Caladenia aff. carnea
— apart from Caladenia chlorostyla, perhaps the most common New Zealand Caladenia, found throughout the country, and still waiting for a name.
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The European genus *Gymnadenia* has two species, only one of them found in Britain. They have a leafy stem, a flower spike, down-curving lateral sepals, with dorsal sepals and petals forming a protective helmet over the rest of the flower. The labellum points down and is tri-lobed, with a long basal spur. The column is short and erect. These are fragrant flowers, and in fact *G. conopsea* is known in Britain as the fragrant orchid. They are attractive to moths and butterflies whose long proboscises reach into the spur for nectar. They thus dislodge the pollinia which stick to the proboscises, at first vertically, later turning forward to strike the stigma of the next flower visited.

The lighter colour of *G. odoratissima* is said to attract night-flying moths in the European Alps where they grow together.

I first saw *G. conopsea* in meadows of old pasture in southern England, along with bee orchids, man orchids and other late spring flowers. In places there was an overall pinkness to the landscape, so plentiful were they: but in France, in the Maritima Alps of a spring evening, the banks were decidedly pink with huge specimens (*var. densiflora*) scenting the still air for a good distance around.

*G. odoratissima* is the smaller, the spike appearing less dense than that of *G. conopsea*, to some extent because of a shorter spur and smaller flowers. The labellum lacks the trilobate appearance of *G. conopsea* because the lateral lobes are smaller than the midlobe. It is found only in mountainous regions: I saw it near San Zeno di Montagne above Lago di Garda in northern Italy.

**Pterostylis aff. irsoniana**

from Haurangi SFP

By the track in the upper part of the Haurangi State Forest Park in southern Wairarapa on 27 December was an unfamiliar small *Pterostylis*, in full crisp flower. Only one, mind you, though spent flowers of *Pterostylis banksii*, *P. graminea*, *P. cardistigma* and one of the *P. aff. montana* complex were plentiful nearby. It was of *P. graminea* size, with grassy leaves, but with an upright habit more akin to *P. cardiostigma*. The labellum was arched like that of *P. irsoniana*, its tip blunt and curved, but it lacked any of the calli found on the median ridge of that species.
**Microtis unifolia** variations

There seem to be three distinct groups of *Microtis unifolia* in the Wairarapa; a third from Northland resembles an apparently identical plant from Wellington. *M. oligantha* and *M. aff. parviflora* are easily distinguished.

First to flower (September, finished by Christmas) in full sun on clay tracks and slips on our small farm near Gladstone was the large (up to 60 cm tall, 1 cm thick at the base), woody (stiff upright plants) taxon that I take to be the true *Microtis unifolia*. The lowermost flowers were close to the stem's exit from the sheathing leaf even when the flowers were fully open (i.e. there was a very short bare stem below the flowers). The leaf-end was degenerate and blackened. The flowers were quite crowded, the lower (fruiting) ones becoming more vertical so they were pressed to the stem. The ovaries were long, the dorsal sepals' long axes in a straight line with the long axis of the ovary. Dorsal sepal pointed, the tip upturned. Forster found the original *Microtis unifolia* at about the same latitude on Long Island in Queen Charlotte Sound in September 1773. Jones wrote (of *M. unifolia*), "Flower stem to 100 cm tall, stiff and rigid..." [1]. The Wairarapa plants had an upturned tip to the dorsal sepal, and Bob Bates writes that *Microtis unifolia* has an acute dorsal sepal whose apex may be "recurved, straight or decurved" (R. Bates unpublished Ms.).

Flowering on average a month later, on shady south-facing pasture slopes, was a much smaller plant, its ovary double-humped with a distinct "lumbar curve" and "bottom", the dorsal sepal sharp and upturned, the petals spreading, free of the cap formed by the dorsal sepal, the labellum long, narrow, violin-shaped, bifid, half as long as the ovary: let's call it *Microtis* "A".

Much later (December-January) a small plant with widely-spaced flowers could be found on wet banks in the Haurangi State Forest Park. Its individual flowers were pretty much the same as those of the first described above (though the ovary was short and globular and the dorsal sepal tip was not upturned), but the habitat and flowering times were quite different: *Microtis* "B".

Anne Puttnam sent *Microtis* she had collected on 2 Nov 97 in Northland, "growing among tall grass, full sun; on track to Paparoa Bush Walk"; and 24 Oct 97 "Whangarei Heads Early Settlers Memorial, full sun, among grass, bracken fern and hundreds of *Thelymitra*." These plants had 50-100 very crowded 1-2.5 mm flowers to a stem, with short, stout ovaries. The flowers were flexed forward so the dorsal sepal was almost horizontal. The dorsal sepal was almost hemispherical, but with a sharp (not upturned) point, the hemisphere divided into five longitudinal ridges. The petals were about half within the cover of the dorsal sepal, and a third short of its length, the lateral sepals pointed straight down, outward, or curled against the ovary; they were as long as the labellum. The labellum was oblong, had a wavy, scalloped edge, carried a midline ridge from two basal calli to an apical one. The labellum tip was straight or had a slight notch. The flowering stem was bare for a considerable length above its exit from the sheathing leaf. The flowers were similar to some found in Wellington at about the same time, which I called *M. aff. unifolia* in NOG/62: p24. Let's call it *Microtis* "C".

Bob Bates's extensive and detailed South Australian field studies "have revealed the presence of many cryptic species which are not easily determined from dried material. These have discrete geographical ranges and flowering times and are quite habitat sp-
pecific. All belong to the *M. unifolia / M. parviflora* alliances and are easily recognised from live material once the distinguishing features are understood. It is not surprising that there are so many cryptic species in this genus of orchids with tiny green flowers which are apomictic and often self-pollinated but which frequently outcross as well" (R. Bates, *unpublished Ms. describing* seven new species of *Microtis*).

Careful observations in different parts of New Zealand are likely to reveal a similar diversity. Already plants similar to the Australian *M. arenaria* have been found in the far north, and probably other Australian species will be found.

*Microtis* are difficult to differentiate: you find a plant that is clearly different - its flowering time, general shape and habitat

are quite distinct from those of similar taxa. But just as you think you have found a constant distinguishing feature you find a few flowers of one plant lacking that feature.

The above should be regarded only as a first attempt.
Hunting native orchids in New Plymouth city, and finding a gigantic *Bulbophyllum pygmaeum*

by George Fuller, New Plymouth

On Thursday 16 January 1997 DOC organised a guided tour of Ratapihipihi Reserve, New Plymouth with the principle objective of viewing native orchids. As it transpired, this particular area of cut-over regenerating forest is surprisingly lacking in native orchids but thanks to some collective lateral thinking the party was eventually well satisfied with their day's outing.

Ratapihipihi Reserve is within the city limits and can lay claim to being the source of puriri timber for the first bridges over the Patea and Whanganui rivers. Original saw pits are still visible as are the stumps of some of the massive puriris that once graced the area. Thanks to surviving seed trees and a thriving pigeon population, regeneration is strong.

A feature of this reserve is the remarkable number of nikau palms, the greatest proportion of them young and seemingly of about the same age. There are only three large rimu remaining and it was on one of these, towering over the general canopy and exposed to all weathers that *Winika cunninghamii* was located, but only clearly visible with binoculars. It was thriving. The only other epiphyte was a surprisingly limited number of *Earina mucronata*, most on treefern trunks.

Having completed the circuit and settled down for lunch, the searchers could probably claim at this stage to have set a record for the least number of orchids to be located on an official hunt, because only one or two aged plants of *Pterostylis banksii* had been found and no evidence of any *Corybas* at all.

There was, however, much of general interest, so none were disappointed.

A short stop at the Huatoki Domain went a long way toward satisfying the orchid bias of the tour. Dominant native trees are titoki and tawa in fairly open motorcamp-style surroundings, and *Earina mucronata* is prevalent but so too is *Drymoanthus adversus* at eye level where small plants were found to be dwarfed by their burden of copulant seedpods.

Perhaps the most famous single native orchid specimen in New Plymouth is the *Bulbophyllum pygmaeum* in this domain. It is located in a hinau (*Elaeocarpus dentatus*) beside the dam forming the original swimming pool. I first saw it about thirty years ago, revealed to me by a protective enthusiast. I thereby became a holder of a not-too-well-kept secret. The legitimate concern was that someone in that era of mania for orchid growing might be unscrupulous enough to remove it since it is located just above eye-level in a public domain. At that time I seem to recall its coverage as a circle of about 30-40cm but that is a little hazy. However, all concerned at the time felt that it was under great threat because of its exposure to magpies in human guise.

It is many years since I last viewed the plant and I had visions of it being a bit bigger since contemporaries assured me that it had survived the passage of time despite consequent recruitment of legions now bearing knowledge of the "secret". There is no question therefore that it was I who registered the greatest surprise and pleasure at
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what we found, even above those having their first encounter with this real miniature among orchids. The tree is literally wearing a tight woolly jumper of *B. pygmaeum*, knitted on No. 6 needles. A magnificent sight.

The relatively free-standing hinau is about 10.8m high. The orchid extends from where a few minor branches emerge at 2.3m up the trunk. The tree is 1.84m in circumference at this height. The entire 180° of the trunk from north to south through east, for 1.7m upward, is simply smothered with the ramifications of the *Bulbophyllum* to the extent that it would not be possible to insert a match between leaves. At the 1.7m point (4m from the ground) the tree forks. Here the circumference is 1.6m. The western fork (furthest from the stream) is 0.8m in circumference at the junction. The orchid continues up this fork a further 0.75m, making a total vertical height of 2.55m for the specimen.

Except where at one point on the fork the plant has just recently managed to “hold hands” around its support, the entire western half of the main trunk is devoid of orchid, yet on the eastern half the coverage is entire. The spread gives a total area of *Bulbophyllum* of about 1.75m². That is about the area of a large table-cloth. It is my contention that this is the vegetative spread of one plant, and if my assessment of its size 30 years ago is accepted as 0.150m², then in that time it has increased about ten times in area — but why upward instead of down or around?

I have a feeling that light factors have a bearing on spread. Downward migration terminates abruptly along a line that coincides with the shadow-throw of the hinau’s foliage; the light is constant on the eastern side of the trunk, but on the western side the light value is lower owing to the shade of the trunk and nearby dominating trees.

In February the plant was bearing a heavy crop of seed capsules — one of the denser areas yielding 25 in a 10x10cm square; even at a quarter of this density there would be 700 capsules ready to disperse literally millions of microscopic seeds into the wind. I find it incredible that (to my knowledge) not one other *B. pygmaeum* has been located within hundreds of metres.

The presence of the climbing fern *Polypodium serpens* seems significant. It is not rampant on this tree, but it does produce an expansive matrix of fine fibrous roots into which the roots of the orchid are embedded. The matrix forms a cushion about 10-25mm thick with a tenacious hold on the bark and seems to provide the perfect substrate for the orchid. Perhaps the spread of the orchid is limited by environmental factors influencing the fern!

To finish the quest we visited a dry infertile area beside the Te Henui stream just above the Cumberland St bridge where *Microtis unifolia, Thelymitra pauciflora* and *T. longifolia* are found. Then it was virtually “over the fence” into John Dodunski’s property to see his collection of “captive” natives, ensuring that everyone concluded their day well satisfied.

(continued from page 11)

References for ED Hatch paper
1. Desmond R.1995 *Kew, the History of the Royal Botanic Gardens*
2. Molloy B.P.J.1990 *Pollination systems of NZ native orchids in NZ orchids, natural history & cultivation* p38
4. Gibbons D.L.1988 *Native orchids of Australia*
The New Zealand genera 4 —
Australian genera with a single species in New Zealand
by E.D. Hatch, Laingholm.

Name = the labellar calli.
Genotype = A.gracilis Hook.f. ibid.
A small genus of two closely related species, one (A.nortonii R.D. Fitzg.) in Australia and one in New Zealand.

Adenochilus gracilis Hook.f. ibid. t56A.
Name = slender
Distribution = endemic – North; South; Stewart Is.
Type locality – Bay of Plenty ?. W.Colenso.
(K)
Flowers – November-February -self pollinated.

2: Caleana R.Br. Prodr. 1: p329 (1810)
Brown’s Observations ibid. – translated EDH
‘This beautiful and very distinct genus is named in honour of George Caley, an experienced and accurate botanist, who for many years, under the patronage and at the expense of Sir Joseph Banks, investigated the flora of New South Wales, finding many new plants, and others not entirely unknown to us, but in this small book (the Prodrumus) incompletely described’.

‘George Caley, a young man from Manchester with enthusiasm and little else, wanted to be a collector in New South Wales. Before sending him out Banks made him take a crash course in elementary botany and identification at Kew. While undoubtedly an efficient collector, Caley proved to be a difficult character, irascible, tactless, impetuous and jealous’. [Shades of J.R. Forster! EDH] [1]
Genotype = C.major R.Br. ibid.
An Australian genus of 5 or 6 species, one of which extends to NZ.

Caleana minor R.Br. ibid.
Name = smaller (than C.major.)
Distribution – Australia – Tasmania; Victoria; NSW; Queensland. New Zealand – North Island – Kaitaia 1898-1912; Rotorua / Waiotapu 1890-1924, and after an interval, in 1982. These possibly represent 3 separate transtasman arrivals, or perhaps the plant persisted unnoticed (it is very inconspicuous when not in flower) at Rotorua?
Type locality – Port Jackson, October 1803, R. Brown (Lecto – BM)
Flowers – October-December – insect pollinated.

A very odd little plant, with the labellum mounted on an irritable claw which flips the labellum completely over when an insect alights on it. In profile the open flower has an uncanny resemblance to a flying duck. This complex pollination system may be completely superfluous. Brian Molloy has suggested that Caleana minor flowers produce seeds without the union of sex cells in a process called apomixis [2]. Molloy grew a plant from Victoria in isolation and it produced abundant seed without pollination...
and fertilisation and he noted that old herbarium specimens from Kaitaia and Rotorua include plants with seed-filled capsules but with pollinia still intact [3]. Jones [4] suggests that two of the five *Caleana* 'species' are freak apomictic developments of *Caleana minor*.

Name = hidden column.  
Genotype = *C. erecta* R.Br. *ibid.*  
A genus of some 20 species extending from the Philippines and Formosa, through Indonesia and Malaysia to New Guinea. Australia has 5 species, one of which extends to NZ.

Name = the subulate sepals and petals.  
A plant of swamps and bogs, with the habit of *Spiranthes*. The tall flower spike is normally supported by the surrounding rushes and sedges, but in cultivation tends to tumble over and has to be staked.

**Distribution** – Australia – Tasmania; SA; Victoria; NSW; Queensland. New Zealand – North Island – Motutangi-Kaimaumau wetlands and on the Kari Kari peninsula.  
**Type locality** – Tasmania, J. Labillardiere (Holo – FI)  
**Flowers** – August-December – insect pollinated. The flowers are pollinated by male ichneumon wasps (*Lissopimpla semipunctata*) which are attracted to the large labelllum under the mistaken impression that it is a female of the species. [5/6]

Name = the curved column.  
Genotype = *C. reniformis* R.Br. *ibid.*  
A small Australian genus of 5 or 6 species. New Zealand has one endemic species, related to *C. reniformis*.

**Cyrtostyli oblonga** Hook.f. *Flora NZ* 1: p245(1853)  
Name = leaf shape, which varies from linear-oblong to almost orbicular. Previously divided into a number of New Zealand species and varieties.  
**Distribution** endemic – Three Kings Is.; North Id. – North Cape southwards to the Waitakere, Hunua and Coromandel Ranges and Rangitoto Id.; Hawke's Bay and about Wellington South Id. – Sounds-Nelson and southwards to north Canterbury.  
**Flowers** – September-October – insect pollinated.

Name = straight horns – the lateral sepals.  
Genotype – *O. strictum* R.Br. *ibid.*  
A very small genus with, at present, 2 species, one in Australia and one in NZ.

First collected from D'Urville Island in Admiralty Bay, by Banks and Solander in March 1770, described by Solander as *Ophrys cornuta* and illustrated by Sydney Parkinson.  
**Distribution** endemic – North Id. throughout in open areas and on clay banks. South Id. – Sounds-Nelson.  
**Type locality** – Hilly places in NZ, A. Richard #338, (Holo – P)  
**Flowers** – November – February. Insect pollinated.  
(continued at foot of page 9)
Some additional locations for *Danhatchia australis* (Hatch)
Garay et Christenson (*Orchidaceae*)

by Peter J. de Lange, Science & Research, Science, Technology and Information Services, Department of Conservation, Private Bag 68908, Newton, Auckland, and Brian P. J. Molloy Research Associate, Landcare Research Ltd, Private Bag 69, Lincoln

**Introduction**

Over the last decade there has been renewed interest in the distribution and seasonal abundance of the monotypic and endemic orchid genus *Danhatchia* (Garay & Christenson 1995). This has led to a review of past and present occurrences (Hatch 1997). *Danhatchia australis* is a saprophytic orchid with a predominantly northerly distribution, following, to some extent at least, the distribution of taraire (*Beilschmiedia taraire*) and nikau (*Rhopalostylis sapida*) (Fig. 1). Both species support a mycorrhizal association with the puffball fungus *Lycoperdon perlatum*. It is this fungus which is said to be associated with *Danhatchia* (as *Yoania australis*) (Campbell 1970).

In the Auckland region the distribution of *Danhatchia* is reasonably well documented. The orchid being reported most frequently from a broad strip of land between the Kaipara Harbour (Hoteo River) and Warkworth (Fig. 1) (Hatch 1997). It is our opinion that diligent searching elsewhere in Northland and South Auckland is likely to reveal further populations.

Within the Hauraki Gulf, *Danhatchia* is known from the northern and southern parts of Great Barrier Island (Wright & Cameron 1985), and in 1994 was discovered by R.E. Beever at one site on Waiheke Island (Hatch 1994) (Fig. 1). Puakeho Specialist Nurseryman T. Hatch (pers. comm.) has also reliably reported *Danhatchia* from Little Barrier Island.

*Danhatchia* has also been collected from several locations on the northern Coromandel Peninsula and for a time at least (judging from herbarium evidence) was locally common at Kirk's Bush, Papakura (Hatch 1997). At the latter location it may now be extinct, for three seasons' diligent searching by the author and R.O. Gardner has failed to rediscover it there, possibly because apparently suitable habitat is now scarce.

Although *Danhatchia* has never been officially reported from the Western Waikato it was discovered on the lower forested slopes of Mt Pirongia by the late Reg Bell (pers. comm. 1976) who found the orchid while looking for *Thesium rodwayi* (for the latter see Bell 1971). Reg Bell took a small flowering piece of *Danhatchia*, which he photographed on the back lawn of the family house at Pirongia, before planting it in his garden in the hope that it might grow. Unfortunately, he did not preserve the specimen, nor provide exact location details, and the photograph (which one of us (P.dL.) saw in 1978) was lost following Reg's death in 1981. Thus the record remained an interesting botanical puzzle, for Reg never provided exact locality details, until December 1997 when one of us (P. dL.) visited Mt Pirongia, and successfully located a small population of *Danhatchia*.

This article discusses these additional *Danhatchia* occurrences in the hope that they may result in further discoveries of this elusive orchid.

**Motukino (Fanal) Island**

Motukino (Fanal) Island, at 75 ha, is the largest island within the Mokohinau Islands archipelago (Fig. 1). The island was repeatedly burned by mutton-birders until the early 1920s, resulting in a dense vegetation of tall flax (*Phormium tenax*) interspersed with low shrubs of mapou (*Myrsine aus-*)
tralis), koromiko (Hebe sp. "v" of Eagle 1982, AK 150628), houpara (Pseudopanax lessonii) and pohutukawa (Metrosideros excelsa). However, in the three deep south-west facing valleys, small forested enclaves dominated by houpara, pohutukawa, tawapou (Pouteria costata), puriri (Vitex lucens), coastal maire (Nestegis apetala), and nikau, have persisted.

In September 1994 the flora and fauna of Motukino Island was examined in detail, as a precursor for planned kiore (Rattus exulans) eradication (de Lange et al. 1995). One result of this visit was the confirmation that there were nationally significant populations of two threatened plants, Cook's scurvy grass, Lepidium oleraceum (see de Lange & Norton 1996) and Rorippa divaricata. It was the presence of these species, which led to a second visit to Motukino Island in December 1997.

One result of this visit, was the discovery of several patches of Danhatchia australis emerging from thick houpara leaf litter near the dry ridge of the wahi tapu, Pahuhunui (see Spring-Rice 1980). At this site, taraire is absent, and nikau scarce, except for a few small seedlings 2m distant from the orchid occurrences. The forest canopy at Pahuhunui consists of a dense pure stand of 4m tall houpara. Beneath this is a sparse understory of etiolated mahoe (Melicytus ramiflorus), mapou and pohutukawa, while the ground cover comprises occasional tufts of Carex spinirostris.

Within an area of c.6m² four patches of Danhatchia were located. The largest of these was c.30 cm diameter, and was the only one to support open flowers. These were borne on glabrate, pale mushroom grey to pinkish leafy spikes. The flowers were pale cream suffused with pink, and had a distinctive, faint musty odour. Careful excavation of one of the colonies revealed that the plant was threaded amongst the roots of houpara (identified by the adventitious sprouting of the roots).

Mt Pirongia
Mt Pirongia, at 959m a.s.l., is the highest peak in the Waikato (Fig. 1). The "mountain" is really a heavily eroded basaltic-andesitic complex with several volcanic vents of varying ages (Briggs 1983, Briggs et al. 1989). The main summit of Pirongia is part of a long ridge bisecting the central section of the range. Based on herbarium and other ecological evidence it seemed unlikely that Danhatchia would grow on the central part of the mountain, so past searches have concentrated on the low altitude forested valleys draining west from the peak Koponui to the Aotea Harbour. This area has also seemed a good prospect because nikau is abundant there and occasional taraire have been reported (cf. Wright 1984). Despite its apparent suitability past searches for Danhatchia have proved unsuccessful.

On the eastern side of the Pirongia Range there are some smaller pockets of lowland forest containing nikau, but apparently no taraire. The best of these forests is situated along the lower reaches of the Blue Bull and Kaniwhaniwa Streams. Furthermore it was here that Reg Bell did a lot of his botanising. After several hours searching at this location one of us (P.d.L.) eventually found a small patch of Danhatchia in a damp gloomy hollow, amongst a thick leaf litter of fallen nikau fronds.

Discussion
Both Danhatchia discoveries are significant. The Motukino Island occurrence is of interest not only because of its location within a remote island archipelago but also because of its apparent association with an unusual forest type. Its discovery here hints at the potential of other Hauraki Gulf islands that support similar habitat, e.g., the Hen & Chicken Islands. Searches of these islands could be worthwhile. The Mt Pirongia population not only provides confirmation of a past, unsubstantiated record but also adds, for the time being at least, a new
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175°E
- 35°S
- 40°S

Fig. 1. Distribution of Danhatchia australis (Hatch) Garay et Christenson (after Hatch 1997). Closed circles - records verified by herbarium specimens, open circle - unverified records. Closed diamonds - new locations (this paper). Dashed line - approximate southern limit of tarairi (Beilschmiedia tarairi) (P.J. de Lange unpubl. data), bold dashed and dotted line - approximate southern limit of nikau (Rhopalostylys sapida s.l.), inset - distribution of nikau outside mainland New Zealand. (P.J. de Lange unpubl. data).
southerly limit for Danhatchia in the North Island.

Occurrences of Danhatchia further afield should not be ruled out either. In December 1984, an observant naturalist, Nicholas Bunart, found Danhatchia at the Kaihoka Lakes Scenic Reserve, North West Nelson. There the species occurs in coastal forest dominated by nikau (Horsley 1989).

It is nikau, rather than taraire, which is consistently found with Danhatchia throughout its range. This raises several questions. What is the relationship between these two taxa? Is the perceived association real or merely an artifact? Does it have any evolutionary or biogeographic significance? Should we now be searching all forest types with nikau present and expect to find Danhatchia? Although the southernmost mainland nikau on Banks Peninsula might seem climatically unsuitable, coastal nikau forest stands to the north (especially near Punakaiki) and on the Chatham Islands (Fig. 1) are worth searching, even though the Chatham Islands nikau is generally regarded as a separate taxon distinct from its mainland relative.

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References
Thoughts on some new names in *Caladenia* and *Pterostylis*

by Rhys Gardner, Auckland

I have commented elsewhere (Gardner 1998) on the nomenclatural shenanigans surrounding a recent change to the name of one of our caladenias — if we believe that "Caladenia calliniger" (*C. carne var. minor f. calliniger*) is a good species, we are now obliged to call it *C. atradena*, the authors of this new name having flouted Recommendation 24B. 2 of the International Code of Botanical Nomenclature, which states: "When an infraspecific taxon is raised to the rank of species... the final epithet of its name (calliniger) should be retained unless the resulting combination would be contrary to the Code."

The same authors have now worked over some New Zealand *Pterostylis* species (Jones, Molloy and Clements 1997). Again, they have taken no notice of relevant recommendations in the Code, and again their nomenclatural reasons for "having to do so" are quite wrong.

Firstly, they recognize "*Pterostylis rubricaulis*" as a good species, but give it a new name, *P. agathicola*. They are mistaken in saying that there has never been a typification of the plant: Dan Hatch’s choice of his illustration (Hatch 1949) is perfectly acceptable, even if he did use the obscure term "hypotype" for it. They are mistaken in saying that the epithet "rubricaulis" is inappropriate and confusing (and of course this carries no weight in deciding on the correctness or not of an epithet). And they have not seen the real reason why Hatch’s publication of *P. rubricaulis* is invalid. It is not because he did not typify it properly, but because he omitted to give a Latin diagnosis or description, or any reference to one. Jones et al. could perfectly well have supplied this, so validating the name; instead they chose to start all over again.

Secondly, *Pterostylis furcata* var. *linearis* Hatch is recognized at species level, and, you guessed it, they do not simply call it *P. linearis* but give it a new name, *P. paludosa*. They say of var. *linearis* that "the unicate type is not well preserved and to avoid further confusion... we have chosen to describe the taxon as new, based on a more representative type specimen." One can wonder who was confused (certainly not Dan Hatch or Lucy Moore), and note that type specimens are not obliged to be "representative". More cogently, there is now provision in the Code (Article 9.7) for the selection of what is called an epitype, a specimen that acts as a supplement to the original type, functioning to more clearly demonstrate the diagnostic features of the taxon. The authors should have collected a good amount of the plant, chosen an epitype, and magnanimously helped clear any "confusion" by widely distributing the remainder as authenticated specimens.

Of course, it is not too difficult to make out why all this sidestepping is taking place, but the incompetent reasoning that accompanies it makes it doubly unacceptable.

References
The column

The *Bulbophyllum pygmaeum* debate

by Eric Scanlen, Papakura

A determined column just had to enter the debate about *Bulbo-
phyllum pygmaeum* and incidentally get some 3-D shots with the clumsy extension bellows for the necessary 7½ times magnifi-
cation. Anne Putnam had reported them on coastal rocks out of Whangarei, flowering profusely within reach of the salt spray! The column was sorely tempted but there were possibilities closer and time is always at a premium. Down-stream of Mangatangi Dam in the Hunua Ranges is a GLOS where *B. pygmaeum* is plentiful low down on kauri. Open flowers can occasionally be found on drying specimens clinging to shedding bark and desperate to reproduce before withering up; or so the hypothesis goes. Everyone else was too busy on 16 December (can’t imagine why) so a field party of one set off.

Colony one had a half open flower. Hur-rah? No, boo! The column resolved not to mess with half open stuff again. The NOG seniority view those old shots with some disdain saying, “They open wider than that you know.” Some fifty colonies and hundreds of closed flowers later, that solid resolve was rapidly dissolving but the half open one still looked no better, spurring a renewed effort. No sign of a likely pollina-
tor was seen during this protracted inspection. Spuming the kauri, the column promptly turned up two wide open flowers on adjacent pseudobulbs low down on tanekaha, in damp moss. So, the hypothesis took flight as the “fun” began. Perhaps Bob Talbot had it right after all? (NOG *Journal* 63: 16). But why would some flowers be self pollinating whilst rare others open wide
inviting insect pollination? Why does Anne get so many open by the sea?

The "fun" involved a reversed 28mm lens which picked out the image of one of the 3mm wide rascals on the focusing screen but any attempt to depress the long-stroke, double cable release, wobbled the image straight out of shot! Where were his well trained button pushers? After an hour's fruitless effort, the pocket knife slid off six pseudobulbs with a shim of bark and battle was soon rejoined at the kitchen table.

With the camera on a heavy tripod and the flower lined up over the axis of a protractor, it was (almost) a simple matter to move the subject into focus, snap it then rotate it 2° and repeat the process. A nice series of stereo pairs was soon obtained along with some unmentionables blamed on the crucially shallow depth of field in macro-photography.

The minuscule scrap of a plant was then ceremoniously epoxied to the column's Feijoa and with some TLC may live to flower in further seasons.

You can best see the photographs on the preceding page in 3-D with two lenses such as strongly magnifying spectacles. Youngsters adept at viewing the Magic Eye books can free view these without difficulty. The trick is to focus the left eye on the left picture and the right eye on the right picture to get a startling, in-depth view of the orchid, unobtainable in the field with a single magnifier.
Gastrodia "long column" and the Disa connection
by Eric Scanlen Papakura

Karsten Wodrich, the celebrated grower and author of Growing South African indigenous orchids, was coming to NZ and needed to see native orchids in addition to lecturing and acquainting himself with local Disa growers, according to Ron Maunder. This had all the makings of a classic field trip especially as Ron wasn’t sure where to get the best range of flowering species at the end of January. So the column contacted Bruce Irwin and hatched an itinerary that coincidentally included Ross and Helen Bishop’s Gastrodia "long column", flowering amongst Rhododendrons in their classic landscape garden at Owhango. This species was the first Gastrodia your column had encountered, (11 Feb 88 Alpine Lodge, St. Arnaud) before he had ever heard of such a thing and happily misled his viewers for years that it was G. cunninghamii! So now there was a crushing need to capture it in full colour 3-D.

Karsten duly arrived and formed a mutual admiration society with the column regarding their respective slide shows on successive evenings but the real show got under way on an overcast 28 January when Bruce, Ron, Karsten and the column set off from Bethlehem (Tauranga, not the Holy Land!) in his fine Carona with quantities of Hawera plums from Ron’s huge and groaning tree (courtesy of the late T. Reader’s Sultan seedling, budwood from George Fuller). The plums did sterling service over two days crammed with activity which as usual, did not go all according to plan.

Rob and Sue Graham’s studio lawn served admirably as a picnic lunch spot. Rob had been forewarned and led a sally up the Waitahanui river, a stone’s throw from his back door, to show us Spiranthes sinensis, the latest addition to his local orchid species list (NOG Journal 61: 6). Some not-so-subtle ragging was in order after Anne Fraser travelled over from Ongarue and made the find a few days earlier, right in Rob and Sue’s patch. How dare she? Karsten was studiously polite about these beautiful 4mm long flowers even though one displayed definite and unusual white striping on huge (for Spiranthes) 230mm stems. They looked somehow uneasy in the exotic grasses along the river bank where they had found their ideal habitat in the continually wet shingle but how long can they survive the foreign onslaught?

There was no time for cogitating (or photography) with a 3pm rendezvous at Horopito with Anne and Ross. Rob joined the party too to show Bruce his find of a late flowering white Thelymitra. Bruce examined one and found the last fresh (but closed!) flower to be a sterile mutant. He says we shall have to wait (with bated breath) until next season for normal flowers. The column busied itself, finally, after 3 years of spurned opportunities, at Microtis oligantha corner, with all the rigmarole of lens reversal (and they think he’s having fun) and the associated hoop-la, to capture this modest excuse for an orchid. Floret 1 had the typical down-thrust lateral sepals and un-notched labellum but its tattiness demanded a move to a more healthy specimen which the slides later revealed (Fig. 1) to have curled under lateral sepals, much akin to M. unifolia. Quel 'orror! The slides were thus mislabelled until belatedly the large(?) rectangular calli atop the labellum were spotted. So with tangible relief, the
labels were quickly changed to *M. oligantha*. Are there any dissenters out there? Karsten seemed not at all impressed with *M. oligantha* yet its labellum isn't much smaller than those on his precious *Disa*.

At 720m altitude, the Horopito *Spiranthes sinensis* were only in white bud yet those at Waitahanui, at 360m were past their best. The cooler climate at Horopito, it seems, delays the season some 3 weeks. Broad tepalled *Thelymitra cyanea* were open in the soggy paddock despite some light showers and brought a spark to the visitor’s eyes. Reddish *Prasophyllum colensoi* (Fig. 2) with well spaced flowers, looked to be a hybrid between the little alpine one and the montane robust form but no sign was seen of *Genoplesium nudum* this year nor the *Caladenia lyallii* with six rows of calli spotted but not photographed on 22 Jan 95, (NOG Journal 59:17).

Bruce and the column enticed Ron and Karsten to Chateau Whakapapa with talk of the many splendours of this orchid field, including stands of *Gastrodia cunninghamii* (NOG Journal 54: 3) — which had vanished from their previous sites, hadn’t they? Ron bailed the pair out, twice, getting Karsten’s camera clicking first at a resplendent *Pterostylis patens* then a fine *G. cunninghamii* looking out of the bush in a new spot, not a metre off the sealed road. *Thelymitra “Whakapapa”* was closed in the overcast and another year passes without the column getting presentable 3-D images of this retiring beauty.
Undeterred, they sought Ross and Helen’s *Gastrodia*. “long column” in the Owhango evening whilst the rain held off. Three stems like miniature khaki foxgloves, made quite a picture once the *Rhododendron* boughs had been propped aside. The column was under strict instructions from Ian St George re his find at Turanganui River (NOG Journal 66: 29) to check for, perfume? (none at 8pm nor at any time of day according to Ross and Helen), possible pollinators? (not a solitary buzz), spent florets turned upwards to let the pollen drop onto the stigma? (negative, any spent flowers had dropped off). Ross reports that all three finished up as bare sticks. So neither Brian Molloy’s self pollinated form nor Ian’s insect pollinated one could be confirmed or denied. Could G. “Owhango” be a third form? A nonscented, insect pollinated form, hence the flowers drop off when the insects fail to deliver? This is getting too conjectural with the scant evidence to hand. Comparison of the photo’s though, showed that G. “Owhango” (Fig. 3) and G. “St. Arnaud” have their unscented flowers trying to jut out at right angles whereas the Editor’s G. “Turanganui” has frangipani smelling flowers hanging plumb and close to the stem. The clues are pointing to at least two distinct forms of *Gastrodia* “long column”, aren’t they? Fig.4 of G. “Owhango”, shows the long column just beneath the labellum and the tubular perianth with knobs on, not unlike the colour of G. *cunninghamii* (Fig. 5) but lacking the latter’s black tip to the labellum. For comparison is biscuit coloured G. aff. *sesamoides* (Fig. 6) without knobs. G. “long column” of both forms outstrip the other two for the flower count per stem. With all those depicted, flowering seems to occur only once every two or three years. Ross showed us where G. “long column” bloomed last year on the other side of his lily pond. No doubt the tuber is still there, thriving on its symbiotic fungus but on the surface there was no trace.
As darkness descended, the four regaled themselves with an excellent meal and much orchid talk at the Owhango Hotel before collapsing at the Ski Post for a sleep untroubled by the crossing bells and mini earth-quakes from freight trains and laden truck/trailers rumbling through the night.

Sunday’s showers saw farewells from the Bishops, a return to Rob’s Waitahanui studio to take in a welcome cuppa, his innovative wood turning and exquisite carving then the descent on Trevor and Barbara Nicholls at their Taupo haven for a surprise (for them) lunch. With five aboard and the long-suffering Carona on the bump stops, Trevor obligingly came along and took the party around his favourite Iwitahi reserve in the worsening drizzle for the final leg of a hectic two days. Some fading *Chiloglottis valida* and a few fresh *C. cornuta* took the visitor’s eye. Scattered *Gastrodia* aff. *sesamoides* were in flower throughout with some healthy specimens crying out for their photo’s to be taken. The rain which put paid to that idea, stopped as the group departed on a tight schedule amidst much muttering and gnashing of teeth from the driver.

Many thanks to the participants mentioned for going out of their way to make this field trip happen and your column just knows that Karsten was most impressed in some way or another, with the eleven NZ native orchids he saw in flower.
Notes

What happened to your subscription in the first quarter of 1998?
1. 190 journals were printed -
   • 170 to NZ (4 free to life members, 3 to Legal Deposit Office, 163 subscribers)
   • 10 to Australia (8 free to other ANOS groups, 2 to subscribers)
   • 3 to Europe (1 free to Kew, 2 to subscribers)
   • 1 to a Japanese subscriber
   • 6 spare copies for future members.
2. Breakdown of expenditure was -
   • NOGJ66 printing $267.75
   • “ 2 x colour plates $738
   • “ postage $154.90
   • sundry post and stationery $ 50
3. The Group’s income amounts to about $3000 p.a. from subscriptions (permitting an average expenditure of $750 per issue of the journal).
4. Additional income is derived from the sale of other publications (mostly the Field guide) and is used as a buffer against over-expenditure on the journal, as a reserve for future publications, and for the purchase of books for the NZNOG Collection.
5. The Group’s accounts are healthy with a current account balance (31 March) of $2444.03 and a term deposit of $5000.

Barbara McGann sent Gastrodia “long column” “from an easily accessible spot in the Herbert Forest — a track that was blocked off for several years following logging....
"13 Feb 1990. First sighting. One 80cm stem with 31+ sulphur-yellow/black-grey flowers. This part of the track is now closed.
"21 Jan 1996. Lower end of track rerouted, passing under pines with straggly under-cover of mahoe and ferns. Small stream nearby. A few grey asparagus-like stems noted.
"2 Feb 1996. At least 20 Gastrodia ‘long column’ dotted around — some flowering well (fully open for most of the stem) and others still growing on.
"13 Feb 96. At least 30 plants either side of about 30m of track. Flowering well.
"28 Feb 97. 100+ plants within 1-2m of the track. Many flowering, some collapsing and past their best. 20-80cm tall, 10-58 flowers (on the few I counted). Scent — musty. Old-clothes-in-a-wardrobe (not that I have any of those!) smell. Some stems had well-opened flowers giving the whole plant a lemon-mustard colour. No sign of insects. Other vegetation in the vicinity included mahoe, wineberry, Himalayan honeysuckle, broom, grasses, ferns.
"8 Feb 98. A quick look. A few flowering colonies, some past — especially those outside the forest canopy.
"15 Feb 98. Not especially counted. At least 12 colonies of 3-18 plants; several dozen ‘singles’. More widespread along and back from the track than previously noted. The flowers on many were a noticeably light buttery-yellow (rather than sulphur-yellow) and many flowers were widely open. Much drier in this area than is usual. No sign of insects. Can’t make up my mind about the scent. Thought at first I detected a very pleasant fragrance but later sniffings were more musky. Remembered I’d washed my hand with a nicely perfumed soap before leaving home so maybe I was smelling flesh rather than flowers initially. The stems out in the more open areas well past and fruit pointing up along the stem.”
Peter de Lange wrote, "Gastrodia ‘long column’ — what struck me (about the photographs in the last issue) was that they are so yellow. I have seen this beastie three times, at Orahiri S.R., Waitomo (in seed), on Mt Pirongia (in seed), and at Kowai Bush, Kaikoura, in Feb 97, where it was in full flower, growing in a slow flowing stream (!) under manuka. These plants were tinted lime green and smelt distinctly of Friesias - don't ask me about scent accuracy, I have rhinitis, but my wife assures me this was the scent she smelt. As you have already observed for your plants, all the flowers were open in the ones I saw - 12 spikes. We were in a hurry so I didn't stop to see if the small flies hanging around the plant were actually moving pollinia.

"Thelymitra ‘Ahipara’ — I got this little orchid to open its flowers quite by accident i.e. a few plants left in the boot of my car, during the great translocation. The boot got very hot and when we opened them that evening, bingo! Open flowers — this never happens in the wild! The flowers are very like what you call T. intermedia - I sit on the fence on that name.

"Lastly, forgot to mention, during Xmas 97 my partner and I went for a tramp around Tongariro National Park — viz up the Mangatepopo over to Oturere and thence back via Waitahononu - Tama Lakes and Whakapapa. Whilst out on a ‘phone call’ I spied a small patch of Waireria stenopetala flowering amongst stunted Dracophyllum and bog pine on a small swampy terrace above a tributary stream to the Ohinepango. This was somewhat of a surprise because I had last seen it in flower on Little Peel (Geraldine) in January 1995 and did not think to see it here so far to the North of the Tararua Ranges, its accepted northern limit. It puzzled me further because Anne Fraser had told me in 1996 that she had heard that ‘someone’ ( i.e. the illustrious someone of all good tales) had seen ‘Lyperanthus on Ruapehu’ to which I assured her this couldn't possibly be. I was wrong obviously but who was this someone? Was Aunty Anne right after all? Does anyone know?"

Bruce Irwin was in New Plymouth in the second week of January, and he and John Dodunski slipped away to the west side of Mt Taranaki; John had told Bruce about a "Pterostylis" that sounded like the elegant form of Pterostylis aff. montana at Horopito, near the base of the Kahui track. Unfortunately though it was supposed to be thick on the ground we found no sign of it but about an hour and a half further up the track John spotted 3 or 4 flowers of what I thought might be P. paludosa (very late flowering if it was P. paludosa which flowers at Ruapehu in midDecember at a much greater altitude), though they were not in a bog, just a mossy area alongside the track which perhaps never dries out. They had very wide petals, longer than the dorsal sepal and free from it toward the top so they failed to lie close to the dorsal. Instead they turned slightly outward, the margins of the upper half of the petals wavy, even irregular. The labellum is apparently only occasionally twisted to the right though I think
the twisting can increase as the flower matures. Stigma thin, shield-shaped, much like *P. paludosa* which I am inclined to think the plant must be. On the way back to the car I found another single flower of the same form.... Perhaps these flowers were abnormal, though they were seen more than 100m from each other.”
Ian Rutherford wrote from Kaitaia, "I note the Drymoanthus in the north is quite different from that in Taranaki. The leaf is longer and narrower and sharper pointed: I did find some on a nikau which I had not seen before. Also the flower appears more towards pink. The Earina autumnalis is a lot shorter leaved and much whiter flowered.... Both species of Bulbophyllum are close to home."

Apologies to Max Gibbs: in my editorial panegyric on Bruce Irwin I was not aware that Max had received the John Easton Award in 1991 for native orchid work. Why didn’t somebody tell me?

Taupo Orchid Society reports that the Iwitahi Native Orchid Reserve has received a cheque for $4385.70 from the Kapiti Orchid Society, which has wound up, and wanted to help the Reserve in its efforts to study and preserve NZ native orchids.

George Fuller sent a Chinese book about Gastrodia elata (see "Close relations" in this issue). The book’s title is Tienma according to my translator Allan Cho, and contains chapters on structure, embryology, pollination, mycorrhizal associations, etc - or so the pictures suggest. What Mr Cho told me though, was this is a book on Chinese medicine, he even produced from the back of his fish shop in Newtown a bottle of "Tienma", a medicine, according to its label, for "Weakness of the liver and kidney, disturbance of nerves and blood circulation, headache due to hypertension, numbness of the limbs, and pain in the loins and legs". If, as Peter de Lange suggests, G. aff. sesamoides grows so easily, isn’t there an opportunity for a new export industry here?

Journal 66 carried one illustration from the book: here is another, showing the flight of the pollinator inside the flower of the long-columned G. elata.↓
C. cheesemani
C. iridescens
C. macranthus
C. oblongus
C. trilobus s.l.
Cyrtostylis reniformis (or Acianthus — whatever!)
Danhatchia australis (uncommon)
Drymoanthus adversus
Earina autumnalis
E. mucronata
Gastrodia minor (uncommon)
G. "long column" agg. (uncommon)
Genoplesium nudum (uncommon)
Microtis unifolia
Orthoceras novae-zeelandiae
Prasophyllum colensoi
Pterostylis alobula
P. banksii
P. cardiostigma
P. foliata (uncommon)
P. graminea
P. paludosus
(uncommon)
P. patens
P. trullifolia
P. aff. montana (sensu
St George et al.
1996: p. 89)
(uncommon)
Thelymitra longifolia s.s
T. aff. ixioides (uncommon)
T. pauciflora
Winika cunninghamii.

Genoplesium pumilum was still flowering when I visited the Waiti Road site, known to many of us, on 19 April. Pigs had been rooting the area, and the little orchids were hard to find this year.

The Orchadian (Vol. 12, No.7, March 1998) appeared, without further taxonomic revisions in the New Zealand Orchidaceae. There were new names for a New Caledonian Pterostylis and some Australian Thelymitra, and there was the news that the genus Dockrillia, newly separated from Dendrobium, has not been accepted at Kew.
Close relations: orchids like ours
Forms of *Gastrodia elata* from the Chinese publication *Tienma.*
From the internet

A correspondent asked, "What is the currently accepted number of species in the genus *Pterostylis*? My copy of Native Orchids of Australia by David Jones says 'some 120'. Can anyone firm up in this?" The response came: "At that time, that would have been the case, but since 1988 a number if new species have been described, bringing the total up to around 170 - 180 spp. If memory serves me correct, we could finish up with about 350 spp based on what David Jones said at a recent Australian Orchid Foundation AGM. Could see some species being transferred into other (new) genera as part of on-going revision."

On fragrance: "Every time one of my fragrant orchids is in bloom the people who smeli them have very diverse opinions as to what the smell is. The latest is my *Rynchosstilis gigantea*. The one comment that I received that stands out is a "fresh" smell. That is a lot better than my *Miltonidium* 'pupukena sunset' which is said to smell like an old lace garment stored away for a long time. Happy sniffing."

An interesting contribution: "I have 17,000 plants sitting in Colombia with my father-in-law and have been looking for a larger piece of property that is undisturbed to move the plants to; but guerrilla groups add extra danger to being in the wilderness, and so far finding a piece of land in an area where there is a little security has been fruitless. I agree that it would be better to keep them in their native habitats but what do we do when that habitat has disappeared completely. If a grower in Colombia for example has rescued plants from slash and burn areas he cannot sell those plants to foreign markets because of CITES. So it cannot be a money making concern to try to recoup funds spent on plant rescue. Many Colombians would be more responsible about their plant resources if it could be profitable to do so. Look at how ecotourism has helped the Amazon by bringing in money to the locals so they then see the advantage of saving the land. But as the laws exist now Colombian orchidists are looked at as if they are criminals unless they have a breeding program — which only looks after the showier more popular plants. What about the *Bulbophyllums*, not a particularly cost-effective group of plants as they do not hold great appeal to the average grower. Do we just lose them because they have no commercial potential? The problem is immense and there is no simple answer. I just wish personally that there was an answer for all of my Colombian plants."

The Orchid List Digest ran an interesting correspondence on the shortcomings of CITES and conservation ideology. A New Mexico correspondednt wrote, "Ironically, we believe that if we wag our finger at developing nations and inform them in somber tones that they should 'stop that population growth and tearing-down-the-rainforest thing' like they're a puppy that keeps wetting the rug is hardly the solution; worse, we're hypocrites of the highest order by insisting they do so.

"We like to think the roots of every problem belong to someone else, that we're chopping down the rainforests because (perhaps) Peruvians eat trees or something. Instead, it's the industrialized nations — our gluttony for cheap beef, cheap lumber, cardboard and chopsticks, and desires to sell industrial equipment to ' primitives' (not my language — that used by others) because they are a
growing market — that are causing the consumption of rainforest and accompanying diversity.

"And we're all guilty. Whether we know it or not, we're contributing in the extinction of species....

"A fellow by the name of Burt Motsul (a PhD, if I recall correctly, in psychology) runs Rare Plant Research in Oregon. He tried to find one species of Bursera (the largest member of the genus); three populations were known in Mexico or somewhere. When he traveled to find it (he travels a lot to find weird plants), all three populations had been replaced by a banana plantation, and the homes to support those that worked there. The species is now widely regarded as extinct.

"So. Feel free to whine, hoot and holler about the current CITES mess, but until we change things, we're going to have to deal with it.

"I don't think there's a 'fix' for the current mess; perhaps we could label orchid media with cobalt-60, and we could subsequently screen orchids with a detector to see if they were propagated.

"Fortunately, seed is relatively free of restriction; of course, some of the most endangered plants (paphs, phrags) are restricted even as dry seed. The way I understand the law, if they are sown in flask, even CITES Appendix I species (such as Paphiopedilums and Phragmipediums) are free of restrictions.

"Seed. Propagation. Dissemination. Defense of the orchid genome by shunning artificial hybrids in favor of the natural species from which they originated. We can always re-make the hybrids in a couple decades; the extant species don't have that long.

"Speak now, or all you'll have to show for it will be 100,000 artificial hybrids, each with a dealer saying, "No, I don't have that one, but I have one that looks just like it.

"All orchids look the same, given sufficient time."

A Brazilian correspondent added, "I am from Recife in Northeast Brazil. I grow my orchids in a farm situated in 900m high mountains 270km from Recife. This is in the middle of Cattleya labiata habitat — to me, the most beautiful of all orchids.

"I have been collecting orchids in several states in Northeast Brazil for more than 16 years now, and my only regret is not having enough time and money to travel and collect more.

"In the first place let's think a little about hypocrisy: every single person on this list owns plants that have been, either itself or their ancestors, collected in the wild. So if you are so strictly fundamental about it, send me back those plants with Brazilian ancestry and I'll try to attach them to trees or rocks in their native habitats.

"Seriously, there is one big problem: their native habitat probably does not exist anymore. So, if it was not for that greedy orchid hunter or dealer, a lot of those beautiful orchids you like so much probably would not exist.

"I collect in areas that are either devastated or will be for sure. I cannot tell you how many times I have come back to a forest where I had collected to find sugarcane or coffee or just burned ground. Only those of you who have visited tropical highlands can imagine the huge number of individuals and species that are lost in a slash and burn operation. So, there is nothing more ridiculous than trying to stop somebody from taking (and saving!) 20 or 30 plants, while looking the other way while one or two hundred thousand plants are burned (if you count the 'botanicals' and miniatures, then
the numbers would easily reach into the millions).

"There are two positive developments in Brazil that, I hope, will do more for orchid conservation than the CITES agreement. 1) If you cut the demand for native plants, than you cut commerce. There are now several good nurseries in Brasil multiplying by seeds and meristems. When prices get down to the levels of, say, Hawaii or Florida, then people will not have reason to buy jungle collected plants. So, the first measure is to stimulate modern nurseries to mass produce seedlings. Unfortunatly, bureaucrats in my country (who cannot distinguish an orchid from a banana) and CITES tend to make the life of these people a mess. Good nurseries, less import restrictions i.e. more legal plants on the market, is the main antidote for mass collecting. 2) The second measure is the hardest — trying to preserve native forests. In Brazil, lately the laws against deforestation are getting tougher and more enforced. But being such a huge country, this is possibly too little and too late. So, if you are really into conservation, try to contact an NGO that is willing to buy land and leave it as a preserve; that is the best solution to this problem."

A Canadian responded, "One has to recognize today that the well-intentioned, but terribly misguided originators of CITES had no sense of meristem possibilities and the recognition that the slash and burn agriculture of the tropics as well as the urban sprawl of the developed nations would make their legislation counter-productive. The lumping of plants and animals in one piece of legislation is not only unworkable, but impossible to administer.

"There are many aspects of this, but most important is the recognition that the word 'conservation' is itself obsolete. We have to substitute 'management' for it and figure out how to take care of what we have been given. The time for lamenting the sins of the past and the rapers of the tropical forests and the legislation that resulted is over. The question is what do we do with what we have?

"It is very easy to blame governments and also expect them to remedy the situation, but the real question is what can we do in our own greenhouses or light-banks. All governments are suffering reduced revenues and 'conservation' is only a useful word in empty rhetorical campaigns. I hope I can convince you to substitute management for conservation. There is very little to conserve. There is a great deal to manage."

A redneck (or was this tongue-in-cheek?) from Houston, Texas, wrote, "For those of you who have not checked out http://gurukul.ucc.american.edu/ted/orchid.htm, do so. Here is one of the fronts on the web of the environmental extremists. This is neo-socialism at its best. For those of you who do not know what 'neo-socialism' is, it is the de facto take over of industries and property by excessive taxes and regulations since the mid 1960s, as opposed to the more obvious method of outright takeover (nationalization), like the communists do. These people thrive on class envy and guilt trips. The normal language used is save or help 'the children', some animal like an owl and 'ecosystems' killed along with the forests, etc. This article has the rare attribute of actually stating the class envy motives and hence the organization's raw political motives. Therefore, along with the usual code words (for the children, save...) you will find:

1. "'Unsatisfied with nursery-produced orchids, many seek out specimens from the wild, particularly endangered ones"
which are protected by national laws and CITES.

2. "Orchid collecting as a hobby has grown increasingly popular, especially among the wealthy people in Europe, the United States...an obsession that leads them to behavior that ranges from odd and bizarre to dishonorable and devious.'

3. "Raising orchids involves a great deal of time and money, and therefore most orchid collectors are people who are so wealthy, that they no longer have to work.'

4. "Some fanciers get so caught up that their marriages falter.'

5. "Orchid growing is a very elitist hobby. And of course, rich people like to show off, so it is a social hobby as well.'

6. "There is great competition among orchid collectors to one-up their peers.....turn to the orchid smuggler, who can pluck rare, endangered type....It is those who are most interested in showing off to their peers who are the greatest danger to wild orchid survival'.

7. "...orchid mania is the case of a white Florida man who was absolutely obsessed with orchids....'

8. "Third world nations realized that their environmental heritage was being stolen from them by rich Westerners'.

9. "For two reasons, orchid smugglers continue unabated. First of all, nursery-raised orchids are expensive..secondly, orchid collectors often find nursery-grown orchids to lack the exotic aura and mystery of wild orchids'

"These are sick people!"

Views expressed by writers whose work appears in the NZNOG Journal are not necessarily those of any member of the Group, nor those of the editor.

Australian notes

Fourth Australasian Native Orchid Conference and Show "Native orchids: our natural heritage": 5-8 October 2000

The Fourth Australasian Native Orchid Conference and Show will be held in Melbourne from 5 to 8 October 2000. A broad range of orchid related topics will be covered. The Conference is timed to take place after the Olympic Games in Sydney and just before the Australian Orchid Conference 2000 in Burnie, Tasmania, on 12 - 15 October.

Venue
Karralyka, in Ringwood, an outer eastern suburb, is a well appointed conference centre in a native garden and park. There is excellent car parking at the venue and a range of accommodation available nearby.

Registration
The fee will include a conference badge, entry to the native orchid show, all talks and papers, and a copy of the Proceedings. Field trips, tours, conference dinner and the cocktail party are optional extras.
Conference programme
Two to three days of talks introduced by eminent keynote speakers. Potential presenters should contact us with a suggested title and contact details.

Field trips
Field trips are planned, and at this time of year many terrestrial orchids will be in flower. Guides will lead the outings. Visits to shadehouses and nurseries are also being considered.

Social
The conference will get under way with a cocktail party; a conference dinner will provide an opportunity to mix and enjoy the fine foods and wines of Victoria. There will be tours to visit Healesville Sanctuary, the wineries of the Yarra Valley or further afield.

Photographic competition
Who can resist photos of native orchids, taken by people with an obvious love of the subject? A photographic competition will allow for large prints (commercial or home processed), small prints and slides; and will have classes for close-ups showing flower detail as well as photos of a more general nature.

Art display
Artists are invited to submit works featuring native orchids.

Show
Our venue will provide a large display area. We will be attempting to show our unique native orchids in habitats ranging from fore-shore to cloud forest. Individual and group displays will be included and will be judged with prizes awarded.

Contact
Conference secretariat, PO Box 2152, Templestowe Heights, VIC 3107.
Home page http://www.ozemail.aust.com/~graemebr/anos-con.html

Summer orchids of Tasmania
by Eric Swarts, from the West Australian Native Orchid Study and Conservation Group's Bulletin 1998, March: p3: to remind NZ enthusiasts of how like Tasmania's our orchids are.

Over the Christmas break we had the pleasure of touring Tasmania and while sight-seeing and visiting family and friends were a priority, we managed to fit in some orchid hunting. A grand total of 17 varieties of orchids were found — not a bad tally considering I was not familiar with the locations and the conditions were unseasonably dry.

We arrived in Devonport (north coast) by boat on the 29th of December and commenced our travels down the east coast until we arrived at Coles Bay (Frey cinet National Park). This is a very picturesque area with Banksia heathland coastal flora similar to our south coast. As luck would have it, the owner of the caravan park was a keen orchid lover and she managed to direct me to a few locations. Coles Bay is renowned for its diversity of orchids and over 40 species have been found within and in close proximity to the caravan park. My first Tasmanian orchid was the beautiful pink hyacinth orchid, Dipodium roseum. This orchid is a saprophyte, with the stem sometimes containing up to 50 flowers. This orchid was
flowering within 5 metres of our caravan site and was prominent throughout the National Park particularly near Wineglass Bay. On a sandy track nearby, we found two varieties of duck orchids, *Caleana minor* and *Caleana major*. *Caleana minor* is similar to our own duck orchids; with a long leaf a distinguishing feature. *Microtis rara* was also found close by.

Moving further south we stopped at Kingston (near Hobart) and spent an afternoon up Mt. Wellington. This is supposedly another rich orchid area, however the dry conditions had obviously taken its toll. Near the base of the mountain, we ventured along a rainforest track at Fern Gully and found our first greenhouse - *Pterostylis foliata*. A day trip to the beautiful Huon Valley and the Tahune forest reserve revealed two more orchids in rainforest locations — the familiar *Gastrodia sesamoides* and *Pterostylis scabrida* (I think!).

We spent a week at Cloudy Bay on South Bruny Island and found a number of orchids flowering. A highlight was finding the beard orchid Calochilus herbaceus. Even though we found only a few still in flower, the beard orchid appears far more common in Tasmania than they do here in the West. Two lucky orchids, *Prasophyllum flavum* and *Prasophyllum odoratum* were found in good flower, as was the old favourite, *Microtis unifolia*. Is there any place where this orchid does not grow? *Thelymitra cyanea*, a veined blue sun orchid was prominent on the low heath covered headlands, close to the ocean. *Pterostylis obtusa* was found in rainforest in more elevated regions of South Bruny Island. Moving on west of Hobart, we camped a few nights at Russel Falls (Mt Field National Park). Apart from the falls, the highlights included the variety of native animals that we were able to observe. A *Pterostylis* species and an Eastern States bird orchid — *Chiloglottis cornuta* were found here. Travelling up to Lake Dobson, revealed a distinct change in vegetation as the altitude increased. Lake Dobson is a sub-alpine region and the orchids found were common alpine plants. Our first spider, *Caladenia alpina* was fortunately still flowering, as was a very distinctive orchid — *Townsonia viridis*. This was a new genus for me and it doesn't look like any other orchid I have seen. It is often found on dense shade in mosses in forest locations. Another alpine region we visited was the beautiful Lake St Clare. Around the lake we found *Thelymitra ixioides* and *Pterostylis foliata*. Our final stop was at Boat Harbour near Rocky Cape National Park. Here we found a few of the orchids previously mentioned as well as the slipper orchid, *Cryptostylis subulata*. The Rocky Cape is also a renowned orchid hotspot and would be worth a visit in October to November.

In the four weeks we spent in Tasmania, we only sampled a small portion of the orchids that were on offer. The variety of habitats encountered would suggest a rich orchid flora, and it has only served to whet the appetite for further investigations. For anyone contemplating visiting Tasie, I would thoroughly recommend the little booklet *Orchids of Tasmania - Plant Identikit* produced by the Society for Growing Australian Plants Tasmanian Region Inc.1993.

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**Orchid smuggler fined**

A German tourist, Dr Manfred Schoenfelder, a retired chemist from Cologne, was fined $10,000 for trying to smuggle West Australian orchids out of the country. His offence contravened federal customs laws and breached the Wildlife Conservation Act. He was caught with 66 native orchids.
Historical reprints: The first descriptions of *Bulbophyllum pygmaeum*

1769-70: Daniel Solander described in manuscript (i.e. he never published the description) a plant found during Cook's first voyage. He called it *Epidendrum pygmaeum*. His Latin description is translated by Dan Hatch:

> "Habitat - NZ - parasitic on trees, in the vicinity of Opuragi [Whitianga].
> "Root - creeping on the trunks of trees, on rocks and on dead plants. Filiform, terete, commonly as thick as a thread, smooth, much branched; Rootlets exserted from below the bulbs, long, white, filiform, more or less branched.
> "Obs. - Please allow me to draw attention to this rather remarkable bulb-bearing plant, with its creeping stems.
> "Bulbs - leaf-bearing, sub-globose, often flattened from above, one and a half lines in diameter, about the size of a small pea, slightly wrinkled, polished-glabrous.
> "Leaf - solitary, on a very short petiole, sub-horizontal, ovate or ovate-oblung, frequently slightly obtuse, entire, flat, leathery, with very small spots, and if seen through the microscope, the upper side with very short scattered hairs, the underside naked.
> "Flowers - not seen by us.
> "Affinities - with Epidendrum emarginatum Ms."

So they didn't see the flower.

1808: Sir James Edward Smith, who wrote over 3000 articles for A. Rees's *Cyclopaedia or universal dictionary of arts, sciences and literature* (not a lot of humility in Rees), renamed it *Dendrobium pygmaeum*. He wrote,

> "Stem creeping, bulbiferous. Leaves nearly sessile, elliptical, downy, coriaceous, solitary from each bulb. Clusters... Gathered on mossy rocks and trees in New Zealand, by Mr. Archibald Menzies F.L.S.... Stems thread-shaped, slender. Leaves alternate, on very short footstalks, elliptical, obtuse, revolute, coriaceous rather than fleshy; ribbed and roughish beneath; clothed above with short, prominent, downy hairs. Each footstalk proceeds from a little round bulb, like a ring, smooth and shining, yellowish, and much wrinkled in a dry state, but apparently very succulent when fresh."

Interesting, that. Menzies accompanied Vancouver on the *Discovery* which spent three weeks refitting in Dusky Sound in November 1791. As did the Forsters before him, Menzies remarked on the tropical aspect of the vegetation, but even so *Bulbophyllum pygmaeum* was a rare find in Fiordland, and it is still rare so far south.

1830: John Lindley transferred it to *Bulbophyllum*. 