

Newsletter

Number 30, June 1989.

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Original Papers

***Yoania australis* at Collingwood**

by Fairlie Horsley, Christchurch.

On 7 January 1989 during the Canterbury Botanical Society's summer camp at Collingwood, one outing was to the Kaihoka Lakes area. It was a dull day and our leader Margaret Bulfin suggested that our exercise might be a search for the little known orchid *Yoania australis* which had been reported from the area, but rarely sighted.

Tony Druce, who had not himself seen the orchid here, had especially asked us to look for it.

The slender information we had was that it was found mostly in the North Island on the forest floor under *Beilschmiedia tarairi* - taraire.

However, in this district of northwest Nelson it was said to be found in association with *Dysoxylum spectabile* - kohekohe.

Yoania australis is listed as an endangered botanical species in New Zealand. It has no chlorophyll to help manufacture its own food, but relies on certain fungi for this function. *Yoania* is not only a rare orchid, but one of uncertain status and considerable botanic interest. This elusive orchid should be thoroughly investigated from all viewpoints.

Whilst searching for *Yoania*, two clumps of the tall *Gastrodia cunninghamii* were found along the lake track. They were splendid specimens, one a lovely pale cream in colour, the other darker.

After looking for some time, I saw on the upper side of the track, amongst the light leaf litter, a single unfamiliar growth. Could this be the object of our search? A call to our leader brought the excited response "Yes, this is it. This is *Yoania*. Tell everyone to come and see."

In a very short time there was a succession of prone bodies, with lens or camera, all set to record this unusual delicate little newcomer.

After our initial acquaintance, members continued to search keenly, and not far away a clump of four *Yoania* was found, one flower barely open.

There was no sign of seeding. Whilst looking at this cluster, I noticed a spider in its tiny web, attached near the top of the orchid. Then a second spider, by the entrance to the highest flower, the one that appeared most open. I wondered if this might be the means of pollination.

A third site of sparse *Yoanias* was discovered, still close to the lake and growing in a similar leaf litter amongst many collapsed nikau branches.

Nearby was found the best site yet, really pretty, on another flattish area, growing around the base of a nikau palm. This consisted of a group of thirteen orchids, with nine in one close cluster, three in another, and the largest yet seen, growing on its own. A ruler produced from a back-pack found the heights ranging from 7 to 15cm.

The stems of *Yoania* were pink, a dusker pink than the underside of a field mushroom. Most of the stems which were covered with fine hairs had up to four bracts of a straw-white colour. The colour of the flower most open was pink-brown, with white-tipped sepals and petals.

A checklist was made of the two sites which were quite close together.

Site 1.

Canopy

Rhopalostylis sapida - nikau palm, very dominant. *Hedycaria arborea* - pigeon wood.

Coprosma lucida - shining karamu.

Dicksonia squarrosa - tree fern.

Macropiper excelsum - kawakawa.

Melicytus ramiflorus - mahoe.

Pittosporum tenuifolium - kohukohu.

Ripogonum scandens - supplejack.

Senecio repanda - rangiora.

Seedlings

Rhopalostylis sapida - nikau.

Parsonsia heterophylla - kaihua.

Pennantia corymbosa - Kaikomako.

Ripogonum scandens - supplejack.

Blechnum filiforme - fern.

Ground cover - light leaf litter

Microlaena avenacea - grass.

Site 2.

Canopy

Rhopalostylis sapida - nikau.

Carmichaelia arborea - broom.

Carpodetus serratus - putaputaweta, marble-leaf.

Eleocarpus dentatus - hinau.

Hedycaria arborea - pigeon wood.

Myrsine australis - mapau.

Panax arboreus - five-finger.

Senecio repanda - rangiora.

Seedlings

Dodonaea viscosa - akeake.

Laurelia novae-zelandiae - pukatea.

Rhopalostylis sapida - nikau.

Ground litter

Microlaena avenacea - grass.

Not one tree was found of *Dysoxylum spectabile* - kohekohe.

In all sites it appeared that the nikau palm was the common denominator of *Yoania australis*.

North Islanders look at orchids in the South

Beryl Goodger, Tauranga.

On 22 November 1988 Bob and I set off on our long-awaited trip to the South Island to visit friends and relations, but timed to see some of the orchids that grow only or especially in that part of the country. Our only excursion on the way to Wellington was to check on the *Thelymitra* just south of Rainbow Mountain - a few *T. decora* with extra-large flowers, and some *T. longifolia*; pink *T. pauciflora* were flowering - the plants smaller than the deep blue ones which were very robust and seemed to be just past peak flowering.

After Picton we stopped at the Pelorus Bridge area, seeing *T. longifolia* and *T. hatchii*, not quite open; *Pterostylis graminea* and *P. banksii* flowering and very tall seedpods on *Corybas aconitiflorus*. We stayed with Jean Jenks at Upper Moutere and she took us up Takaka Hill where she introduced us to *P. oliveri* - flowering, as were *P. australis*, *C. macranthus*, *Caladenia lyallii*, *Chiloglottis cornuta* and *Microtis unifolia*. In bud were *C. carnea*, *Aporostylis bifolia*, *T. hatchii* and *T. longifolia*. Also growing were *Prasophyllum colensoi*, *T. pulchella* and what looked like *T. carnea*. Further along in Canaans Rd area we had our first sighting of *P. foliata* growing in cracks in the rocks. Also *P. oliveri* and *P. australis* and abundant *C. macranthus*, some *C. cornuta*. In bud were *Aporostylis* and *Gastrodia cunninghamii*.

26 November. Richmond Forest Park - *Pterostylis banksii* flowers and fruit; *Corybas trilobus* abundant, some fruit; *Caladenia carnea* mostly buds, a few flowers; in bud *Gastrodia*, *Chiloglottis cornuta* and *Thelymitra* sp.

Hackett, Miner Junction - we saw one plant of *Gastrodia minor* in bud, *Chiloglottis cornuta* and *Corybas macranthus* (fl) abundant. Flowering in a group were *Pterostylis montana*, *P. australis* and *P. areolata*, the last new to us and apparently to the area.

27 November - an unusual sight so early was 2 large clumps of *Dendrobium cunninghamii* in full bloom, near the southern end of the Buller Gorge. Heavy rain prevented much fossicking but on the roadside we saw lots of *Thelymitra*, mostly *T. pauciflora* which had finished flowering.

30 November Lake Kanieri - *Pterostylis graminea*, *P. banksii*, *P. montana* and *P. irsoniana*, and *Corybas macranthus* all flowering; *C. rivularis* and *Thelymitra hatchii*.

2 December Ashley Gorge - *Caladenia carnea*, white with no red markings; *Pterostylis graminea*, *P. banksii*, *P. irsoniana* and *P. aff. montana*; *Thelymitra* sp., *T. longifolia* and probably *T. hatchii*; *Microtis unifolia* and abundant *C. trilobus*. It was good to meet Thom Pendrigh and see his paintings of the orchids he has found, and to get directions.

3 December McLennan Bush Rd - short walk up track yielded *Corybas oblongus* and *Chiloglottis cornuta*.

5 December Wilderness Scientific Reserve near Te Anau - *Prasophyllum colensoi* all stages, mostly flowering; *Thelymitra longifolia* abundant some flowering; *T. pulchella* - scattered large fls open; *T. pauciflora*, fruit, scarce; *Microtis unifolia* and one colony of *Pterostylis australis* past their best. We obviously did not see everything there, but time was limited.

8-10 December Stewart Island - we had some very wet weather during our stay, but we logged *Microtis unifolia*, *Thelymitra longifolia* - some quite pink, *T. hatchii*, *Corybas trilobus*, leaves; *C. macranthus* fls, very large leaves. *Pterostylis australis*, *P. montana*, *P. aff. montana*, *P. banksii*, and some *Pterostylis* that did not seem to fit any category. While there we saw the original paintings by Dorothy Jenkin (whom we met) of native orchids and fungi. These are held in the Rakiura Museum and have been reproduced extensively on cards.

11-12 December. The Native Orchid Group weekend camp at Riverton was a highlight of our trip. It was good to meet fellow enthusiasts of whom six were from Otago and the rest

from Southland. Some stayed at Camp Longwoods and others came out for the day. On the Saturday evening a pot-luck tea was held with masses of delicious food. This was followed by Bob showing his slides - delayed a bit by the long twilight and no hope of darkening the large hall. We were sorry that Jean Jenks was unable to attend.

The field trips were very rewarding. On the Saturday morning we drove into the Longwood Range, to the top of Bald Hill in the Pourakino area.

Lyperanthus antarcticus was fairly numerous amongst the low-lying vegetation but only a couple of *Pterostylis montana* were sighted.

After lunch we drove back down the road to a completely different environment where the trees were covered in deep moss. Here Gordon Watson led us to 3 plants of *Townsonia viridis* which were flowering and these were much photographed. From



Townsonia viridis

here on we stopped at various places along the road, finding a variety of orchids in their micro-climates -

Corybas trilobus, *C. macranthus*, *Aporostylis bifolia*, *Gastrodia cunninghamii*, *Chiloglottis cornuta*, *Prasophyllum colensoi*, *Caladenia carnea* and *C. lyallii*, *Pterostylis montana*, *P. australis*, *Microtis unifolia*, *Thelymitra longifolia*, *T. pulchella* and numerous

T. hatchii, *Earina autumnalis*, *E. mucronata* and *Dendrobium cunninghamii*.

On the Sunday morning we drove to the other end of the Pourakino Walkway and saw *Corybas macranthus* in flower, *C. trilobus*, one *Gastrodia cunninghamii* in fl, the rest in bud; also flowering were *Chiloglottis cornuta*, *Caladenia carnea*, *Pterostylis montana* and aff. *montana*, *Earina mucronata*, *Dendrobium cunninghamii*-, *Aporostylis bifolia* in bud and *E. autumnalis*.

We would like to thank the Southland folk who organised the weekend - only sorry that more people could not have been there. Thank you Gordon Watson for leading the trips. Our only other orchid foray was at Hanmer Springs on 13 December - unfortunately we could not enter the main forest area because of fire risk. Most of the orchids visible on the "Forest walk" were under *Pinus nigra*.

These were *Chiloglottis cornuta*, a few still flowering; *Thelymitra* sp. fruiting, probably *T. longifolia*; *Aporostylis bifolia*, leaves only; *Gastrodia minor* and 2 colour forms of *G. cunninghamii*, the usual brown and gold and a lighter greenish one. There were not many of any species but *Corybas trilobus* was slightly more abundant. On the "Woodland track" under redwood trees was a large stand of *G. minor*, numerous with little space between stems - most were flowering with several flowers to a stem instead of the usual 2 or 3.

Apart from the amount of wet weather we encountered, we enjoyed our trip and met lots of nice people. Without the help of "locals" we could have spent a lot of time looking in vain for those orchids new to us, so - thank you Native Orchid Group members. Photographs of some of the S.Is. species will be published on the back covers of Orchids in New Zealand in the following months.

Orchids on the Chathams

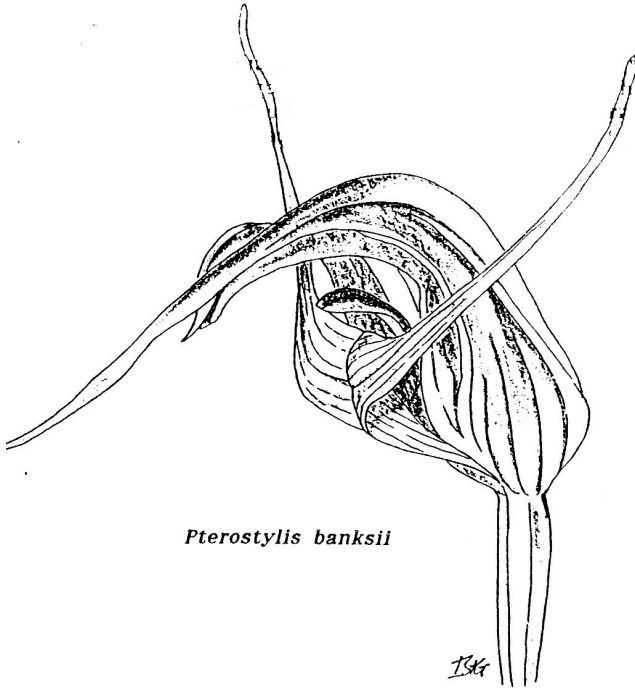
Two NZNOG members have recorded their observations from recent trips to the Chatham Islands.

◆Amelda Swney (Matamata) writes, "Aporostylis were growing and flowering in the bracken fern on Chatham Island. At the southern end where the bush was thicker and more typical of our own I saw *Corybas* but no flowers. Some of the leaves were quite large.... Three patches of *Pterostylis* but not many flowers on them. We flew to Pitt Island and I was delighted to find a beautiful blue *Thelymitra* in long grass, also white ones on a steep clay bank. *Microtis* seems to be on both islands.... Anyone who knows more than I would probably find more."

◆Noeleen Clements (Kamo) writes, "We spent a month on the Chatham Islands Dec-Jan and kept a record of all orchids seen. Although I have never seen

Adenochilus gracilis I am sure we found small groups of this species. They were just past flowering and were growing on sheltered mounds of moss in a sphagnum moss-bog area fairly close to the Taiko camp used by David Crockett for his expeditions. In the same area we found leaves of *Drymoanthus adversus* on either *Dracophyllum arboreum* or *Coprosma chathamica*. Also found in this sphagnum bog area were *Thelymitra longifolia*, *T. pulchella* and *T. venosa*, *Prasophyllum colensoi*, *Aporostylis bifolia*.

Chiloglottis cornuta, *Caladenia catenata*; all these *Corybas trilobus* were common in the southern bush; few - leaf size was huge compared to our northern *C. macranthus*, leaves only of *C. oblongus*.



Pterostylis banksii

In a dry scrub area we found one magnificent specimen of *Gastrodia cunninghamii* in flower (20 buds and flowers). *Earina mucronata* was in bud when we first arrived there and was in full flower early January - so much later than up here. *Acianthus fornicatus* leaves and seedpods were in good numbers. *Pterostylis australis* and *P. banksii* were in flower though past their best: I have never before seen *P. banksii* in flower several feet up in the air - they were on a *Dicksonia fibrosa* trunk and looked very healthy specimens - this was in the Tuku Nature Reserve."

Orchid tour In Victoria and South Australia, 1988 -Part 1 of four parts

by Doug McCrae, Auckland.

Weekend trip to Bendigo

October is the best month for viewing the terrestrial orchids of Australia's southern states.

Early In the month I headed first to Melbourne for a week, staying with active ANOS Victorian Group members Malcolm and Beverley Thomas. Malcolm is an excellent grower of terrestrial orchids and has a fine collection of many species and hybrids.

The first outing was a weekend orchiding trip to the Bendigo area which is about 150km north of Melbourne and famous as one of the first gold mining towns of Australia. This tour was organised by the Victorian Group and led for the most part by Tom Patullo. Tom is a local who knows the Bendigo/Heathcote area well and guided us to some of the prime orchid habitat of the district.

The weather was cool during the tour, which is conducive to the opening of the flowers of the masses of *Thelymitra* species seen. First stop for the group was at One Eye Forest, a eucalypt remnant near Heathcote.

Like most other habitat I was to visit during the following fortnight, the bush had been burned in the recent past. This "natural" habitat management eliminates the undergrowth on the forest floor allowing orchids to proliferate. Many orchids have adapted to regular burns and some species such as *Caladenia menziesii* will not flower without them. Large numbers of *Glossodia major*, *Caladenia* and *Diuris* predominated throughout, the effect being quite overwhelming at times. *Calochilus robertsonii*, an uncommon species of restricted range in New Zealand, was abundant and in full flower. Occasional colonies of a pure white form were seen and I was informed that it is not unusual to see these after a fire. The open areas yielded huge numbers of *Thelymitra*. *T. ixioides*, with spotted and unspotted flowers in every shade of blue was abundant everywhere. Near the bases of trees were large colonies of the multi-flowered white *Caladenia cucullata* and the pink *C. carnea* was common throughout.

The donkey orchid, *Diuris*, was represented by quite large numbers of *D. maculata* with the yellow *D. sulphurea* occurring in colonies and as singletons throughout the bush.

Among the *Thelymitras* were numerous specimens of the yellow flowered *T. antennifera* and *T. flexuosa*. Two blue *Thelymitras* defied identification by anyone in the group. One proved to be *T. juncifolia* and I am confident that the other is an undescribed species.

Many spider orchids (*Caladenia*) were seen, the green *C. dilatata* being most common.

It was late morning when we moved on a short distance to Mt Ida Reserve - a habitat very similar to One Eye Forest. Orchids were just as numerous as before but the main purpose of this stop was to see the uncommon *Thelymitra x irregularis*, a natural hybrid between *T. rubra* and *T. ixioides* with dusky red, spotted flowers which open freely and make a spectacular colony.

After a night spent at Kangaroo Flat near Bendigo the entourage moved off, heading south for Melbourne. The first detour was Picanning Road, and into another forest dominated by eucalypts. *Glossodia* was abundant, as always, and was matched in number by *Calochilus robertsonii* and *Caladenia cucullata*. Other common species in the area were *Caladenia carnea* (white and pink forms) and *Thelymitra pauciflora*.

The final stop for the weekend was at Taradale, in another eucalypt forest, much cooler and damper than the others previously visited. At the bottom of a deep damp gully was a large spectacular colony of *Chiloglottis gunnii* in full flower. My first sighting of *Pterostylis curta* was made here - just a few plants in flower. Other orchids of note here were the orange-red *Caladenia clavigera* and a few flowering specimens of the beautiful, large red *Caladenia concolor*. Examples, of many of the orchids seen on the previous day were evident with *Glossodia* being the most common.

Although the weather was mainly overcast for the duration of the tour I found this initiation to Australian orchids very exciting and was astounded at the sheer numbers and diversity of the flora.

(Part 2 in the next Newsletter)

Notes

◆The Minister of the Environment has approved a grant of \$1000 to the NZNOG under the Environmental Grants Scheme towards the publication of the orchid flora of North Auckland. This will enable Doug McCrae to continue his work on this project, and we congratulate him on the successful application.

◆Colenso on orchids, the first of the Group's Historical Series, is included herewith for those who ordered it. An order form for the next in the series is enclosed.

◆The Third Asia-Pacific Orchid Conference '89 is to be held in Adelaide 31 August - 4 September 1989. Contact PO Box 25, Park Holme, South Australia 5043.

◆ Val Smith writes, "In one of Dorothy Cooper's early Newsletters she mentioned her interest in sightings of double-headed orchids which normally have a single flower. This year I have seen two plants of *Pterostylis banksii* var. *patens* with two-headed flowers (Mt Egmont), and In the past I have seen the odd two-headed *Corybas rivularis* and *C. oblongus* (in the Taranaki area, and Mt Egmont, respectively).



I am aware of colour variations in *Dendrobium cunninghamii* - this year I saw separate plants, each of a different colouration, on the same fallen tree on the recently opened Puniho Track on Mt Egmont. One plant had flowers with the commonly seen two central pink spots, another plant's flowers were overly flushed with pink, and the third plant's flowers had no pink at all - just two central green spots. I spent one day this month (February) trying to follow up old reports of *Spiranthes sinensis* In the Egmont area, but without success. I notice by the checklist that its distribution is very limited, and with the continued drainage of

swamp areas. It will probably become even more uncommon".

◆ William Wright tells us, "I came across a wonderful stand of *Gastrodia sesamoides* late last November between Kawerau and Lake Tarawera; they would have numbered several

hundred In large groups over about half a kilometre. Is this a normal way to find this species?" - *I don't know; G. sesamoides doesn't appear in my neck of the woods. Could a northerner please answer the question?* - Ed.

◆Sandra Jones has sent in mapping reports with the host trees of *Bulbophyllum tuberculatum* (mature kahikatea - 80 year old second growth forest, on branches on the western side); *Drymoanthus adversus* (rewarewa; kanuka; kohekohe - *Dysoxylum spectabile*; Puriri - *Vitex lucens*; *Olearia rani*; mahoe; lemonwood - *Pittosporum eugenioides*).

◆Dariusz L. Szlachetko of the Department of Plant Ecology and Nature Protection, University of Gdansk, 81378 Gdynia, Czolgistow 46, Poland, writes that he would like NZ orchid flowers (several from each species) in small plastic jars with 70% spirit, labelled with name of species, name of collector, when and where specimens collected. He is working on a book about the orchid gynostemium, and would send seed or plants of European terrestrials in return if required.

◆PROSEED wants alpine plant seed and will pay \$3-5 a gram for the right species. Write for a list to Vern Baird, Proseed, Forest Research Institute, PB, Rotorua.

◆Does *Pterostylis tristis* (*mutica*) grow In the deep south? I have never seen it. There are mounted specimens labelled *P. mutica* in the Botany Department herbarium, but at least some of them are *P. cynocephala*, though I have not examined all. Perhaps early reports of *P. mutica* may have been mistaken. Has anyone seen *P. tristis* south of the Waitaki? - Ed.

◆A.N.O.S. News - Wally Upton is the new President. The ANOS badge, of *Thelymitra ixioides*, is available at A\$5 Incl p&p. Back issues of the *Orchadian* are sold out, except vol 7 at A\$25, and vol 8 at A\$32 which includes a year's subscription. Box C106, Clarence St, Sydney 2000.

◆Does *Thelymitra longifolia* grow in Australia? According to A.P. Brown (WANOCSSG *Bulletin* October 1988, p4) it does; "*T. longifolia* is confined to the coastal granites between Augusta and Albany. It may occur east of Esperance but further survey work is required to determine if this is so. Most closely related to *T. pauciflora*, a species with which it often grows in association, it differs in having a somewhat broader leaf which tapers to a sharp point at the apex. It also has larger white or pale blue flowers with acute sepals."

◆Bob Bates writes (NOSSA Journal 1988, 12, 8: 82) on a trip to Monarto South In August 88: "Soon we were bouncing our cars across a paddock to Monarto Conservation Park and a small patch of broombush/limestone. The area was recovering from years of grazing, but what a miracle - there were carpets of thousands of *Diuris palustris*, hundreds of *Pterostylis cynocephala* and dozens of *Pterostylis plumosa*, yellow hairy tongues waving In the breeze". He later (Ibid, 84) mentions "an undescribed *Thelymitra* aff. *pauciflora* (with large bracts and an olive column hood)". Hundreds of *Pterostylis cynocephala* is something I have never seen In NZ - Ed.

◆Beryl Goodger writes (16 April), "In 1987 we saw *Prasophyllum pumilum* fruiting in July, near Kaitaia. On 16 May 1988 Bruce Irwin, Bob and I found *P. pumilum* on the Kopu-Hikuai road - fruiting. In 1989 we decided we'd better go back to the Kopu-Hikuai road earlier this year so we three set off on March 10th. A first glance suggested they were in bud, but closer inspection showed that the flowers were spent and most were fruiting. Only a few plants were in full flower and we saw one or two that were still in bud. This was an early season but we will have to go even earlier next year to be sure."

Notice

World Orchid Conference, Auckland, September 1990

Doug McCrae has agreed to organise, on our behalf, a comprehensive display of native orchids -

- ◆ Artwork
- ◆ Photographic prints (there is to be an international orchid photographic competition)
- ◆ Conservation
- ◆ Cultivation

Keep it in mind, and help where you can. He needs artwork and photographs.

Historical reprint

In view of Fairley Horsley's paper (above) it seems appropriate to reprint an extract from Dan Hatch's "Notes on the New Zealand orchids - II" (*Transactions of the Royal Society of New Zealand* 1963. Bot 2: p186), in which he wrote the first description of *Yoania australis*.

Acknowledgments

I am indebted to Dr Leslie A. Garay, Curator of the Oakes Ames Herbarium, Harvard University, U.S.A., for identifying *Yoania* and providing invaluable notes and drawings. Also to Mr J. Beever, Dr R. C. Cooper, Mrs P. Hynes and Mrs L. M. C. Smith for further assistance, information and material.

(1) Tribe EPIDENDREAE Lindl.

Subtribe CYRTOPODIINAE Benth.

Genus *Yoania* Maximowicz in Bull. Acad. Set. Petersb. 18: 68, 1873.

A small genus of semi-subterranean, saprophytic, non-chlorophyllous herbs with slender branching rhizomes and reduced bracteate leaves. The 5 or 6 species occur in Japan and Formosa, the Himalayas, North Africa and New Zealand. They appear to be very local with wide gaps between. The disjunct distribution suggests that undiscovered or unrecognised species may occur in the intermediate areas. This is not improbable since the greater part of the life cycle is spent out of sight beneath the surface and discovery must be more or less accidental.

The type of the genus (*Y. japonica* Maxim.) has regular flowers borne on long slender pedicels, the labellum-disc is deeply spurred and the column-wings acute. There are 4 setose pollinia superimposed—(2 on 2). The New Zealand plant is however in a state of extreme reduction. The pedicels are short, the labellum disc is not spurred, the column-wings are fleshy and obtuse, and there are only 2 pollinia. These differences so strain the original generic description that I propose creating a separate subgenus as under:

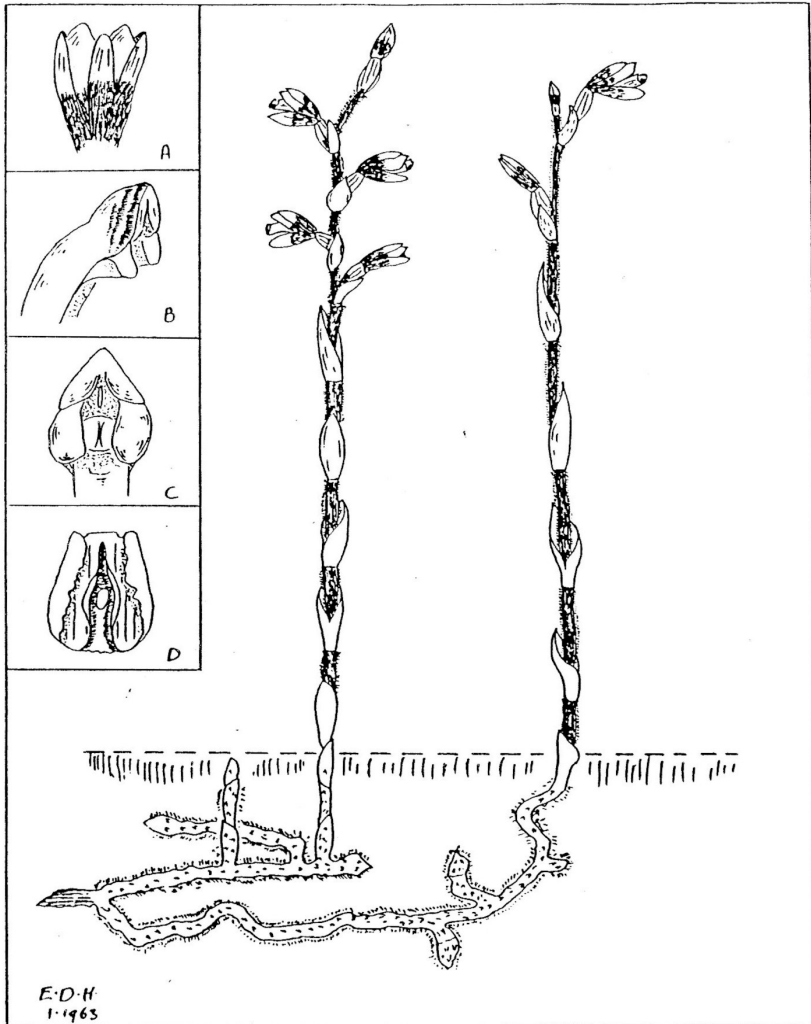
Subgenus *Tarairea* Hatch subgenus nov.

Structura plantae *Yoania japonica* affinis similis. Differentis in pollinia duo; in aiae columnae camosae, obtusatae; in discus labelli sine calcare; et in ovaria sessiles.

Yuania australis Hatch spec. nov.

Saprophytica, semi-subterranea, haud viridis. Planta matura rhizomata, ramosa, tortuosa, 4mm diam. Peduncula 1-7, erecta, rubris pubescens, 7-12cm alta x 2mm diam. Folia 1-7 vaginata, bracteata, acuta, 1cm longa. Flores 1-5, 6mm longi, subregulares. Sepala et petala similes, oblongi-obtusata, 5mm longa x 2.5mm lata. Labellum oblongi- truncatum, 4mm longum x 2.5mm latum, margines incurva. Callus flavus, oblongus, cum jugum medium conspicuum. Columna incurva, normaliter sed reducit, stigma in partim includo alis columnae.

Holotypus—in the Auckland Museum. Glorit 24.12.1962. R. Beever.



Yoania australis Hatch

- (A) Flower from above, showing short dorsal sepal. (B) Column from side. (C) Column from front. (D) Labellum from above, slightly flattened.

Plant body a branching tangled whitish rhizome about 4mm diameter and up to 60cm long. Stems several erect, up to 12cm high by 2mm diameter, brownish-red, pubescent. Leaves 1—7, reduced to sheathing bracts about 1cm long, acute, colourless with pale pink striae. Floral bracts similar to and not much smaller than the stem bracts. Flowers 1-5, about 6mm long, the lower portion brownish-pink, the upper white. Dorsal sepal cucullate, acute, shorter than the lateral sepals and petals, 4.5mm long by 1.5mm broad. Lateral sepals and petals similar, oblong-obtuse, 5mm long by 2mm broad. Labellum translucent, oblong-truncate, 4mm long by 2.5mm broad, the margins inrolled. Callus dull yellow, with 3 longitudinal pink striae and a conspicuous central ridge. Column incurved, the anther-connective brownish-red, pollinia yellow. Column-wings large, oblong, enveloping and partly obscuring the squarish 2-celled stigma.

The plant, though small, is quite conspicuous, the dark stem and flower bases contrasting with the colourless bracts to give a banded effect which stands out against the dark background of the surface debris. The short dorsal sepal, overlying the longer petals, gives the illusion of an emarginate apex to the flower. The column is adapted for self-fertilisation, the wings almost enclosing the stigma. The concave labellum, however, in conjunction with the dorsal sepal, forms a narrow tube which could be insect-attractive, so just what happens in nature is open to observation.

DISTRIBUTION: Endemic; found so far only in deep leaf mould beneath mature taraire (*Beilschmiedia tarairi* (A. Cunn.) Benth.) in situations which are relatively dark and damp. (a) Waipoua River (Northland), 28.1.1955, E. Kulka. A single dried specimen, plucked at ground level and a little past full bloom, handed on to me by Colwyn Trevarthen, 28.5.1955. Noted and illustrated in Auck. Bot. Soc. Newsletter, Sept., 1955, and repeated in Aucklands Orchids, 1959, p. 7, tl. fig. D. (b) Glorit (Kaipara Harbour), 24.12.1962, R. and J. Beever. Handed on to me by Mrs P. Hynes, 10.1.63. A block of assorted leaf and root debris 12cm by 12cm by 7cm deep, contained a tangled mass of branching rhizome totalling 62cm in length, on which were 3 flowering stems and 4 more just breaking the surface. The whole was intertwined with long white fungal hyphae. At the present time (May, 1963) I have had the Glorit rhizomes in cultivation for 5 months and they are still alive, if not exactly thriving. It is, however, hardly likely that in a state of nature they could survive the summer season, since they live, not in the soil but in the debris layer which is comparatively open. It seems probable that tubers are formed to lie dormant until the autumn rains. The complete absence of chlorophyll suggests a mycorrhizal association with the taraire, but this aspect of the plant will have to be studied by mycologists.

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Mapping

(The NZ Native Orchid Group's Mapping Scheme is supported by Lottery Science). Maps are enclosed this time - sorry they were left out of the last issue. If you have seen any of the orchids (since 1982, for the Mapping Scheme notes only records from 1982 to 1992) please note the species, and the District number, and write to me. Sincere thanks to all those who sent in records after the last *Newsletter*.

Thelymitra pulchella

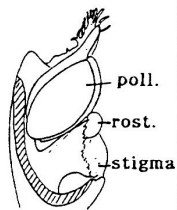


side/back



side

Column



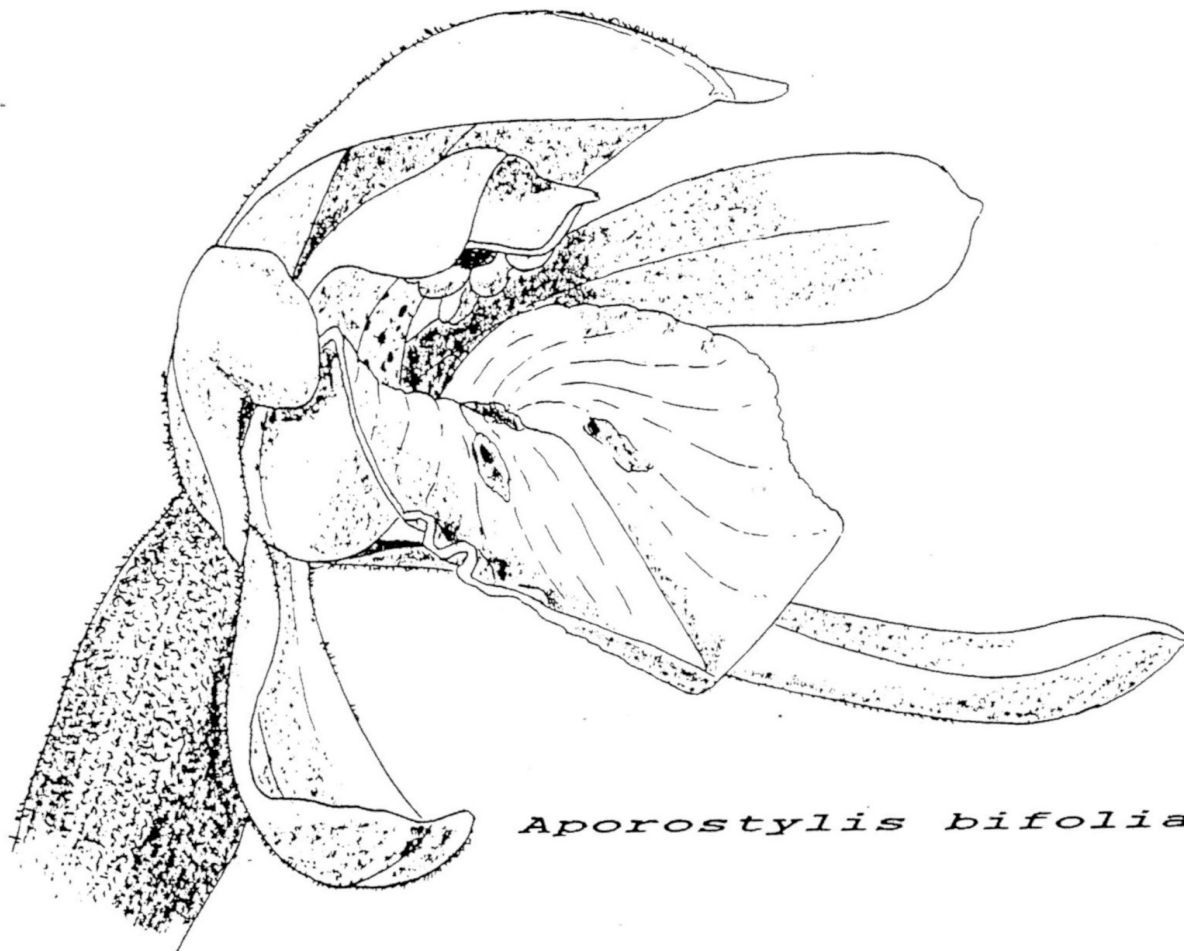
co. wing
cut away

poll.

rost.

stigma

1876.



Aporostylis bifolia