
The
New
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Native
Orchid
Journal
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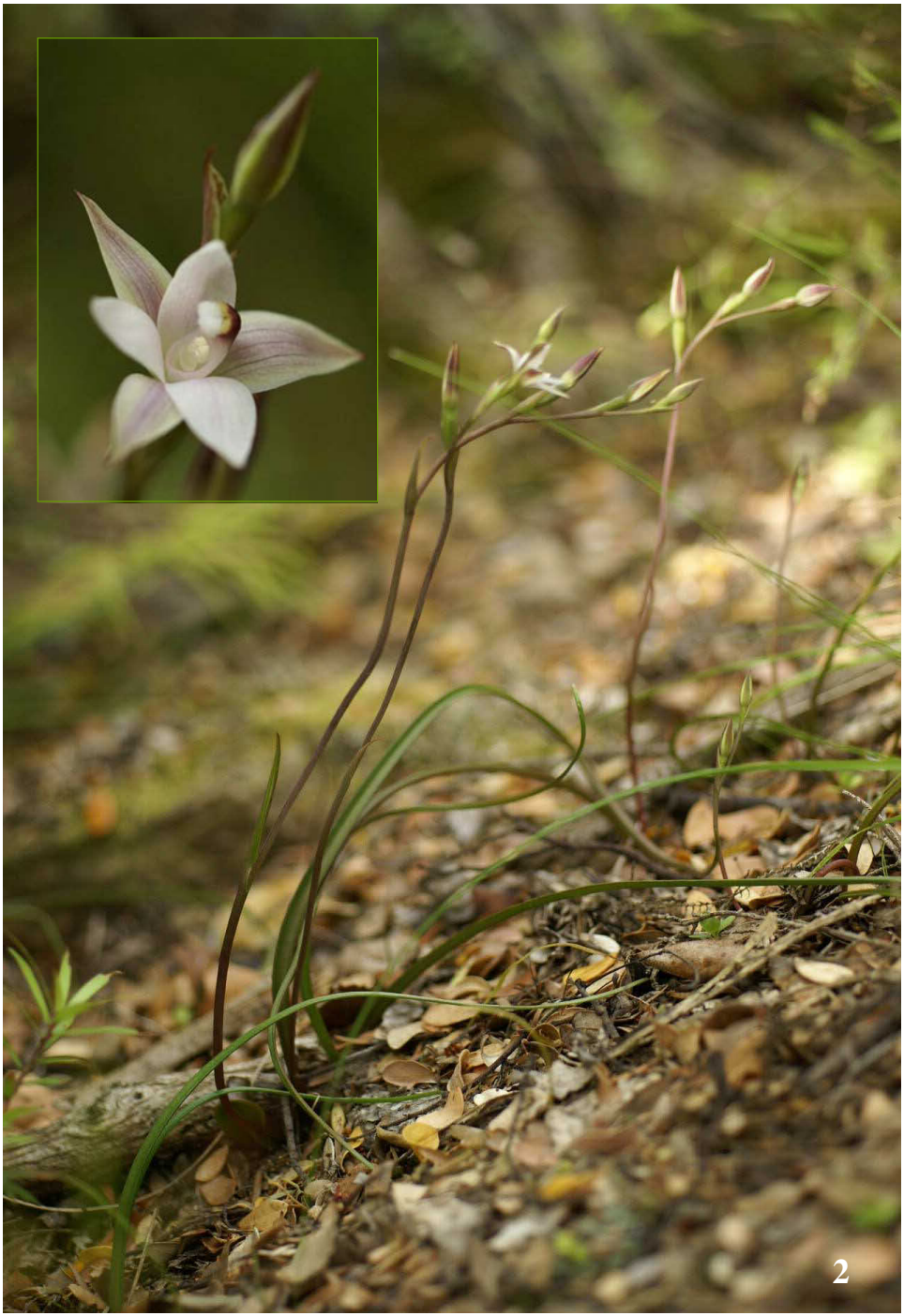
Figure 1:
Thelymitra nemoralis = T. longifolia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Contents: No. 123

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Guest editorial: Gordon Sylvester

New Zealand Native Orchid Group: a retrospect of 30 years.

All organizations have a beginning. Some from a common goal, others from a common interest. This one was a common interest.

About the beginning of the Wellington Orchid Society's existence an orchid show was held at St Oran's College Lower Hutt, this about June or July 1977-78. Another show was organised and advertised to be held in the Green room Wellington Town Hall at Labour Weekend about 3 months later.

I made contact with the Show Organizer, Lew Wyatt, and offered a small display of native orchids from around the Wellington area. Lew accepted the offer and the display was mounted.

During the weekend several people came up to me and asked about the display and natives in general. Here was a good amount of interest in the subject. I joined the Society that weekend and shortly afterwards met Dot and Roger Cooper. We soon started to go out and about looking at the various orchids around the Hills behind Eastbourne, Wright Street in Wainuiomata and the tracks about the Eastern Harbour Hills. Sometimes the party was two or three people, other times more.

Dot had created a series of papers in the journal of the Hutt Valley Orchid Group an offshoot of the Hutt Valley Horticultural Society. And she continued this series in the early issues of the Wellington Orchid Society Journal.

At a casual Saturday morning cup of coffee in 1980 at the Cooper s residence, the conversation turned to native orchids and the interest that had been shown by people. By this time there had been trips to the Puffer track, Butterfly Creek, Rimutaka State Forest Park as well as other destinations. The group was getting lager each time. One trip organised had to cater for the more elderly members of the Society. More and more natives were on display at shows and at meetings—mainly the epiphytes but occasionally *Pterostylis banksii* showed up as well.

A CONZ* Meeting held at Rotorua disclosed there was quite an interest in the natives. So Dot decided to produce a newsletter to test the water. She asked for a donation of $3.50 to help cover the costs of printing. The decision was made not to affiliate with any organisation and to remain neutral.

The first newsletters were printed on an elderly Gestetner machine on foolscap paper. Later the newsletter was printed on an elderly AB Dick litho printing machine in Lew Wyatt's garage. Dot did the type up and her children did folding and addressing the labels.

The response from that small acorn is the result we see now 30 years later. The first contributors to that effort were Bruce Irwin, Dan Hatch, Phillip Tomlinson, and Gordon Sylvester.

Who were these people? Dot's maiden name was Berry, daughter of the designer of New Zealand stamps and coins Charles Berry. Phil Tomlinson worked in the Insurance Industry. And I was a Professional Firefighter. For myself, I had been involved in the pursuit of native orchids since 1952 as a very young boy. I guess I haven't changed all that much. And I used the pursuit as a means of stress relief. Ed. Hatch was retired and a contributor to the Royal Society of New Zealand's *Transactions*.

In 1983 Wellington won the right to host the 2nd National Orchid Show at the Winter Show Buildings. Dot thought it would be a good opportunity to showcase the group. The show dates were to be 9-13 October 1985. I was tasked with designing and mounting a showcase display of suitable materials displaying our native orchids. In conjunction with John Addison the Show Marshall I designed a display that would encompass plant material, drawings, photographs and a slide show and herbarium sheets. I then travelled north to talk with Bruce

Irwin who gave me some 50 of his drawings to mount and display. Ian St George in Dunedin was contacted for some of his photographs /slides for the slide show and Dick Reichenbach agreed to lend me his slide projector.

Next came several trips into the Puffer track to obtain moss and materials suitable as mounts in the display. The acquisition of frames for the photos and drawings soon made the inventory complete. One of the sponsors wanted the keynote place for their purposes so I had to move the display and alter it a little to fit the new space.

The second day of the show I was asked if there were any trips planned. This had not been thought of at the planning stage. A total of three trips were carried out into the Orongoronga Valley and were all fully subscribed on each occasion.

The people who lent material were: Dot Cooper, Colin Ogle, Ian St George, Kevin Luff, Ken Grange, Phil Tomlinson, George Fuller, Dick Reichenbach, Doug McCrae, Dan Hatch, Phil Chandler, Tony Druce, Chris Ecroyd, Jeff Rodger, and Bruce Irwin and of course myself.

After the show was completed, the exercise of "field trips" was re-entered. John Addison and I went over to Kapiti Island in 1986. The result of that trip was the organization of 5 consecutive trips to the island over the next five years. Every trip was fully booked out with a waiting list for any vacancies.

I was involved in two major tramps in the upper South Island where explorations were made into the Roaring Lion River system as well as the Travers and Sabine Rivers systems, extending the work done by Dot Cooper and Tony Druce in these areas.

The other activities of the Society included the Field Days run by the Taupo Orchid Society and the Iwitahi site. I have no doubt that other trips were carried out but were not recorded.

The only information available was Dot's researched papers, Salmon's Book, Dr Barry Snedden of Victoria University Botany Department's paper in the parts work relating to the natural history of New Zealand. And of course the *Flora of New Zealand* Vol II. Dan Hatch's papers became available as well as other papers by Tony Druce. But there was very little illustrated material that could be referred to.

Dot made the decision to hand over the editorship of the Newsletter and approached 3 people to see if they would take up the editorship. Two of those declined the third man accepted the position and is still the incumbent.

The originals were mostly members associated with Wellington Orchid Society and the Hutt Valley Orchid Circle, with a sprinkling from other societies throughout New Zealand. Some of their names come to mind but there are quite a few my advancing years have failed to recognise. But here are the ones I can recall.

Dot and Roger Cooper, Dan Hatch, Gordon Sylvester, Phil Tomlinson, Lew Wyatt, Doug Neilson, Tom Grant-Taylor, Phil Chandler, Bruce Irwin, Jean Jenks, Murray Young, Ian St George, George Fuller, Brian Molloy, Peter de Lange, John Campbell, Jeff and Margaret Anderson, John Addison, Christel Mills, Kevin Ross, Ella Campbell, Jim Forrest, Doug McCrae, James Harper, John Smith-Dodsworth, Michael Pratt, all come to mind. Some of these people made contributions to the first five newsletters.

If I have failed to mention any one or any event I apologise but your involvement is appreciated. There are, I am sure a few more but I plead advancing years for the remainder. The first members' list was instituted by our current Editor in 1987. We eventually had somewhere about 100 members and exchanged our Newsletter with other like minded orchid organisations.

The next 30 years look to be very bright also.

**CONZ Council Orchid Societies of New Zealand; later changed to OCNZ*

Editorial: Ian St George

Māori orchid names

Modified from J44 by request.

JD Hooker listed "native and vernacular names" for the New Zealand plants [2]. Among them are: **hiri turiti** = various epiphytic orchids; **maikaika** = *Thelymitra pulchella* and *Orthoceras novae-zeelandiae* (but also the rengarenga lily and a rata); **makaika** = *O. novae-zeelandiae*; **perei** = *Gastrodia cunninghamii*; **piripiri** = *Bulbophyllum pygmaeum* (but also the common bidibidi – a different spelling of piripiri – and other plants).

Colenso wrote in 1880 of the vegetable foods of the Maori, among them A "fleshy root, and that a tolerably large one, of the Orchis family, often the size of a middling-sized kumara, or of a stout, long-red radish root – the **perei** (*Gastrodia cunninghamii*) – was also eaten; but it was rather scarce, and only found in dense forests"[3].

Elsdon Best would expand on Colenso's observations in 1898: "...when digging for the **perei**, an edible root (*Orthoceras solandri*) the diggers must not mention the name **perei**, or the root will never be found. At such a time it is termed **maikaika**." This was one of a number of ways of failing in food-gathering, called generally **puhore**. Thus "when going a-hunting, should you speak of the game as already caught... nothing will be taken during your hunt" [4]. **Perei** meant the orchid tuber as one ate it – cleaned, dried, roasted, or whatever – and **maikaika** referred to the plant itself.

Best would write later that the **perei** was *Gastrodia cunninghamii*, and that "Some singular notions prevail among the natives in regard to the **perei**. It did not, according to the Maori, originate in or from the earth, but was formed by the gods. Again, when engaged in digging for the roots the word **perei** must not be mentioned or no roots will be found. At such times it is termed **maukuuku**.... The **perei** was dug in the winter season, and dried by exposure, as fern-root is. It was either roasted at a fire, or cooked in a steam-oven" [5].

Cheeseman added to Hooker's list **maikaika** = *Microtis unifolia*; **maikuku** = *Thelymitra longifolia*; **mamaika** = *O. novae-zeelandiae*; **paratawhiti** = *O. novae-zeelandiae* (but also *Marattia fraxine* – a fern whose root was eaten); **peka-a-waka** = *Earina mucronata*; **tutukiwi** = *Pterostylis banksii* [6].

In the second edition of his book, Cheeseman would add **huperei** = *G. cunninghamii*; **ikaika** = *O. novae zeelandiae*; **para**, **perei** = tuber of *G. cunninghamii* or *O. novae-zeelandiae* used as food [7].

Beever added **para**, **paratawhiti** = tuber; **parareka**, **paratarere** = varieties of tuber, **para kehe** = large tuber; **para ponaho** = small tuber [8].

Moore had noted: **winika** = *Dendrobium cunninghamii*, "Its old Maori name, Winika, was given in 1838 to a big war canoe because this orchid grew on the totara tree whose trunk was hollowed out to form the hull. Te Winika was smashed by von Tempsky in 1863 but after reconstruction was used on ceremonial occasions on the Waikato River from 1938 to 1971, and was then donated to the Hamilton Museum" [9]. The waka, Te Winika was refloated for the 1990 celebrations.

What have we then? [10]

Earina autumnalis; **raupeka**: rau = leaf; peka = branch; (**raupeka** as a verb means to droop).

Earina mucronata; **peka-a-waka**: peka = branch; a = of; waka = bird (but also canoe, etc).

Epiphytes; **hiri turiti**: hiri = rely, lean; turi = water.

Orthoceras novae-zeelandiae; **ikaika**, **mamaika**, **maikaika**, **makaika**: ma = white; ika = fish. (It is difficult to decide which of

the several uses of ma and ika are meant here. The partial or complete reduplication of a word – in this case ika – generally diminishes the intensity of the meaning – thus wera = hot, werawera = rather hot; does **ikaika** mean "rather fishy"?); **para**, **perei** when prepared for food; **parareka** (also means potato), reka = palatable; **paratarere** = with a mottled skin; **para kehe** = large; **para ponaho** = small; **paratawhiti** = the para of Tahiti?
Gastrodia cunninghamii; **maukuuku**: ma = white; uku = fish; (but see above under *O. novae-zeelandiae*); **para**, **perei**, **uhiperei**, **huperei** when prepared for food: (uhi, uwhi = yam).
Microtis unifolia; **maikaika**.
Thelymitra longifolia; **maikuku**.
Thelymitra pulchella; **maikaika**.
Bulbophyllum pygmaeum; **piripiri**: piri = stick, adhere, cling; be attached to; a closely woven mat.
Pterostylis banksii; **tutukiwi**: tutu = stand erect (thus tutukiwi = standing kiwi).
Dendrobium cunninghamii; **winika**.

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The New Zealand Native Orchid Journal

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Ruahine: *Thelymitra nemoralis* Col. and *T. purpureo-fusca* Col.

In 1884 William Colenso described two new thelymitras from the Ruahine [1]. They were *T. nemoralis* (*nemoralis* = of woods or groves; sylvan) and *T. purpureo-fusca* (*purpureus* = purple-coloured; dark red, dark brown; *fuscus* = dark-coloured).

Colenso's descriptions

1. *Thelymitra nemoralis*, sp. nov.

Plant stout; tubers large, oblong, narrow. Leaf (occasionally two) variable, 6–17 inches long, 6–9 lines wide, linear-acuminate, acute, broadest at base, green, glabrous, thick, strongly 3-(obsoletely 5-) nerved, keeled. Scape stoutish, 8–16 inches long, bibracteate, bracts equidistant, sub-foliaceous, clasping, acute; raceme 2–8-(usually 7-) flowered; flowers distant, bracteolate on rather long pedicels; bracteoles obovate-oblong, acuminate, acute, obsoletely 5-nerved; perianth spreading ¾ inch diameter; sepals pale green with broad white margins, narrower than petals; dorsal sepal much larger than laterals, obovate-oblong, obtuse with a mucro; lateral sepals ovate-lanceolate, acuminate; petals white, sometimes pinkish, broadly elliptic, acute with a mucro; lip similar to petals but narrower and not so highly coloured; column with stout deeply emarginate tip, pinkish below, umber-brown above, edged with bright yellow, margins incurved; appendages produced, rather shorter than column and inclined at top towards it, densely globosely-plumose at tips, white; the base of wings in front of column sub-two-lobed and two-toothed; stigmatic gland bilobed at base, trilobed at apex including rostellum.

Hab. Dry *Fagus* forests. Seventy-mile Bush, County of Waipawa; 1881–83: *W.C.* Flowering in December.

2. *Thelymitra purpureo-fusca*, sp. nov.

The whole plant exceedingly slender, of a dusky purple-brown or purplish-red colour; tubers narrow, oblong. Leaf narrow, 1 ½–3 lines wide, 7–10 inches long, thickish, channelled, glabrous. Scape erect, very slender, almost filiform, bibracteate, 8–10 inches long; raceme 3–5-flowered (occasionally only one); flowers rather distant, bracteolate on long slender pedicels; perianth ½ inch diameter; sepals dark purple-brown edged with a bright green line, a yellow central stripe and broad white exterior margins, sub-ovate-acuminate, much concave, dorsal one largest, the two laterals with a long mucro; petals light pink, sometimes white, elliptic-oblong, obtuse, broader than sepals; lip the smallest; column pink dashed with blue, apex stout, much emarginate, incurved, dark and edged with bright yellow (as in *T. nemoralis*), but the plumose appendages are more produced and rise above the column; anterior base slightly erose; stigmatic gland similar to that of *T. nemoralis*; anther very acuminate, tip subulate.

Hab. In *Fagus* woods on dry hills with the preceding species, but usually higher up; 1881–83: *W.C.*

Obs. I have both sought and watched this plant very closely; from the fact of its widely different general appearance at all stages from *T. nemoralis*, and yet, on examination and dissection, I find it possessing such scanty differential characters; the principal ones consisting in its plumose staminodia rising *above* the tip of the column—its narrower and variegated sepals—its slenderer proportions, dusky aspect and fewer flowers. In all these however it is very uniform; as I have seen and examined (through patiently waiting for their development) some scores of flowers and plants. It has also a peculiar habit of growth, being often found in little clumps (like crocuses and jonquils), from which arise 6–12 scapes. It wears a very striking and elegant appearance, when its dark perianths with their segments edged with white are about expanding, from their contrasts in colour. Notwithstanding the column-appendages being produced beyond its tip, while in *T. nemoralis* they are below it, this species is naturally very closely allied to that one.

Both then were under beech, with similar columns, but very different structures otherwise – *T. nemoralis* stout and wide-leaved, *T. purpureo-fusca* slender, dark and narrow-leaved.

Treatment by later botanists

Cheeseman lumped both with *T. longifolia* [2]. Hatch included both in his *T. longifolia* var. *forsteri*, which equates to our concept of *T. longifolia* [3]. Moore did likewise, commenting that Herb. Colenso at WELT contained no specimen determined as either, "but descriptions suggest that all belong either here (*T. longifolia*) or in *T. pauciflora* R. Br." [4].

Much later Bruce Irwin described a plant he tagnamed *T.* "Whakapapa" and we have wondered if that is the same thing. And we have all seen clumps of purplish thelymitras of the *T. longifolia* complex.

I think Colenso took a very strict view of the column structure of *T. longifolia*, whose postanther lobe was then regarded as entire, and not notched to any great degree (his botanical mentor JD Hooker had followed Forster and written that the column of *T. longifolia* had a "rounded tip"). So if he did not allow for notching, the column of *T. nemoralis* **(Fig.1)** would make it different from *T. longifolia* s.s.

Is *T. purpureo-fusca* different? Or does that shape simply represent a young plant of *T. longifolia* or *T. nemoralis*? A stunted plant in a poor habitat? Or is it sufficiently and consistently different to call it a different species ? The column is usually the best way to tell thelymitras apart, but even Colenso could find no great distinguishing features in the column of *T. purpureo-fusca* apart from the cilia being above the post-anther lobe (and below it in *T. nemoralis*). But the plant is clearly structurally different—slender, small, narrow-leaved, sometimes dark-coloured, the stems not straight, often growing in clumps.

Colenso sent dried specimens of both, and one of *T. purpureo-fusca* in spirits, to JD Hooker at Kew in October 1885. The type sheet (p.12 overleaf) of *T. purpureo-fusca* is accompanied by a drawing by JD Hooker (noting "deep cleft" in "tip of column"), shown on p.13.

I saw a clump exactly fitting the description of *T. purpureo-fusca* at Endeavour Inlet in mid-november 2010, under very dry beech-associated manuka scrub at trackside **(Fig. 2)**. Next to it was an identical plant with only green pigment **(Fig.3)**. I hypothesise that purple leaves mean fewer chloroplasts and so less reliance on photosynthesis and more on mycorrhizal nutrition. Orchids throw up a new stem and leaf every year, so perhaps have the opportunity to vary the proportion of energy they take from root fungi or the sun.

I have looked at a lot of these plants: not every purple *Thelymitra* is *T. purpureo-fusca* and *T. purpureo-fusca* is not always purple.

In the Ruahine now

We went looking for these two at the eastern end of the Apiti track in the Ruahine on 18 December 2010: old burned-off beech forest, regenerating with scrub. I believe we found both.

The *T. purpureo-fusca* were identical to the Endeavour Inlet plants: colony-forming, slender general habit, notched postanther lobe, pigmentation (purple-tinged green, rather than really dark). This is a distinct species: I don't believe it is the same as *T.* "whakapapa".

There were also plants that must be what Colenso described as *T. nemoralis*. I believe it is *T. longifolia* s.l. These were single plants whose leaf is broad and similarly ridged, but tapers gradually from wide at the base to an acute tip (*T. longifolia* s.s. has a more ribbon-like, parallel-edged leaf). The raceme of flowers is linear, the flowers rather more spaced on the stem, unlike the almost pyramidal crowding of *T. longifolia* s.s. The post-anther lobe is distinctly notched, in some plants quite deeply, the edges rolled inwards, unlike the rounded or at best faintly emarginate postanther lobe of *T. longifolia* s.s. Nonetheless these differences seem insufficient to constitute a distinct species.

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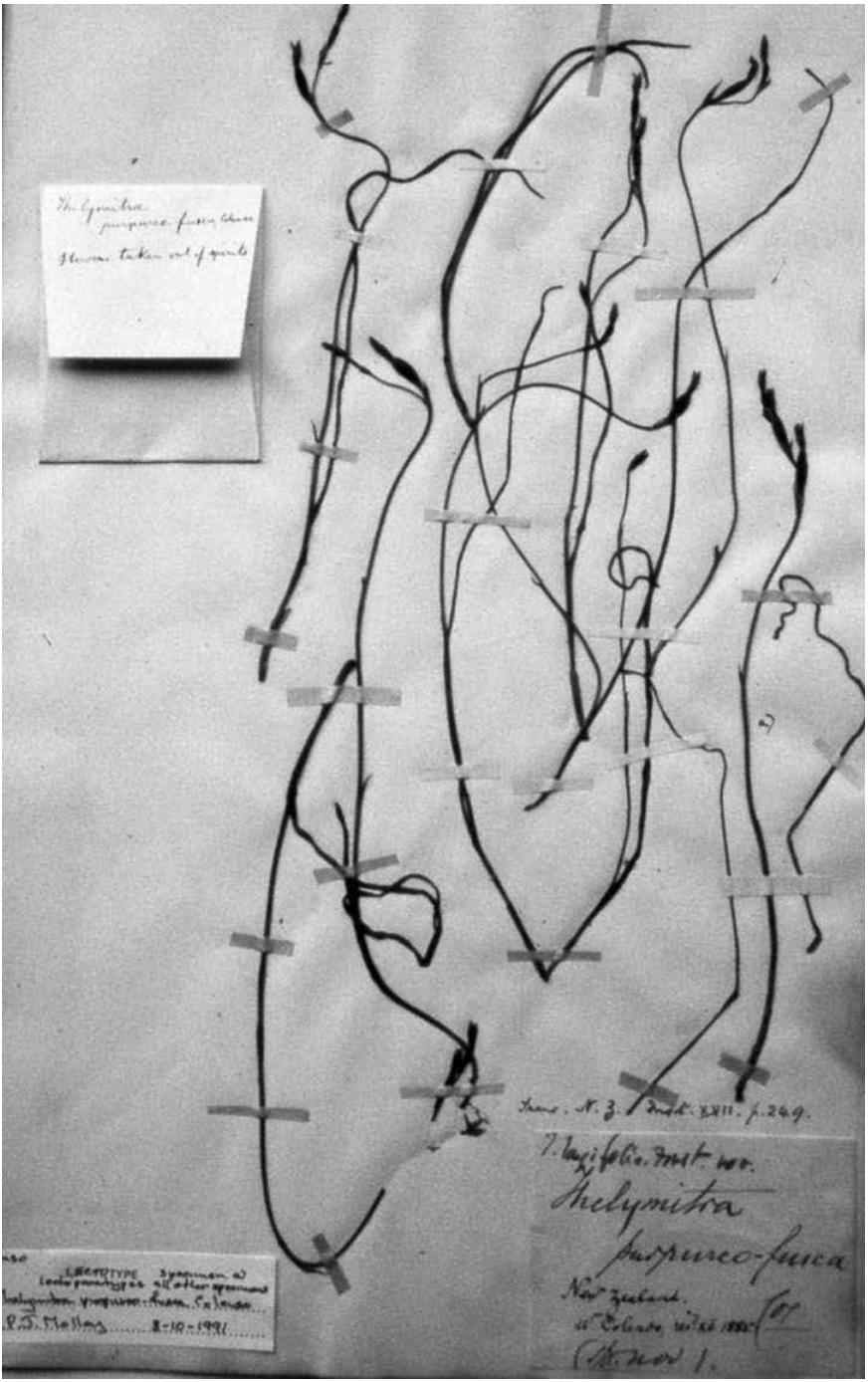
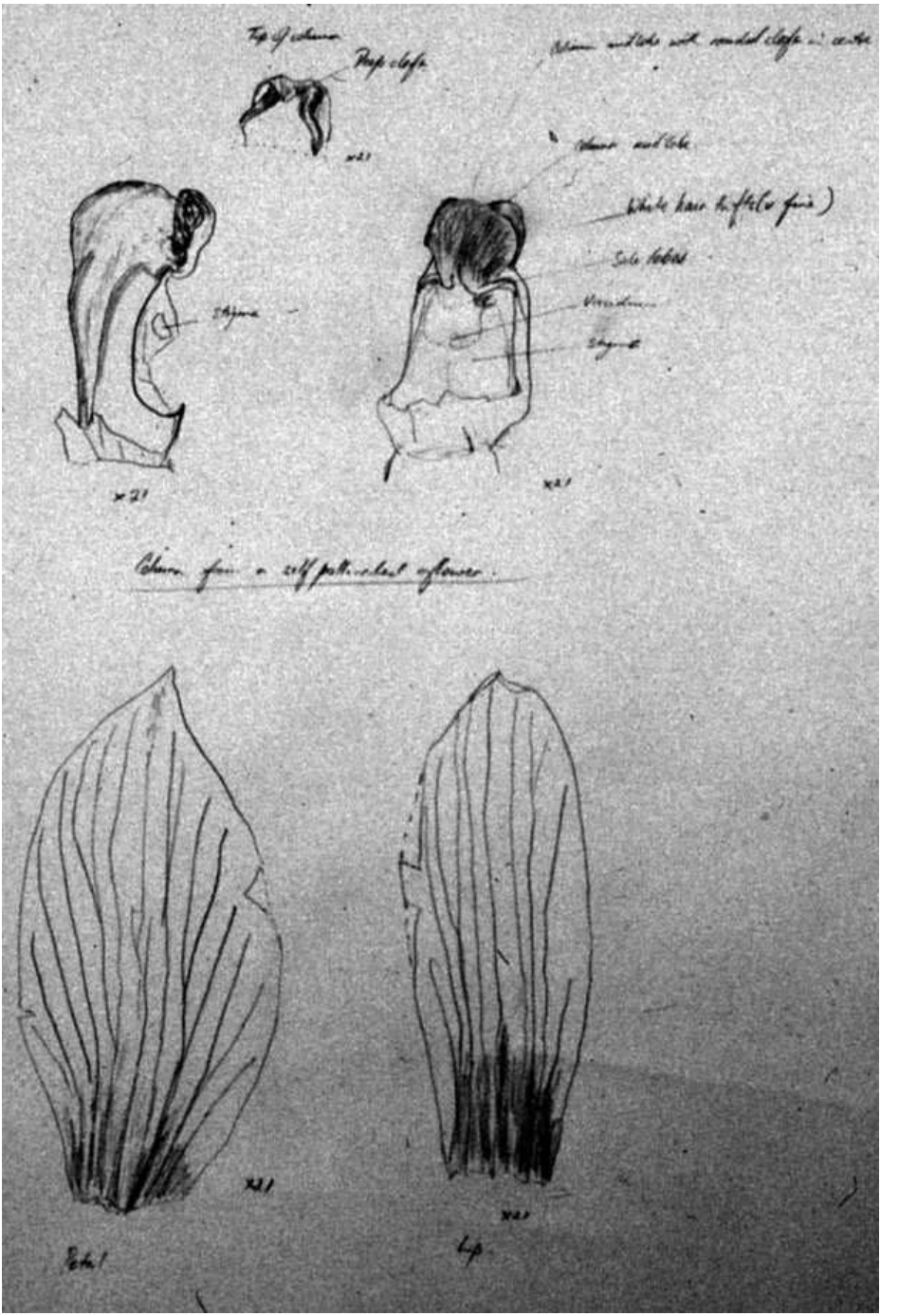


***Thelymitra purpureo-fusca* Col.**, the type at Kew, accompanied by JD Hooker's sketches of the column and sepal and petal



Orchids seen Apiti track, 18 December 2010

We walked about 2 hours up the track, & found 19 orchid taxa, all at trackside, as follows.
[Key: b = in bud; fl = flowering; fr = fruiting; s = dry capsules; a = abundant; m = many, f = few].

Aporostylis bifolia fl. f
Caladenia chlorostyla fl. f
C. aff. chlorostyla (red stem) fr f had flowered earlier
Gastrodia minor fl f
Microtis unifolia fl a
M. aff. unifolia b a
Nematoceras macranthum fr a
N. aff. trilobum f large (4cm) leaves
Orthoceras b f
Prasophyllum colensoi fl a
Pterostylis patens fl m
P. subsimilis fl m
P. montana sensu Moore fl m
P. irsoniana fl. f.
P. sp. narrow leaves fr f tall plant with narrow arching lf
Thelymitra hatchii fl f
T. nervosa fl f
T. nemoralis fl m
T. purpureofusca fl f
T. sp.

The NZ orchids

The editor's irregular list

Acianthus R.Br. Prodr. Fl. Nov. Holland.: 321 (1810). Acianthus alliance

Acianthus sinclairii Hook.f. Fl. Nov.-Zel. 1: 245 (1853).
Acianthus fornicatus var. sinclairii (Hook.f.) Hatch. Trans. & Proc. Roy. Soc. New Zealand 75: 369 (1945).

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Adenochilus Hook.f. Fl Nov.-Zel. 1: 246, t.56 (1853)

Adenochilus gracilis Hook.f. Fl. Nov.-Zel. 1: 246, t.56 (1853).

Anzybas D.L.Jones & M.A.Clem. Orchadian 13 (10): 442 (2002). Corybas alliance

Anzybas carsei (Cheeseman) D.L.Jones & M.A.Clem. Orchadian 13(10): 443 (2002).
Corysanthes carsei Cheeseman. Trans. & Proc. New Zealand Inst. 44: 162 (1912).
Corybas carsei (Cheeseman) Hatch. Trans. & Proc. Roy. Soc. New Zealand 75: 367 (1945).
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Nematoceras rotundifolia Hook.f. Fl. Nov.-Zel. 1: 251 (1853).
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Aporostylis bifolia (Hook.f.) Rupp & Hatch. Proc. Linn. Soc. New South Wales 70: 60 (1946).
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Chiloglottis traversii F.Muell. Veg. Chath. Is. 51 (1864).
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Calochilus robertsonii Benth. Fl. Austral. 6: 315 (1873).
Calochilus campestris as meant by Fitzg. Austral. Orchids 1(4): t.6 (1878), is not that of R.Br. (1810).
Calochilus campestris as meant by Cheeseman. Man. New Zealand Fl. 686 (1906), is not that of R.Br. (1810).

Corunastylis Fitzg. Austral. Orchids 2(3): t.1 (1888). Prasophyllum alliance

Corunastylis nuda (Hook.f.) D.L.Jones & M.A.Clem. Orchadian 13(10): 461 (2002).
Prasophyllum nudum Hook.f. Fl. Nov.-Zel. 1: 242 (1853).
Prasophyllum tunicatum Hook.f. Fl. Nov.-Zel. 1: 242 (1853).
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Corybas Salisb. Parad. Lond. t.83 (1805). Corybas alliance

Corybas cheesemanii (Hook.f. ex Kirk) Kuntze. Revis. Gen. Pl. 2: 657 (1891).
Corysanthes cheesemanii Hook.f. ex Kirk. Trans. & Proc. New Zealand Inst. 3: 180 (1871).

Corybas aconitiflorus as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 75: 367 (1945), is not that of Salisb. (1807).

Cryptostylis R.Br. Prodr. Fl. Nov. Holland.: 317 (1810)

Cryptostylis subulata (Labill.) Rchb.f. Beitr. Syst. Pflanzenk. 15 (1871).
Malaxis subulata Labill. Nov. Holl. Pl. 2: 62, t.212 (1806).

Cyrtostylis R.Br. Prodr. Fl. Nov. Holland.: 322 (1810). Acianthus alliance

Cyrtostylis oblonga Hook.f. Fl. Nov.-Zel. 1: 246 (1853).
Acianthus reniformis var. oblonga (Hook.f.) Rupp & Hatch. Proc. Linn. Soc. New South Wales 70: 59 (1946).

Cyrtostylis rotundifolia Hook.f. Fl. Nov.-Zel. 1: 246 (1853).
Cyrtostylis macrophylla Hook.f. Fl. Nov.-Zel. 1: 246 (1853).
Caladenia reniformis (R.Br.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
Cyrtostylis oblonga (Hook.f.) var. rotundifolia (Hook.f.) Cheeseman. Man. New Zealand Fl. 685 (1906).
Acianthus reniformis (R.Br.) Schltr. Engl. Bot. Jahrb. 34: 39 (1906).
Acianthus reniformis var. reniformis (Hook.f.) Rupp & Hatch. Proc. Linn. Soc. New South Wales 70: 59 (1946).
Cyrtostylis reniformis as used by many authors until now is not that of R.Br. Prodr. Fl. Nov. Holland.: 322 (1810).

Danhatchia Garay & Christenson. Orchadian 11(10): 469, f.471 (1995)

Danhatchia australis (Hatch) Garay & Christenson. Orchadian 11(10): 470 (1995).
Yoania australis Hatch. Trans. Roy. Soc. New Zealand, Bot. 2: 185 (1963).

Diplodium D.L.Jones, Molloy & M.A.Clem. Austral. Orchid Res. 4: 70 (2002). Pterostylis alliance

Diplodium alobulum (Hatch) D.L.Jones, Molloy & M.A.Clem. Austral. Orchid Res. 4: 70 (2002).
Pterostylis trullifolia as meant by Cheeseman. Man. New Zealand Fl. (1906), is not that of Hook.f.
Pterostylis trullifolia Hook.f. var. alobula Hatch. Trans. Roy. Soc. NZ 77: 244, t.30, f.3E–H (1949).
Pterostylis alobula (Hatch) L.B.Moore. New Zealand J. Bot. 6: 486, f.3 (1969).

Diplodium alveatum (Garnet) D.L.Jones & M.A.Clem. Austral. Orchid Res. 4: 70 (2002).
Pterostylis alveata Garnet. Victoria Naturalist 59: 91 (1939).

Diplodium brumale (L.B.Moore) D.L.Jones, Molloy & M.A.Clem. Austral. Orchid Res. 4: 70 (2002).
Pterostylis trullifolia Hook.f. var. rubella Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 244 (1949).
Pterostylis brumalis L.B.Moore. New Zealand J. Bot. 6: 485, f.3 (1969).

Diplodium trullifolium (Hook.f.) D.L.Jones, Molloy & M.A.Clem. Austral. Orchid Res. 4: 72 (2002).
Pterostylis trullifolia Hook.f. Fl. Nov.-Zel. 1: 249 (1853).
Pterostylis rubella Colenso. Trans. & Proc. New Zealand Inst. 18: 271 (1886).
Pterostylis trullifolia Hook.f. var. gracilis Cheeseman. Trans. & Proc. New Zealand Inst. 47: 271 (1915).

Drymoanthus Nicholls. Victorian Naturalist 59: 173 (1943)

Drymoanthus adversus (Hook.f.) Dockrill. Australasian Sarcanthinae: 32, t.3 (1967).
Sarcochilus adversus Hook.f. Fl. Nov.-Zel. 1: 241 (1853).
Sarcochilus breviscapa Colenso. Trans. & Proc. New Zealand Inst. 14: 332 (1882).

Drymoanthus flavus St George & Molloy. New Zealand J. Bot. 32: 416, f.1 (1994).

Earina Lindl. Bot. Reg. sub t.1699 (1834)

Earina aestivalis Cheeseman. Trans. & Proc. New Zealand Inst. 51: 93 (1919).

Earina autumnalis (G.Forst.) Hook.f. Fl. Nov.-Zel. 1: 239 (1853).
Epidendrum autumnale G.Forst. Prodr. 60 (1786).
Earina suaveolens Lindl. Bot. Reg. 29 (1843).
Earina alba Colenso. Trans. & Proc. New Zealand Inst. 18: 267 (1886).

Earina mucronata Lindl. Bot. Reg. 20 sub t.1699 (1834).
Earina quadrilobata Colenso. Trans. & Proc. New Zealand Inst. 15: 325 (1883).

Gastrodia R.Br. Prodr. Fl. Nov. Holland.: 330 (1810)

Gastrodia cunninghamii Hook.f. Fl. Nov.-Zel. 1: 251 (1853).
Gastrodia leucopetala Colenso. Trans. & Proc. New Zealand Inst. 18: 268 (1886).

Gastrodia minor Petrie. Trans. & Proc. New Zealand Inst. 25: 273, t.20, f.5–7 (1893).

Gastrodia "long column" agg.: there are a number of late flowering Gastrodia with a long column.

Gastrodia aff. sesamoides. Gastrodia sesamoides as meant by Cheeseman. Man. New Zealand Fl. 697 (1906), is not that of R.Br. (1810).
Gastrodia "city" appears to be a variant.

Hymenochilus D.L.Jones, M.A.Clem. & Molloy. Austral. Orchid Res. 4: 72 (2002). Pterostylis alliance

Hymenochilus tanypodus (D.L.Jones, Molloy & M.A.Clem.) D.L.Jones, M.A.Clem. & Molloy. Austral. Orchid Res. 4: 74 (2002).
Pterostylis tanypoda D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 273 (1997).
Pterostylis cycnocephala as meant by L.B.Moore. Fl. New Zealand Vol. 2: 135 (1970) and others (1970–1997), is not that of Fitzg. (1876).

Hymenochilus tristis (Colenso) D.L.Jones, M.A.Clem. & Molloy. Austral. Orchid Res. 4: 74 (2002).
Pterostylis tristis Colenso. Trans. & Proc. New Zealand Inst. 18: 271 (1886).
Pterostylis mutica as meant by Cheeseman. Trans. & Proc. New Zealand Inst. 15: 300 (1883), is not that of R.Br. (1810).

Ichthyostomum D.L.Jones, M.A.Clem. & Molloy. Orchadian 13(11): 499 (2002). Bulbophyllum alliance

Ichthyostomum pygmaeum (Sm.) D.L.Jones, M.A.Clem. & Molloy. Orchadian 13(11): 499 (2002).
Dendrobium pygmaeum Sm. in Rees. Cycl. (Rees) 11: n.27 (1808).
Bulbophyllum pygmaeum (Sm.) Lindl. Gen. Sp. Orchid. Pl. 58 (1830).
Bolbophyllum ichthyostomum Colenso. Trans. & Proc. New Zealand Inst. 26: 319 (1894).

Linguella D.L.Jones, M.A.Clem. & Molloy. Austral. Orchid Res. 4: 74 (2002). Pterostylis alliance: may revert to Diplodium.

Linguella puberula (Hook.f.) D.L.Jones, M.A.Clem. & Molloy. Austral. Orchid Res. 4: 75 (2002).
Pterostylis puberula Hook.f. Fl. Nov.-Zel. 1: 249 (1853).
Pterostylis nana as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 237 (1949), is not that of R.Br. (1810).
Pterostylis aff. nana.

Microtis R.Br. Prodr. Fl. Nov. Holland.: 320 (1810). Prasophyllum alliance

Microtis arenaria Lindl. Gen. Sp. Orchid. Pl. t.306 (1840).
Microtis biloba Nicholls. Victoria Naturalist 66: 93, f.O–L (1949).

Microtis oligantha L.B.Moore. New Zealand J. Bot. 6: 473, f.1 (1969).
Microtis magnadenia as meant by Hatch. Trans. Roy. Soc. New Zealand, Bot. 2: 185–189 (1963), is not that of R.S.Rogers (1930).

Microtis parviflora R.Br. Prodr. Fl. Nov. Holland.: 321 (1810).
Microtis javanica Rchb.f. Bonplandia 5: 36 (1857).
Microtis benthamiana Rchb.f. Beitr. Syst. Pflanzenk. 24 (1871).
Microtis longifolia Col. Trans. & Proc. New Zealand Inst. 17: 247 (1885).
Microtis porrifolia (Sw.) R.Br. ex Spreng. var. parviflora (R.Br.) Rodway. Tasman. Fl. 159 (1903).
Microtis aemula Schltr. Bot. Jahrb. Syst. 39: 37 (1906).
Microtis bipulvinaris Nicholls. Victoria Naturalist 66: 92–94, f.A–F (1949).
Microtis holmesii Nicholls. Victoria Naturalist 66: 93, f.G–I (1949).

Microtis unifolia (G.Forst.) Rchb.f. Beitr. Syst. Pflanzenk. 62 (1871).
Ophrys unifolia G.Forst. Fl. Ins. Austr. 59 (1786).
Epipactis porrifolia Sw. Kongl. Vetensk. Acad. Nya Handl. 21: 233 (1800).
Microtis porrifolia (Sw.) R.Br. ex Spreng. Syst. Veg. (ed. 16) [Sprengel] 3: 713 (1826).
Microtis banksii A.Cunn. Bot. Mag. 62: sub 1.3377 (1835).
Microtis frutetorum Schltdl. Linnaea 20: 568 (1847).
Microtis viridis F.Muell. Fragm. (Mueller) 5: 97 (1866).
Microtis longifolia Colenso. Trans. & Proc. New Zealand Inst. 17: 247 (1885). This is an autumn flowering form and may be distinct.
Microtis papillosa Colenso. Trans. & Proc. New Zealand Inst. 18: 269 (1886).
Microtis pulchella as meant by Lindl. Gen. Sp. Orchid. Pl. 395 (1840), is not that of R.Br. (1810).

Microtis aff. unifolia: a summer flowering form allied to M. unifolia and M. parviflora. M. longifolia Col. is autumn flowering, but structurally indistinguishable.

Molloybas D.L.Jones & M.A.Clem. Orchadian 13(10): 448 (2002). Corybas alliance

Molloybas cryptanthus (Hatch) D.L.Jones & M.A.Clem. Orchadian 13(10): 448 (2002).
Corybas cryptanthus Hatch. Trans. Roy. Soc. New Zealand 83: 577 (1956).
Corybas saprophyticus as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 366, t.71 (1952), is not that of Schltr. (1923).

Myrmechila D.L.Jones & M.A.Clem. Orchadian 15(1): 36–37 (2005). Chiloglottis alliance

Myrmechila formicifera (Fitzg.) D.L.Jones & M.A.Clem. Orchadian 15(1): 37 (2005).
Chiloglottis formicifera Fitzg. Austral. Orchids 1 (3): (1877).

Myrmechila trapeziformis (Fitzg.) D.L.Jones & M.A.Clem. Orchadian 15(1): 37 (2005).
Chiloglottis trapeziformis Fitzg. Austral. Orchids 1

(3): (1877).

Nematoceras Hook.f. Fl. N. Zel . 1: 249, t.57 (1853). Corybas alliance

Nematoceras acuminatum (M.A.Clem. & Hatch) Molloy, D.L.Jones & M.A.Clem. Orchadian 13 (10): 449 (2002).
Corybas acuminatus M.A.Clem. & Hatch. New Zealand J. Bot. 23: 491, f.2 (1985).
Corysanthes acuminata (M.A.Clem. & Hatch) Szlach. Richardiana 3(2): 97 (2003).
Corybas rivularis as meant by Cheeseman. Man. New Zealand Fl. 697 (1906), and others (1906–1985), is not Acianthus rivularis of A.Cunn. (1837).

Nematoceras hypogaeum (Colenso) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corysanthes hypogaea Colenso. Trans. & Proc. New Zealand Inst. 16: 336 (1884).

Nematoceras iridescens (Irwin & Molloy) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corybas iridescens Irwin & Molloy. New Zealand J. Bot. 34: 1, f.1 (1996).
Corysanthes iridescens (Irwin & Molloy) Szlach. Richardiana 3(2): 98 (2003).
Corybas "A" tagname.

Nematoceras longipetalum (Hatch) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corybas macranthus (Hook.f.) Rchb.f. var. longipetalus Hatch. Trans. & Proc. Roy. Soc. New Zealand 76: 580, t.60(1) (1947).
Corybas longipetalus (Hatch) Hatch. NZNOG Journal 47: 6 (1993), is not that of Schltr. (1923).
Corybas orbiculatus (Colenso) L.B.Moore. Fl. New Zealand Vol. 2: 118 (1970), is not Corysanthes orbiculata of Colenso (1891).

Nematoceras macranthum Hook.f. Fl. Nov.-Zel. 1: 250 (1853).
Corysanthes macrantha (Hook.f.) Hook.f. Handb. N. Zeal. Fl. 266 (1864).
Corybas macranthus (Hook.f.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
There are several entities in this aggregate. Probable hybrids with insect-pollinated members of the N. trilobum aggregate have been reported.

Nematoceras orbiculatum (Colenso) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corysanthes orbiculata Colenso. Trans. & Proc. New Zealand Inst. 23: 389 (1891).
Corybas orbiculatus as meant by L.B.Moore. Fl. New Zealand Vol. 2: 118 (1970) and others (1970–1996), is not Corysanthes orbiculatus of Colenso (1891) (see Molloy & Irwin. New Zealand J. Bot. 34 (1): 5 [1996]).
Corybas "short tepals" and Corybas "C" tagnames.

Nematoceras papa (Molloy & Irwin) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corybas papa Molloy & Irwin. New Zealand J. Bot. 34(1): 5, f.1 (1996).
Corysanthes papa (Molloy & Irwin) Szlach. Richardiana 3(2): 98 (2003).
Corybas "Mt Messenger" and Corybas "B" tagnames.

Nematoceras papillosum (Colenso) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corysanthes papillosa Colenso. Trans. & Proc. New Zealand Inst. 16: 337 (1884).
This has been regarded as a form of Nematoceras macranthum, and though its status remains speculative, the form with a white lower labellum has been identified with this name.

Nematoceras rivulare (A.Cunn.) Hook.f. Fl. Nov.-Zel. 1: 251 (1853).
Acianthus rivularis A.Cunn. Companion Bot. Mag. 2: 376 (1837).
Corysanthes rivularis (A.Cunn.) Hook.f. Handb. N. Zeal. Fl. 266 (1864).
Corybas rivularis (A.Cunn.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
Nematoceras panduratum (Cheeseman) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corysanthes rotundifolia var. pandurata Cheeseman. Man. New Zealand Fl. 366 (1925), is not Nematoceras rotundifolia of Hook.f.
Corysanthes rotundifolia as meant by Cheeseman. Man. New Zealand Fl. 695 (1906), is not Nematoceras rotundifolia of Hook.f. (1853).
Corybas orbiculatus as meant by L.B.Moore. Fl. New Zealand Vol. 2: 118 (1970) and others (1970–1996), is not Corysanthes orbiculatus of Colenso (1891).
Corybas "Kerikeri" tagname.
The Nematoceras rivulare complex includes unnamed taxa with the tagnames N. "Kaimai", N. "rest area", N. "Kaitarakihi", N. "whiskers" (aka N. "viridis"), N. "Mangahuia", N. "sphagnum", N. "veil", N. "Pollok" and N. "Motutangi".

Nematoceras trilobum Hook.f. Fl. Nov.-Zel. 1: 250 (1853).
Corysanthes triloba (Hook.f.) Hook.f. Handb. N. Zeal. Fl. 265 (1864).
Corybas trilobus (Hook.f.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
About 25 taxa in the Nematoceras trilobum com-

plex are of speculative taxonomic status; they include the late-flowering N. "Trotters" (almost certainly N. trilobum sens. strict.), the tiny May to July flowering forms with the tagname N. "pygmy"; N. "Rimutaka" (NZNOG Journal 58: 8–9 [1996]), N. "round leaf", N. "craigielea", N. "darkie", N. "trisept", N. "triwhite", and many others. The N. trilobum complex has tetraploids in the South Island and Chatham I., and predominantly diploids in the North Island, but further chromosome counts are needed (see Dawson, Molloy & Beuzenberg. New Zealand J. Bot. 45(4): 644 [2007]).

Nematoceras aff. sulcatum: a form on the Chathams, similar to N. sulcatum from Macquarie Is (see Molloy BPJ. Orchids of the Chatham Islands. DOC [2002]).

Orthoceras R.Br. Prodr. Fl. Nov. Holland.: 316 (1810)

Orthoceras novae-zeelandiae (A.Rich.) M.A.Clem., D.L.Jones & Molloy. Austral. Orchid Res., 1: 100 (1989).

Diuris novae-zeelandiae A.Rich. Essai Fl. Nov. Zel. 163 t.25, f.1 (1832).
Orthoceras solandri Lindl. Gen. Sp. Orchid. Pl. 512 (1840).
Orthoceras rubrum Colenso. Trans. & Proc. New Zealand Inst. 18: 273 (1886).
Orthoceras caput-serpentis Colenso. Trans. & Proc. New Zealand Inst. 22: 490 (1890).
Orthoceras strictum R.Br. forma viride Hatch. Trans. Roy. Soc. N.Z. Bot.2; 195 (1963).

Orthoceras strictum R.Br. Prodr. Fl. Nov. Holland.: 317 (1810).

Petalochilus R.S.Rogers. J. Bot. 62: 65 (1924). Caladenia alliance

Petalochilus alatus (R.Br.) D.L.Jones & M.A.Clem. Orchadian 13(9): 406 (2001).
Caladenia alata R.Br. Prodr. Fl. Nov. Holland.: 324 (1810).
Caladenia minor Hook.f. var. exigua Cheeseman. Man. New Zealand Fl. 688 (1906).
Caladenia exigua Cheeseman. Trans. & Proc. New Zealand Inst. 45: 96 (1913).
Caladenia carnea R.Br. var. alata (R.Br.) Domin. Bibliotheca Botanica Heft 85: 549 (1915).
Caladenia carnea R.Br. var. exigua (Cheeseman) Rupp. Proc. Linn. Soc. New South Wales 69: 75 (1944).
Caladenia holmesii Rupp. Victoria Naturalist 70: 179 (1954).
Caladenia catenata (Sm.) Druce var. exigua (Cheeseman) W.M.Curtis. Stud. Fl. Tasman., 4A: 133 (1979).

Petalochilus bartlettii (Hatch) D.L.Jones & M.A.Clem. Orchadian 13(9): 406 (2001).
Caladenia carnea R.Br. var. bartlettii Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 402 (1949).
Caladenia bartlettii (Hatch) D.L.Jones, Molloy & M.A.Clem. Orchadian 12(5): 227 (1997).

Petalochilus calyciformis R.S.Rogers. J. Bot. 62: 66 (1924).
Moore (1970) treated this as an aberrant floral (peloric) mutation of other species.

Petalochilus chlorostylus (D.L.Jones, Molloy & M.A.Clem.) D.L.Jones & M.A.Clem. Orchadian 13(9): 406 (2001).
Caladenia catenata as meant by Cooper. Field guide to the NZ native orchids 17 (1984), is not that of Druce (1917).
Caladenia chlorostyla D.L.Jones, Molloy & M.A.Clem. Orchadian 12(5): 223 f1 (1997).
Caladenia "green column" tagname.
Arethusa catenata and Caladenia alba are names used for Australian plants once confused with NZ taxa.

Petalochilus aff. chlorostylus is a similar taxon to Petalochilus chlorostylus, with red hairs and later flowering. There is also a larger late flowering plant with (usually) 2-3 fls.

Petalochilus minor (Hook.f.) D.L.Jones & M.A.Clem. Orchadian 13(9): 410 (2001).
Caladenia minor Hook.f. Fl. Nov.-Zel. 1: 247, t.56b (1853).
Caladenia carnea var. pygmaea (R.S.Rogers) Rupp. Proc. Linn. Soc. New South Wales 69: 74 (1944).
Caladenia carnea R.Br. var. minor (Hook.f.) Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 401 (1949).
Caladenia catenata var. minor (Hook.f.) W.M.Curtis. Stud. Fl. Tasman., 4A: 106 (1979).
The identity of Petalochilus minor is not clear, but it may be a taxon within P. aff. chlorostylus.

Petalochilus nothofageti (D.L.Jones, Molloy & M.A.Clem.) Jones & M.A.Clem. Orchadian 13(9): 410 (2001).
Caladenia nothofageti D.L.Jones, Molloy & M.A.Clem. Orchadian 12(5): 226, f.1 (1997).

Petalochilus saccatus R.S.Rogers. J. Bot. 62: 66, t.571, 4–7 (1924).
Caladenia saccata (R.S.Rogers) Hopper & A.P.Br. Austral. Syst. Bot. 17: 171–240 (2004).
Moore (1970) treated this as an aberrant floral (peloric) mutation of other species.

Petalochilus variegatus (Colenso) D.L.Jones & M.A.Clem. Orchadian 13(9): 410 (2001).
Caladenia variegata Colenso. Trans. & Proc. New Zealand Inst. 17: 248 (1885).
Caladenia "big pink" tagname. Some flowers have a clear two rows of calli on the labellum, others

have extra calli scattered to either side of the two rows.

Petalochilus aff. fuscatus: a small pink flowered entity which appears similar to the variable Australian species Petalochilus fuscatus. See Scanlen. NZNOG Journal 72: 22 [1999]). It appears to be identical with HB Matthews's Caladenia "nitida-rosea" (see Scanlen E. Matthews & son on orchids. NZNOG Historical Series 2006; 14: 12).

Petalochilus aff. pusillus: a tiny pink flowered entity with broad oval sepals and petals, an incurved dorsal sepal and a triangular labellar midlobe; grows near Wellington, Taranaki and in Northland (W.M.Curtis. Stud. Fl. Tasman., 4A: 133 [1980]).

Plumatichilos Szlach. Polish Bot. J. 46(1): 23 (2001). Pterostylis alliance

Plumatichilos tasmanicum (D.L.Jones) Szlach. Polish Bot. J. 46(1): 23 (2001).
Pterostylis tasmanica D.L.Jones. Muelleria 8(2): 177 (1994).
Pterostylis squamata as meant by Hook.f. Fl. Nov.-Zel. 1: 249 (1853), is not that of R.Br. (1810).
Pterostylis barbata as meant by Cheeseman. Man. New Zealand Fl. 683 (1906), is not that of Lindl. (1840).
Pterostylis plumosa as meant by Cooper. Field guide to NZ native orchids 51 (1981), is not that of Cady (1969).
Jones suggests there is a second unnamed NZ entity.

Prasophyllum R.Br. Prodr. Fl. Nov. Holland.: 317 (1810)

Prasophyllum colensoi Hook.f. Fl. Nov.-Zel. 1: 241 (1853).
Prasophyllum pauciflorum Colenso. Trans. & Proc. New Zealand Inst. 18: 273 (1886).
Prasophyllum rogersii as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 76: 290 (1946), is not that of R.S.Rogers & Rees (1921).
Probably a number of taxa, including Irwin's P. "A" and P. "B" (NZNOG Journal 79: 9–10 [2001]).

Prasophyllum hectorii (Buchanan) Molloy, D.L.Jones & M.A.Clem. Orchadian 15: 41 (2005).
Gastrodia hectori Buchanan. Trans. & Proc. New Zealand Inst. 19: 214 (1886).
Prasophyllum patens as meant by Cheeseman. Man. New Zealand Fl. (1906), is not that of R.Br. (1810).
Prasophyllum suttoni as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 76: 291 (1946), is not that of Rupp (1928).

Pterostylis R.Br. Prodr. Fl. Nov. Holland.: 326 (1810). Pterostylis alliance

Pterostylis agathicola D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 266 (1997).
Pterostylis graminea (Hook.f.) var. rubricaulis H.B.Matthews ex Cheeseman. Man. New Zealand Fl. 351 (1925).
Pterostylis montana (Hatch) var. rubricaulis (Cheeseman) Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 240, plate 23 (1949).
Pterostylis "rubricaulis" tagname.

Pterostylis areolata Petrie. Trans. & Proc. New Zealand Inst. 50: 210 (1918).

Pterostylis auriculata Colenso. Trans. & Proc. New Zealand Inst. 22: 489 (1890).
Pterostylis "Catlins" tagname.

Pterostylis australis Hook.f. Fl. Nov.-Zel. 1: 248 (1853).

Pterostylis banksii A.Cunn. Companion Bot. Mag. 2: 376 (1837).
Pterostylis emarginata Colenso. Trans. & Proc. New Zealand Inst. 15: 328 (1883) may be here.

Pterostylis aff. banksii: A smaller taxon than true P. banksii, common around Wellington, and apparently found elsewhere (see NZNOG Journal 80: 14,19 [2001]). This may, in the editor's opinion, be P. emarginata Col.

Pterostylis cardiostigma D.Cooper. New Zealand J. Bot. 21: 97, f.1,2 (1983).

Pterostylis cernua D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 267, f.2 (1997).

Pterostylis emarginata Colenso. Trans. & Proc. New Zealand Inst. 15: 328 (1883) .
Dubious. See P. banksii and P. aff. Banksii.

Pterostylis foliata Hook.f. Fl. Nov.-Zel. 1: 249 (1853).
Pterostylis vereenae R.S.Rogers. Trans. & Proc. Roy. Soc. South Australia 38: 360–361, f.18(2) (1914).
Pterostylis gracilis Nicholls. Victoria Naturalist 43: 324–326 (1927).

Pterostylis graminea Hook.f. Fl. Nov.-Zel. 1: 248 (1853).
There are several taxa in the P. graminea complex, including tagname P. "sphagnum".

Pterostylis humilis R.S.Rogers. Trans. & Proc. Roy. Soc. South Australia 46: 151 (1922).

Pterostylis irsoniana Hatch. Trans. & Proc. Roy. Soc. New Zealand 78: 104, t.18 (1950).

Pterostylis irwinii D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 269 (1997).
Pterostylis "Erua" tagname.

Pterostylis micromega Hook.f. Fl. Nov.-Zel. 1: 248 (1853).
Pterostylis polyphylla Colenso. Trans. & Proc. New Zealand Inst. 22: 489 (1890).
Pterostylis furcata Lindl. var. micromega Hatch. Trans. Roy. Soc. New Zealand 80: 326 (1953).

Pterostylis montana Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 239, t.22 (1949).

Pterostylis aff. montana agg.: includes as many as 14 undescribed taxa, including the distinctive P. "Blyth" = "**P. pulchragalea**" ms name of HB Matthews.

Pterostylis nutans R.Br. Prodr. Fl. Nov. Holland.: 327 (1810).
Pterostylis matthewsii Cheeseman. Trans. & Proc. New Zealand Inst. 47: 46 (1915).

Pterostylis oliveri Petrie. Trans. & Proc. New Zealand Inst. 26: 270 (1894).

Pterostylis paludosa D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 271 (1997).
Pterostylis furcata Lindl. var. linearis Hatch. Trans. & Proc. Roy. Soc. NZ 77: 243, plate 29, 2 (1949).
Pterostylis "linearis" tagname.

Pterostylis patens Colenso. Trans. & Proc. New Zealand Inst. 18: 270 (1886).
Pterostylis banksii Hook.f. var. patens (Colenso) Hatch. Trans. & Proc. Roy. Soc. New Zealand 75: 370 (1945).

Pterostylis porrecta D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 272 (1997).
Pterostylis aff. graminea.
P. "Hackett" tagname.

Pterostylis silvicultrix (F.Muell.) Molloy, D.L.Jones & M.A.Clem. Austral. Orchid Res. 4: 66 (2002).
Pterostylis banksii var. silvicultrix F.Muell. Veg. Chath. Is. 51 (1864).

Pterostylis speciosa Colenso. Trans. & Proc. New Zealand Inst. 22: 488 (1890).
Dubious. Was identified as P. banksii by Cheeseman.

Pterostylis subsimilis Colenso. Trans. & Proc. New Zealand Inst. 28: 611 (1896).
Was identified as P. banksii by Cheeseman

Pterostylis trifolia Colenso. Trans. & Proc. New Zealand Inst. 31: 281 (1899).
Pterostylis confertifolia Allan. Trans. & Proc. New Zealand Inst. 56: 32 (1926) .

Pterostylis venosa Colenso. Trans. & Proc. New Zealand Inst. 28: 610 (1896).
Pterostylis confertifolia Allan been identified with P. venosa but appears to match P. trifolia.
Pterostylis trifolia Col. has been identified with P. venosa but appears to be distinct.

Simpliglottis Szlach. Polish Bot. J. 46(1): 13 (2001). Chiloglottis alliance

Simpliglottis cornuta (Hook.f.) Szlach. Polish Bot. J. 46(1): 13 (2001).
Chiloglottis cornuta Hook.f. Bot. Antarct. Voy., Vol. 1, Fl. Antarct.: 69 (1844).
Caladenia cornuta (Hook.f.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
The NZ form of Simpliglottis cornuta may differ from the Australian, and may be an aggregate.

Simpliglottis valida (D.L.Jones) Szlach. Polish Bot. J. 46(1): 14 (2001).
Chiloglottis valida D.L.Jones. Austral. Orchid Res. 2: 43–44, t. 54, plate p.92 (1991).
Chiloglottis gunnii as meant by Molloy. Native orchids of NZ: 9 (1983), is not that of Lindl. (1840).

Singularybas Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002). Corybas alliance

Singularybas oblongus (Hook.f.) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Nematoceras oblonga Hook.f. Fl. Nov.-Zel. 1: 250, t.57B (1853).
Corysanthes oblonga (Hook.f.) Hook.f. Handb. N. Zeal. Fl. 266 (1864).
Corybas oblongus (Hook.f.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
There are two or three taxa included in this complex. One appears to be identical with HB Matthews's Corysanthes "aestivalis" (see Scanlen E. Matthews & son on orchids. NZNOG Historical Series 2006; 14: 12). A white flowered form (West Coast and subantarctic islands) is more clearly separate.

Spiranthes Rich. De Orchid. Eur. 20, 28, 36 (1817)

Spiranthes novae-zelandiae Hook.f. Fl. Nov.-Zel. 1: 243 (1853).
Spiranthes australis as meant by Hook.f. Handb. N. Zeal. Fl. 272 (1864), is not that of Lindl. (1824).
Spiranthes sinensis as meant by Rupp & Hatch. Proc. Linn. Soc. New South Wales 70: 58 (1946), is not that of Ames (1908).
Spiranthes lancea as meant by Hatch. Trans. Roy. Soc. New Zealand 82: 614 (1954), is not that of Backer, Bakh.f. & Steenis (1950).
The name Neottia sinensis has been used for Spiranthes australis in Australia, as has the name Spiranthes sinensis var. australis (R.Br.) H.Hara & Kitam. Acta Phytotox. Geobot. 36 (1–3): 93 (1985).

Spiranthes "Motutangi": tagname for endangered Far North taxon similar to S. australis.

Stegostyla D.L.Jones & M.A.Clem. Orchadian 13(9): 411 (2001). Caladenia alliance

Stegostyla atradenia (D.L.Jones, Molloy & M.A.Clem.) D.L.Jones & M.A.Clem. Orchadian 13(9): 414 (2001).
Caladenia iridescens as meant by Hatch. NZNOG Newsletter 16: 1 (1985), is not that of R.S.Rogers (1920).
Caladenia carnea R.Br. var. minor forma calliniger

Hatch. Trans. Roy. Soc. New Zealand, Bot. 2: 187 (1963).
Caladenia atradenia D.L.Jones, Molloy & M.A.Clem. Orchadian 12(5): 221 (1997).
"Caladenia calliniger" and Caladenia aff. iridescens tagnames.

Stegostyla lyallii (Hook.f.) D.L.Jones & M.A.Clem. Orchadian 13(9): 413 (2001).
Caladenia lyallii Hook.f. Fl. Nov.-Zel. 1: 247 (1853).
There seem to be a number of taxa currently included in the S. lyallii agg., including a small form from Iwitahi and Nelson Lakes.

Stegostyla aff. alpina: plants structurally closer to S. alpina than to S. lyallii are in NZ (see St George. NZNOG Journal 63: 4 [1997]).

Sullivania F.Muell. J. Proc. Roy. Soc. New South Wales 15: 229 (1882).

Sullivania minor (R.Br.) D.L.Jones & M.A.Clem. Orchadian 15: 36 (2005).
Caleana minor R.Br. Prodr. Fl. Nov. Holland.: 329 (1810).
Caleya minor (R.Br.) Sweet. Hort. Brit. (Sweet) 385 (1827).
Caleya sullivanii F.Muell. Australas. Chem. Druggist 4: 44 (1882).
Caleana nublingii Nicholls. Victoria Naturalist 48: 15 (1931).
Paracaleana sullivanii (F.Muell.) Blaxell. Contr. New South Wales Natl. Herb. 4:281 (1972).
Paracaleana minor (R.Br.) Blaxell. Contr. New South Wales Natl. Herb. 4: 281 (1972).

Thelymitra J.R.Forst. & G.Forst. Char. Gen. Pl. 97 t.49 (1776)

Thelymitra aemula Cheeseman. Trans. & Proc. New Zealand Inst. 51: 94 (1919).

Thelymitra brevifolia Jeanes. Muelleria 19: 19–79 (2004).

Thelymitra carnea R.Br. Prodr. Fl. Nov. Holland.: 314 (1810).
Thelymitra imberbis Hook.f. Fl. Nov.-Zel. 1: 244 (1853). A colour form only.
Thelymitra carnea R.Br. var. imberbis (Hook.f.) Rupp & Hatch. Proc. Linn. Soc. New South Wales 70: 59 (1946).

Thelymitra colensoi Hook.f. Handb. N. Zeal. Fl. 271 (1864)
Thelymitra intermedia Berggr. Minneskr. Fisiog. Sallsk. Lund 8: 21 f (1878).
Thelymitra longifolia J.R.Forst. & G.Forst. var. stenopetala Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 396, plate 80 F–H (1952).
Thelymitra longifolia J.R.Forst. & G.Forst. var. intermedia Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 396, plate 80 J (1952).
Was tagnamed T. "pseudopauciflora" for a time.

Thelymitra cyanea (Lindl.) Benth. Fl. Austral. 6: 323 (1873).
Macdonaldia cyanea Lindl. Bot. Reg. 25 (1840).
Thelymitra uniflora Hook.f. Bot. Antarct. Voy., Vol. 1, Fl. Antarct.: 70 (1844).
Thelymitra venosa as meant by Cheeseman. Man. New Zealand Fl. 671 (1906), is not that of R.Br. (1810).
Thelymitra venosa R.Br. var. typica Hatch Trans. & Proc. Roy. Soc. New Zealand 79: 390, plate 77 A–C (1952).
Thelymitra venosa R.Br. var. cedricsmithii Hatch Trans. & Proc. Roy. Soc. New Zealand 79: 390, plate 77 D–E (1952).
Thelymitra venosa R.Br. var. cyanea Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 391, plate 77 F–H (1952).

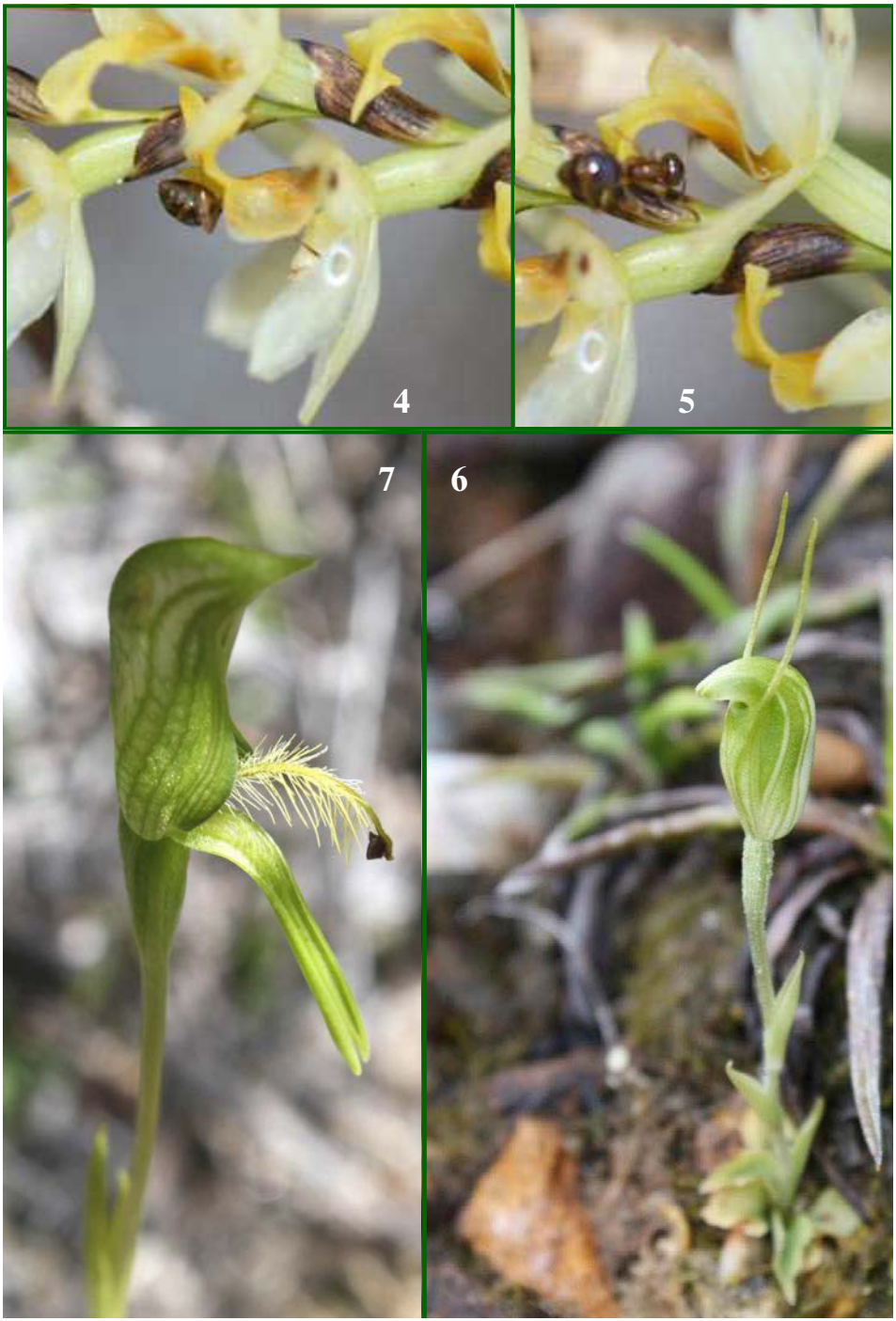
Thelymitra X dentata: a sterile hybrid of T. longifolia X T. pulchella.
Thelymitra dentata L.B.Moore. New Zealand J. Bot. 6: 478, f.2 (1969).

Thelymitra formosa Colenso. Trans. & Proc. New Zealand Inst. 16: 338 (1884).
Thelymitra circumsepta as meant by Hatch. NZNOG Journal 65: 8 (1997), is not that of Fitzg. (1878).

Thelymitra hatchii L.B.Moore. New Zealand J. Bot. 6: 477, f.2 (1969).
Thelymitra pachyphylla as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 394, plate 79 D–H (1952), is not that of Cheeseman (1906).
Thelymitra concinna Colenso. Trans. & Proc. New Zealand Inst. 20: 207 (1888) appears to be the pink-ciliated form of T. hatchii, and if so has precedence.

Thelymitra aff. ixioides.
Thelymitra ixioides as meant by Hook.f. Handb. N. Zeal. Fl. 669 (1864), is not that of Swartz. (Kongl. Vetansk. Acad. Nya Handl. 21: 253, t.3, f.L [1800]).
Thelymitra ixioides var. typica (Hook.f.) Rupp & Hatch. Proc. Linn. Soc. New South Wales 70: 59 (1945).

Thelymitra longifolia J.R.Forst. & G.Forst. Char. Gen. Pl. 98 t.49 (1776).
Serapias regularis Banks & Sol. ex G.Forst. Prodr. 59 (1776).
Thelymitra forsteri Sw. Kongl. Vetensk. Acad. Nya Handl. 21: 228 (1800).
Thelymitra nemoralis Colenso. Trans. & Proc. New Zealand Inst. 17: 249 (1885).
Thelymitra alba Colenso. Trans. & Proc. New Zealand Inst. 18: 272 (1886).
Thelymitra cornuta Colenso. Trans. & Proc. New Zealand Inst. 20: 206 (1888).
Thelymitra longifolia J.R.Forst. & G.Forst. var. alba (Colenso) Cheeseman. Man. New Zealand Fl. 339 (1925).
Thelymitra longifolia J.R.Forst. & G.Forst. var.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Left: Gary Anderson's *Thelymitra cyanea* from Mt Holdsworth, Wairarapa.

Above: (for comparison), *T. cyanea* from Routeburn, Otago (p. 39)

Below and right: orchids from the Milford Track (see p. 39); *Nematoceras* "whiskers" (its southernmost record), *N. acuminatum* and *Pterostylis venosa.*

forsteri Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 396, plate 80 B–E (1952).
Thelymitra aristata as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 395, plate 79 M–N, plate 80 A (1952), is not that of Lindl. (1840), and has been tagnamed T. "tholinigra" by Scanlen.

Thelymitra aff. longifolia agg: some undescribed taxa that appear to be insect-pollinated.

Thelymitra malvina M.A.Clem., D.L.Jones & Molloy. Austral. Orchid Res. 1: 141 (1989).

Thelymitra matthewsii Cheeseman. Trans. & Proc. New Zealand Inst. 43: 177 (1911).

Thelymitra nervosa Colenso. Trans. & Proc. New Zealand Inst. 20: 207 (1888).
Thelymitra decora Cheeseman. Man. New Zealand Fl. 1151 (1906). Spotted and unspotted forms grow together.

Thelymitra pauciflora R.Br. Prodr. 314 (1810).
Thelymitra pauciflora sens. strict. is in NZ according to Jeanes (Muelleria 19: 19–79 [2004]); however, there are also a number of forms in this aggregate.

Thelymitra pulchella Hook.f. Fl. Nov.-Zel. 1: 244 (1853).
Thelymitra fimbriata Colenso. Trans. & Proc. New Zealand Inst. 22: 490 (1890).
Thelymitra pachyphylla Cheeseman. Man. New Zealand Fl. 1151 (1906).
Thelymitra caesia Petrie. Trans. & Proc. New Zealand Inst. 51: 107 (1919).
T. pulchella is a very variable species, yet all of these appear to have features that are relatively stable in some populations.

Thelymitra purpureofusca Colenso. Trans. & Proc. New Zealand Inst. 17: 249 (1885).
Thelymitra "Whakapapa": undescribed taxon from Ruapehu, appears to be distinct.

Thelymitra sanscilia Irwin ex Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 397, plate 81 B–E (1952).

Thelymitra tholiformis Molloy & Hatch. New Zealand J. Bot. 28: 111, f.6 (1990).
Thelymitra intermedia as meant by L.B.Moore. Fl. New Zealand Vol. 2: 129 (1970), is not that of Berggr. (1878).

Thelymitra "Ahipara": an unnamed taxon from the Far North, may be identical with T. "darkie".

Thelymitra "Comet": a large, late-flowering Thelymitra from the Kaweka range. Appears to be sterile, so probably a hybrid.

Thelymitra "darkie": undescribed taxon from the Far North (see McCrae. NZNOG Journal 24: 11; 77: 22 [1987]). May be identical with T. "Ahipara".

Thelymitra "rough leaf": undescribed taxon from the Far North (see McCrae. NZNOG Journal 24: 11; 77: 22 [1987]).

Thelymitra "sansfimbria": plain blue flowers from Far North (see Scanlen. NZNOJ 98: 36 & 102: 39, 45).

Thelymitra "sky": undescribed taxon from the Far North (see Scanlen. NZNOG 70: 30–35, f.6 [1998]).

Thelymitra "tholinigra": (see Scanlen. NZNOJ 85: 10, 15).

Thelymitra "Whakapapa": undescribed taxon from Ruapehu, that may correspond to T. purpureofusca, or may be distinct.

Townsonia Cheeseman. Man. New Zealand Fl. 692 (1906). Acianthus alliance

Townsonia deflexa Cheeseman. Man. New Zealand Fl. 692 (1906).
Townsonia viridis as meant by Schltr. Repert. Spec. Nov. Regni Veg. 9: 250 (1911), is not Acianthus viridis of Hook.f. (1860).
Acianthus viridis as meant by L.B.Moore. Fl. New Zealand Vol. 2: 107 (1970), is not that of Hook.f. (1860).

Waireia D.L.Jones, M.A.Clem. & Molloy. Orchadian 12(6): 282 (1997)

Waireia stenopetala (Hook.f.) D.L.Jones, M.A.Clem. & Molloy. Orchadian 12(6): 282 (1997).
Thelymitra stenopetala (Hook.f.) Bot. Antarct. Voy., Vol. 1, Fl. Antarct.: 69 (1844).
Lyperanthus antarcticus Hook.f. Bot. Antarct. Voy., Vol. 1, Fl. Antarct.: 544 (1847).

Winika M.A.Clem., D.L.Jones & Molloy. Orchadian 12(5): 214 (1997). Dendrobium alliance

Winika cunninghamii (Lindl.) M.A.Clem., D.L.Jones & Molloy. Orchadian 12(5): 214 (1997).
Dendrobium biflorum as meant by A.Rich. Essai Fl. Nov. Zel. 221 (1832), is not that of Sw. (1800).
Dendrobium cunninghamii Lindl. Bot. Reg. 21 sub. t.1756 (1835).
Dendrobium lessonii Colenso. Trans. & Proc. New Zealand Inst. 15: 326 (1883).

Original papers

Pterostylis "goodgerii"

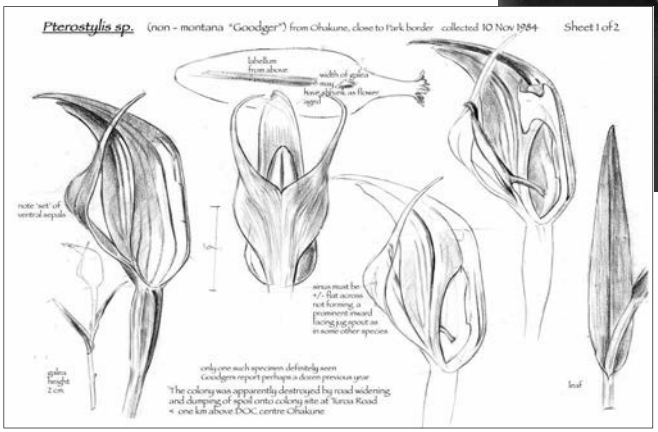
By Gordon Sylvester

In Nov 1983 Bob Goodger recorded a peculiar *Pterostylis* sp. from a trackside near Ohakune. He collected a specimen and passed it on to Bruce Irwin who dissected and drew it in pencil. The drawing is recorded in the journal as well as in the book of Bruce's drawings published by the Group. An article was written by Bruce Irwin as a attribute to Bob Goodger and published in Journal 89:**40** with the tag name of *Pt*. "goodgerii".

The project to digitise Bob's slide collection gifted to the Society by Beryl Goodger has brought to light the photos taken by Bob way back in November 1983. In conjunction with the drawings completed by Bruce it is now our responsibility to confirm the colony and if possible get formal recognition for both the species and the type locality at Ohakune—which is of course within the boundaries of the National Park.

The questions now before us is: is the colony still in existence? Is it a plant suitable for speciation? And who will complete the necessary documentation, collection, and lodgement of herbarium species?

The original of the photograph below is in colour, and it shows one of the four slides, kept by Bob; of his discovery. Reference to the article in J. 89 page 40 and the accompanying drawing will give some perspective to the plant.



Bruce Irwin's drawing of *Pterostylis* "goodgerii"

Earina mucronata and visitor

By Gordon Sylvester

On 23 Sept 2011, I investigated an area of the Dillmanstown Goldfield Tailings; this area is off Larrikins Rd, the old stage coach road into the town. It was not an area I had looked at previously. The purpose of the trip was to see how big an area was covered by the small *Thelymitra* species I had noted earlier in the year, and to see what stage of growth they were at.

Having checked the original site I then moved on further down the road and noted a small grassy bank just above the road. There were five *Thelymitra* plants of flowering size and stems were evident deep in the leaf axis.

At the top of the bank was a small depression concealed from the roadway. There were three epiphytic species growing in this depression. On the high side was an *Earina mucronata* in full flower. The labellum was a pale yellow green.

On the second and later visit on 29 Sept 2011, I returned to get a macro shot of the labellum. While resetting my position I noticed a small wasp like insect in the viewfinder, its thorax cradled by the labellum; the weight of the insect had slightly depressed it as well.

I quickly took several shots and waited. The insect emerged and moved slightly up the stem. I managed to get another couple of shots before the insect disappeared from my viewfinder.

The insect had a colour barred thorax almost black and a very muddy yellow. It location inside the flower leads me to believe it was getting nectar but I could not see any pollen on it **(Figs 4, 5)**. Notwithstanding that statement, is this insect a pollinator of *Earina*?

I have previously noticed changes in the colour of the labellum in *Earina mucronata*. I now wonder if the act of an insect inserting itself into a flower creates a pseudo pollination event for the plant. And as a result of this activity the plant responds by the labellum changing its colour. Much like the Genus Cymbidium and a couple of others, when pollination takes place.

If in fact this is the case then the range of colours noted in various genera of *Orchidaceae* species have at least a possible reason.

Pterostylis [Linguella] puberula: is it a New Zealand endemic?

by Mark E Moorhouse.

Oct 19-21 2011. It is very pleasing to be able to report to the Group that populations of the seriously threatened *Pterostylis [Linguella] puberula* **(Fig.6)** and the associated species *Pterostylis [Plumatichilos] tasmanica* **(Fig.7)** in the main Golden Bay, Nelson site are both stable and numbers in this year's survey even show a slight increase from the survey of two years ago, although a few known sites showed decrease in numbers and in two further sites the population appears to have died out.

This year's survey, carried out by DOC officers Shannel Courtney and Simon Walls assisted by Georgina Upson and myself was carried out to develop a management plan to both protect current colonies and encourage the development and spread of new colonies. Over a three day period a hundred hectares of potentially suitable scrubland was considered, assessed and much carefully searched. The success of the programme was enhanced by the location of several new colonies including another 'mother' colony.

To explain, it has been clearly established that *Pt. puberula* seed is windborne on this site and a large known 'mother' colony was upwind of virtually all other known sites, some 'offspring colonies' well in excess of a mile distant but all falling within a clear band a couple of hundred metres wide lying to the predominant wind direction. So it was an exciting find when Georgina discovered another very large colony on a prominent ridge upwind of which no colonies were to be found, but downwind a new band of healthy 'offspring' colonies growing on suitable sites. It has been an interesting exercise studying this fussy little orchid with it's very specific needs. It seems it must have a number of criteria to survive and colonize. These include a suitable moist clay/loess mixture of soil, little moss competition, extremely short or virtually no plant cover, but does prefer about metre-high shelter from both sun and wind providing the light factor is high and not compromised by the cover, so colonises the fringes of small clearings in short scrub. Where a wind-shadow situation exists just to the lee side of a prominent ridge, the plants seem to be able to survive under very short vegetation [>30cms] but stress levels are usually higher. This is noticeable in flowering plants where to produce the flower it has been at the expense of the foliage which is often yellow or even brown tipped. It appears the plant dies soon after seed-set in many cases with all the energies of both tuber and leaf totally expended to produce viable seed. To compensate, those that do manage to set seed seem quite virile and the proportion of non-flowering to flowering plants is frequently 10 to one or higher.

The wind borne seed factor raises some interesting issues. Not the least of these is whether we do in fact actually have an endemic species as Jones and Clements have concluded from their studies. The *Pterostylis [Linguella] nana* family to which *Pt. puberula* is clearly a member is extensive and prolific in many areas of South Eastern Australia and Tasmania. There is now a clear need to ensure that we do indeed have a unique species before our precious Conservation funds are expended in rather expensive and time consuming management of an Australian vagrant which is common in country of origin.

There is also a need to make some genetic comparisons within the known, yet very isolated [from each other], populations found within New Zealand shores. If *Pt. puberula* is an Australian vagrant, there is a clear possibility that we have vagrants from different sectors of the *Pt nana* aggregate here in NZ. I suggest that no such comparative study has ever been undertaken using fresh specimens and genetic analysis tools. Doing so may determine that one of our populations is indeed endemic, I rather hope so. I suggest the Coromandel population being most likely being furthest east and growing on geologically old territory. However plants from all three sites may prove to be dif-

ferent wind-borne vagrant taxa that have capitalized on the man-made modification of environment for long enough to achieve 'native' [50 yrs] status. The natural endemic forest cover precluded this species from Nelson prior to European colonization, yet clearing of forest and subsequent reversion [which is still very much in process] have provided perfect sites for windblown *Pt puberula* seed to strike and take hold. Ecologically speaking this opportunity is extremely recent, certainly less than 120 years.

Conclusion: If *Pt. puberula* found in Nelson is indeed an endemic species then I suggest the process to speciation has been incredibly rapid and so, rather unlikely. When you are standing in a known 'drop zone for migratory birds' with the Tasman Sea to your back, the normal 40 knot wind blasting up your kilt and you are considering a wind-borne orchid species, you are compelled to deal with the obvious question. How did these plants begin life in this location. One thing for certain, it was not by vegetative spread! I have personally seen a non-migratory Tasmanian vagrant bird species very near this orchid site that no-doubt unwillingly but successfully made the Trans-Tasman crossing. Is *Pt puberula* really a New Zealand endemic? My case rests!

19th AOC Conference and Show Perth Western Australia
PO Box 576 Morley, Western Australia 6062. Email: aocconference@dodo.com.au ABN 14966925212

Dear Orchid Aficionado

The 19th AOC Conference & Show to be held in Perth from 11-16 September 2012 continues to build momentum with a confirmed Speaker List of 19 world class orchid specialists, 12 of whom are from overseas. They are headed by Terry Root of the Orchid Zone, USA, who will be our Keynote Speaker.

The latest addition to the 19th AOC Conference Lecture Program is Isobyl la Croix of the UK, the noted author and expert on African Orchids. Isobyl's lecture will compliment that of Johan Hermans on the Orchids of Madagascar.

The unique Western Australian native orchids have not been ignored, with the inclusion of Dr Mark Brundrett of the University of Western Australia, and Andrew Brown, Threatened Flora Coordinator at the Western Australian Department of Environment and Conservation and honorary Curator of the Orchidaceae and Myoporaceae at the Western Australian Herbarium. Our Lecture Program is by no means done and dusted, so stand by for further updates.

Registration for the 19th AOC Conference & Show is open and the details are now available on line at http://www.waorchids.iinet.net.au/Registration.pdf. And don't forget that Earlybird Registrations must be received by 31st January 2012. If you are unable to download the registration form, please contact the Secretary at the address above or email at aocconference@dodo.com.au with your postal details. We now have credit card facilities for your ease of payment.

There is a particular interest in the 5 day South West Tour led by Andrew Brown, (see above) to see in situ, the wonderful range of unique native terrestrial orchids of Western Australia. Seats are limited, so get in soon and avoid disappointment.

Five flowers at Millerton mine

By the late Leicester Kyle

Caladenia catenata

a slow curve
and as faint

a pulled thread against the moss
all edge

we go past

even the flower might be
one piece of a petal
from the tree

a speck
that's floated in
from an alien source
suspended
on an insect silk

best left
half seen

and turned to later
when there's time to find

privately

Pterostylis montana var. rubricaulis

not in kauri
(see the book)

but here
far from there
in cold bush
convivial

on the way
to bath-house
canteen
and offices dead
before this bush
took life

crowding
like ghosts
for a walk among
the ruins

staunch
in stance
and almost
sartorial

in disposal of the
leaves
lined fabric of the
flowers

troop for space
and permanence
beside the hundred
steps

Calochilus robertsonii

and
to you

alone
in the rushes

that you show
your orchid face
and tinsel beard
in a sour spot

exotica's
more usual
in a voluptuous place
with richness

but you
like saints before
make a solitary choice
take mud

on the pakihi
to the sun
(when it shines)

and flower
and fade
where none compete

nor envy

your gaudiness

Thelymitra venosa

taste honey in the tree
myrtle in the manuka
and in your eye
the sky

I
crouch before your blue

you
have no modesty

make your space
in a water world
of rush and moss

reach greedy
like the flesh
held firm

and no-one sustains you

a double dip
to be
are you
with me
the disguise of a life

to keep
in your short self
a brief for brilliance

The Rev. Leicester Kyle, botanist, minister of religion, writer and poet, died in 2006. He had a long interest in native orchids and had been a member of the NZNOG [see J90: 14]. Kyle lived the last few years of his life on the West Coast, at Millerton, and there wrote a number of new poems about orchids. Four are reproduced here with permission from the Leicester Kyle Literary Estate. For more of Leicester Kyle's writing, go to http://mairangibay.blogspot.com/2011/07/launching-leicester-kyles-collected.html. Gordon Sylvester, who knew him, sent the list of his orchid discoveries on the following page.

Corybas oblongus

round here
the first
show of
the glitter
of spring

bright tips
in the bush
by the stream
road edge
on rocks
along the steps
jeweleries of light
like this-
one patterned leaf beneath
a brow of moss

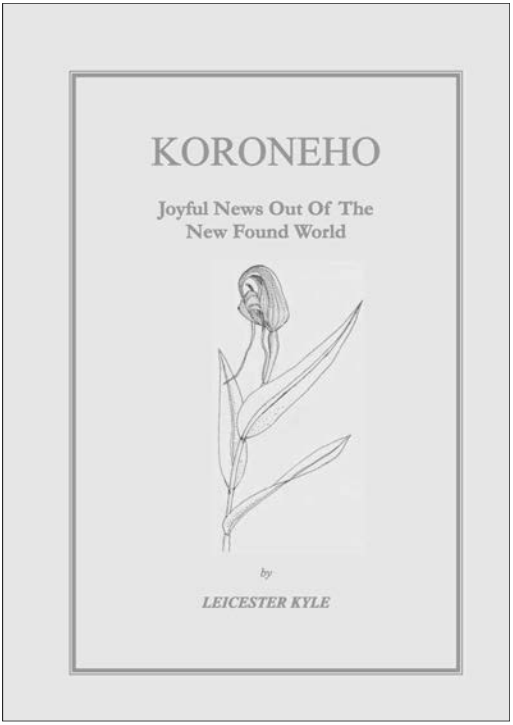
one flower
with tentacles

carved from the thought
of a mind against utility

look in:
a hole in the world
pass to another sphere

you won't want this flower

stay without



Leicester Kyle's long poem *Koroneho: joyful news out of the new found world* is a tribute to fellow botanist, writer and minister of religion the Rev. William Colenso; it has 14 sections, each devoted to one of Colenso's orchids described 100 years earlier. It is now published jointly by the Leicester Kyle Literary Estate and the Colenso Society: istge@yahoo.co.nz.

Leicester Kyle's orchids, with Ecological District

Compiled by Gordon Sylvester

Buller Coal Plateau

Pterostylis foliata 48.01;
Nematoceras papa 48.01;
Pterostylis venosa 48.01;
Winika cunninghamii 48.01;
Earina autumnalis 48.01;
Earina mucronata 48.01;
Adenochilus gracilis 48.01;
Aporostylis bifolia 48.01;
Chiloglottis cornuta 48.01;
Thelymitra cyanea 48.01;
Thelymitra hatchii 48.01;
Thelymitra pauciflora 48.01;
Thelymitra pulchella 48.01;
Gastrodia cunninghamii 48.01;
Singularybas oblongus 48.01;
Pterostylis graminea 48.01;
Thelymitra longifolia 48.01;
Pterostylis cernua 48.01;
Pterostylis banksii 48.01;
Caladenia chlorostyla 48..01;
Nematoceras trilobum 48.01;
Nematoceras acuminatus 48.01;
Corunastylis nuda 48.01;
Orthoceras novae-zeelandiae 48.01;
Calochilus paludosus 48.01;
Pterostylis irsoniana 48.01.

Millerton

Drymoanthus adversus 48.01;
Earina autumnalis 48.01;
Earina mucronata 48.01;
Corunastylis nuda 48.01;
Microtis unifolia 48.01;
Orthoceras novae-zeelandiae 48.01;
Nematoceras longipetalum 48.01;
Diplodium alobula 48.01;
Caladenia atradenia 48.01;
Pterostylis australis 48.01;
Prasophyllum colensoi 48.01;
Nematoceras papa 48.01;
Singularybas oblongus 48.01;
Nematoceras acuminatus 48.01;
Chiloglottis cornuta 48.01;
Caladenia chlorostyla 48.01;
Ichthyostomum pygmaeum 48..01;
Aporostylis bifolia 48.01;
Adenochilus gracilis 48.01;
Acianthus sinclairii 48.01;
Pterostylis banksii 48.01;
Thelymitra longifolia 48.01;
Calochilus paludosus 48.01;
Thelymitra x dentata 48.01;
Winika cunninghamii 48.01;
Waireia stenopetala 48..01;
Townsonia deflexa 48.01;
Thelymitra pulchella 48.01;
Thelymitra pauciflora 48.01;
Thelymitra nervosa 48.01;
Thelymitra hatchii 48.01;
Calochilus paludosus 48.01;
Pterostylis cardiostigma 48.01;
Thelymitra cyanea 48.01;
Thelymitra carnea 48.01;
Pterostylis cernua 48.01;
Pterostylis venosa 48.01;
Pterostylis montana 48.01;
Pterostylis irsoniana 48.01;
Pterostylis humilis 48.01;
Pterostylis graminea 48.01;
Pterostylis foliata 48.01;
Thelymitra "aff" ixioides 48.01.

Sawcut Gorge

Chiloglottis cornuta 42.04;
Nematoceras trilobum 42.04;
Thelymitra longifolia 42.04.

A tale of two gastrodias

By Ian St George

In 1834 Richard Cunningham (RC) found a *Gastrodia* at Whangaroa.

In 1837 his brother Allan Cunningham (AC) included that *Gastrodia* among the orchids in the first published list of NZ plants. He wrote,

> "G *sesamoides ? Br. Prodr.* 1. *p.* 330…. Vicinity of Wangaroa.—1834, *R. Cunningham.* Note.—This species, found sparingly in New Zealand, may perhaps prove distinct from the plant of Port Jackson, but the fragment of a specimen with which I have been furnished, has not enabled me to determine it [1]."

The "plant of Port Jackson" was Robert Brown's Australian *G. sesamoides*.

In 1838 AC visited William Colenso at the Bay of Islands, and afterwards sent him a list of NZ orchids with descriptions. Some time after that Colenso filled a notebook with lists of NZ plants; he called it his *Glossarium Botanicum.* In it he described RC's Whangaroa plant; he wrote,

> "*Gastrodia sesamoides*: flower forming a tube, divided at Þe mouth into 5 lobes: Labellum, included in the flower: Column long, hollow at Þe apex; thickened at Þe base in front, where Þe stigmatic gland exists. G. is occasionally epiphytical on roots of Trees: its roots fleshy, branched & jointed: flower scape without leaves, but furnished with alternating short sheaths. Flowers in racemes whitish or ochre col^{d}. Found by R.C. in Þe vicinity of Wangaroa, 1834 [2]."

Colenso was still using the old "thorn" letter, Þ, for "th", but he was quite clearly saying the Cunninghams' *Gastrodia* is the whitish or ochre long-column plant we now call *Gastrodia* aff. *sesamoides*.

In 1853 JD Hooker's *Flora Novae-zelandiae* introduced *G. cunninghamii*; the description included "*columna brevissima.* G. sesamoides, *A. Cunn. Prodr. non Br.*" (column shortest. Allan Cunningham's *G. sesamoides* is not that of Robert Brown), and he added, "From the Bay of Islands, *R. Cunningham*, to Port Preservation, *Lyall*," naming it for Richard Cunningham [2]. Perhaps Hooker had better RC specimens than the fragment from Whangaroa described by AC, and found it was the same as the short-column Fiordland plant.

But that seems unlikely: in 1970 Lucy Moore pointed out that *G. cunninghamii* is not found north of Little Barrier Island. She wrote, "Hooker's record of Bay of Islands may have been based on the 'fragment of a specimen' mentioned by A. Cunningham [3]". If that is the only RC specimen Hooker examined, the fragment must have been missing the column, or Hooker would not have thought it the same as Lyall's plants.

A passage in a letter from Colenso to JD Hooker dated 17 May 1843 suggests that, curiously, Hooker had himself found *Gastrodia*:

> "Although I have discovered several *Orchideæ*, since you left, I have not yet seen *Gastrodia*; and can but think you a very lucky fellow, to fall in with your specimens. It was sought for by *Allan* Cunningham without success [5]."

But Hooker made no mention of that collection (unlikely to have been flowering as he was at the Bay from August to November), relying on RC's specimen from a long way further north than *G. cunninghamii* grows. It seems to me we have to accept the type locality of *Gastrodia cunninghamii* as Preservation inlet and the collector, Lyall if the name is to remain correct for the short-column plant. It would be silly, I think, to call it "Cunningham's gastrodia" if, as seems likely, RC never saw it.

The *Gastrodia* aff. *sesamoides* that RC did find at Whangaroa is, as AC and JDH thought, distinct from the Australian *G. sesamoides*, and it is still unnamed.

Colenso quite possibly never found the short-column plant we call *G. cunninghamii*: when in 1884 he did find a plant with white petal- and sepal-tips he called it *G. leucopetala.*

[References on request]

Nematoceras "Kaimai" variation at Paeroa Reservoir and other sites

By Graeme Jane

Last year, near the end of the season, we stumbled across a population of *Nematoceras* with a dappled (diffusely) red labellum which seemed to fit neither *N. rivulare* nor *N.* "Kaimai". Suspicions were roused as *N. macranthum* was present within 15 m downstream of the site and typical *N.* "Kaimai" was found in the stream also within 15 m upstream. Bruce Irwin suggested that there appeared to be a cline between true *N. rivulare* and *N.* "Kaimai". So there we left the issue for the season (*NZ Native Orchid Journal* 119:29).

This year we paid several visits to the site and finally caught the plants in full flower. Close examination showed the population of red flowered plants was uniform as one might expect from a colony originating from a single seed (photos 9466,9474). The flower fitted well with *N.* "Kaimai" with the narrow ovary standing erect above the leaf but the shape differed slightly. Instead of tip of the labellum curling in towards the ovary the tip tended to jut forwards. Careful consideration ruled out any possibility of hybridism with *N. macranthum*.

A wider search around the site reveal a large population of *Nemaoceras* along the stream bank for some distance upstream of the first site, on a track 15 m above. This population was broad band of normal *N.* "Kaimai" over 30 m or so containing small discrete populations (from a single seed source?) of what could be regarded as red *N.* "Kaimai". These flowers were similar to those on the track above but a few showed very short stiff hairs around the lower margin of the labellum (photo 9474A).

The plants designated as "normal" *N.* "Kaimai" had red coloration only at the top of the labellum mostly in the area enclosed by the dorsal sepal (photo 9382).

Next we revisited our "reference site" for *N.* "Kaimai" in the Wairoa Stream off Woodlands Rd near Katikati. to make sure that the *N.* "Kaimai" were similar. Again we searched the area more carefully than in past years and found the same red *N.* "Kaimai" present as small groups of plants.

This started a wider search conected with relocating sites in the BOP Waikato area for *N. rivulare* identified by herbarium specimens (a DOC project). Herbarium specimens of course can be difficult to interpret and identify.

Sites visited from south northwards were: Tawarau Gorge, near Waitomo(2 sites); Waharoa Falls, south of Tauranga Ngamuwahine, south-east Kaimai Ranges; Wairere Falls, western Kaimai Ranges; Whanarua Stream falls near Whanarua Bay; Webb Creek, Kauaeranga valley, near Thames, Waiau Falls, near Coromandel.

The first site had plants of *N. iridescens* and the second plants of both *N. iridescens* and normal *N.* ″Kaimai″. The Waharoa Falls site had both *N.* "Kaimai" and *N. acuminatum* (another alias of *N. rivulare*). All the other sites had only *N.* "Kaimai". But in these the colour and shape of *N.* "Kaimai" varied between sites and within sites. The southern sites had only typical, normal *N.* "Kaimai" but from the Woodlands Rd site northwards ie including Paeroa Reservoir, Webb Creek and Waiau Falls colour varied. At Webb Creek the colour was variable within a site with grades between mostly red to normal colouration.

At Waiau Falls, a site of over 100 m with several discrete areas colour appeared continuous with fully red and normal colouration. Here the shape of the flower varied independently of the colour with some fully red flowers with inturned labellum tip and some normal flowers with the labellum tip pointing downwards (photo 9817). Also some plants exhibited leaves with a distinct petiole because the pedi-

cel was partly separated from the petiole (it is usually fully enclosed by the petiole and hence appears sessile). In these plants the pedicel and/or petiole was somewhat curved.

These flowers are approaching *N. rivulare* in shape and presentation. They still differ from *N. rivulare* seen in Northland near Kaeo (Photo 4167) in that the colour is less intense (diffuse, with clear areas on the labellum) and the floor of the labellum is noticeably shorter. It would be interesting to visit sites of *N.* "Kaimai" and *N. rivulare* from Auckland northwards to see if this variation is sustained and does grade from *N.* "Kaimai" to *N. rivulare*. But that is for another season (or two).

An intriguing point is the appearance of hairs on the margin of the labellum in some of the red plants. This is a character on *N.* "Whiskers" although the hairs there extend across the face of the labellum. From a trip south to Nelson I brought back a few flowers on N. "Whiskers" for comparison. The close similarity of these two taxa and with *N. papa* is very striking. All are plants of very wet sites, either close to waterfalls or along stream banks in seepages just above bare the flood line, often associated with kiokio. They form quite distinct geographic distributions. One suggestion is that the colour variation in these taxa is related to different insect pollinators and in particular the red forms at the Paeroa Reservoir are arising from an insect spreading southwards. Or, it may be that the red form is spreading southwards and the genes are mingling with the more usual populations of N."Kaimai".

***Nematoceras* "kaimai" Figs, page 24**

Fig. 8: Red Paeroa reservoir form front view

Fig. 9: As above, side view

Fig. 10: A tip of labellum in red form

Fig. 11: Normal N "Kaimai" Whanarua Bay

Fig. 12: Waiau Falls N "Kaimai" with shape of red form

Fig. 13: N. rivulare Kaeo

Notes etc

Anna Galovich has recently translated some of our material into Estonian. Have a look at http://blog.1800flowers.com/international/nativeorchids-co-es/ .

Art Whistler (whistler@hawaii.edu) emailed on 13 October, "I was given your address by Ewen Cameron. I have a new book out (as co-author with Phil Cribb) entitled *Orchids of Tonga, Niue, and the Cook Islands.* It includes about 50 native species, most with color photos, and sells for $US26 plus shipping. If any members of your society want to order the book, I am the sole distributor (by default) since it is actually a journal issue (*Lankesteriana*)." *Email him—Ed.*

Tony Fluerty took beautifully crisp photographs of *Nematoceras* "restarea" by the Puffer track, Kaitoke, Tararua **(Figs 14–16)**. The camera he used was a Canon 5D mrk 11; his lens was a Canon EF 50mm f/2.5 compact. "Because it was raining I had little light so I shot it at 1/15 sec, f/8 and iso200." Look at Tony's website (Boney Whitefoot Photography) www.boneywhitefoot.co.nz and his blog http://boneywhitefoot.wordpress.com/. *Thanks too to Eric Scanlen who confirmed the identification from the photographs—Ed.*

Danhatchia has been found in Australia: in northern coastal New South Wales, apparently. I know no more than that. Look at http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Danhatchia~australis .

Mike Lusk emailed (29 September 2011), "I've been at several places on the East side of the central Ruahines in the past week and have seen many colonies of N. 'pygmy' Type 3 flowering

much later than the normal June/July season. **(Fig.17).** *Anyone got a decent ruler they could let Mike have? Mike's observations on Nematoceras "red petiole" will appear in the next issue—Ed.*

On 1 November I was in the Onetai valley (between Thames and Paeroa); we passed the cottage where I was born and followed an old logging track, looking for the Maori canoes left there in the 1880s. We did find the canoes, and on the way saw a range of orchids: *Acianthus sinclairii* (fr); *Corybas cheesemanii* (fr); *Diplodium alobolum* (fr); *D. trullifolium* (fr); *Earina autumnalis*; *E. mucronata* (fl); *Nematoceras acuminatum* (fr); *N.* aff. *trilobum* (lf); *N. rivulare* var. "Kaimai" (fl); *Pterostylis banksii* (fl); *P.* aff. *montana* (fl)…. *IStG.*

Gary Anderson sent a January photograph of *Thelymitra cyanea* from Pig Flat on the Mt Holdsworth track in the Tararua **(Fig.18)**. It shows a single flower with long thin tepals. These forms usually are delicate, single flowered, solitary plants and are pretty widespread. They might be contrasted with the colony-forming, much more robust forms with oval tepals, e.g. **Fig. 19** from Routeburn, Otago.

Elisabeth Burton emailed (20 November), "Last week I walked the Milford Track and saw three orchids in flower which I believe are *Pterostylis venosa, Nematoceras acuminatum* and *Nematoceras* 'whiskers' **(Figs 20–22)**. I have attached images and hope you agree with my choices. I would estimate it was about two thirds the way between the Dumpling Hut and the Boatshed where the track follows the Arthur River and the estimated altitude would be 100 m." *This is the southernmost record for N. "whiskers"—Ed.*

Ernie Corbett emailed, "On Saturday afternoon 19th Nov. the active members of the N.O.G. in Taranaki made a surprise visit to Gary Pennial to present him with his Certificate of appreciation for his work as secretary **(Fig.23)**. It was a nice afternoon and we all enjoyed a wander around his bush gardens." *And thanks from all of us Gary—Ed.*

For over a year now Ernie has been sending pictures of a mysterious orchid leaf he has been carefully watching. This year, to his delight, there was a flower stem—and (wait for it) it was that rarity, *Chiloglottis cornuta* **(Fig.24).**

Gordon Sylvester reports that the only known colony of white *Singularybas* on the mainland islands has been destroyed by track widening in Greymouth.

Anne Gaskett emailed, "I asked a colleague, Dr Richard Toft, about the fungus gnats on the amazing photo on the front cover of NZNOJ 121 (Aug 2011). His response might be of interest to the photographer (Mike Lusk) and readers in general: 'Wow! That's a wonderful photo of gnats in action. Those are all males of a rather interesting species: *Allocotocera crassipalpis* (Diptera: Mycetophilidae). The males of this species have a modification to their palpi, with the basal section greatly enlarged and blackened ... you can actually see this on the lower-most fly in the picture (it looks like a dark blob immediately below the head). I have no idea what this modified palpal segment is used for, but perhaps it is also involved in the "gnattic fandango" as some kind of display or maybe is even tapped on something to make a noise (outside our hearing). Would be very cool to find out!'"

Sue McManus (28 Nov 11), "My husband, Jake, and I are new members of NZ Native Orchid Group and we look forward to the journals when they arrive. We have also managed to purchase quite a few back copies. We have a lot to learn. But getting back to that photo of five insects on *Singularybas oblongus* **(Cover picture)**, what drew Jake's eyes to it

(Cover picture), what drew Jake's eyes to it was the colour of its leaf. We found several *S. oblongus* on West Pirongia Rd that day with the same vibrant coloured leaves. Is this colour unusual? Photos taken early afternoon on a shady roadside bank. Thirty minutes later the insects where still there although one of the mites had worked its way up to the lip of the flower head." *I have never seen leaves so red on Singularybas—Ed.*

Sue responded with, "After parting a large amount of foliage on a roadside bank on West Pirongia Road, we found a group of *Singularybas oblongus* growing in the wet moss and were excited to find one unusual coloured specimen in amongst them **(Figs 26, 27)**. Getting in closer with the macro lens, I thought there was a spider web on the back of the flower head and it wasn't until I checked out my pics on the computer, that I thought it might be a slime mould. We went back a week later hoping to see the flower open only to be confronted with a dead flower head covered in a growth. I sent a pic to Clive Shirley, who specializes in fungi and slime moulds, and he ruled out a slime mould because they only have one fruiting body per stalk and there are up to five in this growth. He suggested that it is a fungus type mould."

M.A.M. Renner & S.M. Beadel formally report "*Taeniophyllum norfolkianum*: a second genus of Vandeae (Orchidaceae) indigenous to New Zealand" in the *New Zealand Journal of Botany,* http://www.tandfonline.com/loi/tnzb20.

Gary Little sent a nice shot of a solitary bee on a purple-stemmed *Thelymitra*. **(Fig.25)**

WANTED TO COMPLETE A SET –
NZ Native Orchid Journals
93, 99, 109, 110, 113, 116.
Sue McManus (suemcm25@clear.net.nz).

The Swiss Orchid Foundation at the Herbarium Jany Renz was this year on the World Orchid Conference (WOC) in Singapore. Our presentations (mentioned in the last newsletter) were a complete success, although the situation on the congress was a little chaotic. We were able to inform the audience about the tasks and activities of the Swiss Orchid Foundation and got good feedback. Our magazine *Renziana* 1 was a big success on the congress! It sold very well. This encourages us and gives us even more motivation to bring out the next edition of *Renziana*. In addition to that, it was a great honour for Rudolf Jenny and SOF to receive a fellowship by the OSSEA (The Orchid Society of South East Asia) as the second Swiss in history.
Here are some impressions from the exhibition: http://orchid.unibas.ch/contents/downloads/woc2011/
Currently the BilbiOrchidea has 166,200 entries of orchid bibliographies and the WOI has 110,041 images. After the collection of K. Senghas we have received the slide collection of R. Jenny with 5138 pictures. P. Gölz author of *Die Orchideen der Schweiz und angrenzende Gebiete* will provide us his slide collection of about 70,000 pictures. We started to scan his slides and have already 627 pictures in our database. I. Olmedo is working for four months at the SOF and contributed 175 pictures from Ecuador and Columbia. L. Baquero contributed 154 images of the genus *Dracula* to the WOI. W. Rysy has send us his *Bulbophlyllum* slide collection and we scanned and entered 330 pictures. At the moment we are scanning the drawings of Carl Luer's *Icones Pleurothallidinarum*, and some drawings are already online on our database.
The drawings of the following books have been inserted in our database:

- Icones Pleurothallidinarum XXIII–XXVIII, Carlyle A. Luer
- Icones Plantarum Asiaticum, John M'Clelland, William Griffith
- Icones Plantarum Asiaticarum, Part III, Monocotyledonous Plants, William Griffith
- Archivos do Museu Nacional do Rio de Janeiro, A. J. de Sampaio
- Archivos de Botanica do Estado de Sao Paulo, Friedrich Richard Rudolf Schlechter; Frederico Carlos Hoehne
- Anexos das Memorias do Instituto Butantan, Seccao de Botanica, Vol. 1, fasc. 2, 4, Friedrich Richard Rudolf Schlechter; Frederico Carlos Hoehne
- Botanica, Frederico Carlos Hoehne
- Orchidaceae / bearb., Otto Porsch
- Beitraege zur Orchideenflora SÃ¼damerikas, Friedrich Kraenzlin

Camp and Field Trip 2012

The 2012 field trip of the group is planned to be held at lake Lyndon Canterbury high country.

The proposal is to conduct the trip along the same lines as the Arthurs Pass trip in 2010.

The venue is isolated and is a back country "lodge" operated by the local fishing club.

I need to know how many members are interested in attending and what period of time to plan the event for.

The proposal is that the trip would be run over a 3-5-7 day period. The proposed dates would be Xmas - New Year 2012.

At the AGM held at Kennedy Park 2011, it was decided to combine the AGM with this trip.

The surrounding area is high country grasslands. Genera and species previously noted include *Prasophyllum* including *Prasophyllum* "A", *Hymenochilus tristis*, and *Hymenochilus tanypodus*, *Thelymitra* sps. Why late December? generally the orchids are out and flowering—it is snow high country.

Surrounding areas include the Rakaia River, Lake Coleridge, as well as Porters Pass, Kowhai River, Castle Hill Limestone area.

It is important to note that the nearest petrol station is located at Springfield some 30 minutes' drive away. There are no shops closer than Darfield.

The facilities are all taken into the site. We have to provide the fuel for heating the hot water. A generator is supplied for electric lighting, and will require fuel to operate. Cooking facilities are powered by gas.

Lake Lyndon is fishable and is subject to Fish and Game licences and regulations. Deer and Chamois are also found in the vicinity.

Weather conditions are similar to Arthurs Pass. All four seasons can occur in one day. You will need to be prepared for that environment. Bedding is not supplied.

I am looking at expressions of interest to join us. Once the Catering Committee (Evelyn and Melanie) has worked out costs, we can then work out total costs. I am assured the menu will be similar to "Arthurs Pass".

I have 9 names already. The accommodation is limited. To ensure a place I need to know your interest. Please email me to go onto the mailing list.

Gordon Sylvester: southcol@xtra.co.nz

The Column: Eric Scanlen

1. The macranthum manhunt

Ian St George and the writer are interested in tying down and documenting, all the distinctly separable taxa in the *Nematoceras macranthum, N. papillosum* aggregate in New Zealand, including the outer islands, where possible. A hurried email announcement, made on 30 Sept 2011 gave those likely to have pertinent information, a year's start because the Journal notice will arrive only after the 2011 *N. macranthum* season has finished. Volunteers would be welcome to lead field parties to the macranthum manhunt in suitable areas.

The macranthum manhunt is based on the very successful Corybas crawls that Bruce Irwin organised, with the help of NOG members, in Taranaki, headquarters of the *Nematoceras rivulare* aggregate. From these "crawls" and Bruce's knowledge of some northern forms, seven distinct taxa in the *N. rivulare* agg. were successfully defined. Bruce depicted them immaculately with his detailed drawings in Journal 47 and brought definite clarity to the previous confusion in this aggregate.

N. macranthum's several forms can similarly yield distinct taxa as you may well be aware but they are known from Kaitaia to South Cape and the outer islands. Some pix of specimens received by the writer or encountered personally, are shown here for starters. Undoubtedly there will be more forms than these but a concerted effort by all interested and able members is undoubtedly the best way of achieving this aim.

Detailed drawings of your *N. macranthum* forms would be most welcome of course but good colour pix from different angles, including a centre line section, would be most welcome too. Descriptions and measurements are most important where erection of a new species is distinctly possible.

Herbarium specimens too please from authorised private property or roadsides but only by permit bearers in parks. Modest funding for chromosome counts and for molecular comparisons can be made available from NOG funds and/or from possible donations. Members or others who are in a position to organise the technical studies, please contact the Editor for details.

Only well-established, fairly consistent taxa should be considered please, in order to eliminate oddities, sterile mutants and isolated hybrids.

Some known forms are illustrated below from available information. Traits complying with Colenso's *N. papillosum* have been underlined. These possible starters comprise:

Fig. 31 *N. macranthum* (Hook. f.) northern form, flowers Oct-Nov under the orbicular, apiculate leaf, in total shade but sometimes level with the leaf in lighter shade. Habitat is usually mossy and damp. Dorsal sepal is narrow, usually pale, flecked with purple (Waitakeres & Hunuas 140m-480m a.s.l.) but darker at Matakawau, 80m a.s.l. The node is in the sheathing bract, no discernable egg pocket in the cleft and only one flexure of 180º. An epiphytic colony at Te Toto Gorge, Raglan, was 3m up a tree fern (*Cyathea medularis*). Flowering in the wet pockets left by fallen fronds, 30 Sept 1995, see J58:20.

Fig. 32 ER12, Kaimango Rd. Kihi Track area, 16 Oct 2007. Also from Kawhia Rd, 13 Oct 1995, flower level with leaf, grows in damp to dry shade, dorsal sepal pale behind dark tip area. Node in sheathing

bract, first flexure in labellum midrib is 135º, second flexure 60º distinct egg pocket between flexures, fungus gnat pollinated. See J107:35,**40.**

Fig. 33 Waitonga Falls Track (not Blyth Tk.), Ruapehu, 1,200m a.s.l., 3 Jan 1997, colony in total shade, with only one in flower, well above a small leaf, short, skewed dorsal sepal, narrow, upturned and pale with a thread of purple to the margin, short tepals. See J66:20,**21**. Similar specimens found by the late Ross Bishop on 5 Nov 1997 at Retaruke, only 200m a.s.l. hence the differing flowering time.

Fig. 34 ER46, Tremolite corner, Canaan Rd, Takaka Hill, 630m a.s.l, 12 Nov 1998. Grows in either full sun when flower is level with leaf or well below the leaf in full shade. Dorsal sepal dark on top, pale at the back, tepals long. Muted pale centre in labellum with small papilla. See J70:**38**.

Fig. 35 *N. papillosum* (Col.) found by Graeme Jane, Hawke's Lookout, Takaka Hill. Also found at Tremolite corner, (different from Fig. UU) both pix in ER46, 27 Nov 2002. Very short peduncle. Pale, purple-flecked, recurved dorsal sepal. Dark papillate labellum has only a small white centre, flowers ±level with the heart shaped to orbicular, apiculate leaves. Auricles overlapping sepals.

Fig. 36 *N. papillosum, s*imilar form to Fig. 35, found by Mark Moorhouse, at Miners Stream, Bryant Range, ER 47, 28 Nov 2002. Labellum has an extensive central white patch extending to the lower margin, a fan shaped apiculus in a central notch to the lower margin and only small papilla. Dorsal sepal turns up a little, tip is pale, midsection is magenta, base is pale.

Fig. 37 Ernest Islands at the south end of Masons Bay, Stewart Id. photo by Rebecca Thompson. Karsten Wodrich also sent pix from the same place. Long petiole very short peduncle, node well above the sheathing bract. Narrow dorsal sepal, dark at the front, pale at the back, papillate labellum all identifying this taxon as *N. papillosum* although different in detail from the other forms.

Fig. 38 *N. papillosum* (Col.) Tangoio Falls, near the type locality, ER 22, from Mike Lusk. Also from the Catlins, ER 70, 1,000km away, by Ian St George. Catlins specimen, being closer to the pole, flower two months later than the Tangoio Falls specimen, and has first and second flexures each about 85º but with no discernable egg pocket between. Notably papillose in the labellum, dorsal sepal recurved, peduncle very short, well above the sheathing bract. NB., these specimens are a good fit to Colenso's description but differ from the Stewart Island and Nelson forms.

A writer's thought: the gnats' egg pocket in the cleft of some forms yet its lack in others, makes one wonder if the *N. macranthum, N. papillosum* agg, don't stem originally from hybrids of *N. trilobum* agg.—which all have egg pockets — and *N. rivulare* agg, which have none. Chromosome counts to date [1], in several of these species have been either 2n=36 (diploids) or 2n=72 (tetraploids). Thus hybrids could be a possibility. No counts available for *N. papillosum* forms as yet.

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2. Nematoceras "tri red petiole"

Have you heard the one about Pat and Mike and Tony finding very similar *Nematoceras trilobum* agg. taxa with wine-red petioles, independently and within eleven days of each other? What's the big deal you might ask? Well, red petioled *N. trilobum* agg. colonies are most uncommon. Mark Moorhouse, master of Nelson *N. trilobum* agg., when asked, kindly produced two with red petioles, one from Hinetai Rd, Tapawera, **Fig. 28** only in bud, but which could be the same taxon. His green flowered *N. trilobum* agg. from Growler Track, Mt Arthur, has a red-brown petiole and could be an exception-to-prove-the rule. Then there is the Fairy Falls Track, specimen in the Waitakere Range. It features as No. **59,** *N. acuminatum* in Colour Field Guide 2 and perhaps shouldn't, because this ancestral species, normally has a green petiole.

Aside from that, Pat Enright and Tony Silbury found theirs, **Fig. 29,** near Tinui, ER35 on 22 Aug 2009. Mike Lusk found his, **Fig. 30,** beside Lotkow Track ER27,29 in the Kawekas, 120km to the north, on 3 Sept 2009. The Column had gladly received pix of both these specimens by email at a busy time so the relevance didn't dawn until Feb 2011 when old emails were coming under review. Botanic convention puts little relevance in colour variations so this didn't arouse too much interest back in 2009. However, a recent search of umpteen *N. trilobum* agg. in the Column's own files and all his received pix, drew a blank on red petioles. Some few *N.* "tricraig" from Pollok, had pink lines up the petiole and the flowers were similar to *N.* "tri red petiole" except for the apiculus in the labellum notch. A *N. trilobum* s.s. from Te Wharau had the pink lines as did Graeme Jane's *N.* "darkie" in Mark's pic but no others had all-over red petioles. A request to Ian St George also drew a blank from his collection.

Thus, this orchid received its tag name, purely for temporary tracking purposes and was accepted by all involved. Note the red petioles, peduncles and outer ¾ of the filamentous tepals; sepals very long, some four times the length of the lateral petals. The notched labellum has no apiculus but the outer margin is ragged. Labellum inside is green but the outside is dark red. Habitat at Tinui was native forest of kanuka, black beech, tawa, supplejack and *Pomaderris* aff. *phylicifolia* according to Tony. At Lotkow Track, habitat was tall kanuka, according to Mike.

The Column put **95** *N.* "tri red petiole" into the third Colour Field Guide (CFG3) crediting Tony Silbury for Mike's photo, after some doubts about which was the most suitable. Mikes photo won the day, despite the shortened sepal, when an enlargement showed the culprit, a looper caterpillar, still on the scene. Sincere apologies to Mike and Tony for the mix-up in the rush.

Now the call for you lovers (or haters) of new taxa coming onto the scene, is to get into the bush on the hills between Lotkow Track, Tinui and Tapawera, in August/September 2012 etc. When you find them, do please observe sizes and all detail including the sheathing bract, any perfume, flowering times habitat, altitude etc. for a more complete future description. We could be onto a definable *N. trilobum* agg. taxon to separate it from the range of hybrids and cross-bred species out there.

Figures

Fig. 28 *Nematoceras* "tri red petiole" by Tony Silbury 22 Aug 2009, from native forest surrounded by *Pinus radiata* west of Tinui. Note similarity with Fig. 30 from Lotkow Track.

Fig. 29 *Nematoceras* "Hinetai red petiole" by Mark Moorhouse is only in bud but it has visible traits just like *N.* "tri red petiole" such as, green dorsal sepal, dark red outer labellum, long red sepals, short red petals and red petiole.

Fig. 30 *Nematoceras* "tri red petiole" by Mike Lusk, 3 Sept 2009, Lotkow Track in the Kaweka Range 120km north of Tinui, in tall kanuka. Note the most unusual red petiole.

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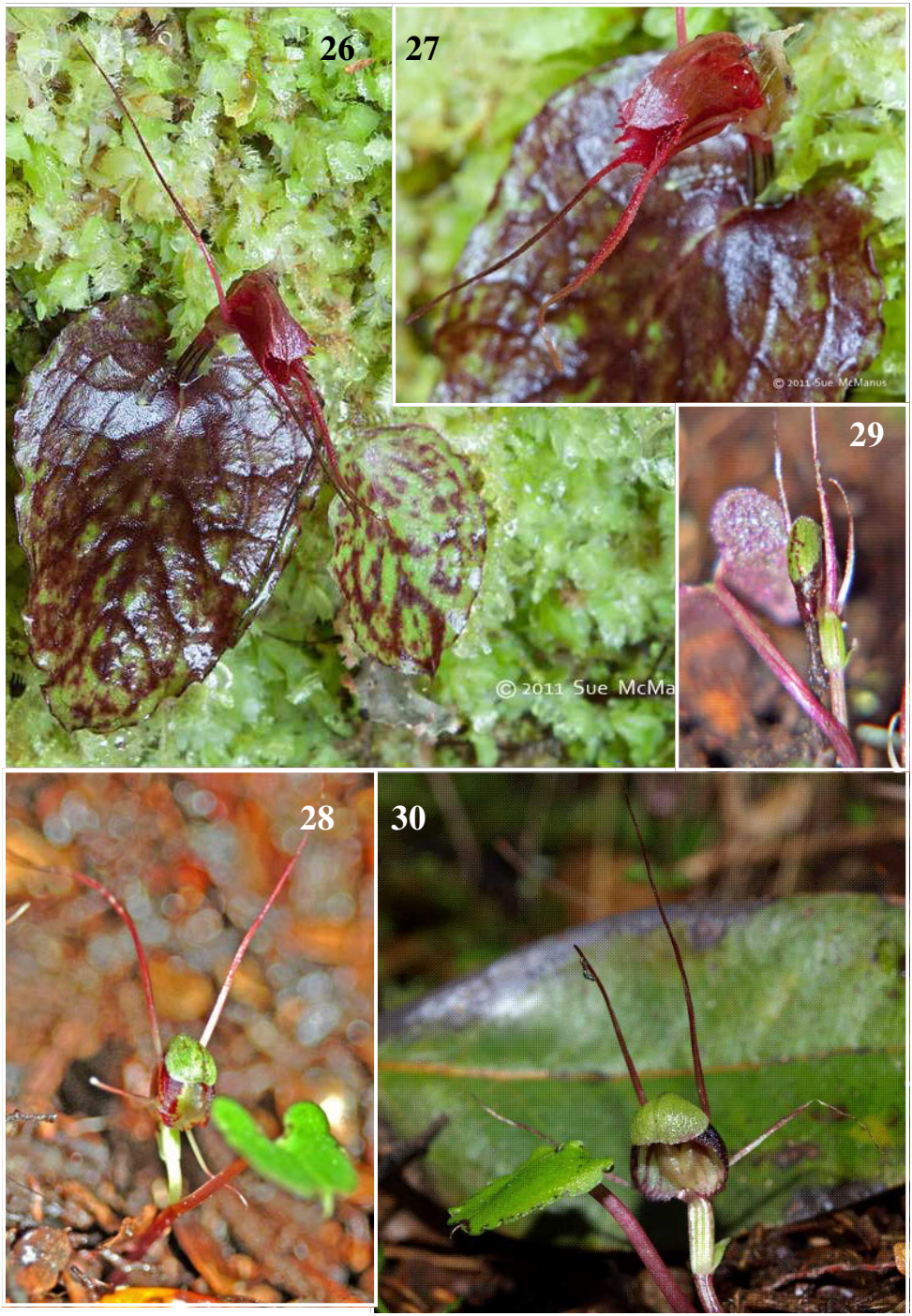
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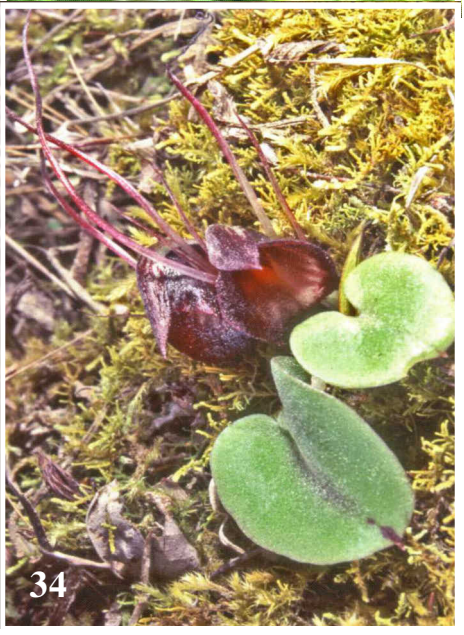
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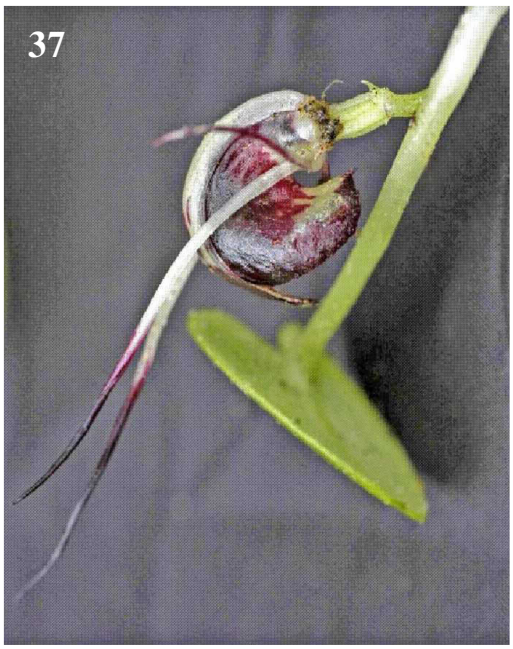
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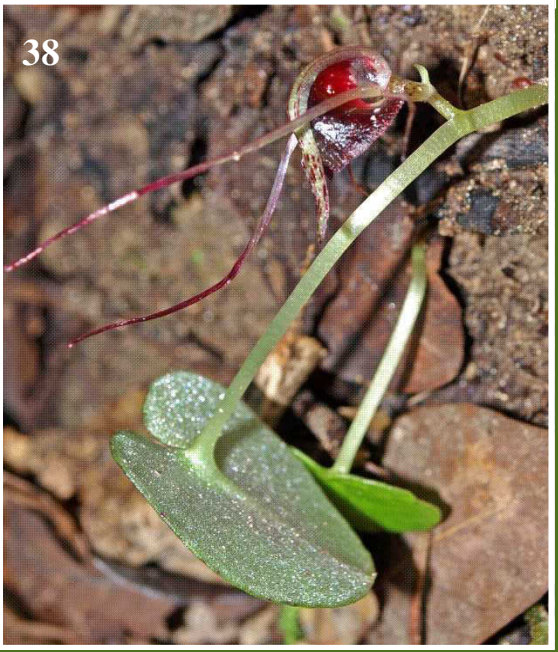
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