Orchid Species Bulletin

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Meeting Venue Ithaca Bowls Club 22 Fulcher Rd Red Hill
Next To Broncos Leagues Club.

Annual General Meeting
The March Meeting is our Annual General Meeting which only takes up a short time to receive reports and to elect the various position within the Society for the coming year. We then revert back to the general meeting.

Speaker this Month
Our Speaker this month will be Trevor Heitman (one of our members). Trevor will be telling us about how he has been able to use a board range of Commercial Fungicides and Bug Killer that were used in his Commercial cut flower Rose Nursery and now, how he has been able to adapt them effectively for use on his orchids. These chemicals already have offered very beneficial results which I believe every member should hear about and make the effort to attend this meeting to hear Trevor's Story

Queensland Orchid Fair
My visit to the Queensland Orchid Fair on the Friday is a good indication of the number of people very interested in growing Species Orchids. The three or four Commercial Orchid Species Displays were sometime two and three rows deep with eager growers straining to get their hands on some of the more rare and unusual Orchid Plants.Your Society made the effort to purchase two trays of Orchid Species Seedlings for Raffles and Flasks for "pot out" competitions. Talking to some of our members presents it appears like me most over spent their budget. In the Months ahead we look forward to seeing the purchases yet to be viewed except in books or on the web in flower and on display at our meetings

SUBSCRIPTIONS DUE
Members are reminded that their annual subscriptions are now due. Their are many benefits of being a member, also your subscription helps the Society financially and enables us to provide you with good speakers and a quality bulletin. Please ensure your subscriptions are paid promptly.

Email Addresses
Please ensure you provide your **email address** to the Secretary or to the Treasurer. The colour bulletin is now emailed out to members. By providing your email address you are forwarded a better quality bulletin in colour. Printed bulletin are only sent out now in Black and white. Your Society is interested in hearing from you how we can better serve its members by improvement in the bulletin or other matters that will help you in relation to growing your Species Orchids

Species Orchid Care
If for some unexpected reason you cannot look after your orchids due to ill health, feel free to contact a committee member. The committee will then try to find someone in your vicinity who would be willing to temporarily help keep your orchids growing till you are well or other arrangements can be made.

Show Displays
The Orchid Species Society has displays of orchids at a few of the Orchid Society shows in the Brisbane area. In return these societies enhance the look of our show by having a display there. The display set-up involves either taking orchids and/or stands (& foam boxes etc) to the show on mostly a Friday and collecting them on a Sunday. If you cannot get to the show then talk to the committee member about getting them picked up.

TRADING POST

For Sale by Geoffrey Taylor on geoffrey333@hotmail.com if you are interested please email me.
$30 Orchid Monographs Volume 2 'A Taxonomic Revision of the Continental African Bulbophyllinae' by J.J.Vermeulen
$30 Orchid Monographs Volume 7 'A Taxonomic Revision of Bulbophyllum, Sections Adelopetalum, Lepanthanthe, Macrouris, Pelma, Peltopus, and Uncifera' by J.J.Vermeulen
These two texts are in very good condition and are the only two volumes of the eight volume series dealing with *Bulbophyllum*. The price is $30 each or the two texts for $50.

For Sale from Arthur 07 32863161
Orchid Bench—3m x 1.2 M + 3m x 2m Gal Mesh with 1" Pipe Stand - $60.00

For Sale: Lots of Books - Allan Gardiner 07 3245 4249

The Orchidaceae Of German New Guinea: Schlechter
Bulbophyllum & Their Allies: Siegerist
Orchids a Practical Handbook: Ritterhausen
Novelty Slipper Orchids: Koopawitz & Hasegana
Paphiopedilum A Cultural Guide: Wellington O/S
The Manual Of Cultivated Orchid Species: Bechtel, Cribb, etc
Dendrobium & Its Relatives: Lavarach, Harris, Stocker
Oncidium a Cultural Guide: Wellington O/S
Creating Oncidiinae Intergenerics: Moir
Reproductive Biology Of Species Orchids: Adams
Phalaenopsis Culture: Photocopy: Gordon
Successful Orchid Growing: Ritterhausen
Tropical Orchids of Souith East Asia: Peripus
Wild Orchids of Great Britain & Ireland: LAng
Australian Native Orchids: Caddy & Rotlerham
Australian House & Garden Book Of Orchids: Murray
Orchid Growing in The Tropics: Kangaroo
Expanding Your Orchid Collection: Rentoul
Tropical Orchids Orchids In Australia: Nelson
Orchids for Everyone: Treasure Press

Orchid of Australia - Nichols
What Orchid Is That
A Survey of The Slipper Orchids: Waters
Tropical Asiatic Slipper Orchids: Bennett
Native Orchids of Australia: Jones
Northern Home Orchid Growing: Reinhold
New Zealand Orchid Grower: James
Quality Stream Orchids: Jusekisha
Orchids: Spring Books
The Oncidiinae: Veitch
Exotic Orchids in Australia: Jones
Home Orchid Growing: Northern
The Orchids of Asia: Isaac Williams
Australian Rock & Tree Orchids: Clyne
Orchids of Western Australia: Fourte
A Golden Guide Orchids: Shuttleworth
Orchids: Bristow, Orchids: Irvine
Modern Orchid Growing : Harris
Orchids of South Central Africa: Williamson
Orchids in Australia: Kerr

Sanders Orchids Hybrids: 1856-1945, 1946-60, 1961-70, 1971-75, 1976-80, 1981-85, 1986-90, 1991-5, 1996-8, etc

Wanted To Buy
"The World of Catasetums" by A.W. Holst .
Wanted To Buy
Laminar Flow Cabinet,
Gordon Botting 07 3390 7197 or PO Box 221, Wynnum Qld 4178
Wanted to Buy
Epidendrum pseuepidendrum
Contact Brian or Lynn Ross Phone 54943135 Mobile 0414973308
Wanted to Buy
Albinistic Paphiopedilum Species

PLANT COMMENTARY

By Gary Yong Gee

CYPRIPEDIOIDEAE
Paphiopedilum chamberlainianum (Sander) Stein
COELOGYNEAE
Dendrochilum macranthum Schltr. [syn. *Ddc. latifolium* Lindl. var. *macranthum* (Schltr.) H.Æ.Pedersen [2, 4]
CYMBIDIEAE
Cymbidium dayanum Rchb.f. [5]
DENDROBIEAE
Cirrhopetalum flabellum-veneris (J.König) Seidenf. & Ormerod [syn. *Bulb. flabellum-veneris* (J.König) Aver.] [2, 6]
Sayeria convoluta (Rolfe) Rauschert [*Den. convolutum* Rolfe]
EPIDENDREAE
Anacheilium cochleatum (L.) Hoffmanns. [syn. *Prosthechea cochleata* (L.) W.E.Higgins] [7]
Cattleya bicolor Lindl. subsp. *brasiliensis* Fowlie [2, 8]
C. forbesii Lindl. [9]
C. intermedia Graham fma. *amethystina* (Morren ex Lemaire) M.Wolff & O.Grüss [2, 10]
Epidendrum secundum Jacq. fma. *album*
Epidendrum aff. *nocturnum*
Guarianthe bowringiana (O'Brien) Dressler & W.E.Higgins [syn. *C. bowringiana* O'Brien] [2]
Hoffmannseggella fournieri (Cogn.) Chiron & V.P.Castro [syn. *L. fournieri* Cogn.]
Isochilus linearis (Jacq.) R.Br. [11]
Lindleyalis hemirhoda (Lindl.) Luer [syn. *Pleurothallis hemirhoda* Lindl.] [2]
Pabstiella hypnicola (Lindl.) Luer [syn. *Pths. hypnicola* Lindl.] [12]
Seraphyta diffusa (Sw.) Pfitz. ex Fawcett & Rendle [syn. *Epi. diffusum* Sw.] [2]
Stelis peliochyla Barb.Rodr. [2]
Zootrophion griffin Luer
Zo. oblongifolium (Rolfe) Luer [13]
ONCIDIEAE
Miltonia moreliana A.Rich. [2, 08c]
Ornithocephalus myrticola Lindl. [2, 3, 14]
VANDEAE
Phalaenopsis amboinensis J.J.Sm. [2]
Phal. bellina Rchb.f. [2, 15]
Phal. cornu-cervi (Breda) Blume & Rchb.f.
Phal. pulcherrima (Lindl.) J.J.Sm. [syn. *Doritis pulcherrima* Lindl.]
Robiquetia succisa (Lindl.) Seidenf. & Garay [2, 3, 16]
Vanda roeblingiana Rolfe [17]
OTHER TRIBES
Diplodium truncatum (Fitzg.) D.L.Jones & M.A.Clem. [syn. *Pterostylis truncata* Fitzg.] [1, 18]
Dipodium punctatum (Sm.) R.Br. [1, 3, 19]

Going by the 7 plant lists, there did not seem to be many members benching flowering orchids at the February meeting. Could exhibitors please fill out a list of plants brought along, to enable an accurate record of species shown at our meeting? The forms are usually near the entrance of the hall, together with the attendance book.

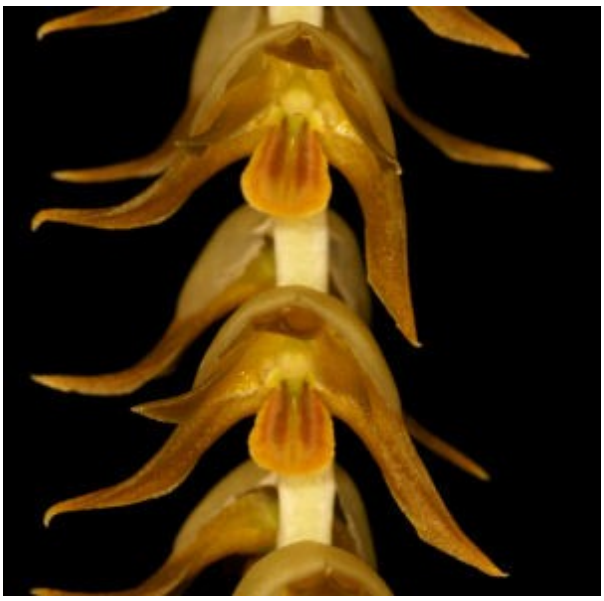
Well-flowered specimens included *Isochilus linearis*, *Miltonia moreliana* and *Vanda roeblingiana*. Only a small plant the Miltonia carried about half a dozen large deep maroon waxy blooms and the Vanda bore 2 outstretched dark brown racemes.

Three species had not been shown previously. They were *Ornithocephalus myrticola*, *Robiquetia succisa* and *Dipodium punctatum*. *Dipodium punctatum* is one of our leafless Australian native terrestrials that cannot be cultivated due to its reliance on a mycorrhizal fungus together with an associated host plant. I believe that the pot benched at the meeting was the result of a rescue. Further information on these newbies can be

found in the notes below.
At the end of the meeting I commented on the species benched. I chose *Cymbidium dayanum* which was owned by Brian and Lynn Ross as Plant of Interest. *Cymbidium dayanum* is very rarely shown at our meeting. The last benching was 15 years ago, in January and May of 1996. After a quick scan of the plants, I selected *Ionopsis utricularioides* that was owned by Margaret Lobley as Cultural Plant for the Month. A member of the Oncidiinae, *Inps. utricularioides* is a twig epiphyte with small white to pink flowers and has a reputation for being difficult to maintain for long periods.

NOTES:
1 Australian native orchid

2 Scented. I would welcome comments from readers who know of species having scents when I have not shown them to be scented.



Dendrochilum macranthum

3 Species or colour form not shown previously at our Society meeting.

4 ***Dendrochilum macranthum*** **Schltr.** was first described by Rudolf Schlechter in *Repertorium Specierum novarum Regni Vegetabilis* in 1911. The specific epithet comes from the Greek *macro* (large, great) and *anthos* (flower) for the size of its blooms, which when described were the largest of the genus.
Henrik Pedersen subsequently reduced it to ***Ddc. latifolium*** **Lindl. var. *macranthum* (Schltr.) H.Æ.Pedersen** in *Opera Botanica* in 1997. Pedersen did this after concurring with Oakes Ames' observation that this taxon was very closely related to *Ddc. latifolium*. In fact Pedersen was unable to find features other than the conspicuously different cataphylls (tubular sheaths) to distinguish the two taxa. I now follow David Banks and Jim Cootes (personal communication) who believe that this species should be given specific status.
Most plants of *Ddc. macranthum* have been labelled in error as ***Ddc. magnum*** **Rchb.f.** *Ddc. macranthum* is an easy-to-grow and flower species and is in fact quite commonly cultivated. Plants in cultivation may also be incorrectly labelled as ***Ddc. cobbianum*** **Lindl**., the name given it by Philippine nurseries. *Ddc. macranthum* has been written up and illustrated by David Banks and Jim Cootes as *Ddc. magnum* in *Orchids Australia* (1995), which is a different taxon that has odourless or only faintly scented flowers. *Ddc. macranthum* produces many long pendent racemes during autumn with golden-orange blooms that have a strong spicy scent. *Ddc. latifolium* flowers three months earlier in summer and has greenish-yellow flowers with a brown lip, which are scented like chocolate.
Ddc. macranthum has clustered, spindle-shaped to somewhat reverse pear-shaped pseudobulbs that are 2-7.5 cm long and 5-18 (-25) mm in diameter. Initially the pseudobulbs are covered with 4-6 inflated green sheaths that eventually dry and disintegrate into fibres. At the time of flowering these cylindrical sheaths are already torn at the top, producing dark 5 mm triangular teeth - one of the distinguishing features of this species. Each pseudobulb has a single stalked leaf with a stalk that is 3-25 cm long. The linear to broad, lance-shaped leaf blade is 13-60 cm long and 4-8 cm across.
Inflorescences from the centre of the newly developing growth have a suberect to slightly curved peduncle that is 12-52 cm long and a pendent rachis that is 13-39 cm long. Numerous (up to 80) strongly scented flowers are borne in two ranks and are about 1.5 cm across. The flowers of *Ddc. macranthum* are subtended by large cream to yellow-green floral bracts that cover the ovary and back of the bloom. When viewed from the side, the floral bract with the protruding sepals and petals remind David and Jim of an armadillo in profile. The flowers have green to golden-orange sepals and petals and a darker brownish lip. Most cultivars have flowers that open a lighter green or yellow colour and darken to orange or bronze with age.
Ddc. macranthum is an epiphytic plant found growing usually in mossy forests from 1,200-1,630 m altitude. It is an intermediate-growing species that is endemic to Luzon and the Visayas in the Philippines. Plants can soon become nice-sized specimens in very little time if conditions are to its liking. Shading of 60 -70%, moist conditions at most times of the year and excellent air circulation are its main requirements. During the warmer months of the year regular watering and fertiliser can be given. In winter while the plant

is not so actively growing a cooler, drier rest should be given with sufficient water to prevent the pseudobulbs shrivelling. Plants should not be allowed to dry out during the rest period. *Ddc. macranthum* seems to do well without the need for winter heating in areas as far south as Sydney. I would recommend a winter minimum of 10-12 ^{o}C but lower temperatures are fine for short periods provided that plants are dry at night, with perhaps some overhead protection.

Cymbidium dayanum

***5 Cymbidium dayanum* Rchb.f.** was first described by Heinrich Gustav Reichenbach in the *Gardeners' Chronicle* in 1869. The younger Reichenbach based his description on a specimen imported in 1865 from Assam, which first flowered in Europe for John Day of Tottenham, London.

Cym. dayanum is a medium-sized epiphyte consisting of small spindle-shaped pseudobulbs that are about 4 cm tall and 2.5 cm across. The pseudobulbs are usually covered by the remains of the persistent leaf bases that eventually become fibrous with age. Each pseudobulb has (4-) 5-8 (-12) leaves, borne in two ranks. They are (30-) 40-95 (-115) cm long and 0.7-1.6 (-2.4) cm wide and are linear-elliptic in shape. The erect to arching leaves are acute to acuminate at the tip.
Cym. dayanum bears a suberect to horizontally arching scape that is 18-30 (-35) cm long, The raceme is covered in pink-veined sheaths that are up to 8 cm long. The rachis bears 5-15 (-20) flowers that are usually unscented. Its starry flowers are 3-4 cm across and 5-6 cm long.
The flowers of *Cym. dayanum* have white or cream sepals and petals with a central maroon to purple stripe that does not reach the apices of the segments. Occasionally there are colour forms that are suffused wine-red with a deeper central stripe, and a narrow whitish margin which may be absent except towards the base of the sepals and petals. The labellum is white, strongly marked with maroon to purple, with a yellow or orange spot at the base. The side-lobes of the lip are white veined maroon to purple, with a maroon to purple margin. Its mid-lobe is deep purple to maroon with a basal triangular, pale yellow stripe which does not reach the apex. The callus ridges are white or cream. Contrasting with the very dark maroon to purple-crimson column is the pale yellow anther-cap.
A widespread species, *Cym. dayanum* is found from Sikkim and Assam (northern India), Thailand, Cambodia, West Malaysia, Sumatra, and Sabah. Also, it is found in the southernmost provinces of China, Taiwan, Ryukyus, southern Kyushu (Japan) and Luzon (Philippines). Coming as it does from such a wide area of distribution, *Cym. dayanum* has been named many times by various authors, and thus it has many later synonyms.
In the southern part of its distribution, *Cym. dayanum* prefers the cooler, higher altitudes around 1,000-1,500 m elevation. It is found between 300-1,300 m altitude in Sikkim, Thailand and western Malaysia and below 1,000 m in the mountains of Taiwan.
Cym. dayanum is encountered in bright positions in evergreen forest, in hollows in trees and on fallen rotting logs, often in damp and rotting wood. It flowers in the northern hemisphere from August to November (December), and also sporadically throughout the year in tropical areas.
An intermediate-growing species, *Cym. dayanum* needs to have good air circulation at all times. Grow it in a well-drained medium under about 70% shade. Maintain high humidity and water it regularly during the warmer months. Watering frequency should be reduced in winter but plants should not be allowed to remain dry for long periods.

Cirrhopetalum flabellum-veneris

***6 Cirrhopetalum flabellum-veneris* (J.König) Seidenf. & Ormerod** is better known as ***Cirr. lepidum* (Blume)**

Schltr. or ***Bulbophyllum lepidum* (Blume) J.J.Sm.** Unfortunately one of the names that has been overlooked for many years was Johann König's posthumous publication of this species as *Epidendrum flabellum veneris* in Retzius' *Fasciculus Observationum Botanicarum* in 1791. The specific epithet comes from the Latin *flabellum* (flabellate) and *veneris* (veins) for the fan-shaped arrangement of the flowers. Gunnar Seidenfaden and Paul Ormerod transferred it to *Cirrhopetalum* in *The Descriptiones Epidendrorum of J.G. König 1791* in 1995.

This species has been described by different authors on numerous occasions and therefore has many synonyms. Some of the incorrect names that I have seen applied to this species include: ***Cirr. makoyanum* Rchb.f.**, ***Cirr. pulchrum* N.E.Br.** and ***Bulb. pulchellum* Ridley**, the latter of which is a synonym for *Cirr. concinnum* Hook.f. These names are referrable to three other different taxa.
Bluntly 4-angled, the ovoid pseudobulbs of *Cirr. flabellum-veneris* are about 1.5-1.75 cm tall and are spaced along a creeping rhizome at 2 cm (rarely 3-4.5 cm) intervals. At the apex is a single narrowly oblong leaf that is up to 16 cm long and 3-6 cm wide with a blunt apex and it is gradually narrowed to a short stalk at the base. The scape emerges from the base of the pseudobulb and is up to 20 cm long and bears 6-10 (-14) flowers that open simultaneously in an umbel. Its short-lived flowers have a musty or brackish scent and last for about 5 days before suddenly falling. On large plants numerous umbels are produced over a period of several months in early autumn.
The hooded yellow dorsal sepal of *Cirr. flabellum-veneris* is 8 mm long and 3 mm broad at the base. At the apex is an apical 5 mm slender tip and the margin has long purple hairs. Narrowed gradually from the middle to the blunt tips, the joined lateral sepals are about 2.5 cm long and 4 mm wide. The upper edges of the laterals are joined almost from the base and are cream suffused variably with rosy mauve towards the base. The petals are 5-6 mm long, gradually narrowed with the hair-like tip shorter than in the dorsal sepal. Like the dorsal sepal, the petals also have long purple hairs on the margin. The glossy hinged lip is dull olive-brown. The column has broad large semicircular stelids at the apex and is pale greenish with purple spots. Depending upon the amount of rose-purple suffusion on the sepals the flowers may vary from cream to red-purple.
Cirr. flabellum-veneris is a widespread species distributed in the Andaman Islands, Thailand, Laos, Cambodia, Vietnam, Malaya, Sumatra, Java, Borneo and the Moluccas. In Java plants are found in the foothills between 150-400 m altitude.
I find this species to be an easy grower for the south-east Queensland region. It can readily develop into a specimen plant with numerous growths, resulting in many umbels. Any well-drained medium such as fine to medium grade bark, sphagnum moss or 1:10 ratio of peat/ super coarse perlite seems to suit it well. Provide it with 70% shade and good air circulation at all times. Due to its rambling habit a shallow tray is ideal. Other alternatives would be baskets or hardwood or cork mounts. Mounted plants may need daily watering or misting during the hotter months as they seem to grow better when the roots are kept moist. In winter when growth is not evident keep *Cirr. flabellum-veneris* drier with occasional water to prevent the pseudobulbs shrivelling. I would suggest a minimum of 12 ^{o}C, otherwise leaf drop may occur if it is subjected to lower temperatures for any length of time.

Anacheilium cochleatum

***7 Anacheilium cochleatum* (L.) Hoffmanns.** was first described by Carl von Linné (Linnaeus) as *Epidendrum cochleatum* in *Species Plantarum* in 1753. The specific epithet comes from the Latin *cochleatus* (coiled like a snail shell) for the lip.

Since that time, *Epi. cochleatum* has undergone numerous name changes. Johann Hoffmannsegg transferred it to *Anacheilium* as ***Ahl. cochleatum* (L.) Hoffmanns.** in *Litteratur-Beiricht zur Linnaea* in 1842. Albert Lemée transferred it to *Encyclia* as ***Enc. cochleata* (L.) Lemée** in *Flore de la Guyane Français* in 1955. More recently, Wesley Higgins transferred this species to *Prosthechea* Knowles & Westcott as ***Psh. cochleata* (L.)**

W.E.Higgins in *Phytologia* in 1997.
Carl Withner and Patricia Harding resurrected Hoffmannsegg's genus *Anacheilium* in *The Cattleyas and their Relatives- The Debatable Epidendrums* in 2004.
Anacheilium is distinguished from *Encyclia* and *Dinema* by both plant and flower characteristics. *Anacheilium* has ovoid, elliptic, cylindrical or spindle-shaped pseudobulbs that are often flattened, with 1-5 thin leaves at the apex. The pseudobulbs are borne along a rhizome at various lengths and the pseudobulb has a basal stalk that lifts it above the rhizome. Racemose inflorescences emerge from a prominent spathe at the apex of the pseudobulb and the flowers are non-resupinate. The lip is joined from the base to about half way on the underside of the column. Unlike *Encyclia*, which has a callus of two fleshy ridges the callus of *Prosthechea* consists of a thick pad. Its wingless column is gibbous (flattened on cross section below and rounded above). The fruit or seed capsule is three-winged, or three sided. Glycoside crystals are found throughout the plant and flower. These crystals precipitate out as a milky cloud when the flower is preserved in ethanol.
Ahl. cochleatum is a stout epiphytic plant that has loosely clustered stalked pseudobulbs that are 5.5-26 cm long and 2-5 cm broad. Ovoid, ellipsoid to pear-shaped, each somewhat compressed pseudobulb bears 2-3 (-4) thin elliptic or elliptic-lanceolate, apical leaves that are 20-33 cm long and 3-5 cm wide. An upright inflorescence emerges from an apical sheath that is 2-11 cm long on the recently matured pseudobulb. The raceme may be rarely few-branched and is up to 50 cm or more long, bearing many loosely arranged flowers.
Quite variable, especially in flower size, the flowers of *Ahl. cochleatum* are 5-8 cm across. The flowers open in succession so that there are several or up to 10 blooms open on the raceme at one time. Being non-resupinate, the lip of the flower is uppermost, above the column. Its long helically twisted sepals and petals are greenish white or greenish yellow, often with purplish botches at the base. The broad lip is whitish to greenish or yellowish at the base and centre with radiating deep purple veins and becomes deep purple to maroon-black at the basal margin.
Widely distributed, *Ahl. cochleatum* is found from Mexico to Panama, the West Indies to Colombia and Venezuela. Plants grow in tropical evergreen as well as deciduous and oak forests from 100-1,900 m altitude. Carl Withner and Patricia Harding (2004) say that this species is a plant for everyone's collection. It is tolerant of all sorts of conditions and abuse, be it low or high temperatures, drought or over-watering, bugs and slugs. In addition, it rewards you with an inflorescence that, though long, commonly produces new blooms over 18 months. By the time that raceme is done, the new growth is well in bloom, so established plants are virtually ever-blooming.

***8 Cattleya bicolor* Lindl. subsp. *brasiliensis* Fowlie** was described by Jack Fowlie in *The Brazilian Bifoliate Cattleyas and Their Color Varieties* in 1977. The subspecific epithet comes from Brasilia (Brazilian state) and the Latin suffix *–ensis* (origin) for where this subspecies is found. Unfortunately, Jack Fowlie did not designate a type specimen, so this subspecies may not be validly published.

Endemic to Brazil, *C. bicolor* grows as three races that have been recognised by Jack Fowlie (1977) as three subspecies. *C. bicolor* subsp. *bicolor* is a coastal population that is distributed in eastern São Paulo, central Rio de Janeiro and south-western Espírito Santo. Subsp. *bicolor* has spathulate petals and a lip mid-lobe that is barely dilated and hardly notched at the tip. It is found between 700-1,000 m (to as high as 1,800 m) altitude.

The other two races are tetraploid plants and are found in the Brazilian interior in Minas Gerais and Brasilia**.** *C. bicolor* subsp. *minasgeraisensis* Fowlie is found in Minas Gerais at around 1,000-1,200 m elevation. This subspecies is larger in all dimensions than subsp. *bicolor*. It is distinguished by the broader, more expanded kidney-shaped mid-lobe that is usually margined with white. *C. bicolor* subsp. *brasiliensis* comes from Brasilia and has club-shaped petals with undulate margins and a broadly dilated kidney-shaped mid-lobe that has a notched apex.

Cattleya bicolor subsp. *brasiliensis*

The flowers of subsp. *brasiliensis* are dark brown with a crimson-purple lip that virtually lacks any white. Sometimes the sepals and petals are also spotted or speckled with darker brown.
My observation is that in cultivation there seems to be some confusion between subsp. *minasgeraisensis* and subsp. *brasiliensis*. There do not seem to be distinctive features distinguishing the two subspecies, except for distribution.
C. bicolor has clustered terete, long and slender pseudobulbs that are variable in height depending upon cultivation and also subspecies. The 25-80 cm tall pseudobulbs consist of 5-8 internodes and are longitudinally grooved. At the apex of each pseudobulb are two narrowly lanceolate or broadly elliptic leathery leaves that are 12-20 cm long and 2.5-5 cm broad. An inflorescence that is 10-25 cm long carries 2-10 (or more) showy flowers from a green and purple-mottled sheath at the pseudobulb apex.
Slightly fragrant, the flowers of *C. bicolor* are 7.5-10 cm across and have coppery-brown, tawny-yellow to olive or green-brown sepals and petals. Sometimes the sepals and petals may be finely spotted with maroon or purple-brown. The lip is white and is flushed with lavender purple to pale rose, which is usually more intense centrally. It has a crimson mid-lobe that is edged pink, sometimes with a white margin and the column is white, suffused with lavender-pink.
C. bicolor requires bright light such as 50-70% shade and a well-drained potting medium. It can be grown in a pot or basket and also mounted. Mounted plants will need daily watering during the warmer months. The roots prefer a wet-dry cycle, so should be allowed to dry quickly between waterings. Plants seem intolerant of continually wet conditions around the roots – hence the need for excellent drainage. Good air circulation is important at all times as well as high humidity during the warmer months. In winter plants need a drier rest with reduced watering. Occasional applications of water or misting of the roots in the mornings of sunny days will ensure that the pseudobulbs do not shrivel excessively. I recommend a winter minimum of 12 ^{o}C.

***9 Cattleya forbesii* Lindl.** is a distinctive member of the genus that cannot be confused with any other. H.O. Forbes collected it in Brazil for the Horticultural Society of London and introduced it to European cultivation. John Lindley described it in *Collectanea Botanica* in 1823, naming it Forbes' honour.
C. forbesii is an epiphytic plant that has slightly swollen, thin elongate pseudobulbs that are 10-20 cm tall and 10-15 mm diameter. The pseudobulbs are borne along a short creeping rhizome and bear two apical leaves. Elliptic or narrowly ovate, the leathery leaves are 9-14 cm long and 2.5-5 cm broad. Inflorescences that are 9-12.5 (-14) cm long are produced from a sheath that is 4-6 cm long at the apex of the stems. The raceme bears 2-5 flowers that are 6-10 cm across.

Cattleya forbesii

Variable in colour, the flowers of *C. forbesii* have pale green or yellow-green sepals and petals that may be tinged purple-brown or muddy-tan. Its lip is white on the outside, with pale pink inside on the side-lobes and a deep yellow streak in the centre. The side-lobes are veined on the inside with purple to tan or carmine and the mid-lobe has a white margin. The hidden column is yellow, stained and spotted with red.
John Lindley described Forbes's yellow Cattleya in the *Botanical Register* in 1826 as having yellow-green sepals and petals that were brownish-yellow on the outside (of the sepals). The pale yellow lip had a yellow interior that was striped and spotted with red.
C. forbesii fma. *punctata* J.Day ex Braem is best referred to as the rare spotted form of the species, which has yellowish sepals and petals that are profusely spotted with reddish-brown. ***C. forbesii* fma. *aurea* A.Seidel ex Roeth** was published by Jürgen Röth in *Die Orchidee* (Hamburg) in 2006. It is the yellow form of the species, which has golden yellow sepals and petals and a white lip that is marked inside on the disc with orange. In addition, fma. *aurea* lacks the red or purple-brown veining on the disc of the lip, which is found in the typical form. *C. forbesii* var. *viridiflora* Horta was described by Paula Horta in *Rodriguésia* in 1936. Var. *viridiflora* is a green form that has a yellow lip, which lacks the purple veins on the disc that is found in the typical form.
I have seen several colour forms of *C. forbesii* in cultivation that may be labelled as "yellow", "green" or "pink", which vary in the amount of yellow, green or pink colour in the sepals and petals. The white lip is usually veined internally with red to purple-brown. Other than the abovementioned forms, these other vari-

ants do not appear to have been validly published.
Found in Rio de Janeiro, São Paulo and Minas Gerais states, Brazil, *C. forbesii* grows on rocks and trees near sea level. A common inhabitant of coastal tidal swamps and streamside forest, *C. forbesii* grows on large trees that are 2-10 m high, on the trunk or outstretched horizontal branches. The environment where this species grows is shady and is shared with wet moss, lichen, philodendrons and bromeliads. Conditions are hot and humid with regular sea breezes.
An easy species to grow and flower in the south-east Queensland region, *C. forbesii* requires 70-80% shade and a well drained medium. Maintain high humidity during the warmer months with good air circulation and ensure that the roots do not dry out for long periods. In winter provide it with a drier rest, with reduced watering or misting in the mornings of warm sunny days. Despite its lowland habitat, *C. forbesii* survives winters down to 12 ^{o}C, without ill effects particularly if the leaves are dry at night.

Cattleya intermedia

Cattleya intermedia fma. *amethystina*

10 ***Cattleya intermedia*** **Graham** was described by Robert Graham in the *Botanical Magazine* in 1828. The specific epithet comes from the Latin *intermedius* (intermediate) for the intermediate-sized flowers. The two other *Cattleya* species that had been described at that time were the larger *C. labiata* Lindl. and the smaller *C. forbesii* Lindl.

A highly variable species, *C. intermedia* not only varies in its growth habit but also with regards to the size, number, form and colour of its flowers. The plants have cylindrical pseudobulbs that are 25-40 (-50) cm long and about 15 mm in diameter. At the apex of the pseudobulbs are two (sometimes three) ovate-oblong fleshy leathery leaves that are 7-15 cm long and 2.5-5.5 (-7) cm broad. Usually the leaves are finely serrate at their extreme base. Terminal inflorescences that are 7-15 (-25) cm long are produced from an apical sheath that is 6.5-8 cm long. The racemes bear 3-5 (-9) showy flowers that are variable in colour and size, averaging about 5 cm across.
Blooming occurs in spring from August to October, with an occasional second blooming at the end of summer around December to February.
Typically, the sepals and petals of *C. intermedia* are light uniform lilac-lavender to white with the sepals greenish at the tip. The immaculate petals may have a faint suggestion of fine purple spotting. Its lip is uniform, light lilac-lavender ground colour to white, upon which the six longitudinal lamellae are of deep orchid-lavender colour. The side-lobes are immaculate with only the mid-lobe suffused with a deep orchid-lavender.
Various colour varieties have been published, yet many colour forms have not been officially described. A number of the variants used in horticulture are synonyms for older names.
Edouard Morren first described ***C. intermedia*** **fma.** ***amethystina*** in *Annales de la Societe d'Agriculture et de Botanique de Grand* in 1848. Robert Rolfe published this colour form later by as *C. intermedia* var. *coerulea* in the *Gardeners' Chronicle* in 1900. *C. intermedia* fma. *amethystina* was described as having the front lobe of the lip violet-blue which extended around the apical margin of the side-lobes and the rest of the flower was pure white.
Lucien Linden and Émile Rodigas published ***C. intermedia*** **fma.** ***gibeziae*** in *Lindenia* in 1887. This form has pure creamy milk white sepals and petals. The labellum is of the same ground colour with three longitudinal faint pinkish venations which merge distally to form a very faint pink blush at the base of the mid-

lobe. The widely available mericlone *C. intermedia* 'Aranbeem' appears to be a cultivar of fma. *gibeziae*, with its white flowers that have a pink mid-lobe. This cultivar is usually labelled incorrectly as fma. *amethystina*.
Benjamin Williams described ***C. intermedia* fma. *parthenia* Rchb.f.** in his *Orchid Grower's Manual* in 1894. It is the form which is pure milky white, devoid of any colour. Sander's fma. *alba* was mentioned in *Reichenbachia* in 1892, however that name was not validly published.
Endemic to Brazil, *C. intermedia* is a plant of the Atlantic seacoast from Rio de Janeiro to Rio Grande do Sul. Easy to grow and bloom in the south-east Queensland region, *C. intermedia* requires a pot or basket with a coarse or well-drained medium. Provide bright light such as 50-70% shade, with good air circulation. Maintain high humidity and water it regularly during the warmer months. Give it a slightly drier rest for the cooler months with occasional misting or water in the morning of sunny days to prevent the pseudobulbs from shrivelling. I recommend a winter minimum of 12 ^{o}C.

11 *Isochilus linearis* (Jacq.) R.Br. was first described by Nicolaus Jacquin as *Epidendrum lineare* in his *Selectarum Stirpium Americanarum Historia* in 1763, based on a collection by Charles Plumier in Martinique. The specific epithet comes from the Latin *linearis* (linear) probably for the narrow leaves. Robert Brown transferred it to *Isochilus* in 1813 in *Hortus Kewensis*.

Isochilus linearis

A terrestrial, lithophytic or epiphytic plant, *Iso. linearis* produces clumps of thin slender grass-like, leafy stems that are 40-60 cm tall. The upright stems spread and may become pendent as they lengthen. They are covered with verrucose leaf sheaths and have rather thick white roots emerging from the base. Numerous thin linear leaves that are 4-6.5 cm long and 2.5-3 mm broad are borne alternately along the wiry stems in two ranks. The leaves all face one side and are nearly parallel to the stem.
Inflorescences that are 1.5-3.5 cm long are produced from the apex of the recently matured stems. The racemes bear one to several small short-lived somewhat tubular flowers all on the upper side of the raceme. Rather bell-shaped, the flowers of *Iso. linearis* do not seem to open widely and are about 5 mm across. The flowers are variable in colour from rose to amethyst, magenta or crimson and the rather narrow lip has two very dark purple to amethyst spots in the centre. Its whitish column has two apical lavender lobes. Short-lived, the flowers last for about 3-5 days.
Helmut Bechtel et al. (1992) reports that the blooms vary from white, orange-yellow to red or rose-purple. Ancile Gloudon and Cicely Tobisch (1995) say that the raceme may bear 7-8 flowers but most references report only several blooms. Robert Dressler (1993) comments that there are clearly a number of *Isochilus* species in Mexico and Central America, but that herbarium workers have lumped most of them under *Iso. linearis*. Recent workers have recognised more species and further study of the genus is still needed. I suspect that some of the differently coloured blooms that have been reported for *Iso. linearis* may refer to other species.
Widespread in tropical America, *Iso. linearis* is reported to be distributed from the West Indies and Mexico to Brazil, from sea level to 3,900 m elevation. Further studies may isolate *Iso. linearis* to the West Indies and Central America. In the south-east Queensland region, this species requires about 70% shade with a well-drained medium. Water it regularly and maintain high humidity during the warmer months and give it a slightly drier winter rest while it is not actively growing. The plant should not be allowed to remain dry at the roots for long periods. Care must also be taken so that the roots do not become water-logged, so good drainage is essential.

12 *Pabstiella hypnicola* (Lindl.) Luer was first described by John Lindley as ***Pleurothallis hypnicola* Lindl.** in Edward's *Botanical Register* in 1842. The specific epithet was derived from the Lepidoptera genus Hypna and the Latin suffix *-cola* (dweller) for where the plants were found. Some authorities have placed *Pths. hypnicola* as a synonym of *Pths. fusca* Lindl., which was published also by Lindley earlier in 1837.
Based upon recent DNA studies, Alec Pridgeon and Mark Chase (2001) redefined and expanded the genus *Stelis*. They transferred *Pths. hypnicola* to *Stelis* as ***Stelis hypnicola* (Lindl.) Pridgeon & M.W.Chase** in

Lindleyana in 2001. Interpretation of the DNA studies is subjective, so that some of the expanded defined genera, such as *Stelis* in the broad sense, could be found to be polyphyletic (more than one common ancestor). Carlyle Luer believes in a narrower generic concept and transferred this species to *Pabstiella* in *Monographs in Systematic Botany from the Missouri Botanical Garden* in 2007.

Pabstiella hypnicola

An epiphytic plant, *Pbsl. hypnicola* has clustered ramicauls (pleurothallid stems) that are 2-4 cm long which are covered with dark brown bracts. Each ramicaul bears a single obovate lanceolate, mid-green leaf that is narrowed at the base. The leaves are 4-8 cm long and 12-20 mm broad. Over a period of time, the apex of each ramicaul produces several fine thread-like racemes that may be up to 12 cm long. Somewhat zigzag, the very fine and wiry raceme bears from several to many flowers as it continues to elongate over an extended period. Usually the flowers open one or two at a time in succession, or sometimes simultaneously. The small flowers face the ground and do not open widely, and are 2.5-3 mm across and 5-7 mm long. Variable in colour, the yellow flowers are usually very heavily blotched or spotted with dark claret or they may be solid red to maroon.

An intermediate- to cool-growing species, *Pbsl. hypnicola* prefers shady conditions such as about 80% shade. Grow it in a small container with a well-drained medium. Maintain high humidity, with good air circulation and water it regularly so that the roots are evenly moist at all times. Plants often struggle in the south-east Queensland region during our hot summers. During those hotter months, lowering the plants closer to the ground with some misting may help the plants survive this danger period. This species seems to do better with a summer maximum below 28-30 ^{o}C.

13 *Zootrophion oblongifolium* (Rolfe) Luer was first described by Robert Rolfe as *Cryptophoranthus oblongifolius* in the *Bulletin of Miscellaneous Information* in 1895. The specific epithet comes from the Latin *oblong* (oblong) and *folius* (leaf) for the leaf shape. Carlyle Luer transferred it to *Zootrophion* in *Selbyana* in 1982.

Zootrophion oblongifolium

Zo. oblongifolium is a small epiphytic plant, but medium- to large- for a *Zootrophion* species. The plant has clustered slender ramicauls (pleurothallid stems) that are 4-9 cm long. Each ramicaul is enclosed by 4-5 inflated loose tubular sheaths that soon dry dark brown. At the apex of the ramicaul is a single upright elliptical-oblong stalked leaf that is 6-10 cm long and 2-3.5 cm broad, including the 1 cm long stalk. Single flowers are borne on a peduncle about 1 cm long from the apex of the ramicaul. Sometimes the inflorescence may be a loose, successively few-flowered arching raceme that is 4-7 cm long, including the 3-4 cm long peduncle.

As typical for the genus, the flowers of *Zo. oblongifolium* do not open widely and look like a bud that has yet to open. The subcylindrical box-like flowers are 6-10 mm wide and 27-30 mm long. They have sepals that are joined completely except for two lateral slit-like openings on each side that are 3-6 mm long. Cream-coloured to dull white, sometimes pale yellow or pale rose, the sepals are longitudinally veined with thin rose to red or red-

purple stripes. Hidden within the flower are small translucent petals that have a purple mid-vein and a tiny white lip that is suffused rose.
An uncommon species, *Zo. oblongifolium* is distributed in the Andes from Colombia, Ecuador to Peru. It has been found between 1,500-1,950 m altitude.
Zo. oblongifolium is an intermediate- to cool-growing species that requires about 70% shade, high humidity and good air circulation at all times. Grow it in a small container with a well-drained medium. Water it regularly as it should not be allowed to remain dry for long periods. This species is one of the Pleurothallids, which do not have any significant storage reserves, so will not easily survive dry conditions nor sudden root loss.

Ornithocephalus myrticola

14 *Ornithocephalus myrticola* Lindl. was collected by M.E. Descortilz near Bom Jesus de Bananal in Brazil and described by John Lindley in the *Annals of Natural History* in 1840. The specific epithet comes from the Latin *myrticolus* (living on myrtles) as it grows on trees of the *Myrtaceae*.
Robert Dressler (1993) placed *Ornithocephalus* within the subtribe *Ornithocephalinae*. Volume 5 of *Genera Orchidacearum* has followed recent phylogenetic DNA data studies, which show that both *Ornithocephalinae* and *Telipogoninae* are nested within *Oncidiinae*.
Orcp. myrticola is an epiphytic miniature plant that has a very short stem, lacking a pseudobulb. It consists of a flat fan of two-ranked, overlapped fleshy, narrowly lanceolate-ligulate leaves. The leaves are about 4 cm long and 4-7 mm broad at the base, and taper to an acute point. One report gives the leaf length as 5-7 cm long. Short upright, slightly zigzag inflorescences that are 4-8 cm long are borne from nodes between the leaves. Usually, the raceme is shorter than the leaves and bears 7-10 (-15) small flowers in 2 alternating ranks. Relatively long white bristles or hairs can be seen covering the exterior of the blooms, as well as the raceme.
The blooms of *Orcp. myrticola* are 6-8 mm across and have white sepals and petals which have a central green stripe on the sepals and several on the petals. Its fleshy white lip has a bright yellow callus that is marked with 5 green stripes in front. The anther cap is green and yellow with a long beak and the flowers have a lemon fragrance.
Distributed in Peru, Bolivia and Brazil, *Orcp. myrticola* has been found in the Brazilian states of Minas Gerais, Rio de Janeiro and Rio Grande do Sul in Brazil. It is a twig epiphyte that grows in tropical wet forests at around 670 m elevation.
A warm- to intermediate-growing species, *Orcp. myrticola* is best grown on a mount such as cork bark, hardwood or tree fern. Grow it under about 70% shade with high humidity and good air circulation. Plants should be watered or misted regularly. As it does not have storage reserves in the form of pseudobulbs, it should not be allowed to remain dry for long periods.

Phalaenopsis bellina

15 *Phalaenopsis bellina* (Rchb.f.) Christenson was first described by Heinrich Gustav Reichenbach as ***Phal. violacea* var. *bellina* Rchb.f.** in the *Gardeners' Chronicle* in 1884. The varietal epithet comes from the Latin *bellus* (pretty, charming) for the flower. Following an examination of floral fragrances and morphological differences, Eric Christenson raised the variety to specific status in *Brittonia* in 1995.
Phal. bellina can be distinguished from ***Phal. violacea* Witte** by the broader leaves; noticeably dilated ovate petals; and bow-legged lateral sepals. In addition, the purple suffusion is limited to the sepals and base of the dorsal sepal and petals.
Phal. bellina is an epiphytic monopodial plant with short stems. The

stems eventually become long and pendent with age and are completely covered by two-ranked overlapping leaf sheaths. At the stem apex are three to several elliptic-obovate to oblong-elliptic rounded leaves that are 20-25 cm long and 7-12 cm broad. In nature the glossy pale green, fleshy or leathery waxy leaves hang downward. Rigid arched inflorescences are produced from nodes opposite the base of the leaves and often rest upon them.
Sequentially produced, the showy flowers of *Phal. bellina* open at the end of the zigzag rachis one or two at a time. The waxy flowers are 4-5 cm across and have greenish white to greenish yellow sepals and petals. The inner edge of the lateral sepals is intensely marked purple and the base of the sepals and petals are suffused and finely spotted with purple. Its purple lip has yellow side-lobes. Eric Christenson (2001) said that *Phal. bellina* is probably the most fragrant of the species in the genus. He described the strong pleasant fragrance as being like the popular Fruit Loop® breakfast cereal.
Distributed from the Malay Peninsula and Sarawak, Borneo, *Phal. bellina* is found at low altitudes below 200 m elevation. Plants grow low down on trees or on branches overhanging streams in mixed primary lowland forest and swampy riverine forest. The habitat receives a uniform high rainfall of over 2,500 mm per year. A warm-growing species, *Phal. bellina* requires a winter minimum of 18 ^{o}C to grow at its best. Provide it with plenty of shade and hot humid conditions with plenty of moisture and good air circulation.

16 *Robiquetia succisa* (Lindl.) Seidenf. & Garay was first described by John Lindley as *Sarcanthus succisus* Lindl. in the *Botanical Register* in 1826, based upon a plant collected in China. The specific epithet comes from the Latin *succisus* (abruptly broken off) for the leaf tips. Gunnar Seidenfaden and Leslie Garay transferred this species to *Robiquetia* in *Botanisk Tidsskrift* In 1972.
Rob. succisa is an epiphytic monopodial plant that has compressed upright to pendent stems that may be up to 1 m long. The stems are covered with sheathing leaf bases that may be spotted with purple, which become dry and light brown with age. Pale roots emerge at regular intervals from nodes along the lower portion. The stems bear many alternating two-ranked, somewhat wavy leaves at 10-22 mm intervals at the apex. Usually the apex has 4-9 or more leaves at any one time.
The oblong to oblong-elliptic green leaves are 5-8 (-12) cm long and 1.2-2.5 cm broad and are emarginate at the apex as if bitten off and eroded. Spreading to pendent or hanging, panicles are produced from nodes opposite the base of a leaf. The many-flowered panicle of *Rob. succisa* is 16-25 cm long and may be purplish. The panicle may have up to 3 branches and bears 30-100 flowers that are often open at the same time. Its small flowers are 7-9 mm across and may be dull purple or suffused red externally but are usually pale yellow to yellowish-green or golden yellow on the inside with a few minute purple or red-brown spots. Its pale yellow to white, spurred 3-lobed lip has a single crimson stripe in front or several brownish dashes. The dirty yellow spur has a brownish tint and is doubly inflated at the tip. Each flower lasts for about 1 week, but buds continue to open progressively towards the apex of the panicle.
A widespread species, *Rob. succisa* grows on tree trunks in open forests or sometimes on cliffs between 500-1,800 m altitude. It is found from Bhutan, Sikkim, north-east India, Burma (Myanmar), Vietnam, Laos, Cambodia, southern China (Yunnan, Hong Kong) and Thailand.

17 *Vanda roeblingiana* Rolfe can be readily distinguished by its bilobed fringed lip. Robert Rolfe described it in the *Kew Bulletin* in 1894, naming it in honour of Charles Roebling of New Jersey, USA.
V. roeblingiana is a monopodial plant that has upright stems, which are up to 40 cm long and about 1 cm in diameter. When old, the stems may be 50-70 cm long. The stems are covered in the lower portion with dried overlapping leaf bases and carry many closely set two-ranked leaves in the upper portion. The leathery linear-oblong to strap-shaped leaves are 20-30 cm long and 3-4 cm broad and are V-shaped in cross-section. Several axillary racemes are produced from the upper portion of the stems and carry 8-15 well-spaced showy flowers.
The waxy glossy flowers of *V. roeblingiana* are about 5 cm across and are variable in colour. The sepals and petals are yellowish to greenish with various amounts of red-brown longitudinal stripes, spots and blotches. Some cultivars have predominantly nearly solid red-brown

Robiquetia succisa

flowers while others are mainly yellow-green with red-brown markings. Its spurred lip is white with the prominent mid-lobe yellow to greenish-yellow marked red-brown. Its mid-lobe is covered with fine hairs and diverges at the tip into two hatchet-shaped lobes that have a fringed margin. The column is white. Lasting for about 2 weeks, the flowers are not scented.

V. roeblingiana is found in Baguio, Benguet and Bontoc in the mountains of Luzon, the Philippines at around 1,600 m altitude, where it often grows in heavy shade.

In keeping with its natural habitat, *V. roeblingiana* is a highland orchid that requires cool shady conditions. Pot or basket culture with a well-drained medium seems to suit it well. Shading of 70-80%, high humidity and constant air circulation are important especially during the summer months. When it is actively growing it can be watered and liquid fertilised regularly. In winter watering can be reduced, but it should not be allowed to dry out for any length of time.

Vanda roeblingiana

18 *Diplodium truncatum* (Fitzg.) D.L.Jones & M.A.Clem. was first described by Robert Fitzgerald as ***Pterostylis truncata* Fitzg.** in *Australian Orchids* in 1878. The specific epithet comes from the Latin *truncatus* (cut off) for the galea, which has a blunt rounded apex as if truncated.

Based upon recent morphological and molecular studies, David Jones and Mark Clements resurrected the genus *Diplodium* Sw. They transferred *Ptst. truncata* to *Dpl. truncatum* in *Australian Orchid Research* in 2002. Stephen Hopper and Andrew Brown (2003, 2004), however believe that such a transfer is unnecessary to maintain monophyly within *Pterostylis*. Wayne Harris told me that a recent meeting of the Australian State Herbaria (2005) has decided to maintain *Diplodium* as a synonym for *Pterostylis*.

Dpl. truncatum is a dimorphic terrestrial plant that has two growth forms. Sterile or non-flowering plants form a rosette of 2-7 leaves. Clonal colonies are produced from daughter tubers that form on the end of stolonoid roots, usually on the non-flowering or sterile plants. The bright green shortly stalked ovate leaves are 1-3.5 cm long and 6-18 mm broad.

Fertile or flowering plants of *Dpl. truncatum* produce a slender upright stem that is 5-15 cm tall without a basal rosette. The flowering stem bears 2-5 acuminate sheathing stem leaves that are 1-3 cm long, which are distributed along the length. Its apex bears a single flower (rarely two) that is 5-6 cm long and 3-3.5 cm broad with a sausage-like galea. Leaning forward, the hooded flower is translucent greenish white with darker green and reddish stripes. The petals are rufous or brown and its curved lance-shaped lip has a dark brown tip, which just protrudes from the galea in the set position.

Diplodium truncatum

Dpl. truncatum is distributed in New South Wales from Guyra to Batemans Bay on the coast, and extends inland to near Armidale and Griffith and south down to near Melbourne in Victoria. Plants are found in open woodland, open heath and forests mostly in moderately exposed flat areas. It grows on stony ridges and slopes in well drained soils that vary from sandy loam to gravelly clay loam.

David Jones (1988) comments that *Dpl. truncatum* is very easy to grow, but often does not flower well. He recommends a potting mix based upon sandy loam mixed with about one third leaf mould or eucalypt shavings. The Australasian Native Orchid Society, Victorian Group's (1988) basic mix consists of 2 parts coarse sand, 1 part rich loam, 1 part buzzer chips (wood chips/shavings), 1 part leaf mould. To each 9 litre bucket of the basic mix is added 1 dessertspoonful of blood and bone and 1 dessertspoonful of garden lime or dolomite. During active growth from autumn to spring *Dpl. truncatum* can be watered regularly to keep the mix evenly moist. An occasional, but not frequent application of dilute fertiliser solution can be given. Alternatively a small amount of organic fertiliser such as blood and bone can be added to the potting medium. After the plants die down and become dormant for the summer

period the potting mix should be allowed to dry so that the tubers do not rot. At this stage I usually shift my pots away from the sprinkling area for the summer.
Annual repotting is recommended in late summer (November & December) to ensure that the plants do not become too crowded and to also renew the potting medium. Many growers like to combine some of the old media with new mix. If you are re-using some of the old media ensure that the same tubers are replanted into the same mix, in order to prevent spread of virus. The repotting stage is also a good time to sort the tubers into various sizes and separate out the larger, flowering size plants from the smaller, rosette producing plants.

Dipodium punctatum

19 *Dipodium punctatum* (Sm.) R.Br. was first described by James Smith as *Dendrobium punctatum* in *Exotic Botany* in 1804. The specific epithet comes from the Latin *punctatus* (spotted) for the markings on the sepals and petals. Robert Brown transferred it to *Dipodium* in his *Prodromus Florae Novae Hollandiae et Insulare van Diemen* in 1810.
Dipo. punctatum is a leafless hemiparasitic plant that lives in a symbiotic relationship with a mycorrhizal fungus and a host plant species that grows in close proximity. The *Dipodium* produces an upright flower stem from an underground root stock. Covered with overlapping basal bracts, the green to blackish raceme is 40-100 cm tall and bears 5-60 showy flowers. The buds open progressively so that there may be a dozen or so blooms open at one time. The flowers are 2-2.5 cm across and have pale pink to bright pink sepals and petals that are spotted and blotched with darker pink-purple. Its pink lip is heavily marked with darker reddish pink blotches and bears a band of pink hairs.
Dipo. punctatum is one of our Australian native coastal orchids that is widely distributed from Queensland north to Carnavon Gorge, down South through New South Wales, Victoria to near Naracoorte in South Australia. It is common in open forest, woodland and heath in well-drained soil between 100-1,000 m altitude.
Being a hemiparasite, *Dipo. punctatum* is not amenable to long-term cultivation as the symbiotic relationship with both the mycorrhizal fungus and host plant needs to be maintained for the on-going well-being of the orchid.

Flasks for Sale

A number of flasks are available for purchase via the Orchid Species Society.

There are a minimum of 40 plants in each flask, and they are of excellent quality with good strong root growth in the bottom of the flask.

The plants are already touching the top of the flask (square whisky bottles on their side).

The plants are ready to take out of the flask now, and should have enough time to get some growing in before the cooler weather starts.

The flasks will be able to be picked up at the next meeting Monday 21st March.

For ordering, or more information contact Nev Bone, ph 07 3264 3897.

Flasks will be $35 per flask. This is a good purchase for the number of plants and quality.
Dendrobium bractiosum – 1 flask

Phalaenopsis sumatrana – 1 flasks

Phalaenopsis hierogyphica – 3 flask

Phalaenopsis speciosa – 1 flask

Orchid Shows Etc

March 26—27: West Brisbane Orchid Society - Auditorium - Botanic Gardens Mt-Cootha. Setup Friday 25th March between 3 & 7 pm with Judging from 7.15pm - All plants in Displays to be judged as well as benched plants. Six Orchid Species Classes. Grand Champion Orchid $ 100.00. Non-WBOS Members can sell plants provided they have a least one orchid enetered for general exhibition. More Details - Paul Horgan 07 33666899 pchorgan@bigpond.com

April 2: Redlands Orchid Society - Donald Simpson Over 50's Leisure Centre. Setup Friday 1st April 2011 between 5.00 & 7.30 pm with Judging from 8pm. Show open on Saturday Only from 8.30 AM - 4.00 PM. Grand Champion Orchid $ 250.00. More Details - Margaret Rieck - Show Secretary - PO Box 116 Cleveland 4163 or Society Secretary Ann Cable 07 38245931

April 9-10: Brisbane Orchid Society - 38th Charity Orchid Show—New Venue - Hibiscus Place Hall, Hibiscus Place. off Klump Road, Upper Mount Gravatt next to Hibiscus Sporting Complex. Setup Friday 8th April between 3 & 7.30 pm with Judging from 8pm. More Details - 07 38413330

April 16 - 17: Eastern District Orchid Society 45th Autumn Orchid Show at Bayside Uniting Church Hall, 420 Wondall Rd Manley West (which is just north of the Moreton Bay Girls College). Setup Friday 15th April between 4 & 7.45 pm with Judging from 8pm. More Details: Brent Nicol 0418734325 (Show Captain) and Eric Locke 07 32452778 (Chief Steward).

April 16: North Moreton Species Appreciation (Not a show, display of species orchids) Bald Hills Memorial Hall,2126 Gympie Road, Bald Hills, Brisbane

22-23 April: Bribie Island Orchid Society at Bribie Island State High School First Ave, Bribie Island ,Setup 21 April 5pm-7pm

28-30 April: North Start Orchid Circle & ANOS Kabi combined Show at Lutwyche Shopping Centre, Lutwyche, Brisbane

30 April - 2 May Toowoomba Orchid Society Gardenfest, Lindsay St,Toowoomba

21-22 May Oasis Orchid & Garden Expo at Oasis Shopping, Centre,Gold Coast

5 November - Nambour Orchid Society would like to invite your society to participate in the first Orchid species show to be held on the Sunshine Coast. This show will be open to members of all Orchid Societies. The venue is the Uniting Church Hall, Coronation Ave, Nambour on Saturday 5th November 2011. We are planning a benched show with vendors in attendance for plant sales and orchid supplies. Judging will be between 7 am & 9am with the show opening hours being 9am-4pm.
Prize money will be as follows: Champion Orchid $100
Reserve Champion Orchid $50 & Champion Specimen Orchid $50
1st, 2nd, & 3rd in each class will receive a ribbon & card.
Flyers and schedule will be forwarded to your society at a later date.
Alison Parkes (07) 5441 7201 - Secretary - Nambour Orchid Society
nambourorchids@gmail.com

CLUB SHIRTS

It was the general opinion that the club investigate the purchase of a club shirt with our logo embroidered on it. The consensus was that we should purchase shirts, (polyester and cotton) and not go for the polo type T-shirts as it was considered that they had a smarter appearance. I have carried out some investigations with a few companies and it would appear that members would be expected to pay around $25 - $30. I will continue to work on this for the club.

Fire Ant Rules – This is a reminder to all members to ascertain if they are in a Fire Ant Treatment Zone (a Restricted Area). A map is displayed next to the Members Register on meeting nights. Don't forget that all those in restricted areas must sign the register to affirm that they have read and understood the Approved Risk Management Plan (ARP 2354).

Orchids In The News: The flowers that drove men to murder

By Christopher Middleton 7:00AM GMT 23 Feb 2011 3 Comments

You can't really approve of how the bee orchid behaves, but it's hard not to feel a certain grudging admiration. Like many other members of its species – the majority, in fact – Ophrys apifera relies on a mixture of low cunning and shameless deceit to ensure its survival.

Perhaps we shouldn't be surprised: the orchid gets its name, after all, from the Greek word for testicle, a reference to its twin, undersoil tubers. At the same time, though, it's hard to imagine such loveliness harbouring such sneakiness. So, if you have always thought of these flowers as the very embodiment of rarefied beauty and refinement, then look away now.

"The bee orchid pretty much fools young male bees, still virgins, into having sex with it," says Professor Mark Chase, keeper of the Jodrell Research Laboratory at Kew Gardens. "They are young, inexperienced bees, and don't know what a female bee looks like, but they're lured in by the shape and the smell of the flower, which, to them, looks like a female bee. While in there, they pick up the orchid pollen on their bodies, and then take it with them to the next flower they visit.

"They do know they've been duped, though, because when the young female bees finally emerge, the males recognise the real thing, as it were, and don't pay any more visits to the bee orchid."

Hardly the ideal way, you must agree, for an innocent young insect to learn about the birds and bees. But that's not the end of it. Take the cruel trick played by the Gongera orchid, of South and Central America. Playing on the gullibility of young male euglossine bees, it somehow convinces them that within its petals lies an oil that will make females go weak at the knees.

The reality could not be further from the truth. Once the chaps have splashed the oil all over themselves, they emerge from the orchid expecting women to swarm all over them. But it just doesn't happen.

"Researchers have studied this for some time, but they have not been able to detect any increase in interest among female bees," says Prof Chase with an unmistakable note of sympathy in his voice. "That said, the orchid has got what it wants, in that, while applying the oil, the bee will have inadvertently picked up some pollen about its person, and then delivered it elsewhere."

Oh yes, the orchid always gets what it wants. Don't be fooled by the pretty petals, either. The flower of the Lady's Slipper orchid, for example, looks like the kind of little pink ballet shoe that must surely belong to a fairy. And what would happen if a baby insect crept in there for a nap?

"It would be eaten, no question," says Steve Ruddy, organiser of Kew's current orchid orgy, the Tropical Extravaganza. "Mind you, there's a flower over there, Nepenthes, which can swallow a whole rat."

Then there is the terrible and largely unreported way in which fungi get treated in this floral jungle. All right, there are a few soil-dwelling (terrestrial) orchids that operate a stable, monogamous relationship with their own personal fungus, feeding it carbohydrates and starches and getting minerals in return. But many thousands of their tree-dwelling (epiphyte) counterparts play fast and loose with half a dozen different fungi.

"They are unfaithful opportunists, no question," says Prof Chase. "Most of the fungi and pollina-

tors who interact with orchids would have a better life without them. Only one third to one quarter of all orchids provide some kind of reward, usually a sweet nectar, for the creatures that come to pollinate them. The other three quarters of orchid species give nothing: they are frauds. That said, they are probably the most successful frauds in history."

It's true. Orchids inhabit every part of the world, apart from the North and South Poles. Some are vast, and have flowers as big as your hand, while others are minuscule: Platystele misera, for example, looks like a tiny sprig of thyme.

"Its flowers are said to be the size of the Queen's nose on either a 5p or 10p coin, I can't remember which," says Lara Jewitt, manager of the Princess Diana Conservatory, where the Tropical Extravaganza is taking place. "Either way, very small.

"One of my favourites, though, is the comet orchid, which has this beautiful long tail flower. When Charles Darwin first encountered it, he came up with the theory that it must be fed on by a creature with at least a 10 to 12in proboscis. Everyone mocked him until, in Madagascar, they discovered the hawk moth, which, as he predicted, can reach its proboscis right into the end of the tail and get the nectar."

Orchid-collecting was popular in Darwin's time, and rich Victorians would hire trowel-wielding bounty hunters to scour the Tropics for rare breeds. Competition was fierce, and the stakes high. Scores of orchid-seekers succumbed to disease and killer bees, while those that survived were ruthless in their methods.

"Sometimes they would kill rival orchid-hunters," says Jewitt. "On other occasions, they would just kill their plants, by urinating on them."

A useful warning, there, for any orchid-owners looking for a novel way of upping their flowers' liquid intake. When it comes to water, orchids prefer the stuff that comes out of the sky, rather than the tap (too much chlorine and calcium). And they like to be lightly hydrated, rather than sat in a puddle.

Despite having a reputation for needing round-the-clock care and brow-mopping, orchids are actually pretty robust. "They don't like draughts and they don't like direct heat, but, on the whole, orchids like the same kind of temperature as you and me, if not a bit cooler," says Prof Chase.

That said, you don't want to be wearing an overcoat when visiting the Kew orchid show. Temperature at the heart of the conservatory is a highly humid 21C (70F), and the displays are, as advertised, both tropical and extravagant.

Making the most out of the fact that orchids prefer to grow in loose material, rather than compacted soil, Ruddy and his arrangers have created a gigantic Hanging Baskets of Babylon tableau, in which Carmen Miranda-like towers of flowers are suspended from the ceiling or draped around concrete pillars (one of them shaped like a tree).

"We've had 3,000 orchids brought over from Holland," says Ruddy. "They're grown by robots: each day, each flower is automatically rotated and photographed from three different angles by a remote-operated camera. As soon as it's achieved sufficient growth, it's mechanically transported, via conveyor belt, to the next stage in the process."

But while machines may be able to carry out the work of the human grower, nothing can replicate the inner workings of the flower itself.

"The internal configurations of the orchid are so precise, and so specific to each species, that it deposits its pollen on one part of one bee, and receives it from the same part of another bee," says Prof Chase. "There is no danger of mixing species; it is a perfectly designed system."

For confirmation, you only have to look at the number of orchid species in the world today, an astonishing 25,000 at the last count. Oh yes, when it comes to looking after Number One, it seems we could all take a leaf out of the orchid's book.

http://www.telegraph.co.uk/gardening/8341406/The-flowers-that-drove-men-to-murder.html

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