

Newsletter

Number 31. September 1989.

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Original papers

Greetings from Taupo

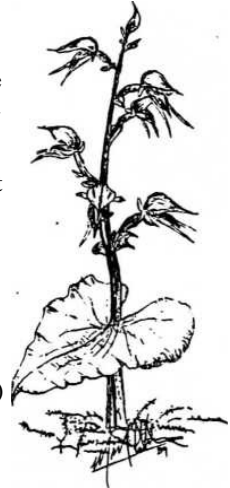
written (June 1989) and illustrated by Max Gibbs.

Native Orchids are their own worst enemies because with few exceptions they don't feature prominently in their habitats and are easily overlooked unless you are specifically looking for them. This was brought home to me recently when I visited Robert Gower at his lake-side development on Whakamoenga Point at Lake Taupo. Whakamoenga Point was the subject of a Taupo Orchid Society field trip with Dorothy Cooper in 1983. At that time about 20 species were found on the point but only in isolated locations. The roading across the point for the new development has inadvertently destroyed many of these habitats. The developer, Robert Gower, has a keen appreciation of native flora but was unaware of the existence of most of the orchids. His development concept will leave all but the few trees on the house site untouched and will designate large areas of the bush as reserve thus leaving most of the bush intact. The real damage has been the massive desiccation of the understorey through the openings created by the roads.

Notwithstanding this, one special habitat is undisturbed and will be specifically protected as part of Robert's own section. This consists of a large (house sized) rock which is thickly encrusted with *Earina mucronata* and *E. autumnalis*. The latter had already been noticed because of the perfume in March and April. The *Earina* patches extend from the top of the cliffs right down to the water's edge and encompass an area of several acres. Surveyors had walked tracks through the orchids around the top of the cliffs.

The rock also supports large colonies of *Pterostylis trullifolia* and *P. alobula* both of which are in flower now. *P. trullifolia* was in flower from 20 March and is still going strong.

Also growing on the rock and around its base are numerous colonies of *Acianthus fornicatus*. These have been in flower since mid April. Both

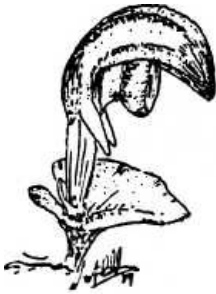


Acanthus fornicatus
Whakamoenga point
27.5.89

the *Pterostylis* and *Acianthus* colonies are growing in the tightly clumped mat of moss on the rock. The *Acianthus* on nearly flat surfaces while the *Pterostylis* plants had colonised the near vertical faces.

The distribution of all of these orchids suggests that seed has been carried in on the westerly wind as only the rocks exposed to the lake breezes had orchids with few colonies further inland. The largest colony of *Acianthus fornicatus* was on the eastern side of the huge rocks suggesting that the seed had dropped in the still air behind the rocks.

Elsewhere around the lake edge I have found other small colonies of *P. trullifolia* also growing on vertical rock faces in patches of moss exposed to the lake breezes. In one patch, several of the *P. trullifolia* flowers had a small round 'pea' sized snail inside the flower. The snails were not eating the orchids as no damage was found on any plants and the flowers were still present two weeks later although a bit wilted with developing seed pods. Could the snail be a pollinator ?



Corybas aconitiflorus
21-5-89

At IWITAHI, the survey work is continuing with most of the likely native orchid habitats mapped and about half of them inspected. A new native orchid find for the area is *Corybas aconitiflorus* which is presently in full bloom in large patches typical of the populations of other native orchids found at Iwitahi. *C. aconitiflorus* was not found in the reserve area but in one stand of *Pinus nigra* several kilometres further north west. The plants were flowering below the pine needle litter and were very hard to find at first. The first plants were found where a Robin had been digging. Several white fleshy seed stalks standing up through

the needles about six inches also marked the area... the seeds had already gone.

Most colonies had plants which were well spaced while a few had plants which were very tightly packed together. That block of pines is currently being logged and where heavy machines had broken the soil, networks of white interconnecting roots were exposed. The roots formed a complete circle radiating from the base of each plant rather than just the single root extension as found in other *Corybas* species. Most of these roots also had small bulbs on the end. We have transplanted several large patches of *C. aconitiflorus* into the Native Orchid Reserve area from that block.

We also transplanted several patches of *Gastrodia cunninghamii* from the same block of pines as there were numerous colonies of both



Gastrodia minor

Iwitahi 26/12/87

G. cunninghamii and *G. minor* in the area. Several plants of *Chiloglottis* sp. with very large leaves were also removed to safety and will be identified when they flower. The floor under this particular block of *P. nigra* had virtually no understorey and few fallen trees.

Gastrodia seed heads stood thick in places and in others, newly emerging *Caladenia* sps, some with broad purple strap leaves and others with thin green leaves, were prominent. *Thelymitra* sps were also scattered throughout. The last remnants of *Adenochilus gracilis* leaves were found in several places as were leaves of *Corybas trilobus*.

If any large area of this block of pines remains standing undisturbed through October to December it should produce a lot of native orchids. Meanwhile the survey continues and I will send updates as we proceed. An interim report has to be prepared for the Ministry of the Environment for the Environmental Grant Award by the end of June.

Orchid touring in Victoria and South Australia, 1988 - part 2

by Doug McCrae, Auckland.

Anglesea adventure

With only a week in Victoria, there was no time to waste. An early start the morning after returning from the Bendigo tour took us through recently burned forest on the Ocean Road to Anglesea.

Near the road in dry, open habitat, similar to that in New Zealand, were scattered plants of *Thelymitra carnea* which were more richly coloured than N.Z. specimens. Growing in association with them and common, were *T. flexuosa* and *T. rubra*.

Further into the eucalypt bush we came upon a colony of hundreds of the hare orchid, *Caladenia menziesii*. Another rarity requiring fire for flower induction was *Lyperanthus nigricans*. Although the colonies were quite large, only a few plants were flowering at the time.

Lots of *Pterostylis plumosa* with their hairy tongues fluttering in the breeze dotted the whole area. As usual, *Thelymitra ixioides* (spotted and unspotted) was encountered everywhere. *Thelymitra aristata* is a huge, robust-growing orchid which was resplendent and stately with numerous deep flowers on a long stem. This one usually occurs as singletons sporadically throughout the Anglesea area. *T. nuda* Was not uncommon.

Calochilus campestris, one of the beard orchids, was seen occasionally here and provided a useful comparison with New Zealand's *C. herbaceus*. Here, as everywhere, orchids were in abundance. Other flowering species noted included *Diuris corymbosa*, *Microtis unifolia*, *Glossodia major*, *Caladenia dilitata*, the lovely large white *C. patersonii*, *C. reticulata*, and lots of *C. carnea*. *Thelymitra pauciflora* was as common as it is in New Zealand and just as shy in opening its flowers in dull conditions.

Everett and Margaret Foster of the ANOS Geelong Group were our guides in the Anglesea area. When time is limited it is most useful to have the aid of people with good local knowledge. After lunch in the Park just outside town we headed up into the Otway Ranges along Forest Road.

Most of the forest in the area was devastated by the Ash Wednesday fires and although fire-induced species are slowly disappearing, such gems as *Caladenia menziesii* were still to be seen in good numbers.

The huge, many-flowered *Prasophyllum elatum* was the highlight of this stop. An open grassy patch was dotted with about a dozen specimens. One example in full flower was about a metre tall with a stem about 20mm thick.

The *Caladenia* hybrid *C. patersonii* x *C. dilatata* was noted along with both parents. The pink *Caladenia* species known in Victoria as *C. pusilla* grows here and is identical with the pink orchid known in New Zealand as *C. minor*. *Pterostylis plumosa* was not uncommon and occasionally seen was *P. nutans*. *Acianthus exsertus*, *Thelymitra rubra*, *T. antennifera*, *Microtis unifolia*, and *Diuris corymbosa* were not uncommon throughout.

After a drive of a few kilometres we reached the area known to local orchidists as the Gravel Pits. Despite being somewhat early in the season, I had my first sighting of the "flying duck" orchid, *Caleana major*. There were quite a lot of plants but only a few flowering. Other orchids in the area were *Caleana minor* and *Lyperanthus nigricans*, the latter not flowering. The ubiquitous *Thelymitra ixioides* was there together with a few *Diuris corymbosa* in flower.

Further along this loop road we stopped in another area of forest to see *Calochilus robertsonii* once again and *Caladenia patersonii*, *C. cardiochila*, *C. dilatata* and *C. clavigera*. Late flowering specimens of the multi-flowered *Pterostylis longifolia* were a new sighting for me. *Thelymitra pauciflora*, typical *Diuris corymbosa* together with an all-yellow form and *Glossodia major* were evident in smaller numbers. Observed from the car as we drove along were the stately *Thelymitra aristata* and *Caladenia reticulata* growing along the verge.

The end of the loop took us onto Gum Flat Road where *Caladenia carnea* and *C. pusilla* were not uncommon. *Lyperanthus nigricans* was here too, the large, circular, fleshy ground-hugging leaves unmistakable. *Cyrtostylis reniformis* had finished flowering and there were a few bronze- coloured *Calochilus robertsonii* in flower. Other orchids noted here were *Glossodia major*, *Thelymitra antennifera*, *T. rubra*, *T. pauciflora* and the delicate *Acianthus exsertus*.

The drainage viaduct on Forest Road is home for a colony of *Thelymitra x irregularis*. Apart from the plants in the Bendigo area, this was to be the only other time I saw this hybrid in two weeks of orchiding. Along the grassy banks of the viaduct the other species noted were *Caladenia clavigera*, *C. dilatata*, *Thelymitra pauciflora*, *T. rubra* and *Pterostylis vittata*.

The Anglesea area is well known in Victoria orchid circles as containing some of the best habitat and range of orchids in the state. The variety of species and numbers of them again left me somewhat "orchid- shocked" at the end of the day.

ANOS- Victorian Group meeting

The October monthly meeting of the ANOS Victorian Group coincided with my trip so I had an opportunity to give a short talk and show slides of New Zealand

orchids. This introduction to the N.Z. orchids was well received by the meeting and I am grateful to Bob and Beryl Goodger for the use of the CONZED native orchid slide programme while in Australia.

It was fortunate that I had the opportunity to visit the "old man" of orchids, Gerald McCraith. As you may know, Gerald is Director of the Australian Orchid Foundation and is very active in promoting research and conservation. He manages a seed bank so that rare and endangered species can be saved from possible extinction. The Foundation also grants funds for research and other worthwhile projects likely to promote or conserve orchids.

Gerald has a couple of glasshouses in his backyard and grows a wide range of orchids. He is certainly a very hard worker in the interests and love of orchids.

(Part 3 in the next Newsletter).

Notes

◆ Bruce Irwin writes (30 June), "I was particularly interested in *Gastrodia leucopetala* on page 30 of *Colenso on orchids*. Despite the complete absence of data about the column I suspect that he was describing *Gastrodia* 'long column', particularly because he said (on p32) that the lip was widely different from *G. cunninghamii*, indeed more like *G. sesamoides*. Lucy Moore wrote of a plant associated with a Colenso label, *Gastrodia leucopetala* Col. Column very small. Type, Wellington 24288 in Colenso herbarium'. Lucy herself must have doubted this specimen or she would not have used the expression 'associated with a Colenso label'. All very interesting and confusing but obviously Colenso must have been frustrated by inadequacies in the early descriptions. Had they all been as precise as his own descriptions we would not be faced today with the spate of name changes". *Gastrodia "long column" is illustrated by Bruce Irwin in Moore and Irwin's "Oxford book of New Zealand plants" where it is labelled as G.sesamoides; the name "long column" was used by Hugh Wilson for a plant he illustrated in his "Field guide - Stewart Island plants". It is an undescribed species, with the long column of G. sesamoides, and tuberculate flowers as in G. cunninghamii; I was shown a group of them at Waituna Bog, Southland, by David McNaughton and Gordon Watson - Ed.*

◆ A few too many copies of *Colenso on orchids* were printed after all - if you would like a copy, please send \$10 to the editor. Some extra copies of *Cheeseman on orchids* at \$10, and of *The orchid papers of E.D. Hatch* at \$20 are also available. Those who ordered them should by now have received them - if not, please write.

◆ Doug McCrae has agreed to be the Group's Conservation Officer, and will liaise with conservation officers in the other affiliated ANOS groups.

◆ Maureen Young writes from Warkworth, "I was interested in Fairlie Horsley's article on *Yoania australis* at Collingwood, and the comments made about the nikau palm being the common denominator at all sites. Frank Hudson and I have seen *Yoania* in three places. The first, on a farm at Glorit near Mt Auckland, was first found by J. and R. Beever in the early 1960s. When we relocated the site in

1986. we only found the plants after removing old nikau fronds, as the orchids were flowering in darkness under the litter from the palms. Taraire trees were also present. The other two sites, at Kaipara Plats and at Wayby, were also in taraire bush, but we were impressed in each case by the fact that the nikau palms were as dominant as the taraire. The fact that we have only found *Yoania* in taraire bush is not surprising as we have only looked for it in taraire bush. Perhaps we should be searching in nikau groves!" - *And then perhaps we should be calling it Yoania nikau - Ed.*

◆New member, Muriel Morley of Blenheim, writes, "At Easter my husband and I stayed with friends in their holiday home in Blackball, in a little hamlet called Moonlight Valley. While there we were shown many orchid species, and after referring to the NZ Native Orchid book, they could be *Dendrobium cunninghamii* and a variety of *Pterostylis*.... I have admired the NZ varieties for some time.... It saddens me to see such lovely species disappearing under the gold dredges in the Moonlight area; already some have been lost - our friends showed us evidence of this while we were there. We are looking forward to going down when they are flowering. I would be interested to know if there are any NZ natives for sale anywhere".

◆Max Gibbs went out to the Kawakawa Bay walking track in June, and found "masses of *Pterostylis trullifolia*, *P. alobula* (spectacular clump, duly photographed), *Acianthus fornicatus* and buds of *Cyrtostylis reniformis*" - see *Native Orchid Weekend notice in this issue.*

◆The *ANOS Newcastle Bulletin* of April 1989 printed a list of rare and endangered orchids supplied by National Parks and Wildlife in Australia - among them *Bulbophyllum tuberculatum*. *Strange, I thought it was a NZ endemic - Ed.*

◆The Taupo Native Orchid Group has received an Environmental Grant of \$1000 from the Ministry for their survey, recovery and public awareness programme. Congratulations to Max Gibbs and the Taupo people - as Max writes, "hopefully this signals an increased appreciation of NZ native orchids which might carry forward and help save some of the more important habitats from destruction through ignorance of the existence of orchids in these areas". The Taupo Group plans an illustrated series of articles in a local newspaper, under the NZNOG logo, as part of their public awareness programme - others wishing to do likewise should contact Max who would make the articles available. The grant is in addition to that of \$1000 to our Group for the publication of the orchid flora of North Auckland. The 1989 Environmental Grants have been advertised - interested members and local groups should contact the Ministry of the Environment.

◆Wayne Burns, Conservation Officer for the ANOS Newcastle group, writes (*Bulletin* March 1989) on *Spiranthes sinensis*: "One of the most common terrestrial orchids found. It grows along creek banks in small numbers and sometimes along forest roads. One area I have found this species growing is on a hillside facing northeast in the Dungog area. The whole hill was covered with *Spiranthes* of a population of a few thousand plants. I found this area about four years ago. Today this number has been depleted greatly, and numbers are down to

about a few hundred. Three reasons that may have reduced numbers are (1) soil erosion, (2) cattle, (3) man. These plants are growing in full sunlight, and the soil contains a lot of iron. A creek is situated below the hillside and *Spiranthes* is not present along its banks. *Spiranthes* seems to be self-pollinating. Three colour forms are present; they are album, light pink and dark pink".

◆ Ann Green writes from Waihi, "For several years John and I lived in Wainuiomata. Encouraged by my mother, from about 1980 on we became interested in looking for and photographing native orchids. With the Catchpole area of the Rimutaka Forest Park not far away, we went often, even twice a week after work. The following is a list of orchids found on, or a metre or two away from the main paths between the Catchpole car park and the Orongorongo River (Jacob's Ladder). As we found new plants each year from 1980 to 1984, there are probably many more. *Acianthus fornicatus*, *Cyrtostylis reniformis*, *Caladenia carnea*, *Chiloglottis cornuta*, *Corybas oblongus*, *C. rivularis*, *C. trilobus*, *Dendrobium cunninghamii*, *Drymoanthus adversus* (we found only one plant growing on a rock by the track. To our disappointment someone took most of it just before flowering. We watched it over several years - as it grew, someone took a piece, and eventually it disappeared), *Earina autumnalis*, *E. mucronata*, *Gastrodia cunninghamii* (so common in one area we named It Gastrodia Flat - about an acre containing dozens of plants). *Microtis unifolia*, *Pterostylis alobula*, *P. banksii*, *P. foliata*, *P. graminea*, *P. trullifolia*, *Thelymitra decora*, *T. longifolia*, *T. pauciflora*.

"We were determined to find *Bulbophyllum*. We kept a bottle of bubbly in the fridge to celebrate the great day! Unfortunately, we left Wainuiomata without finding any (and the bottle had been drunk and replaced several times). Not long after our arrival in Waihi we took a drive one wet day and went for an orchid search along the Kopu-Hlkuai road. On one track, vandals had hacked at the bush and we picked up a 40cm branch with a tiny *Dendrobium* plant on it. This went home to be placed with other epiphytes we have. It was a month later, checking up on the garden in general, that I looked closely at the new acquisition. There, even larger than the *Dendrobium*, was *Bulbophyllum pygmaeum*, on the same branch. No wonder we never found it earlier! And needless to say, the bottle was not there for us to celebrate properly!

"Another orchid list from Chatham Islands December 1981: *Aporostylis bifolia*, *Caladenia carnea*, *Earina mucronata*, *Microtis unifolia*, *Pterostylis* - probably *montana*, identified by Dorothy Cooper from a photo, *Thelymitra venosa*."

Notices

Native orchid weekend

The Taupo Orchid Society is planning to hold its 7th annual native orchid field days on the weekend of 9 and 10 December. This year two separate trips are proposed. On Saturday 9 December the first part of the

Kawakawa Bay walking track will be investigated. The meeting place is at the Kinloch Store at 11 a.m. - bring a lunch and firm shoes - togs for a swim if it's hot!

The track has a large number and variety of native orchids along its length and should provide an interesting contrast to the Sunday trip to the Iwitahi Native Orchid Reserve in the Kaingaroa pine forest. The walking track has several small hills and includes a walk along the lake shore. It is not strenuous but a moderate degree of fitness is desirable.

On Sunday 10 December, those people going to Iwitahi will meet at the Taupo District Council car park (lake front adjacent to the fire station) at 9 a.m. or at the Iwitahi Outdoor Education Centre Camp at 9.45 a.m. Bring a lunch and something to drink.

The native orchid weekends have proved very popular in the past and we hope this year's field days will be no exception. The trips are open to everyone and we hope to see some familiar faces as well as some new ones.

The Taupo Orchid Society will host a barbecue on the Saturday evening and will provide the meat if those attending bring a side dish, a salad or similar. Also bring your own plates, cups and cutlery.

For further information, and to indicate your intention to come to the barbecue, please contact either Doug Mitchell (074) 86993 or Max Gibbs (074) 85024, 15 Rahui St, Taupo.

First Australasian Native Orchid Conference

Wollongong and District Native Orchid Society are hosting a conference and show on 28-30 September at Wollongong University. The event will include an Australasian native orchid art exhibition and a variety of conference tours. Contact the Conference Coordinator, Wollongong Uniadvice Ltd, PO Box 1144 Wollongong, NSW 2500, phone 042.270966, fax 042.271675.

C o n s e r v a t i o n B a d g e

Diuris purdiei is one of Western Australia's most endangered orchids. About 75% of the known population is currently under threat in its restricted habitat at Canning Vale, south of Perth. Coincident with this threat, ANOS has released its first annual Conservation Badge, featuring *Diuris purdiei*. It is proposed to release a conservation badge every year in a continuing set, the profits to go towards ANOS Council's conservation fund, available for conservation projects in Australasia. AS5.50, including post and handling, from ANOS Secretary, PO Box C106, Clarence St, Sydney NSW 2000.

Cultivation of Australian Native Orchids

A new edition of this book, with 96 pages and colour, and full of interesting advice applicable to many New Zealand species as well as Australian, is available at All 1.65 Including post and packing from ANOS Victorian Group, PO Box 285, Cheltenham, Vic 3192.

E l e c t r o n i c d a t a t r a n s f e r

Contributors to the *Newsletter* who use IBM compatible wordprocessors are asked to supply copy as printed papers, and also to send a 5 1/4 inch floppy disk labelled with the name of the author, the title of the paper, and the type of software used. It saves a lot of retyping.

H i s t o r i c a l r e p r i n t

A member asks for detailed information on *Pterostylis cardiostigma*. We therefore reproduce Dorothy Cooper's note on the species from NZNOG *Newsletter* No.6 of June 1983. The original report can be found in *NZ Journal of Botany* 1983; 21:97-100: it will be reprinted in full in a forthcoming booklet in our *Historical Series*.

Dorothy Cooper recently told me about the discovery - while out in the local park at Day's Bay, Wellington, she noticed a huge *Pterostylis*, often with bright red stems and markings, which looked different from anything she had then seen - similar to a not-fully-opened *P. banksii*, and no doubt often mistaken for it previously. She later found more smaller plants, though still with the curious upright habit and not so red if growing in shade. Dissection of the flower showed a noticeably different, heart-shaped stigma, and after re-examining the literature she realised that indeed this was a new species. Since then it has been recognised in many North Island areas. Plate 74 (page 51) of Johns and Molloy's *Native orchids of New Zealand* shows a photograph of the (then unnamed) species, labelled as *Pterostylis* "Day's Bay".

Pterostylis cardiostigma D.Cooper sp.nov. -
a new species of Orchidaceae from Wellington.

This species is distinguished from other species of the genus by its characteristic heart-shaped stigma, red markings, and upright habit of both the leaves and flower. Plants are 6-35 (40)cm tall, internodes are very short, stem is thickish, the lower portion is covered by pink to red overlapping leaf sheaths with darker red stripes. There are 5-7 sessile leaves, often very upright, especially in young plants. Leaves are 8-23cm by 1-2cm, with a red midrib; they are slightly grooved above and have a prominent keel below. Lateral yellow veins are often prominent.

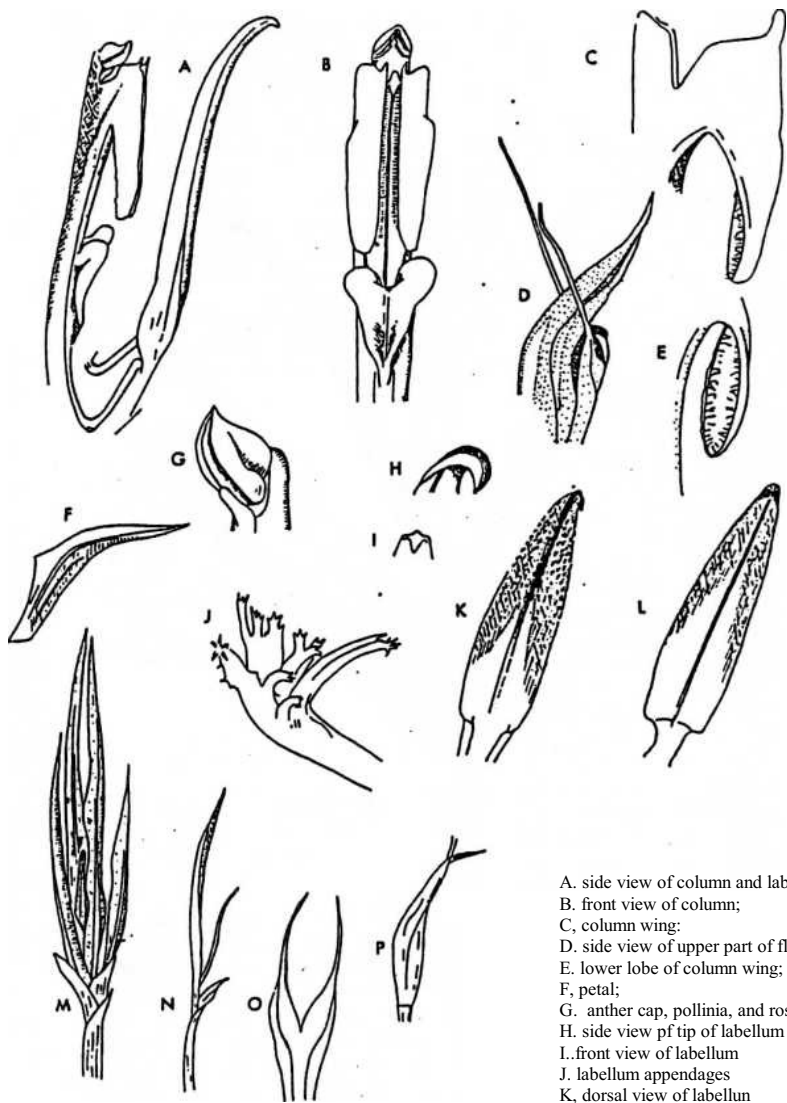
The flower is tall and narrow, the dorsal sepal is 7cm long, has a red tip, is vertical in the lower half, and in its upper half is steeply inclined or very occasionally more horizontal. Lateral sepals diverge at a very narrow angle and the long red caudae overtop the hood by 2cm. Petals are slightly shorter than the dorsal sepal, and the tips are red.

The labellum is long and triangular, arched in the upper third. The distal part is red and there is a darker red dorsal median ridge. It is grooved beneath. The stigma is heart-shaped and very prominent.

The species has been found in the eastern hills of Wellington, and in the southern Tararua. There is an unconfirmed report of it from the eastern Tararua. It grows about 30m higher than the *P. banksii* zone in Wellington, and main populations range from 60m above sea level to the ridge crest at 300m. The main flowering period is from early October to late November.



Figure 1
A, side view of type specimen; B, front view of type specimen.



A. side view of column and labellum;
 B. front view of column;
 C. column wing;
 D. side view of upper part of flower;
 E. lower lobe of column wing;
 F. petal;
 G. anther cap, pollinia, and rostellum
 H. side view of tip of labellum
 I. front view of labellum
 J. labellum appendages
 K. dorsal view of labellum
 L. ventral view of labellum
 M. young plant with flower bud