

Newsletter 72 September 2010

PTEROSTYLIS SP. AFF. *DOLICHOCHILA*

Kate Vlcek, DSE, Warrnambool

I have to make an amendment to my last article (in Newsletter 71) about *Pterostylis* sp. aff. *dolichochila*, the Portland Long-tongue Shell Orchid.

I invited Dr Mike Duncan (one of Victoria's best orchidologists and current President of ANOS Vic.) to help me wade through the hybridization issues with *P striata / alata* and *P* aff. *dolichochila* and to assist me with identification. Because *P* aff. *dolichochila* is currently undescribed it can be difficult to decide whether a plant is or isn't – making it even more difficult. Mike informed me that David Jones feels there are several distinct forms of *P striata / alata* which upon description will be considered species in themselves so that we were also potentially looking at an undescribed but widespread coastal form of that species. So how does one decide what one is looking at for conservation purposes?! Mike's opinion was that I was being far too fussy with my ID of *P* aff. *dolichochila*, that anything that looked 60% or more like it could be included for conservation purposes and that I should allow for more variation within the species. Hence my population estimate has changed considerably.

On top of this, some locals showed me a lovely large patch of over 200 or so plants in an area I hadn't checked, so things are really looking up for this species and my concerns of the apparent extreme rarity have been alleviated. There are probably about 500 plants but all occurring within a few kilometres.

DENDROBIUM BIFALCE LINDLEY

Mary Gandini

"A rose by any other name would smell as sweet" (with a nod to Shakespeare)

Poor *Dendrobium bifalce* has endured more than ten name changes since the name was published by Hooker in 1843. Changing names of plants is nothing new. It happens every time some botanist does a revision. The list below shows what the orchid has endured with the original name having been reused several times.

Doritis bifalce in 1874

Dendrobium chloropterum in 1878.

Callista bifalce in 1891.

Phyllorchis chloroptera in

Bulbophyllum oncidiochilum in 1893.

Latourea oncidiochilum in 1894.

Dendrobium breviracemosum in 1898, Bailey

Dendrobium chloropterum in 1909

Sayeria bifalcis 1983 .

But there's more! Clements and Jones, in their 2002 revision of many Australian orchids, gave it another new genus:- *Leioanthum*. At least they left the species as *bifalce*. They separated *Leioanthum* from *Dendrobium* on the presence of hard pseudobulbs, terminal leaves and long racemes arising from upper nodes.

Dendrobium bifalce has been placed in Section Latouria (Blume) Schltr. It is the only Australian representative in this section, with most members occurring in New Guinea. At one time *Dendrobium fellowsii* (*bairdiamum*) was also in this section. The name *Dendrobium* comes from two Greek words meaning tree and life. Olaf Swartz used it when he described all plants known to him in 1800.

Dendrobium bifalce is a tropical orchid found in Indonesia, New Guinea, the Solomon Islands and Australia. In Australia, it occurs from the Daintree River, which is just north of Cairns, through Cape York to the Torres Strait Islands. It is very common in New Guinea, from where it may have radiated to Australia and the Solomons. Growing on both trees and rocks at low to moderate altitudes, it needs good light intensity and good rainfall. In cultivation, it grows well in the tropics but further south flowers are rarely produced.

The following is a general description based on my observations. For a proper scientific description consult any reputable orchid tome.

Pseudobulbs are hard and tufted, slightly swollen basally and then sometimes constricted like *D. jonesii*. Above this they are cylindrical to fusiform. The 2-4 leaves are tough and coriaceous, ovate in shape and the upper surface canaliculate or concave. Altogether it can become a large, robust plant, producing many racemes several times a year.



Fig. 1. *Dendrobium bifalce* flowers of plant 1 showing the bifid end of the white keel and shape of the perianth segments.

The peduncle is longer than the rachis which bears up to 12 flowers on thin, 2-2.5 cm pedicels. Flowers open widely to about 2.5 cm. No parts are hairy. General outline of a flower is triangular, with the lateral sepal forming a pointed apex. My flowers are yellow with purplish dots and stripes on the sepals and lateral petals (Fig. 1). No brown colouration is present although this is mentioned in other descriptions. The labellum is yellowish, dusted with purplish dots and stripes except for the white keel. Its lateral lobes are pointed, long and erect and almost embrace the anther. The white keel is bifid (notched) at the front as is the apex of the labellum.



Fig. 2. Plant 1 on a stump



Fig. 3. Plant 1 is developing a capsule.

I have two large specimens of *D. bifalce* in my garden. Plant 1 would be 25 + years old. This plant was originally on a mandarin tree that died. The trunk section with the orchid was left in the ground for several years then when the timber decayed the piece was put in a hollow log standing in the ground Fig. 2. Obviously it likes rotting wood because it has happily thrived there for many years, producing many flowers and sometimes seed capsules Fig. 3. At times pieces have been detached for propagation. It receives dappled sunlight and occasional watering. The whole plant is about 70 cm wide with canes 30cm long and very dark green leaves.



Fig. 4. Plant 2 in a tree fork



Fig.5. Plant 2 producing a new raceme

The other specimen (Fig.4) is nearly as old and on a live mandarin tree on a higher ledge of the garden. This plant is just as robust and productive as the other and has a small seedling plant growing nearby. When I find a ripe capsule, I shake some seeds on the roots of the mother plant; This one paid off.

Old peduncles are present. There are many pseudobulbs around the back of the tree. I have kept records of flowering since 2004. Most years flowering commences in June and continues into October. However, in 2005, the first flowers appeared in May and the last were in November. I have not recorded flowers from December to April. These are the hot months and often the very wet ones. The digital images shown were taken 22nd August 2010 when both plants were at the end of a flowering period. New racemes have appeared with new buds developing. Both specimens are not far above the ground and are shaded by trees but receive bright light. The leaves are always dark green and succulent.

CALADENIA (ARACHNORCHIS) TOXOCHILA

Kate Vlcek



‘Almost Lost in the Litter’

This is a drawing of a pair of small spider-orchids growing in a flora and fauna reserve in the Little Desert, in western Victoria. These spider-orchids belong to the green comb complex, which can be very difficult to distinguish from each other and may contain some cryptic species. From my drawing and the distribution and flowering time, these flowers have been identified as the Bow Lip Spider-orchid *Caladenia (Arachnorchis) toxochila*, which is a threatened species in Victoria. It also occurs in NSW and SA and it can be distinguished from similar species by its broader, flatter labellum, short weak clubs and the comparatively short marginal teeth of the labellum (I find this the most user-friendly diagnostic feature) as well as flowering time and distribution (*C amoena* flowers much earlier and does not occur in the area and *C parva* has much longer labellum teeth).

I chose to draw this image because I wanted to show how difficult it can be to see/find these orchids and also to show how all the emphasis in this group of sexually deceptive spider-orchids is on the insect-mimicking labellum – the tepals are all held away from the labellum and are dull coloured to further emphasise the high contrast created by the shiny black calli. I also wanted to show how easily our orchid species can ‘vanish’ - literally. So many of them are teetering on the edge of life and death.

Colin Bower has been working with the pollinators of the green comb complex for some years now with some surprising results – some of them have attracted the same thynnine wasp pollinator, suggesting that they are biologically the same species (i.e. *Cal parva* and *Cal villosissima*). Many of these species were originally lumped under *Ca. dilatata*, the true *dilatata* flowers later (generally late November and December) than the rest of the complex. Regardless of taxonomy, they all make an equally interesting artistic subject and are always a joy to come across.

References: Backhouse & Jeanes 2006, Bishop 1996

NAMES, DAMNED NAMES, STATISTICS AND CONFUSION

Donald Lawrie

Pauline and I have had the privilege of being Indigenous Orchid Study Group Leaders for 15 years. In that time we have published and distributed a quarterly newsletter which dealt with a large variety of orchidean topics. Our best issues, we feel, were those for which we simply had to coordinate the articles written by Study Group members. In the early days it was easy to understand what was being written, but of late we often have to stop and translate names presented to us in correspondence.

David Jones in his watershed publication, *Native Orchids of Australia* 2006, has almost completely abandoned the known and familiar botanical orchid names in favour of common names and new botanical names. His book is "a complete guide" and will be invaluable as a reference for orchid enthusiasts new to this branch of botany/gardening. Clear ID pictures, descriptions of plants and their occurrences will enable any astute reader to put a name on an indigenous orchid. The problem of communication then arises: when a neophyte orchidologist writes to a reactionary septuagenarian such as myself, enthusing about colour variation in the inflorescence of a *Durabaculum undulatum* var *undulatum*, my roadblock mind at first refuses to recognise the name and then, reluctantly, translates into *Dendrobium discolor*, and finally, good old Golden Orchid. Golden Orchid as such does not feature in Jones's index. (Is it my eyes, or are indices in plant and bird books being printed in much smaller type?). On looking up *Durabaculum* I eventually find "Golden Antler Orchid". These are the names that the next generation of orchid enthusiasts will have to use since all the Old-Fashioned reference books - including Jones's own wonderful *Native Orchids of Australia*, the one with real names - are out of print.

The botanical family Orchidaceae is one of the world's largest - perhaps 30,000 plus species have been named and classified into around 1,000 genera. Assigning clear, easily recognised names that will be recognised world-side is essential. It is not a new problem: in the mid 1700s, Carl Linnaeus, Professor of Botany at Uppsala University, Sweden, recognised that the system of naming plants needed to be organised. He expounded and enlarged the binomial system of genus/species that is still in use today. Three hundred years ago, known orchid species were few and mostly of interest for medicinal or magical uses. Common names reflected the plant's appearance e.g. Finger Root Orchid, which was easily Latinised to the botanical name, *Dactyloporhiza*. The discovery of the multitude of orchids in the world by intrepid plant hunters gave rise to the need for new names which would be recognised and accepted. Some were easy such as *Cattleya*, named after Mr Cattley who more or less accidentally grew the type species. In the 20th century in particular, enthusiastic hybridisers developed intergeneric crosses that began to glory in such remarkable names as *Brassiolaelaocattleya*, which for practical purposes was rapidly abbreviated to BLC. The stage was set for reform.

In the Queensland SGAP September 2010 quarterly Bulletin, Elwyn Hegarty, SGAP Technical Officer, has some relevant comments re plant name changes : "...members may wonder why this happens. Sometimes it is just to correct past mistakes in classification, other times to rationalise the name of a plant that had been described and named more than once e.g. in different States. In this case the first name that was validly proposed takes precedence. Mistakes are normally corrected in the course of a botanical revision of all or part of a genus or family, when all historical records and new information have been reviewed. Subsequently the superseded name can be shown as a synonym after the name which is currently proposed, with the persons who described and named the species cited

after each species name (e.g. L. for Linnaeus). You might need to remember that not all revisions are immediately or completely accepted by all authorities."

The list of synonyms as mentioned above can make fascinating reading. In Alec Dockrill's two volume *Australian Indigenous Orchids* 1992 edition, the author gives full pedigree to the plants listed. My favourite orchid, *Dendrobium discolor* the locally common Golden Orchid, is listed by Dockrill as first making itself known in 1810 as *Dendrobium undulatum*, described by Lindley. It then becomes *Callista undulata* in an 1891 revision by Kuntze, then in 1910 Kranzlin called it *Dendrobium arachnanthe*. In 1953 Rupp called it *Dendrobium elobatum* and in Dockrill it is *Dendrobium discolor* Lindley. Jones, in the publication referred to in this household as *The Pretty Picture Book*, ignores all reference to the above names and orchidological luminaries and in assuming the role of infallible nomenclator uses the term Golden Antler Orchid *Durabaculum undulatum* var *undulatum*.

Mr Jones's reasoning for name changing is not arbitrary whimsy. He states "changes can be frustrating to amateurs." He details such reasons for change as recent molecular studies which reveal hidden aspects of genetic make-up and ancestral relationships which provide "compelling support for reclassification and name changes."

Pauline and I are members of SGAP, Cairns Branch. Our members have a regular monthly outing to places of plant interest and we always find at least a few species of orchid. Since Jones's book was published we have noticed a dichotomy in discussions of such plants among our younger and more highly qualified members. They tend to use the new names and it does make for lively discussion at times. Time will tell whether Jones et al have made a giant step forward in facilitating the recognition of orchid nomenclature or whether they have taken a giant stirrer and turned a rather difficult situation into a total, impenetrable mess of confusion.

HOW CAN A CHINESE ORCHID BE AN AUSTRALIAN NATIVE?

When we moved from Babinda to our present home at East Russell in 1976 Pauline brought a number of orchids with her. Most re-established on the plentiful trees around the house and most still survive. One, given to Pauline by an orchid-mad GP when he was transferred away, was thought to be a rare local named after the then living orchid legend Jack Wilkie. The plant thrived but didn't flower on an exotic *Tecoma* tree; the orchid's name was changed from *Dendrobium wilkianum* to *Dendrobium mirbelianum*; Jack grew old and died, and after twenty something years the orchid revealed itself to be nothing more exciting than a common old Golden Orchid, albeit with masses of deep chocolate flowers with delightfully curly sepals.

Another plant was referred to for years as "the Indian Orchid" until we found that it was in fact a *Dendrobium moschatum*, native to the Himalayan Mountains. How, we asked, could a Himalayan orchid grow and flourish in the coastal lowlands of Queensland? In much the same manner as one can survive a fall from a thirty-foot ladder was the answer; drop off the bottom rung! *Moschatum* is native to the very bottom slopes of the Himalayas where the climate is analogous to ours. It was planted on a rose trellis, but is happier as a terrestrial. The roses are long gone, the *Moschatum* is a giant plant with *Hoya australis* tendrils twining around it, and it produces hundreds of perfumed, apricot coloured flowers from Remembrance Day until Twelfth Night each year.

These rambling reminiscences were sparked by APS South Australia Study Group Liaison Officer, Eleanor Handrek's remark, in the APSSA Journal for August 2010, that the wide distribution of *Spiranthes sinensis* "suggests more questions". One can only speculate on how so many plants from other parts of the world can occur over such a wide area.

We are very keen on The Wallace Line, a divider discovered by the great naturalist Alfred Wallace who propounded a line of demarcation running between Bali and Lombok and beyond. Fauna

and flora species on the Asian side were not represented on the Austro-New Guinea side of the Line and vice versa. His hypothesis is valid but, as with all such, there are exceptions. A wide variety of orchids, mostly if not all terrestrial, occur on both sides of the Wallace Line. A science friend told me recently that the Torres Strait between Papua and Cape York was dry about 6-7,000 years ago and that this was a not infrequent occurrence which allowed successive waves of human entry to the Southern Continent. These humans would have crossed the Wallace Line to reach Torres Strait and it is not inconceivable that plants and birds - perhaps birds carrying plant/orchid seed did so also. There are birds, trees and orchids in Northern Cape York Peninsula that occur nowhere else in Australia but also are widespread in the New Guinea-Indo Malaysian area, and they flourish in an area of Australia that has a similar tropical climate. Elsewhere in Northern Australia, e.g. Top End and Kimberley, the climate is radically different, so the plants of Indo-Malaya generally do not prosper. Some of the orchids introduced in the above manner have managed to infiltrate further into Australia where they found conditions suitable, and so we DO have a Chinese orchid that, shall we say, has become native to Australia.

FINANCIAL STATEMENT 2009-2010

BALANCE BROUGHT FORWARD 1/7/09		\$867 22
INCOME: Subscriptions, grants, donations	315 00	
Bank Interest	11	315 11
	<u>1,182 33</u>	
EXPENDITURE: Printing	52 40	
Postage	99 00	
Stationery	156 90	308 30
BALANCE CARRIED FORWARD 30/6/10		<u>\$874 03</u>

Bendigo Community Bank a/c No. 114 030 240 in the name of ANPS(A) Indigenous Orchid Study Group with the signatures of Donald C Lawie and Pauline M Lawie, one to sign.

ASSETS: The assets of the Indigenous Orchid Study Group consist of \$874 03, nine 55c stamps, a reasonable ballpoint pen, some A4 paper and some DL envelopes.

Other assets are the drawings of Kate Vlcek held in trust for the Study Group, also a couple of CDs of photographs.

ANNUAL REPORT 2010

This year we succeeded in our aim to produce four newsletters, nos 68, 69, 70 and 71. We also co-operated with Margaret Bradhurst, a Study Group member, who masterminded an orchid issue of *Australian Plants*, an effort which helped the editorial committee to go a long way towards getting up to date. Most of the articles printed this year were contributed by members and covered a wide range of orchids, particularly those from Western Australia, and including some from New Zealand where the relationship was examined.

A tribute was paid to Mr Lewis Roberts who is working on painting all the orchids found in the north. He is a most individual talent.

Kate Vlcek provided us with a beautiful painting for reproduction. Mostly the photographs did not do the originals justice; I still struggle with the printing process in spite of using a great deal of expensive coloured ink. At this stage we are close to breaking even with our low subscription, but there is no reason to increase it while there is still money sitting in the bank.