NEW ZEALAND NATIVE ORCHID GROUP

Newsletter no.17
March 1986

Dear Member,

We now enter our 5th year of existence, thanks to all you keen people out there. Reports on your finds are received with grateful thanks - who knows what problems they may sort out in future years.

That is, if you all take a bit more care than I did in the last newsletter, when I said that Bulbophyllum tuberculatum had been identified on Macquarie Island, - I was of course thinking of Corybas macranthus! - sorry, I was tired! - so any researchers reading newsletter no.16 will be sent on a wild goose chase (I don't know whether geese fly that far south!) but you can see how easy it is to get future researchers in a muddle!
The Australian records of B. tuberculatum now turn out to be B. argyropus, putting B. tuberculatum back as an endemic NZ species. Corybas macranthus still exists on Macquarie Island!

Dan Hatch and Mark Clements have been sorting out early accounts of Corybas rivularis - see Page 3. Anyway, hopefully all our wanderings, and reports, - because our finds aren't much use unless others know about them, will be of some use to somebody some day.

Special thanks to Max Gibbs for more of his wonderful illustrations.

Dorothy Cooper,
37 Waimea Road,
Waikanae.

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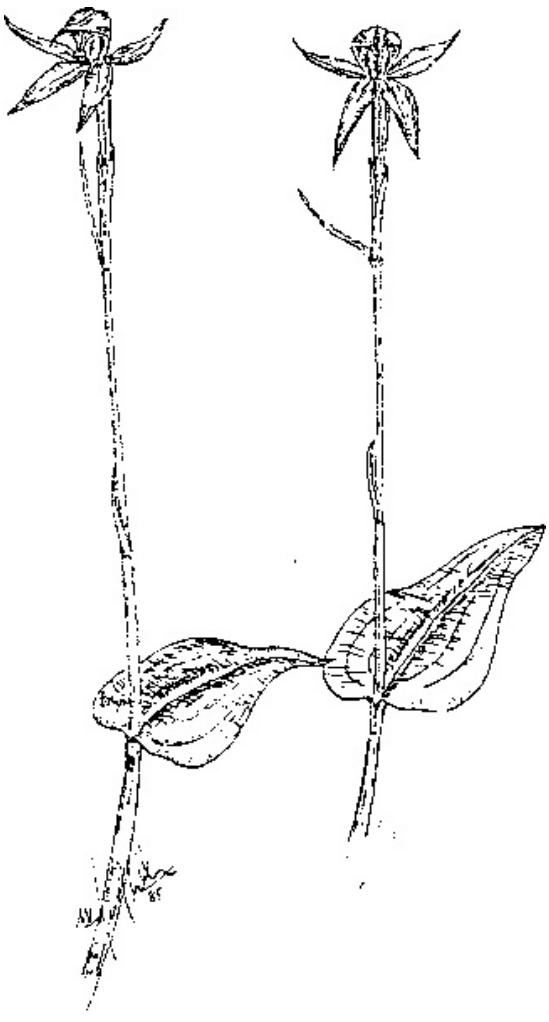
TAUPO ORCHID SOCIETY ANNUAL NATIVE ORCHID FIELD DAYS
7th & 8th December 1983 Max Gibbs

Once again the Taupo Orchid Society set out to discover just what native orchids grow where, around the Central Volcanic plateau. This year we had visitors join us from other societies ranging from Wellington to Auckland and were pleased to have Dorothy Cooper with us again to identify our finds and find the ones we miss. Bob Goodger also joined our party and showed us his techniques for close up photography.



We visited two very different localities - Whakamoenga Point which is a scrub covered bluff jutting out into Lake Taupo, and the Iwitahi forestry camp which is high up on the Napier-Taupo Road, very flat and planted in pine trees.

The Whakamoenga Point trip produced the expected selection of more common orchids (and an unexpected selection of fantastic rock carvings! - Ed,): Thelymitra longifolia and T. pauciflora, Microtis unifolia and Earina mucronata in reasonable numbers. The terrestrials growing prominently in the moist ash layers in the pumice banks. E. mucronata had forsaken the trees to cling to rock walls or lumps of rock on the ground. A specimen found in deep shade alongside a plant of E.autumnalis had stems over a metre long compared to the short stems on the plants in bright light. Pterostylis banksii was found in clumps sheltered in hollows full of leaf mould. A specimen of Pt. alobula was found along with an unnamed species - Pterostylis sp., seemingly a mixture of Pt. montana and Pt. graminea. Orthoceras strictum was just sending up buds as were a group of Chiloglottis cornuta. Unusual finds were Microtis parviflora, Adenochilus gracilis by (Max Gibb)

Acianthus fornicatus and Caladenia carnea. In general the native orchids were few and far between except for the Uncommon ones listed. Not withstanding this the sunburnt scrub at the point had produced 13 species which was a good start to the weekend.

The Iwitahi trip took in pine forest, open swamp drains and later mature native bush at Opepe, so covered a wider range of habitat and hence could be expected to produce a greater range of orchid specimens than at the point. We were not disappointed and were amazed at the vast numbers of many of the species found. (I was a little sceptical about finding many under dark pine forest but have never seen anything like it!) Ranking them in order of greatest numbers presents problems as Chiloglottis cornuta and Adenochilus gracilis were present in uncountable numbers forming a veritable carpet of flowering orchids under the trees. It was difficult to walk without trampling on them. The next most common were Caladenia lyallii and Aporostylis bifolia, the first just finishing flowering while the latter had yet to open. Breaks in this orchidaceous carpet were patched with colonies of Corybas trilobus. Four species of Thelymitra were found although not very common until well away from the pines, - T. longifolia, pauciflora (pink and blue), T. venosa (leaves only) and T. decora. Deeper into the pines were isolated plants of Pterostylis cardiostigma and Pt. sp (unnamed) and one or two plants of Orthoceras strictum which hadn't yet sent up flower stems. More common were plants of Caladenia iridescens (refer newsletter no.16) with their jewel-like flowers on longer stalks than C. carnea. These were nearer the edge of the pines. Microtis unifolia was found in larger numbers in the grassed areas than under the pines and where grass was sunburnt off leaving bare ground we discovered a colony of Calochilus robertsonii in flower with their purple-blue beards glowing in the sunshine. Each plant had a flower open with buds waiting above and seed pods developing below the open flower, some plants had two open flowers. Several plants of this species were also later found under the pines in gaps where the odd tree had fallen.

By a small spring we found two plants of Prasophyllum colensoi in flower and in the native bush Earina mucronata and E. autumnalis were found in the trees, E. mucronata in full flower. The last find of the day was a specimen of Gastrodia cunninghamii bringing the day's count to 19 different species. As 8 of these orchids had also been found at Whakamoenga Point the grand total for the weekend outing was 24 species. The contrast between the two sites was astounding - the sparsity at Whakamoenga Point versus the super abundance at Iwitahi - well most of it. Our forestry caper through the orchids was cut short when we came to the end of the orchids - pigs had systematically turned the ground removing every orchid as far as we could see in front of us.

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THE DISTRIBUTION OF PTEROSTYLIS CARDIOSTIGMA

Chris Ecroyd N.Z.F.R.I.

A recent visit to Pureora to attend a seminar on Central North Island Volcanic Plateau was a good opportunity to look for a few orchids. Pterostylis banksii was common near the Outdoor Education Centre and quickly passed by after a brief inspection but one clump with what appeared to be a flower almost fully developed was hastily sampled for later inspection. Under the microscope the heart-shaped prominent stigma was obvious and the flower matched perfectly illustrations of Pt. sp, (Day's Bay') p.51, of John Johns and Brian Molloy's book, and drawings of it by Dorothy Cooper, see newsletter no.6. After hearing that the Goodgers had found Pt. cardiostigma in the Kaimais I had no hesitation in naming the plant. Then out of curiosity I searched through the Pt. banksii folder in the Forest Research Institute herbarium and located a similar looking plant. After careful dissection of this specimen from the Ureweras I was able to conclude that the species Pt. cardiostigma is indeed quite widespread but easily overlooked.

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CORYBAS RIVULARIS - the wet one

Dan Hatch

I am indebted to Mr Anthony Wright and Dr P.J. Brownsey for help in searching the early collections of Cheeseman and Thomas Kirk.

Prelude:
On 27 July 1983 Mark Clements wrote from Kew to Dorothy Cooper, telling her that he had found among other things, in the Lindley Herbarium, the type material of Cunningham's Acianthus rivularis. Item 3 of his letter read -

> '...Corybas rivularis is without doubt the correct name for the plant known as C. orbiculatus. This leaves the species previously interpreted as C. rivularis without a name. I suggest that this be named as soon as possible.'

Dorothy passed this letter on to me. I wasn't even surprised. For years I had wondered why 'Corybas rivularis' was so often to be found in cloud forest on high ridges, miles from the nearest stream; massed on mossed logs, clustering a couple of metres up the trunks of old tree ferns or clinging to trackside embankments. Over the same years I had several times commented on the aquatic tendencies of C. orbiculatus. and I was relieved to find that rivularis (as its name implied) was after all the wet one.

After looking into the literature and searching the Cheeseman Herbarium and the Index Kewensis. I wrote to Mr Clements suggesting that the orphan be named (from the shape of the mature leaf) Corybas acuminatus.
On 24 February 1984 I received from Kew a photograph of the Isotype of Acianthus rivularis. which confirmed Clement's opinion that Cunningham's species was identical with Corybas orbiculatus.

The nameless species was eventually redescribed as Corybas acuminatus M.Clements and Hatch (1983).

Account of the Misinterpretation of Corybas rivularis

1826: On 6 November Allan Cunningham found an orchid - "... growing among moss upon rocks in the bed of a briskly running rivulet, flowing through a deep shaded ravine near Wangaroa..." (1837). He gathered flowering specimens (one of which had a pandurate - fiddle-shaped - leaf) and took them back with him to Sydney.

1837: In the Precursor (1837) he described these specimens as Acianthus rivularis (= pertaining to streams). He recorded the petals and lateral sepals as of equal length, filiform and extremely long; and the labellum as cordate-acuminate, with very thin, crenulate margins; but didn't mention the leaf or the dorsal sepal at all. Nor did he give any illustrations of his new species. These omissions caused the subsequent misinterpretation, for while rivularis and acuminatus both have long filiform petals and lateral sepals, the orbicular-apiculate leaf and acuminate dorsal sepal of rivularis are distinctly different from the ovate-acuminate leaf and filiform-caudate dorsal sepal of acuminatus. It is also possible that Cunningham's use of the name Acianthus added to the confusion, for the mature leaf shape of acuminatus is superificially similar to that of Acianthus fornicatus var. sinclairii.

1838: In a letter dated 4 December Cunningham asked Colenso if he had found - "... my little darling, the subaqueous Acianthus of the great falls of Keri Keri and Wangaroa". (1948).

1844-1864: J.D. Hooker listed rivularis under Acianthus in(l844); under Nematoceras in (1853); and under Corysanthes in (i864); and it is probable that in one or more of these accounts he was mixing rivularis and acuminatus together. Only a careful study of the material preserved in the Hooker Herbarium at Kew will decide how many species were in fact involved.

What is certain is that Thomas Kirk, in July 1864, (WELT 1 8877)

and again in December 1866 (WELT 18879) collected rivularis sens. orig. from a waterfall at Great Omaha, near Leigh, and determined it as Corysanthes rotundifolia.

1867: Having unwittingly disposed of Cunningham's species Kirk looked round for something to call rivularis and found it in December 1867 (WELT 18901) on the Great Barrier Island. His specimens are Corybas acuminatus.
1872: In his Botany of the Titirangi District etc. (1872) Cheeseman recorded Corysanthes rotundifolia with a question mark. His voucher sheet (AK 3653) is labelled 'Corysanthes .. Titirangi, Oct. 1870 TFC'. The specimens are rivularis sens. orig. A further collection from the same locality (AK 3652) is labelled 'Corysanthes rotundifolia Titirangi, October 1873 TFC', and several pandurate-leaved specimens are marked var. pandurata which however he did not describe until (1925). In his Titirangi paper (1872) Cheeseman also listed Corysanthes rivularis. The voucher specimens for this (AK 3644) are in fact Corybas acuminatus. These errors, by whom and however they originated, were 'fixed' by Cheeseman (1906) and the rest is taxonomic history (1970).

References:

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	1925:	" " " Ed.2. p.366
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Cunningham A.	1837:	Florae insularum NZ precursor Companion Bot. Mag. 2: p.37^
Hooker J.D.	1844:	Flora Antarctica 1 : p.71
	1 853:	Flora NZ 1: p.251
	1 864:	Handbook NZ Flora 1: p.266
Moore L.B. & E.Edgar	1970:	Flora NZ 2: p.118. f.24

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Putting their paper in a nutshell - hope I've got it right Dan!:
Corybas orbiculatus is a synonym of C. rivularis. The species mistakenly known since Cheeseman 1906 as C. rivularis is now named C.acuminatus.

C.rivularis: sessile leaves (without a stalk), oblong-orbicular, apiculate; long filiform petals and lateral sepals approximately equal in length, dorsal sepal acuminate(tapering to a point). Likes streams and seepages, sometimes on vertical rock walls and often in the open.

C.acuminatus: sessile leaves, ovate-acuminate, up to 4cm long, with conspicuous red veining when mature; petals and lateral sepals filiform and long, petals smaller; dorsal sepal up to 4cm long with filiform cauda, flower more or less translucent with dull red striping. In humid mixed forests between 300-1100m. Forming large colonies on forest floor, on mossy logs, on the base of treeferns or as solitary plants. Usually in slightly raised well-drained positions. Flowers September - November.

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