

Group Leaders: Don and Pauline Lawie
P.O. Box 230, BABINDA 4861
Phone: 0740 671 577

Newsletter 61 December 2007

STETHOPACHYS FORMOSA (Dendrobium beetle)

A while back a friend brought to me some strange looking stuff in a box and asked what it was. I had no idea so suggested she keep it imprisoned and see what happened. When I found some of the same stuff on a spike of Golden orchids we had in a vase during our intensive study of the flowers, I followed my own advice and kept it in a small jar covered with material. Many weeks later I could see no change and prepared to throw it away. Fortunately I looked closely first and here's the result.

Wildlife of Tropical North Queensland, a Queensland Museum publication, states: "length 11mm. Yellow with two black blotches on each wing cover. Open forest and rainforest. North-eastern Australia. Adults and larvae feed on flowers and soft leaves of orchids. Pests in orchid shadehouses. Larvae white and slug-like; feed in groups and cover backs with own faeces. Pupate in mass covered with poly-styrene-like foam" QED



Doreen from Malanda reports that at the Atherton Tableland Orchid Society in October the "Australian Orchid nuts" were enthralled with plants from Bruce Gray's collection:

Sarcochilus hartmanii, so rarely seen in the North, grows in full blazing sun on rocky cliff faces. Doreen tells how a neighbour coerced Doreen's husband to go with her down a narrow cattle pad just a metre or so from the edge of a drop of hundreds of metres, near Canungra in Southern Queensland, to look at a flowering plant. Doreen and the neighbour's husband stood at the top of the cliff yelling, "no, come back, come back – no orchid is worth that risk." Plant hunters of yore would not agree. This "blue nob variety" was hung as near as possible to the roof of the bush house to imitate the hot natural conditions. 'Oh, yes,' says Doreen, 'I can relate very apprehensively to *S. hartmanii*!!'

Sarcochilus ceciliae, although a local plant, is rarely seen so successfully cultivated. This specimen, growing in big-ish chunks of broken rock in a small terracotta pot and hung high in the bush house, rewarded the grower "with several sprays of beaut purple flowers ... and was the piece de resistance".

Inspection of a cylinder no more than 10 cm long revealed dozens of tiny pale single flowers from minute pseudobulbs about 2 mm across – possibly the smallest orchid plant in the World and at home in the Far North – was a fabulous specimen of *Bulbophyllum globuliforme*. "This little beauty held its own amongst all the brash exhibitionists on display (Even out-shone them?) It does help to be biased!!"

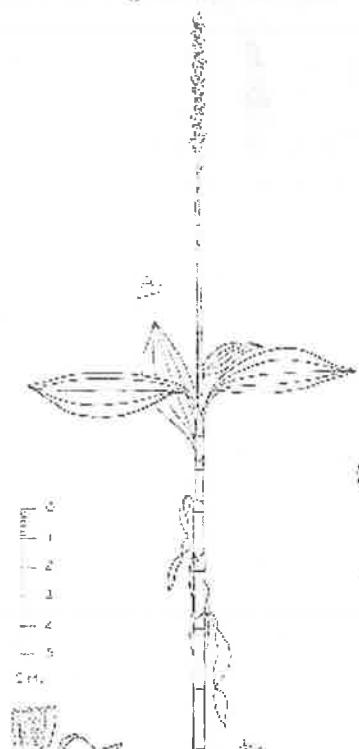
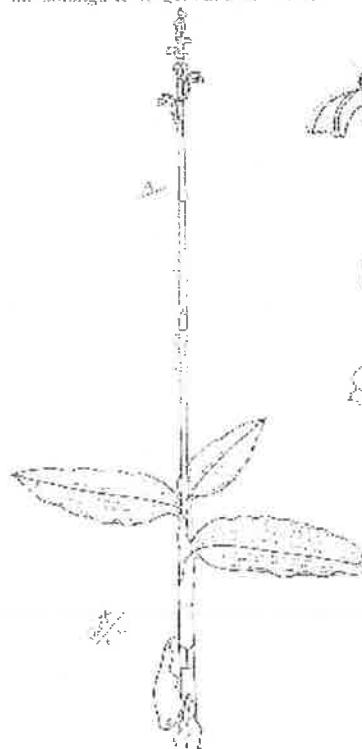
ORCHIDS OBSERVED ON SGAP OUTING TO MOSSMAN GORGE

Mary Gandini

Mossman Gorge is part of the Daintree National Park. Although it is south of the Daintree River, it is still an area of high diversity with a well developed rain forest that receives abundant rainfall. With the perennial river flowing through the gorge, a shady, moist microclimate is assured providing ideal conditions for orchids. On my many bushwalks in the area I have observed at least 30 species of orchids. There are reports of others that I have not yet seen. Some orchids were observed on our Cairns SGAP walk to the water intake up the gorge.

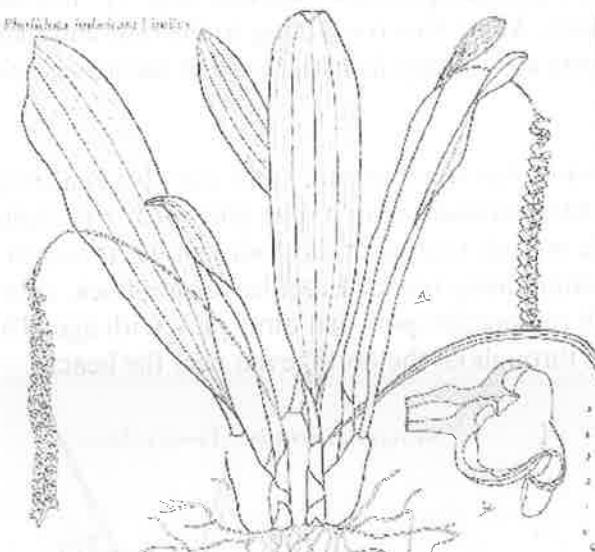
Along the roadside someone observed two, often over-looked terrestrial orchids. These were *Hetaeria oblongifolia* (Fig. 1) and *Zeuxine oblonga* (Fig. 2). Both orchids are comprised of single stems with a few spaced leaves, the lower ones dead at flowering time. The flowering spike is an extension of the stem and at a glance the orchids look like slender brown grass leaves. They are very similar in appearance and one must look closely to determine the differences.

Leaves of *Hetaeria* are thin with longitudinal veins, while those of *Zeuxine* are fleshy with the lateral veins forming a chequered pattern. *Hetaeria* flowers are tiny and crowded along the stem; they are green with white lips hooded by the lateral sepals, and have long ovaries. *Zeuxine* flowers have green hairy sepals with white petals and lips. The top sepal and the petals form a hood. The lateral sepals are rounded and project forward giving the appearance of ears.

Hetaeria oblongifolia (Blamei Blume)Fig. 1. *Hetaeria oblongifolia**Zeuxine oblonga* R. Rogers and C. WynnFig. 2. *Zeuxine oblonga*

All together nine orchid species were observed. Unfortunately, the other seven orchids were not flowering. I have scanned line drawings of them from *Australian Indigenous Orchids*, Volumes 1 & 2, by A. Dockrill (1992), Surrey, Beatty & Sons in association with SGAP – NSW. There are many more species to be found in the area but the day was not just about orchids.

One large orchid we had observed growing on rocks at the previous outing was *Pholidota imbricata* (Fig. 3). This can become a very large orchid with pleated leaves to 45 cm. The pseudobulbs are pear-shaped and sometimes angular. Each pseudobulb bears one leaf. The inflorescence arises from the apex of the bulb within the leaf and the thin, wiry peduncle becomes pendulous. Many small white/cream/green flowers crowd at the end of the stalk.

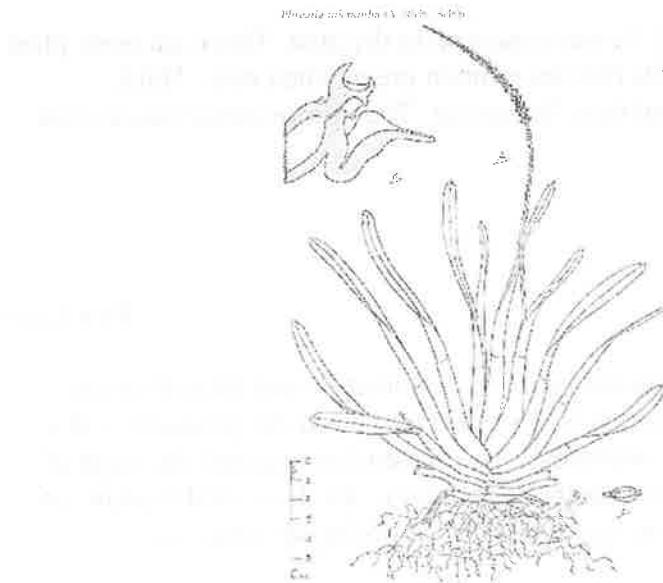
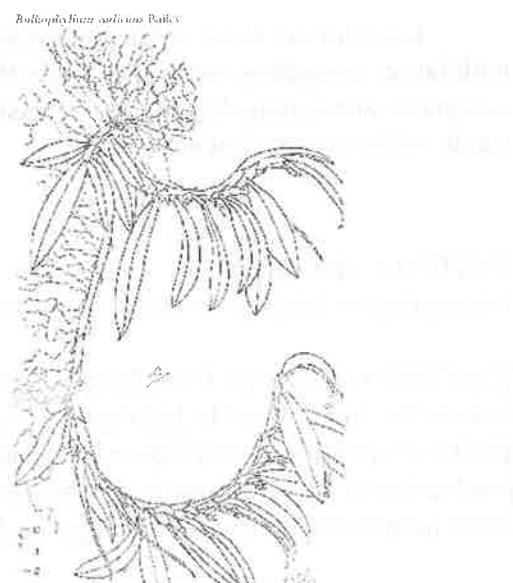
Fig. 3. *Pholidota imbricata*Fig. 4. *Eria queenslandica*

Tree branches that over-hung the water were loaded with masses of a light green orchid amongst the fern. This was *Eria queenslandica* (Fig. 4). Tapered, cylindrical pseudobulbs bore 2 leaves each. This orchid produces short racemes of dingy white/cream flowers.

A small orchid on the tree trunks in this moist area was *Dendrobium prenticei* (Fig. 5). This name causes some controversy. It is considered to be a leaf variation of *Dendrobium lichenastrum* by Dockrill (1992). *D. lichenastrum* has small rounded flat leaves, but, *D. prenticei* has terete leaves with a shallow groove present. Calling this form *D. prenticei* identifies its form. Leaves are distichous on single strands but the orchid often forms extensive mats.

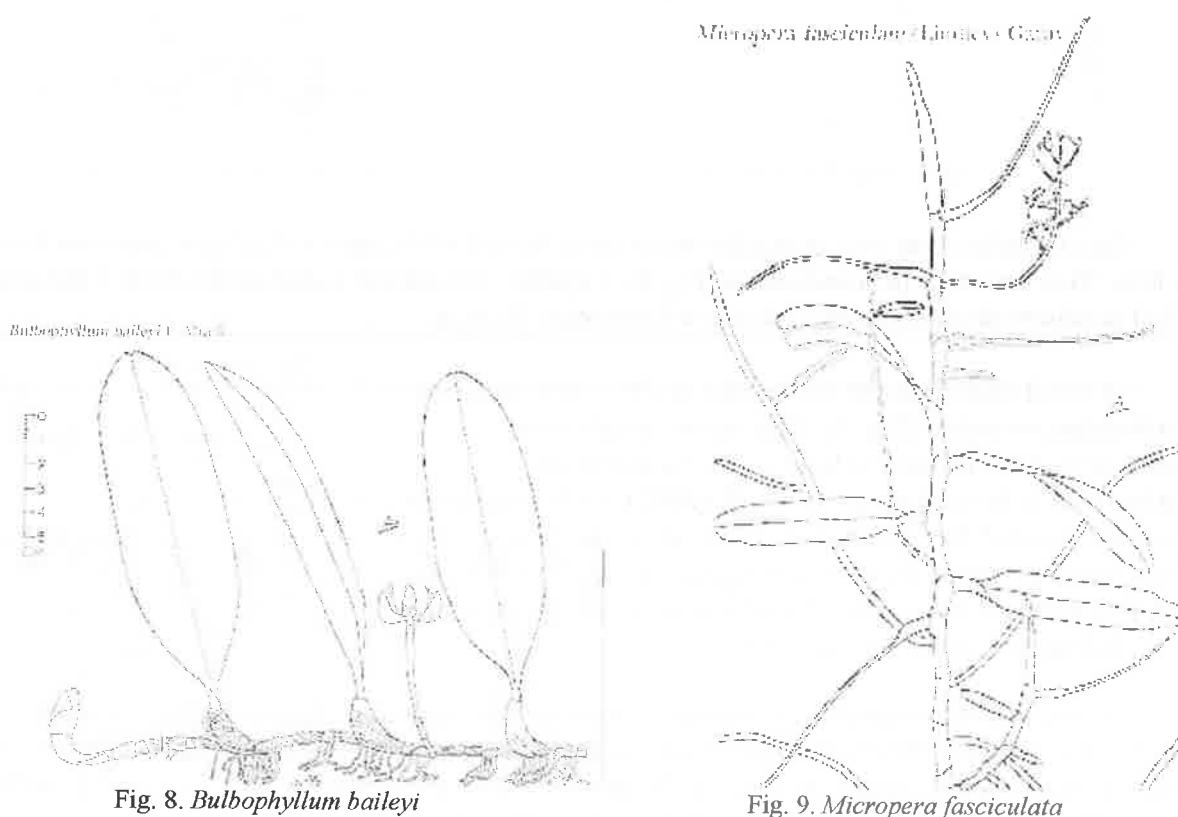
Fig. 5. *D. prenticei*

A peculiar fan-shaped plant also in these trees was an orchid. This orchid is *Phreatia micrantha* (Fig. 6). The whole orchid is flattened with the folded leaves twisting to open out away from the main stem. The lower leaves break off leaving the petioles. A large plant can reach 35cm long. Inflorescences emerge from the upper leaves and bear numerous small white flowers.

Fig. 6. *Phreatia micrantha*Fig. 7. *Bulbophyllum radicans*

Another orchid of the sheltered moist spots was *Bulbophyllum radicans* (Fig. 7). It is usually a bunch of pendulous stems with brown, papery bracts. Many fine roots cling to the host and many are aerial. Leaves are narrow, thick and curved. Flowers are solitary from the base of the leaves, pink/cream with dark red stripes and yellow labellum.

At the bend in the road where we went down to the water intake, there were broken strings of a large-leaved orchid together with a sick ant plant (*Myrmecodia platytyrea*), (the result of a fallen branch). *Bulbophyllum baileyi* (Fig. 8) grows in long brittle strands rooting at the nodes along its length. Pseudobulbs are prostrate on the stems amid sheathing hairy bracts. Erect leaves are thick, often yellowish. The solitary flower is white/cream with red/purple spots and turns pink with age. The orchid is very common on trees and rocks on water courses throughout the north, even near the beach.



Last but not least, a *Micropora fasciculata* (Fig. 9) was observed in the area. This is an erect plant with large, straggling stems and many thick, aerial roots that are whitish green when new. Thick, unequally emarginate leaves clasp the stem initially and then flatten out. The inflorescence has several small, white/cream flowers.

TESTING THE KEY

Attempting to Identify Tropical Rainforest Orchids

Don Lawie

The CSIRO Centre for Plant Biodiversity Research's success with its information and identification system for Australian Orchid Genera (see elsewhere in this Newsletter) has led to the production of a similar system for identification of Australian tropical rainforest. The system has reached the stage of production of a CD for use in a computer, and the team of authors decided to try the orchid module on some people familiar with the target orchids. The venue was the CSIRO building in Atherton.

Thursday, October 4 this year, saw an assemblage of orchid enthusiasts from the Far North Queensland area. About 15 "testers" split into small teams to operate a battery of ten computers, loaded with the new key. Pauline and I attended as leaders of the ASGAP Indigenous Orchid Study Group, and

there were three other members of the Study Group present. Other testers ranged from members of the Atherton Tableland Orchid Society with extensive experience in growing and showing orchids, to naturalists whose interests included orchids and some "men in the street" types with no particular knowledge of orchids but with an interest in testing the new key. Living specimens to work on were largely supplied by Bruce Gray – the well known orchid grower and scientist – and we brought up a few coastal lowland plants to add some variety.

The CSIRO team who put the key together were present and were keen to assess our reactions. Dr Judith West welcomed us to the gathering, Tara Hopley and Siobhan Duffy explained the system, and Dr Mark Clements (another well known orchid scientist and author) gave us an overview of the system. The Team circulated among us as we keyed in characteristics and gently led us away from false conclusions when it was obvious we were travelling in the wrong direction. I had swotted up on orchid terminology beforehand and had even written out a short glossary of terms but I soon found myself lost in the esoterica of taxonomical terminology as well as realising that my command of computers was pretty feeble. The second failing was speedily overcome with the help of my companion (a noted ornithologist and amateur botanist) and the prompting of Judith, and the language problem was easily resolved by the Key itself, which has explanations and illustrations of the terms used.

The Key uses 51 characters which when properly evaluated and entered can identify 224 taxa of Australian tropical orchids. Characters include regional distribution, general plant lifeform and habit, and details of leaves, pseudobulbs, flowers, fruit etc. Each characteristic chosen results in the elimination of taxa which do not possess that trait and the Key shows the accumulated characteristics chosen plus the remaining possible taxa. Once this list has been reduced to a reasonable number the user can use a "tool" called "best". The clever thing then sorts what taxa are remaining and just what differences there are between them so that the investigator can concentrate on those features. There are multiple photos of the possible taxa, plus written information so that a decision can be reached.

Participants had mixed success at first but after some time we were all doing reasonably well. Since the test plants were all "locals" they were generally known to participants, but cribbing was reduced since the Key exclusively uses the new orchid names developed by David Jones, and this provided an element of mystery to we old-fashioned enthusiasts. Various Dendrobium friends turned out to be Vappodia or Durabacula or the like.

In all, it was a most interesting and enjoyable day, and CSIRO's catering kept us well nourished. It is always a pleasure to associate with fellow orchid fans, and to find that dedicated scientists such as Bruce Gray and Mark Clements are approachable and friendly was a big bonus.

Pauline's take on the experience. The day was very valuable to us and the CSIRO team took full advantage of the knowledge of the "testers" – a few errors were found; good suggestions were made by botanists familiar with the Lucid software and the need to use illustrations of orchid leaves rather than rainforest leaves. Siobhan took photographs of Bruce Gray's excellent plants and called for others. Garry could supply many. The only quarrel was with new names and the use of common names – the most common of common names in this area have been wiped out and one was given for a plant so rare and seen by so few it could not possibly have a common name.

As Don said, we don't often have the opportunity to rub shoulders with eminent orchidologists. Dr Mark Clements went to much trouble to get me to understand how and why the new taxonomy has come about. However, I was not comforted. When young I was aggravated by constantly being asked who my father was. I was me, full stop. Though I now value my parents for what they gave me, reducing them to DNA appals me. I feel the same way about orchids and so do lots of other people, particularly the plant breeders. We are slowly learning that it is not only the Far Northerners who reject the new names. Pretty books and CDs may play a part in gaining acceptance, but TIME WILL TELL. As a result of this participation, Dr West gave us a copy of the Australian Orchid Genera CD.

AUSTRALIAN ORCHID GENERA – An Information And Identification System

Don Lawie

Produced by the Centre for Plant Biodiversity Research, Canberra, (a division of CSIRO) in 2006, this system is a CD, packed with information, which can be applied to a home computer. Once installed, the system gives an overview of the current status of Australian orchid taxonomy, then provides extensive information on using the system to identify Australian orchids to the level of genus.

All of the current 192 genera of Australian orchids are covered, with the identification process consisting of observation of as many as possible of the listed 127 plant characteristics. As each characteristic is selected, the system rejects whatever of the 192 genera do not possess that character, until a small group of possibilities is left. The user then goes to a portfolio of quality photos of the possible genera, with backup of extensive information on each genus. The language used is technical, which is easily mastered since each feature is amplified by follow-up words, photos and drawings if needed. This is a very good way to learn the words, since with repetition during a number of ID attempts the nomenclature becomes rapidly familiar.

An orchid under investigation does not necessarily have to be in flower; items of ID include leaves, stems and pseudobulbs as well as flowers and fruit. Descriptions of floral parts are particularly precise and easy to understand – once again with illustrated backup of terms. If no flower is currently available, the other features – e.g., geographical location, plant habit (terrestrial/epiphytic), leaf shape and placement, even time of year of observation – all combine to bring the investigator down to a small circle of candidates. The illustrations of the various genera include a number of species in that genus and so, even though this system is only meant to allow of ID to generic level, one can often get through to a species.

I would think that anybody who purchases this system would already have a basic orchid library which could be used in conjunction with the system to extrapolate a species once the genus has been determined. Books such as Dockrill's *Australian Indigenous Orchids*, 1969/1992, and Jones's *Native Orchids of Australia*, 1988, 1993, come to mind here. But here we have a problem: the new System uses, exclusively, the new taxonomy for Australian orchids. The preamble to the system gives complete and compelling-sounding reasons for these new names. There is a long list of common names related to the new ones, also a comprehensive list of name changes. Thus, with a bit of effort, one can discover that, as an example, the new genus *Vappodes* has been split from the well known genus *Dendrobium*. This problem, too, can be eliminated if one uses Jones's new book *A Complete Guide to Native Orchids of Australia*, 2006, which uses exclusively the new terminology.

I would recommend this system, with the reservation that the new taxonomy has not been generally accepted, and is indeed an item of controversy among our Study Group members. It would be an invaluable ID tool when added to a portable computer and I think that we shall have to start saving up for a laptop. I am not very facile with a computer, but had no problems with this system after practising; there is even a self-tutor item included for people like me.

The system is available from CSIRO Publishing, P O Box 1139, Collingwood Vic 3066, at a price of about \$120. Email address is: publishing.sales@csiro.au, or more info on The Web on www.publish.csiro.au. Our copy from the publisher.

This newsletter is almost exclusively Far North Queensland, but Kate Vlcek has promised a full report for the Study Group on a new *Prasophyllum* she and Andrew Pritchard discovered; that will be something for us all to look forward to, especially the southern terrestrialists.

Printing was interrupted when we had 18 inches of rain in little more than 12 hours!

