

# ONE HUNDRED AND ONE REASONS FOR GROWING TERRESTRIALS

## The Victorian (Backyard) Experience

By Helen Richards AM

Firstly, why did I accept the invitation to talk at this Conference? Because my aim is to encourage more people to grow Australian terrestrial orchids. Why? There is the obvious pleasure of a horticultural nature in producing an eye-catching pot full of quaint or showy terrestrial orchids. But there is much more. Picking up my recent *Orchadian*, on the first page at the top, under 'The *Orchadian*' and the web address, were the words, 'Dedicated to the Study and Conservation of Australasian Native Orchids'. You can do something about that in your OWN BACKYARD. Hence the title of my talk, which I hope compliments the lectures of Les Nesbitt and Dick Thomson who are working with terrestrials on a more professional and official government level.

ANOS Vic was formed under the guidance and with the support of that Newcastle veteran Bill Murdoch in 1968. What had been happening in Victorian backyards prior to that time? In consulting with the then young David Jones, a foundation member and very active member of that new group, he had an extensive collection of Australian terrestrials which he had been growing since he was 14 because of his great interest in orchids and horticulture and because he had been told by a nurseryman that they could not be grown. He rode his bicycle all over Melbourne collecting plants as Melbourne went under suburbs and could see even then that the orchids were under threat.

In reading the old Bulletins, a few terrestrials were benched at those early meetings. The interest grew and several terrestrial enthusiasts were experimenting with growing mixes. John Fanning, an active member and excellent photographer, developed an interest and skill in growing terrestrials and was responsible for the gathering of the first lot of surplus tubers to be sent back to the Newcastle Group in appreciation for epiphytes sent down by them. The 'Surplus Tubers' after a while became the 'Surplus Tuber Bank', and then the 'Tuber Bank' by 1973. It was noted in the October 1973 Bulletin that 3,000 tubers had been distributed in those first three years of the operation of the Tuber Bank.

I joined ANOS Vic in 1974 after picking up a leaflet in David and Barbara Jones' fern nursery. My eyes nearly fell out of my head at my first meeting in April when I saw people coming in carrying pots of flowering terrestrials. I was, no doubt, typical of many bush lovers who, as a child, had dug up some orchids from the nearby bush and planted them in our garden, never to be seen again (I seem to remember 'brown beaks' i.e. *Lyperanthus suaveolens*). Hopefully I left the tubers safely behind! However 'my bush' is now a recreation park in busy, built-up suburban Ringwood, so any 'brown

beaks' are well gone and the rest of 'my orchids' from my childhood. That is the fate of so many previously orchid-rich areas in suburbia.

In asking a member at that first meeting how the terrestrials were grown, the reply was that it was the grower's secret, or words to that effect. Well, that didn't help my enquiring mind but my deep interest must have been evident as a very kind person gave me a pot at the next meeting. I was hooked. At that time, there was another new member in the Society with an even more enquiring mind who was fascinated with terrestrials, Rick Datodi. Rick was on a journey to find out as much about growing terrestrials as was known. He learnt much from David Jones. He sought out the new young employee at Canberra Botanic Gardens, Mark Clements, who was having success growing terrestrials in the laboratory there from seed. Mark was from South Australia and had learnt much from Ray Nash, a South Australian who had been growing terrestrials for years. Drawing on the earlier experiences of David and Ray and the current work of Rick, Mark, other Victorian growers and myself, we came up with a 'basic mix' which was a reliable starting point for anyone wishing to grow Australian terrestrials. It was a 'generic' mix, something which could be prepared anywhere in the world. In January 1983, Mark Clements was seconded to the Royal Botanic Gardens, Kew, England for 18 months to undertake research on the propagation of the extremely rare UK orchid, the Lady's Slipper Orchid, *Cypripedium calceolus*. At that time, only one plant was still in existence in UK. During that time, he introduced the Australian method of cultivation of terrestrials to the Kew Gardens using this basic mix and modified it for use with European terrestrials.

In an effort to educate people on how to grow Australian orchids, ANOS Vic has produced many cultivation booklets, the first of which was in the early 1970s, 'Native Orchids in Melbourne'. This was expanded, then totally re-written in 1981 and revised in 1983. In 1984, a new cultivation book was written, 'Cultivation of Australian Native Orchids' and the next re-write, i.e. its 2nd edition was published in 1988. (yes, and is well overdue to be redone). This was produced as a straight forward A-Z of growing Australian orchids. Armed with this information, tubers shared around by growers and from the Tuber Bank, the cultivation of Australian terrestrials flourished in Victoria. We learnt from each other. Rick Datodi was always a tidy grower, then Malcolm Thomas came along, setting new standards! It wasn't just being tidy, it was attention to detail, it was the process of learning more about cultivation. Malcolm turned his expertise into growing the *Caladenia* alliance, becoming an authority on this subject, always willing to share his knowledge.

We have also learnt from interstate growers. South Australian Les Nesbitt was an enthusiastic member of ANOS Vic Group from the beginning of 1974. In a letter published in the September 1974 Bulletin, Les says, "I firmly believe that we must learn to cultivate all of our native orchids before they become extinct and that the quickest, safest and most economical way to establish a National Orchid Collection (referring to

an article by the Australian Orchid Foundation's Gerald McCraith) is to foster the private collections of interested Australians". Here I am, 36 years later, saying just that again. Our private collections can contribute greatly in the conservation of our orchids. In that article Les spoke of a method to propagate species which don't form colonies, by sprinkling seed around mother plants, which had given excellent result with some *Caladenia*, *Diuris*, *Glossodia* and *Thelymitra*. In Victoria, we followed suit with some people such as Malcolm Thomas having excellent results. Les also trialed the tuber-removal method for increasing numbers of some of the solitary species which we subsequently tried in Victoria also, with great success.

Back to the Vic Group Tuber Bank. It has been a tremendous success in the distribution of terrestrials. Over the years hundreds of thousands of tubers have been distributed. Our current tuber bank coordinator, Andrew Gibbons, does a mammoth job overseeing the distribution of tubers each year. He has given me the statistics for the last 10 years. The average figures for those 10 years are 20 donors supplying 7,000 tubers of 108 species to 70 requestors who received 1,280 serves. We now have to observe quarantine rules, so not all of the states can receive tubers from Victoria. We have strict rules regarding the legality of donations, have a paper trail to their original source, so that we would be able to pass an audit on the source of tubers. Warnings are also issued regarding the donations of disease-free tubers, no virus. As to the total number of tubers distributed over the 40 years, it is hard to estimate. Going back further to the late 1980's, the average no. of tubers was about 8,000 per year so our numbers have dropped back a little, hopefully only due to the drought and quarantine rules. Yes, we have had many donations from people interstate also. Some people have been donating tubers for over 20 years. Other names I see on the list are no longer with us, sadly one being Jenny Barnett who lost her life in the 2009 Black Saturday Victorian bushfires. Victorian backyarders over the years have made a fantastic effort in donating their excess tubers for others to learn to grow. About 1/3 of the orders these days are from people who are ordering for the first time, so the demand is high. The pressure is always on for more donors.

Right from the beginning, ANOS Vic has been active in rescuing plants (with relevant permission) which would otherwise have been destroyed. This has been the largest source of tubers over the years. The early Bulletins refer to many areas around Western Port Bay being cleared, Lysaghts at Hastings being one of the sites. Hundreds of tubers were rescued from there and sent interstate. *Pterostylis nutans*, variegated form, rescued from Creswick in 1967, is still circulating in Victoria. On my first outing with ANOS Vic, in September 1974, we went to the land owned by the Victorian Railways at Stony Point. We were told we could collect whatever plants we wanted and that included *Thelymitra antennifera*. That species was supposed to be difficult to grow, but that has been proved to be incorrect as the Stony Point *T. antennifera* from that collection still appear regularly in the Tuber Bank. That particular area has since been made into a reserve and many orchids still thrive there.

ANOS Vic has not only participated in rescue digs in recent years, but has been involved in many translocations, with which Dick Thomson has been heavily involved and will discuss in his paper.

Let's go back again to those early years. In April 1977, the inaugural meeting of the Terrestrial Study Group was held, with Rick Datodi being elected its first leader. Its objectives, which were decided upon at that first meeting, included the study and recording of methods and requirements for the cultivation of Australian terrestrial orchids, and the study of the cultural requirements of those species which had previously proved difficult to maintain in cultivation. Other areas included were the understanding of botanical terminology and its application, recording the distribution of species in Victoria and the study of pollinators and methods of propagating terrestrials from seed. The Terrestrial Study Group continues today and has met on most months of the year since then, i.e. for the last 33 years. Its role put more briefly now is that it is an informal group of members who meet to further their knowledge of Australasian native terrestrial orchids which may include such aspects as habitat, morphology, propagation, taxonomy, culture and propagation. The TSG spends more of its time in the field these days, but still has regular updates on cultivation techniques.

The Terrestrial Seed Propagating Group was formed under the leadership of Dick Thomson and Paul Lloyd in 1999. Members have been meeting at the home of Dick and Marion Thomson once a month ever since, where they learn how to flask seed and replat protocorms. The Thomson's spare room now contains 2 laminar flow cabinets and hundreds of bottles of flaked terrestrial seed. It is not everybody who would have their spare room turned into a laboratory and have a monthly invasion of eager students to master the skill of flaking and replating. Some members now have sown seed, replated, deflaked and grown the resultant plants to flowering, what an achievement for a back-yarder.

In summing up, the aim of the growers in Victoria has been to educate, propagate and share. We do not have judging in the Society, but acknowledge good culture.

Education- we have sold thousands of copies of the various editions of the cultivation books at affordable prices over the years and distributed other educational material. We have organized regular visits to members' backyards to see first hand growers' conditions and discuss cultivation. We give talks at Shows and other orchid and garden clubs.

Propagate- Good cultivation leads to excellent multiplication rates of the colony forming species. The propagation of solitary species is more difficult and time-consuming. Activities such as tuber removing, sowing seed around parent plants, learning to flask seed and deflask seedlings has been encouraged. A couple of years ago I was humbled when speaking to John Jeanes, long time members of ANOS Vic, who cannot be an active member now because of caring for his aged parents. He told me that

he had tuber-removed his *Diuris punctata* plants every year for many years and he now had over 100 plants. It reminded me of the tortoise and the hare. Look what he has achieved by quietly tuber- removing every year. That inspired me to get back to tuber-removing solitary species yearly. It is a messy procedure each Spring while the plants are still actively growing and right when flowering plants are required for various shows. However, done properly, it is a very effective way of doubling the number of plants.

Share- Members donate their excess tubers to the Tuber Bank every year and share their rarer species. What good insurance it is to spread around important plants. Many is the time I have had to beg some plants back!

So what has been the backyard experiences of members of ANOS Vic over the last 42 years since it was formed?

We can confidently instruct interested people in the art of growing many of our Australian terrestrials. These terrestrials can range from a display of cute *Corybas* alliance flowers, nestled in their ground-hugging leaves to a stunning colourful display of sunny *Diuris* or *Thelymitra* or green *Pterostylis* alliance soldiers standing tall side-by-side, or a breathtaking clump of *Caladenia* alliance flowers. We have been able to grow on unusual and newly-described species, supporting those doing research on our Australian orchids. We have nurtured rare terrestrials using our cultivation skills, and produced seed for further propagation, helped maintain numbers in cultivation prior to reintroduction programs. Our backyards have produced thousands and thousands of tubers of colony forming species for distribution to others via the Tuber Bank. We have propagated the solitary species by tuber-removal and germinating seed around parent plants. We have had success in flasking seed, asymbiotically and symbiotically and deflasking seedlings.

We must continue to educate as many people as possible in the skills we have developed. We constantly need new growers. Will it be you? Will you make a difference? Will you grow something in your backyard also? Will you do something at your place towards protecting and promoting our native orchids?

**And the 101 reasons.....just look at their flowers and I'm sure you will find more than 101 which appeal.**