



ISSN 1170-4543. Editor Ian St George, 22 Orchard St, Wadestown, Wellington, phone 04 4994227, fax 04 3895725.
Australasian Native Orchid Group Ltd, POB 69, Unclon, Canterbury.

THE NZ
NATIVE

ORCHID
GROUP
JOURNAL
49

MAR 94
NUMBER

Contents

Editorials

1. NZNOG celebrations, December 1994
2. William Colenso's Hawke's Bay orchids

Original papers

12. Iwitihi Native Orchid Reserve: proposed heritage park. Trevor Nicholls
13. The annual Taranaki *Corybas* Crawl. Audrey Eagle
15. More about that cantankerous *Corybas* - a diary. Margaret Menzies

Notes

17. Errors.
Cath and Ken Wilson on *Caladenia iridescens*.
Steve Savage on *Gastrodia*.
Max Gibbs and native snails.
18. John Dodunski on "impossible" terrestrials.
Nelson Botanical Society field trips
Calochilus in Te Kopia Scenic Reserve
Betty Seddon on *Pterostylis patens* from Westland.
19. *Corybas cryptanthus* near Wellington.
Robert Macnab on Tangarakau Bush Walks
20. Allan Ducker's field trips
Ian Rutherford in Taranaki
21. Bruce Irwin on "Pterostylis epiphyticus"
WWF on *Corybas carsei*.

Help wanted

22. What are the ranges of elevation and its effects on orchid species? Mark Moorhouse
23. Red and green forms of *Orthoceras*.
Ian Rutherford

Orchid artists

23. Hugh Dale Wilson

Australian notes

26. Andrew Batty on *Caladenia* propagation.
Bob Bates on mice that eat tubers.
Bob Bates on forms of *Pterostylis nana*.

Close relations

27. *Gastrodia javanica* and *G. verrucosa*

NZNOG CELEBRATIONS, December 1994

It was in March 1982, Dorothy Cooper sent out the first Newsletter. She wrote, "By using members' contributions on any aspects of our native orchids, we can circulate information throughout New Zealand to many people now interested in this section of our flora."

Questions can be answered and discussions can take place and we can communicate ideas to the benefit of all when we're so widely separated." That vision has been well and truly fulfilled. In December 1994 we will begin the second fifty issues of what has become the NZNOG *Journal*.

On 2-4 December 1994 we will celebrate. We will join the Taupo Orchid Society in a NATIVE ORCHID CONFERENCE, to be held in conjunction with the official opening of their new Iwitahi Native Orchid

Reserve, and with their annual native orchid Field Days. We plan to invite a number of speakers, and to intersperse social and scientific sessions with field trips. The December issue of the *Journal* will be enlarged with the Conference *Proceedings* - and we need your writing to make it the best issue ever.

You shouldn't miss this event: make a diary entry now, and use the enclosed form to register. Start to write your paper for the *Journal*.

William Colenso's Hawke's Bay orchids

William Colenso collected 22 of the new orchid species described by J.D. Hooker in his *Handbook of the NZ Flora* in 1864. Among them was *Corybas rotundifolius* which he had collected from the village of Puehutai.¹ The village is no longer on the map, but in 1846 it was important as the highest navigable point on the Manawatu River. It was near present-day Dannevirke.

Colenso retired in 1877 at age 66 and from 1881 to 1898 he described 36 new orchids. Of these 36, 27 were collected in Hawke's Bay - sixteen from Waipawa County; six from Glenross; five from the eastern side of the Ruahine ranges; others elsewhere (Table).²

The Seventy Mile Bush had been the site of an almost unknown track until it was cleared by Scandinavian settlers in 1872. With the government's public works scheme to open up better access between Wellington and Napier via the Manawatu Gorge, the Seventy Mile Bush district was renamed Dannevirke Highway District in 1876, administered by the Waipawa County.

Bagnall and Petersen wrote that Colenso, who had walked the track years earlier, now saw

"...the roads and villages erasing the old thread of track would give a ready approach to plant communities not studied since his last missionary tour.... he was with mixed feelings to watch the newcomers' hopes and necessity push back the stump-charred forest margin towards the Ruahine foothills....

"Colenso, in the refund youth of his early seventies, made day-long excursions from headquarters in the village hotels...." 4,(p423)

Colenso's orchids

"Thus began the long series of descriptions of specimens which he alone considered to have specific validity. The specimens once described were usually sent to Kew, and there were seldom duplicates for his fellow botanists in New Zealand....

"Cheeseman ...was becoming more and more doubtful of the great numbers of new species Hawke's Bay was producing, and finally, in 1884, joined issue with Colenso on the subject....

TABLE

Orchids described by Colenso from Hawke's Bay 1881-1898

(*Colenso's name (current identification); locality where found originally; year found; whereabouts of the Type (from Moore); collector*)

Bulbophyllum ichthyostomum (*Bulbophyllum pygmaeum*); Waipawa: Kumeroa R. Manawatu; 1893; Type: WELT 24264; H. Hill

Bulbophyllum tuberculatum (*Bulbophyllum tuberculatum*); nr Petane; 1883; Type: WELT 24263; A. Hamilton

Caladenia macrophylla (*Aporostylis bifolia*); Ruahine ranges E side; 1894; Type: WELT 24286; A. Olsen

Caladenia variegata (*Caladenia minor*); Waipawa: Norsewood (top of high hill); 1883; Type: AK WELT "several specs"; Colenso

Corysanthes hypogaea (*Corybas trilobus*); Waipawa: Fagus forests nr Norsewood Sept fl; 1883; Type: K?; Colenso

Corysanthes papillosa (*Corybas macranthus*); Glenross; 1883; Type: not found; Colenso, D.P. Balfour

Dendrobium lessonii (*Dendrobium cunninghamii*); Waipawa: Norsewood (forks of *Podocarp. spicata* + sts stones under Fagus); 1882; Type: WELT many sheets; Colenso

Earina alba (*Earina autumnalis*); Waipawa: banks of R. Mangatawhainui on rocks + under *Fagus solandri*; 1885; Type: WELT 24267; Colenso

Earina quadrilobata (*Earina mucronata*); Waipawa: on trees nr Norsewood fl Nov; 1881; Type: WELT 22612 22613 24266; Colenso, A. Hamilton

Gastrodia leucopetala (*Gastrodia cunninghamii*); Waipawa: Seventy Mile Bush betw. Norsewood & Dannevirke; 1885; Type: WELT 24288 AK 3682; Colenso

Microtis longifolia (*Microtis unifolia*); Waipawa: skirts of woods nr Norsewood fl Feb/Mar; 1884; Type: WELT 24277 AK 3452; Colenso

Orthoceras rubrum (*Orthoceras novae-zeelandiae*); Glenross; 1885; Type: not found; Colenso, D.P. Balfour

Prasophyllum pauciflorum (*Prasophyllum colensoi*); hills W of Napier; 1883; Type: not found; Colenso

Prasophyllum variegatum (*Prasophyllum nudum*); Glenross; 1887; Type: not found; D.P. Balfour

Pterostylis emarginata (*Pterostylis banksii*); Ruahines E side + Te Aute forest + Hampden; 1882; Type: not found; Colenso, C.P. Winkelmann, S.W. Hardy

Pterostylis patens (*Pterostylis patens*); Waipawa: hilly country nr Norsewood + Glenross; 1884; Type: WELT 24281; Colenso, D.P. Balfour

Pterostylis subsimilis (*Pterostylis banksii*); Ruahines E side; 1894; Type: WELT 24282; A. Olsen

Pterostylis trifolia (*Pterostylis venosa*); Ruahines E side; 1898; Type: not found; A. Olsen

Pterostylis tristis (*Pterostylis tristis*); Waipawa R. S. bank open flat turf spots; 1885; Type: WELT 24284; H. Hill

Pterostylis venosa (*Pterostylis venosa*); Ruahines E side; 1894; Type: uncertain; A. Olsen

Sarcochilus breviscapa (*Drymoanthus adversus*); Waipawa: high in Podocarps Seventy Mile Bush + Glenross fl Sept; 1881; Type: WELT 24268; D.P. Balfour

Thelymitra alba (*Thelymitra longifolia*); Glenross; 1885; Type: not found; D.P. Balfour

Thelymitra nemoralis (*Thelymitra longifolia*); Waipawa: dry Fagus forests Seventy Mile Bush fl Dec; 1883; Type: not found; Colenso

Thelymitra purpureofusca (*Thelymitra longifolia*); Waipawa: Norsewood in Fagus woods; 1883; Type: not found; Colenso

Thelymitra formosa (*Thelymitra formosa*); Waipawa: Fagus woods high land betw. Norsewood & Dannevirke fl Dec; 1882; Type: WELT 22571; Colenso

Thelymitra concinna (*Thelymitra pulchella*); R. Mohaka open country nr E bank; 1884; Type: not found; A. Hamilton

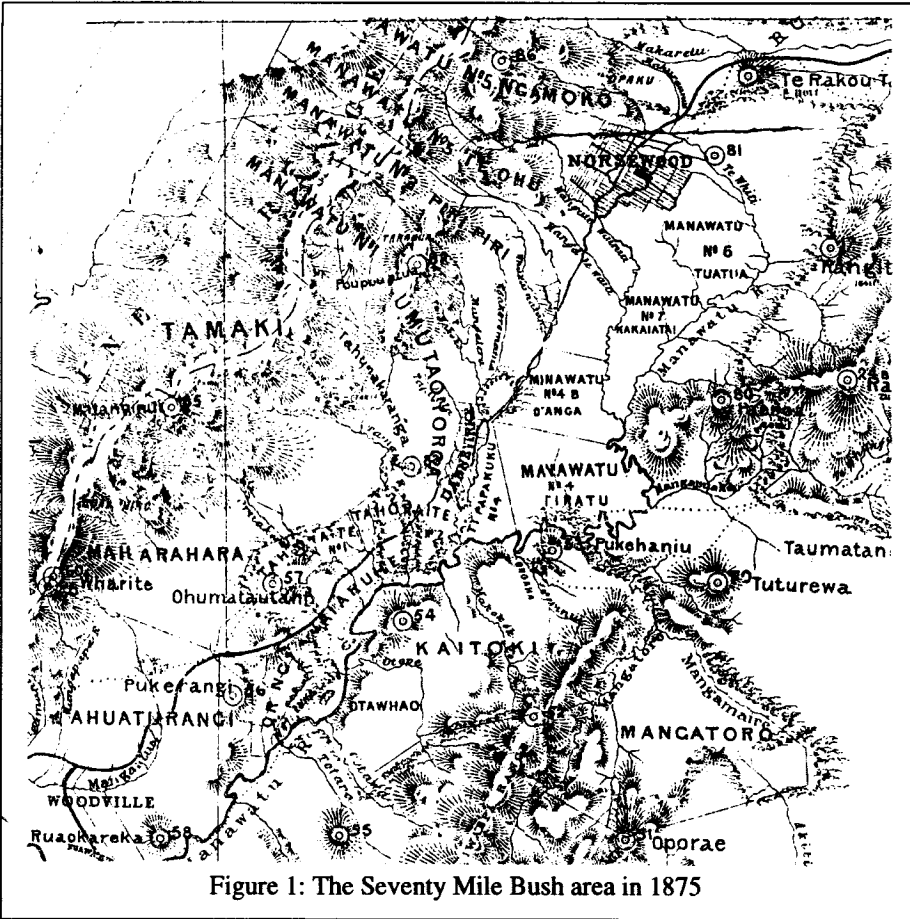


Figure 1: The Seventy Mile Bush area in 1875

"...in many cases the characters noticed by Colenso were not those which the best botanical opinion considered as necessary to the establishment of a species and the differences stressed were sometimes so slight as not even to constitute varieties." 4 (p425-7)

Cheeseman's corrections

Bagnall and Peterson reviewed Colenso's achievements:

"In botany he was as a collector the leading New Zealand figure for

twenty-five years. As a taxonomist he suffered rather from lack of self-discipline than from ignorance. His later botanical work is marred by too wide an attention to variations in the determination of species Cheeseman ... rejected some 360 species of Colenso's later work." 4, (p439)

Cheeseman would accept only two of Colenso's 36 orchids as valid species - *Bulbophyllum tuberculatum* and *Pterostylis venosa*. He included the other 34 in named species.

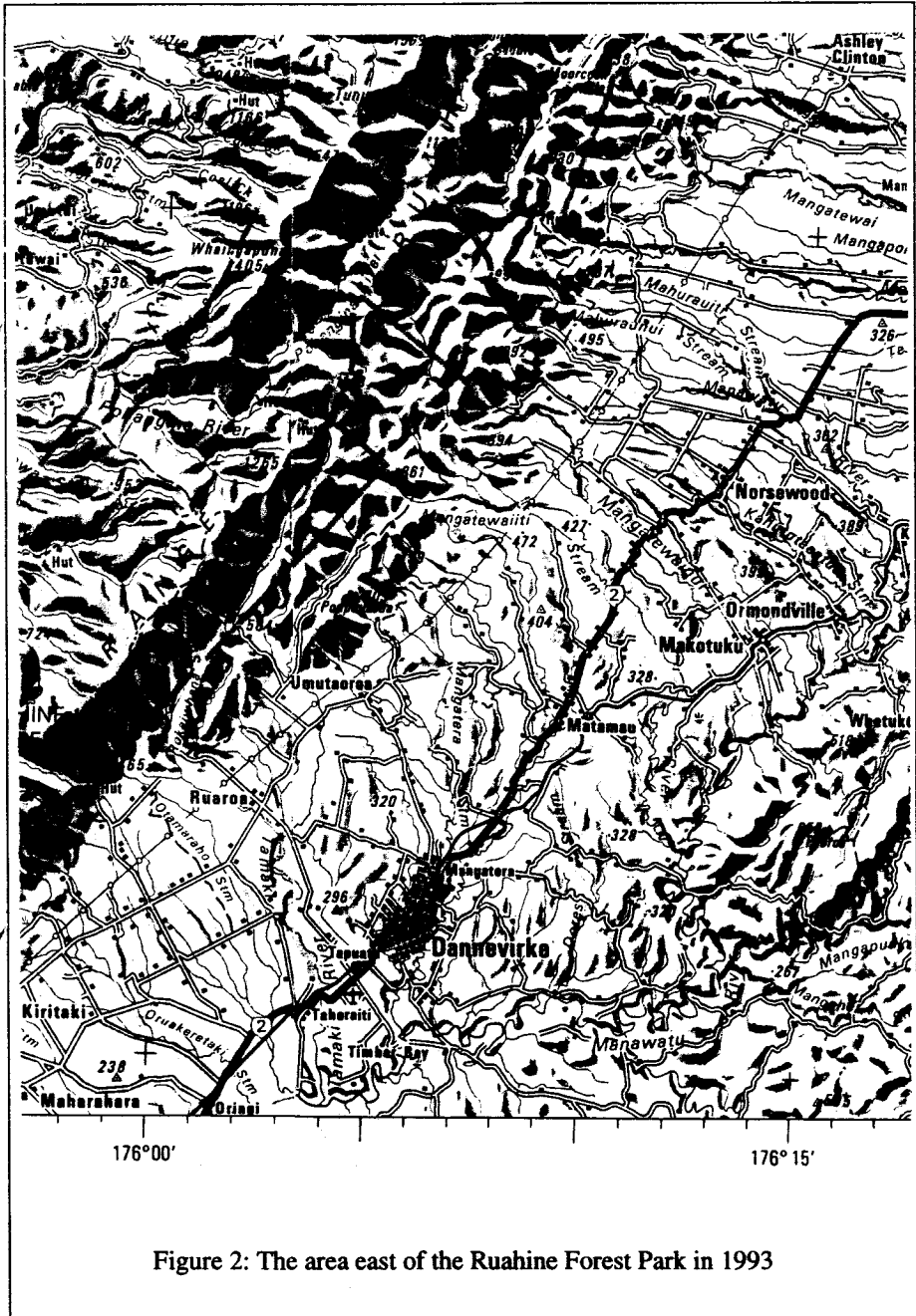


Figure 2: The area east of the Ruahine Forest Park in 1993

Since Cheeseman *Corybas orbiculatus*, *Pterostylis patens*, *Pterostylis tristis* and *Thelymitra formosa* have been accepted as valid species.

Moore could find no Type specimen in New Zealand herbaria for ten of Colenso's orchids, and for several other sheets commented that they were identified as Colenso specimens only in Cheeseman's writing.⁵ She did not examine Colenso specimens held at Kew.

With the growing number of plants currently being split from named species, a re-examination of Colenso's names is essential, and indeed a number of orchidologists interested in the New Zealand species have visited Kew and examined them. Little of what they found has been published.

Colenso's *Corysanthes*

Two of the Hawke's Bay orchids were *Corybas*; *Corysanthes hypogaea* was later identified as *Corybas trilobus*, and *Corysanthes papillosa* as *Corybas macranthus*. Might the former match one of Max Gibbs's forms of *Corybas trilobus*⁵ or the latter one of Bruce Irwin's forms of *Corybas rivularis*?⁶

The answers can only come from, first, examining the herbarium Type specimens that do exist - both are at Kew. And secondly (ideally) rediscovering the plant where it was originally collected: not easy a century later with the changes the land has been subject to, but then Colenso's late collections were from habitat highly modified by the industrious settlers too.

Corysanthes hypogaea

Colenso found this plant near Norsewood, and described it in 1884 as follows (*Trans. N.Z. I.* 16: 336)

Genus 9. *Corysanthes*, Brown.

Corysanthes hypogaea, sp. nov.

Plant very small, terrestrial, tender, succulent; *leaf* single, 5-8 lines diameter, membranous, shining, much veined, veins largely anastomosing with longitudinal dots in the interspaces, cordate-reniform, 3-lobed at tip, middle lobe produced, acute acuminate, side margins sinuate with a single notch on both sides near base, auricles large, distant, subhastate, very blunt; light green above, midrib and marginal spots purple; silvery below and sometimes dashed with a purple hue; *petiole* $\frac{1}{2}$ -1 $\frac{1}{4}$ inches long, white, often pinkish, with a sheathing truncate bract at base; *peduncle* short, 1-2 lines long, bibracteate close to base of flower, the front bract much smaller linear, the hind one ovate-oblong, both obtuse; *flowers* 3-4 lines diameter, much veined, dorsal sepal arched, closely clasping, subobovate-spathulate, narrowest at base, rounded and slightly sinuate or subapiculate at apex,

green with a purple median line; *lateral sepals* and *petals* linear acuminate, very narrow filiform, upper pair $\frac{3}{4}$ inch long, lower pair hair-like, 4 lines long; *lip* large, dark blood-red above with darker stripes, greenish below spotted with red, bi-lobed at top, lobes rounded entire, 2-3 deep lacinations or ragged lobes below, with the sides much cut and jagged and incurved, a delicate circular bordered ear-like aperture on both sides immediately behind bases of petals.

Hab. Among mosses, steep cliffy sides of dry hills, *Fagus* forests near Norsewood, Waipawa County; 1880 (plentifully but barren); 1882 (a few capsules long past flowering); and 1883, September, in flower: *W.C.*

Obs.—I have known this plant for some years, but never found it in flower until the spring of 1883, mainly owing to its peculiar manner of growth, and its very early flowering; for while its one small leaf is spread flat on its mossy bed, its delicate flower is 1-2 inches below the surface, and never appears above during its flowering, though afterwards (in a few observed instances) its capsule is shown just above the surface, owing to the elongation of the peduncle after flowering, which habit is also common to the genus. It grows pretty thickly scattered in beds, showing its small glistening leaf just above the mosses and *débris* of fallen *Fagus* leaves (*F. solandri*), but flowering specimens are very scarce, not one plant in twenty bearing a flower. A species possessing close affinity with *C. triloba*, Hook. fil.

Moore could not find the Type in Auckland or Wellington. Clements found it at Kew and identified it as *C. trilobus*. But several of us believe there are a number of species currently included in this name: which of them was *C. hypogaea*?

I was in London in November, and took the opportunity to search out the herbarium sheet at Kew; it contains mounted specimens of five flowering plants and two leaves, the leaves less than 1cm across, the flowers less than 0.6cm (Figure 3).

Max Gibbs drew attention to consistently tiny forms of *C. trilobus*,⁵ and Trevor Nicholls showed me a colony at Iwitahi on 28 November this year, under *Pinus nigra*. The effect of the deep pine needle litter on the habit of the plant must be similar to that of moss - the leaves lay on the surface, but the flowers were quite hidden beneath, their filiform lateral sepals only sometimes penetrating the litter (Figure 5). (Not uncommon for several forms of *C. trilobus* mind you).

I suspect nonetheless that this will prove to be Colenso's *C. hypogaea*.

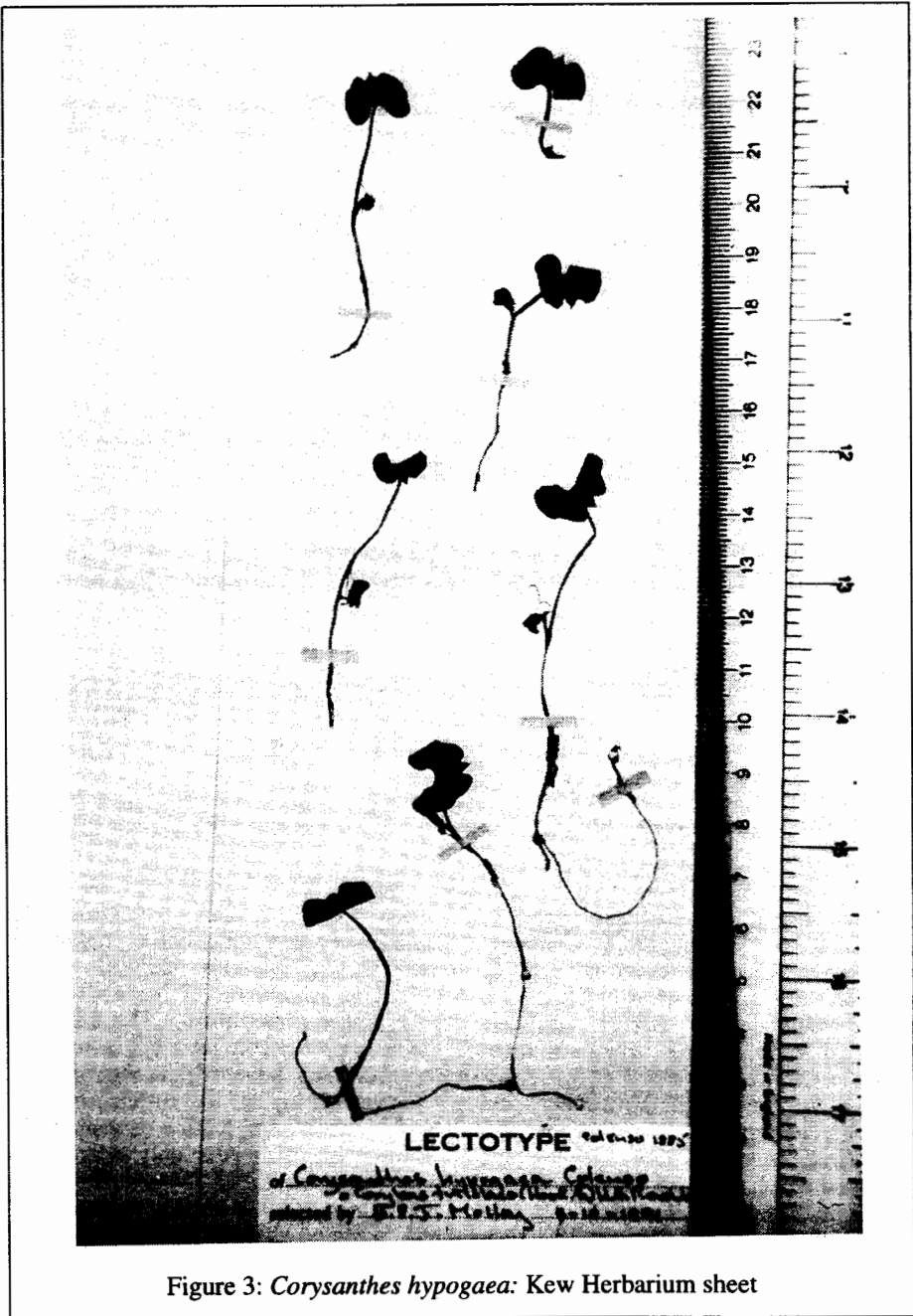


Figure 3: *Corysanthes hypogaea*: Kew Herbarium sheet

Corysanthes papillosa

Balfour found this plant at Glenross, and Colenso described it in 1884 as follows (*Trans. N.Z. I.* 16: 337)

Corysanthes papillosa, sp. nov.

Plant small, 2–3½ inches high. *Leaf* ¾–1¼ inches diameter, membranous, finely and regularly papillose on upper surface, orbicular-cordate; *auricles* broad and largely rounded overlapping petiole, slightly retuse and apiculate at tip, much veined; *veins* anastomosing with an intramarginal vein running all round, light-green with (sometimes) a purple midrib and spots near margin; *petiole* ½–2 inches long; *peduncle* short, 3–4 lines long, variously situated—springing from near base of long petiole—from the middle—and from the top near leaf, purple spotted, bibracteate at base of ovarium; *bracts* small, unequal, the front one very minute, white, the back one much larger, ovate-acuminate, green. *Flower* ½ inch diameter, upper sepal suboblong-lanceolate, 2½ lines broad, acuminate, acute, projecting far beyond the lip (sometimes 2½ lines), recurved at tip, very thin, 5-nerved longitudinally, greenish-white spotted with purple-red; *lateral sepals* very filiform, 6–9 lines long, acute, whitish; *lateral petals* about 2 inches long, somewhat filiform but stoutish, obtuse, cylindrical, twisted, minutely spotted and coloured purple-red above for half of their length, white below; *lip* large orbicular, ½ inch (or more) in diameter, deeply bilobed above, spreading, plain, neither recurved nor involute, margins rounded entire above with a single slight notch at top on each lobe, very minutely undulate or finely and slightly toothed, retuse and apiculate below, papillose within, transparent, much veined; *colour*, dark purple-red above, whitish spotted with purple-red below; *ovarium* subangular, sulcated, purple striped.

Hab. In various parts of Hawke's Bay, among mosses in ravines, shaded woods in the interior, 1850–1880: *W.C.* Glenross, near Napier, 1883: *Mr. D. P. Balfour.*

Obs.—A fine species closely allied to *C. macrantha*, Hook. fil., but very distinct. Also, having affinity with *C. fimbriata*, Lindl., an Australian and Tasmanian species.

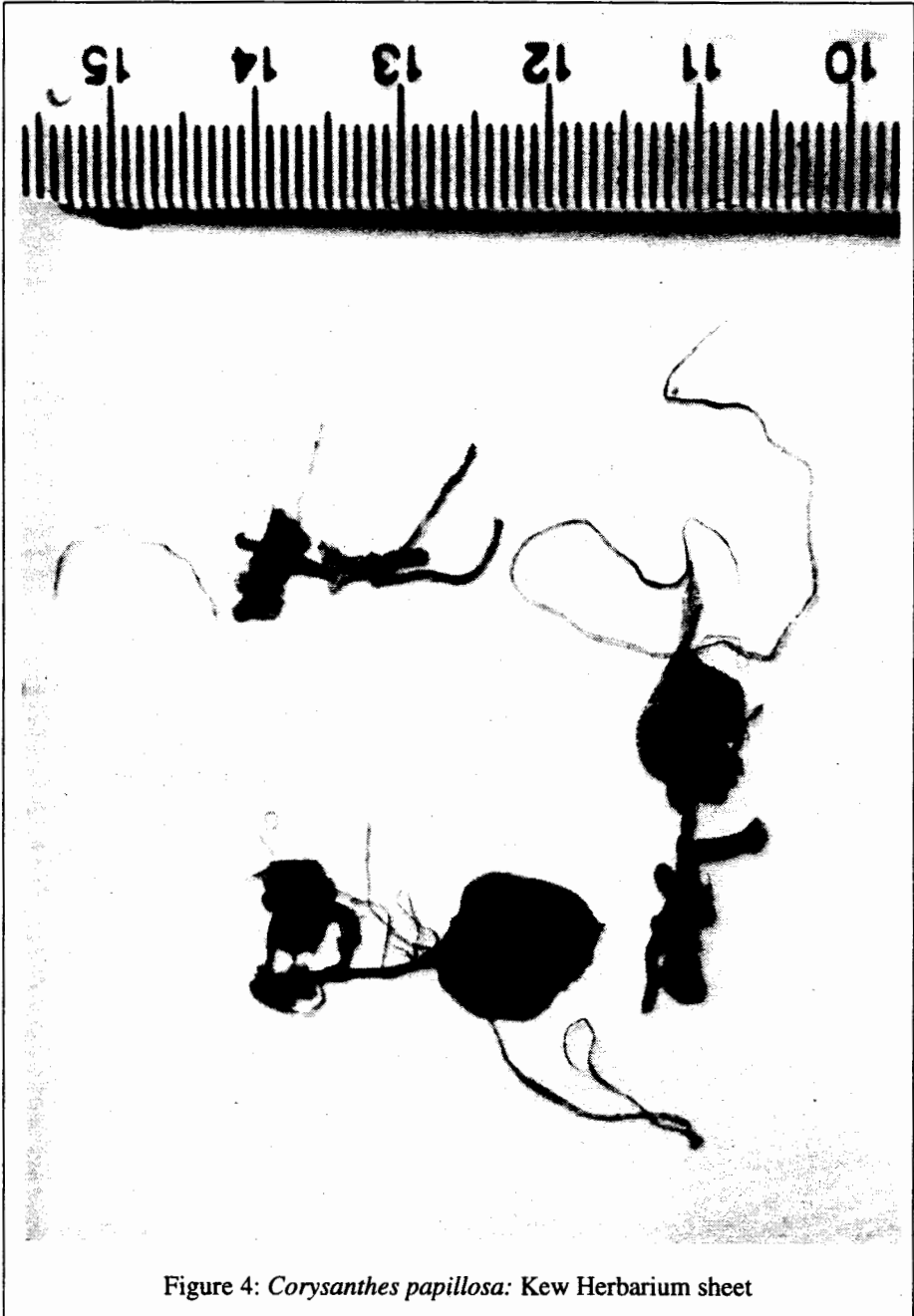


Figure 4: *Corysanthes papillosa*: Kew Herbarium sheet

Colenso must have known *C. rivularis* from Kerikeri, for he had been a friend of Allan Cunningham while both were in Northland forty years before, and Cunningham had written to Colenso in 1838 asking whether he had found the species ("my little darling") elsewhere. In fact Colenso did find it in late November 1841 at East Cape: "Descending the side of a hill through a small water-course, I obtained a remarkably fine individual of *Acianthus rivularis*, A. Cunn."²

C. macranthus had been known since Hooker's *Flora NZ*, and it is hard to imagine Colenso was not aware of it; and he had obviously decided that *C. orbiculatus* was something different at least three years earlier when he described it in 1891.

What then was Colenso's *Corysanthes papillosa*? Cheeseman included it in *Corybas macranthus*, as did Moore who wrote that she could not find the Type in Auckland or Wellington (she did not look at Kew).

In 1947 Dan Hatch described his *C. macranthus* var. *longipetalus*⁷ which is the same as Bruce Irwin's *C.*

"Waiouru":⁶ could *Corysanthes papillosa* be this?

I drove to Glenross, west of Napier off the Taihape road. It is mostly rolling green sheep pasture now, but there are remnants of manuka in gullies, and secondary bush on higher hills. In a narrow gorge twenty metres from the road I found *Corybas* identical with *C. macranthus* var. *longipetalus*.

I examined the Type of Colenso's *C. papillosa* at Kew (Figure 4): two packets, one containing a longitudinally sectioned labellum, column, and a lateral sepal and petal, the other a leaf (1x0.8cm), three flowers (only one in good condition, its lateral sepals longer than its petals), and tubers. The sheet is labelled December 1885. It certainly appears to be one of the *C. rivularis* complex, and it would fit *C. macranthus* var. *longipetalus*, but it will take a more sophisticated orchid anatomist than I to translate with certainty these century-old dried, flattened specimens (compare the photograph in Figure 4 with Bruce Irwin's drawings of *C. rivularis* variations.⁶

References

- Hatch E.D. *Corybas rotundifolius* (J.D.Hooker) H.G.Reichenbach 1871. *NZNOGJ* 1991; 38: 4-5.
- St George I.M. (ed). Colenso on orchids. *NZNOG Historical Series* 1989; 1: 58-59.
- Moore L.B and E.Edgar. *Flora of New Zealand* volume II. Wellington, Government Printer, 1970.
- Bagnall A.G. and Petersen G.C. *William Colenso, printer, missionary, botanist, explorer, politician: his life and journeys.* Wellington, A.H. and A.W.Reed, 1948.
- Gibbs M. Iwitahi diary: *Corybas trilobus* variations. *NZNOG Newsletter* 1989; 29: 2-7.
- Irwin J.B. Notes on seven forms of *Corybas rivularis*. *NZNOG Journal* 1993; 47: 7-9.
- Hatch E.D. The New Zealand forms of *Corybas Salisb.* *Trans. Roy. Soc. N.Z.* 76: 574-580.

Original papers

Iwitahi Native Orchid Reserve: proposed heritage park

by Trevor Nicholls, Taupo

The changing scene at Iwitahi has been so dramatic since the 1992 Native Orchid Weekend at Iwitahi that we have just been able to keep up with it. Our apologies that you have not heard sooner, but until now it has been all go and still more to go before everything is completed.

To tell it, briefly as it has happened.

At that weekend there was some discussion about the future of the current reserve. The concern that was expressed came to the attention of the Department of Conservation. They asked if they could meet with representatives of the Taupo Orchid Society to look at the problems involved and possible solutions. At their suggestion we put the results of our conclusions in writing and sent them to the Regional Conservator. This resulted in the calling of a meeting of interested parties to look at the best method to tackle the problems involved in preserving a representation of the unique collection of native orchids in the Kaingaroa Forest at Iwitahi.

Forestry Corporation of New Zealand got wind of what was going on and looked at the situation from their point of view and came up with a positive and practical offer.

The offer is to swap the present 5.9 ha reserve for another. This is situated on the main road, 4.8 km nearer to Napier, and yet is set back from the highway and the casual passerby. The local topography is such that it is protected from windblow. It is a triangular block of approximately 16 ha with two consolidated boundaries and the third is along a dried up stream bed. In fact a

swathe across this bed has been included into the reserve to act as a protective hedge for when the surrounding forest is felled, to stop dessication.

It was February 1993 when we investigated the potential of this area of *Pinus nigra* to see how suitable it would be as a new reserve. We found nine genera of native orchids in quite large colonies. We expect to see many more in the main growing season. There is a wide range of microclimates present in the block, so there should be no difficulty in carrying out a programme of recovery of some of the colonies and representatives of them from the existing reserve and other blocks of *P. nigra*.

The Taupo Orchid Society has had to become an incorporated society and then to apply to the Ministry for the Environment to become a heritage protection authority. Why? Because Forestry Corp has offered us the block not as a reserve with a limited tenure as is the situation with the present reserve which terminates in 2005. The offer is for a heritage order to be taken out over the block and the control of the block will pass to TOS to look after on behalf of us all. This means that in effect it will be an orchid reserve in perpetuity. It will give us a reserve where the native orchids will be able to be easily accessed to view and study. It will provide a permanent home for this unique collection of orchids.

To maintain this 'home' a management committee has been appointed made up of members of TOS, NZNOG, Forestry Corp and a forest consultant. Their

responsibility is to look after the health of the block and to carry out a programme of renewal. There is already a stock of 200 young trees waiting to be planted into breaks in the new reserve. Sadly, one of our members, John Dryden and his wife Betty were killed in a car accident while returning from Rotorua on 23 November.

The reserve has been marked out in a grid system to allow for a survey of what is there and where. It will also allow for a record to be kept of what is moved into the block and any other changes that may take place in the orchid colonies.

Word has been received from the Ministry for the Environment that a notice has been Gazetted, (5 October 1993) to the effect that Taupo Orchid Society Inc has been "approved as a heritage protection authority for the purpose of protecting a 16 hectare (more or less) area of *Pinus nigra* forest comprising the south eastern corner of compartment 647 of "Kaingaroa State Forest."

The final step will be the application to the local territorial authority for a heritage protection order.

The annual Taranaki *Corybas* Crawl

by Audrey Eagle, New Plymouth

On the weekend of 17 September it was shown just how hospitable Taranaki is, both as an environment for the orchid genus *Corybas* and also in hosting orchid enthusiasts from other areas.

On Saturday members from as far afield as Auckland, Tauranga, Hamilton and Palmerston North met with the local group at Uruti on the main road north from New Plymouth. From there, twenty-eight people started the *Corybas* Crawl. This genus abounds high in the hills along the Moki Road where there is often mist clinging to the bush covered ridges. The man-made roadside cuttings and damp ditches are an ideal habitat for the species.

It was not so ideal a habitat for the numerous keen photographers who, in true *Corybas* Crawl fashion, had to kneel or squat in the ditch, or even as in Allan Ducker's case, prostrate

themselves on the road verge to be in a position to take that perfect shot.

Allan was operating his video camera in dark conditions with the lens almost touching the orchid's labellum, much to the surprise of the traditional photographers with their flash units and tripods.

The objects of all this obeisance were *C. oblongus*, *C. rivularis* - Mt Messenger form, *C. "A"* (undescribed, but see Irwin JB NZNOG *Journal* 1993; 47: 7-8) and *C. acuminatus*. All were in flower and all were growing within a distance of 40 m.

Also seen nearby were - *Corybas trilobus* in flower, *Pterostylis alobula* in flower and growing on the drier north-facing side of the road, *P. aff. montana*, *P. trullifolia* still bearing one flower, *Acianthus sinclairii* and *Orthoceras novae-zeelandiae* both with seed capsules, *Drymoanthus adversus*,

Bulbophyllum pygmaeum, *Earina mucronata* in flower, *E. autumnalis* and *Dendrobium cunninghamii*. The last three were growing on one tree.

Orchids are difficult to draw even for botanical artists, so it was commendable to see Malcolm Campbell helping someone by drawing the salient points of a certain *Corybas* species, using a pen on the back of a dead brown leaf. Even Bruce Irwin would have found that a challenge.

Heading north along Kiwi Road it was found that one didn't have to leave the car, or even to stop the car, to scrutinise the nearby bank for *Corybas*. The Aucklanders found this quite amazing especially as they usually have to climb steep banks to find their *Corybas* and they said that they had never before seen so many plants or so many species in one day. *Corybas* "A" were quite varied in this area, some having leaves with three regular notches and some with stripes on the leaves.

A visit to Rob and Helen Kendall's farm at Ahititi produced more orchids, first on a fairly open dry ridge *Orthoceras* and *Microtis* were seen, and further along in the bush there were *Corybas acuminatus* and *Acianthus sinclairii*. The last was a very large plant, just past flowering but still with green bracts. It had had twelve flowers on a stem 20 cm high.

In the evening the group had a barbecue at Wai-iti Beach, where a number of them were staying for the weekend. Allan showed the results of his day's filming and any scepticism about video filming orchids was dispelled when details of the *Corybas* flowers, including their interiors, were clearly shown.

On Sunday the out-of-town members were shown that even within the city boundary *Corybas* were to be found. New Plymouth is blessed with several

bush-filled gullies and in one of these is the Te Henui Walkway which is home to *C. cheesemanii*. The plants were at the dehiscing stage, some with the capsules on 5 cm stems and some with capsules at ground level. There was also a colony of *C. "Kerikeri"* (undescribed, but see Irwin JB. *NZNOG Journal* 1993; 47: 7-9) nearby at the edge of the stream and growing in saturated ground.

Pukekura Park was also visited. It is a short distance from the centre of the city and has a fernery and orchid houses on three levels on a hillside. These are joined by two tunnels cut through the clay. Iolanthe Small had planted *C. "A"* and *C. rivularis* at the entrance to one of the tunnels thirty years ago, and they both continue to flourish. They now grow intermingled with each other and with foliage so similar that without the flowers the two species are hard to distinguish. They had both finished flowering.

John Dodunski took the group to Burgess Park, a few kilometres from the city and in a remnant area of bush he had a surprise awaiting them. Growing on a stand of *Lophomyrtus bullata* there were numerous plants of *Drymoanthus adversus*, not as one would expect on the tree trunks and larger branches but on tiny twigs and some on small branches so low over the river that they would be inundated in periods of flooding.

During a visit to John Dodunski's garden John showed some of the unusual forms of *Drymoanthus* that he had in pots in his orchid house together with several species of *Corybas*.

This was a successful weekend and it was to Ernie Corbett that thanks go for the suggestion in the first place. The excellent organisation was due to Ernie, John Dodunski, George Fuller, Ian Rutherford, Val Smith, Margaret Menzies and other local members.

More about that cantankerous *Corybas* - a diary

by Margaret Menzies, Eltham

The specific name *cryptanthus*, meaning hidden flower, was given to this strange orchid because until now all flowers found had been virtually hidden beneath leaf-mould. At Omoana however, as the following notes show, *C. cryptanthus* can belie its shy reputation and put on a botanical strip-tease act.

27 December 1992: I find two separate colonies of seeding *C. cryptanthus* growing under manuka scrub on a rather steep west-facing bank. There are fungal threads in the thin layer of leaf litter and fairy club fungus is present at the first colony. This first group of twelve seedheads has been raised 12-15cm by elongation of the flower stems above the fragile bracts which have protected the developing buds. All parts of the plants are translucent white without any sign of red flecking. About 80 metres away the eighteen plants of the second colony are all lightly flecked red.

10 January 1993: After much rain seedheads of *C. cryptanthus* have disappeared, although the more robust seedheads of *C. cheesemanii*, also present, are still OK. Val Smith, John Dodunski, Malcolm Campbell and Bruce Irwin come out to see the plants and confirm that they are *C. cryptanthus*.

1 February: I clear the sites of twigs and branches which could snag flowers if removed during the flowering season. A protective mulch of manuka leaf-mould is added over some plants.

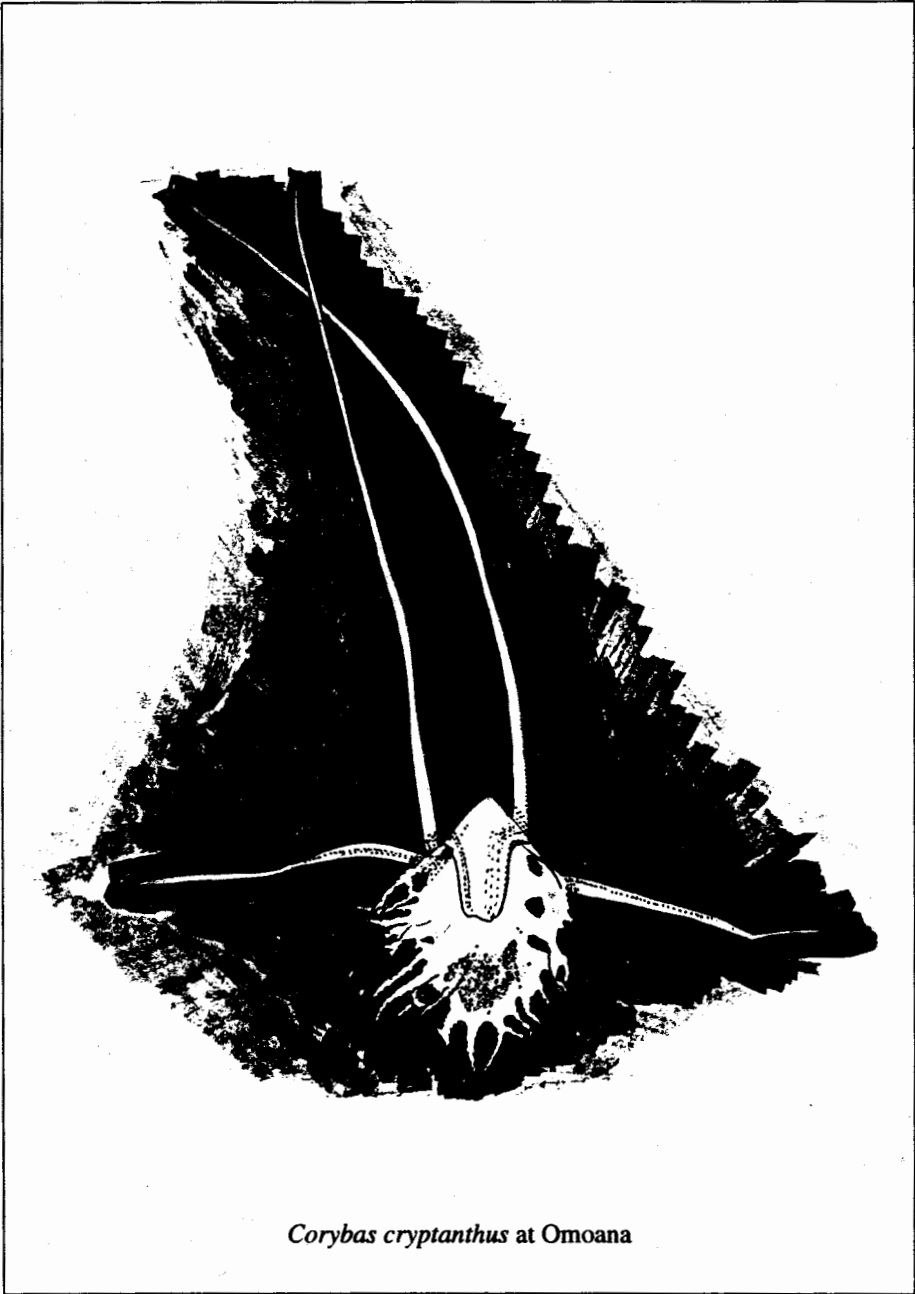
11 July: The first colony has eight flowers on the mulched parts, along with nine of *C. cheesemanii*. The *C.*

cryptanthus flowers are shimmering satin white flushed red in their throats. At the second site no flowers are visible, so I have the nerve-racking job of excavating a flower at a spot I marked the previous season. This flower appears more transparent than those in the first colony, is flecked red and is quite difficult to see in the fading light. Both flower forms are beautiful. They look slightly different, probably because of the colour.

17 July: I go with Val and John to photograph both colonies. There are sixteen white flowers at the first site all visible whether mulched or not. At the second site, the red flecked flower found the week before has faded. John says it has been pollinated. After careful digging we find another similar flower in fine condition. I ring Bruce and he asks me to pickle one flower of each colour form in case they show other differences.

24 July: I count eighteen white flowers still in good condition though the odd one is slightly chewed. Rain during the week has not harmed them. I pick one of the first eight flowers for Bruce. I feel a real criminal. Then I dig up the red flecked flower that Val and John photographed. It too is still in perfect condition, so it shares the fate of the other. Boy - what I do for Bruce. As Val says, "worse than cutting a sheep's throat".

31 July: The remains of those first eight flowers are fading, but still quite identifiable. Two fresh white flowers are breaking the surface. I check the second colony quickly: the only flower I can find has faded.



7 August: There are four fresh white flowers on the mulched part of the first colony and three on the unmulched part. The seven original flowers have disappeared. I have seen a total of about 25 flowers at this colony, all above the surface. At a guess I would say each flower lasts three weeks, some less, some more. Rain at the start of the week appears to have done no harm. The second colony seems to have finished flowering, though more buds may be developing. Seven flowers which have all flowered underground are seeding. There were eighteen seedheads counted in January.

15 August: Ian St George and Kristy McDonald come out to see and photograph the *C. cryptanthus* flowers - there are still two showing through the surface in the first colony, and a faded red one in the second.

26 August: One last white flower still shining through. I'm still very taken with the beauty of these fragile-looking flowers. The fertilised flowers have disappeared below the surface of mulch. I will try and keep an eye on them to see if and when they actually emerge again as seedheads.

Notes

* **ERRORS:** *there were two errors in addition to the wrong date on the cover of the last issue.*

*On page 5 the illustration of **Corybas longipedunculata** was wrongly labelled **C. longipetalus**. My apologies, especially in view of Brian Molloy's paper on the next two pages, for any confusion caused.*

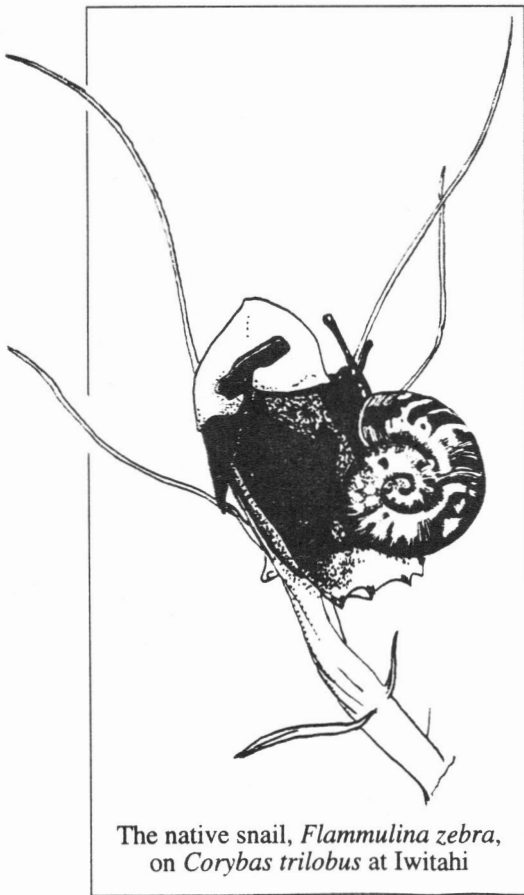
On page 23 Bruce Irwin's address was wrongly given as 195; it is 192 Bellevue Rd, Otumoetai, Tauranga - Ed.

* Cath and Ken Wilson wrote (3 Dec), "... a group of beautiful *Caladenia iridescens* in the Waitakeres - eleven flowering plants all in the space of two metres.... (and) a solitary *Caladenia catenata* (?). This was a lovely rose pink, the deepest pink *Caladenia* we have seen."

* Steve Savage wrote, "I recently found *Gastrodia* in the Church Hill public gardens, twenty-three plants altogether in heavy bud in early December. They were growing about five metres away from a large conifer so they must definitely have formed a fungal association with it."

* Max Gibbs kindly sent samples of the forms of *Corybas trilobus* from Iwitahi (27 Sept 93). He wrote, "...they were being attacked by tiny snails and some had suffered badly. These small snails were actually inside some of the flowers and may be pollinators. The larger ones appeared to be content to chew the outside of the labellum and many of the flowers of each colony were just lacework, although the seed capsules were still intact." *Max sent some snails with the flowers. I kept them separate for a few days, then, in order to*

photograph a small snail on a flower, put it on the labellum. With lightening speed (well, I exaggerate a tad), it was off up to the bend of the labellum and over into the flower cavity. I have to admit, though, that most of these tiny snails would be too big to get in there. Greg Sherley of DoC in Wellington identified it as the native *Flammulina zebra*, one of the *Endodontidae*, reasonably common, identified by its pink-purple foot, thought to be a detritus feeder. We know otherwise - it eats orchids - Ed.



The native snail, *Flammulina zebra*, on *Corybas trilobus* at Iwitahi

* John Dodunski wrote, "I have been told some information about growing 'impossible' terrestrials. The first method has been used for growing the 'saprophytic' *Dipodium roseum* for six years with success (flowering too). Pellets of an enzyme-activator called 'ACTIZYME' (sold to clean out drains) are watered into pots of difficult species (6 pellets/6" pots every 2-3 months). It is supposed to replace the dependance on mycorrhiza by breaking down mix and providing the orchid with food.

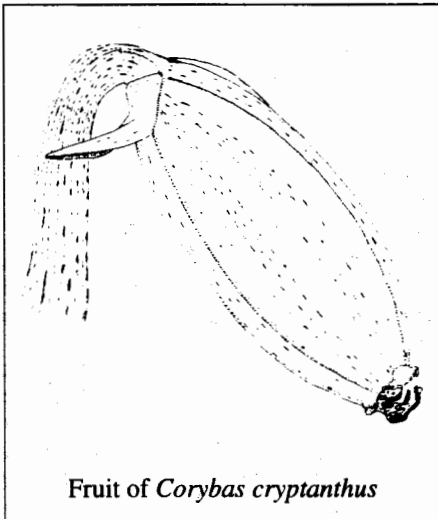
"Secondly, recent research has shown many 'impossible' species are growing naturally in very acid soils; suggestions in Australia are to water pots with 1 teaspoon sulphur powder per 5L pot every 2-3 months to keep the mix very acidic."

* Graeme Jane reported on the Nelson Botanical Society's field trips in the December 1993 *NZ Bot Soc Newsletter*: coastal walk from Split Apple Rock to Ngaio Bay - "a great array of orchids with three species of *Pterostylis* - *P. banksii* and *P. graminea* ... and carpets of *P. alobula* rosettes". "... we wandered the southern shore of Whanganui Inlet seeing great carpets of orchids in flower - three species of *Pterostylis*, another spider orchid (*Corybas rivularis*) and *Acianthus sinclairii*." "Lake Otuhie... *Corybas macranthus*..."

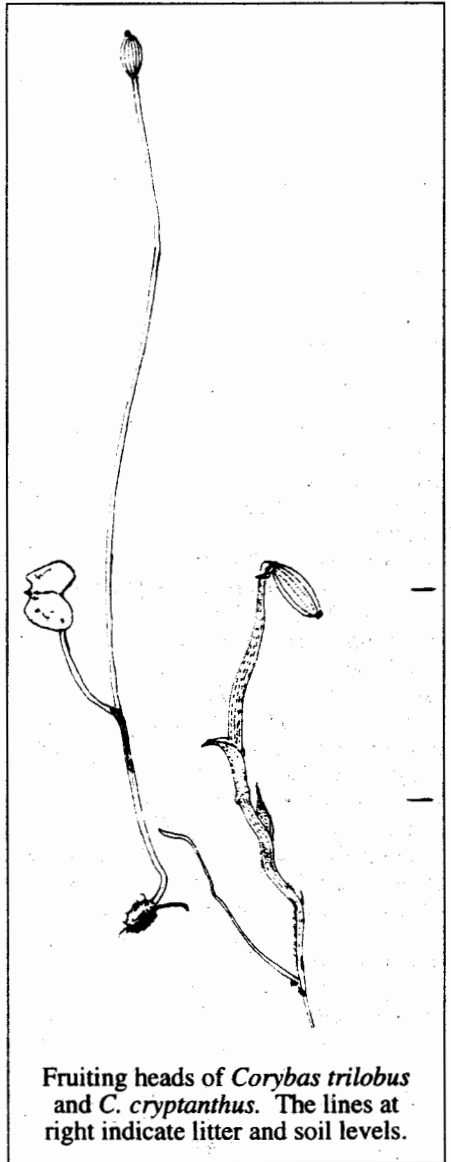
* In the same issue Bruce Burns reported that "the rare orchids *Calochilus paludosus* and *C. robertsonii* are well represented" in the Te Kopia Scenic Reserve on the Paeroa Range south of Rotorua.

* Betty Seddon sent photographs of *Pterostylis patens* from Lake Moeraki, Westland.

* Brian Molloy and I were walking in the hills above Eastbourne on 14 December. Brian stopped on a ridge in beech forest to look at a little colony of *Corybas trilobus* with a long thin seedhead. When he scratched the hard and black beech leaf litter away from the *Corybas* leaves, he exposed very different seedheads, just emerging among the leaves. They were thicker, pinker, and the capsule was flexed (see drawing). You guessed it: they were the fruit of *C. cryptanthus*, a new record for this locality. Has anyone noted the flexion of the capsule in the young fruiting heads before? All the illustrations I have seen (no doubt of more mature capsules) show them upright. Indeed, on 30 December I found within a kilometre of this spot two patches of *Corybas cryptanthus* fruiting heads, fully mature and upright. One was 7cm from a young *Gastrodia cunninghamii*. There were eight in one 1m² colony, three in the other, emerging from leaf litter stiff with fungal hyphae; no *Corybas trilobus* in the immediate vicinity - Ed.



Fruit of *Corybas cryptanthus*



Fruiting heads of *Corybas trilobus* and *C. cryptanthus*. The lines at right indicate litter and soil levels.

* New member Robert Macnab sent a brochure on "Tangarakau Bush Walks" in northeast Taranaki: "We will show you a 74 metre waterfall, foot-tracks made 70 years ago, a unique water

storage, a Maori lookout, some magnificent native trees and lots of native orchids and some very rare and ancient plants. We will take you into the forest where the rare kokako still survives...." Robert has found *Microtis*, *Thelymitra*, many *Corybas*, *Pterostylis*, *Orthoceras*, *Aporostylis*, *Chiloglottis* and possibly *Adenochilus*; the two *Earinas*, *Dendrobium* and *Bulbophyllum pygmaeum*; he "would love the assistance of an 'expert'" for formal identification. Contact him at PO Box 36, Wanganui (phone 06 3444194).

* Allan Ducker wrote, "I was checking out my favorite spot on 25 September - that's at the coastal end of the Brynderwyn range - and came across a colony of *Corybas rotundifolius* with 8 plants in seed; went back on 30 October and about 4 plants had elongated to over 200mm. Was up Mt Auckland looking for *Yuania australis* on 18 December; found no trace of it but came across 2 colonies of *C. rotundifolius*.

"On 25 September found *Corybas macranthus* coastal end Brynderwyn range - in late bud. I reckon it would have opened in a week or two.

"On 26 October a party of 8 went looking for *Corybas macranthus* on Mt Manaia just out from Whangarei; we are happy to report that it was found in full flower on a windy showery day. A great day was had by all.

"Was out and about with 2 other orchid buffs in the Waitakeres on 26 October looking for *Corybas rivularis* and came across a big old rimu with a very large part of the head fallen across the track. To our amazement it was covered in epiphytic orchids - *Dendrobium cunninghamii*, *Earina mucronata*, *E. autumnalis*, *Bulbophyllum pygmaeum* and the best find was *Bulbophyllum tuberculatum* in seed. The tree was really covered in it, small branches to larger parts of the

trunk. Brian Molloy said the bulbs were flatter than others he had seen. On 23 December most of the tree was dying and so was the *B. tuberculatum*. Will investigate the surrounding area at flowering time to see if it has spread its wings.

"Have been going around sniffing *Thelymitra longifolia* and finding lots with scent.

"Went with Auckland Botanical Society to Pukekaroro Scenic Reserve, Kaiwaka, Northland on 20 November. We found 14 species with 5 in flower, and *Earina mucronata* in ripe seed. We also found *Corybas macranthus* on the summit. A party of 25 enjoyed a bright sunny day."

* Ian Rutherford wrote, "On 8 January I arranged for a native orchid field trip in conjunction with the Taranaki Orchid Society Summer Show. At 9 a.m. about 20 people met in New Plymouth and we set off to Mt Egmont for an enjoyable morning. This area has become an annual trip for me during the Christmas break as each year the growth and flowering seem to change. As does the weather, for when we left the city it was raining but once we got to the mountain it was really hot and sunny.

"We were delighted to observe many plants in flower. As we wandered up the summit track we noted *Pterostylis patens*, *P. venosa*, *P. irsoniana*, *Chiloglottis cornuta*, *Aporostylis bifolia*, *Thelymitra longifolia*, *T. hatchii*, *Prasophyllum colensoi* and much leaf form of *Corybas*. Unfortunately there appeared no sign at all of the *Caladenias* this year.

"We traversed the Veronica track on the return to our cars - certainly there are never as many species on this track but the colonies of *Chiloglottis* were larger and wider spread than I had seen before. When leaving the Park many stopped at

the gateway to admire the *Dendrobium* and *Earina* flowering well.

"Have made trips to Tangarakau Valley recently (see Robert Macnab above - Ed) and found many plants growing well in this most interesting area. On one river bank which we had climbed down to cool off, I nearly trod on two species growing alongside each other, *Thelymitra hatchii* and *Prasophyllum colensoi* in flower. I find the growth habit of *T. hatchii* most interesting in comparison with other *Thelymitras*.

"Later that day on the Rarekapa Track I was pleased to notice *T. hatchii* again, this time on a bank which had the species I had set out to locate and record. Yes, here was *Orthoceras* (see *Help Wanted below - Ed.*)

"Other plants noted on this track were at least two other *Thelymitra* species, some interesting forms of *Microtis* and large colonies of *Corybas*. The last is spread widely in this valley."

* Bruce Irwin wrote (25 January) on *Pterostylis 'epiphyticus'*: "*Pterostylis* species are normally considered to be ground orchids. Recently however, members of the Wellington Botanical Society exploring forest west of Tongariro, drew my attention to a group of five mature plants near the top of a *Dicksonia squarrosa* trunk. Estimates of the height above ground varied from ten to fifteen feet, so two of us returned later with a tape measure. The correct measure was almost precisely three metres (ten feet). All *Pterostylis* in the area were well past flowering, so my identification as *Pterostylis patens*, though likely, could not be confirmed."

* The World Wide Fund for Nature continues to support Landcare Research in its monitoring of the threatened orchid *Corybas carsei*. Here is a cutting from their Spring 1993 publication *Wildlife in New Zealand*.

Wetlands and swamp orchid 'sharing same fate

New Zealand has lost at least 90 per cent of its original wetland vegetation - degradation that has resulted in many native plants being added to the threatened species list.

One of the smallest is *Corybas carsei* - an orchid only 3cm high, distinguished by its purple-red flower, now found only in the Whangamarino wetland, near Huntly.

For two years WWF New Zealand and DoC have supported Landcare research on the orchid, aimed at finding

ways to help this endangered species to recover. WWF New Zealand project officer Dr Brian Clarkson and DoC scientist Peter de Lange have led this investigation. Two populations were monitored, one cleared of vegetation to determine the influence of overgrowing plants. Dr Clarkson believes results support the theory that this orchid is adapted to occupying sites early in wetland succession. Eventually other species overgrow the orchid. In pre-

vious decades disturbances, especially fires, maintained open sites suitable for the orchid's growth. The last fire in the area occurred before 1970; since then the orchid has declined.

Priority for ongoing conservation of this species is to develop a site manipulation regime to determine the best conditions for the orchid's growth. Further work will focus on the impact of browsing damage and ongoing monitoring of the site. Cultivation of the species to date has been unsuccessful.

Help wanted

What are the ranges of elevation and its effects on orchid species?

by Mark Moorhouse, Nelson.

I have on such delightful climbs as Mt Richmond and Fishtail noted a vast range of morphological and stage development variance in, e.g. *Chiloglottis cornuta*, from large flaccid (and mesh patterned) leaves of lowland 'normals', through the entire gamut to plants a mere 1cm across, stemless, with narrow apical leaves held rigidly upright, with flower buds just appearing when lowland ones were in the dry seed stage; an elevation range of 4000 feet.

Even more dramatic are the effects on *Thelymitra* spp. which at 42° S reach a maximum elevation of about 4300 feet and under these conditions can produce 'oddies' with virtually stemless single flowers and abnormal features such as greatly elongated petals.

In contrast to this *Prasophyllum colensoi* appears 100% normal at 5500 feet, an elevation at which I encountered some, happily flowering on the side of Mt Hopeless (Nelson Lakes National Park) a while back.

Your excellent Mapping Scheme has given us all great insight into the range of our native species, but could we also define the boundaries of elevation (both up and down), giving, say, a North, Central and South reading for each species. Lucy Moore made a start with some montane species.

It will require lots of very fit orchid enthusiasts, with topo maps in hand, to respond to this one. I will set the ball rolling with a set of records for a number of species in the "Central" area - all South Island records, north of 43° S. Elevation is in feet.

Acianthus viridis 0-1400'
Adenochilus gracilis 1500-2500'
Aporostylis bifolia 0-4400'
Caladenia catenata 1200-2600'
C. carnea 1200'
C. lyallii (alpine form) 1800-4500'
C. lyallii (montane form) 1200-2000'
Calochilus paludosus 2800'
Chiloglottis cornuta 0-4000'
Corybas cheesemanii 200'
C. macranthus 500'
C. rivularis 1900-2550'
C. trilobus 1900-2300'
Cyrtostylis reniformis 0-1400'
Drymoanthus adversus 800-1200'
Earina autumnalis 0-2400'
E. mucronata 0-1700'
Gastrodia cunninghamii 200-3600'
G. minor 100-1400'
G. sesamoides 100-2800'
Genoplesium nudum 800'
Microtis unifolia 0-2700'
Orthoceras novae-zeelandiae 500-1000'
Pterostylis alobula 0-250'
P. areolata 0-3000'
P. australis 0-2550'
P. banksii 0-2500'
P. graminea 1000-2500'
P. irsoniana 0-900'
P. micromega 2500'
P. montana 1500-3500'
P. oliveri 600'
P. puberula 1800'
P. trullifolia 50-1400'
Prasophyllum colensoi 1000-5500'
Thelymitra aemula 0-100'
T. carnea 100-1200'
T. cyanea 1200'
T. formosa 0-1300'
T. hatchii 1200-4500'
T. longifolia 0-4000+
T. pauciflora 0-1100'
T. pulchella 0-1200'.

Red and green forms of *Orthoceras*

by Ian Rutherford, New Plymouth

Without meaning to cause botanical unease I must say that I do question the descriptive reasoning in relation to *Orthoceras*. I would appreciate any correspondence on same.

I spent a lot of time bent on all fours checking and rechecking the two forms at this point, and cannot say anything other than that the colour difference is not caused by the richness or poorness of the soil as suggested by some. The green form was in all instances up to 20cm shorter than the red form (some even call the latter brown or black). In

fact I also sketched the differences and wrote down my observations while the friend who accompanied me took photographs.

The flowers are certainly quite different in size, and one thing that did attract my attention was the flower bract which appeared to support the flower in its finally opened position. From the back it appears as a copy of a winged beetle - maybe this is a defence against insect attack? In all instances the red form also had a leaf bract halfway up the stem and the green did not.

Help!

The December 1994 issue of the *Journal* is number 51 

It would be good to make the first of the second fifty the biggest, brightest and best issue yet, and to do that we need your help. If you have ever (or never) written anything on native orchids, now is the time to do it (again). Please send your papers, articles, observations, drawings, comments, ideas, complaints... anything apt will be included.

It's your *Journal*

Orchid artists

Hugh Dale Wilson (1945-)

Hugh Wilson's life has been a full one: he has been active in human rights movements, learned Spanish and has visited the Peruvian Andes on climbing and scientific work, visited Canada, USA, Fiji, and South America and left Chile just before the 1973 coup.

He was born in Timaru into a family of six children interested in the outdoors. They camped near the high country lakes and rivers of the South Island; his father was a serious fisherman, and his mother took up tramping in earnest in later life, guided

by her three mountaineering sons over the three pass trip, the Copland Pass and Graham Saddle.

Hugh was at first interested in birds, an interest he has strongly retained, but one overtaken by a deep interest in, and love of, plants: as a boy he had a native plant garden (the idea was to attract birds) in Christchurch, where the family moved in 1950.

Hugh Wilson gained top mark in University Scholarship Biology from St Andrews College in 1962, then left for Sarawak with Volunteer Service Abroad. He taught in Tanjung Lobang secondary school, and went on expeditions with his pupils - lived in longhouses on the Baram river tributaries, climbed to the summit of Mount Kinabalu in Sabah. In 1966 Reed published his first book, *The year of the hornbill* on experiences in Sarawak.

Back in New Zealand in 1964, he attended Canterbury University, graduated B.A. in English and philosophy, and B.Sc. in botany and zoology, and took a labouring job in a flour mill. Later he worked in Mount Cook National Park, as a track hand and then as Park Naturalist, years when he was a keen mountaineer, trapper and skier. In 1968 he began a detailed botanical survey of Mount Cook, and made his first ascents of that mountain in the 1968-9 summer. After a fire in the Liebig Range in the Park he set up fixed vegetation plots for long term study.

He worked at Botany Division, Department of Scientific and Industrial Research in the midseventies and completed his *Vegetation of Mount Cook National Park*, published by the National Parks Authority in 1976.¹ With two friends he set up his own publishing group and published *Field guide, wild plants of Mount Cook*

National Park in 1978 (with twelve illustrations of orchids). From 1978 to 1982 he was engaged in field work on Stewart Island, and in 1982 published his *Field guide, Stewart Island plants*,² (with thirty-two illustrations of orchids, including that of *Gastrodia* "long column") followed by *Vegetation of Stewart Island* in 1987.

He has bicycled through Britain and parts of Europe, as far as the Orkney Islands, revisited North America, camped and walked in the Colorado Rockies, and botanised in the Swiss Alps.

He lectures on botany, natural history and conservation themes in Christchurch, manages the 109 hectare Hinewai Reserve on Banks Peninsula, and is working on more books. He refuses to own a car, and travels by foot, bicycle and public transport. He reports that he is deeply pessimistic about world ecology and the ability of the western world to make the necessary fundamental changes to lifestyle.

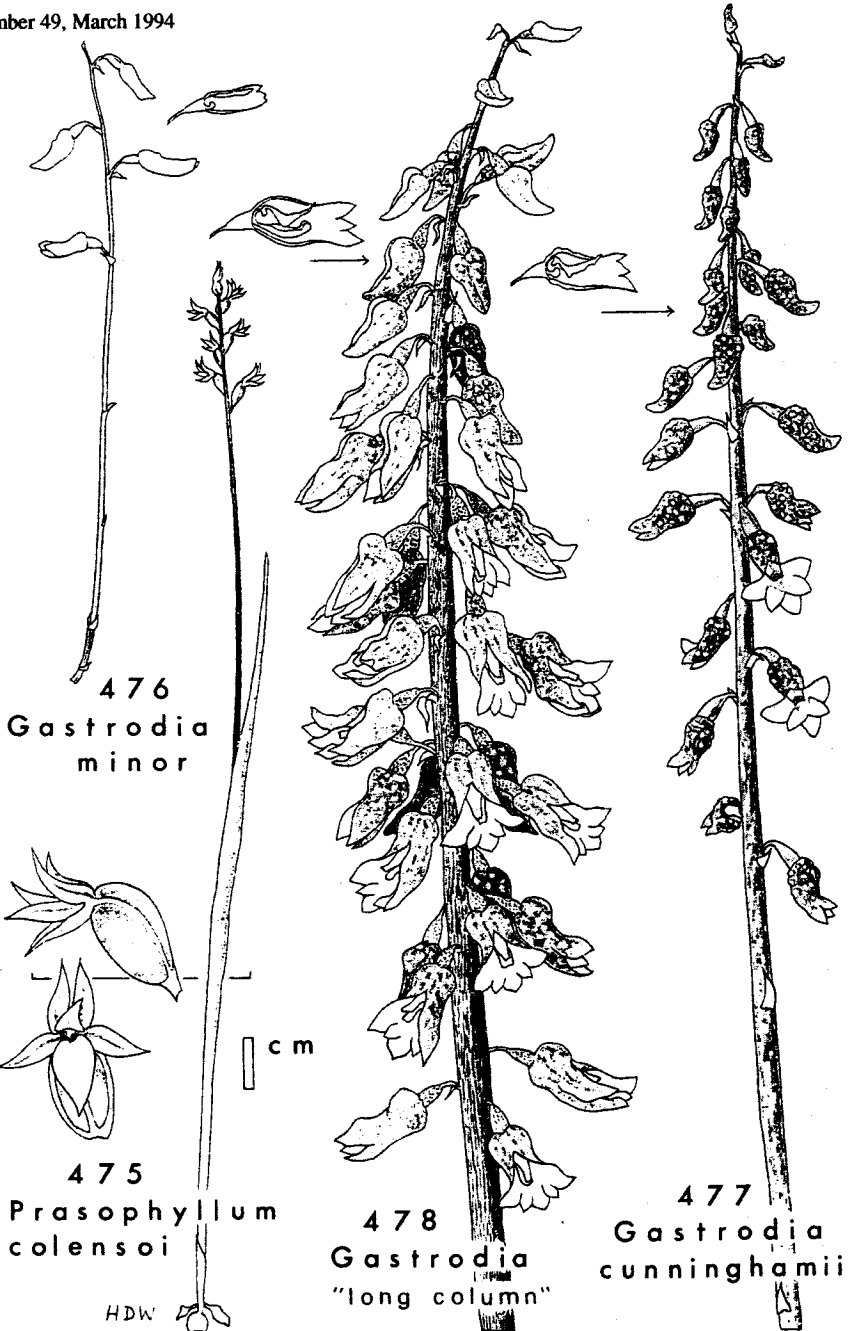
Hugh Wilson was awarded the Loder Cup for 1987, cited for his work

"In the field of education on the scope and value of our native flora and the distillation of his knowledge and research in his widely appreciated books, along with his other efforts in this vein."³

His published illustrations are botanically accurate line drawings with pencil shading, in black and white or in colour, simplified to the bare essentials in order to amplify diagnostic differences between species.

References

1. Wilson H.D. *Field guide, wild plants of Mount Cook National Park*. Christchurch, Field Guide Publications, 1978.
2. Wilson H.D. *Field guide, Stewart Island plants*. Christchurch, Field Guide Publications, 1982.
3. Press announcement, Minister of Agriculture, announcing the award of the Loder Cup, 1987.



Prasophyllum colensoi and *Gastrodia*, monochrome drawing by Hugh Dale Wilson, from his *Field Guide, Stewart Island plants*.

Australian notes

* The Wollongong Native Orchid *Bulletin* of October 1993 carried a paper by Andrew Batty on "*Caladenia* propagation at the Royal Botanic Gardens, Melbourne". He wrote, "The program at the RBGM is concentrating on the propagation of Victorian Spider Orchids (*Caladenia* Sect. *Calonema*) with seedlings of *Caladenia rosella*, *C. latifolia*, *C. lindleyana* and *C. aff. dilatata* being produced to date.... The main aim is to reintroduce seedlings of *C. rosella* to the wild to supplement much depleted populations. The seedlings of *C. rosella* are progressing well with over 500 now contained in flasks. This is nearly ten times the number in the wild. It is hoped that the application of cold treatment to the seedlings will induce tuberoid formation, thus allowing deflasking to proceed. The current schedule is to deflask seedlings this winter and reintroduce them to the wild the following autumn. Field trials involving baiting for the fungus are currently under way in order to determine the distribution of mycorrhizal fungus required for the orchids' survival in the field...."

* **Mice: a threat to native orchids.** Bob Bates wrote (*NOSSA Journal* 1993; 17(9): 88), "1993 has seen the worst mice plague on record in the wheatbelt of Australia. The first evidence that mice were destroying orchids surfaced on a trip to Jamestown in June. One of the largest colonies of *Pterostylis robusta* in South Australia occurs in a private reserve near here. A check of the colony showed hundreds of tiny holes and no rosettes except for a few severed at ground level.

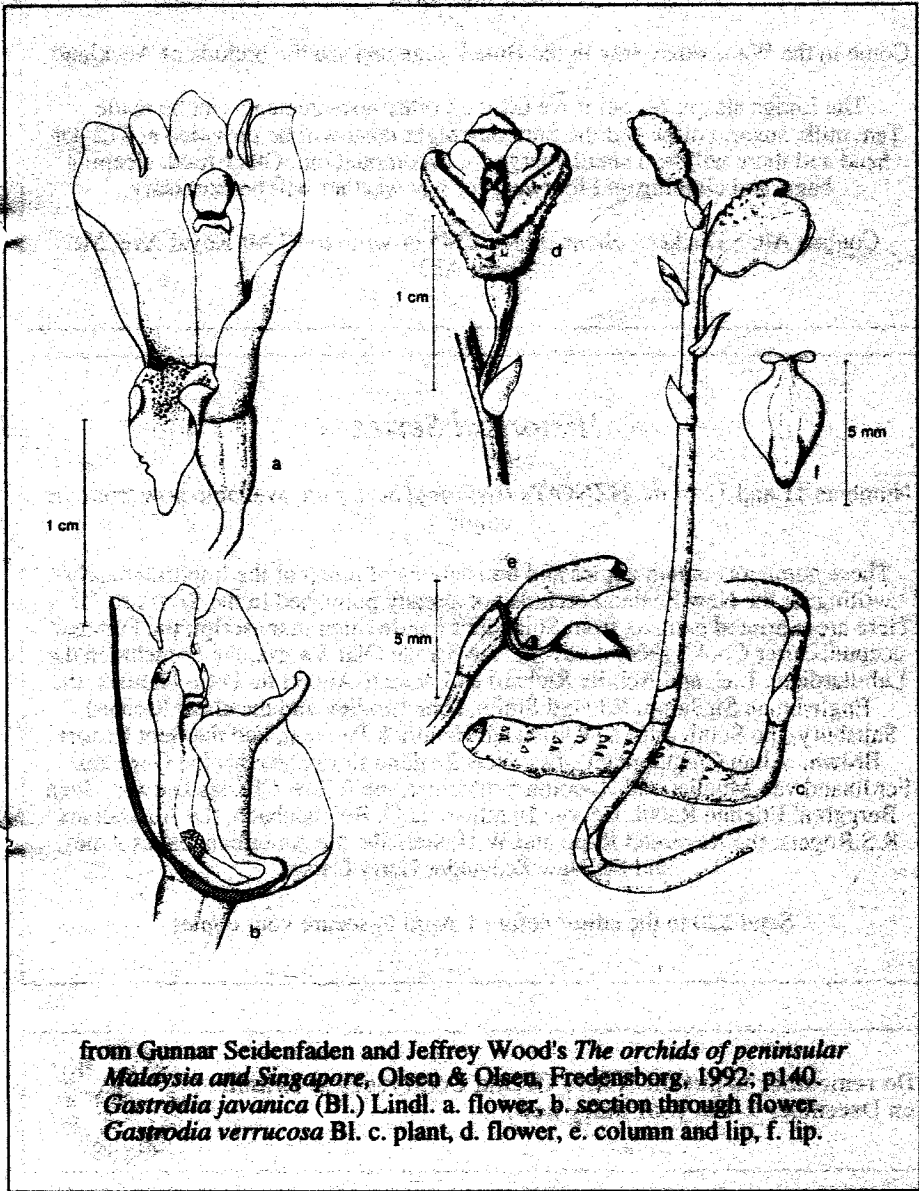
In August a search for a clump of *Thelymitra epipactoides* x *T. nuda* hybrid in the upper South East revealed the sad sight of millions of tiny diggings and all that remained of this hybrid (the only plants known) was a broken leaf.

"Other trips into the mallee showed that in areas where orchids were once common there are now very few. Of course the drought did not help things at all. The dry conditions meant that flowering was less than 20 percent of the usual throughout the wheatbelt; the rabbits were hungrier than usual and the sheep were meaner. Altogether 1993 has been a disaster for our dry land orchid species."

* A new *Pterostylis* aff. *nana* discovered in the Adelaide Hills. Bob Bates wrote (*NOSSA Journal* 1993; 17(9): 88), "...there are three distinct species lumped under the name *Pterostylis nana* in the Adelaide Hills - i.e. the very common "Hills *nana*" with its smooth round leaves and hairy stems, the "Mallee *nana*" with its crenulate pointed leaves, smooth stems and narrow flowers, and the "Veined *nana*" with its pointed veined leaves, veined flowers without the inflexed tooth in the sinus of the lateral sepals...."

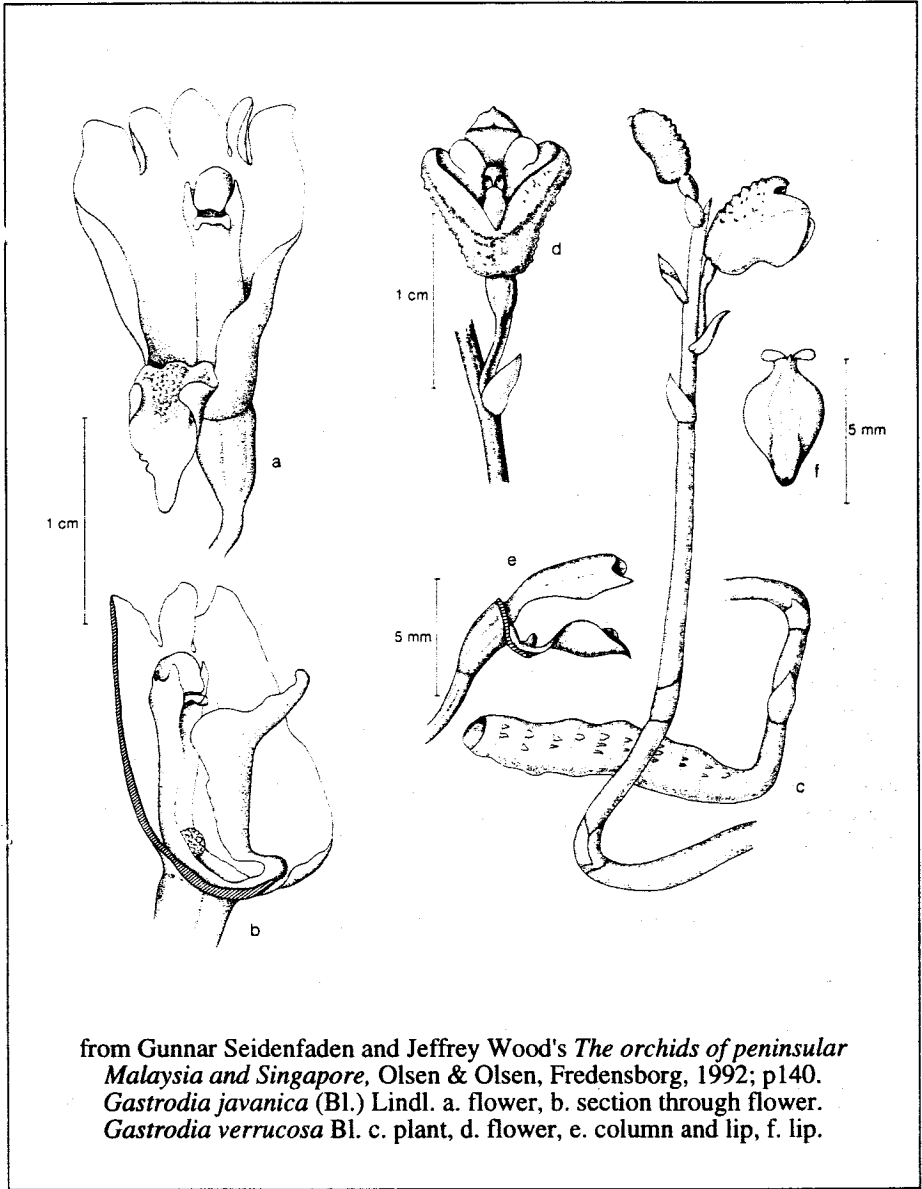
"...we looked at a private heritage area.... On a large rock in shallow soil another species of *Pterostylis nana* was found. This had arrow shaped smooth leaves, smooth stems and large long sepalled flowers. The same day we went to Warren and searched similar habitat there and located the same species. It is likely to be a cryptic species, a copy of the Hills *nana* but not closely related. It also goes to show that it is still possible to find new species close to Adelaide."

Close relations



from Gunnar Scidenfaden and Jeffrey Wood's *The orchids of peninsular Malaysia and Singapore*, Olsen & Olsen, Fredensborg, 1992; p140.
Gastrodia javanica (Bl.) Lindl. a. flower, b. section through flower.
Gastrodia verrucosa Bl. c. plant, d. flower, e. column and lip, f. lip.

Close relations



from Gunnar Seidenfaden and Jeffrey Wood's *The orchids of peninsular Malaysia and Singapore*, Olsen & Olsen, Fredensborg, 1992; p140.
Gastrodia javanica (Bl.) Lindl. a. flower, b. section through flower.
Gastrodia verrucosa Bl. c. plant, d. flower, e. column and lip, f. lip.

WAITAKERE WONDER

24-26 June 1994

Come to the Waitakeres, stay in the Huia Lodge and see the orchids of Auckland.

The Lodge sleeps 24, but if we fill it up other arrangements can be made. Tea, milk, sugar, coffee and the Saturday night meal will be provided at \$12 per head and there will be a small charge for accomodation. Other food, sleeping bags, and clothing and footwear for wet weather will be necessary.

Contact Allan Ducker - phone 09 8462345 or write to 92 Mt Royal Ave, Mt Albert, Ak3.

Historical Series

Numbers 11 and 12 of the NZNOG's *Historical Series* are available now from the editor.

These numbers contain copies and translations of much of the important early writing on the New Zealand orchids not already published in the *Series* so far. Here are reprinted extracts from Solander's handwritten manuscript, the Forsters' accounts after Cook's second voyage, the Swede Olaf Swartz, the Frenchmen de Labillardiere, L.C. and Achille Richard and Aubert-Aubert du Petit-Thouars, the

Englishmen Sir James Edward Smith, John Lindley and the cheat Richard Salisbury, the South African Christiaan Hendrick Persoon, and the Scot Robert Brown. Allan Cunningham's first New Zealand flora precedes the Germans Ferdinand van Mueller and Rudolph Schlechter, the follow Charles Darwin, Sven Berggren, Etienne Raoul, George Bentham, H.G. Reichenbach, the Australians R.S. Rogers, the Reverend Rupp and W.H. Nicholls, the American Oakes Ames, and the New Zealander Harry Carse.

Send \$20 to the editor before 1 April to secure your copies.

Do remember to put the Native Orchid Conference at Iwitahi on December 2-4 in your diary now.





**The first NZNOG Native Orchid
Conference**

together with the annual

Taupo Orchid Society Field Days

will be held on

2-4 December 1994

to celebrate the official opening

of the

**Iwitahi Native Orchid Reserve
and Heritage Park**

by the

**Hon Simon Upton,
Minister for the Environment**

Programme

FRIDAY 2 DECEMBER:

Chair: Max Gibbs

8 pm	<i>Opening remarks:</i> Bill Rademaker
8.10-8.30	Scientific
8.30-9 pm	Scientific
9 pm-9.30	Scientific

SATURDAY 3 DECEMBER:

Chair: Bill Rademaker

9-9.30 am	Scientific
9.30-10 am	Scientific
10-10.30 am	Scientific
10.30 am	TEA & DISPLAYS

Chair: Doreen Abraham

11-11.30 am	Scientific
11.30-12 noon	Scientific
12 noon	LUNCH & DISPLAYS
1 pm	AFTERNOON IN THE RESERVE
5 pm	OPENING OF THE IWITAHU NATIVE ORCHID RESERVE

Chair: Bill Rademaker

Tangata whenua

Tom Rogers, General Manager Forests,
Forestry Corporation of New Zealand

Max Gibbs, Taupo Orchid Society Inc

Official opening: Hon Simon Upton,
Minister for the Environment

DRINKS AND DINNER

SUNDAY 4 DECEMBER

9 am	FIELD DAY
------	-----------

Registration

You may register any time before Friday 25 November, by returning the registration form herewith. Accommodation is available at Iwitahi Outdoor Recreation Centre (camp huts with mattresses - bring your sleeping bags and pillows). The registration fee covers attendance at

all events, but does not cover the dinner on Saturday night. You should bring your own breakfasts and lunches.

Full details and instructions will be sent on receipt of your registration. A final programme listing speakers will be available in the September issue of the *NZNOG Journal*.

Call for speakers and exhibitors

Call for speakers

Oral presentations of any length (up to 30 minutes including discussion) are sought for the scientific programme. Speakers should plan to allow one third of their presentation time for discussion, and should provide details as requested on the registration form, ***but before 1 August please***. Brief (5 minute) presentations are welcome - if you have a question, a point of view, an interesting illustration, or just like talking, this is your opportunity.

A special conference issue of the *NZNOG Journal* is planned for December 1994; if your presentation is appropriate for publication, you should send copy (typed, using a new ribbon) to reach the editor

Ian St George,
22 Orchard St,
Wadestown,
WELLINGTON

before 1 November 1994.

Displays

Artists and photographers of native orchids are invited to bring their work. Collectors are invited to bring the work of others. Display boards will be available, and exhibitors should indicate on the registration form the amount of display space they will require.

Exhibitors should make appropriate arrangements for the security of their exhibits, and should insure them if that is appropriate.

Registration form

Please return to
Trevor Nicholls,
33 Hinekura Ave,
TAUPO.
Phone: (07) 3784813

Name(s) _____

First name(s) (for badge) _____

Address _____

Telephone _____

(delete the items * below that do not apply)

* I wish to present a paper
Title _____

Duration in minutes (including discussion) _____

Audiovisual requirements _____

* I will send material for publication in the conference issue of
NZNOG Journal YES / NO

* I wish to exhibit illustrations, and require display space of ___ sq.m.

Number of persons attending: _____

Accommodation at \$14 per night per person: Friday \$ _____
Saturday \$ _____

Registration fee @ \$10 per person: \$ _____

Saturday dinner @ \$20 per person: \$ _____

TOTAL herewith \$ _____