

Pterostylis



from Haurangi State Forest Park,
Southern Wairarapa,
(Aorangi; ecological region no. 37)
14 November 1998

Contents

Cover

Pterostylis from Haurangi State Forest Park, southern Wairarapa

2. Guest editorial: E.D. Hatch

From the editor

3. Edwin Daniel Hatch, octogenarian. The NZNOG code of ethical conduct.

4. British orchid genera VII: a miscellany.

6. Tales of pterostylises.

9. Orchids by Ecological Region.

Notes, comments, letters

13. NZNOG affiliates with NZ Orchid Council. John Williams finds *Caladenia chlorostyla* in ecological region 24. *Gastrodia* aff. *sesamoides* in John Groom's neighbour's garden.

14. George Fuller waxes fulsome on *Chiloglottis formicifera*, and describes double-headed *Corybas iridescens*. *Nature guide to the NZ orchids* due in 1999.

15. Johns & Molloy's *Native orchids of NZ* auctioned. A good year for *Winika cunninghamii*.

Doyle Allison-Cooper dilates on *Microtis*. Dan Hatch on *Australian orchid research* Vol 3.

16. Triple-headed *Pterostylis* aff. *montana* from North Otago. Peter de Lange's observations.

18. Queensland's orchids. *Thelymitra circumsepta*, *T. formosa* and *T. resecta*. *Bulbophyllum pygmaeum* in the Hokianga. *Gastrodia* "long column" at Silverstream.

Close relations: orchids like ours

19. *Microtis unifolia* from New Caledonia

Historical reprint

20. RD FitzGerald on *Thelymitra media* and *T. circumsepta*

Original papers

24. Ten tips to better orchid photographs. David Banks.

26. Seeing double. George Fuller.

28. The NZ genera 7: *Calochilus* and *Chiloglottis*. ED Hatch.

The Column: Eric Scanlen

30. *Thelymitra* enthrallment at Te Pahi.

35. *Pterostylis irwinii* in Nelson.

Conference and field days

40. Pokaka 1998. Bruce Irwin, Eric Scanlen, Anne Fraser, David McConachie.

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Editor: Ian St George, 22 Orchard St, Wadestown, Wellington, phone 04 4994227,
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Guest editorial

by E.D. Hatch, Laingholm

Looking back over my sixty year career as an amateur thorn in the botanical side, I have come to the conclusion that it was all very casual and unplanned. At no time did I actually intend to do anything. As you might say *willum nillum*. I was interested and I was ignorant and I wanted to know. To mangle Omar Khayyám –

*Into this botany, and why not knowing,
nor whence, like water willy-nilly flowing,
like wind along the Waiouru waste,
I knew not whither, just willy-nilly blowing.*

I have probably annoyed more people than I have pleased. On the other hand the friends I have made have been very loyal. I have had a lot of fun and may even now and then have done something useful. There have been one or two high spots –

- Working with Lucy Cranwell in the herbarium at AK, which developed into a fifty-year friendship and an FLS.
- Collaborating with HMR Rupp on the transtasman orchids and helping him to describe the genus *Aporostylis*.
- Describing some of Bruce Irwin's and Owen Gibson's early finds, *Corybas cryptanthus*, *Pterostylis irsoniana* and *Thelymitra sanscilia*. Another fifty year friendship.
- Working with Ross and Jim Beaver, and Leslie Garay, which culminated in *Danhachia*. This was disappointing for Mark Clements, who had planned another, and excellent, name for the genus. There is a moral here somewhere – 'do not delay'.
- Arguing with Lucy Moore over the *Flora* II orchids. She told me to mind my own business and then described *Thelymitra hatchii*. Later she sent me a complimentary copy of the *Flora*, stockings for the

girls and a charming little note thanking me for giving her something to criticise because, she said, 'it was easier to criticise than to do the work in the first place'.

- Driving Mark Clements to get a move on with *Corybas rivularis* / *acuminatus*. He has never forgiven me.
- Working with Brian Molloy on *Thelymitra tholiformis*, which I enjoyed and he didn't.

I should perhaps make one point. The papers which have been so freely criticised, were submitted to the Royal Society of New Zealand, refereed in form by the then authorities (one paper rejected outright), duly altered and adjusted, and printed in *Transactions*. If I was wrong, and I was often wrong, the referees were not aware of it. I shall undoubtedly go down in history – right to the bottom!

From the editor (1): Edwin Daniel Hatch FLS, octogenarian.

Dan Hatch was born in 1919. He began his botanical life as a boy, and by now he has written over 100 scientific papers, most of them on the New Zealand orchids.

When he was stationed at Waiouru in the early nineteen-forties he explored the field on a push-bike. He found seven new orchids and realised Cheeseman's 1925 second edition of the *Manual of the New Zealand Flora* was far from complete. None of the professional botanists were studying orchids (there was a War on) so this accountant-soldier set out to

describe them.

He did so in a series of classic papers, mostly illustrated by his father, in the *Transactions* 1949-1963. The next major revision of the orchids was that by Lucy Moore for *Flora II* published in 1970, so Hatch's work was the first comprehensive and systematic treatment of the NZ orchids since Cheeseman's second edition in 1924! it thus provided a vital update of orchid knowledge.

He made a few mistakes. This is no criticism: so did Cheeseman before him and so did Moore after him. So no doubt will others, for publication of scientific work is rarely the last word. On the contrary, it should be the



trigger that informs debate: a private opinion becomes a public statement, now an open hypothesis to be tested by others. If in the testing the original hypothesis is found to be wrong, fine: the process of scientific debate has worked.

In the many times Dan Hatch entered the debate, in the generosity with which he shared his expertise, he became the greatest contributor to the knowledge of the New Zealand orchids of his time. He has continued to write for the orchid literature. He has been honoured by the Lucy Cranwell Lectureship and Honorary Fellowship of the Linnaean Society. He is one of only four Honorary Members of the NZ Native Orchid Group.

He has written the guest editorial above at your editor's invitation. We salute him as he enters his ninth decade.

Code of ethical conduct.

1. **Regard the orchid tuber as sacred** and leave it undisturbed. Take only photographs if a plant is scarce in a locality. If you need a specimen for identification, take the minimum — don't take the whole plant unless there are more than twenty; don't take more than 5% of any one plant; don't take flowers or fruit if there are few present; don't take duplicates. It is illegal to take specimens of any native plant from a Protected Natural Area without official permission.
2. **Make sure you know whether it can be grown**, and if so what its requirements are, before you take even a "common" native orchid for cultivation; where possible use seeds.
3. **Preserve the habitat** of all native plants: tread with care to minimise compaction of soil and disturbance of swamp habitat; "garden" minimally before taking photographs and do replace shelter if you have bent surrounding vegetation away.
4. **Don't introduce any plant** into wild habitat without proper authority.
5. **Do tell the conservation people if you find a new site for a rare plant.** Inform those who might unwittingly destroy a site with normal maintenance activities. Take care who you tell about the whereabouts of a rare plant, and don't take big groups to visit.
6. **Tell park or property administrators when they should protect orchid habitat** by clearing scrub, maintaining tracks, spraying weeds or burning off.
7. **Respect the rights and wishes** of landowners and those of conservation people who ask you not to visit a site at times.
8. **Make little impact on the environment:** dispose of rubbish responsibly.

From the editor (2): British orchid genera VII: a miscellany

Dactylorhiza

The marsh and spotted orchids are widespread throughout Europe, and display a wide and confusing array of species and hybrids. They are named for the fingerlike tubers.

Pseudorchis albida

The small white orchid is an alpine species, common only in northwest Scotland in Britain, but stumbled on frequently enough on walks in the mainland European mountains. This one was on a shingle slide in the Swiss Alps. It flowers May to July and is vanilla-scented, attracting moths and butterflies for pollination.

Anacamptis pyramidalis

The pyramidal orchid readily colonises tilled soil and is found in many parts of southern Britain and the Midlands, to Scotland and Ireland, flowering June to August. Its tightly packed pink flowers appear as conical shapes in the meadows. There is a long spur whose walls contain sweet juice attractive to the pollinating moths and butterflies. Darwin noted how the two pollinia are attached to a saddle-shaped disc which contracts to grip the insect's proboscis, the stalked pollinia then bending forward to strike the stigma of the next flower visited.



▲ *Dactylorhiza* species ▼



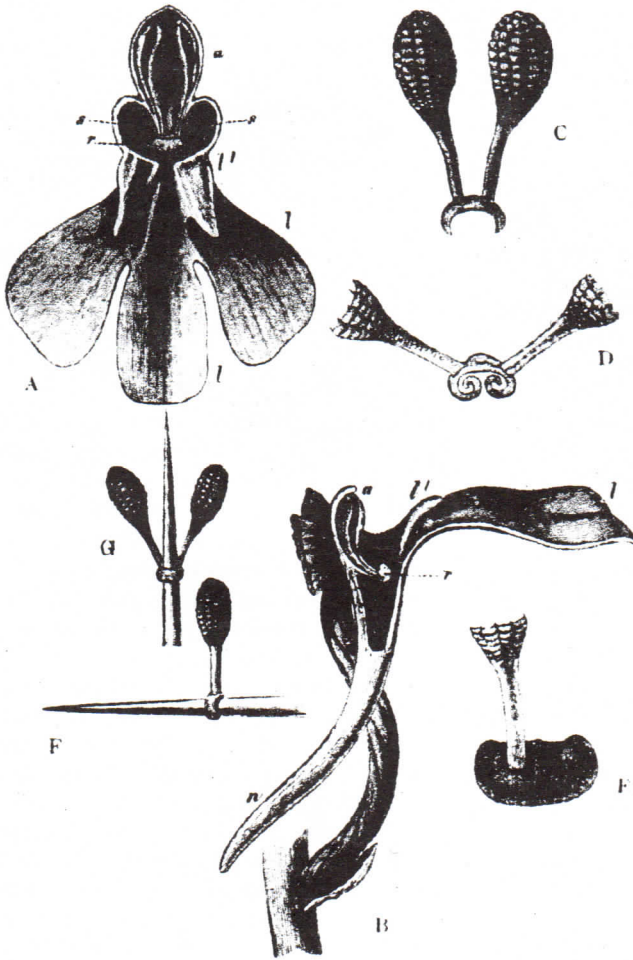
▲ *Pseudorchis albida*
Anacamptis pyramidalis ▼



LEGEND

- a. anther.
- l. labellum.
- s.s. stigma.
- l'. guiding plate on the labellum.
- r. rostellum.
- n. nectary.

- A. Front view, with all the sepals and petals removed, except the labellum.
- B. Side view, with all the sepals and petals removed, with the labellum longitudinally bisected, and with the near-side of the upper part of the nectary cut away.
- C. The two pollinia attached to the saddle-shaped viscid disc.
- D. The disc after the first act of contraction, with no object seized.
- E. The disc seen from above, and flattened by force, with one pollinium removed; showing a depression in its surface, by which the second movement of the pollinium is effected.
- F. The pollinia removed by the insertion of a needle into the nectary, after the saddle has clasped the needle by the first act of contraction.
- G. The same pollinia after the second movement and their consequent depression.



***Anacamptis pyramidalis*,**
the pyramidal orchid,

— from Charles Darwin:
Fertilisation of orchids, 1904 p18.

From the editor (3): Tales of pterostylises

① 14 November found me in Haurangi State Forest Park (Southern Wairarapa) to see what *Pterostylis* were on display.

A cluster of *P. graminea* first caught my eye at trackside as I trudged south, the headwaters of the Turanganui river accompanying me below the track. Further down *P. montana* (the small, wide-flowered, flat-sepal taxon with the round stigma) was sporadic on the banks, but heavily outnumbered by veritable groves of dozens, even hundreds of *P. banksii*.

Or were they? all had large flowers and identical labellums and columns with long flat stigmas. Otherwise they are variable here, even within colonies. In shade they may have long, broad, arched, dark, blunt leaves for all the world like *P. australis*, while plants with identical flowers but growing in the sun have short, narrow, sharp, upright, pale leaves. Some flowers have lateral sepals turned back and down, dorsal sepals curved down, for all the world like *P. patens*. Others have short dorsal and lateral sepals for all the world like one of the so-called *P. aff. montana* taxa (some of which seem to have greater affinities with *P. banksii* than *P. montana* anyway).

The older I get the less certain I am about the identification of pterostylises in the *banksii/patens/australis/aff. montana* continuum.

P. montana and *P. cardiostigma* were new records for the Region; further down the track there were a few *P. foliata* in full bloom, and just a few tantalising leaves of a *Pterostylis* with longitudinally striped leaves, suggesting a later-flowering plant having affinities with *P. irsoniana* (J67 p3). I'll be back in a month to try to catch them flowering.



② What is *Pterostylis australis* anyway? There has been doubt for some time. Lucy Moore wrote (*Flora* II, 1970 p143), "Further investigation is still required but meantime it seems useful to retain the concept of *P. australis* for the very abundant and often very large Fiordland plant which is matched in suitable habitats further north, and which usually stands well apart morphologically from, *P. banksii*." Nonetheless she gave as its distribution, "N., S., St. Probably on all wetter mountain ranges; to altitudes of 1,500m. in Ruahine Range...."

Hooker had described it in his *Flora NZ* in 1853: "Nearly as large as *P. banksii*, but the leaves are shorter, broader, not keeled, reticulated. Stem sheathed by the leaves. Perianth $\frac{3}{4}$ -1 inch long, erect at the base, then suddenly curved downwards. Lateral sepals with subulate erect tips. Upper sepals and petals with long acuminate points. Lip as in *P. banksii*, but the appendix is shorter." By 1864 (*Handbook*, p268) he had changed his mind and included *P. australis* in *P. banksii* as "var. β " of which he wrote, "Leaves broader.... Sepals less produced into long tails." He did not illustrate it.

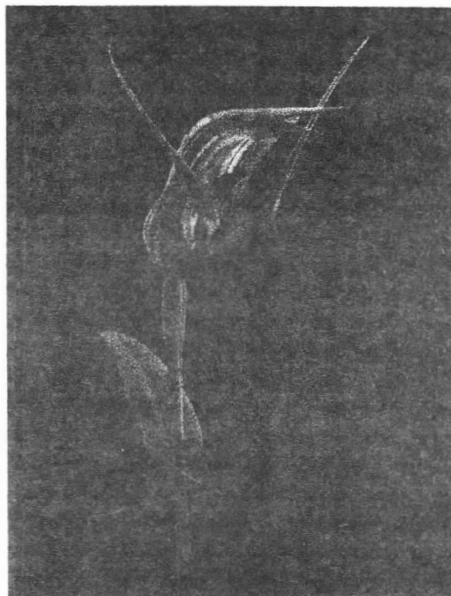
Cheeseman (*Manual* 1906 p679-80) reinstated it but seemed uncertain: "No doubt very closely allied to *P. banksii*, and to some extent connected with it by intermediate forms." His plants were "shorter, 4-10 in. high, rarely more. Leaves shorter and broader.... Flower small, $\frac{3}{4}$ -1 $\frac{1}{4}$ in. long, including the points of the sepals. Galea much as in *P. banksii* but the upper sepal and petals are not produced into filiform points." He stuck to that in his 2nd (1925) edition. He did not illustrate it.

Dan Hatch interpreted the name as applying to "rather narrow"-flowered plants "not un-

common in *Nothofagus* forests about the base of Mt Ruapehu... occasional throughout the Tararua and Ruahine Ranges... abundant in montane and subalpine areas... not uncommon throughout Stewart Island... also abundant in the Chatham Islands." His father drew it in May 1947, a short-sepalled flower (see next page). Hatch later added Mt Taranaki to the distribution, from specimens collected there by Irwin and Gibson.

Molloy described it (next to Johns's photograph in their *Native orchids of NZ*, 1983) as, having "broad-bladed rosette leaves merging into shorter narrower leaves on flowering stems.... The flower has longer tails that stand well out and above the hood, which also has a short straight point."

My drawing (*Field guide*, 1997) is of an Otago plant, and my interpretation relied



Pterostylis australis
photo by John Johns,
from Johns & Molloy, 1983.

pretty much on Johns & Molloy, though I cannot say I ever saw a plant with a true rosette of leaves in the far south.



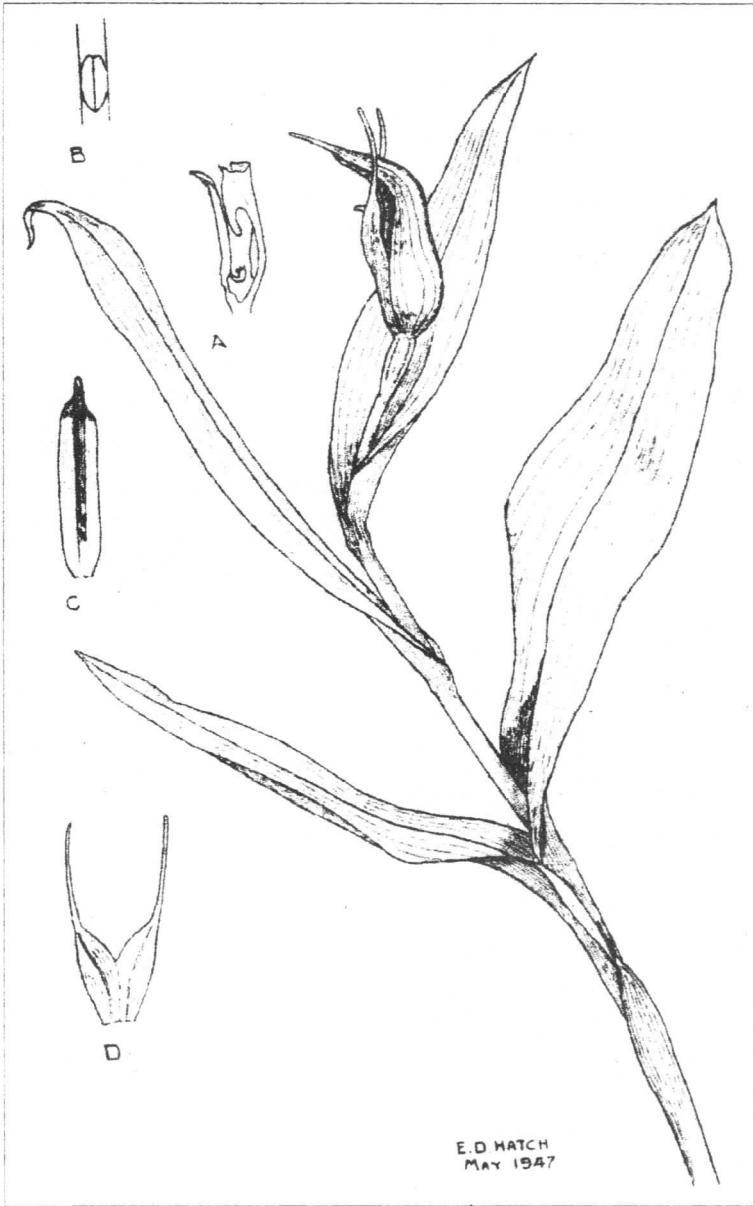
③ On highway one out of Wellington, you turn left north of Mana onto Airlie Rd, pass the Whenua Tapu cemetery and wind on up the hill. Over the summit the banks on the right constitute a GLOS. Amazing that it is right beside a tarseal road, but then a surprising number of Great Little Orchid Spots are.

This was a vintage year, even here. Slips along the bank bore witness to the heavy spring rains, and the bare clay was riddled with native bee holes. On 18 November *Thelymitra intermedia* was well in fruit, but rich deep purple *T. pauciflora* and various forms of pink or white *T. longifolia* were just in flower or still in bud. *Caladenia chlorostyla* was in full bloom, as was dark pink *C. minor* with its small bare triangular midlobe, and the light pink *C. aff. carnea*. Another small *Caladenia* was well over, its fruit brown and splitting. A miserable *Prasopphyllum colensoi* was about to open, and *Microtis unifolia* and close relations were everywhere. *Acianthus sinclairii* pods had dried and split. The odd early *Orthoceras novae-zeelandiae* leaves stood out, but it was the *Pterostylises* that thrilled.

One looked strangely familiar – could it be *P. irwinii*? Alas, no, just a tall thin-flowered version of *P. banksii*; and nearby a rather short version, and here too the tiny upright local version of *P. montana*, its flowers narrow, its lateral sepals flat and all but covering the opening to the floral cavity, its stigma almost spherical – certainly self-pollinating. And near the top, a veritable grove of *P. foliata*, mostly in fruit by now, the mature stems elongated to 40 or 50cm.



④ 26 November Pat Enright showed me a *Pterostylis* he had found and at two sites in



Pterostylis australis

drawn by ED Hatch, from Hatch ED (1949). "The New Zealand forms of *Pterostylis* R.Br." *Trans. Roy. Soc. N.Z.* 77: 234-46.

the eastern Wairarapa, and Arnold Dench had potted up. It was *P. porrecta*, an extension of the range for that newly described species previously known only from the Richmond mountains near Nelson and the Elsthorpe Bush in southeastern Hawke's Bay. Pat has a keen orchid eye: in 1997 he drew my attention to a July-flowering *Pterostylis* (otherwise very like *P. graminea*) near Wellington.



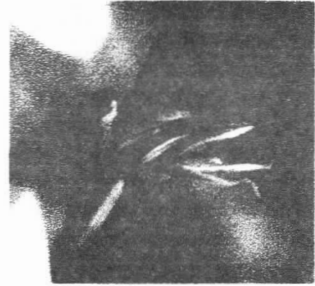
The ecological regions of *Pterostylis porrecta*



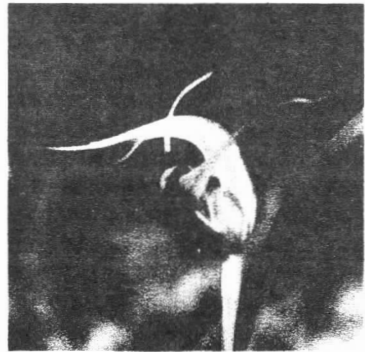
⑤ 5&6 December saw me at Ruapehu — where I was especially impressed with the form of *P.* aff. *montana* Bruce Irwin calls “elegant”: beyond doubt a new taxon. It was good too to renew acquaintance with *P. humilis*, *P. patens*, the local form of *P. graminea* and human friends.



⑥ 20 December I was again in Haurangi SFP (Aorangi: ecological region 37), looking for the *P.* aff. *irsoniana* with the upright dorsal sepal and the labellum without tubercles that I described in J67 p3. Alas, no luck. But I did find a good number of *P. irsoniana*, each with the typical callus at the base of the labellum, some small-flowered and narrow-leaved, the size of a *P. graminea*, with a red labellum; others the same size as Mt Taranaki specimens, with a dark labellum. Not previously reported from the region were *Thelymitra nervosa*, *Chiloglottis cornuta*, *Prasophyllum colensoi*, *Gastrodia cunninghamii* and *Caladenia chlorostyla*. Along with *P. cardiostigma* and *P. montana* (see p6), eight new species for the Aorangi region this year.



Pterostylis porrecta
from the eastern Wairarapa



Pterostylis aff. *montana* (“elegant”)
from Ruapehu



Pterostylis irsoniana
from Haurangi State Forest Park

From the editor: (4) Orchids by Region

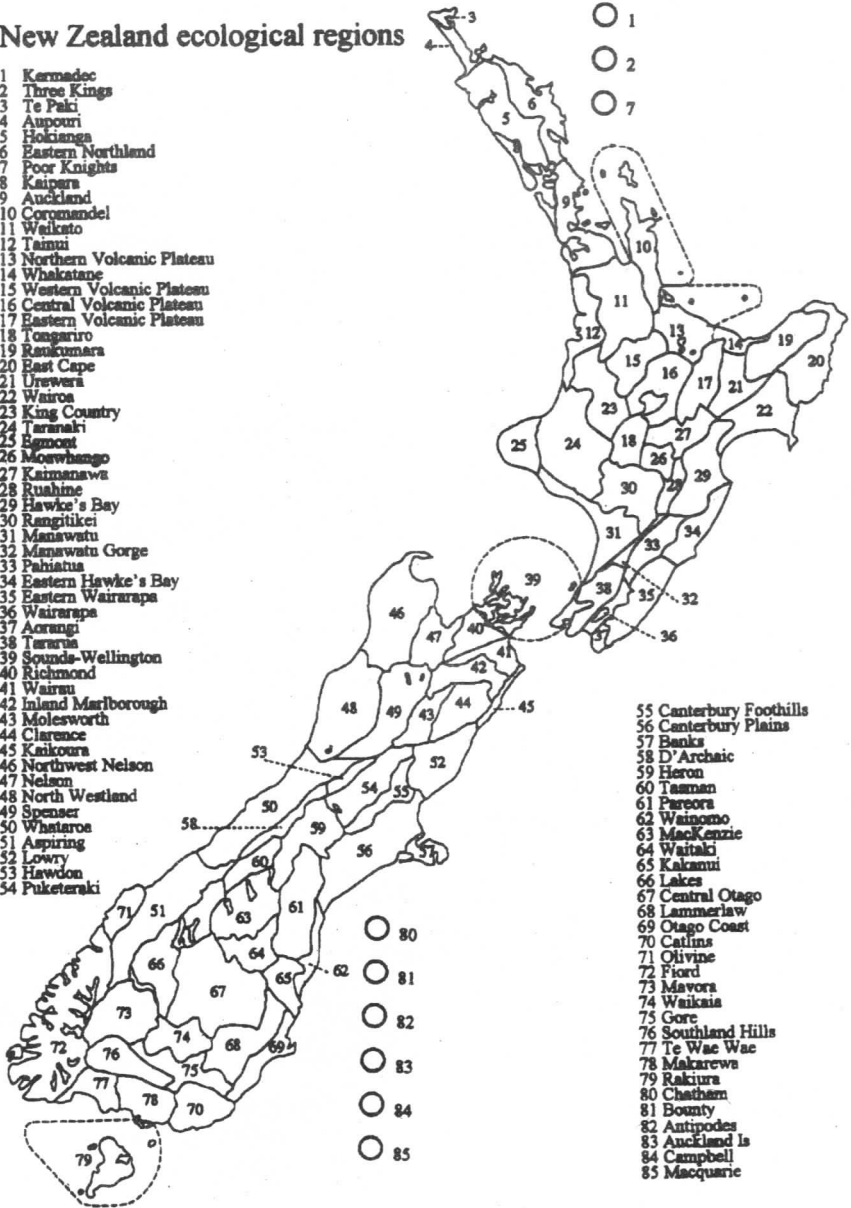
The NZNOG Mapping Scheme recorded reports, after 1972 of NZ orchid taxa, and resulted in the distribution maps published in the *Field guide*. The following updates new taxa and further reports (the numbers refer to NZ Ecological Regions). The editor would be grateful for information leading to more complete data.

- Acianthus sinclairii*, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 19, 20, 21, 22, 23, 24, 25, 29, 35, 36, 37, 38, 39, 40, 46, 47, 79, 80,
Adenochilus gracilis, 16, 17, 18, 19, 20, 21, 25, 29, 40, 43, 46, 47, 48, 49, 50, 51, 54, 59, 66, 68, 69, 70, 72, 73, 74, 77, 79, 80,
Aporostylis bifolia, 10, 13, 15, 16, 17, 18, 19, 20, 21, 23, 25, 26, 27, 28, 29, 38, 39, 40, 43, 46, 47, 48, 49, 50, 51, 53, 54, 59, 61, 63, 65, 66, 67, 68, 69, 70, 72, 73, 74, 77, 78, 79, 80, 83, 84,
Bulbophyllum pygmaeum, 2, 3, 5, 6, 9, 10, 11, 12, 13, 14, 20, 21, 23, 24, 25, 31, 38, 39, 40, 46, 48, 50, 61, 72, 77, 79,
Bulbophyllum tuberculatum, 5, 6, 9, 12, 13, 19, 31, 46,
Caladenia alata, 3, 4, 5, 6,
Caladenia atradenia, 5, 6, 9, 10, 12, 13, 16, 17, 18, 28, 38, 39, 40, 46, 47,
Caladenia bartlettii, 3, 4, 5, 6, 7, 8, 9,
Caladenia aff. *carnea*, 9, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 27, 31, 37, 38, 39, 40, 46, 47, 48, 49, 55, 66, 69, 72, 79, 80, 83,
Caladenia chlorostyla, 2, 3, 4, 5, 8, 9, 10, 12, 17, 18, 21, 24, 35, 37, 39, 48, 57, 70, 72, 73, 77,
Caladenia hyallii agg., 16, 17, 18, 24, 25, 26, 38, 39, 40, 43, 46, 47, 48, 49, 53, 54, 55, 56, 57, 58, 60, 61, 64, 65, 67, 68, 69, 70, 72, 73, 74, 77, 79,
Caladenia minor, 2, 3, 4, 5, 6, 8, 9, 10, 39
Caladenia nothofageti, 38, 40, 56,
Caleana minor, 13
Calochilus herbaceus, 3, 4, 5, 9
Calochilus paludosus, 5, 6, 10, 11, 13, 46, 47,
Calochilus robertsonii, 11, 13, 15, 16, 17,
Chiloglottis cornuta, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 35, 37, 38, 39, 40, 43, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 57, 59, 61, 63, 65, 66, 68, 69, 70, 72, 73, 74, 77, 78, 79, 80, 83, 84,
Chiloglottis formicifera
Chiloglottis valida, 17, 40, 52, 54
Corybas acuminatus, 3, 5, 6, 8, 9, 10, 12, 13, 15, 16, 17, 20, 21, 22, 23, 24, 25, 38, 39, 46, 47, 48, 49, 50, 51, 71, 72, 77, 79, 80, 83,
Corybas carsei, 11,
Corybas cheesemani, 2, 3, 5, 6, 9, 10, 11, 12, 13, 16, 17, 24, 25, 35, 38, 39, 46,
Corybas cryptanthus, 2, 3, 18, 24, 38, 39, 47, 48, 55,
Corybas dienemus, 85,
Corybas iridescens, 12, 13, 16, 23, 24, 25, 69,
Corybas macranthus, 9, 10, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 35, 36, 37, 38, 39, 43, 46, 47, 49, 50, 51, 55, 57, 61, 65, 66, 67, 68, 69, 70, 72, 73, 74, 77, 79, 80, 84, 85,
Corybas oblongus, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 38, 39, 40, 46, 47, 48, 49, 50, 51, 69, 70, 72, 77, 78, 79, 80, 83,
Corybas orbiculatus, 12, 24, 30, 42, 55, 45, 46, 58, 66, 79,
Corybas papa, 12, 18, 23, 24,
Corybas rivularis, 5, 6, 25
Corybas rotundifolius, 3, 4, 5, 6, 9,
Corybas trilobus agg., 3, 4, 5, 6, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 35, 36, 37, 38, 39, 40, 46, 47, 48, 49, 50, 51, 53, 54, 55, 57, 61, 65, 66, 68, 69, 70, 72, 73, 74, 76, 77, 78, 79, 80, 84,
Corybas trilobus hybrids
Corybas "Kaimai", 9, 10, 13, 19, 21, 25,
Corybas "rest area", 18, 38
Corybas "round leaf", 18
Corybas "Rimutaka", 38,
Corybas "Trotters", 18, 36, 57, 62, 71
Corybas "Waiouru", 12, 18, 24, 25, 26, 30, 32, 38, 46
Corybas "whiskers", 6, 9, 12, 15, 18, 23, 24, 47
Cryptostylis subulata, 4,
Cyrtostylis oblonga, 2, 3, 4, 5, 8, 9, 10, 38,
Cyrtostylis reniformis, 3, 4, 6, 20, 22, 29, 35, 36, 39, 40, 46, 47,
Danhatchia australis, 5, 8, 9, 10, 12, 46,

New Zealand ecological regions

- 1 Kermadec
- 2 Three Kings
- 3 Te Pahi
- 4 Aupouri
- 5 Hokianga
- 6 Eastern Northland
- 7 Poor Knights
- 8 Kaipara
- 9 Auckland
- 10 Coromandel
- 11 Waikato
- 12 Taupui
- 13 Northern Volcanic Plateau
- 14 Whakatane
- 15 Western Volcanic Plateau
- 16 Central Volcanic Plateau
- 17 Eastern Volcanic Plateau
- 18 Tongariro
- 19 Ruakumara
- 20 East Cape
- 21 Urewera
- 22 Wairoa
- 23 King Country
- 24 Taranaki
- 25 Egmont
- 26 Moerwhango
- 27 Kaimanawa
- 28 Ruahine
- 29 Hawke's Bay
- 30 Rangitikei
- 31 Manawatu
- 32 Manawatu Gorge
- 33 Pahiatua
- 34 Eastern Hawke's Bay
- 35 Eastern Wairarapa
- 36 Wairarapa
- 37 Aorangi
- 38 Tararua
- 39 Sounds-Wellington
- 40 Richmond
- 41 Wairua
- 42 Inland Marlborough
- 43 Molesworth
- 44 Clarence
- 45 Kaikoura
- 46 Northwest Nelson
- 47 Nelson
- 48 North Westland
- 49 Spenser
- 50 Whaitaroa
- 51 Aspiring
- 52 Lowry
- 53 Hawdon
- 54 Puketeraki

- 1
- 2
- 7



- 55 Canterbury Foothills
- 56 Canterbury Plains
- 57 Banks
- 58 D'Archaic
- 59 Heron
- 60 Tasman
- 61 Pareora
- 62 Waikamo
- 63 Mackenzie
- 64 Waitaki
- 65 Kakasnu
- 66 Lakes
- 67 Central Otago
- 68 Lammerlaw
- 69 Otago Coast
- 70 Catlins
- 71 Otago
- 72 Fiord
- 73 Mavora
- 74 Waikais
- 75 Gore
- 76 Southland Hills
- 77 Te Wae Wae
- 78 Makarewa
- 79 Rakura
- 80 Chatham
- 81 Bounty
- 82 Antipodes
- 83 Auckland Is
- 84 Campbell
- 85 Macquarie

- Drymoanthus adversus*, 2, 3, 5, 6, 9, 10, 11, 12,
13, 14, 16, 17, 19, 20, 21, 22, 23, 24, 25, 29, 31,
36, 38, 39, 40, 45, 46, 47, 50, 61, 72, 80,
- Drymoanthus flavus*, 16, 38, 39, 46, 47, 69, 70,
77, 78, 79
- Earina autumnalis*, 3, 5, 6, 7, 9, 10, 11, 12, 13, 14,
15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29, 30,
31, 33, 35, 36, 37, 38, 39, 40, 41, 46, 47, 48, 49,
50, 57, 69, 70, 72, 77, 79, 80,
- Earina mucronata*, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12,
13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25,
27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40,
41, 43, 46, 47, 48, 49, 50, 57, 66, 69, 70, 72, 77,
79, 80,
- Gastrodia cunninghamii*, 5, 6, 9, 10, 13, 15, 16,
17, 18, 21, 22, 23, 24, 25, 26, 30, 31, 37, 38, 39,
46, 47, 48, 49, 50, 51, 54, 55, 56, 57, 58, 61, 65,
66, 68, 69, 70, 73, 74, 77, 79,
- Gastrodia minor*, 9, 10, 12, 13, 15, 16, 17, 29, 31,
38, 40, 46, 47, 49, 51, 54, 55?, 65, 66, 68, 69,
73, 78, 79,
- Gastrodia* aff. *sesamoides*, 3, 8, 9, 10, 11, 13, 16,
17, 29, 30, 31, 38, 39, 40, 41, 46, 47,
- Gastrodia* "long column agg.", 12, 18, 23, 25, 30,
37, 39, 45, 49, 56, 61, 62, 65, 66, 73, 78, 79,
- Genoplesium nudum*, 9, 10, 12, 13, 15, 16, 17, 18,
20, 21, 22, 24, 27, 47, 48, 49, 50,
- Genoplesium pumilum*, 3, 4, 5, 6, 9, 10, 11, 13,
16, 39, 40, 46, 47,
- Microtis arenaria*, 4,
- Microtis oligantha*, 13, 16, 17, 18, 26, 39, 46, 50,
51, 57, 61, 63, 64, 65, 66, 67, 68, 69, 78, 79,
- Microtis* aff. *parviflora*, 2, 3, 4, 5, 8, 11, 13, 16,
17, 19, 31, 35, 39, 46, 48,
- Microtis unifolia* agg., 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24,
25, 26, 28, 29, 31, 35, 36, 37, 38, 39, 40, 43, 46,
47, 48, 49, 50, 54, 55, 56, 57, 61, 64, 65, 66, 67,
68, 69, 70, 72, 73, 74, 77, 78, 79, 80,
- Orthoceras novae-zeelandiae*, 3, 4, 5, 6, 8, 9, 10,
11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23,
24, 25, 27, 28, 29, 31, 37, 38, 39, 40, 41, 46, 47,
48,
- Prasophyllum colensoi*, 4, 5, 12, 13, 15, 16, 17,
18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31,
37, 38, 39, 40, 43, 46, 47, 48, 49, 50, 51, 55, 56,
57, 58, 61, 63, 64, 65, 66, 67, 68, 69, 70, 72, 73,
74, 77, 79, 80, 83, 84,
- Prasophyllum* aff. *patens*, 3, 10, 15, 18, 30,
- Pterostylis agathicola*, 3, 5, 6, 8, 9, 10, 13,
- Pterostylis alobula*, 2, 3, 5, 6, 7, 9, 10, 11, 12, 13,
14, 16, 17, 20, 22, 23, 24, 29, 37, 38, 39, 40, 46,
47, 57,
- Pterostylis areolata*, 47, 54, 55, 57, 61, 63, 69, 73,
- Pterostylis australis*, 21, 28, 30, 38, 40, 43, 46,
47, 49, 50, 51, 66, 69?, 70?, 71, 72, 73, 74, 78,
80,
- Pterostylis banksii*, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14,
15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28,
29, 30, 31, 35, 36, 37, 38, 39, 40, 43, 46, 47, 48,
49, 50, 51, 54, 55, 57, 61, 65, 66, 69, 70, 72, 73,
74, 77, 78, 79, 80,
- Pterostylis brumalis*, 3, 5, 6, 9, 10,
- Pterostylis cardiostigma*, 9, 10, 12, 13, 15, 16, 17,
18, 20, 21, 22, 24, 25, 37, 38, 39, 48,
- Pterostylis cernua*, 53,
- Pterostylis foliata*, 12, 15, 16, 35, 37, 38, 39, 40,
46, 47, 57, 65,
- Pterostylis graminea*, 6, 9, 10, 11, 12, 13, 14, 15,
17?, 18, 19, 21, 23, 25, 29, 24, 31, 36, 37, 38,
39, 40, 46, 47, 48, 49, 50, 53, 57, 61, 65, 69, 70,
72, 78, 79,
- Pterostylis humilis*, 18, 25, 46, 47,
- Pterostylis irsoniana*, 20, 25, 37, 46, 47, 48, 49,
50, 55, 79,
- Pterostylis irwinii*, 16, 46
- Pterostylis micromega*, 11, 16, 18, 27, 31, 46
- Pterostylis montana*, 18, 21, 24, 25, 29, 31, 37,
38, 39, 40, 46, 47, 48, 50, 51, 53, 55, 57, 61, 65,
69, 70, 73, 78, 79,
- Pterostylis* aff. *montana*, 11, 12, 13, 15, 16, 17,
21, 23, 24, 25, 30, 31, 35, 37, 58, 65, 69, 70, 79,
- Pterostylis nutans*, 16,
- Pterostylis* aff. *obtusata*, 46,
- Pterostylis oliveri*, 46, 47, 49, 53, 54,
- Pterostylis paludosa*, 11, 12, 15, 16, 18, 46, 48,
- Pterostylis patens*, 10, 12, 16, 17, 18, 19, 20, 21,
22, 23, 25, 26, 27, 28, 29,
- Pterostylis porrecta*, 34, 35, 47
- Pterostylis puberula*, 2, 3, 10, 39, 47,
- Pterostylis tanyпода*, 55, 56, 61, 63, 64, 65, 66,
67, 69,
- Pterostylis tasmanica*, 2, 3, 4, 9, 10, 38, 39, 46,
- Pterostylis tristis*, 26, 55, 56, 57, 61, 63, 67,
- Pterostylis trullifolia*, 3, 4, 5, 6, 9, 10, 11, 12, 13,
14, 16, 20, 21, 22, 23, 24, 29, 34, 38, 39, 40, 46,
47,
- Pterostylis venosa*, 21, 25, 26, 28, 38, 46, 51, 66,

- 69, 70, 74, 77, 78, 79,
Pterostylis "Catlins", 70,
Spiranthes sinensis, 3, 4, 5, 10, 11, 13, 15, 16, 17,
 18, 25, 26, 31, 38, 39, 50, 56, 71,
Thelymitra aemula, 3, 4, 5, 6, 8, 9, 10, 11, 13,
Thelymitra carnea, 3, 4, 5, 6, 9, 10, 13, 16, 22, 40,
 46, 47, 48, 49,
Thelymitra circumsepta, 10, 13, 16, 17, 18, 24,
 26, 29, 38, 39, 46, 47, 51, 55, 61, 66, 69
Thelymitra cyanea, 5, 11, 15, 16, 17, 18, 21, 23,
 25, 26, 27, 29, 30, 38, 39, 43, 46, 47, 48, 49, 50,
 51, 55, 61, 65, 66, 68, 69, 70, 72, 74, 77, 78, 79,
 80, 83,
Thelymitra x dentata 17, 38, 39, 46, 48,
Thelymitra hatchii, 9, 13, 16, 18, 20, 21, 24, 25,
 26, 29, 35, 38, 39, 40, 46, 47, 49, 53, 55, 56, 57,
 58, 61, 65, 66, 69, 70, 73, 77, 78, 79,
Thelymitra intermedia, 4, 5, 6, 9, 10, 11, 12, 16,
 38, 66, 69, 73, 76
Thelymitra aff. *ixioides*, 3, 4, 5, 6, 8, 9, 10, 12, 13,
 16, 18, 38, 39, 46
Thelymitra longifolia agg., 2, 3, 4, 5, 6, 7, 8, 9, 10,
 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24,
 25, 26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 39,
 40, 43, 46, 47, 48, 49, 50, 51, 54, 55, 56, 57, 58,
 61, 63, 64, 65, 66, 67, 69, 70, 72, 73, 77, 78, 79,
 80, 83,
Thelymitra malvina, 3, 4, 5,
Thelymitra matthewsii, 3,
Thelymitra nervosa, 13, 15, 16, 17, 18, 20, 23, 26,
 29, 35, 38, 39, 40, 46, 47, 57, 65
Thelymitra pauciflora, 2, 3, 4, 5, 6, 8, 9, 10, 11,
 12, 13, 14, 16, 17, 18, 20, 21, 23, 24, 25, 28, 35,
 37, 38, 39, 40, 46, 47, 48, 49, 55, 56, 57, 61, 63,
 65,
Thelymitra pulchella, 3, 4, 5, 6, 9, 10, 17?, 18, 38,
 39, 46, 48, 49, 51, 55, 65, 66, 69, 70, 73, 77, 78,
 79, 80,
Thelymitra sanssilia, 3, 4, 6,
Thelymitra tholiformis 3, 5, 8, 9, 10, 11,
Thelymitra "Ahipara", 4,
Thelymitra "darkie", 3, 4, 5,
Thelymitra "rough leaf", 2, 3, 4, 5,
Thelymitra "Whakapapa" 18,
Townsonia deflexa, 18, 38, 39, 46, 49, 53, 73, 77,
 79, 83,
Waireia stenopetala, 18, 38, 46, 50, 51, 53, 66,
 67, 68, 69, 70, 72, 74, 77, 79, 83, 84,
Winika cunninghamii, 3, 5, 6, 7, 9, 10, 11, 12, 13,
 14, 15, 17, 19, 20, 21, 22, 23, 24, 25, 28, 33, 36,
 38, 39, 40, 41, 46, 47, 48, 49, 50, 69, 70, 72, 77,
 79.



Notes, comments, questions, letters

THE NZNOG is now affiliated with the **NZ Orchid Council**: this brings us the Council's *Newsletters* (the *Orchid News*) and *Yearbook*. The Council is appealing for articles for its *Yearbook*. The *Orchid News* (October 1998) reported that Katy Buck from Auckland had won the Supreme Award in the paintings category at the Aichi Flower Festival and Nagoya International Orchid Festival for her watercolours of *Winika cunninghamii* and *Pterostylis banksii*.

Colin Ogle sent a specimen of *Caladenia chlorostyla* found by John Williams in

his beech forest "island" described in J69 p17: a new record for the area, and proof that formal description of a species rapidly leads to further new knowledge.

John Groom wrote, "As a learner I have found (the *Field guide*) most useful and have now identified eleven different orchids in the patch of bush at Matata behind my house. One I had searched for without success was *Gastrodia*. When showing the journal to a neighbour she said she had a colony of them under a shrub in her garden against the house. Sure enough, there were about a

dozen *Gastrodia* aff. *sesamoides* which must have been there several years probably when scoria from out of the area was spread in the garden."

The *Field guide to the New Zealand Orchids* has sold out. No publication will ever be the definitive document on a subject, and indeed there has been a good deal of progress since the *Field guide* appeared. A list of corrections and updates, kindly collated by Eric Scanlen, is included with this issue — stick it in your copy. A second edition is not yet planned, but a new *Nature guide* (incorporating updates) will be published by Random House in 1999, and should be discounted for Group members. Watch this space.

George Fuller wrote from New Plymouth (22 December), "*Chiloglottis formicifera* R.D. Fitzg. (formicifera = ant-bearing): Without doubt taxonomists bestow names on plants with good reason at the time; but often we are later left bemused and worse still, even confused. Bergius has not been forgiven in 230 years for bestowing on a dried specimen the name *Disa uniflora* for a species which in fact is invariably multiflowered. The genus *Masdevallia* was founded on *M. uniflora* by Ruiz & Pavon in 1779. The genus now comprises approximately 350 species, few of which are multiflowered! Top marks then to Robert Desmond Fitzgerald for getting it spot on. Is there any doubt that there is still what first appears to be an ant, crawling over the labellum of the orchid? It even has legs!

"On multi-flowered *Corybas*: it has taken almost two years to get my act into gear and respond to an article in *Journal* 62 p4, recording the finding of *Corybas oblongus* bearing twin flowers per leaf. I was reminded of just such a specimen that I found and photographed in the Burgess Park, New Ply-



mouth in November 1978. Unfortunately I did not mark the specimen and dramatic topographical changes to the location from a massive slip make tracing it almost impossible. It may even have been destroyed in the slip so at present I have no follow-up information on which to make any conclusions over its consistency or uniqueness as a clone. It certainly was an outstandingly vigorous specimen.

This characteristic may not be species specific however because in 1994 I flowered a specimen of *C. orbiculatus* ▶ with twin flowers and both produced sound seed pods. This specimen had been salvaged from an untenable road-



side site inland from Kai Iwi, on a very memorable safari with Bruce Irwin from which his trusty steed did not return in the condition in which it started. (see J66 p14)."

At the Ruapehu conference David McConachie was good enough to donate a copy of **Johns & Molloy's Native orchids of NZ** for sale by tender, the price to go to the colour fund for the Journal. Suzan Dopson was the lucky tenderer, and she wrote later that she was having trouble getting it back from her grandfather, also a native orchid admirer.

Was it a great year for *Winika cunninghamii* flowering in your area too? It was the best I have ever seen it around Wellington. A recent study of some European orchids showed that in any year flower numbers correlated best with the length and heat of the preceding summer. Another *El nino* effect?

Doyle Allison-Cooper, editor of *Adversus*, the Newsletter of the Australasian Native Orchid Society of New Zealand Inc. (ANOS NZ), writes (from Katikati), "On my regular walks around the suburbs I have discovered several colonies of *Microtis*. There is *M. unifolia* and another of which I wonder, are they juvenile *M. unifolia* or another species? Apart from that another interesting feature prompts me to write. There is one particular *Microtis* plant that had its flower-spike mown off when it was about 10cm tall and doing nicely. Lo and behold a second spike came up through the hollow stem of the original spike with its head of flowers. It in turn was mown off and surprise! yet another flower spike made an appearance inside the second stalk! How many times can a *Microtis* repeat this production? (As a farmer I know it is similar behaviour to that of *Paspalum*). What actually happens? Are there latent eyes

inside the original stalk as there are in a *Cymbidium* pseudobulb for example? Is the ability to send up successive spikes peculiar to a particular *Microtis*?

Can anyone shed light on these fascinating questions? - Ed.

Dan Hatch has provided some additional notes on *Australian Orchid Research Volume 3* (see David McConachie J69: p8): *Corybas carsei* (Cheesem.) Hatch is endemic in NZ.

Cyrtostylis R.Br. - When Paul Kores was here in 1991 he showed me cladograms suggesting that *Acianthus*, *Cyrtostylis* and *Townsonia* were separate and valid genera. His arguments were specious and I accepted his ruling, although I had previously followed Schlechter and included *Cyrtostylis* in *Acianthus*. However when he came to publish his doctoral thesis in 1995 he reverted to Schlechter and included *Cyrtostylis* in *Acianthus*. This was inconsistent and I now agree with David Jones that *Cyrtostylis* should be maintained.

Spiranthes Rich. - David Jones's use of *Spiranthes australis* (R.Br.) Lindl. for the Tasmanian plant suggests that the NZ species is endemic and should be called *Spiranthes novae-zelandiae* Hook.f.

Townsonia Cheesem. - The reinstatement of *Townsonia* is not so surprising as it seems. Brian Molloy told me back in 1991 that they intended to do so. What is not clear is why the two species are considered distinct, and endemic in their respective islands.

It is ironic that when I used the name *Townsonia* in 1949, and treated *Thelymitra caesia* and *T. pachyphylla* as valid species in 1952, I was howled down. The stone that the builders rejected....

References -

- Schlechter R. in Engler's *Bot. Jahrb.* 39: p35 (1906)
Kores P.J. *Allertonia* 7(3): p87 (1995).

Julie and Gary Speer sent this great photograph of the Otago form of *Pterostylis* aff. *montana*. They wrote, "... taken at Trotters Gorge November 1997, where we found this triple-headed specimen and six to eight double-headed plants. We checked the same area this last November and found the six to eight doubles but no triples this time. They all grow in a group about one metre diameter just off the main track.



Peter de Lange wrote in January, "My work with David Norton (School of Forestry, Canterbury University) on *Corybas carsei* at the Whangamarino is now drawing to a close. It was a good year – 125 flowers, 75 set in one of our burn plots, and to prove that this orchid is fickle, five flowers produced seed

capsules. My investigation of the flowers' reproductive parts suggests that it can occasionally self, through collapse of the pollinia: these are generally coherent and set well out from the stigma, so that self-pollination is not the norm. The pollinia and stigma arrangement coupled with the strange oniony-meaty smell of the flower suggest that it is predominantly insect pollinated, and I find it significant that in eight years of observations 1998 was the only time natural set seed was observed at the Whangamarino. On that point I harken back to Bill Butcher's observations at Moanatuatua, where this species was once common (alas now long gone); he saw many hundreds of flowers but only a few seed capsules. Matthews seems to have been the only person to have collected seed capsules in the past (from Lake Tangonge), and his are imperfect. However Bill Butcher's description I can confirm: he observed that the peduncle was a lovely purple colour, and elongates greatly. Of the five fruiting plants I have seen, the peduncles varied from 3-16cm long, were a distinct purple – almost maroon colour, and the capsule was straw-yellow, distinctly shortly ovoid. The flower remnants are retained after capsule dehiscence, shrivelled and so dark as to look like a miniature duck's bill! So it would seem that *C. carsei* can occasionally set seed without human aid.

"1998 was also the first year in which *C. carsei* appeared in one of our "Should be here 'cos habitat's right but it's not been seen here" plots – whether these were the activation of dormant tubers or seedlings I can't say, though common sense would suggest the former is the case.

"Whether it is the same as *C. fordhamii* remains to be seen. D. Jones has stated it is not. Recently I sent some leaves to Brian Molloy who intends to look at the DNA of both species (and other orchids).

"Aside from *Corybas*, David and I were pleased to see many more *Prasophyllum* aff. *patens* in the swamp than we have previously. All were growing rather suspiciously in our well trodden tracks, usually in waist deep pools of water. This orchid has never been common in the Huntly Basin – but it has thrived on our induced habitats. Oddly these plants had the typical white labellum and reddish green petals/sepals more usual for the taxon – judging from photographs and descriptions. Previously I had seen only fully yellow flowers here, at nearby Opuatia and on the Chatham Islands. I have observed that plants with black labella seem to be the norm around Pureora, so mayhap these are just regional colour differences or are they something else? Read on.

"*Thelymitra cyanea* continues to throw some puzzles. In 1990 all plants I saw at the Whangamarino were the typical dark blue but by 1991 some white had crept in, and now all I can find are white flowers – the same pattern was observed at Opuatia during the 1980s, wherein blue flowers were common in a site burned in 1980 but I can only find white there now. Oddly I have observed the same with *Spiranthes novaezelandiae* – wherein Opuatia plants progressively lost their pink colour in the same area, so that by 1990, most were either white or only slightly tinged pink. This led me to ponder whether these flower colour changes are nutrient related? Ponder this will you?

"Anyway to return to the Whangamarino we were surprised to find plenty of *Thelymitra formosa* this year – this orchid is always (in my view) a sparsely distributed species, usually appearing following fires in the more

fertile peat bogs of the Waikato, lasting a few years, then vanishing. At our Whangamarino site, *T. formosa* has always been scarce until this year, during our field work we were surprised to see it outnumber *T. cyanea* 2:1, odd because *T. cyanea* is the most tolerant of the lot in these conditions, and is the only *Thelymitra* common in really acid bogs like Kopouatai (Hauraki). Whangamarino *T. formosa* were also unusual in having many more pink/cerise flowers than the usual pale blue.

"Other orchids seen included *Microtis unifolia* (I guess) on peat (!), fruiting *Pterostylis paludosa* (common as always as a semi-lignoid mass struggling through *Empodisma*), and occasional vegetative *Spiranthes*.

"Aside from this a recent bout of field work on Norfolk Island (November 1998) threw in another surprise! A small patch of *Thelymitra longifolia* (selfing form) on a clay bank above Kingston. The plants grew with a *Microtis* equated with *M. unifolia* but to my eye much closer to the *M. parviflora* "mess".

"I also found another patch of *Gastrodia* aff. *sesamoides* in December 1998 whilst strolling up Symonds St. Some "creative soul" landscaped the other site, and constructed a nice dog kennel with no entrance (mayhap a home for deranged elves) on the patch I reported in 1994, so I thought it was history on Symonds St. The new patch grows 150m down the road toward the university. The plants were spotted protruding out of a messy planter box full of *Hebe* cv. 'blue inspiration' near a medical laboratory. About 35 shrivelled stems – a few sporting flowers, were noted. Very nice. Nice also was to see the plants in association with the same pine bark Ewen Cameron noted a few years back – the link seems to be there alright. Meanwhile at Hamilton *Gastrodia* aff. *sesamoides* continues to bamboozle the idle motorist with botanical leanings, when one can view it in the traffic jams."

Queensland has about 420 species of orchids. There are two major groups in the flora – a tropical group comprising terrestrials and epiphytes which has close affinities with New Guinea, Indonesia and south east Asia generally, and a group of predominantly terrestrials with relatives in the southern and western States of Australia, New Caledonia, New Zealand and South America. The first group comprises about 240 species or 58% of the total. Thus Queensland is a meeting place of two major orchid floras and represents one of the more diverse orchid areas in the world, making it a key area for orchid conservation.

The last word on *Thelymitra circumsepta* and *T. formosa* may not yet have been uttered. In this issue is a reproduction of FitzGerald's original description and drawings. New Zealand plants only occasionally have the third central lobe, and never (as far as I know) with the amount of fimbriation shown in FitzGerald's specimen. Apparently the same is true in Australia, and what FitzGerald described is now regarded as aberrant (see p. 335 of Backhouse & Jeanes' *The orchids of Victoria* [1995]: "The epithet *circumsepta* (meaning partitioned around) was originally applied to extraordinary mutant plants having three tufted staminodes on the column, the third central staminode arising from the base of the column in front of the stigma.") The name *T. resecta* was later given to plants lacking the fimbriated central lobe, but when it was realised that each represented a different form of the same plant, the earlier name (*T. circumsepta*) took precedence despite its unsuitability, and *T. resecta* was reduced to synonymy. The same has apparently happened to *T. formosa*. See pages 20-23.

Ian Rutherford writes that *Bulbophyllum pygmaeum* in the Hokianga has a lot longer and wider leaf than he has noted before. He will keep us informed.

I wrote (J66 p30) of Barton's Bush in Silverstream, just north of Wellington. Ken Wright has cleared it of possums, and the *Gastrodia* population is quite staggering. Groves of yellow/green or brown *G.* "long column" were everywhere when I visited the reserve on 10 January (that freesia scent was all but imperceptible in the midafternoon), and *G. cunninghamii*, though mostly in fruit, was still flowering in darker-shaded spots (I wrongly reported this as *G. aff. sesamoides* last year) – Ed.



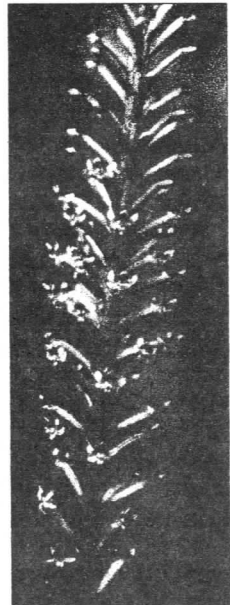
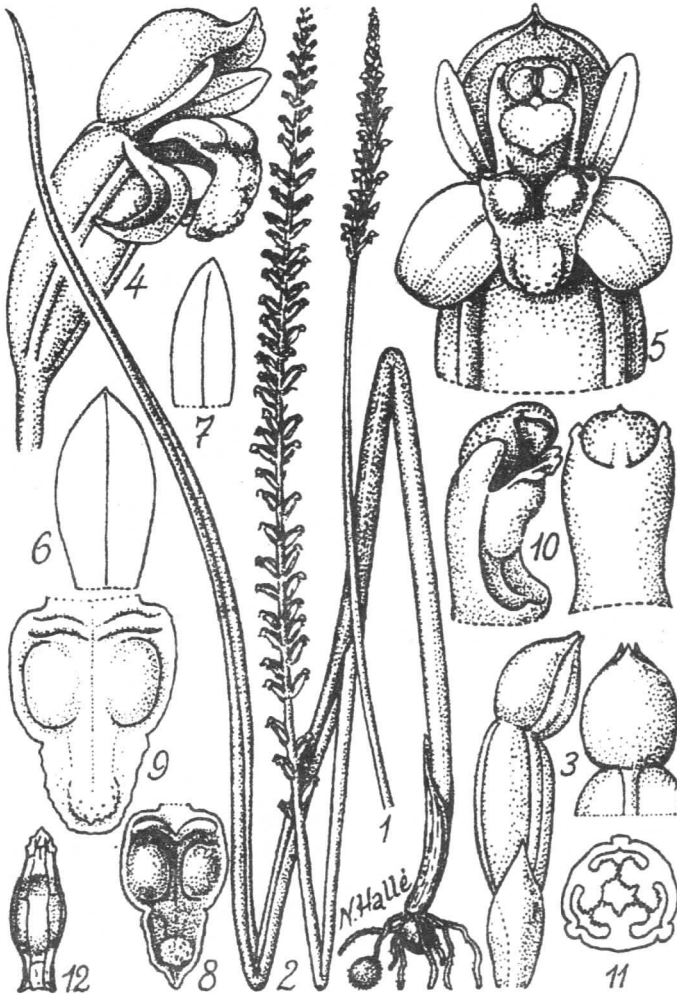
Gastrodia "long column"
January 1999,
Bartons Bush, Silverstream

Close relations: orchids like ours

Microtis unifolia from New Caledonia

The drawing (left, below) of *Microtis unifolia* by Nicolas Hallé and published in his *Flore de la Nouvelle Calédonie et dépendances* (1977) shows a flower with a triangular or heart-shaped labellum which, despite its apical callus, should place it in *M. aff. parviflora*.

The photograph (right, below) labelled *M. unifolia* from the Société Néo-Calédonienne Orchidophile's book *Orchidées indigènes de Nouvelle-Calédonie* (1995) shows a plant with quite unusually long and thin ovaries, a flower with its tepals wide-spreading, and a narrow, flat, oblong labellum. Not at all like any *M. unifolia* I have seen in N.Z.



Historical reprint

From RD FitzGerald's Australian orchids Vol 1 part 4, 1878

(Illustration reproduced on pages 22-23)

***Thelymitra media.* (R. Brown.) *Thelymitra circumsepta.* (FitzGerald.)**

Thelymitra canaliculata is a Western Australian species, and *T. media* is given by R. Brown as from Port Jackson, on the shore of which the specimen from which the figure has been taken was obtained. *T. media* is, in the *Flora Australiensis*, made a variety of *T. canaliculata*. Having no access to Brown's specimens it is with hesitation that I have given the name of *media* to this plant, but it is at least not *inconsistent* with the short description given by him, and is, I think, the species he obtained near Sydney.

In this form the pollen-masses are connected with the rostellum (figs. 8 and 9), and may, in the early bud, be easily drawn from the anther; but the column does not increase much in height, and the pollinia therefore remain behind the stigma; the edges of which, however, curl back and so present the stigmatic front to the pollen-masses, each pair of which immediately become united by pollen-tubes with the recurved edges on their own side (fig. 12), and gradually become with the stigma an almost solid mass (figs. 10 and 11) separated from it only along the centre, the rostellum gradually shrinking or being absorbed.

I am of opinion that this species is invariably self-fertilized, unless the pollen of some other species be brought by insects and left upon the stigma, when should such pollen be more potent than its own, hybrid seed would be produced. I have invariably obtained hybrid seed by removing the pollen-masses from the bud, and afterwards applying the pollen of some other *Thelymitra* to the stigma. When flowered under a bell-glass every flower produced seed.

I have never found *T. media* except at Hunter's Hill, nor as yet obtained it from any other locality. It grows in the stiff, swampy soil so often to be found on the summits of dividing ridges in the sandstone country. When in bud it can readily be distinguished from the other *Thelymitras* by the dark Prussian-blue of the buds, as *T. circumsepta* can by a metallic green.

T. media flowers in October.

Thelymitra circumsepta. This fine species of *Thelymitra* I found growing on the swampy edges round the summit of Mount Tomah. The flowers are uncommonly large for a self-fertilizing species, for in this genus the flowers of such are generally reduced to such an extent as only to enclose the large columns. The appendages of the column would (if adapted for any purpose) appear to be adapted for the exclusion of insects, as

they not only enclose the pollen and stigma but spread a network over them by the interlacing of the filaments with which they are terminated, from which incarceration I have named the species. Unlike *T. media* the rostellum is not attached to the pollen-masses, and may, in the early bud, be drawn away from them (fig. 3), but the column remaining short they are not carried up from behind the stigma, and the upper edges of it as it grows become revolute and imbed themselves in the bursting pollen, which cannot at any period (as it can in *T. media*) be removed, as a whole, from the anther. This species is, I believe, wholly self-fertilized, and the third wing in front of the stigma seems to render hybridization by the visits of insects improbable. Such a third wing to a column has not, I believe, been observed in any other Orchid, and were it not that there is proof from other genera that the lateral wings are abortive anthers it would seem to contradict the idea. All the flowers on spikes which were placed under a bell-glass produced full capsules of seed. The time of flowering is December.

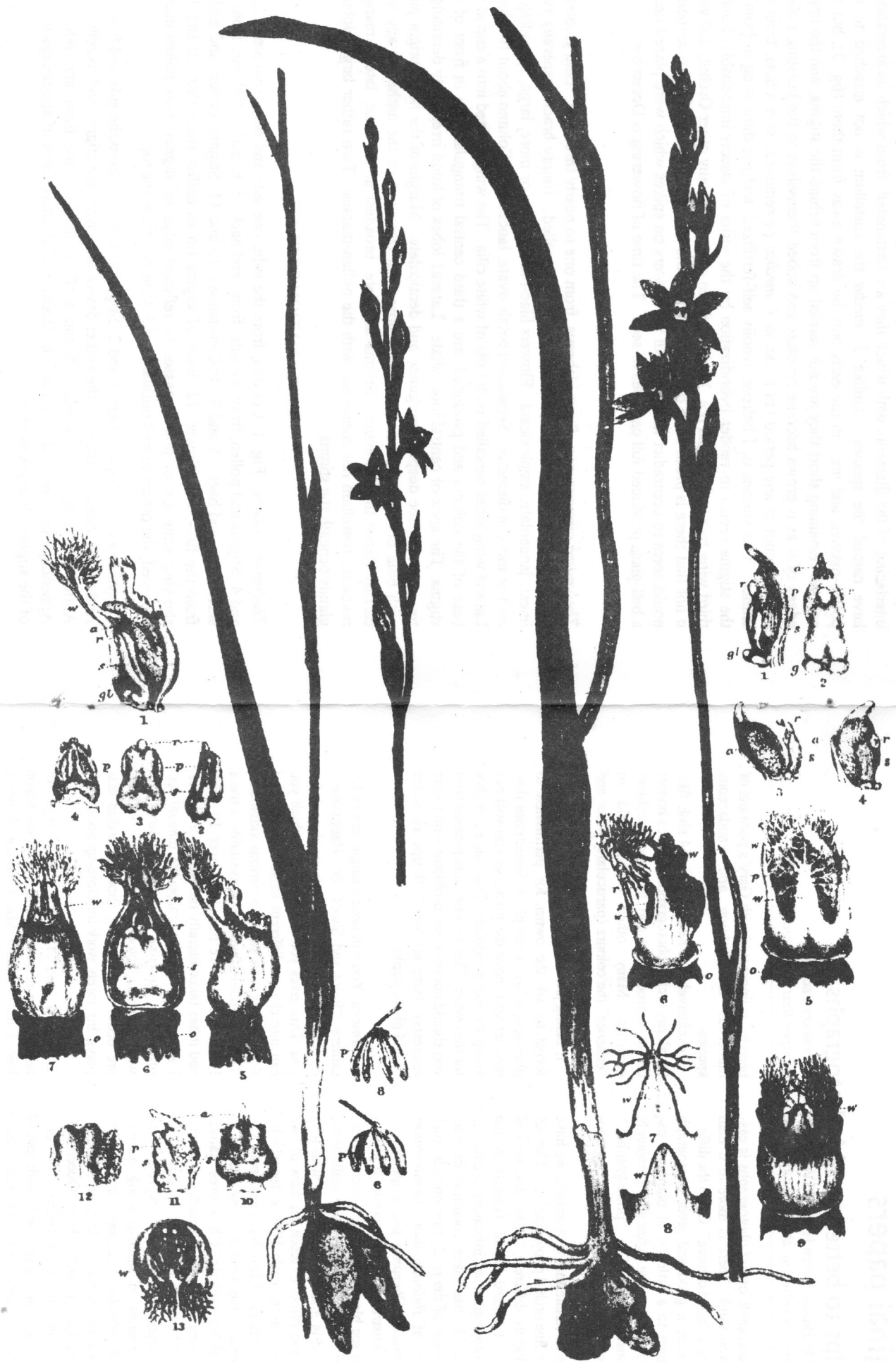
DESCRIPTION.

Thelymitra circumsepta. Stem glabrous, from one to nearly three feet. Leaf glabrous, more than one foot, broadly linear, deeply channelled. Empty bracts generally two, linear, lanceolate, amplexicaul. Flowers lilac-blue, twelve or more, large, spreading an inch or more in diameter. Sepals and petals ovate, lanceolate. Column about two lines. Lateral wing lobes pencilled with tufts of white cilia. The wings united into a cup at the base of the column and produced into a third central triangular lobe in front of the stigma. The apex of central lobe ciliate. Lateral lobes of hood irregularly denticulate, the central space deeply emarginate and denticulate. Margin of the hood bright pink, with blue dorsal band beneath. Not more than one-third of the anther at any time carried above the rostellum. Stigma lingulate, broadest at the base, lateral margins revolute, rostellum not connected with the pollen-masses. Two rather large globular glands beneath the stigma.

EXPLANATION OF PLATE.

Thelymitra media. Fig. 1. Column, from the side, one side and wing removed. 2, 3, and 4. Stigma and pollen, from the side, front, and back. 5, 6, and 7. Column, from the side, front, and back. 8 and 9. Pollen-masses. 10 and 11. Stigma, pollen, and anther, from the full-blown flower. 12. Back of stigma (in an earlier stage than 10 and 11), showing adhesion of pollen-masses to reflexed edge of stigma; two pollen-masses removed, the others turned outwards. 13. Column, from the top.

Thelymitra circumsepta. Figs. 1 and 2. Stigma and anther, from the side and front. 3. Anther and stigma in the bud, the anther drawn back from the stigma and rostellum. 4. Anther and stigma in the bud. 5 and 6. Column, from the front and side. 7. Appendage in front of the stigma. 8. Occasional abortive form of appendage in front of the stigma. 9. Back of column.



Thelymitra media

Thelymitra circumsepta

Original papers

Ten tips to better orchid photographs

by David P. Banks, Seven Hills, NSW (dpbanks@ozemail.com.au).

David Banks is editor of the Orchadian, where this paper first appeared.

Taking acceptable orchid photographs is easier than you think. There is more to it than just having a “good camera”. Often the difference between a good and great photograph comes down to a little bit of planning, patience and maintenance. After all, I personally don’t consider myself a “photographer”, more an orchid grower who likes taking photographs!

We are fortunate that in Australia we have some very fine orchid photographers. They all have a slightly different “style” and area of expertise. I regard David Titmuss as the finest photographer of miniature orchids in the world. He has taken countless brilliant shots of some of the really tiny orchids, such as species of *Bulbophyllum*, *Dendrobium*, *Dendrochilum*, *Oberonia* and a number of the small Australian *Sarcanthinae*. It always is a joy to see blown up on the screen flowers which are (in real life) only a few millimetres tall. David is also the one person who took the time and effort to teach me how to take good photos in the early 1990’s, for which I am most grateful. Chris Nicholas from Hobart, Tasmania has written a few articles on photographing orchids. Chris uses natural light and uses long time exposures to extract as much “depth of field” as he can. Chris generally uses a sky blue background and takes fine shots of small-growing orchids, particularly *Masdevallia* species and hybrids. These are often of the whole plant in bloom. Gary Yong Gee, from Brisbane, Queensland is a most versatile photographer, who produces exceptional images both with use of flash (often ringflash) or natural light. I have

been most impressed with Gary’s portraits of numerous *Dendrobium* and vandaceous species.

I exclusively use Kodachrome 64 slide film for all my orchid photographs. It gives honest colour reproduction and has good archival qualities. Many other brands tend to “enhance” the colours (particularly blues and reds) and the slides do fade with age.

If taking photos at an orchid meeting, don’t forget to ask the owner for permission to photograph his or her plant. Sometimes they may let you move the plant, so you will not bump the other exhibits. Take an extra shot for the owner. They will be most pleased (and you should not have any problems with future requests). Here are my “10 tips to better orchid photographs”.

1. Camera. You will need a single lens reflex camera. “Point and Shoot” or “Happysnap” disposable cameras will rarely do the job for you. This gives you a camera for which you can interchange different lenses so you (and your photos) can adapt to various situations. There are many fine brands available. I use a Nikon F-301. I’ve had it for over 10 years and it has taken literally thousands of photos. I always use my camera on the manual settings, this way you have total control over what you do. Automatic focus and settings are better when taking shots of orchid displays, but rarely work for close-up photos.

2. Macro lens. This really is a must for taking close-up photographs. From the Nikon line, I use a 60mm Micro Nikkor. It has a

range from $f/32$ to $f/2.8$. This enables you to get up "close and personal" with the flower. For tiny flowers I use a $\times 2$ converter between the lens and the camera, and reduce the setting by two stops.

3. Ringflash. One of the best things I ever bought. This specialised flash screws onto the end of the lens and operates on a separate power pack, running off four AA batteries. (A battery recharger and rechargeable batteries are a sound investment here.) Mine is an Elicar Auto Macro-8. I also have the dedicated Nikon version as back-up. A ringflash gives you photographs without shadows and an even light throughout the flower. It is less effective for shots of large plants in full flower, as the lighting will be correct for the front of the plant, then the rest of the exhibit fades into darkness. The use of a ringflash is a must, in my opinion, for portraits of close-up orchid flowers. Over 90% of my photos are taken with a ringflash.

4. Tripod. A sturdy tripod is a must when photographing native orchids in the wild. I rarely use one when using a ringflash. (I have a steady hand and hold my breath when I take photos!) When using natural light a tripod should be used to help increase the depth of field. If you have a bright room in the home, this could be a good place to take photos. It certainly eliminates the movement factor due to wind.

5. Background. An otherwise good photograph can be crucified by a poor background. I cringe when I see shots with clothes lines, back fences, brick walls, garbage bins etc. in view. They take the focus away from the flower. Remember, the best background is the one that doesn't distract you. I like to use black material as a background for most of my photos. Sky blue is popular, but please

avoid "loud" colours! Have a spare piece which you can transport to meetings, shows etc. I rarely use a background when photographing native orchids, as I like the "natural" effect for these shots.

6. Subject. A little bit of "grooming" may be required here. Firstly, select flowers in good condition. Use sticky tape to get problem leaves out of the way. Take labels out of pots. If the pot is not black, cover it with black material or put it inside another black pot. For tiny flowers, check for equally tiny insects, remove spider webs etc. Sadly, these are sometimes not seen until you get the slides back. Then you can see the "monsters" on the flowers!

7. Fill the frame. Get as close as you can to the flower to fill the frame. Sadly at Judging Panel meetings, we are often entertained by photos of awarded orchids (from all States) that are very "distant". You pay for the film, use it all up! Nothing is worse than seeing a single flower with a thick border of "nothing" around it. Look through the viewfinder to see if it is best photographed vertical (portrait) or horizontal (landscape). If you are not sure, take both!

8. Take notes. Keep a notebook to record the names of plants photographed and what settings were used. This will prove a most valuable reference when you get your slides back. You will get a feel for what works (and what doesn't!). Remember to label your slides. The ultra fine point black "Pilot SC-UF" is my first choice for a permanent marker. I am now labeling a lot of my slides using the "Avery Laser L7656 Labels". This is used through a program in Microsoft Word (go from "Tools" to "Envelopes and Labels"). How you label the slides is a matter of choice. For species orchids I include the name (in Bold italics).

Country of Origin, initials of owner of plant and finally the photographers name and the year. You can change this around to suit yourself.

9. "Bracket" photos. Experience (and your note book) will give you the best idea on the optimum exposure to take your photographs. All my "ring-flash" shots are taken at $1/125$ of a second. What I can modify is the f stop. As an example, most of my "exhibition style" *Paphiopedilum* hybrids are taken at $f 13.5$. White or pale green flowers are better at $f 16$, and darker colours, such as reds at $f 11$. So what is "bracketing"? Once I have the subject ready and I think it would be best at, say $f 13.5$, I will take that shot then one a small stop either side, say $f 16$ and $f 11$. These days I tend to work in a narrower band, and may

take four shots at $f 12$ $f 13$ $f 14$ and $f 15$. I like to keep at least two "shots" of the same subject. One slightly under-exposed (which are better for reproduction in books, magazines etc.) and one "spot on" for slide shows.

10. Storage. Housing your photographic collection can present a few problems as your collection starts to grow. Remember, dust and light are your worst enemies here. I use wooden slide boxes (each box holds about 500 images). Most of my collection is kept this way. I also use plastic slide sleeves (for non-orchid slides), and these are kept in a filing cabinet.

We are forever learning more about photography. I hope these tips may help you take better orchid photos.

Seeing double

by George Fuller, New Plymouth

As a boss-eyed member of the group I can contain myself no longer, but I hasten to point out that this state has more to do with exercise of the retina than the sphincter. I simply must record my great appreciation of inclusion in the *Journal* of a series of Eric Scanlen's wonderful three dimensional pairs of close-ups of native orchid flowers – and in colour. His self-developed skills in the complexity of taking the photographs – indeed photomicrography – are now legendary, but to publish these gems in the hope that readers will be able first to understand and then perform the optical contortions necessary to 'bring them alive' is a daring move. Since the suggested method for ruining human optical perception in order to enjoy 3-d

rendition of the pairs doesn't work for me (see *J67* p18) it occurs to me that I just may be the only reader able really to appreciate the hidden potential they possess, so I feel compelled to endeavour to describe how I am able to become totally enraptured in their qualities. Firstly it is wise to make sure you are alone (as a novice) because your behaviour may take an unprofitable amount of explanation to a nonbeliever.

Good lighting on the page will make the optical transition required less complicated. I suggest standing at a window where good light will fall on the page.

Now hold the page at comfortable focal distance from your eyes but just below your line of sight while you focus on a distant

object outdoors. Without succumbing to the temptation to change focus, raise the page into your line of sight. Presuming that the eyesight of others responds similarly to mine, one now sees not two but three pictures, all out of focus. The next stage may require practice but don't give up on it because the result is well worth the effort. Discipline yourself to concentrate only on the centre picture, ignoring the two outer ones. You will probably find that there is a double image in the centre picture at this stage and your task is now to bring it slowly into focus in the realisation that you are making an unnatural demand on your eyesight. It may take time and several efforts to resolve the puzzle. It is absolutely critical that the plane of your eyes and the page are parallel. For some individuals, some photographs, perhaps even some lighting conditions, it may be desirable to choose for first focus on an object not so distant, say one or two metres away. Spectacles don't seem to create difficulties.

If you have not previously experienced 3-d vision from a flat page, prepare yourself for a very enjoyable surprise. Gradually that stork-like labellum of *Pterostylis tasmanica* with its cluster of bristly golden hairs (J69 p29) raises its head from the page, the green bifid reptilian tongue reaches out to lick you and you'll swear that the golden pollen is recessed right through on to page 39! How else could there be such depth?

But there is another quality not adequately portrayed in normal photography, that of texture and translucency. For a real ecstasy trip turn to page 17 of *Journal 67* and exercise your newfound skill. That single example is worth risking going permanently cross-eyed. And what about that whimsical candy-floss flower of *Corybas rotundifolius* on page 20 of *Journal 68*? You can really see the stem through the diaphanous lateral sepals in a perspective not possible in a single photograph, however technically good. Study each

one of the pair to prove that!

Eric's photographs are absolutely exquisite. No, they are more than that. They are masterpieces. We are so very fortunate to have a member with dedication and technical expertise of this order. To have in addition an editor willing and daring enough to publish this material which after all may be incomprehensible to many readers, makes those who can resolve the challenge, very privileged. To realise that I can sit in my lounge and without the aid of any equipment, study in 3-d colour the infinite detail of tiny flowers which I can never hope to see in nature, simply by opening the pages of our *Journal*, gives cause for great satisfaction.

The inevitable next question is just how does one exit from this ecstatic state? Well I can give assurance that it certainly speeds up the process if one's non-believer partner suddenly enters the scene and queries the transfixed posture, crossed eyes and silly smile!

Since the procedure I have described is quite different to that suggested by Eric in *Journal 67* it is quite likely that there are other possibilities. I'm sure that the editor would be delighted to have details of any alternatives. I'm intrigued to know the proportion of readers who can actually attain 3-d status. Should we have a poll?

In the meantime Eric and Ian, please keep up your efforts, even if it is only for my personal satisfaction.

PS WARNING OF HEALTH HAZARD – Only those with demonstrably low IQ should attempt the above procedure on the *Gastrodia* couplet on page 31 of *Journal 66*: Could this have been the fifth member of Eric's inimitable *Column*, trying to sabotage his integrity – pre-publication of the 3-d series?

The New Zealand genera 7: *Calochilus* and *Chiloglottis*

by E.D. Hatch, Laingholm.

1: *Calochilus* R.Br. *Prodr.* 1: p320 (1810)

Name = the beautiful labellum.

Genotype – *C. paludosus* R.Br. *ibid.*

An Australian genus of some 10 species, one extending to New Guinea, one to New Caledonia and three to NZ. Non-flowering plants are easily confused with the related *Thelymitra*, but when in flower the coloured hairs on the labellum make recognition a simple matter. NZ plants are strongly mycorrhizal and difficult to cultivate.

1: *Calochilus herbaceus* Lindl. *Gen. & Spec. Orch. Plant.* p45 (1840).

Name = grasslike, presumably the linear leaf. Both *herbaceus* and *robertsonii* were earlier confused with the Australian *C. campestris* R.Br.

Flower greenish-yellow with red markings and labellar fimbriae; apex of the labellum shortly ligulate and naked at the tip; column-wings with a prominent callus like an eye, on either side at the base. In some plants the red pigment is absent and the flowers are greenish-white.

Distribution: Australia – Tasmania; New Zealand – North Island – North Cape to Kaihu. There is some doubt whether the NZ plant actually is *C. herbaceus*. No doubt the authorities will eventually decide.

Type locality – Tasmania, Rocky Cape, 12.1837 R. Gunn #920 (Lecto – 3b K-L)

Flowers – October-December – self pollinated.

2: *Calochilus paludosus* R.Br. *Prodr.* 1: p320 (1810).

Name = growing in swamps.

Apex of the labellum with a long naked

ligule; column-wings without basal calli.

Distribution – Australia – Tasmania; SA; Victoria; NSW; Queensland. New Zealand – North Island – from Kaitaia southward; South Island – Nelson / Westland – swampy or damp areas in tussock and scrub.

Type locality – Port Jackson, Sydney, 10.1803 R. Brown (Lecto – BM)

Flowers – October-December – self pollinated.

3: *Calochilus robertsonii* Benth. *Flora Austr.* 6: p315 (1873).

Named for J.G. Robertson. [John George Robertson (1803-1862). Collector for Kew. arrived in Victoria from Tasmania in 1840, returning to his native Scotland in 1854]. Lionel Gilbert *The Orchid Man* (H.M.R.Rüpp) p231 (1992).

Apex of labellum with a short ligule, variously naked or fimbriate; column-wings with a single large callus on either side at the base.

Distribution – Australia – Tasmania; WA; SA; Victoria; NSW; Queensland. New Zealand – North Island – from the Waikato southward; South Island – Nelson.

Type locality – Glenelg River, Victoria, 28.9.1843 J.G. Robertson #627 (Lecto – K)

Flowers – October-December – self pollinated.

2: *Chiloglottis* R.Br. *Prodr.* 1: p322 (1810)

Name = the tongue-shaped labellum

Genotype – *C. diphylla* R.Br. *ibid.*

An eastern Australian genus of (so far) 22 species, 3 of them extending to NZ.

Peduncle elongating after fertilisation of the flower, raising the ripening seed-capsule as much as 30cm. *cf Corybas*.

1: *Chiloglottis cornuta* Hook.f. *Flora**Antarctica* 1: p69 (1844)

Name = the horn-shaped labellum.

Leaves 1-4 (usually 2), oblong-lanceolate, ± acute, glabrous, petiolate. Flower green, on a short peduncle, usually solitary, rarely 2. Labellum with large raised calli, usually green, sometimes red.

Distribution – Australia – Tasmania; SA; Victoria; NSW. New Zealand – North; South; Stewart; Chatham; Antipodes; Auckland; Campbell Is. Scrub and forest edges. Very prolific in Eucalypt and exotic pine plantations.

Type locality – Campbell Island – D. Lyall 1841 (Holo –K).

Flowers – October-December – self pollinated.

2: *Chiloglottis formicifera* R.D.Fitzg.*Austr.Orch.* 1(3): t9 1885)

Name = the ant-shaped labellum.

Unlike *C.cornuta* the flower is borne on a peduncle ± 80mm high, which continues to elongate after fertilisation. Also unlike *C.cornuta*, the edges of the leaves are distinctly undulate.

Distribution – Australia – NSW; Queensland. New Zealand – North Island – Kaitaia 1900-1915. Listed by de Lange as a vagrant species.

Type locality – ‘Liverpool’ Sept.Oct. C. King (Lecto – Fitzgerald’s plate q.v.)

Flowers – September-November – insect pollinated.

3: *Chiloglottis valida* D.L.Jones*Austr.Orch.Res.* 2: p43 (1991).

Name = robust or strong growing.

Previously treated in NZ as *C.gunnii* Lindl., which is now considered to be a Tasmanian endemic.

Generally similar to *cornuta*, with which it often grows, but the plant is larger and the flower tinged with reddish-brown. Labellum with a stalked callus at the base and a sessile callus on the disc, with pairs of glossy, black, ant-like calli on either side.

Distribution – Australia – Tasmania ? *; Victoria; NSW. New Zealand – North Island – Iwitahi, under *Pinus nigra* – Lorna Grey, 29.11.1985; South Island – Marlborough – Richmond Range, in beech forest on the ridge up to Mt Fishtail – Helen Rainworth, 28.12.1981; and Canterbury, Hammer Forest Park, under *Larix decidua* – Grant Bawden, 15.11.1981.

The three colonies would appear to be separate trans-tasman arrivals. Although the plants flower freely they don’t set viable seed, and spread by vegetative increase only. Insect pollinated but no suitable local insects ? Listed by de Lange as a vagrant species.

Type locality – Canberra – Ginini Flats track D.L. Jones 3.12.1989 #5453 (Holo – CBG)

Flowers – October-December – insect pollinated.

* In his original description, (for a xerox of which I am indebted to Ian St George) p44. David Jones records this species from Tasmania, but omits it from his current Tasmanian checklist.

If you are on email and would like your email number listed along with those of other members of the Group, please contact the editor on istge@rnzcgp.org.nz before 1 May.



The column

Thelymitra enthrallment at Te Paki

by Eric Scanlen, Papakura.

Wouldn't you think that two field trips to the far north would be enough in one year? So did the Column until Bruce Irwin's elation about the Te Paki Jewel trip (J69 p24) rubbed off on his long-time associate, Ron Maunder. An impromptu trip was soon under way on 21 October with Ron the ring-leader and Bruce plus the Column as willing accomplices.

High ground by SH 10 south of Kaeo, yielded a 1.02m tall, blue striped *Thelymitra pulchella* with sprays of yellow fimbria and some dazzlingly white *T. aff. longifolia* but the tantalising colony of purplish plants seen here in September were only tightly closed, boring old *T. aemula*.

Lake Ohia had a late little *T. carnea* (Fig. 1) with puckered tepal tips, wide open on the edge of the reeds and sheltered from the half gale westerly (cf. J62 p3, bottom R). *T. malvina* could not escape the wind and remained firmly closed but *Cryptostylis subulata* in the reeds to the west, near the box of marijuana seedlings, was abundant and unlike the vexing *Thelymitra*, doesn't bother closing over its well sheltered column. The two open species had 3-D portraits made before the trio moved off to Anawhata Road, Kaingaroa to see Ian Rutherford and Jonnie. Their unbelievable "Global Gardens" brim with curious exotic and native plants complete with *Thelymitra intermedia* ("pseudopauciflora") being nurtured right where they were found. "Global Gardens is a gem, well worth the \$4 each the tourists pay but be prepared to feel ignorant (as your Column did) in the face of the great variety of rarities. After a welcome cuppa, and an intense orchid chin-wag, the trio left for their cabin at Waitiki Landing. In the morning, each claimed not to have slept a wink because of the other two snoring in concert. How could that be?

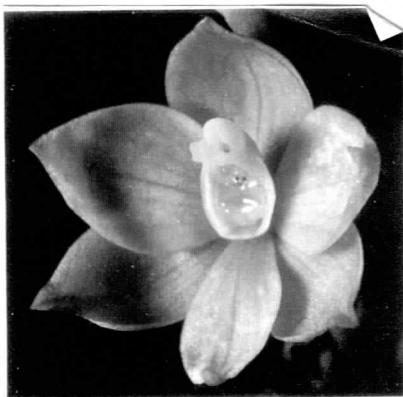


Fig. 1. *Thelymitra carnea* with claw ends on all tepals, from Lake Ohia



Fig. 4. *T. aff. longifolia* with gracefully cupped blooms

On Thursday, Rubbish Dump Hill (RDH) delivered its renowned multitudes of varied *T. aff. longifolia*. Fig. 2 with the deeply cleft post-anther lobe, Fig. 3 with the orange banded one (J58 p36), Fig 4 with the gracefully cupped blooms and Fig. 5 with the blue halo daubs on the petals, were some of the



Fig. 2. *T. aff. longifolia* with deeply cleft post anther lobe.



Fig. 3. *T. aff. longifolia* with orange tipped post anther lobe

best this year. All eight *T. matthewsii* in Ernie's plot (J69 p30) were standing firm in fruit but wholly black. Bruce and Ron measured them in from two struggling tea-tree boles whilst the Column checked out I St George's patch. The seed-head on the leafless plant had wilted but one corkscrew juvenile survived, green and unique.

Only one other (blackened) juvenile was found out of dozens seen on all six sites in September (J68 p17). No doubt the tubers are safe with their pet fungus until conditions improve. A cold-front westerly gale driving horizontal scotch mist, sent the trio scurrying for the car but some unrecognised, leaf-green *Thelymitra* in bud, stalled the flight as the squall abated. This, along with *T. "rough leaf"* and *T. aemula*, gave a tantalising foretaste of things to come. What came right then was less notable. The Column's trusty Carona had a broken quarter-light and his \$63 new gum-boots were missing along with Bruce's daintier Warehouse pair. A taped-on lunch bag kept the rain out for the remainder of the trip.

The track to the Kauri Block (Radar Bush) looked OK to drive up but DoC have dug a tank-trap at the bottom end so, without enough time to walk it, this great little orchid spot again went neglected. Instead, the Column introduced Ron to the Shenstone track whilst Bruce minded the car, stretched out in the back seat. Some wondrous dark cerise *Caladenia bartlettii* were by the waterfall, *C. chlorostyla* was abundant under the shade of the

tea-tree (*Kunzea ericoides*), some few *Corybas rotundifolius* were now in seed and the round mouthed *Corybas oblongus* looked decidedly worse for wear. Cattle going for water, had obliterated the bracken leaving the four colonies clinging to the ground like bladder-wort in the unaccustomed brightness. A thought though; if the cattle did not flatten the scrub occasionally, it would become too dense for any *Corybas*. They only survive here because the cattle get in now and then.

Friday found the three at the Shenstone gate, blocked by two large and agitated Jersey bulls. They were growling, pawing the ground and glaring at two smug, black bulls amongst their cows on the other side. Deciding upon discretion, the doughty three sidled up the fence and across, teetering over the stream on fallen tea-tree. The Column startled the wits out of himself and a turkey nesting in the umbrella fern. What we dedicated orchidologists have to go through!

Shenstone has become the magnetic north for NZ orchids and again she did not disappoint as some of her deeper secrets began to unfold. *T. "darkie"* appeared for the first time, in rather slender form but not uncommon; how come? *T. intermedia* and *T. aemula* likewise kept appearing where they had been rare before. Possibly the unusually dry conditions had persuaded hibernating tubers to sprout? If so, then why didn't they open!!!! Perhaps they need dry conditions to sprout then a wet tuber to induce flowers to open? Who knows?

There was more. The unrecognised *Thelymitra* from RDH kept appearing where none had been seen in three years of close scrutiny by the Group. It has an erect, leaf-green stem and leaf. The narrow leaf was sharply veed and erect, its tip only deviating 60 to 80mm from the stem. Careful jacking open of the sky blue tepals, revealed a white column with a yellow post anther-lobe like a cyclist's helmet, similar to *T. "rough leaf"*

(J62 p11) although it lacked both the latter's red-brown saddle and mauve colour. Well on the way to Fri 2 (J69 p28), Ron found an open one (Fig. 6) alongside another rare opener, *T. aff. ixiooides* (Fig. 7). The portrait gear was quickly mobilised on the latter, much to Bruce's bewilderment. He urgently indicated the new blue as the top priority before it changed its mind and snapped shut. Let us call this unrecognised, sky blue orchid, *Thelymitra "sky"* until the experts can tell us who she is. Peter de Lange later assured the Column that it was not *T. "Ahipara"* because that grows in wet places and flowers in mid November, not 23 October. The colour is the same but the column (J67 p24) of *T. "Ahipara"* is more akin to that of *T. "darkie"*. Leafing through the books [1,2 & 3] from Oz revealed nothing quite like *T. "sky"* in their extensive repertoire. For that matter, the Oz varieties of *T. ixiooides* [2] with multiple blooms and "Perianth segments ...freely spreading on warm days." also demonstrate graphic differences from ours. Back at Shenstone, Ron sauntered 10m ahead of *T. "sky"* to find the first open *Calochilus herbaceus* (Fig. 8) of the trip. It had the purple labellum-base common to Shenstone and differing somewhat from the normal violet shade. Under a *Pinus radiata* by Fri 2, lay some white *Thelymitra aff. longifolia* var "tired-one" (Fig. 9) as Bruce calls it, with the spike bravely turning upwards to the light. This clustered white form differs from the well spaced lilac blooms of the RDH specimens (J62 p14) and suspicions arose that the shade alone may be responsible for the slender, lax stems.

T. matthewsii were dutifully checked out at Fri 2 and at three other Shenstone sites recorded in "Te Paki Jewel". Most of the flowering plants from September were extant but black, hence hard to find. One alone, at Fri 2, still had a green leaf.

Returning along the track from Fri 2,



Fig. 5. *T. aff. longifolia* with internal blue halo



Fig. 6. *Thelymitra* "sky" from Shenstone Block.



Fig. 7. *Thelymitra* aff. *ixioides*, Shenstone Block



Fig. 8. *Calochilus herbaceus* from Shenstone Block is indistinguishable from the Australian *C. campestris*

hawk-eye Ron made another find under tea-tree; the first recorded *Pterostylis tasmanica* for Shenstone. Allan Duckert recorded the only two other *Pterostylis*, *P. alobula*, at the waterfall, 6 September 98, and *P. brumalis* in seed c. 8 November 95 (J58 p36). Four *P. tasmanica* were now in fruit among numerous juvenile rosettes. The Column and three others had been back and forth past this site in September when it would have been in full bloom so Ron is right in trouble for blatantly revealing our chronic orchid blindness.

On the hill to Fri 1, a large colony of *Caladenia chlorostyla* received some close attention because they only grew out in the bright light. No difference from the shade lovers could be detected in the flowers except that these were predominantly twin flowered. Saturday



↖ Fig 9

← Fig 10

↗ Fig 11



Fig 9. *T. aff. longifolia* var. "tired one" drooping onto pine needles

Fig. 10. *Thelymitra* "sky" from ridge track
Fig. 11. Column of *Thelymitra* "sky"

dawned fine, warm and calm (Bruce was with us again). Ideal weather for the shy opening *Thelymitra*, wouldn't you say? Forget it! An unexplored ridge track was chosen across the road from Shenstone. Before long, closed *T. sanscilia* began showing up, some without cilia and some with a few but all had the characteristic split down the post-anther lobe right down to the anther attachment. This was looking most interesting. Closed *T. aemula* were almost abundant. Further along, *T. sanscilia* gave way to closed *T. "rough-leaf"*. Then, not far from lunch and peeping out of some stunted bracken fern, Ron spotted a

colony of *T. "sky"* with one wide open sky blue flower (Fig 10). Flaggin' spirits leapt afresh at the sight of this starry wonder. Out flopped the 3-D portrait gear to record it with Bruce's help. He is now an expert button pusher on the tricky reversed lens, ultra-close-ups (Fig. 11). This time there were no complaints about the delay and perhaps it was best that the other rarities along the track had been closed otherwise portrait delays may have prevented us reaching this prized colony. *T. "rough leaf"* plants nearby, with their broader, almost flat leaves, with 80 grit underneath, contrasted with the stiff, narrow and Veed leaf of *T. "sky"* so no one thought to test the latter for roughness. We had almost convinced ourselves that it was *T. "Ahipara"* but Peter put that idea to rest as mentioned above. A kikuyu smothered pa site, in view of Spirits Bay, served as a soul uplifting lunch spot.

The long hike back plus pushing the Carona out of a bog demanded ice creams at Waitiki Landing to lift three sagging spirits before they set off to the Sod Wall Track in a long-suffering, mud splattered car with lunch-bag window flapping.

The albino and regular *Calochilus herbaceus* were absent on the hard white track or in the surrounding scrub. Possibly too dry for this species to sprout this year. The Column had been surprised to hear that *Gastrodia* species sprouted only biannually or triannually but evidence at Te Paki this season suggests that some green leafed species can also hibernate if the season is unsuitable. At the sod wall, a late and lonely *Caladenia alata* got filmed whilst hawk-eye Ron was patiently levering open another blue flower atop another leaf-green *Thelymitra* stem. The colony of about five limp plants, in shade under some tall tea-tree, sported only one or two flower buds each. It was not *T.* "sky" but another enigma. This one was deeper blue like the zenith sky. Its short armed and squat column was like *T. sanscilia*'s except that white cilia were abundant. Bruce later suggested it be called *T.* "sans-ou-avec-cilia" (translating to *Thelymitra*. "with or without cilia"; Irish French however you look at it.) The Column failed to photograph this second blue find of Ron's with its bent tepals protruding at all angles despite all his care and more's the pity. But we couldn't be late for dinner at seven in the Kanuka Restau-

rant could we?

Here, over plates of steak and huge oysters fresh from the Parengarenga Harbour, we were privileged to observe most of Te Kac celebrating a young lady's 60th birthday in style.

Sunday too broke fine calm and warm but it was home time to avoid the inevitable Labour Day queues. At Lake Ohia, the Column in his natty gear, was sure that *T. malvina* would be finished but Bruce insisted it wouldn't and walked straight out to two wide open flowers on the 30,000 year old kauri stumps in the dry (?) lake bed. After groveling apologies and gracious acceptance, some nice 3-D portraits were obtained. The cilia were malvina (mauve) but the flowers were quite a deep blue, as at the Money Tree (J62 p9) rather than the mauve of the Kaimaumuau specimens (J62 p3 top L & R).

The finds from this field trip have set off a hubbub which still cannot match the elation that Te Paki orchid hunting never fails to deliver.

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Pterostylis irwinii in Nelson

Jean Jenks heard that the Pterostylis Pterodactyls were craving a sight of mainland orchid species and she was good enough to offer not only her home at Upper Moutere as a base, but also her extensive knowledge of orchid sites in Nelson. Before they could

collect their wits, she took the five Nogggers straight off the planes on 9 November, down to her place for lunch and an introduction to Bird, her pet galah, who declared, "I've been a good boy." Then off to the Baton in her van. to rafts of *Corybas* "whiskers" along a seep-

ing road batter complete with waterfall. But the flowers had finished and the *Pterostylis graminea* in the scrub and weeds defied the photographers as labella flicked back at the least vibration. Touchy mainlanders you see. *Caladenia* leaves were in evidence but flowers were weeks away.

A great dinner and orchid natter preceded a peaceful night for the Pterodactyls bunked all around the house. The Column chose a camp stretcher in a glassed in porch, under a breath-taking, star spangled black sky, unheard of near the bright lights.

November the 10th dawned and Bird, seeing the Column Sno Sealing his boots demanded, "What are you doing?" Soon the little lady had us breakfasted and off to the Parapara Peak Track to seek out *Drymoanthus flavus*. Graham Dickson drove, the weather was brilliant, of course, with its harbinger, Bruce Irwin, present to sort out *P. australis* once and for all. Jean happened to mention that she had seen a strange *Pterostylis* aff. *graminea* under some bluffs near the top of Takaka Hill. So Allan Ducker and the Column scaled a slip face (and that was the easy slope!) to the indicated spot.

Allan sang out that he had *Pterostylis irwinii*, right under a kowhai. Bruce, down by SH 60, felt sure this was in jest. He had found this orchid at Erua on a river flat, elevated only a little above the swamp, how could it possibly be flowering here, one month early, under beetling cliffs atop a slip face of rock? What wafted back to the death-defying photographers? "Hurry up, we're late already!"

A handy sheep track proved a safer retreat than the slip face and before very long the climb was on toward Parapara Peak. The track was a haven for *P. banksii* (half sized mainland specimens), *P. irsoniana* (Fig. 1) and a precious few *Chiloglottis cornuta*. *P. montana* appeared to be abundant but Graeme Jane assured us at the Pokaka Conference, that the Parapara taxon has only slightly curved lateral sepals and a double heart shaped stigma, not "short, broad, oval to cordate, inclined to be prominent." as described in *Flora II*. So *P.* "Parapara" (Fig. 2) may be an addition to the ever lengthening string of *P.* aff. *montana* now perplexing the pundits. Much



irsoniana
Fig. 1. *Pterostylis irwinii*, Parapara Pk Track.

further up Parapara Peak Track, through slip turmoil of the previous two wet months, was a *Drymoanthus adversus*, in flower but too high for the cameras. The *D. flavus* had been perched on a nearby mingimingi *Leucopogon fasciculata*) but had vanished, shrub and all. Jean, who had recently suffered cracked ribs



Fig. 2. *P.* aff. *montana* "Parapara"



Fig. 3. Disputed *Pterostylis australis* from Hacketts Track

when a gale blew her bodily off a razor-back ridge into a matagouri bush (*Discaria toumatou*) now felt sore and distraught at the perfectly normal situation for the Pterodactyls, of missing a target species.



Fig. 4. *P. banksii* s.s. from Karamatura Track, Waitakere ranges.

Graham Marshall (Marsh, to avoid double Graham confusion) took on driving duties home whilst the crocks in the back nursed a variety of aches, pains and anguish. Oh gentle reader, do you realise what we suffer, only for your reading pleasure? Bird greeted the limping lot with, "Do you want a cuppa tea?"

Wednesday and the bell-birds brought fresh hope with welcome(?) calls at 5 am. Jean greeted her 7 am wake-up cuppa, with a muffled "Hmph" but departure just after eight still eventuated.

for the legendary and gently climbing, Hackett Track, just out of Hope. It's true, look at the map. Bruce was looking for *Pterostylis porrecta* and told us (at the Conference on 6 December!) that he thought we all knew. We didn't 1) know, 2) find it. Here too, said Jean, was *Pterostylis australis* for sure. Eager eyes scanned the tea-tree (*Leptospermum scoparium*) and *Corokia cotoneaster* in the appointed spot but, fresh from yesterday's disappointment with the *Drymoanthus flavus*, they saw only *P. banksii* with leaves and dorsal sepals a bit shorter than normal. But some attractive specimens and subconscious question marks, did bring out the cameras, fortunately, because the orchids were, none other than target No.1, *P. australis* (Fig. 3). The dubious N. Islanders, inured by false reports of this orchid at home, just couldn't believe what they saw. Beware; Bruce and G. Jane identified Fig. 3 in 3-D, at the Pokaka Conference, as *P. banksii* in the face of photographic evidence that *P. banksii* s.s., has a dorsal sepal curving upwards, ± 25 mm beyond the lateral petal tips (Fig. 4). Amazingly, *Thelymitra longifolia* s.s.(?) were open in the midday heat and had portraits made in the certainty that these one-flower-open-at-a-time miniatures were not just more *T. aff. longifolia*. But nothing is ever certain especially on South Island field trips! Bruce looked a little closer and found neat packets of pollinia — meaning, insect pollinated — in the *T. aff.*

longifolia. The pale green, diminutive stems and leaves also seemed to set them aside from *T. longifolia* s.s. The Column could weep. He may not have a single photo of s.s. after 40 years of trying; they could all be affs but how can one tell from photo's? Any reader that can, please let him know the secret.

The Browning Track branched away but seemed barren of orchids viewed at even a geriatric walking pace. Jean and Bruce with long faces and heads hung low (no *P. oliveri* either)

returned to meet Allan and the Column, noses to the moss beside a fine pair of *P. foliata* and a *Corybas oblongus* "aestivalis" with its near-black internal whiskers and spangled fringe. Close inspection also delivered *Corybas* "whiskers" still in fresh flower hidden in the drain, a large colony just off the track of *C. macranthus* with *P. australis* (again mistaken for the disputed *P. banksii*) and the two Grahams spotted a pink *Caladenia* (which they were understandably unwilling to name) near the Hackett Hut. Not bad for a fine day's controversial stroll. Bird of course was up to the moment that evening with, "Give's a kiss goodnight, x x x, see you in the morning."

The first rooster crowed at 4:50 am on 12 Nov. to wake the bell birds. Jean's plan of action was a trip to Canaan Road at the top of notorious Takaka Hill, but she refused to say for what. She declared she had opened her gob too much so this time she was saying nought! Her tight lipped policy certainly delivered the goods. Parked at Tremolite corner, the first eye openers were thousands of *Corybas macranthus* (with dark maroon dorsal sepals?) on the road batters, some with leaves appressed to the ground, drawing seepage from the face of the out-cropping Takaka marble. The Column, who had up



Fig. 5. *Corybas macranthus*, southern style.

to now been suspecting a second taxon of *C. macranthus* with flowers above the leaves, soon found he had to do a certain amount of misguided grovelling to the injured pride of Bruce who had



Fig. 6 *Corybas macranthus*, northern style, from Parau Track, Waitakeres.



Fig. 7. *Pterostylis foliata*
from Takaka Hill



Fig. 8. *Pterostylis oliveri* in
Takaka marble outcrops



Fig. 9. *Pterostylis irwinii* from
Takaka Hill.

always decried such sacrilege. Here were flowers above the leaf (Fig. 5, cf. J62, p24) on exposed plants, flowers below the leaf on robust plants in damper, shadier niches and everything in between. For comparison, Fig. 6 is a typical Region 9 *C. macranthus* (with pale dorsal sepal) which the Column has never seen flowering in either an exposed position or above the leaf. Separate taxa? What do you think?

Three or four paces from the van, *P. foliata* (Fig. 7) stood proud and nearby, in parallel niches in the marble (announced in ear splitting whoops by Allan), stood *P. oliveri* (at last, Fig. 8) and *P. australis*. Now, finally, the short broad leaves and the darkest green tipped labellum, convinced the field party that this indeed was the long-sought *P. australis*. Across the road, in places on a grassy ridge, half the "grass" was *P. australis*. *P. graminea* grew under some marble here too rounding out an intriguing morning's scavenging. But Allan and the Column were itching to get more time at the *P. irwinii* site where

things had started to look good; was that only two days before? Everyone else seemed keener on steaming mugs of thermos brew and the inspiring view from Takaka Hill. No accounting to taste is there? Soon, two dozen plants of *P. irwinii* had been tracked down, merging with a bigger colony of *P. oliveri*, both thriving on seepage from under the towering bluffs. The camera gear came out but carefully! Anything plonked straight down through the shrubbery onto SH 60. *P. irwinii* labella flicked back at the merest vibration so the Column, clinging valiantly to the shrubbery, set up on a beauty unencumbered by grass and debris, only to have its voice-activated labellum flick back upon a shouted reply to one of Allan's long-distance conversations (Fig. 9).

Black Friday saw Marsh and Allan headed by bus for another two days orchidising in Marlborough whilst the others flew off home to catch up on chores. Thank you Jean for your unstinting hospitality, for introducing us

to Bird and for the interesting process of negotiating down before you would accept any consideration for the costs involved. Jean's dejection at missing target species at crucial times had her giving up orchids in favour of tramping, mineralogy and her talented paintings but it is too late to give up Jean, when you are in the top few native orchidologists in New Zealand.

Subscripts

1 Bruce was so pleased at his fine weather abilities that he has offered his services for a modest fee to any self respecting orchid field

party. The Column wants a cut for all his promotion efforts but has been offered nothing.

2 G. Dickson proposed that *P. irwinii* had originated in the South Island then seed blew north to help re-colonise areas devastated by the most recent Taupo eruption in 120 A.D. A thought provoking hypothesis.

3 Allan and Marsh found Marlborough too dry for many orchids at low altitude but ran into masses of *P. irsoniana* in the moister high ground at Pine Valley on the north bank of the Wairoa.

Conference and field days report: Pokaka 1998

by Bruce Irwin, with contributions from Eric Scanlen and Anne Fraser,
compiled by David McConachie.

On 4 December thirty-six orchid enthusiasts seemed an ideal number to accommodate in the Taylor Memorial Lodge. If they were split into three groups, the orchids would not be subjected to severe trampling over the next two days (I hoped). One point I think we should raise at future gatherings is that having located a few flowers of any rather rare orchid, the group should be asked not to search the entire habitat, but be content to study and photograph only the first few flowers found. Probably little lasting harm will be done trampled plants, but why take the risk?

Eric's 3-D slide programme the first evening impressed the group, as I knew it would.

The first day my group searched a previously unknown site, across the railway from the monument at the site of the last spike driven on the Main Trunk Line. Few orchids were found so we drove instead to Whakapapa village. It was interesting having Gael Donaghy and Graeme Jane from Nelson/

Takaka in our group. *Pterostylis patens* was new to them and caused many oohs and ahhs. They were intrigued too by the variability of *P. "aff. montana"* at Ruapehu. A splendid group of flowers at one of the caravan sites of the dark-leaved, late-flowering form of *P. "aff. montana"* came in for much attention. I had never before seen such a startling group! *P. humilis* was flowering well nearby and was also popular with the photographers. Plants of *Thelymitra* "Whakapapa" were in bud throughout the rock garden.

We lunched in comfort at in the public shelter close to DoC HQ then made a quick search for *Corybas* "round leaf" near the water reservoir. Leaves but no flowers were found. The next call was the swamp opposite the lahar mounds 5 km below the Chateau. Those *P. paludosa* that were found were small plants but the photographers were happy – well almost happy. Wet trouser knees resulted from their efforts. A few fine-leaved *Thelymitra* (probably *The-*

lymitra pulchella and/or *Thelymitra cyanea*) were in small bud.

At our next stop near Erua, enormous sword-like leaves of *Thelymitra circumsepta* were most impressive. The track to the *P. irwinii* colony just across the stream had already been visited by both other groups, so was obvious though muddy. My group respected my request not to explore beyond the first group of flowers and waited patiently for their turn to take photographs.

The last call for the day was to the excellent habitat NE of Horopito. There we found not only many orchids but many NOG members as well. At this site *P. "aff. montana"* are determined to express their individuality. Gael noticed this and decided that the narrow-leaved form had a longer, constricted apex to the labellum than the more yellow wider-leaved form. To me it seemed that the quite obvious difference in flowering times of previous seasons was, this season, much reduced. Other orchids found included *P. graminea*, *P. montana* (showing some tendencies to "aff. montana"), *Caladenia lyallii* and *Caladenia chlorostyla*, as well as *Corybas oblongus* in flower. (Some people remarked on the variation in leaf colour and even leaf shape). Barren leaves of *Corybas "round leaf"*, *Chiloglottis cornuta*, a few unidentified *Thelymitras* in small bud and some lovely groups of fresh *Adenochilus gracilis* flowers were also seen. *Aporostylis bifolia* was also present but I saw no flowers.

Everyone enjoyed an excellent chicken dinner after which David McConachie spoke on the possibility of rare and endangered species being saved in cultivation. His talk was thought provoking. Ian St George followed with a hilarious account of the



Townsonia deflexa. Twin flowered plant; unflowered leaf behind (photo Eric Scanlen)

use of orchids in medicine through the ages. (Who needs Viagra when you have orchid tubers)? Informal chatter about orchids and the display of orchid photographs filled any spare time. I found such chatter very useful. Much can be learnt about local variation of species in other parts of the country.

On Sunday my group drove up the Turoa Road to the Waitonga Falls Track. Ian and I had rushed ahead to look for *Pterostylis* "too big" at the lower end of the Blyth Track. Our search was unsuccessful, nor did I find it on 4 December, across the railway, opposite the lodge. Possibly the plant was on "sabbatical leave". From the car park we searched for orchids, finding (as usual) a puzzling assortment of *P. "aff. montana"* and a few *P. patens*. *Thelymitra* "Whakapapa" was well above ground, some showing tiny buds. I had expected to recognise the corner where Anne Fraser and



A bogged-down photographer (at left) and her quarry *Pterostylis paludosa* (at right)

Ron Bishop had found *Townsonia deflexa* last season, but well short of the boardwalk realised we were past the colony. Near the Mangawhero Falls there were plenty of flowering plants (see Eric's photo) willingly posing for the photographers.

Some of us made a hurried trip up to the Turoa Car Park where David showed us the area where he had seen *Waireia stenopetala*. (*pre-eruption* - D.McC) We could find no plants but will search later in the season.

Back at the Lodge we enjoyed a fine lunch before dispersing.

Additional comments from Eric Scanlen.

Guide 2 happily led his team straight to Erua where the swampy creek crossing sank Bob Talbot right up to his knees in ooze but Bob had his photo's secure by the time the two Richards from Nelson had set up their tripods by another three *Pterostylis irwinii*. At this juncture, Guide 3 (Anne) and her entourage paddled over the ooze and picking their way carefully among the ferns, (*Polystichum vestulatum*) to avoid the flowerless, grass-like orchids, soon sorted out the confusion. The Richards kindly withdrew

their cameras unused because the site was too limited for two parties but they need not worry: *P. irwinii* now has several known sites in Nelson according to Graeme Jane.

Later at Horopito the soggy tea-tree flats were deserted so the fourteen spread out in this ideal orchid site. *Caladenia lyallii* showed up in two forms, one white all over and one with a beautiful red patterned labelum (visible through a strong magnifier). Another cluster of *P. banksii* s.s. was found akin to the Rotokura colony and unusual in this southerly latitude. *P. montana* has been found in the area but most that showed up today were just close copies with perhaps curled lateral sepals but untwisted labella or twisted labella and terete lateral sepals. The ID *P. "aff. montana"* did tend to get overused when identifiers were in any doubt. *Corybas oblongus* in flower was common and a few *Corybas trilobus* were still in flower. *Corybas macranthus* graced the stream banks by a large culvert with very few seed capsules in evidence. Browsers seem to get most *Corybas* fruit. Party 1 had arrived by now and with the huge area to cover, complemented party 2 but the unusual activity disturbed a

green gecko with a pair of continuous gold lines down its back and an amazing deep blue mouth and tongue. Bob Talbot has photos for the doubters. The book would have this as *Naultinus elegans* — if it weren't for the gold stripes.

Sunday and field party 2 left the Lodge in a flurry for Whakapapa. Guide 2 led off into the swamps alongside SH48 and splashed completely around one of the many boulder mounds left by ancient retreating mudflows, without seeing a solitary *P. paludosa*. Meanwhile his party, who had abandoned the chase, had found the orchid in and around swampy puddles marking the head of a stream and said nought. That's gratitude for you! But there were some lovely fresh flowers, which got the shutters going again. The last fling of party 2 before some returned for lunch to the Lodge and others headed home, was to Whakapapa where subalpine orchids abound in the native forest between the campsites. One immaculate *P. humilis* was leaning out by the street near the dairy and attracted plenty of photographic attention. Another at caravan site 10 helped to reduce the camera queues. *P. "aff. montana"* were in evidence with *P. graminea* but it was too early for the abundant *Gastrodia cunninghamii* here.

Additional comments from Anne Fraser

From Turoa to the Mangawhero Falls for *Townsonia deflexa* the drive up the mountain is always a pleasure but the weather closed in a bit with low cloud and rain. However in the bush there was enough shelter to satisfy the photographers. Suzan pointed out some mistletoe under surveillance and described aspects of the study to some of the group, and we searched a creek bed across the road where good strong plants of *Thelymitra sp.* had been seen. Shingle and build-up of ash seems to have reduced their number. A stop in Ohakune on the way down was mandatory — chocolate éclairs for some and cappuccino

for others — and a comfort stop revealed clumps of *Thelymitra (longifolia?)* in the garden bark. Pauline pointed out the *Earina mucronata* in the *Nothofagus* (beech) trees, observing that there can't be many towns with native orchids in the main street!

This avid old rose fan spotted an old rose on the roadside bank: Ross, husband of another old rose fan, obediently stopped. The delightful pale lemon flowers and finely cut foliage immediately showed it was absent from my garden. A cutting will hopefully remedy that. Sunday morning: Ross had obtained permission from the owners to check a wetland on a farm near Ohakune. Gwen, one of the owners, came with us and we appreciated her guidance. The wetland is extensive and appears to contain a variety of habitats that tempt a further look at a later date. We spent a happy, if boggy, time in tall manuka and kahikatea bush after negotiating raupo, a wonderful array of sedge species and luxuriant grass, including large clumps of *Gahnia*. Orchids seen included *Corybas trilobus* with numbers of seedpods, *Pterostylis banksii* and those maddening *Pterostylis sp.*, a small pale pink *Caladenia* and *Caladenia chlorostyla*, and *Chiloglottis cornuta*. In the access track there were the ubiquitous *Microtis sp.* and *Thelymitra*, probably *longifolia*. We did our share of the farm-work on the way out, righting a cast ewe. The group idea worked well and proved a very good way to organise a fair number of people around a fair number of places in a limited time. I'd like to thank our group for their enthusiasm and cooperation. It was a pleasure to accompany, and learn from them.

(On behalf of the attendees of the weekend I would like to thank the organiser and guides for a thoroughly enjoyable weekend. Hopefully we will have another interesting area to explore at the end of this year

-- David McConachie)