

Newsletter No 22.  
June 1987.

Editor : Ian St George  
45 Cargill St  
Dunedin

Dr Lucy Moore died this month in her 81st year. From our point of view her great contribution was in orchid taxonomy. Cheeseman's Flora was the first really tangible local effort then the work of ED Hatch. Lucy Moore brought us forward to the 1970s as a Flora writer. She made many friends and did much to stimulate amateur and professional interest in orchids throughout New Zealand. We will miss her warmth and wisdom

---

EDITORIAL

---

Sorry about the small print but reduction in size is cheaper than photocopying more pages -- I hope this one is more easily readable. You will read in Doug McCrae's Notice (below) the suggestion that the NZNOG should have a badge. Frances Nicholls of Auckland has written with the same suggestion, and extends the idea to NZNOG tee-shirts. So: let's have a competition to design a NZNOG logo -- one suitable for (say) a 1.5cm badge, and for a 15cm tee-shirt pattern. Art-work may be in draft form, but the artist should be prepared to work it up to a standard suitable for reproduction. All entries should be sent to me by 1 August, and will be judged by Frances Nicholls, Doug McCrae and me. The winning design (should there be one) will be announced in the September Newsletter. The prize will be immortality.

ORCHID HUNTING IN FARTHEST ENGLAND — Part 2.

■ Why have so many of the British orchids become rare?

For many their beauty has been their own downfall. The largest and most showy of the orchids have simply been collected to the point of extinction, transplanted to gardens where inevitably have perished. Paul and Jeanne Davies, authors of the book Wild orchids of Britain and Europe tell horror stories of fountain hotels in Italy where quite recently visitors found vases filled with specially picked blooms of the Slipper orchid (Cypripedium calceolus). No doubt other large and attractive wild orchids like the Lady orchid (Orchis purpurea), the Monkey orchid (Orchis simia) and the Military orchid (Orchis militaris) have declined for the same reason.

Orchids need quite specialised habitats: each terrestrial orchid grows in association with perhaps a specific mycorrhizal fungus, and possibly it is the fungus that is fussy (the Australian botanist, Mark Clements, has worked to identify the specific fungi associated with several of the British rarities). Whatever the cause, British wild orchids do not transplant well, and are intolerant of change in their surroundings. They are long-lived plants, often taking many years to reach flowering age.

■ But equally important in their demise have been changes in agricultural policies. In one place we visited, the change from a Jersey herd to the heavier Friesians had caused extensive damage to an orchid site.

Lightly grazed downland, the habitat of many of Britain's terrestrial orchids, suffered with the decline in sheep population from the first World War and with the consequent encroachment

of scrub and coarse tussock grass. In the second World War much of the ancient downland pasture was cultivated to grow food. Better tractors and ploughs have enabled the cultivation of steeper land. More recently EEC policies have asked for less dairy and other animal products, and so there are fewer grazing animals: England's patchwork of hedged fields and meadows has in many places given way to a comparatively featureless landscape of seedcrops or grain. Chemical herbicides and fertilisers have played their part, together with hedgerow removal and stubble burning. Wetlands have suffered badly as ditches are dug deeper, ponds filled in, and water enriched by nutrients from fertiliser runoff and sewage.

Since 1945 95 percent of hay meadows have been lost, along with 90 percent of ponds, and four fifths of ancient woodlands and chalk grasslands.

England is a small and heavily populated country, one that boasts very efficient farmers. Perhaps it has suffered more than most: indeed, many orchids rare in Britain still flourish in France, Switzerland, Italy and other European countries.

But the destruction accelerates with "progress" in continental Europe too: in Greece recent EU policies have encouraged farmers to till the ground under olive trees, once the favoured habitat for several plants, including the endangered Bee orchid (*Ophrys apifera*). By 1945 the tiny orchid called Summer Lady's Tresses (*Spiranthes aestivalis*) was thought to be extinct in Britain (though since a possible sighting in 1959 many have searched for it in the faint hope that it might be rediscovered). In Normandy in France there are low-lying fields full of Summer Lady's Tresses; even there though, Paul Davies writes that it is "...decreasing rapidly as its former haunts are subjected to drainage or other land improvement schemes. (It is) unlikely to survive until the end of the twentieth century...."

■ Could we let it happen in New Zealand?

#### NOTES

Barbara McGann, our only Oamaru member, has sent a photograph of Gastrodia minor from the Herbert State Forest. As I noted in the last Newsletter, Waituna Bog in Southland was the only known site in Otago-Southland, and there G. minor grows as occasional single stems. Mrs McGann's extraordinary (to me at least) photograph shows nearly forty stems in an area of about 20 x 20 cm — 11 Jan 86.

Other orchids she recorded in the Forest were Chiloglottis cornuta, Aporostylis bifolia, Caladenia lyallii, Thelymitra pulchella, T. venosa, T. longifolia (?), Pterostylis banksii, Pt. graminea (?), Pt. montana, Microtis unifolia, M. oligantha, and two Corybas, probably macranthus and trilobus.

■ The Journal of the Native Orchid Society of South Australia contains a paper from R Bates about orchids on Kangaroo Island. Of interest to us in New Zealand was a report of "two unnamed Corybas" — rumour has it that new members of the genus have been reported in New Zealand too, and furthermore that there are two genetically distinct plants at present included under Corybas trilobus (didn't you always wonder why Corybas trilobus had the longest flowering period of any orchid, and why that period seemed to have two separate peaks? It is the earliest flowering native here in the south, appearing in ski season — July — near Queenstown; the same colony flowers until late August, then in October another colony at Trotters Gorge flowers for three weeks or so. Watch this space). Bates refers to Gastrodia cunninghamii as "cinnamon bells", a reference to its scent, no doubt, and a rather more attractive common name for the plant than "Cunningham's potato orchid", don't you think? — Ed.

■ In another paper in the same issue, R Bates writes on orchids in Tasmania in early summer —

page 3.

"we saw the hybrid between Thelymitra venosa and T. pauciflora", and later "there were reports of a marvellous hybrid between T. venosa and T. ixioides, the flowers having both brilliant spots and stripes!" I cannot recall having read any material on hybrids in New Zealand: does anyone out there have any observations? R Bates also makes mention of a pure white Thelymitra venosa in Tasmania (referred to in Moore 8, Edgar, and by Kevin Luff in Newsletter 16), and one without stripes — Ed.

■ Brian Molloy, who has agreed to contribute regularly to the Newsletter, is the Editorial Associate for New Zealand for the Australasian Native Orchid Society journal, The Orchadian, and writes that A.N.O.S. is very keen to build a closer relation with New Zealand. The orchadian publishes a wide range of taxonomic, cultural and other orchid information. Contributions need not be "major" works and articles on anything covering orchids in NZ would be welcomed. Reports on field trips, unusual forms and hybrids, habitats, cultural techniques would help the editors develop the journal. In addition, the Society intends to publish a quarterly ANOS News to inform members of current issues and to provide a forum for discussion. Brian Molloy will be happy to respond to any queries within NZ, and he has a supply of brochures and membership forms for anyone who is interested (Dr B Molloy, Botany Division, DSIR Lincoln, Private Bag, CHRISTCHURCH, telephone (03)252511).

■ I had not been aware until recently of the name change from Pterostylis mutica to Pt. tristis, so for the benefit of others who may be as slow, here is what Brian Molloy had to say (Proc. 2nd NZ Int. Orchid Conf. Wellington, 1985): "At the orchid symposium in Sydney in 1981, I was puzzled with an orchid in the display labelled Pterostylis mutica. As this is an early Robert Brown name, based on Australian material, I assumed it was correctly labelled. However, I was struck by how different it was to the species we know in New Zealand under the same name. To cut a long story very short, my friend Wally Upton sent me tubers to grow and study. My initial reaction was subsequently confirmed. Moreover, the two species have different chromosome numbers. Pterostylis mutica (Aust) has  $2n = 62$ ; its New Zealand counterpart, which fortunately has a later valid name, P. tristis, has  $2n = 52$ .

The name, P. tristis, thus comes back into use."

■ "The past year has seen me pursuing my fondness for tramping," writes Val Smith of New Plymouth, "with the bonus of adding to my personal list of native orchid 'finds'.

Highlights have been,

"15 Dec 85 A Forest and Bird outing on the Puniho, Kapoia and Stony River tracks on the western side of Mt Taranaki and found at least 14 different native orchids, most at or near flowering.

"11 Dec 85 Dawson Falls area, Mt Taranaki — thanks to information from Michael Pratt of Wanganui, found Adenochilus gracilis in flower, and a small colony of Caladenia lyallii. Several trips within a week failed to find the latter in flower, however, the buds appearing to wither and die off before they opened.

"5 Jan 86 On holiday in the northern half of the South Island, found Lyperanthus antarcticus in flower on the Upper Otira Valley track in Arthur's Pass National Park -- the only place I have seen this orchid.

"6 Jan 86 Caladenia lyallii flowering prolifically among tussock and low scrub in Temple Basin area, and a few days later, on Scott track.

"11 Jan 86 Leaves only of Corybas acuminatus seen on lower Porarari River track and on 14 Jan in Lyell Walkway area — but I have yet to see plants closer to home, and in flower.

"30 Mar 86 A solitary Orthoceras strictum in flower at upper level of bush on Ketetahi trackside, Tongariro National Park.

"16 May 86 Waitakeres — Pterostylis brumalis flowering under kauris on Arataki Nature Trail; and in moss under manuka on Parau track, plants of Pt. trullifolia just coming into bloom. In more shaded locations on Parau track were colonies of Acianthus fornicatus in bud, with one just far enough advanced to photograph.

"25 Aug 86 Corybas rivularis (was orbiculatus) flowering on very wet banks on Mt Messenger roadside — the first time I had seen these plants growing) apart from those in the Pukekura Park fernery.

"26 Aug 36 Waitakeres — a few Pterostylis alobula flowering on sunny rockface on Centennial track.

"27 Aug 86 Rangitoto Island — many Pterostylis alobula and Acianthus reniformis in flower; A. fornicatus numerous but mostly finished flowering) with seed capsules formed. A. reniformis proved very difficult to photograph successfully) the dark flowers tending to merge with the distracting backgrounds — the film manufacturers did very well out of my Rangitoto trip).

"14 Sept 36 Found Bruce Irwin's article and drawings from the Sept 35 Newsletter very helpful after a walk along the first section of the Matemateaonga Walkway from Kohi Saddle. A colony of Corybas rivularis was found in flower — one head had two flowers — with just two flowers of Corybas 'species A' amongst them. About an hour further back was a large flowering colony of Corybas 'species A' alone. Both colonies were growing in similar conditions on wet mossy banks. The first time I had seen similar plants growing together in the Pukekura Park fernery. I was rather sceptical when told that it was believed they were variations of the same species. Now I can see the similarities and differences much more clearly. Thank you, Bruce."

■ Stan Butcher, of Lower Hutt( wrote in a letter to Dorothy Cooper: "Some time ago you mentioned the value of observations of insects visiting orchids in flower. As a contribution I notice a photograph in Richard Sharell's NZ insects and their story (revised ed. 1982) plate 23 of a Red Admiral butterfly Bassaris gonerilla 'feeding on Earina autumnalis.'" Other observations — first or secondhand — of insect visitors would be very welcome — Ed.

■ Frances Nicholls, Mt Eden, is one of several members who have asked for a membership list — there is a growing interest in meeting, rather than 'jst reading, other enthusiasts, so a full list of paid-up members is printed in the back of this Newsletter. She writes, "I think some time in October to December we should hold a native orchid camp — so people can get together, meet each other and swap notes about orchid hunting.... I really would like to meet the other orchid enthusiasts and talk to them." Her suggestion of Taupo as a good venue has been readily taken up by Trevor Nicholls of Taupo, and those interested should look at Notices below.

■ Doug McCrae, Kaitaia, writes, "In October 1986, whilst pursuing a regular hunt in Peria, near Kaitaia, I came across Pterostylis graminea var. graminea for the first time. This bush remnant is well endowed with epiphytic and terrestrial species and var.rubricaulis is present, always in the immediate vicinity of kauri. In part of the bush I had not previously explored, a few plants of var.oraminea were growing in association with var. rubricaulis. They differed conspicuously by their large size, green stems, larger, wider and shiny leaves and general robustness. Lucy Moore's notes on this species (Newsletter 21) show that var. graminea has narrower leaves than var. rubricaulis but my observations contradict this. Lucy does state that this species appears variable, so another look at these plants this year is required. Interestingly HB Matthews did not record var. graminea in the Far North, stating that only var. rubricaulis grew there."

■ Renate L de Zacks (address: MSU-Doe Plant Research Laboratory, Plant Biology Bldg, Michigan State University, East Lansing, Michigan 43324-1312, USA) writes, "I am interested to obtain plants or seeds (preferably still in green capsules) of some species of the genus Corybas, including C. macranthus, and of the genus Thelymitra". Please write direct to Renate de Zacks if you wish to help.

---

**NOTICES**

---

## **Index - for Newsletters 1 - to 20**

KF Ross of Lower Hutt has completed the mammoth task of compiling a superb index for the first five years of publication of the NZNOG Newsletter. What it shows us is the huge range of subjects) authors) orchid localities and illustrations that were covered in those very important first five years which Dorothy Cooper so capably guided and reported. But what the index also shows us is the gaps: the species that have been neglected, the illustrations not printed, the localities unreported, the potential authors unsung. Funds do not alas (allow us send the index free to all members) but you can have your copy with the next Newsletter for a mere \$2 if your order (and your \$2) is with the editor by 1 August. The price is so low because Kevin Ross has generously subsidised printing costs.

Can you get by without it?

### **13-th World Orchid Conference      Auckland 1990**

Doug McCrae writes: "The Organising Committee has asked Jean Jenks and myself to organise and coordinate the NZ native orchid display for the Conference. This will be a major foyer display and will be of a standard commensurate with the status of the event.

"As the show will be in September) a display of many genera in flower will be difficult — but not impossible! From my own experience) spring/summer flowering terrestrials and epiphytes can be made to flower early. By giving terrestrials a shorter rest period than is normal) and by growing them in a heated greenhouse) Thelymitras will flower as early as July. Do not attempt this method if you do not have a heated house with a good fan and are not familiar with the growth habits of terrestrials.

"Plants alone will not be sufficient to constitute a significant display) so photographs) drawings) paintings) historical information or what have you will be useful. What about a NZ Native Orchid Group badge? We would sell a large number at the Conference and these would more than cover the cost of production for members' own badges. Excess funds could be used for the Newsletter. field days, or whatever.

At this point), no decision has been made about the design or form of the display. As it will be mounted by the NZNOG you are all invited to assist in any way you can( and to submit ideas and suggestions. Try to be as original as you can — we want to leave a lasting impression on the two thousand overseas registrants expected. There will be regular updates on the progress of the display planning.

"If you think you can help in any way with the display) contact Mrs Jean Jenks) RD 2> Upper Moutere) NELSON) or Mr Doug McCrae, Parau, RD 3, KAITIAIA. Your assistance will be much appreciated."

### **NZNOG camp Taupo 5 — 6 December 1987**

The native orchid subcommittee of the Taupo Orchid Society is organising a national native orchid meeting) using the Iwitahi Outdoor Recreation Camp for accommodation on the above dates.

There will be walks, talks, demonstrations and other activities during the weekend. Those interested should write at once (places in the camp are limited), sending \$5 (\$10 after 1 October) to Trevor Nicholls, 33 Hinekura Ave, Taupo 3300. Telephone (074)34813.

---

ARTICLES

---

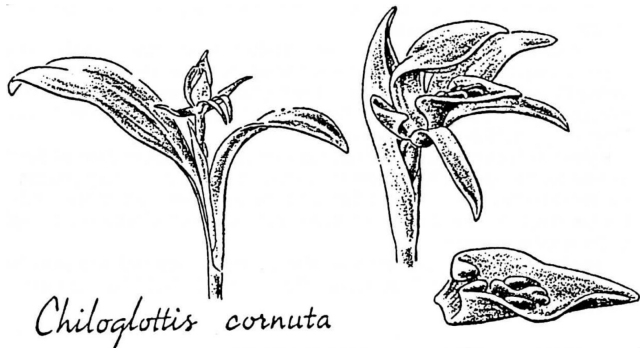
## Altitude range of Chiloglottis cornuta

Text by KF Ross, Lower Hutt; illustrated by J Bruce Irwin.

Prior to a recent tramping trip in the Ruahine Forest Park, I had always regarded Chiloglottis cornuta as a lowland and forest-inhabiting species. The Ruahine trip in early January 37 included a traverse along the top of the Ngamoko Range. C. cornuta was very common along forest tracks to the west of the Ngamoko Range, but of greater interest to me was its profusion above the bushline, with frequent large colonies from 4000-5000 ft, and scattered plants to about 4900 ft (1500 m), just north of Tunupo trig. point. As would be expected, higher plants were smaller with many still in flower, compared with the larger lower altitude plants which were mainly in seed.

Flora of NZ does not make mention of the altitude range of C. cornuta. Dorothy Cooper gives "from sea level in the S to higher altitudes in the N". Cheeseman says "to 3000 ft" and Hatch "to 3500 ft". Johns & Molloy seem more aware of its true range: "from sea-level to the tree-line and beyond," and an Australian publication (Nicholls) mentions it in subalpine grasslands. C. cornuta is not mentioned in either of the books on alpine plants (Mark & Adams; Salmon).

Presumably one cannot really classify C. cornuta as a true alpine plant because of its predominantly low level distribution (although I note that Salmon includes Orthoceras strictum, also presumably a low level species in his book). However, in view of its abundance in the alpine zone of part of the Ruahines



*Chiloglottis cornuta*

—and it would seem quite possibly the mountain areas  
—perhaps it would deserve a mention in future alpine plant publications.

### References

- Cheeseman TF (1925). Manual of the NZ flora, 2nd ed.  
Cooper D (1931). A field guide to the NZ native orchids.  
Hatch ED (1949). Trans.R.Soc.NZ, 77: 229.  
Johns J (x Molloy B (1933). Native orchids of NZ.

Mark AF & Adams NM (1986). NZ alpine plants. Revised ed.

Moore L & Edgar E (1976). Flora of NZ. Vol II.

Nicholls WH (1969). Orchids of Australia.

Salmon JT (1968). Field guide -to the alpine plants of NZ.

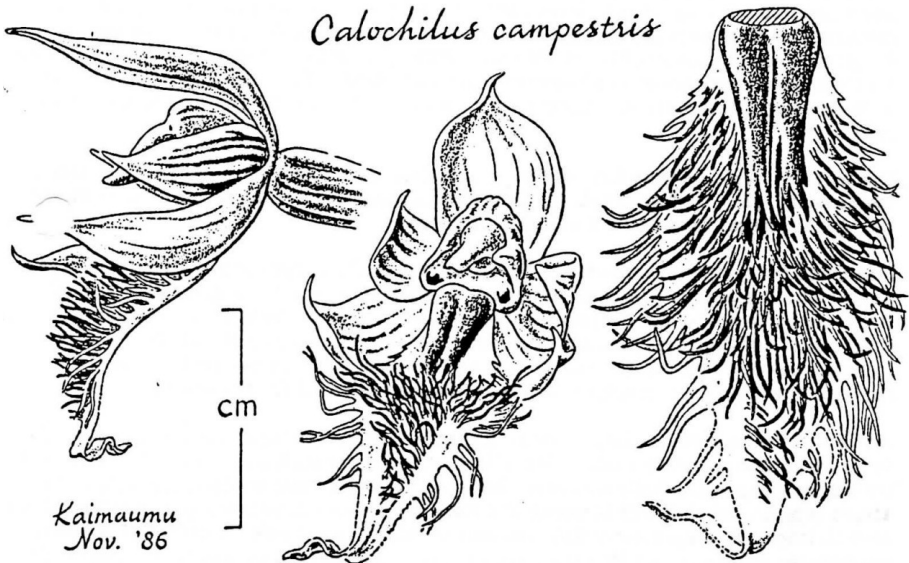
---

## The rediscovery of Calochilus campestris in NZ.

Text by Doug McCrae( Paranui Kaitaia; illustrated by J Bruce Irwin.

Sixty-two years have elapsed since HB Matthews first discovered C. campestris at Kaimaumu north of Kaitaia. This species, which also grows in Australia) was stumbled upon by NZNOG members Margaret and John Perry in October 1986 on a neighbour's property at Kaimaumu.

After consulting publications available to them, they could not identify it specifically, but considered it did not fit descriptions of C. robertsonii or C. paludosus. From a brief description over the phone, I was sure they'd found C. campestris so I made the trip north the next morning. Eureka! but only the one plant! A quick browse by Margaret, John and myself yielded two more. More searching was needed — but this would have to be done another day. I had one plant photographed. A couple of weeks later, Bruce Irwin came north and another two plants were found. These were followed by two more some distance from the original locality, bringing the total to seven. Although in his original description, Matthews noted plants with three to eight or more flowers, none of those we saw had more than four or five, so larger plants must be very robust indeed. The flowers of C. campestris are strikingly beautiful. Its habit of growing among rushes makes it easily overlooked when not in flower( and it can be easily confused with Thelymitras unless in spike.



The original locality is on private land, isolated from public access and relatively safe -except from fire. The owners of the site, on which a large number of orchid species are to be found, are keen to see it preserved. They are a retired couple and are not capable of managing the site either physically or financially. The predominant cover, manuka, is becoming so dense in places that it is overwhelming the orchids. It would make an ideal orchid arboretum and perhaps a worthwhile project for the new Conservation Department. There may well be more plants of C. campestris in the nearby large peat-mining property. These and the thousands of other orchids that could be salvaged from the same area could be re-located there.

Other species located in this area include Thelymitra pauciflora, T. aemula, T. carnea, T. pulchella, T. longifolia (new sp.), Caladenia carnea, Corybas oblongus, Corybas sp. (unguiculatus or carsei), Microtis parviflora, Prasophyllum pumilum, Prasophyllum sp., Pterostylis plumosa, Cryptostylis subulata.

---

## The puzzle of Spiranthes, our pink Ladies Tresses orchid Part: II

by Brian Molloy, Botany Division, DSIR, Lincoln.

I pointed out in Part I that NZ and Australian Spiranthes are now placed under the same name, S. sinensis spp. australis, by some authors. I questioned this treatment in view of the complex range of forms involved under the name. Some examples are as follows.

Three years ago Bob Bates of Adelaide sent me two Spiranthes from South Australia (SA); a white flowered one that did not survive, and a normal pink-flowered one. I have grown and compared this plant with Spiranthes from the Chatham Islands, Lake Ellesmere and the Rangitata River in southern NZ, and one from Motutangi Swamp, Northland, sent by Doug McCrae. All these plants were grown in a loam/peat/grit mix in porous clay pots plunged in coke breeze in an unheated glasshouse. An insect-proof cage was placed over the pots to prevent insect pollination.

The southern NZ plants were first to flower (late December), followed by the SA plant, and then the Motutangi plant (mid January). All flowering was completed by the end of January by which time the southern NZ plants were shedding ripe seed.

Flowers of the southern NZ plants are the smallest overall and open only slightly, forming a narrow tube-like aperture. The white concave labellum is narrow, rectangular, and squared across its upturned tip; the margins are thickened and laciniate; and there are two prominent basal calli. The stigma is broad and nondescript and is overtopped by the anther. The blunt pollinia break down readily, even in the bud, effecting self-pollination. Fertilisation is rapid and the lowermost capsules shed seed while the uppermost flowers are still opening.

Flowers of the SA plant are larger overall and open readily, forming a wide aperture through which the column is clearly visible. The white labellum is broad, flared out and downturned at its tip; the margins are thickened and markedly laciniate; and there are two basal calli. The stigma is broad and distinctly bi-lobed, and there is a prominent, two-pronged rostellum with a central, long-oval, grey, bladder-like viscidium or disc which exceeds the anther. The acute, pear-shaped pollinia remain firm and intact, do not break down and can easily be removed. In keeping with all Spiranthes, the flowers open successively from the bottom, but



eventually every -flower is open simultaneously throughout the spike. When the flowers wither and die the pollinia are still intact and no seed is formed. This Australian Spiranthes is entirely dependent on insects for pollination and this fascinating process is described in detail by Edith Coleman in the Victorian Naturalist of April 1931 and July 1933.

The Motutangi plant is by far the tallest with brown-tipped floral bracts. Its flowers are narrow but longer than the others and do not open at all. The white narrow labellum is pointed at the tip; the markedly less lacinate margins are folded inwards to meet especially at the tip, forming a slipper-like structure; and there are two basal calli. The stigma is broad and nondescript and is overtopped by the anther with acute-pointed pollinia that are difficult if not impossible to remove. The tips of the pollinia remain firm and intact, even after the f TS wither and die. Pollination seems to be effected by the contact and fusion of the lc part of the pollinia with the upper edge of the stigma. Not surprisingly, fertilisation is a much slower process and the uppermost flowers fail to set seed.

Bruce Irwin has kindly agreed to illustrate the flowers of this trio for a future number of the Newsletter. Meantime the question arises, how typical are they of Spiranthes in Australia and NZ?

The SA plant matches the illustration of Nicholls (Orchids of Australia t.352, 1969) and the descriptions of most Australian flora writers. However, Fitzgerald (Australian Orchids Vol.1, 1876) could find no trace of a rostellum or disc in the Spiranthes he studied and illustrated. In some respects the plants he described, especially their intact pollinia and mode of pollination, resemble the Motutangi form above. Curtis (Student's Fl. Tasmania 4A, pp.128-129, 1979) found no rostellum or disc on Tasmanian Spiranthes either, and notes that they appear to be self-pollinated as do those in southern parts of NZ. On the other hand, a specimen in our herbarium, collected from Boyer, Tasmania, by E Cruikshank in 1947 (CHR 130303) does have a rostellum and disc! Australian forms clearly need further study and confirmation.

Most NZ Spiranthes resemble the southern plants already described above and lack a rostellum and disc. The more northern plants tend to have larger flowers and open them more widely, probably because of the higher average temperatures experienced, as pointed out by Dan Hatch (Trans. Roy. Soc. NZ 32, p.615, 1954). Unfortunately, the critical drawings of Spiranthes in Hatch (Trans. Roy. Soc. NZ 79 P1.73, 1952), Moore and Edgar (Fl. N. Fig33, 1970), and Moore and Irwin (Oxford Book NZ Plants, p.195, 1978) are all based on cultivated Australian plants with a prominent rostellum and disc.

A careful examination of Spiranthes throughout NZ is essential to determine more precisely what grows "on the ground". In particular, it is important to establish how widespread and variable the Motutangi form is. With Spiranthes it is equally essential to compare NZ and Australian forms to determine whether or not we are talking about the same or entirely different species. These steps lead automatically to a study of type specimens, that is, the specimens to which the names of species are permanently attached. We must do this to see whether or not we are using the right name or a new name is required. Then and only then will the puzzle of Spiranthes be resolved.

I have dealt with Spiranthes at some length since it illustrates a problem common to many NZ orchids, especially those thought to be shared with Australia. Although not all of us can follow to completion each of the essential steps outlined above, collectively we can at least establish what orchids occur in NZ and what variation, significant or otherwise, is present.

Already some contributors to this Newsletter have adopted this critical approach in their accounts of other species. Spiranthes is by no means the only puzzling NZ orchid.

-----

## On Pterostylis coccinea RD Fitzg.

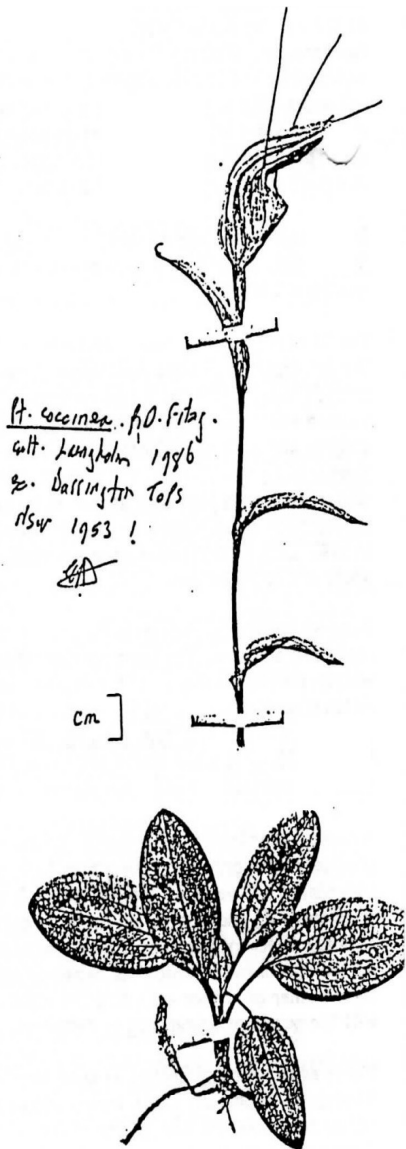
by ED Hatch, Laingholm, Auckland.

From time to time the question is asked — how long do terrestrial orchids live? In those genera (Pterostylis is a good example) which produce a tuber to tide them over the dry, sometimes cold period) the life of the plant is a single season, rarely more than 6-7 months, more often 3-4. The tuber (a dormant, swollen) terminal rhizome node) is a new plant in waiting. In theory such a plant may go on forever, but in nature accidents happen and colonies may be wiped out. They have in the meantime flowered and dispersed their seed) so all is seldom lost.

In 1965 I put a (long forgotten) note in The Orchadian (2: [2] p 30) which may bear reviving.

In February 1953 Alick and Molly Dockrill walked across Barrington Tops (NSW), and I received some little time later, a packet of assorted tubers. I tossed them all into one largish pot and sat back to await developments. One by one that spring they came through, Spiranthes, Thelymitra venosa, Chiloglottis (later described by Rupp as Ch. dockrillii — this was its first discovery, and that magnificent Pterostylid — falcata (which grows, like our Pt. micromega, in water). Reckoning that was the lot, and in any case more than satisfied with my haul, I gave over peering in the pot. Imagine my delight when, one evening in January, I found a lone Pt. coccinea glowing softly red. At the time of writing, 23 February 1937 — 34 years later (!) — I have one plant of Pt. coccinea in flower and 12 rosettes.

Pt. coccinea belongs to that broad group of species which also contains our brumalis, trullifolia and alobula. Each plant produces several tubers and so increases



vegetatively as well as by seed. There are two distinct leaf—forms — a juvenile rosette of oblong-orbicular, petiolate leaves and a mature flowering form with sessile acuminate bracts. The stage of development depends entirely on the size of the tuber (i.e. on the amount of food reserve available). The rubicon appears to be 12mm diameter. Anything above this will produce a flowering plant, while everything below it will develop into a rosette. Each tuber carries several buds, only one of which normally develops. In the event of accident to the leading shoot, bud #2 will begin to grow, and should anything happen to that, there is a fair chance that bud #3 will develop, but these secondary or emergency shoots are always rosettes. If a flowering plant is plucked, leaving say 40mm of stem attached to the tuber in the soil, the dormant secondary buds will often start away, producing 1, 2 or rarely 3 rosettes round the base of the cut stem. I went into this in some detail in Newsletter 2- June 1982, p 4.

A tuber once got lost near the bottom of the pot and the rhizome failed to reach the surface. But it did manage to grow upwards for 6 cm and throw a branch 3.5 cm long with a terminal tuber 2 mm larger in diameter than the original and 5 cm higher in the pot. All this between 10 and 20 cm below the surface of the soil without the benefit of light or leaf chlorophyll.

Some time ago I found in Laingholm, a chewed flowering plant of Pt. brumalis which had developed two rosettes from the nodes (the axils of the leaves) of the remains of the stem.

-----  
Errata: in Part I of Brian Molloy's paper on Spiranthes in Newsletter no. 21, Lesley Garay should read Leslie Garay; under 1873, Fl. Australia 5 should read Fl. Australia 6; geneology should read genealogy.

---

New Zealand Native Orchid Group

---

## Individual subscribers 1987

Mr IL Hansen, 14 Davis St, KAITAIA. Margaret and John Perry, Kaimaumau, Waiharara RD, via KAITAIA. Mr Doug McCrae, Paranui, RD 3, KAITAIA. Mrs J Thompson, 101 Onerahi Rd, Onerahi, WHANGAREI. L Ford, 273 Western Hills Drive, WHANGAREI. Mrs ME Young, 36 AInwick St, WARKWORTH. Dr LB Moore., Wilson Rd, WARKWORTH. Betty Gunn, 51 Pupuke Rd, Birkenhead, AUCKLAND. Sandra Jones, 14 Park Rd, Titirangi, AUCKLAND 7. Mrs Gwen Parker, 8 Janet Place, Laingholm, AUCKLAND 7. Mrs Beryl Finlay, 91 New Windsor Rd, Avondale, AUCKLAND 7. Mr RF Whitten, 5 Thorley St, Mt Eden, AUCKLAND 4. Marjorie Guttery, 13 Springleigh Ave, Mt Albert, AUCKLAND. Brent Torrens, 3 Lynbrooke Ave, Blockhouse Bay, AUCKLAND 7. ED Hatch, 25 Tane Rd, Laingholm, AUCKLAND 7. Mr and Mrs RC Grange, 560 East Coast Rd, Mairangi Bay, AUCKLAND 10. Heather Crofskey, 27 Skipton St, Mangere East, AUCKLAND. MG Wilson, 16 Argyle St, Herne Bay, AUCKLAND. AW Holmes, 115 Beach Rd, Papakura, SOUTH AUCKLAND. Mr WF Liddy, c/- Pukekohe Hotel, PO Box 3, PUKEKOHE. Rosemary Weir, 50 Landscape Rd, PAPATOETOE. Mrs PM Turvey, 8 Le Havre Place, TAKANINI. Barbara J Knowles, Main Road, Onewhero, RD 2, TUAKAU. A Beck, RD 2, Ngatea, HAURAKI PLAINS. Mrs JP Green, 14 Princes St, WAIHI. Gary Staples, Box 92, PAEROA. Rev HE Whitten, 301 Fergusson Drive, THAMES. Mr and Mrs R Goodgeri 9 Somerset Grove, TAURANGA. JB Irwin, 192 Bellevue Rd, TAURANGA. Mrs Pauline Mayhill, 13 Ruamoana Placet Omokoroa, RD 2f TAURANGA. Mr and Mrs JM Feist, 25 Seddon St, TE PUKE. WJ Forrest, "Miltord Haven", No. 1 Road, No. 2 RD, TE PUKE. PJ de Lange, 19

Cranwell Place, HAMILTON. Stella Rowe, 1 Corrin St, HAMILTON. Mrs MLD Skinner, 117 Lake Ores, HAMILTON. Mrs J Blackwood, 250 Pohutukawa Ave, OHOPE. Mr MC West, c/- Post Office, Lake Okareka, ROTORUA. Mr WB Shaw, Forest Research Institute, Private Bag, ROTORUA. Gordon Weatherall, PO Box 1341, ROTORUA. C Ecroyd, 33 Raniera Place, ROTORUA. N & E Miller, Te Akau Rd, RD 4, ROTORUA. Miss Frances Nicholls, 33 Hinekura Ave, TAUPO. Mr Trevor Nicholls, 33 Hinekura Ave, TAUPO. Mrs A Gatchell, Crystal Brook Lodge, Waitahanui, TAUPO. Mr M Gibbs, 15 Rahui St, TAUPO. Mrs J Lennane, 43 Gordon St, GISBORNE. Mrs Beryl Ellmers, 1 Cobham Place, GISBORNE. PM Pegram, PO Box 34, Frasertown, HAWKES BAY. Mr TA Smith, 73 King St, Taradale, NAPIER. Rob Ward, 13a\_ Veronica Place, Bell Block, TARANAKI. CL Perry, 234 Bridge St, ELTHAM. Mrs Shirley M Thomson, Ashdown Park, Weld Road, RD 4, NEW PLYMOUTH. Mr G Fuller, 25 Victoria Rd, NEW PLYMOUTH. Mrs Val Smith, 22 Whiteley St, NEW PLYMOUTH. Mrs Audrey Eagle, 3 Mount View Place, NEW PLYMOUTH. Mr Dean Walker, 73 Cressida Ave, STRATFORD. Eric Turfrey, 20 Duigan St, WANGANUI. Dr EO Campbell, 26 Frederick St, PALMERSTON NORTH. Mr DP McConachie, 15 Battersea Place, PALMERSTON NORTH. Mrs JA Chrystall, RD 11, FOXTON. Mike Dunn, Kuku Beach Rd, RD 20 Ohau, LEVIN. Ian Cooksley, c/- NZFS, RD 31, Manakau, via LEVIN. PC Shapcott, PO Box 7, MARTINBOROUGH. Mrs HA Cook, c/- Post Office, GREYTOWN. JB Kinder, 402 Fergusson Drive, LOWER HUTT. Mr and Mrs J Anderson, 21 Rosebank Ave, LOWER HUTT. Alan Jolliffe, Parks and Reserves, Private Bag, LOWER HUTT. Mr AP Druce, Botany Division Regional Station, Taita Research Centre, DSIR, Private Bag, LOWER HUTT. John Johns, 530 Stokes Valley Road, LOWER HUTT. Simon Dynes, 25 Wyndrum Drive, LOWER HUTT. CS Butcher, 139 Taita Drive, LOWER HUTT. KR Grange, 7 Wyndham Ave, LOWER HUTT. KF Ross, 13 Hinau St, LOWER HUTT. Jean Mowbray, 3 Downsview Place, PUKERUA BAY. Mr John Gregory, 329 Main Rd, LINDEN. Mrs Dorothy Cooper, 37 Waimea Rd, Waikanae, WELLINGTON. Mr P Tomlinson, 14 Putnam St, Northland, WELLINGTON 5. Mr D Catchpole, 25 Taipakupaku Rd, WELLINGTON 3. Mr Philip Chandler, 16 Cruikshank Rd, WELLINGTON 3. TR Burns, 70 Campbell St, Karori, WELLINGTON. Mrs Margaret Anderson, Coast Road, WAINUIOMATA. K Jarrett, Native Landscapes, PO Box 38221, PETONE. ND Neilson, 60 Horokivi Rd West, Newlands, WELLINGTON 4. Gordon Sylvester, 22 Pencarrow Cres, Wainuiomata, WELLINGTON. BM Ledger, 15 Bellbird Cres, Waikanae, WELLINGTON. Ms MC Wassilieff, 69 Tiber St, Island Bay, WELLINGTON. Mrs G Nendick, 14 Apuka St, Brooklyn, WELLINGTON 2. Mr R Reichenbach, 96 Nottingham St, Karori; WELLINGTON. Mark E Moorhouse, PO Box 3074, Richmond, NELSON. Mrs JM Jenks, RD 2, UPPPER MOUTERE. Fred Overmars, c/- Department of Conservation, Private Bag, HOKITIKA. IL Stephenson, 14 Regent Ave, RANGIORA. Dean Pendrigh, 22 Allstone Pl, CHRISTCHURCH 9. Fairlie Horsley, 23 Glandovey Road, CHRISTCHURCH. J Thompson, 13 Therese St, CHRISTCHURCH 2. Rodney Boon, 143 Halswell Rd, CHRISTCHURCH 2. Peter Heenan, 23b Taylors Ave, Fendalton, CHRISTCHURCH. Dr Brian Molloy, Botany Division DSIR Lincoln, Private Bag, CHRISTCHURCH. IJ Tweedy, 11 Sandringham Place, Bryndwr, CHRISTCHURCH 5. John Hunt, PO Box 31-011, CHRISTCHURCH. Mr DJ Barron, 33 Mountain View Rd, TIMARU. Mrs Barbara McGann, 4a Rother St, OAMARU. MC Matheson, 4 Cherry Lane, BALCLUTHA. Miss HF Duff, 77 Craighleith St, Northeast Valley, DUNEDIN. Ian St George, 45 Cargill St, DUNEDIN. Mr ML Young, 61 Argyle St, MOSGIEL. Bev and Ian Thorne, Deep Cove, c/- FNP, PO Box 29, TE ANAU. Mr G Watson, 53 Isabella St, INVERCARGILL. Maureen Townson, 136 Grace St, INVERCARGILL. AG and CM Mathieson, Myross Bush, No 11 RD, INVERCARGILL. Mr David McNaughton, No. 7 RD, Mokotua, via INVERCARGILL.