



Australian Native Orchid Society - Macarthur Group

JANUARY 2019

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PARRAMATTA. 2150

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Next Meeting: TUESDAY , 15th January, 2019

Life Members: Mr. J. Riley, M. T. Cooke, J. English, and W. & M. Southwell.

Conservation Officer: R. Hanman

ANOS Macathur Group disclaims any responsibility for any

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Venue: BIRRAWA HALL

FITZPATRICK ROAD

Mt. ANNAN.

Doors open 7.15pm, benching closes 7.30pm, meeting starts 7.30pm

Hi to All

The Christmas party meeting was a great night again and many thanks must go to the very generous donors of food on the night and items for the raffle.

Congratulations to Ross for winning the Harry Turner Perpetual Trophy for the monthly Benching cummulative point score.

+++VERY IMPORTANT the meeting night is now the third Tuesday of the month.

Tuber night will be at the January meeting, so any donations of spare tubers will be really appreciated.

February meeting will be the discussion and financial decision to bring the budget into line.

Wally

Something a little different!! All articles are from Orchid Societies Council Of Victoria Inc. Website.

THE WARDIAN CASE by Brian Milligan

London surgeon Nathaniel Ward could have no idea of what would follow when in 1829 he found a chrysalis (butterfly cocoon), sealed it in a bottle, and set it aside to watch it hatch. The chrysalis never hatched but by next spring two tiny seedlings, a grass and a fern, had sprouted from the damp earth on which the chrysalis was lying. These seedlings continued to grow, sustained only by the moisture trapped in the bottle. Twenty years later, the fern was still alive!

Nathaniel Ward experimented with other plants in sealed glass containers and had great success with ferns, which otherwise died in the smoky atmosphere that prevailed in London during the nineteenth and early twentieth centuries. Ward showed one of his fern-cases to the Linnean Society and thus began a hobby among the British gentility that by 1850 (after the punitive tax on glass had been repealed in 1845) had grown to full-blown "pterido-mania"! By then, almost every London drawing room contained a fern collection in a sealed glass case or 'Wardian' case, as it came to be known. Designs ranged from simple, square or round cases to elaborate affairs resembling Gothic cathedrals, Tintern Abbey and the Crystal Palace! By 1860 the Wardian case had run its course (in Victorian drawing rooms, at least), and was replaced by the home aquarium!

However, the Wardian case had a far bigger impact on horticulture than as a means of beautifying Victorian drawing rooms. The London nurseryman, Conrad Loddiges, was one of the first to appreciate its utility. He used a Wardian case to send a consignment of plants to Sydney in 1834, and was delighted to hear that they had survived the long sea voyage. The success of this venture led to the successful importation into Britain of many exotic plants, including orchids, from all corners of the globe using Wardian cases. One of the most important crops from which Britain benefited commercially was rubber. Large numbers of rubber tree seedlings raised at Kew Gardens from seed collected in Brazil were successfully transported to Malaya in Wardian cases. Within forty years Malaya had displaced Brazil as the world's major source of natural rubber. Eventually synthetic rubber replaced natural rubber for many uses but I believe that natural rubber is still used for aircraft tyres and other speciality products.

Not all orchid species were transported from their native homes to Britain in Wardian cases. In fact most orchids had to endure being sealed in wooden cases for the journey. Cases with glass tops and/or sides were fragile, and especially likely to be damaged during transport from the orchids' native habitat to the nearest seaport or navigable river. And then, for maximum benefit, the Wardian cases had to be stored on board ship where they were exposed to diffuse but not direct sunlight, not in a pitch-black hold.

However, those plants deemed to be most valuable were usually carried in Wardian cases. John Gibson used Wardian cases to transport orchids and other exotic plants that he collected in India for his employer, the sixth Duke of Devonshire, in 1837. The added expense of using Wardian cases was of no consequence to the Duke, who probably spent more money on his orchids than any one before or since!

The development of the commercial airliner spelled the end of the Wardian case for transporting plants internationally. However, it is still used by amateurs for growing orchids and other exotic plants in city apartments, especially in countries with cold climates. Advertisements for Wardian cases with temperature, humidity and light controls still appear in overseas orchid journals. And it all began with a chrysalis and a fern spore in a bottle.

NATIVE TERRESTRIAL ORCHIDS - GIVE THEM A GO! by Frankie Fraser

A 'terrestrial' orchid literally means an orchid that grows in the ground. There are approximately 1200 native orchid species in Australia: more than half of these are terrestrials and most are uniquely Australian. Terrestrial orchids have tubers. In comparison to other plants, they have few roots because they live in association with fungi, called mycorrhizal fungi, which gather nutrients for the orchid. Some of these orchids are easy to grow, while some are difficult and others are impossible because of a special symbiotic relationship that they have with mycorrhizal fungi.

Growth Cycle. Almost all terrestrials are deciduous and have a growth cycle in which they spend 6-8 months growing in cool, moist conditions and 4-6 months resting as dormant underground tubers during the hot, dry summer. This is their unique way of surviving Australia's harsh dry summer conditions. New tubers are produced in winter-spring and after flowering the plant dies down, the tubers becoming dormant until the next autumnal rains. Most terrestrial orchids flower in spring but there are some earlier flowering species such as the autumn flowering *Pterostylis* (greenhood orchids).

Growing terrestrials from tubers. I grow a few terrestrial orchids and love the sight of a potful of them in flower. The cultural comments below refer to my growing practices in my conditions – methods may vary from grower to grower. Tubers can be potted in December/January -1 do mine in January when I am on holidays and have time to do it.

I use black plastic pots – squat pots are good because of their extra drainage holes. Before I put the potting mixture into the pot, I place a circle of shade-cloth in the bottom of the pot to cover the drainage holes. The cloth prevents the sandy potting mixture from leaking out and also deters larger slaters and earwigs from sneaking in!

I use the basic potting mixture recommended by ANOS which comprises two parts of coarse sand, one part of mountain soil, one part of buzzer chips (not treated pine, Western Red Cedar or chipboard), one part of leaf mould (partially rotted down leaves found under trees) and approximately one dessertspoonful of Blood and Bone per 9 litres of mix. Fill the pot about two-thirds full with the mix, and arrange the tubers with their growing 'eye' facing upwards. The tubers should be about 30 mm below the final level of the mix. Cover the tubers with more mix and firm it down. Top the mix with about 10 mm of chopped pine or Casuarina (sheoak) needles. The chopped needles form a mat and prevent erosion of the mix when watering. It also keeps the leaves above the mix so that they dry off quickly, thus lessening the chance of leaf rot. The juvenile plants find their way through this mat without difficulty. Note: When re-potting tubers the following year, use equal quantities of new mix and last year's mix, so as to transfers necessary mycorrhizal fungi to the new mix.

Water the pots well and keep them shaded. Allow the pots to dry out between very light sprinklings until about the end of February (you don't want the tubers to rot). Then place the pots in their growing position in the orchid house -1 stand mine on paving bricks on the floor. *Diuris* like a brighter position than *Pterostylis*, and *Corybas* like more shade. Water them more regularly now, gently filling the pot to the rim and then allowing the water to soak in.

In autumn each tuber sends up a shoot to the surface and leaves grow quickly in late autumn. Pterostylis are the first to appear (March), then Diuris and finally Corybas (June). Terrestrial orchids don't cope well with fertiliser (they can be burnt and even die), although Pterostylis and Diuris are tougher and can cope with a very weak solution (I use Aquasol®) when the leaves first appear.

After flowering, the plants begin to die down in or about November. I stop watering them, remove the pots from the orchid house and put them where they won't get water (as in their natural growing conditions) – mine go under my decking because they are conveniently out of the way. I do give the pots a little sprinkle of water occasionally every week or two. Too much water will rot the tubers – so don't overdo it!

Pests. The worst pests are slugs and snails – they love to chomp on a stem or bud just when the plants are ready for the Spring Show! Snail pellets help (Baysol® works best for me). Scatter them around the pots, but preferably not in them. Remember that snail bait is poisonous to pets! Placing the pots on rough paving bricks also helps to deter snails and slugs. Slaters, and occasionally earwigs, find their way into the bottom of the pot if I don't put a piece of shade cloth inside the pot before adding the mix. Infrequently, near flowering time, tiny green caterpillars appear and wreak havoc with the stems. Pyrethrum spray 'fixes' them, but nothing can fix the damaged stems!

Some Recommendations. Beginners should choose species that are hardy and multiply well. I find colony-forming Pterostylis the easiest to grow, particularly Pterostylis curta, P. pedunculata, P. nutans, P. concinna and P. baptistii, which has large impressive flowers. Hybrids show vigour, and I grow Pterostylis Cutie 'Harold's Pride' which makes a nice show.

Terrestrial orchids are available as dormant tubers (Dec-Feb), bare rooted plants (May-August), flasks (all year) and as pots of plants (winter-spring). For starters you could try the following:

Sales at spring orchid shows and sales tables at club meetings. Pots of plants are available. Australian Orchid Nursery (Wayne Turville). A few Pterostylis species are available. 58 Mornington-Tyabb Rd., Tyabb, Victoria. 3913. Phone: (03) 59773122

Nesbitts Orchids (Les Nesbitt). Tubers, bare-root plants and flasks are available. PO Box 72, Walkerville, SA 5081. Phone: (08) 8261. Les Nesbitt is a renowned grower and hybridiser of native terrestrials as well as a senior judge in South Australia. He puts out a catalogue twice a year, so get on his mailing list if you are interested in terrestrial orchids. He has quite a range, particularly of Pterostylis species and hybrids. Join the Australasian Native Orchid Society (ANOS). Do NOT remove terrestrial orchids from the wild.



GEORGE KNIGHT, AN EARLY VICTORIAN ORCHID GROWER by Greg Campbell, Gerald McCraith AM and Brian Milligan

Sir Frederick Sargood is believed to have assembled the first major collection of orchids in Australia at Ripponlea (his estate at Elsternwick, a Melbourne suburb) in 1883. His interest in orchids was sparked by a visit to England in 1880-1882, for not only did he return to Melbourne with a large collection of orchids but he also 'imported' two gardeners to care for them!

It now appears that George W. Knight, City Surveyor at Sandhurst (Bendigo), also accumulated a substantial orchid collection, beginning in 1884. Knight's copy of the fifth edition of B.S. Williams' The Orchid-Grower's Manual, published in 1877, has recently been found. Knight inscribed his name in the frontispiece of his copy and also noted in the margins the orchids that he had acquired and when they first flowered. Knight's notes indicate that he acquired his first orchids (seven species and two hybrids) during 1884, followed by at least a further 46 orchids the following year

(other entries list only the date of flowering, not of purchase). A total of 89 orchids were marked altogether. Four of Knight's first orchids, acquired in 1884, were paphiopedilums, then known as cypripediums. Two (*Paphiopedilum concolor* and *P. niveum*) were species, while the other two were hybrids (*P. Dominionum* and *P. Harrisianum*). His *P. concolor* produced four flowers in 1888, while *P. niveum* had three, results that would delight most modern growers. He also purchased two odontoglossums (*Odontoglossum hallii* and *O. rossii*, now *Rhynchostele rossii*) in 1884 but there is no indication that either had flowered.

Knight grew four cattleya species and must have been especially pleased with his plant of *Cattleya mossiae* 'albo-marginata', as (according to his note in the margin) its flowers measured 7.5 x 7 in. Considering Bendigo's hot summer weather, he did well to flower *Odontoglossum crispum* in 1888, when it displayed its "beautiful pure white blooms" during the entire month of August. Another orchid that deserved special mention was *Odontoglossum citrosum* (now *Cuitlauzina pendula*), which in December 1888 produced flowers that were "lovely, large white, of great substance, (and) highly perfumed".

A note in the margin reveals that *Trichopilia suavis* produced twenty blossoms in late August 1888, while his *Sophranitis grandiflora* (now *S. coccinea*) also flowered in August the same year.

We know that George Knight purchased some of his orchids from William Bull's Establishment for New and Rare Plants of the King's Road, Chelsea (England). Bull's nursery was one of several great orchid nurseries of the era, two others being Sander's of St. Albans and Veitch's of Chelsea. Bull imported plants from Africa, India, Japan and North America, and commissioned Edward Shuttleworth and John Carden to collect for him in Colombia. He was one of the first sixty chosen by the RHS to receive the Victorian Medal of Honour commemorating Queen Victoria's jubilee in 1897.

A letter written by William Bull was found sandwiched in the pages of Knight's copy of *The Orchid-Grower's Manual*. Dated 28 October 1885, it reads (in part): "Your letter of the 15th August duly reached me and I have now forwarded by P & O "Carthage" a case containing the *Saccolabiums* as per enclosed invoice. I have sent two extra strong plants of *Cypripedium caudatum* and *C. caudatum roseum* and charged half price for them. I have also sent extra strong plants of the two others that failed." Three of the *saccolabiums* that Knight ordered are now known as *Ascocentrum ampullaceum*, *A. curvifolium* and *Rhyncostylis gigantea*, while *Cypripedium caudatum* is now called *Phragmipedium caudatum*. It's surprising that so few of Knight's purchases died in transit, which would have taken about two months, as calculated from the above dates.

George Knight was born in London in 1831. He qualified as an architect and practised as a civil engineer before coming to Australia with a younger brother in 1854. After arrival in Victoria he was appointed Government Engineer and supervised the construction of a railway line to Williamstown and the Sunbury section of the main railway line to Bendigo. Subsequently he established a vineyard at Sunbury but soon sold it and moved to Bendigo, where held the position of City Surveyor until retiring in 1886. During that period he established nurseries, vineyards and orchards on four different sites in and around Bendigo, trading as the Knight Brothers. The Rosenberg nursery at Back Creek was established on former gold diggings only after turning over the whole site to unearth the fertile soil and bury the clay and gravel that the miners had brought to the surface.

William Knight was a Fellow of the Royal Horticultural Society of Victoria and served as a Justice of the Peace and Magistrate in Bendigo for fifty years. He died in 1923, aged 93.

Acknowledgements.

We thank Mr. Darren Wright of Bendigo for lending the authors Knight's copy of the fifth edition of *The Orchid-Grower's Manual*, and Mrs. Helen Mainka of the Bendigo Historical Society for her research.

Short newsletter as no minutes or benching....

Hope everybody had a terrific Christmas and a happy start to 2019....

Good Growing....