



*The New Zealand  
Native Orchid Journal: No. 127*



# Stewart Island's orchids: Ian St George

We were at Rakiura (Stewart Island) in the last week of November 2012 and explored most of the tracks around Oban, visited Ulva Island and walked back to Oban from Port William.

We saw *Aporostylis bifolia* (bud), *Chiloglottis cornuta* (fl), *Drymoanthus flavus* (fl), *Earina autumnalis*, *E. mucronata* (fl), *Microtis unifolia* (fl), *Nematoceras acuminatum* (fr), *N. macranthum* (2 taxa, fl), *N. aff. trilobum* (fr), *Pterostylis montana sensu Moore* (fl), *P. montana sensu Hatch* (fl), *P. australis* (fl), *P. cernua* (fl), *P. banksii* (fl), *P. auriculata* (fl), *Singularybas oblongus*, *Thelymitra longifolia* (bud), *T. hatchii* (bud), *Winika cunninghamii* (bud). Notable were

1. The finding of *Pterostylis cernua* and *P. auriculata* on the island. *P. cernua* (right) was growing in roadside scrub and grass; and *P. auriculata*, with its broad arched leaves, was by far the most common *Pterostylis* on Ulva Island (below).

2. Elsewhere the predominant pterostylis was *P. australis*, with its lateral sepals long and spreading horizontally—i.e., what we have tagged *P. “Bluff”* is the local form of *P. australis* (next page).

3. I wonder if *Drymoanthus adversus* grows on the island. The only plants we saw were *D. flavus*.

4. The two forms of *P. montana* both grow at roadsides here at the type locality: that of Hatch longer in the dorsal sepal, lateral sepals rolled like a cigarette paper, stigma long and flat; that of Moore with ribbonlike lateral sepals, a little curved forward, the stigma bulbous, the dorsal shorter, often with a bronze-green flower, leaves and stem.



**P. cernua**



**P. auriculata**



*P. australis* aka *P. "Bluff"*





*Pterostylis montana*

*sensu* Moore ▲

◀ *sensu* Hatch

5. The leaves of the *Nematoceras trilobum* agg. plant were big—up to 60mm across—carpeting the forest floor in places (**right**), with elongated stems carrying fruit.

6. Two forms of *N. macranthum*. The former, crimson with a white throat, leaves on long pedicels, flowers beneath (**below right**); the latter, in extensive colonies at roadside, leaves at ground level, dark maroon flowers above—i.e., the habitus of a member of the *N. rivulare* complex (**cover picture this issue**). I have seen this at Shag Point north of Dunedin.



7. *Singularybas* was quite variable in size and leaf colour, but it is difficult to discern any consistent distinguishing features (**below**).

8. The Rakiura Museum holds watercolours by Dorothy Jenkin of a number of orchids (and an



even greater number of fungi) found on the island. The orchid illustrations now form a new number in our *Historical Series*. The watercolours of Elsie Smith of Stewart Island orchids are also available as a separate number.

# The type locality: Ian St George Norsewood and *Gastrodia leucopetala* Col.

## *Gastrodia leucopetala*

In 1886 William Colenso described a new species he called *Gastrodia leucopetala*; he wrote, [1]

Root a long sub-cylindrical greyish-flesh-coloured pubescent tuber, encircled throughout with several rows or rings of scarios long light-brown ovate-acuminate scales, the rows being pretty regular and close together, of about 5 rows to 1 inch, somewhat resembling the sheaths on the stem of some species of *Equisetum*. Stem 2 ft.–2 ft. 9 in. high, erect, sub-succulent, stout, 3 lines diameter and cylindrical below, sub-angular at top, smooth, light-brown with short purplish stripes; 8–9 bracts, perfoliate, membranaceous, distant, on lower part of stem, margins entire, dark purplish-brown, spotted with light-coloured spots much like perianth. Flowers 20–40 at top of stem in a raceme 10–15 inches long, pendulous, rather distant, scattered, pedicelled; pedicels 2½–4 lines long, each with a single sessile bracteole at base 2–2½ lines long, 1 line broad, ovate-acuminate, sub-scarious, reflexed, coloured like those of lower stem but darker. Perianth thickish, papillose, dark brownish-green spotted with large light-(sub-fawn-) coloured spots without, whitish within, ventricose at base, anterior portion much curved upwards, 6–7 lines long excluding ovary, mouth open, 4½ lines diameter, quinquefid; segments spreading, veined, veins branching at tips, margins crenulate; two lateral sepals largest, deltoid, sub-acute and recurved; upper sepal oblong, obtuse and emarginate; two lateral petals pure white, adnate, projecting from just within perianth tube, linear-oblong, concave, tips truncate and retuse, margins thickened,

slightly crenulate, and recurved; labellum white, 3-nerved, disc contracted below the middle, the anterior portion sub-rhomboidal with two reddish longitudinal ridges, their margins thickly crenulato-fimbriate, rising divergent from the middle and united towards tip, but not joined to it; tip produced, thickened, recurved, verrucose and dark-brown at apex; anterior margins of disc finely crenulate-waved and incurved, the middle margins plain and spreading, posterior margins thickened, largely raised, waved and incurved; claw plain and grooved; ovary thick, ovoid, coloured as perianth, at first 3–4 lines long, after flowering twice that size.

*Hab.* In dark forests on the eastern slopes of the Ruahine mountain range, 1850–52; and in similar spots in the Seventy-mile Bush, between Norsewood and Danneverke, County of Waipawa, 1884–85: *W.C.*

*Obs.* I have long known this plant, (for upwards of thirty years,) but have never obtained good flowering specimens until this summer (January, 1885). I had, however, always suspected it to be a distinct species from the known endemic one (*G. Cunninghamii*, Hook. fil.), although the specimens I had detected in the woods in autumn travelling were always long past flowering. Having again met with it in those woods near Norsewood in April, 1884—but, as before, too late!—I marked those spots, and in visiting them again in January, 1885, (almost purposely,) I was rewarded with finding a few in flower on the top of two racemes, not, however, so many as I could wish, and in localities some miles apart. It now appears that the lowermost perianths on their long raceme expand, first, and so regularly proceed up the

stalk, like many other flowers produced in racemes and spikes. Having obtained, after all, only a very small number of really good flowers, (though plenty of both unopened and withered ones,) and being very desirous of sending them preserved in spirits to Kew, I have only dissected *one* perfect flower. Of this I have given a very minute description, in the hope of its being compared by some one of our working botanists with *G. cunninghamii*, which, I fear, is daily becoming more scarce.

*Obs.* II. I believe this plant to be very distinct from the other long-known New Zealand species, but, unfortunately, I have no specimens of that species left for comparison, and the description of it in our botanical books is neither complete nor minute. The pure white petals of this species are a most striking object when fresh and in its dark habitat; its lip, too, is widely different from that of *G. cunninghamii* (*viz.*, the description of it given in our books of the New Zealand Flora); indeed, its lip is more like that of the Australian species, *G. sesamoides*, Br., though the perianth differs considerably. Of this species a fine drawing, with dissections and description, is given in the "Flora Tasmaniae" (*Bot. Antarctic Voyage*, vol. vi.).

He didnt mention the column but on his type sheet (24288 in Herb. Colenso) he wrote "Column very small"). Cheeseman identified every specimen of *G. leucopetala* in Herb. Colenso as the short column plant we know as *G. cunninghamii*. Every botanist since has identified *G. leucopetala* with *G. cunninghamii*.

### How did this happen?

In 1834 Richard Cunningham (RC) found a *Gastrodia* at Whangaroa. In 1837 his brother Allan Cunningham (AC) included it among the orchids in the first published descriptions of NZ plants. He compared it with the Australian *G. sesamoides*.

Indeed (as Lucy Moore pointed out much later) it is only that long column plant that is found north of Little Barrier Island.

By 1839 both Cunninghams were dead and about then Colenso wrote a translation of Robert Brown's Latin description in *Glossarium Botanicum*, his manuscript list of NZ plants,

*Gastrodia sesamoides*: flower forming a tube, divided at the mouth into 5 lobes: Labellum, included in the flower: Column long, hollow at the apex; thickened at the base in front, where the 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<sup>d</sup>. Found by R.C. in the vicinity of Wangaroa, 1834.

Colenso was saying the NZ plant discovered thus far, i.e. Cunninghams' *Gastrodia*, was the whitish or ochre long-column plant we now call *Gastrodia* aff. *sesamoides*.

On 12 April 1844 Colenso wrote to JD Hooker, "(during my late journey through the dense forests of the interior) I could not detect *Gastrodia* (unless an *Orchis* I have found should prove to be it—I have not the generic char. of *Gastrod.*, so, not being gifted with supernatural powers, I of course could not determine....")

On 20 May 1844 he included that plant among a collection sent to Kew; No. 101:

One of my prizes – and what I take to be an *Orchis*. This plant, although I have sought after for several years, offering rewards for it, but in vain until this journey. It is leafless, 1-2 feet high, and found in alluvial ground, banks of rivers and shaded woods. It has a profusion of tuberous roots, of all sizes (some 18 inches long,) beneath the soil, which were always greedily sought after by the Natives, being quite a prize to them before the introduction of potatoes – hence, I conclude, its scarcity. I have planted several roots, which I hope will grow. A portion of the root is in the bottle of spirits. Native name *Perei*; flowering in Decr. and January. From Te Hinau, River Wīrinaki, and banks of the Wakatane River,

Interior, N. Island. I believe I sent you an incipient stalk of this plant in my *first* parcel.

He had been in that locality in December, and this was a flowering specimen, but significantly he did not mention the flower, and clearly (from what he wrote) he was still not familiar with *Gastrodia*, though that is indeed what this was (his 101, Kew # K000718250, next page). He sent a further specimen (his 1044, Kew # K000718251) in 1848.

In 1853 JD Hooker formally described *G. cunninghamii* in *Flora Novae-zelandiae*; he wrote, “column very short. 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.

What was Hooker saying? *I agree with AC that RC’s plant is not Gastrodia sesamoides, so I here name it Gastrodia cunninghamii; it grows throughout NZ from the far north to the far south. It has a very short column.*

But (as I have said above) the short column plant is not found north of Little Barrier Is.

The *Gastrodia* that RC did find at Whangaroa was, as AC thought, distinct from the Australian *G. sesamoides*, but it had to be our yet unnamed *G. aff. sesamoides*: it was not the same as the short column plant Colenso had sent from the Urewera country.

I believe Colenso was never familiar with *Gastrodia*, and (naturally) he continued to think it was Richard Cunningham’s northern plant that Hooker had named *Gastrodia cunninghamii*. His observations following his description of *G. leucopetala* (above) now make sense.

### **Two species of *Gastrodia*?**

Years later, in 1884, Colenso published his *Memorandum of a journey into the interior*. He wrote,

There is yet another curious plant that I should like to mention—to call attention to; not that it is confined to those high woods, for it (or a closely allied species) was for-

merly pretty common throughout N.Z. in the damp shady forests, but always scattered; and I have good reasons for believing that it is gradually becoming more scarce—like many other of our native plants. It is an Orchid, a species of *Gastrodia*, a small genus peculiar to N. Zealand, Australia, and Tasmania, and the E. Indian isles. It is leafless, and has a strange appearance, reminding one at first sight of the larger British species of *Orobanche* (Broom rape)....

Its root, a tolerably large cylindrical tuber, is perennial; its single scaly and spotted flower-stem is 2 feet and more high, stout, erect, and bears several pretty large and peculiar bizarre flowers. The root was eaten by the old Maoris, together with the tubers of other congeneric terrestrial Orchids,—*Pterostylis*, *Thelymitra*, *Orthoceras*, &c. (Much like those of several British Orchids,—as *Orchis mascula*, &c., from whose tubers the nutritious salep of commerce is obtained.) A chief reason with me for mentioning this Ruahine forest plant, is, that I have good reasons for believing it may prove to be a different species from the Northern one, *Gastrodia Cunninghamii*, HOOK., fil.,—which R. Cunningham its discoverer supposed to be identical with the only Australian and Tasmanian species—*G. sesamoides* of Brown. This Ruahine plant being taller (2 ft. 9 in.), and much larger in all its parts than the Northern one, and bears many more flowers, 80–86, on its longer raceme of 15 inches. And though I have more than once met with it in the lower mountain woods, it had always past flowering with withered perianths.

In a paper published in 1885 (“On *Clianthus puniceus*, Sol.”) he suggested the northern (Northland) plants might differ from the southern (Hawke’s Bay) plants,

And here I may further remark (having very frequently of late years noticed it), that several of our indigenous New Zealand plants, and in particular of genera of which it had always been believed that New Zealand possessed but *one* species of each genus,





Colenso's # 101, Kew # K000718250



have now, at least, *two* species to each genus; or if not exactly (and beyond all controversy) two species, seeing that the limit of a species can scarcely be clearly defined, then two forms; the southern form being very distinct from the northern one, yet pretty closely resembling it in general appearance. And this I have especially noticed to take place in the Orchid Order: e.g. *Dendrobium*, *Sarcophilus*, *Bolbophyllum*, *Gastrodia*, *Earina*, *Microtis*, and *Orthoceras*....

On 1 January 1885, as he was preparing to leave for “the Bush”, Colenso wrote to JDH, “One of the prizes I am going in quest of is my big *Gastrodia* (2 ft. 9 in., w. a raceme of 15 in., & 36 fl.!)—mentioned at p.62, of my *Ruahine* paper: may I be in luck!”

He was in luck, for he found it in flower on 9 January 1885. Still thinking the name *G. cunninghamii* applied to the “northern species”, he described this “southern species” as *G. leucopetala*.

But what did he mean when he wrote, “its lip, too, is widely different from that of *G. cunninghamii* (viz., the description of it given in our books of the New Zealand Flora); indeed, its lip is more like that of the Australian species, *G. sesamoides*, Br., though the perianth differs considerably”?

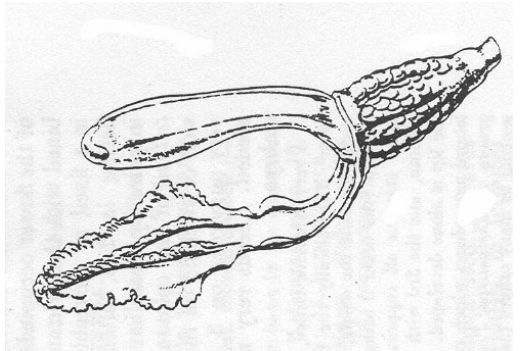
Hooker had described the labellum of the genus in rather imprecise terms in the *Flora*, essentially copied for the species *G. cunninghamii* in the Handbook, “Lip free, clawed; claw winged; lamina linear-oblong, membranous, waved, with two thick ridges down the middle” (my emphasis).

Colenso described the labellum of *G. leucopetala* in minute detail: “labellum white, 3-nerved, disc contracted below the middle, the anterior portion sub-rhomboidal with two reddish longitudinal ridges, their margins thickly crenulato-fimbriate, rising divergent from the middle and united towards tip, but not joined to it; tip produced, thickened, recurved, verrucose and dark-brown at apex; anterior margins of disc finely crenulate-waved and incurved, the middle margins plain

and spreading, posterior margins thickened, largely raised, waved and incurved; claw plain and grooved”.

The points of contrast are “claw plain and grooved” cf. “winged”; “two ...ridges... rising divergent from the middle and united towards the tip, but not joined to it” cf. “2 thick ridges down the middle”. These are difficult points to interpret when one description is detailed and the other brief and ambiguous.

*G. sesamoides* in Tasmania (above) shows a Y-shaped ridge. So have all *G. cunninghamii* flowers I have seen from the North Island. But



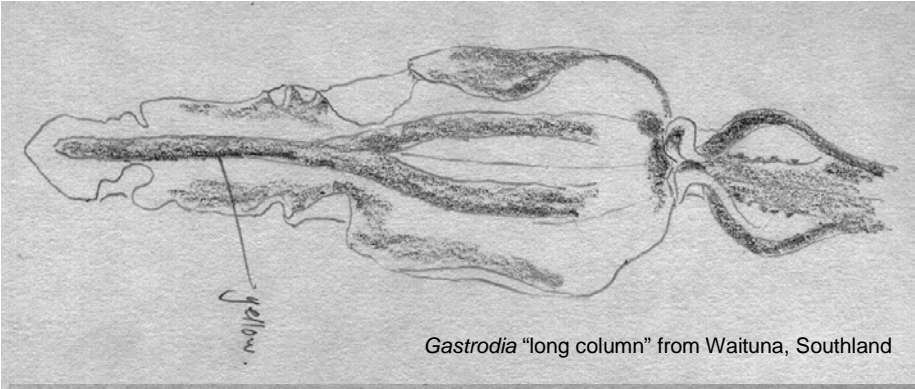
*Gastrodia sesamoides*, drawn by Archer and lithographed by Fitch, for Hooker's *Flora Tasmaniae*.

my old notebooks show a rough sketch of a Dunedin *G. cunninghamii* with 2 almost parallel ridges meeting just short of the tip (Cover photo and overleaf).

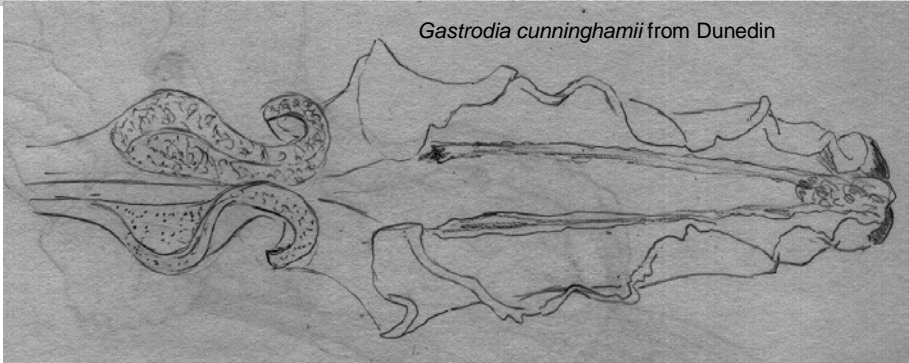
Are these ridges important differentiators? Or are they simply variable within the species? It is tempting (but I think premature) to conclude that the S. Is. *G. cunninghamii* has two almost parallel ridges, and the N. Is. *G. leucopetala* has Y-shaped ridges like those of *G. sesamoides*, as Colenso described.

### ***Gastrodia* in the Ruahine now**

Colenso had “marked the spot” where in March 1884 he had found the post-mature *Gastrodia*, recording an *aide memoir* (instead of a GPS reading) in his botanical notebook, “Top Loranthus Hill, near praying-tree a high



*Gastrodia* "long column" from Waituna, Southland



*Gastrodia cunninghamii* from Dunedin

dead stump, white lichen at base; in front and near a stone, a fine *Gastrodia* (brought stem away); a little beyond, close to *Dendrobium* among dead logs, another *Gastrodia*...."

He provided a more objective guide later: "1885. Jany. 9. Norsewood:— In wood, nr. Mill, found 4 *Gastrodia* growing near each other, 3 *past* flowering the 4<sup>th</sup>. nearly so— with 2—3 fair flowers on top."

The old sawmill was on Ngamoko road which, though the bush begins further back now, still leads from Norsewood to the Apiti track which in turn leads up into the Ruahine. We walked the track on 4 January 2012, and found *Gastrodia minor* (so we had our "eyes in" for *Gastrodia*) but nothing bigger.

Mike Lusk did find a Ruahine *Gastrodia*, on the Sunrise track, further northwest of our site. It had all the features of typical *G. cunninghamii*.

### I conclude

1. Cunningham's *Gastrodia* from the Bay of Islands (1834) was probably *G. aff. sesamoides*, still unnamed. It was only a scrap, and Hooker mistakenly identified it with Colenso's plants in (2) below.
2. *Gastrodia cunninghamii* on the other hand is the short-column plant described by Hooker (1852), based on Colenso's Urewera specimens (1844) and Lyall's Fiordland specimens (1850).
3. *Gastrodia leucopetala* is identical with North Island specimens of *G. cunninghamii*. Colenso described it (1886) as new because he quite reasonably thought *Gastrodia cunninghamii* was Cunningham's *Gastrodia* (*G. aff. sesamoides*).
4. *Gastrodia cunninghamii* may have different patterns of labellar ridges in northern and southern sites.





*Gastrodia cunninghamii*,  
Dunedin

# 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).

## **Adelopetalum Fitzg. J. Bot. 29: 152 (1891). Bulbophyllum alliance**

**Adelopetalum tuberculatum** (Colenso) D.L.Jones, M.A.Clem. & Molloy. Orchadian 13(11): 498 (2002).  
*Bulbophyllum tuberculatum* Colenso. Trans. & Proc. New Zealand Inst. 16: 336 (1884).  
*Bulbophyllum exiguum* as meant by Buchanan. Trans. & Proc. New Zealand Inst. 16: 397 (1884), is not that of F.Muell. (1861).

## **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).  
*Corybas unguiculatus* as meant by L.B.Moore. Fl. New Zealand Vol. 2: 116 (1970) is not *Corysanthes unguiculatus* of R.Br. (1810).

**Anzybas rotundifolius** (Cheeseman) D.L.Jones & M.A.Clem. Orchadian 13(10): 443 (2002).  
*Nematoceras rotundifolia* Hook.f. Fl. Nov.-Zel. 1: 251 (1853).  
*Corysanthes rotundifolia* (Hook.f.) Hook.f. Handb.

N. Zeal. Fl. 266 (1864).  
*Corybas rotundifolius* (Hook.f.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).  
*Corysanthes matthewsii* Cheeseman. Trans. & Proc. New Zealand Inst. 31: 351 (1899).  
*Corybas matthewsii* (Cheeseman) Schltr. Repert. Spec. Nov. Regni Veg. 19: 23 (1923).  
*Corybas unguiculatus* as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 75: 367 (1945), is not *Corysanthes unguiculatus* of R.Br. (1810).

## **Aporostylis Rupp & Hatch. Proc. Linn. Soc. New South Wales 70: 60 (1946)**

**Aporostylis bifolia** (Hook.f.) Rupp & Hatch. Proc. Linn. Soc. New South Wales 70: 60 (1946).  
*Caladenia bifolia* Hook.f. Fl. Nov.-Zel. 1: 247 (1853).  
*Chiloglottis traversii* F.Muell. Veg. Chath. Is. 51 (1864).  
*Caladenia macrophylla* Colenso. Trans. & Proc. New Zealand Inst. 27: 396 (1895).  
*Chiloglottis bifolia* (Hook.f.) Schltr. Engl. Bot. Jahrb. 45: 383 (1911).

## **Calochilus R.Br. Prodr. Fl. Nov. Holland.: 320 (1810)**

**Calochilus herbaceus** Lindl. Gen. & Spec. Orch. Plant.: 45 (1840).  
*Calochilus campestris* as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 248 (1949), is not that of R.Br. (1810).

**Calochilus paludosus** R.Br. Prodr. Fl. Nov. Holland.: 320 (1810).

**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).  
*Prasophyllum variegatum* Colenso. Trans. & Proc. New Zealand Inst. 20: 208 (1888).  
*Genoplesium nudum* (Hook.f.) D.L.Jones & M.A.Clem. Lindleyana 4(3): 144 (1989).  
**Corunastylis pumila** (Hook.f.) D.L.Jones & M.A.Clem. Orchadian 13(10): 461 (2002).  
*Prasophyllum pumilum* Hook.f. Fl. Nov.-Zel. 1: 242 (1853).



*Genoplesium pumilum* (Hook.f.) D.L.Jones & M.A.Clem. *Lindleyana* 4(3): 144 (1989).

**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. Pflanzentk.* 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. Pflanzentk.* 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. Pflanz. 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. Pflanz. 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* Schldtl. Linnæa 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).
- Myrmecchila D.L.Jones & M.A.Clem. Orchadian 15(1): 36–37 (2005). Chiloglottis alliance**
- Myrmecchila formicifera** (Fitzg.) D.L.Jones & M.A.Clem. Orchadian 15(1): 37 (2005). *Chiloglottis formicifera* Fitzg. Austral. Orchids 1 (3): (1877).
- Myrmecchila 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” tag-names.
- 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” tag-names.
- 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 labelum 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. “*Mangahua*”, N. “*spaghnum*”, 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* complex 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 fl (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 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. 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 distinct  
small form from Iwitahi and Nelson Lakes,  
tagnamed *S. minor*.

**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. Vetensk. 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. *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).



## The New Zealand Native Orchid Journal

The main aim of the **New Zealand Native Orchid Group** is informing people about native orchids, so we permit others to copy material published here, provided the source and author are acknowledged. Authors should note this as a condition of acceptance of their work. The *Journal* is normally published quarterly from February, and deadline for copy is the first of the month beforehand. We like copy to be typed or sent on disk or by email.

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THE EDITOR and EDITORIAL BOARD  
MAY NOT SHARE  
AUTHORS' OPINIONS .

# Occasional contributions

**M**ike Lusk emailed, “In August we visited a couple of coastal areas in South Australia in one of which, Pt Lincoln, we’d lived about 30 years ago, at which time my main interest was children, not orchids. But this time I was able to spend time exploring walking tracks and roadsides, being rewarded by a good number of their very attractive plants and animals. Amongst the orchids were the lovely blue *Pheladenia deformis*, several of their spider orchids—*Arachnorchis* spp, large groups of *Caladenia latifolia* in pink and white, a couple of brown *Perostylis*—*P. dolichochila* and *P. sanguinea*, and the aptly named donkey orchid, *Diuris orientis*. I was grateful for the help of Jane Hutchinson, co-author of a small book on regional orchids—having local advice made searching far more efficient.”



*Pterostylis sanguinea*



*Diuris orientis*



*Pheladenia deformis*



*Arachnorchis* aff. *macroclavia*



*Pterostylis dolichocheila*



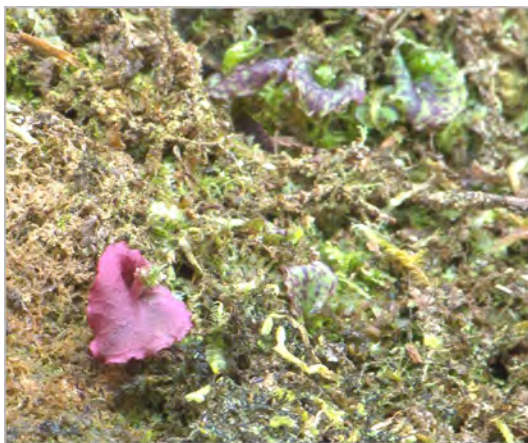
*Caladenia latifolia*



**P**at Enright emailed (17 September) with photographs of two very different taxa in the *Nematoceras trilobum* agg. from near Masterton....



Sue McManus emailed (25 September), “Jake and I were back at West Pirongia Rd, Mt Pirongia on Sunday and I spied this little pink leafed *Singularybas*. The leaf is a startling colour and approx 12mm long. It is growing about 12 feet above the road on a vertical bank, which is a bit unfortunate because we would like to check underneath the leaf to see if aphids have caused the colour as suggested by Ian Townsend (J124). Will try squeezing a ladder into the car next time so we can get closer to it.”



Sue emailed a week later, “Well, what a difference a week has made to that lovely bright, pink leafed *Singularybas*. Jake and I arrived at the site last Saturday with our newly purchased collapsible ladder and stood there dumbfounded because we couldn’t locate that vibrant orchid. And then a shift in the light revealed a much changed leaf colour, so up the ladder I went with camera in hand to be confronted by my beautiful pink find having the colour sucked out of it by what looked like a fungal growth—see second photo. We are wondering if the colour of the leaf was caused by fungus, even though it isn’t present on top of the leaf or emerging flowerhead in the first photo. Meanwhile, down lower and approximately a metre away, Jake found another vibrant leaf. This one was also attacked by the same growth—see third photo. Both of these orchids were surrounded by healthy *Singularybas*.”



And then a shift in the light revealed a much changed leaf colour, so up the ladder I went with camera in hand to be confronted by my beautiful pink find having the colour sucked out of it by what looked like a fungal growth—see second photo. We are wondering if the colour of the leaf was caused by fungus, even though it isn’t present on top of the leaf or emerging flowerhead in the first photo. Meanwhile, down lower and approximately a metre away, Jake found another vibrant leaf. This one was also attacked by the same growth—see third photo. Both of these orchids were surrounded by healthy *Singularybas*.”



*Gastrodia cunninghamii* from the Wairarapa, within 100km of the type locality of Colenso’s *Gastrodia leucopetala*. He wrote of the latter, “The pure white petals of this species are a most striking object when fresh and in its dark habitat”.

## GPS and Coordinates

By Gordon Sylvester

A brief discussion with the Editor raised the question about recording either GPS. or coordinates as part of our mapping data.

As an experiment I made the decision to attempt to record my personal records and those in the database—in total about 1000 records. While the exercise was being carried out I started to see patterns arising, where certain species seemed to be confined to bands of altitude.

This brought to my mind the situation when *Pterostylis* “Days Bay” (*cardiostigma*) was first discovered in 1978. It was confined to a band of weathered greywacke about 100-150m above the village, on clay and in full sun. The rest of the details are well known so no need to go into that. The important point was the altitude, as there was also an upper limit—in this case when the denser scrub took over under red beech forest.

There have been several changes to the way coordinates have been recorded over the years. The current system is based on the Mercator Projection, and is referred to as NZGD 2000. It is recorded as a Southing and Easting. As far as the mapping is concerned all I need to know is a prominent point that can be identified on my personal mapping programme (Freshmap). For example Coal Island [Alaisdair and Karen Nicoll article J 125] Moonlight Point would give me a record as E166,39.442 S46,6.208: +/- 20m. While it is a specific point, exactly whereabouts was the record made? A GPS would be able to place you within 2 or 3m of the reference point, but anyone on the ground using a relevant map could get within 10m of the point.

On the bigger picture any other records (for example *Winika cunninghami*) could be expected to be seen at approximately the same altitude locally—though when looking at the global picture taking into account the fact that the further North you go the higher you need to go to get the same temperature requirements. See for example *Waireia stenopetala* at sea-level in the far south (Stewart Island) but only on the high peaks in the Tararua Ranges. And completely missing (never been sighted) on Mt. Ruapehu.

I am happy to receive emails giving me details like “2<sup>nd</sup> bend in road West Side Mt. Pirongia” or “on Pirongia West Road”. I can get an approximate coordinate from that information. The most important part as far as I am concerned is the altitude of the record.

I will continue to record these data. As for you, it is your decision alone. But please remember it may well assist someone carrying out research on the distribution patterns of orchid species.

Oh, and the LENZ system? Well that is my personal project, but I am willing to discuss it with interested parties.

**G**ordon Sylvester emailed (4 October) about **Karaka Point**, “I know I keep saying the same thing over and over again, but to stress the issue I want to record a simple point.

Mark Moorhouse of Nelson visited Karaka Point in 2004 and recorded two species from this location. I then visited it in Dec 2006. I was visiting Picton 1-2 Oct 2012 and decided to have another look at this place. The three visits have produced a surprising result, considering the small area and the situation of the site.

Karaka Point is on the Port Underwood Road, Queen Charlotte Sound. It is a narrow neck of land about 20m above sea level. It is a good example of an old fortified Pa, surrounded on three sides by seawater and 15 metre plus cliffs. The herbage is a mixture of coastal scrub and escapees from cultivation. It is exposed to all day sun.

Mark recorded *Diplodium alobulum* and *Cormunastylis nuda*.

My first visit in Dec 2006 recorded *T. longifolia*, *M. unifolia*, *Gastrodia cunninghamii*, *Pterostylis graminea*.

My visit on 2 Oct 2012. Recorded *Microtis unifolia*, *Thelymitra longifolia*, and 2 other *Thelymitra* sps (all three *Thelymitras* seen had different leaf shapes and identified by that), *Pt. graminea*, *Pt. banksii*, and *Pt.* (small *graminea*: see note), *Pt. montana* (Hatch).

The small *graminea* type species was the black dimpled species I have tag named from Brunner Peninsula as *Pt.* “peninsula” but this one is at sea level. It is also the same as the one I have seen in Kumara, so is it living in a greater range of country—sea level on weathered greywacke, 900m on weathered glacial till, and in sphagnum moss bog.

The *Thelymitra* leaves were typically the wide 3 ridged leaf of *T. longifolia*; a single mid ridge but 8mm wide lax leaf; a narrow rust spotted awl shaped leaf. One plant had a small flower head of 3 buds present on a U shaped leaf which had been ‘pruned’ by DoC mowing activities recently.

I will return to the site at a later date.

But now the records stand at 13 possibly 14 species for a very small site.

My simple point? You have to keep going back to a site if you want to make a complete orchid list.

**M**ike Lusk: “I, like Gordon and his acquaintance [J 126] have been mortified and enraged by the bleaching effect of the built-in flash on my camera, particularly when part or all of the subject is very pale. A while back mentioned it to a young fellow who has worked as a lighting person on such famous TV shows as ‘Xena: Warrior Princess’, and he told me of an old pro trick—sticking a layer of two of cigarette paper into the front of the flash using saliva as the glue. So I hastened to the local service station where I felt forced to explain that I was not in fact a smoker, and was rather disbelievably sold a packet of Zig-Zag papers. And they worked a treat, being easy to fold and with the added advantage that they can be comfortably stored in one’s camera case. Further, they are less likely to be contaminated with sweat and other unsavoury secretions than is a handkerchief. Please note that I am not endorsing this particular brand of cigarette papers, nor indeed the TV show.”

**N**ick Miller emailed,

### The ‘Red’ *Earina mucronata*?

Nearly 40 years ago, while attending the estate sale of a well-known Auckland orchid enthusiast, we spotted some cardboard cartons containing old magazines. These turned out to be early issues of the *New Zealand Gardener*, in those days a very well respected magazine, published by a famous NZ family of gardeners. The run of magazines extended to Volume 1 Issue 2—the magazine was first published in September 1944, the Editor gaining permission from the Minister of Supply to obtain supplies of precious paper (remember, this was wartime) by promising to devote significant space



to food production in the home garden!

The magazines were read with much enjoyment, and we have recently been going through them again, discovering many forgotten and overlooked gems. Among the offerings during the period 1956 to 1957 was a series by L.H. Kyle titled 'The Orchids of New Zealand'. The first in the series, in the August 1956 issue of *NZ Gardener*, dealt with the epiphytic species including the *Earina* species *E. autumnalis* and *E. mucronata*. *E. aestivalis* was not mentioned, although it appears to be accepted as a respectable species (or maybe hybrid) these days.

The discussion of *E. mucronata* included the interesting sentence:

"However, there is a very rare red variety which flowers in great profusion, but unfortunately I have not yet been lucky enough to see this extremely beautiful type."

I have never come across another mention of this red flowered form, but I would like to know if any readers have seen such a form or know anything of it.

*Kyle seems elsewhere to have used Hatch's papers for his information and Hatch wrote only, "Labellum pale orange to almost red,"—Ed.*

**K**evin Grant of Rangiora wrote, "I was up at Glen Tui (north Canterbury) with my wife walking in the bush when we met up with an old bushman / hunter / possumer. We yarned as you do, and I mentioned we were looking for native orchids. He mentioned that after DoC had done a 1080 drop for possums, the following year he noticed that the "tutukiwi" *Pterostylis banksii* was growing in profusion. He said the mistletoe was also on the come back. I then surmised that the possum must like our orchid spp. The area he was referring to was the Ashley Gorge." — *Gastrodia "long column" made a similar profuse appearance after possum control in Barton's Bush, Upper Hutt a few years ago. We may need to reassess the effect of possums on orchid populations—Ed.*

**K**evin also sent this photograph of an insect, bearing pollinia on its thorax, looking like and at the labellum of *Diplodium trullifolium*. An entomologist's "...best guess is that it is a male scale insect, possibly *Icerya purchasi* (see <http://nathistoc.bio.uci.edu/hemipt/Icerya%20purchasi.htm>).

"If not that, then the only other possibility I can suggest is the cantharid beetle *Malthodes pumilus*. It would seem to be either Hemiptera or Coleoptera anyway."



Kevin took the shot at about 2pm on an overcast day on the Elaine track to Piwakawaka Bay, under coastal pine and kanuka.

*That's an important shot: until now we have considered fungus gnats to be pterostylis pollinators, but this looks authentic: bearing pollen, and matching the labellum. Pretty convincing—Ed.*

**B**rian Molloy has retired from his contract with QEII in the high country. At the retirement function for him the Trust announced the establishment of the Brian Molloy QEII National Trust Scholarship for PhD study at any NZ university. Brian writes, “Needless to say I am deeply honoured and humbled by this permanent scholarship,” but we know it is richly deserved. It will provide generous financial assistance to successful applicants, and Brian has been asked to serve on the Scholarship Selection Committee. The announcement also appears in the Trust’s latest *Open Space* magazine. Our sincere congratulations again Brian.

**M**ike Lusk emailed again (14 October), “A friend had told me about some *Thelymitras* growing under a stand of ancient *Pinus pinaster*, (with the thick bark that flakes, leaving a patchwork of claret areas), at the root of the Mahia Peninsula, in Northern Hawkes Bay. In particular one *T. longifolia* agg had been in flower in early Sept and that there was a blue spotty one with a weird column. I looked at pix of both but since I didn’t have my glasses, didn’t see much. So we needed to get up there on a fine calm day to investigate. The pines are growing on flat rear dunes and in most areas the ground is bare apart from a wide variety of *Thelys* none of which were in flower, so that was normal behaviour for the genus. In fairness we were a bit early, but to judge by the wide variation of leaves there are at least 6 spp of *Thelys*. The weird column was still exposed and there was an adjacent similar one. I presume the plant is a mutant *T. decora*. Also present were *Acianthus sinclairii*, *Earina autumnalis*, *Winika cunninghamii* and many very tall *Microtis unifolia*. My friend will keep an eye on the orchids—it may well be that *P. pinaster* provides, as does *P. nigra* at Iwitahi, a favourable environment.

“Next day we had a look at the Mahia Reserve which is not far from the town and a most attractive piece of rugged coastal native



The weird column at Mahia

bush featuring large patches of nikau and kohekohe. There was an abundance of flowering *N. trilobum* colonies, with the usual wide variations. In all at least 15 orchid spp were seen, many in flower: *Acianthus sinclairii*, *Diplodium* sp., *Drymoanthus adversus*, *Earina autumnalis*, *Earina* sp (fine leaf), *Ichthyostomum pygmaeum*, *Microtis unifolia*, *Nematoceras* ‘pygmy’, *Nematoceras iridescens*, *Nematoceras papillosum*, *Nematoceras trilobum* agg (at least 2 distinct taxa), *Pterostylis* ‘pulchragalea’, *Pterostylis banksii*, *Thelymitra longifolia* agg, *Thelymitra* sp.”

*As so often happens, the late great Bruce Irwin’s extraordinary record of drawings includes his sketches of a similar plant [pp.696–697 of “Bruce Irwin’s drawings of NZ orchids”]. Bruce noted on the sheets, “ex Kaimanawa Range grown on for many years by Mrs Jean Trainor Taupo drawn 25 Sept 1989.... FREAK with two leaves (very long lax ones) flower stem short very narrow side lobes to column, pollinia not viable.... Column very reminiscent of pauciflora but with central rear portion missing perhaps this is a hybrid between formosa and pauciflora.*

*See next page for one of his drawings—Ed.*

*Thelymitra* Sp.?

flowering in cultivation very early Sept.  
Possibly Hybrid or freak *T. decora*

third flower on same spike as that drawn  
on 25 Sep 1989 (see sheet 1 of 2)

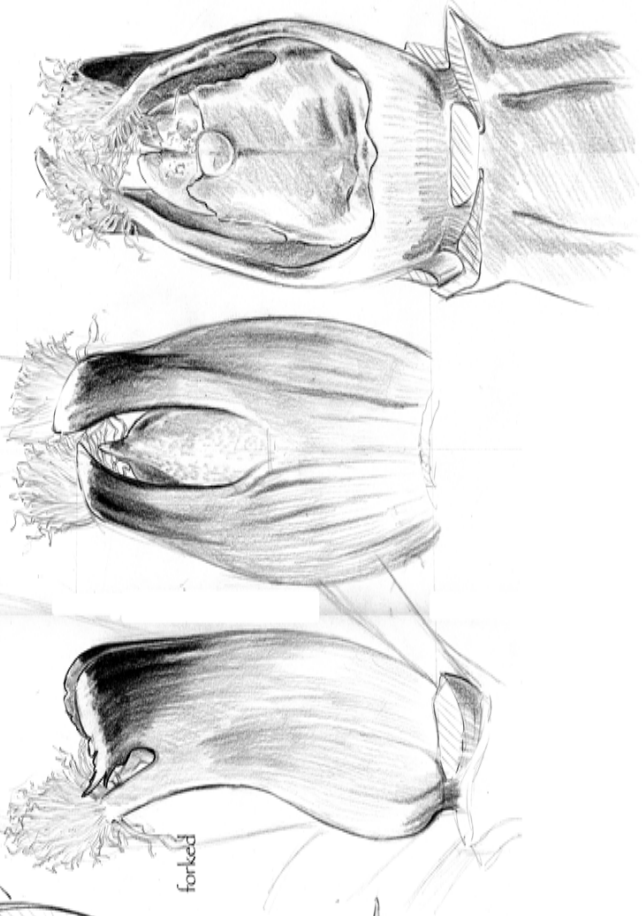
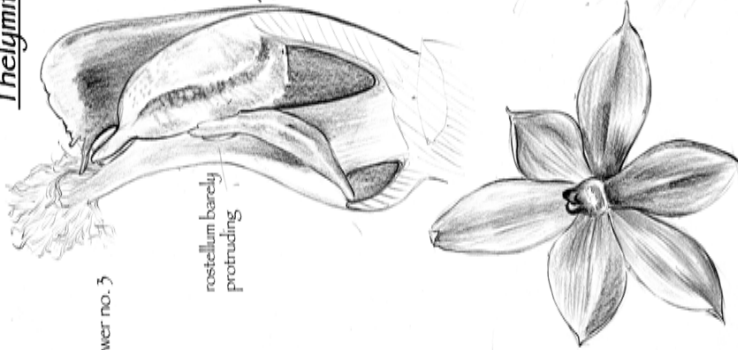
presumed hybrid possibly *formosa* x *pauciflora*  
NOTE: the area from which plant was collected  
was searched on 10 Dec 1989. *formosa* not found  
*T. decora* fairly common and one plant showed  
aberration but not nearly to the extent of this plant

Flower no. 3

rostellum barely  
protruding

wing originates outside  
centreline so no cut surface

forked





**M**ike Lusk emailed again (5 November), “These *Pterostylis emarginata* plants were growing within 3m of each other and I was struck by the marked difference in size. The first is about 45cm high while the plants in the second photograph are about 19. (The large plant has the typical notched labellum tip).”



**S**eabourne Rust emailed, “Hello there Ian and members of NZNOG, just wanted to say how much I appreciate the work the Orchid Group does and congratulate you on a fantastic website – a truly valuable resource and much appreciated! I am not (yet) a member but live near the Waipoua forest and love our native flora. As well as an artist I am involved with other taxonomic study, so make good use of your site.

PS thought you might like to see one of my artworks (at right).”

*Hmmm. Seabourne needs a bit of education about orchid structure—Ed.*





# The beginnings of *Pterostylis*

Gordon Sylvester, from ED Hatch

One of the advantages of wet days—when working outdoors does not provide much incentive—is that the internet is available. It is amazing what can turn up with a query.

I came across an historical article, published way back in 1967, entitled “The Beginnings of *Pterostylis* by E.D.H.”

“*Pterostylis*, like so many things in this part of the world, began with Captain Cook and the voyage of the *Endeavour*. On 8 November 1769 the ‘Immortal Banks and Solander’ found *Pt. Banksii* at Mercury Bay, on the banks of the Purangi River, and Solander described it briefly in the *Primitiae Florae* under the MS name *Arethusa tetrapetala*.

“In May 1770, having crossed the Tasman, they collected *Pt. revoluta* from Botany Bay on the coast of New South Wales. (There is a B. & S. Specimen sheet of *revoluta* in the Sydney National Herbarium). It has been supposed that they also collected *Pt. acuminata*, which certainly occurs at Kurnell where Cook landed.

“Parkinson made a drawing of *revoluta* showing a flowering plant with an abnormal basal rosette of leaves. Dryander (who was Banks’ Librarian after Solanders death) suggested that this rosette belonged to *acuminata* and that Parkinson had mixed the two species into his drawing. But the normal *acuminata* rosette surrounds the stem, while the rosette in the drawing springs from one side of the stem, and is apparently the result of a double meristem. In short I believe that this drawing of Parkinson’s, while showing an unusual form of *revoluta*, does not prove that the expedition collected *acuminata*. This is borne out by Nicholls (*Orch. of Austr.* 1951. t 81) who records a specimen of *revoluta* having a lateral growth of large leaves at the base of the stem, and another

which possessed a well developed rosette of leaves immediately below the floral pedicel. (refer also Nicholls loc.cit. p. xii, and Rupp *Orch. N.S.W.* 1943. p.90).

“In 1792, in April, Labillardiere collected *Pt. alata* at Recherche Bay in Tasmania, and this was published, described and illustrated in *Nov. Holl. Plant. Spec.* 2: 1806. p.59. t.210 as *Dispersis alata*. In 1810 Swartz (*Mag Ges. Naturf. Fr. Berlin.* 4.1810.p.84.t.3) redescribed Labillardiere’s material as *Diplodium australe*, and this species remained outside *Pterostylis* until Lindley (*Gen. et Spec. Orch.* 1840. p.388) brought it in as *Pt. praecox*.

“The genus *Pterostylis* was meanwhile described by Robert Brown (*Prodr. Flor. Nov. Holl. etc.* 1810. p.326) based upon the 17 species collected by him during Flinder’s *Investigator* expedition to Australia in 1802-5. The generic type is *Pt. curta*. Brown’s name was conserved against the *Diplodium* of Swartz (presumably to prevent confusion with *Diplodium* R. Br. *Prodr.* p. 330), and from then on it was merely a matter of adding or subtracting names as species were discovered, denounced or reconsidered.”

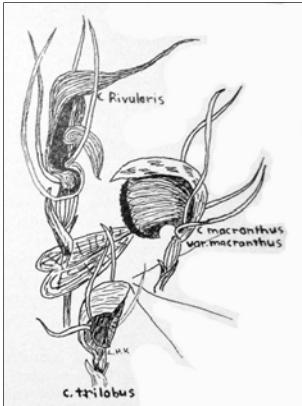
The paper was published in the *Auckland Botanical Society Newsletter*, November 1967 p.3.

Interestingly Hooker only mentioned the fact that Banks and Solander collected some plants and completely omitted to mention *Arethusa tetrapetala* in his 1853 *Flora*. And of course there has not been any mention of this obscure piece of information until Dan Hatch published his little piece in his journal.

So is this another old name to be added to the lists of synonyms or do we let it rest in peace?

(*Arethusa tetrapetala* is a manuscript name (*Primitiae florae* was not published) so has no formal status—Ed.)

# Leicester Kyle The Orchids of New Zealand



The late Leicester Kyle, poet, priest, scientist, environmentalist, orchidologist & one-time member of the NZNOG, wrote a series on NZ orchids in *The NZ Gardener* 1956–1957.

This is important not just because Kyle is a celebrated New Zealander, but because his writing is populist and bridges the gap between Hatch and Moore. It will form our *Historical Series* No. 19, but will be available in print at \$10 only by ordering in advance. It will be available free as an electronic book.

If you wish to receive a copy, send \$10 to Brian Tyler at [bandj.tyler@xtra.co.nz](mailto:bandj.tyler@xtra.co.nz).

**F**elicity Goodyear-Smith found *Calochilus herbaceus* in a reserve just north of Auckland, 11 November.



**M**urray Dawson emailed (15 November),

## “Native orchid key now online

“The new interactive identification key to our native orchids – first announced in the *NZNOGJ* 121, p. 22, August 2011 – is now live on the Landcare Research website ([www.landcareresearch.co.nz/resources/identification/plants/native-orchid-key](http://www.landcareresearch.co.nz/resources/identification/plants/native-orchid-key)). This replaces an early demonstration version of the key.

“To recap, this is a joint project between Murray Dawson of Landcare Research, author and photographer Jeremy Rolfe and the NZNOG. We sincerely thank members of the NZNOG and others who have generously contributed their outstanding image collections and other help to the project.

“This new tool is easy to use and provides rapid and accurate identification to the native

orchids. There are currently 124 species and informal entities as main entries in the key, with further tag-name entities captioned under species aggregates. 40 characters and 214 character states are used to identify them.

“Links within the key connect other biodiversity resources – the Landcare Research Plant Names database, the NZNOG orchid profiles, and New Zealand Plant Conservation Network (NZPCN) pages.

“This new key is part of a series of Lucid™ keys to the New Zealand flora being developed at Landcare Research. These include keys to flowering plant genera of New Zealand, weed species, and grass species.

“A help file explains how to use interactive keys ([www.landcareresearch.co.nz/resources/identification/plants/lucid\\_help](http://www.landcareresearch.co.nz/resources/identification/plants/lucid_help)). There is also a link on that page to troubleshooting – what you need to do if the key does not work for you.

“The orchid key is a two year project, scheduled for completion in May 2013. Funding was provided by the TFBIS (Terrestrial & Freshwater Biodiversity Information System) programme.

“There is still time to incorporate further images and feedback from users – so please contribute!”

**M**ike Lusk sent photographs (at right) of *Pterostylis*: “I visited the Blowhard Bush on 14 November to check on a *Pterostylis patens* with a notch at the tip of the labellum. The colony grows on a trackside in mature manuka scrub along with *P. pulchragalea*” and *P. patens* with the typical labellum. It seems to me that if *P. emarginata*, so similar to *P. banksii* apart from the labellar notch, can be a separate species, then the equivalent situation in *P. patens* deserves the same treatment. Alternatively we should look critically at the current separation of *P. banksii* and *P. emarginata*. It would be helpful if people could review their pictures of *P. patens* to see if the emarginate labellum occurs more widely.” [See next page—Ed.]



My concept of *P. emarginata* is consistently a much smaller plant than *P. banksii*, always grassy-leaved, always with a notched labellum (photographs at left). Many do not share Colenso's enthusiasm for splitting it (if indeed my concept is the same as Colenso's) from *P. banksii*, and Brian Molloy makes the valid point that the labellum tip of *P. banksii* is variably emarginate anyway. So, as Mike shows, is that of *P. patens*. The problem with photographs is they don't show relative size, and, since the labellum carries a hollow ridge to its tip, you can make the labellum tip look notched by the angle of the photograph—Ed.



From the *Wairarapa Times-Age*...



By ANNE TAYLOR

Small is beautiful at Aratoi right now, with a show by Ian St George, and the biannual fundraiser *Little Jewels*, is not to be missed before they close on December 16.

Several years ago, Ian presented a memorable exhibition of painted Wairarapa churches that alluded to Mediterranean and Mexican portable and roadside shrines. He has developed this theme in *The Iconic Orchid*, a group of small paintings mimicking the style of Greek and Russian Orthodox icons but with the sacred objects haloed New Zealand wild orchids, set in magical local landscapes. Ian has extensively researched the life of William Colenso, who discovered a number of New Zealand orchids, some of which are endemic to the Wairarapa. Elaborate gilt frames complement the artist's intense, intimate visions.

## Stewart Island orchids

New numbers in the **New Zealand Native Orchid Group's Historical Series** are available now from Brian Tyler: [bandj.tyler@xtra.co.nz](mailto:bandj.tyler@xtra.co.nz); Elsie Smith's watercolours of Stewart Island orchids; Dorothy Jenkin's watercolours of Stewart Island orchids; \$10 each includes p&p.



**P**at Enright emailed (19 November) with photographs of plants growing within 100m of each other at Kaitoke in the Taranaki.



▲ These are *Thelymitra nervosa* ▲



*T. aff. ixioides* ▲

... again ►



Columns of *Tt. nervosa*, *colensoi* and *aff. ixioides* from Pat's site.

# *NatureWatch NZ: a free online tool for field observations of orchids*

By Murray Dawson

NatureWatch NZ (<http://naturewatch.org.nz/>) is a new natural history recording website that is ideal for sharing your field observations of New Zealand native orchids.

This website is a redevelopment of an earlier New Zealand Biodiversity Recording Network (NZBRN) initiative, but using a New Zealand implementation of a US-developed platform called iNaturalist. The NZBRN facilitates recording 'citizen science' observations of plants, fungi, insects, birds and mammals. Redevelopment work was funded by TFBIS (Terrestrial and Freshwater Biodiversity Information System).

With NatureWatch NZ it is simple – and free – to create an account and enter your observations (you do not need an account to explore the observations made by others).

When recording new (and past) observations, there is lookup list of common and scientific names available. These names are attached to the New Zealand Organism Register which provides a powerful and New Zealand-specific nomenclatural resource. Alternatively, you can enter your own species or common name. This is a handy feature for accommodating the many orchid tag-names.

If you are unsure of your identification, you can choose 'ID Please' which allows an online community of experts to help. Anyone can make general comments on your observations – you don't have to be an expert.

Images can be uploaded onto the system individually. However, for multiple images it is more efficient to use the built-in connection to the online image hosting services Facebook, Flickr and Picasa. For batch upload of images from these services, you will need to have

separate accounts with them. Some cameras have built-in GPS and any georeference (latitude and longitude) data within an image is automatically pulled across into NatureWatch NZ.

Place-names and georeferences are added to locate your observations on embedded Google maps. This mapping facility produces New Zealand-wide and global distribution maps for a given species, observer or project. For sensitive observations of threatened species you can choose the level of geoprivacy (open, obscured or private). This feature caters for endangered orchids where precise localities should not be disclosed.

There is a great opportunity to include into NatureWatch NZ the 45,000 orchid records assembled through the NZNOG Mapping Scheme. It is also possible to link or use a 'widget' to connect this information to the NZ Native Orchids website.

You can also create and share projects. Using orchids as an example, projects could be set for observations of all contributing members of the New Zealand Native Orchid Group, and observations made by members of each regional orchid society.

NatureWatch NZ is undergoing progressive enhancements. For the tech-savvy, there is even a free app for recording NatureWatch NZ observations through your iPad and smartphone (iPhone and android). This is especially handy for field use and you don't have to be in network range for this application to work on your device.

NatureWatch NZ is a useful and well thought-out resource aimed at community-based science and natural history observations. If adopted widely by members, it should prove an invaluable resource for New Zealand orchid enthusiasts.

## Purpose and attributes of NatureWatch NZ

### Mission

- Fill gaps in knowledge about distributions and behaviour/phenology/activity of indigenous and exotic organisms
- Engage a wide cross-section of society in becoming more observant, aware and protective towards their natural history – and contributing to citizen science including monitoring biodiversity and biosecurity.

### Main features to achieve these outcomes

- Seamlessly provides for recording or viewing records or information about all organisms – from bacteria to elephants – linked to the comprehensive NZOR (organism register), but also to worldwide species lists
- Basic version (easy to follow steps)
  - ◊ Adding observations – minimum required
    - ◆ What? Species name (common or scientific) with digital image upload & copyright protection, ID Please, interactive conversations & peer-review
    - ◆ When? Calendar and time
    - ◆ Where? With accuracy and privacy

options

- ◆ by Whom? Provide your profile information, automated life lists, etc
- ◊ View observations (by a range of taxonomic, place, time and other filters)
- ◊ Encyclopaedia of life
- Pro-features
  - ◊ Behaviour, Age Status and/or Phenology
  - ◊ Absence as well as Presence records
  - ◊ Individual tagging of plants or animals for monitoring (including plot indication)
  - ◊ Abundance of above categories
  - ◊ Measurements
    - ◆ Height/Length
    - ◆ Spread/Width
    - ◆ DBH
    - ◆ Basal Diameter
- Open source platform
- iPhone & Android apps
- Creation and polygon definition of ‘Places’
- Creation of ‘Projects’ that may be defined by Places, Taxa, Lists or Group activity
  - ◊ Text description and rules
  - ◊ Connections and widgets for linking a Project to other websites.

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## Bill's far north blog

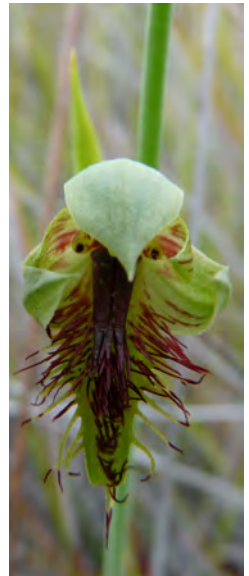
By Bill Campbell

Over the past couple of years I've made a few unusual or noteworthy orchid finds while fossicking about in various parts of the Far North.

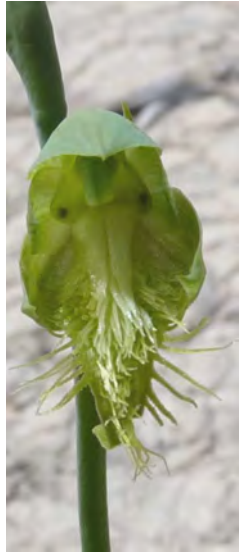
*Calochilus herbaceus* – a new colony at Tahanga Road, Lake Ohia, in 2011. This colony had two flowering plants only in 2011, but 25 flowering plants at the same site on 21 October 2012. The majority of these were in a five metre long by one metre wide strip track side. In other colonies I have observed the plants are usually far more scattered.

At least 40 flowering plants were observed alongside the Earth Wall Track at Te Paki during two visits in October 2012.

Only three flowering plants were located in the Cable Bay colony in 2012, the first of which was flowering on 23 September, nearly a month earlier than usual. ►



*Calochilus herbaceus* “viride” – 10 flowering plants of this form were observed alongside the Earth Wall Track on 2 October 2012. During a revisit on 27 October it was noted that a small group of five plants had completely disappeared. ►



◀ *Molloybas cryptanthus* – observed in a number of locations in the Shenstone Block at Te Pahi over several visits during 2011. It was only observed in one of those locations on 5 September 2012, but a new colony was discovered alongside the Earth Wall Track at Te Pahi on 27 October. I have noted that, contrary to what is stated in some descriptions, the seed capsule is held upright and not partly or completely horizontal when the scape is fully extended. The emerging capsules are invariably horizontal to some extent.

*Plumatichilos tasmanicum* – a new colony of at least 22 immature plants was located at Whatuwahiwi on the Karikari Peninsula on 29 Sept. 2012. No flowering plants were observed. ►



◀ *Pterostylis puberula* – a colony of 30+ plants was located at Whatuwahiwi on 22 October 2012, several hundred metres away from the *P. tasmanicum* colony. Some of these plants were still in flower.

*Thelymitra* aff. *ixioides* – a previously unknown colony was located adjacent to State Highway 10 near the Matauri Bay intersection on 30 October 2011. Only a handful of plants were observed.



Further exploration on 20 October 2012 turned up considerably more plants, some in full flower, approximately half a kilometre further south. The only other colony currently known to Kevin Matthews and me in the lower reaches of the Far North is at the Ahipara Gumfields. ►



*Anzybas rotundifolius* “late pale” – the colony at Lake Ohia had plants flowering on 11 July 2012, putting paid to the belief that this variety flowers several weeks later than its normal coloured counterpart. ►



◀ *Prasophyllum* “patentifolium” – the small colony located at Cable Bay several years ago was believed to have been subsequently destroyed by property development. However, I am pleased to say that a handful of plants were located in the same general area this year and one of these flowered.

*Prasophyllum hectorii* – a trip to a previously unexplored area of Lake Ohia on 8 and 9 December 2012 turned up a colony of more than 41 plants in full flower. Whilst previously included in species lists for Lake Ohia, there is no record of who observed it or when. Apart from an observation made by Ewen Cameron at the Te Werahi wetlands many years ago, this elusive species doesn’t appear to have been recorded elsewhere in Northland in recent times.

As an added bonus, I also observed in the same general area several plants of *Thelymitra cyanea*, which has not been recorded at Lake Ohia previously and which is presently known from only one other site in the Far North.

Kevin Matthews’ photograph ►



*Nematoceras rivulare* – whilst engaged in my work in September 2011 I was acquainted for the first time with this species. There appeared to be numerous plants in the vicinity of a ford crossing of a bush stream near Otangaroa, south of Mangonui. I subsequently revisited the site with Kevin Matthews on 5 November 2011 and we observed and photographed large numbers of flowering plants in what transpired to be a very extensive colony, covering the banks on both sides of the stream for several hundred metres at least. ►



◄ In contrast to 2011, 2012 was not a good season for *Thelymitra* flowering, due to adverse weather conditions much of the time. In 2011 I was able to observe *Thelymitra colensoi* flowering for the first time, along with a number of other elusive species. The *T. colensoi* created a conundrum, as there was also another small species flowering at the same time with a distinctly different column. This relitigates the *Thelymitra intermedia/Thelymitra colensoi* debate, as the two quite distinctive small flowered entities flower three to four weeks earlier than the more robust, and much more common, *Thelymitra pauciflora*. I was hoping to make further observations in 2012 and perhaps unravel the mystery, but weather conditions conspired against me.



After what I observed in 2011 due to the excellent flowering conditions, I have concluded also that *Thelymitra* “rough leaf” (▲ left) and *Thelymitra* “sky” (▲ right) are two distinct entities. I must admit that I had been skeptical that *T.* “sky” was different, but I now know that this entity flowers well after *T.* “rough leaf” has finished flowering. When seen in full flower, *T.* “sky” is quite distinctive.

A trip to Te Pahi with Kevin Matthews on 14 December 2012 turned up at least 50 plants of *Gastrodia* aff. *sesamoides* in the vicinity of the Shenstone Block. ► The majority of these were in rather un-orchid like habitat, growing up through a dense cover of Kikuyu grass. To the best of our knowledge, this entity is known to be present in the Far North only from the vicinity of the Shenstone Block at Te Pahi and the Spirits Bay Road area. I spent a considerable amount of time following up a quite recent record of this entity from Totara North, only to eventually track down a photo posted on the internet which clearly identified not the target taxon, but Broomrape.





# Plant list for AGM 2012

By Gordon Sylvester

The AGM has come and gone. The location this year was one of the type localities (sites of records ) for a lot on the “old” species. A list was prepared from the database and from that we were able quickly to assemble a list of sightings by everyone present. Tracks traversed were Puffer/Smiths Creek, Ridge Track (old), Marchant Ridge track to site of old Dobson Hut, Top track to YMCA track—plus the scrub behind the YMCA complex.

So firstly my thanks to all those who made the list possible for this year 2012. The Ecological District is 38.01 or if you prefer Ecological Region 38.00

Plants seen were

<i>Aporostylis bifolia</i>	leaves and small bud.
<i>Caladenia minor</i>	flowers
<i>Caladenia variegata</i>	flowers
<i>Caladenia chlorostyla</i>	flowers
<i>Caladenia ‘red stem’</i>	flowers
<i>Chiloglottis cornuta</i>	leaves very small buds
<i>Earina autumnalis</i>	leaves only
<i>Earina mucronata</i>	leaves and flowers
<i>Microtis unifolia</i>	flowers
<i>Nematoceras dienum</i>	leaves, seedpod—identified by Carlos Lehnebach.
<i>Nematoceras macrathum</i>	leaves
<i>Nematoceras trilobum</i> agg	leaves
<i>Orthoceras novae-zeelandiae</i>	leaves
<i>Prasophyllum colensoi</i>	flower and buds
<i>Pterostylis graminea</i>	flowers
<i>Pterostylis banksii</i>	flowers
<i>Singularybas oblongus</i>	red veined leaves in flower; plain green leaves at small seed pod stage.
<i>Stegastyla lyallii</i>	bud and early open flower
<i>Thelymitra pulchella</i>	bud
<i>Thelymitra longifolia</i>	flower
<i>Thelymitra colensoi</i>	flower and fruit
<i>Thelymitra decora</i>	bud
<i>Thelymitra</i> aff. <i>ixioides</i>	open flower
<i>Thelymitra</i> sp.	did not fit any recognised category
<i>Thelymitra pauciflora</i>	flower



## More on *Molloybas cryptanthus*

Margaret Menzies, November 2012

My sisters, Glyn Claire and I have been trying to keep up with the “cantankerous cryptanthus” as Bruce Irwin called it. You never know when or where it is and if it is going to pop through the litter or whether it has moved on and which way? North, south, east or west, or just gone away? It really makes your day when you see a beautiful little flower peeping up at you. It also makes you quite nervous to have to dig them out of the litter. When we see that they are still present, we tend to leave them alone and check for seed-heads later on.

On 1 July we went to Omoana to look for *Corybas cheesemanii* and found red flecked *M. cryptanthus* up through the litter, only one plant, the earliest I have seen yet.

On 4 August we found two white flowers on top of the litter and dug out four red flowers; not as many as usual because some sites were bare. It will be interesting to see if any seed-heads appear later on. The wind and rain, bugs and slugs, made getting good photos nearly impossible so while Glyn and I were on our knees photographing, Claire wandered downhill and found another patch in amongst punga and fern. Very difficult to photograph. There were three *M. cryptanthus* flowers spaced out downhill. The bottom flower had rhizomes all over the place with a bud protruding (Fig. A) not far from the flower. Somehow I got the job of covering it to check out later.



On 18 August there were two more white *M. cryptanthus* smiling up at us (Fig. B) and Glyn uncovered two more red flowers but we left the



fern patch alone. We went back on 2 Sept and looked at fern patch: there was a red flower out on top of the site. After carefully uncovering the bottom flower—which had faded—we found that the bud was just unfurling into a flower.

(Fig. C) Fantastic to see clever wee flowers so I covered it over again and we said goodbye to *M. cryptanthus* for the season.



Glyn and I checked sites out on 24 Nov but no seed-head were showing although *Corybas cheesemanii* had started to push through. The *Molloybas cryptanthus* plants are on the north-northwest faces on steep country in the Omoana area at about 1,300 ft. altitude. The seed-heads we have recorded previously have been from the end of Nov through Dec. The seed-heads last only about 10 days, weather depending. The manuka in the area is of course getting older and taller and the fungus species are probably changing because we are getting different species of orchids there now.

## *Pterostylis* "Triplex"

Margaret Menzies November 2012

I found one plant on the top of a bank on Waitiri Track in 2011, with the flower past its best. On 2 Sept 2012 there were one tall plant and two small plants on the top edge of the same bank. On 6 Oct Claire, Glyn and I carried a ladder back only to find that bugs had eaten its throat and leaves to bits and also nibbled at the others. On 27 Sept we decided to go to the Red Bridge bank at Omoana where we found a dozen or more *Pt.* "Triplex" plants. A large plant had olive green leaves with orange up leaves, stem and tepals.

On 9 Nov we went back and took photos (Fig. D) of the first flowering plant, very robust with colours so strong, and that red labellum. Back again on 24 Nov finding about 40 plants, small to flowering with heart shaped stigma (Fig. E).

Margaret's pix show a plant quite similar to Mike Lusk's from the Triplex Hut, Sunrise Track, in Dec 2006, see *Colour Field Guide 3*, page vii, illustrated on the third from last colour page. It hasn't been found again as yet, in the Ruahine Range but it is great news that Margaret, Glyn and Claire have it in quantity at Omoana. Closely allied to *P. cardio-stigma*—EAS.

## *Chiloglottis* "khaki calli"

Glyn Wren, November 2012

On 9 Nov, Margaret and I went to Omoana, out by the Red Bridge bank. We found a *Chiloglottis* in a damp area which stood 100mm high in flower (Fig. F) along with three or four younger plants.

On 24/11/12 we went out to find that birds had dug it out so we replanted it. There were five more plants about 1m away. They appear to rise on a stem out of the ground with two longer narrower leaves rather than like *C. cornuta* whose leaves seem to come out straight from ground level. We seem to think that it is the *C.* "khaki calli" specimen.



## Eric Scanlen Hatch Medallist for 2012

Eric Scanlen will be 80 in April.

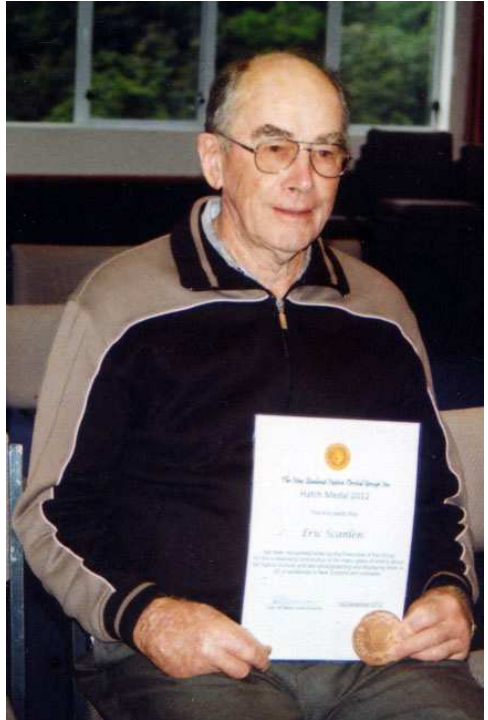
At its AGM at Kaitoke in December, the NZ Native Orchid Group awarded the Hatch medal for 2012 to Eric Scanlen. The nominating letter said,

“Eric has done a huge amount for the Group and for native orchids. Many years ago he began photographing wild orchids in the Hunua Ranges when he was an engineer there; at that time he consulted Dan Hatch. Later he joined the Group, and has contributed significantly in many ways.

“He is a regular attender at the Group’s field days and weekends. He is the most consistent contributor to the *Journal*, with his regular ‘Column’ illustrated with his excellent photographs. He has written and contributed to numbers in the Group’s *Historical Series*. He has been co-editor of the Group’s *Field Guides* over several editions, at first contributing drawings and more recently descriptions and photographs. His photographs embellish the Group’s website. He has been a pioneer in orchid stereo-photography (see next page), and has presented 3-D shows of orchid studies at many weekend meetings; he has been an invited speaker at meetings of other New Zealand groups, and at the Victorian Group of the Australian Native Orchid Society.

“Eric Scanlen is a controversial figure; he has challenged botanical orthodoxy by tag naming and even publishing descriptions of unnamed taxa so that people can recognise them and contribute to our knowledge about them. He has thus been open and honest, avoiding the usual secrecy and delays in the publication of information in order to be the one to make a formal description. Some say he recognises differences between plants that are too minor, that constitute within-species variation rather than real between-species differences, that he states his opinions too firmly. Perhaps so, but the same criticisms were levelled at some of his predecessors, most notably at our pioneer orchidologist William Colenso. Colenso’s species are now being recognised.

“We don’t know how many of Eric Scanlen’s new orchid taxa will eventually be formally described as new species, but you may be sure there will be some. It is above all for that, for his very keen botanical eye, for his acute sensitivity to the differences between plants, for his persistence despite criticism, for his questioning of accepted belief and prevailing attitudes, that I believe he merits this award. It is a pleasure and an honour therefore to nominate him.”



Eric Scanlen receives the 2012 Hatch Medal: photo Margaret Menzies



NZNOG Chair David McConnachie writes, “Personally and on behalf of the NZNOG I would like to congratulate Eric on receiving the Hatch Medal and attaining his 80<sup>th</sup> Birthday. One memory I have of Eric and his dedication to his craft was during the first DOC survey at Tongariro National Park. There were 3 teams of 4 people in the field and we were being transported from site to site by helicopter. The helicopter would collect 3 members of a team, transfer them to a new site, repeat for the other teams then collect the 3 stragglers. Eric found an orchid to photograph so offered to be a straggler during one transfer. When the helicopter finally arrived back to pick him up Eric still hadn’t got the shot he was after so he waved the chopper off. Fortunately for Eric he was scheduled to be second pickup for that transfer so after picking up number 3 the helicopter came back for him. Even then Eric had to drag himself away from the plant.”

Congratulations Eric; and best wishes to you and Gloria.



Eric Scanlen shows 3-D orchid slides.... (newspaper photograph).





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