Macdonald, Monarto, Morialta, Belair, Yorke Peninsula, Knott Hill, Mylor and Hale.

We also visited several other parks in the search of interesting locations.

Year 2015 proved to be a Field Trips success and rewarding for all who attended.

Thank you Bob Bates, Leo Davis Robert Lawrence, Lorraine Badger, Bevan Scholz and all the members who gave us valuable guidance.

Having learnt so much in just a year we highly recommend the learning experience to any who may wish to follow as Field Trip Coordinators.

## *Dipodiums* in Deep Creek, Fleurieu Peninsula

NOSSA field trip Saturday 2nd January 2016.

**Marg Paech**

A rather cool overcast day greeted the group of five who assembled at Stringybark Campground in Deep Creek, to look for *Dipodium* orchids on Saturday 2nd January.



*Dipodiums*, like *Gastrodias* (potato/cinnamon Bells) have no leaves, not relying on photosynthesis, but rather on the fungi which breaks down dead plant material. When they come up in late October or November, they resemble asparagus shoots and are found in stands of stringy barks, often amongst bracken fern. Flowers for both varieties found in the Mt Lofty Ranges (*roseum* and *pardalinum*) may be found on stems of bright green through reddish brown to one we found which looked black. As we pulled up in the camp ground, a few flower heads were already visible. The bright pink 'roseum' with its darker pink blotches and distinct darker pink stripes going lengthways on the labellum; the pale pink to almost white 'pardalinum' with its soft pink spots but without stripes on the labellum. We found them growing side by side. The flower heads stood from around 16 cm to 80 cm tall. There were a few seed capsules indicating pollination.

Some areas had no *Dipodiums* and we noted the difference in undergrowth in those areas. There was a cloud of butterflies in one spot and at other times we were delighted by little blue wrens and fantails.

Black cockatoos could be heard and their activity noted in the seedpods of hakeas totally mangled as they retrieved the seeds. Apart from the *Dipodiums* only a lone rather large seed capsule of maybe a *Thelymitra* was seen to indicate there had been any other orchid varieties present during the year.



Other flowering natives that caught our attention were a few false orchids - the lovely bright blue flowers on 10 - 15 cm stems of *Lobelia gibbosa*. The frilly flower of *Thysonianthus juncifolius* (rush fringe lily) stopped us in our tracks. Hopping ants that kept hopping under leaves or disappearing during Robert's attempts to educate us on their habits were an interesting distraction. We did learn that they are about 12 mm long with red nippers!

### *The effect of controlled burns*

One section had been 'control-burned' in late October (two of our group were present while it was burning). We were very interested to see if we could find any *Dipodiums* in there. We found orchids around the area - on the other side of the track and in patches where the burn didn't come to the edge of the track there were *Dipodiums* flowering. In the burnt areas there were no flowers or even stems indicating that 'roos had found and eaten them. We noted that in areas obviously burned in years past, the *Dipodiums* were definitely back so we felt that the timing of the burn, just as they would have been emerging would have seen this year's plants destroyed.

Since they grow so closely, do the two varieties cross? There seemed little evidence of that happening but a couple plants did make us wonder. One, with an almost black stem had dots on the labellum which were in lines, but very pale in colour.

A great finish to the day was a picnic lunch on the camp tables and chairs provided in the park! We departed about 1.30 pm.

**Editor's Note:** Originally Margie had attached the following label to the above single flower photos - 'roseum' with distinct stripes on the labellum, blotches only on 'pardalinum'. This has been contested and I am wondering if anyone can shed some light on this conundrum.

## Diuris behrii Project Report - 31 December 2015

*Les Nesbitt*

The September-November spring period was much drier than normal, requiring regular hand watering of orchid pots until mid-November. Healthy fat tubers were still produced despite the dry spring. Total rainfall for the year was 712 mm or 139 mm below the 11 year average.

Disaster struck in May when rats started eating the developing diuris leaves down to ground level. By the time the rats were eliminated there were no leaves left. Luckily diuris leaves grow from the top of the tuber and new growth pushed up from below ground over the next 2 months and there was little lasting setback.

Seventy nine diuris plants flowered in September, four with 3 flowers, creating a splash of yellow in the shadehouse. The first flower opened on September 12<sup>th</sup> and the last flower faded on October 15<sup>th</sup>.

Annual activities have settled into a set routine. Three mother pots (5, 9, & 68) had their tubers removed this year. There is now at least one backup tuber for each mother clone. The other mother pots were not repotted for the second year running. Some mother pots contain seedlings. Three clones have no extra tuber large enough to be a daughter yet. One daughter tuber (C8D3) was lost to rot during the dormant season. There were an additional 124 daughter tubers potted up this year which more than replaced the 95

that went back to the mine lease area in winter for planting out. Surviving small tubers are increasing in size and each year some grow large enough to be daughter tubers. From past experience some small tubers & seedlings will not survive the summer dormancy.

At year end there were 73 mother clones in 150 mm pots, 288 daughter tubers in 100 mm pots, 501 small tubers in 125 mm pots and 31 pots of seedlings. This gives a total of 893 diuris tubers in the shadehouse. At the same time last year there were about 890 tubers. 190 daughter plants have been returned to the mine site. Starting in 2012, the original 168 diuris plants have been propagated to produce more than 1000 tubers in 4 years. It was another successful year with some 98 extra orchids produced.

Six seed pods were collected for sowing on all pots next Easter. A number of seedlings germinated in 2015 in different size pots but again only in ones and twos per pot. There are now seedlings from the past three years, most with only a single leaf. The largest from 2013 had 3 leaves. Seedlings are growing slowly and are years from flowering. Seedling pots were not repotted this year except to remove any large daughter tubers. The year in which seedlings first appeared is noted on the seedling pot label.

## TUBER BANK REPORT JANUARY 2016

*Jane Higgs*

This year we did quite a bit better with the Tuber Bank than last year. We had a slightly larger selection of tubers on offer and consequently more tubers ordered. I was able to supply 95 lots using some substitutions. It is a tremendous help to me when filling the orders if substitution lots are listed – this also means that people receive tubers that they want, even if it is only their second choice. Once again I thank those who donated tubers and also the people who purchased them. I received orders from some new members this year, so hopefully we will have more tubers being grown on for the future.



# Mt Lofty Botanic Gardens Walk 2015

*Rosalie Lawrence*

Of the three walks planned for the year, the first was cancelled due to a fire ban and for the first time the last because of a lack of orchids. On the first walk early in October it was obvious that there was going to be a paucity of orchids. Orchids that we would expect to see were absent: no *Caladenia prolatus* or *Calochilus robertsonii* and very few *Diuris orientis*. On a positive note, there were a good number of *Arachnorchis tentaculata*, *Diuris pardina* and *Pterostylis pedunculata* in flower.

Whilst the final walk (end of October) was cancelled people turned up wanting a tour so we turned it into

a wildflower walk instead. There were still a few *Arachnorchis tentaculata* in flower and surprisingly we found a couple of *T pauciflora* and *Microtis* sp. Despite the poor showing of both orchids and wildflowers the participants enjoyed themselves with one expressing amazement that there was so much to see and as she said "I would have walked right past and not known that there was anything to see" – a reminder that these walks are important for educating the public about the bush jewels on their doorstep.

## Editor's Report

*Lorraine Badger*

The old adage, *Practice makes Perfect*, has certainly had some bearing on the production of the NOSSA journals over the last two years. However, there are still times when the editor, wrestles with Word over various tasks, such as placing photos where I want them and not anywhere else, or the bug hidden away somewhere which, at times, over-rides my automated page numbering system. Not wanting to be defeated by a computer, time saved through familiarity with the routine is lost. So more practice is needed.

All grumbles aside this journal would not be worth the trouble if I did not have the support of many. In 2015 it was encouraging and greatly refreshing to have a variety of new folk contribute to the journal. Their various reports on NOSSA field trips make very interesting reading. The gracious attitudes to my editing are also noted. Certainly the school teacher in me wants things to be just so but then my ethnographer side puts a halt to making too many corrections lest the author's voice be lost in modifications. Editing is needed, from time to time, to enhance the formatting of each page. It is so very frustrating to find that, when justifying text, lines may appear with just two or three words spread out across the column and so a word tweak here and there is needed to improve the look. Long articles sometimes need pruning to fit all into the allotted 12 pages.

Apart from those who contribute articles there are number of other folk who play their part each month. One particularly valued partner is David Hirst, our former editor. At each meeting he takes photos of the Benched Orchids, in and around folk adding orchids to tables or simply milling around admiring what is being presented. At home he goes through the photos, rejecting some, enlarging clear aspects of others; adding correct plant names to each and finally reducing them to a suitable size to email. On some occasions he has sent up to 8 or 9 emails with about half a dozen photos in each. The quality of his photos never cease to amaze despite the poor conditions under which he takes them. There were a couple of times when he could not attend or his camera was not performing and on these occasions his work was sorely missed. Perhaps there is some other photographer in the wings who would like to help him at times. Thanks, David for your considerable effort each month.

Another valued helper is John Badger, my husband, who can usually calm the beast within when things go awry, or get an awaited meal, or even make the computer comply with my wishes. Over the years he has established an outstanding ability to proof read documents which is an invaluable assistance. Finally he 'posts' out the electronic journal version to members. Each month Les Nesbitt sees to it that I am presented with the judging results. Thelma

Bridle, Rosalie Lawrence and Bob Bates also provide support when called upon.

In 2016 the journal will be produced 'on the wallaby' as we travel around Australia with our caravan. One of our newer members, Robin Soerges has kindly volunteered to take on the role of assistant editor in

my absence, reporting on monthly meetings and being introduced to routines should he need to step up and take control. We welcome him to the team and look forward to getting to know him.

**Remember:** Articles, feedback and photos are always welcome.

## NOSSA Conservation Report 2015

*Thelma Bridle (NOSSA Conservation Officer)*

Bob Bates continues to identify and describe new orchid species. Whilst a number of these are not formally recognised by DEWNR, and therefore have no conservation status, the descriptions are useful for NOSSA members to recognise new species and expand knowledge on their range of occurrence and numbers.

During the year NOSSA members assisted with weeding sites for *Pterostylis cucullata* in Belair and *Oligochaetochilus arenicola* at Grange. A full count of *Pterostylis bryophila* was conducted in June at Mount Billy. Surveys were carried out in the badly burnt region of the Sampson Flat bushfires early in 2015. *Caladenia (Arachnorchis) rigida* responded to the burn with thousands of flowers, although many were eaten by white-winged choughs. *C. behrii* numbers were in hundreds. NOSSA members monitoring *Oligochaetochilus despectans* in the mid-north recorded rosette numbers slightly fewer in 2015. For the first time since 2000, monitoring of December flowering/seedpods was cancelled due to the very dry conditions and above average temperatures. Erica Rees advised she found very few flowering plants in Peppermint Gully in early November.

Dr. Noushka Reiter (Royal Botanic Gardens, Cranbourne) collected fungal material from five threatened orchid species in late winter, which she has successfully cultured in the laboratory. During spring 2015 NOSSA members assisted Dan Duval (Adelaide Botanic Gardens Seedbank) with identification and hand pollination of flowers, providing protection where there was a possibility of cross-pollination with other species, to ensure seed of the specific species could be collected. Dan has subsequently collected pods and some of the thousands of seeds harvested will be sent to Noushka for propagation. This is an expensive and

time-consuming project for which funding is still being sought to propagate the orchids. Subsequently many of these will be planted in the bush at appropriate sites, where they will require volunteer assistance to help them become established.

In 2015 NOSSA was requested to assist with a sun orchid (*Thelymitra*) phenology project being conducted in Queensland. This genetic study will be combined with morphology and other features to elucidate relationships and differences between *Thelymitra* species. Unfortunately circumstances and a poor orchid season resulted in fewer species than were requested, but a few NOSSA members were able to collect a number of leaf samples together with an associated flower specimen. Hopefully, further collections will be possible in 2016.

Thank you to all NOSSA members who contributed time and effort into the conservation of rare and threatened orchid species, a number of which will not be available for our grandchildren to enjoy unless we act now.

In 2016 NOSSA will be conducting further trips to the southeast to continue detailed recording of orchid species in Native Forest Reserves for Forestry SA. If you would be interested in participating please let me know as I will have further information on this shortly. Other conservation events in the Adelaide Hills area will be published in the NOSSA Journal and all NOSSA members are welcome to attend.

ooOOOoo

The following article by Cath Dickson of the Glenelg Trust for Nature, which will be concluded in the March journal, provides an in-depth example of conservation work that is taking place. Our thanks go to Cath who has given permission for her article to be reproduced in the NOSSA journal.

# Translocated Nationally Threatened Orchid Populations – Part 1

*Cath Dickson of Glenelg Trust for Nature (Victoria)*

The 2014-2015 financial year saw the culmination of four years of planning, collecting and growing of terrestrial orchid species in the South East of South Australia, with the translocation of four nationally threatened species back into the wild. This translocation represents the largest translocation of terrestrial orchids in South Australia, focusing on the nationally endangered Metallic Sun-orchid (*Thelymitra epipactoides*) and Little Dip Spider-orchid (*Caladenia richardsiorum*), and the nationally vulnerable Elegant Spider-orchid (*Caladenia formosa*), and Swamp Greenhood (*Pterostylis tenuissima*). The project was undertaken as part of the Restoring the Under-represented Ecological Communities project, funded by the Australian Government’s National Landcare Programme.



Metallic Sun-orchid



Little Dip Spider-orchid



Elegant Spider-orchid



Swamp Greenhood

It was a significant achievement to see the orchids go back into their natural habitat, as the translocation process was first started back in 2012 when the orchids were hand-pollinated and seed collected by NGT, under a separate contract from NRSE. To ensure the seeds continued to grow on from tiny germinants they needed to be combined with their respective mycorrhizal fungus, which was collected and cultured from wild plants in 2012 by Dr Noushka Reiter in Victoria. The relationship between fungi and orchids is so specific and essential that without the fungi the tiny ground-pepper-like orchid seeds simply do not have the energy reserves to grow. The seed was given to Dr Reiter to propagate at the specialist orchid propagation facilities at Royal Botanic Gardens in Cranbourne, Victoria



Seed collected 2012



Orchid germinants



Orchid germinants



Greenhouse facilities

**Threatened orchid propagation at the Victorian facilities in 2012/2013 (photo credits O. Sweeney)**

Prior to the planting a concerted effort was made in 2013/2014 to select the most appropriate site for translocation. Key considerations included the vegetation community, proximity to known populations, tenure of the site, pollinator presence, micro-topography and micro-climate. Given the complex requirements of the terrestrial orchids, the new sites were required to mirror existing populations as closely as possible. For example, the Swamp Greenhood needed a weed free site, with total canopy cover and peat soils that stayed hydrated through-out the year, but did not flood.