



New Zealand Native Orchid Journal

No. 128
May
2013

Editorial: Jan St George

Orchid piece on Arthur's Pass

We had a few days at Arthur's Pass in early January, and were delighted to find several of the orchids from the 2011 field trip exactly where Gordon Sylvester's excellent maps said they would be: thanks Gordon!

Interesting to see some cordoned off areas with sticky-lined plastic cylinders, dark with trapped insects, over some orchids—clearly a research project to discover orchid pollinators. I wonder who is doing that?

Here are a few shots: we found (in flower) tiny purple trackside *Thelymitra* sp., *Prasophyllum colensoi*, *Pterostylis australis*, *P. irsoniana*, *P. irwinii*, *P. montana*, *P. oliveri*, *Chiloglottis cornuta*, *Petalochilus* aff. *chlorostylus*, *Prasophyllum colensoi*, *Waireia stenopetala*, *Nematoceras macranthum*, *Aporostylis bifolia*, *Gastrodia cunninghamii*, a single nonflowering *Microtis*, *Adenochilus gracilis* (fr.), *N. acuminatum* (fr.), *N. trilobum* (lf.), a waterfall sprayzone *Nematoceras* (lf.), *Earina autumnalis* (bud), *Winika* (bud). I had hoped to see *Pterostylis venosa* but couldnot find it.



Waireia stenopetala was everywhere, the one on p.3 as open as I have seen it....



January orchids at Arthur's Pass : *Waireia stenopetala*, *Aporostylis bifolia*, *Pterostylis oliveri*, *Pterostylis irwinii*, *Petalochilus* aff. *chlorostylus*



Pterostylis montana. Flower, column & labellum from side, column (wings removed).
Note the flat lateral sepals and the bulbous stigma.

Quiz: can you identify this orchid? answer page18....



The type locality: Jan St George

Te Ruahine, *Pterostylis venosa* Col. & *P. trifolia* Col.

William Colenso published *Pterostylis venosa* in 1896, and *P. trifolia* in 1899, both collected by Andreas Olsen from the Ruahine; the type specimen of *P. trifolia* has been lost. Almost every botanist since then has regarded the two as identical (though Hatch did write, “It will probably be found that 2 jordanons exist within the present conception of the species”).

But recently Mike Lusk found a colony of short *Pterostylis* with clasping leaves (**Fig.i**), and he and Eric Scanlen suggested these might be the long lost *P. trifolia*. The plants appear similar to those recorded by Mervyn Rodgers in the 1970s (**Fig.ii**) [J124] from the Tararua, and those found by Vic Vercoe in 1989 (**Fig.iii**) [J73: 28] from the Ruahine (Tunipo track). They have short peduncles and petioles and appear different from large plants from the South Island (**Fig. v**, by Gordon Sylvester, Arthur’s Pass); **Fig. vi**, the author, Otago; **Fig.vii**, Vic Vercoe, Rangiwahia) with petiolate leaves and long stems.

Why would Olsen have collected, and why would Colenso have described, the same plant twice, 3 or 4 years apart? Were they these two apparently different plants? or were they both becoming senile? (Colenso complained often in his letters that his memory was failing, but his mind seems to have been sharp until his death aged 87 in 1899; Olsen was younger).

We have published a lot of speculation and I have no wish to add to the confusion, but it is, perhaps, time to sum up.

In July 1848 William Colenso sent a new *Pterostylis* to WJ Hooker at Kew. He listed it as “1584. *Pterostylis*, from among grass, on top. *P. montana*, W.C.”[1]—ie, tagging it *P. montana*. WJ Hooker kept it for his son’s return from India, and in 1853 JD Hooker determined this plant was just an alpine form of *P. foliata* “almost stemless, with three to four sessile radical leaves, a short scape, and a flower hardly exerted beyond them” [2].

On 31 January 1853 William Colenso sent a further collection to WJ Hooker including “4154. *Pterostylis*? (from open summits, top of [Ruahine] range)” [3]. Colenso kept four fruiting plants (numbered 4154 in his hand), which TF Cheeseman, after Colenso’s death, identified as *P. venosa* (**Fig.iv**). The Kew specimen seems to have been lost from the Kew herbarium, perhaps because by then JD Hooker had included it in *P. foliata*.





In 1894, forty years later, Colenso's Norsewood neighbour Andreas Olsen collected and a little later still Colenso described *Pterostylis venosa*...

***P. venosa*, sp. nov.**

Plant small; leaves 2 near the base of the stem, suborbicular-oblong, 1¼ in. long, 1 in. wide, very membranous, largely veined, veins prominent anastomosing, areoles large subquadrilateral; petioles also veined, broad, loose, clasping, with 2 sheathing-scales at base. Scape 2½ in. high, naked. Galea erect, ¾ in. long, hood-shaped, greenish; dorsal sepal ovate-acuminate, obtuse; lower lip small, cuneate, sub ½ in. long, ascending, with 2 linear-ovate lobes, tips finely acuminate, extending a little beyond dorsal sepal; petals ¾ in. long, sub-linear-spathulate with an obtuse angle produced on outer edge near the middle, tips broadly truncate. Labellum sub ½ in. long, purplish, ovate-acuminate, parallel-veined, tip very slender, slightly exerted. Column sub ½ in. high, very slender, wings with lower lobes oblong-obtuse, upper lobes, or teeth, short, narrow, acute.

Hab. Ruahine Mountain-range, east side: Mr. A. Olsen; 1894.

Obs. I have only received two specimens of this little plant, and they are very similar; unfortunately, though whole and perfect, they have been pressed very much in drying, so that it has been a difficult matter to ascertain correctly their finer internal construction, on which so much depends, and I have only dissected one of them. [4]

The plants referred to by Colenso in this description are at Kew (Brian Molloy, *pers. comm.*).

There is a sheet in the Kirk herbarium with an envelope containing two

2-leaved 50mm plants collected by Olsen (**Fig. viii**).

Pat Brownsey suggests this sheet is actually misidentified, and should be labelled "Herb.

Colenso" (Olsen collected only for Colenso, and the identification is in Cheeseman's hand, as with the other plants in Herb. Colenso. Furthermore, the inner envelope is labelled in Colenso's hand, "Pterostylis venosa dissections"). The plants are 50mm, much like Mike Lusk's plants; the stigma is long and flat.

In 1899 Colenso's description of *P. trifolia* from a single postmature plant was published; that specimen has never been found:

***P. trifolia*, sp. nov.**

Plant small, glabrous, 2½ in. high; 3-leaved at base; leaves close, equidistant, spreading, flat, sessile, broadly oblong, 1½ in. long, 1 in. broad, tips very obtuse-rounded, many-nerved longitudinally, with veins largely anastomosing between nerves. Scape 1





Pterostichis
venosa
1847-1848

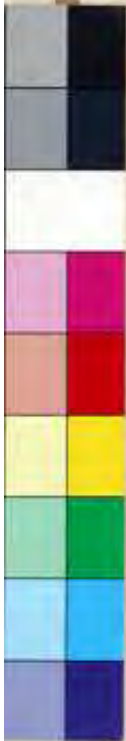


Pterostichis
venosa L.f.
Rushmore Hill
Chim

Only one
Herb. 26-4-77



ix



Australian National Herbarium (CANB)
 Lectotype of *Pterostylis confertifolia* Allan
 (= *Pterostylis venusta* Colenso)
 Det. D.J. Jones 11 January 2007

*It appears that there are no specimens
 labeled *P. confertifolia* or otherwise
 matching any way to description and
 locality in either Auckland or Taranaki
 Museums. I therefore assume that this
 is the type specimen collected by Allan
 and destroyed - 4/2/56/19028 *Plate 26/1/88**

Pterostylis venusta
 [?] A.D. Jones Aug. 1961
 [*P. confertifolia* ~~was~~ was considered by Hatfield (R.S.M. 2
 15(N):269) to be identical with *P. humilis*
 Examination of the Labellum and
 stigma however, show it to be *Pterostylis*
 A.D. Jones
 Aug. 1961.]

HERBARIUM OF THE PLANT RESEARCH
 STATION, NEW ZEALAND.
 No. 1975
Pterostylis confertifolia

District: Date:
 Locality: *Hakima nr. Apiti*
 Collector: Det. by
 Number:

CHR 1975-001-897
 HERBARIUM OF THE PLANT RESEARCH STATION

CHR 1975-001-897

in. long, stout, erect; flower solitary. Perianth 1¼ in. diameter, sepals and petals nearly equal in length, narrow, sub 8 lines long, membranous and veined, not long-tailed; tongue narrow, thickish, dark-red, tip subacute, exerted; appendage large, membranous, veined, erect, curved, tip acute; column wings upper and lower corners largely produced, tips narrow-acute. Capsule very stout, obovoid, sub 1 in. long, 4 lines diameter; sutures ribbed, thick.

Hab. Ruahine Mountain-range, east side, near secondary summits; 1898: Mr. A. Olsen.

Obs. Only a single specimen received, and that with withered (though perfect) perianth, so could not afford to break it up for closer examination. A species very distinct from all other New Zealand ones known to me. [5]

Note, he didn't look at the stigma: large plants, **Figs. v–vii**, fit that description. So does *P. humilis*, named much later.

Pterostylis confertifolia

In 1926 HH Allan described plants from near Apiti, in the western Ruahine. They have since been identified by Tony Druce and Lucy Moore as *P. venosa*. The type sheet (CHR 1915, **Fig. ix**, supplied by the Allan Herbarium, Lincoln) shows 50mm 2- and 3-leaved plants. Allan remarked (shades of Hooker) that “*So crowded are the broadly elliptic-ovate, obtuse leaves that superficially the species more closely resembles the P. foliata group*”.

Pterostylis confertifolia Allan sp. nov.

Herba terrestris glabra, ± 7 cm. alta; erecto caule e tubere pisiforme ± 7 mm. diam. Folia conferta caulem amplectantia, inferiora scariosa squamiforma, obtusa, superiora plerumque 3, erecto-patentes, pallide viridia, paulo crassa, in siccitate tenuiora; laminae 3–5 cm. longae, 1.5–2 cm. latae, elliptico-ovatae, obtusae, venis per vitam obscuris, marginibus paulo incurvatis, basim versus in vaginas latas albas angustatae. Flores solitarii, virides, venis rubris, vix folia excedentes, aliquando in fructu increscentes, ± 2 cm longi, ovario obovoideo ± 1.5 cm. longo excepto. Galeae erectae usque ad ± 12 mm., deinde arcuatae,

apicibus acutis. Petala lateralibus inferioribus dimidiis linearo-oblonga, in superioribus falcata, acuta. Sepala lateralibus linearia, usque ad ± 8 mm. connata, deinde in lobos 2, ± 1.2 cm. longos, erectos, acuminatos producta. Labellum subcrassum, latericium, linearo-oblongum, marginibus minute serrulatis; in canaliculatum, minute retusum, paulo exsertum apicem angustatum. Unguis curvatus, apice 2 longis et aliquis brevibus satis latis filamentis ornatus. Columna gracilis, galeam partem erectam aequans; auriculae decurrentes, superioribus lobis late triangularis, apice breviter acuminatis; inferioribus lobis late oblongis, obtusis, apice mollibus pilis vestitis.

North Island: Wellington Botanical District—On margins of subalpine scrub, and in lower subalpine herb-field, about 1,200 m. altitude, Ruahine Mountains, near Apiti: H. H. A. Though coming into the group containing P. Banksii, P. australis, P. graminea, that have cauline leaves only, this species is very distinct. So crowded are the broadly elliptic-ovate, obtuse leaves that superficially the species more closely resembles the P. foliata group. The plant grows in small colonies, and when growing through moss cushions the stems may be much elongated. [6]

Allan's Apiti locality must be close to Vic Vercoe's. One can only speculate why Allan did not refer to Colenso's descriptions.

Pterostylis humilis

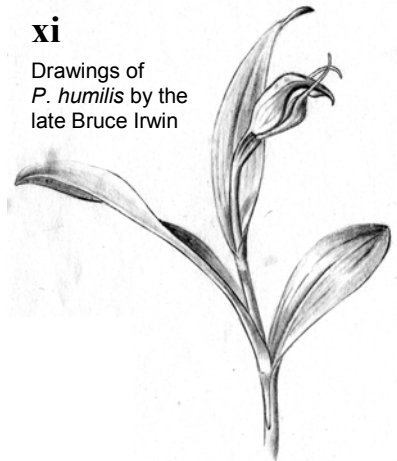
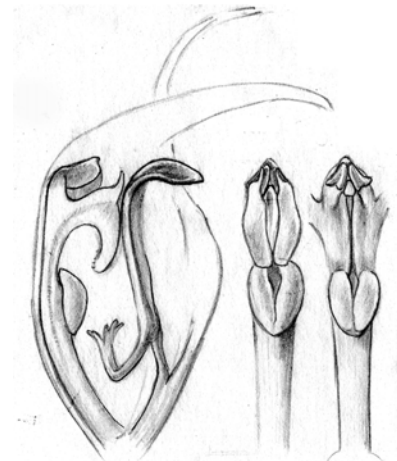
There is a strong resemblance between *P. humilis* and the larger 100mm plants, with blunt oval sessile leaves and longish stems. The critical difference is in the stigma: Dan Hatch wrote, “*Pt. humilis* is excellently adapted for self-fertilisation.... The column is erect, so that the anther is directly above the stigmatic plate.... The pollinia are extremely sensitive, the slightest touch to the flower being sufficient to cause them to fall. **The stigma is globose and very large, protruding forward beyond the vertical line of the anther** (my emphasis). The column-wings have the lower lobes strongly incurved and almost

touching the stigma—so that the falling pollinium is caught between them and the viscid surfaces of the stigma cells. Of the five hundred odd plants observed by the writer during 1942–5, every one set seed, whereas in the same locality *Pt. banksii* was just as consistently infertile.” [7] **Fig. x** shows a Ruapehu plant, **Fig. xi** a dissection drawn by Bruce Irwin [8].

No report of *P. humilis* can be relied on if that globose stigma has not been sighted. No report of *P. venosa* can be relied on if a long flat stigma has not been sighted.

Conclusions

1. *P. humilis* is a 100mm long-stemmed plant with flat blunt oval leaves, erect flower with large globose projecting stigma. It has reliably been reported from the North Island and upper South. Adapted for self-pollination (Figs x, xi).
2. *P. venosa* s.s. is the 50mm Ruahine and Tararua plant, with a very short stem, 2 to 5 rather upright leaves, often slightly pointed (Figs i–iii). This small plant is not *P. trifolia* Col.—it does not fit Colenso’s description (rounded flat spreading sessile leaves), and Fig. vii shows clearly that he considered it to be *P. venosa*. These plants should be watched over time—they may change as they age, or they may be dry habitat dwarves (plants in a shady habitat near a Tararua colony have longer and rounder, sessile leaves).
3. *P. confertifolia* = *P. venosa*.
4. *P. trifolia*: unless Colenso’s single specimen can be found, *P. trifolia* has to be rejected (as Hatch suggested) as a *nomen dubium*.
5. The 100mm long-stemmed plant with the flat blunt oval leaves, slightly nodding flower with flat narrow stigma appears to be the only southern South Island form, but also grows as far north as Taranaki (Figs v–vii). It is adapted for insect pollination. It fits Colenso’s description of *P. trifolia* better than does the smaller plant.
6. Intermediate forms between the 50mm *P. venosa* and the large 100mm plant grow alongside “pure” forms. Intermediate forms may, as Eric Scanlen suggests, result from **hybridisation**. Their pres-




ence is not of itself *evidence* of hybridisation: hybridisation requires a shared pollination vector for both parents which are locally present and flowering at the same time. Those requirements are not met in all sites where intermediate forms grow; the 50mm plant has not been reported in the south, and furthermore selfers such as *P. humilis* would not be expected to hybridise.

In my opinion hybridization is unlikely and *P. venosa* is a **single variable species**—the variation either occurring among different plants of the species as they grow in different habitats, or within individual plants as they age.

References

1. St George IM 2009. Colenso's collections. NZNOG, Wellington, p.233.
2. Hooker JD 1853. *Flora Novae-Zelandiae* 1. Reeve, London, 1853.
3. St George 2009, p.280.
4. Colenso W. 1896. *Trans. & Proc. New Zealand Inst.* 28: 610.

5. Colenso W. 1899. *Trans. & Proc. New Zealand Inst.* 31: 281.
6. Allan HH 1926. *Trans. N.Z. Inst.*, 56, 1925, 32.
7. Hatch ED 1948. *Trans. N.Z. Inst.*, 77: 245.
8. Irwin JB 2007. In Tyler B, St George IM. *Bruce Irwin's drawings of NZ orchids.* NZNOG, Wellington.

 wen Gibson noted (unpublished orchid diary, 12 December 1947, transcribed by Val Smith), "*Pt. venosa* occurs spasmodically throughout this valley (Waiwakaiho Gorge) and in some instances a wide and marked variation in the species was apparent. An example of this was the occurrence of a robust, compact type which compared favourably with the characteristics of a form, confirmed by Hatch as *humilis*, which was found 3 miles away near the Holly Hut. Possibly the verification of *humilis* will be achieved in some future season."

Pterostyles venosa
Mount Egmont



Bruce Irwin's drawings

Australian notes: David McConachie

Below are a pair of field trip reports that members of WANOSCG carried out during the period of the 19th AOC Conference and Show in Perth— from WANOSCG Bulletin October 2012 pp7-9.

SOUTHERN RIVERS GROUP field trip

Cape Riche and Miller's Point,
Saturday 15 September 2012

Saturday 15th September 11 members in 4 cars travelled east from Albany to Cape Riche. Here we saw 19 different orchids in a small area. Though the variety was there, numbers were much less than in better seasons. *Ericksonella saccharata* (Sugar Orchid), *Elythranthera brunonis* (Purple Enamel Orchid), *Caladenia flava* subsp. *flava* (Cowslip Orchid), *Thelymitra flexuosa* (Twisted Sun Orchid), *Thelymitra antennifera* (Lemon-scented Sun Orchid), *Vanilla* Orchid), *Diuris laxiflora* (Bee Orchid), *Pterostylis* sp. 'limestone' (Limestone Snail Orchid), *Pterostylis turfosa* (Bearded Bird Orchid), *Caladenia polychroma* (Joseph's Spider Orchid), *Caladenia pectinata* (King Spider Orchid), *Pterostylis vittata* (Banded Greenhood), *Caladenia barbarossa* (Common Dragon Orchid), *Caladenia vulgata* (Common Spider Orchid), *Cyanicula sericea* (Silky Blue Orchid), *Caladenia longicauda* subsp. *australora* (Southern White Spider Orchid), *Cyrtostylis robusta* (Mosquito Orchid, Large Gnat Orchid) and *Thelymitra crinita* (Blue Lady Orchid), *Pterostylis recurva* (Jug Orchid), *Diuris corymbosa* (Common Donkey Orchid) and a number of the *Pterostylis rufa* group in bud.

After leaving Cape Riche we travelled to Miller's Point, stopping at Pallinup en route. Again the numbers were less than in past years and also fewer varieties were seen. At the Pallinup we also found *Caladenia longicauda* subsp. *eminens* (Stark White Spider Orchid), *Caladenia falcata* (Fringed Mantis Orchid) and *Cyanicula Gemmata* (Blue China Orchid), Southern White Spider Orchid

At Miller's Point a similar scenario greeted us, as did a multitude of Mossies, usually a good sign where Orchids are concerned!! (This is not necessarily backed by scientific evidence!) Here we found *Corybas* leaves, *Caladenia reptans* subsp. *reptans* (Little Pink Fairy), *Pterostylis* sp. 'Millers Point' (Dwarf Snail Orchid), *Caladenia latifolia* (Pink Fairies), *Cyrtostylis huegelii* (Midge Orchid), *Cyanicula aperta* (Western Tiny Blue Orchid), *Cryptostylis ovata* (Slipper Orchid), *Prasophyllum* sp. 'early' (Scented Autumn Leek Orchid), *Caladenia douchiae* (Purple-veined Spider Orchid) and many *Microtis* which were too immature to identify.

The weather was kind to us and a thoroughly enjoyable day had by yours truly.

Pam Goodman

WONGAN HILLS weekend

A select group of Members ventured to Wongan Hills for the week-end of September 15/16. On the way into Wongan Hills around Lake Ninan Trish and I found some small spider orchids (*Caladenia dimidia/vulgata*?), and Purple-veined Spider Orchid (*Caladenia douchiae*). The main group (Trish, Ramón, Peter, Debbie, Beth, Delys, and Marian) met up at the visitors centre where were greeted by Rod Clarke and Lyn Phillips who provided a lot of help as always. Lyn joined us for most of the day in order to show us where some orchids had been seen recently. A big thanks to the Rod and Lyn.

At Elphin Reserve (east) we found a range of *Caladenia* spider orchids (*Caladenia longicauda*, *Caladenia roei*, *Caladenia flava*, sp.), Smooth-billed or Broad-billed Duck Orchids,

Purple Enamel Orchid, Vanilla Orchid, Pouched Leek Orchid, and Donkey Orchids. Across the road in the west part of the reserve we found Flying and either Smooth-billed or Broad-billed Duck Orchids, Warty Hammer Orchids and Shirt Orchids. On the Ballidu road, just outside the town, there were plenty Vanilla Orchids (Lemon-scented Sun Orchids), more of those hard to identify small spiders and ant orchids.

On the Sunday morning Kelvin joined us at the Christmas Rock Trail where we saw the small white spiders, Ant Orchids, Cowslips and donkey orchids. Most of the group then ventured out to Dingo Rock to see Vanilla Orchids, Don-

key Orchids, Cowslip Orchids and Little Laughing Leek Orchids. On a tip off from Peter, who had to return to Perth, we pushed on to the Cullimbun Well Nature Reserve on the 54 Gate Road, to find a couple of the Lazy Spider Orchids much to our delight. There were also some Cowslips and Ant Orchids, donkey orchids and a single Drooping Spider Orchid.

So it was altogether a very enjoyable and relaxing week-end, with something for everyone.

Ramon Newmann

NOSSA visit to Muloowurtie Reserve, Mulbura Park, Ramsay Way and the Brentwood Cemetery, on Yorke Peninsula. Sunday, 26 August 2012— *from NOSSA Vol 36 (9) pp95-96.*

The organisers of this outing can feel proud and satisfied. What a fruitful and friendly day! Our taste for travel and rare sightings is undiminished (so far, this year, we've been way out to Mawantjie Willauwar C. P. south of Tailem Bend, out along Chauncey's Line Road, to Ferries McDonald C. P. and Monarto C. P. and as far north as Sandy Creek C. P.). The turn out of 17 included a number of non NOSSA members who live on the Peninsula and were interested to join us on the day and possibly as future NOSSA members. At least 7 NOSSA bods were sensible enough to sleep on the Peninsula on Saturday night (Fred and Pauline Myers, Wendy Hudson, Jill McPherson, Annette Smith and Patsy Love and David Mangelsdorf). Some made it a longer stay. For those travelling from Adelaide it was a 12 hour day.

Helen, Jill and Annette are keen and skilled ornithologists, so they made the most of time on the Peninsula, spotting dry land birds. Three sightings of note were of sexually dimorphic species (males & females different, as with NOSSA members!); Hooded Robin (*Melanodryas cucullata*), Mulga Parrot

(*Psephotus varius*) and, perhaps near the edge of its distribution, the Crested Bellbird (*Oreoica gutturalis*).

One novice mistook a flower of Early Nancy (*Wurmbea sp.*) for a small orchid. Bob Bates was able to correct the observation. Not only is he an unparalleled expert on orchids; he has published in *J. Adelaide Bot. Gard.* 21 (2007) 75–81, surveying all Early Nancy species of SA, and so is the expert in that field also.

We started at Muloowurtie Reserve (inland, west of Pine Point) where we saw as many species as elsewhere but many fewer actual plants and flowers. Some leaves of the **endangered**, SA endemic, Tall Bayonet Spider Orchid (*Arachnorchis macroclavia*), were seen inside protective cages, but there were no flowers. On August 28 last year flowers were observed.

Slim Tongue or Common Mallee Shell Orchid (*Diplodium dolichocheilum*) plants were seen with seed pods, and the Red Shell Orchid (*D. erythroconhum*) was found in healthy flower. Bob mentioned that plants with richer coloured flowers might be seen at sites later in

the day. The Tiny Shell Orchid (*Hymenochilus pisinnus*) was in flower and a few buds of the Scented or Dryland Sun Orchid (*Thelymitra megalalytra*), the most widely distributed Sun Orchid in SA, were close to opening. A few plants of the Glossy or Limestone Banded Greenhood (*Bunochilus prasinus*) were ending flowering and setting seed. The plants were only a quarter, or less, the height of plants currently in full bloom at Sherlock, the type location, where they are up to 36 cm high.

At Mulbara Park, a National Trust property, we were thrilled to find specimens of the **vulnerable**, SA endemic, Winter Spider Orchid (*A. brumalis*) and the **endangered** endemic SA Dwarf Comb Spider Orchid (*A. conferta*), immediately we entered the property. The Little or Cinnamon Donkey Orchid (*Diuris palustris*) was in flower with some pure yellow forms. Blue Beard or Blue Fairy-orchids (*Pheladenia deformis*) occurred in colours from the usual dark blue, through sky blue to full albino.

At Ramsay Way Conservation Park, inland from Port Vincent, we found the same two spider orchids but Bob Bates alerted us to hybrids between the two. The hybrids, naturally, had characteristics and appearances between the parents but varied among themselves. It was instructive to see examples of the parent species with a hybrid growing between them.

In passing, Bob declared the Ramsay Park to be “*Pheladenia* heaven” and indeed we had trouble not treading on them.

A last minute decision to head to Brentwood, given we’d already come so far, caught Leo unprepared yet again. A detour through Minlaton restored his fuel supplies and we all met up at the quite hard to find 19th century cemetery, an oasis amidst the bare orchid free crop lands. There were more thrills as we found perhaps 20 flowering plants of the **critically endangered** SA endemic Ghost Spider Orchid (*A. intuta*). The Latin name, *intuta*, means “unprotected”, and refers to the precarious conservation status of the species. The com-

mon and widely distributed Pink Fairies (*Caladenia latifolia*; sub-genus *Elevatae*), which we’d already seen at Ramsay Way, were also in flower and a single specimen of *Diuris palustris* was found.

Leo Davis

The New Zealand Native Orchid Journal

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Tottings

Margaret Menzies, Glyn and Claire stopped at Waiohine Gorge in the Tararua on their way home from the AGM and found an interesting *Thelymitra*: “in flower along the roadside. A hot morning and the plants had 5–6 flowers open wide, lots of plants, white, blue and pink. There was a gnat pollinating the flowers. We also saw a *Pterostylis montana* (?) olive to gold colour, lots of *Petalochilus chlorostylus* and *Corybas cheesemanii* seedheads.”



Rebecca Bowater, Nelson, sent the cover photograph, a beautifully coloured *Stegostyla alpina* growing on marble at 1469mts on the top of Hoary head on the Arthur Range, photographed on 23 Dec 2012.

It looks remarkably like a very large plant with six rows of calli from Flagstaff, Dunedin that I photographed and published (in McCrae and St George: The NZ orchids, natural history and cultivation, Fig.21)—Ed.

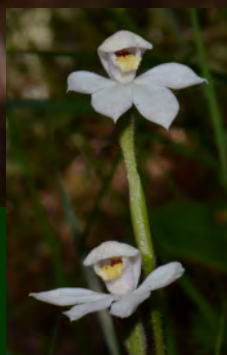
FOUND AT IWITAHIA CAMERA REMOTE SWITCH. Please contact Ernie Corbett 06 7550563 or ejcorbett@xtra.co.nz.



Pat Enright, as if sensing we wanted some southern *Stegostyla lyallii* with which to compare Rebecca Bowater's cover picture, sent a selection from Dolamore Park near Gore in the Hokonui Hills.



◀ Labellum, showing 4 rows of calli.

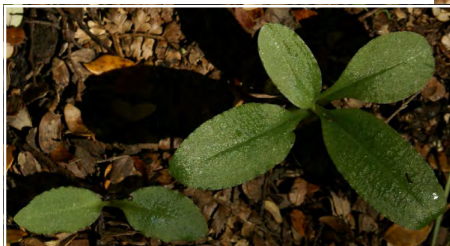


Pat Enright also sent this curious *Pterostylis* from the same locality.



Quiz answer: OK, you were right.

These are seedlings of *Pterostylis oliveri* at Arthur's Pass—not *P. venosa* as I at first thought—Ed.



The 2013 ANOS Orchid conference is now not far away...

How time flies.

Preparations for the conference are now well underway and we have already received our first registrations. Don't forget the early bird registration end in only a few weeks, so get your registration in now.

Many registrants are planning to attend the ANOS conference followed by the Kempsey Speciosum Spectacular the following weekend and are looking for ways to spend the few days between these two events. Depending on interest, we are considering a post conference orchid tour on Monday, Tuesday, Wednesday and Thursday the 26, 27, 28 and 29 August 2013. The current thinking is to run the orchid tours as day trips from and returning to Strathpine each day.

Friday would be for people wishing to attend the Kempsey Speciosum Spectacular to travel from Brisbane to Kempsey.

The native orchid day trips would be to four different areas around Brisbane to observe and photograph in-situ terrestrial and epiphytic orchids. Orchids would be short easy walks from the vehicles.

The tour will take the form of a coach, small bus or tagalong vehicle trip depending on numbers. This tour, if held, will be in addition to the conference orchid bus trip on Thursday while judging is occurring, and will go to different locations.

The final cost of the tour will depend on the form of the tour and this will be controlled by the numbers. As a guide we expect the bus trip would cost around \$30 per person per day and the tagalong vehicle trip form would cost around \$15 per person per day for passengers.

Snacks, lunch and drinks (fruit juice for lunch and/or water) will have to be supplied by each attendee.

Expressions of interest are currently being sought so plans can be firmed.

Expression of interest is non-binding on you nor Kabi and is just an indication to Kabi as to whether there is enough interest in organising this trip. Should these orchid trips be offered, firm prices will be determined and firm bookings sought at a later date at which point you may choose to attend or not attend.

Can you please respond whether you would be interested in attending this trip should it be offered. Could you please answer these questions in your reply.

Are you interested in participating in this 4 day orchid trip

- if the trip was a bus trip? Y/N
- if the trip was a tag along tour? Y/N

Number of people attending?

Names of those who would like to attend (so we don't double count people)

Club (if a group response)

Any comments or suggestions, both good and bad

Could club secretaries request expression of interest from their clubs and respond on behalf of your members. Remember this is non binding on those who offer their names as being interested.

Thank you for your assistance. It would be appreciated if you could respond by the end of January. I understand this may be difficult with holidays, but please try your best.

Graham Corbin, Value Adding Committee, ANOS Kabi

Georgina Upson emailed (16 Feb), “Regarding Nick Millar’s enquiry about colour in *Earina mucronata*, in the Nelson region principal labellum colour varies—from cream on the Waimea plains, bright orange in the Baton, lemon in the far North West to a beautiful salmon on the Killdevil track west of Takaka Hill. It is this salmon to which LH Kyle and or Hatch might have been referring. The labellum underside is more or less red with a reddish tinge internally. Photographs taken another year in the same area but not necessarily the same plants retain the red patches but with a lemon labellum. In looking at my photographs of *Earina mucronata* the colour and size of the dark patches on the flowers also differs in different areas (below and below right).

“The artwork of Seaborne Rust, depicts reasonably the late bud stage of *Nematoceras acuminatum* albeit with some licence colour-wise (see below left). It might be suggested that the editor brush up on floral development.” *Hmmm—Ed.*



Gordon Sylvester emailed about the “red” *Earina mucronata* (the article in J.127 page 27 by Nick Miller refers), “While living in Wainuiomata I occasionally hiked up the Whakanui track over to the Orongorongo River. On one such trip I was enjoying the view over Wainuiomata when I happened to notice an *Earina* in flower just below me at the top of an old slip face. The colour was what I saw. A red orange *Earina mucronata*. What was even stranger was the time of the year, January. I had failed to bring my camera as it was the wrong time of the year to see any orchids up the track. I marked the spot determined to return the following leave day. However this was not to be—it being High Gorse Fire Season.

“My next visit was the following summer. The plant had finished flowering so I collected a small piece and took it home to cultivate. You may imagine my disappointment the following summer—an ordinary coloured *Earina*. Despite my several visits I was never able to repeat that colour experience at that site.

“While working at Shantytown in 2007 I was on the lookout for orchids on the site having been assured there were none there. It didn’t take me too long to find *Microtis unifolia*. In Oct 2007 I was working a little deeper in the bush when I came across a single *Earina mucronata* growing on a tree fern. I tagged it for further investigation when the buds opened, which I estimated to be in about 1–2 weeks time.

“The appointed time arrived and I headed up the track to the site with my camera. On arrival at the site I was to find the flowers just starting to open. I took a couple of shots and departed the scene. I returned 3 days later and to my surprise the plant was in full flower. ▶▶▶

“I am no longer working at Shantytown but I know the plant is still there as no one else was told about it. And you have to be pretty lucky to stumble across it, especially if you had not been told of its existence. In conclusion it pays to persist in recording everything you see. Quite often weird things occur when you least expect it.”



Mike Lusk's Hawke's Bay orchids

10 January 2013: I was on the Maungaharuru Range above Boundary Stream Mainland Island, north of Napier on 8 January 2013 and was treated to a display of *Thelymitra longifolia* agg. and *Microtis oligantha* pushing through small patches where *Hieracium pilosella* does better than the coarse grasses which dominate elsewhere. It is limestone country subject to westerly gales and frequent snow. The *Hieracium* patches are in the most exposed places and I suspect they may be areas where the rock is close to the surface.

The *T. longifolia* agg. plants are short, nearly all with only a single flower (max. of 3), and show considerable variation in the post anther lobe shape and colour, and in leaf form. A couple had some blue marking on the petals and it might be argued that they are not *T. longifolia* agg. at all.

A treasure trove for splitters!



Gordon Sylvester's Borland Odyssey

Melanie Bridgen had asked me on several occasions to join her in an expedition to Borland Lodge Fiordland—which she had last visited with her father (the late John McDonald of Invercargill) and other members of the Orchid Society of Southland in the early 1980s. This happened in the week of 21 Jan 2013. I left home early Monday morning heading down the Coast. First stop was Franz Josef as a rest break and a look around to see what was showing. The Rata trees were just coming into flower. While climbing up to Sentinel Rock I noted several species. Returning to the car park, I went down Roberts track a short distance and noted several orchids between the start of the Roberts Track and the toilet blocks.

Resuming the journey southwards, I noted an *Earina mucronata* on the roadside between Franz and Fox.

After stopping for fuel at Haast I drove up to the Gates of Haast, where I found a couple of orchids one on the road side, the others up the vehicle runout chute.

Next stop was Haast Pass proper. There are two tracks starting at the road and going at a right angle into the bush to two lookouts on either side of the road. Orchids were seen on the track on the north side of the road, but none on the south side. Eventually I arrived at the top of the Crown Range where I thought there was a certainty of specimens. Disappointment followed: great view, no orchids were to be seen.

The small party assembled at Lumsden. Making room for the baggage and food supplies we were off heading for Lake Manapouri. On going past the Wilderness Scientific Reserve we decided to give the Reserve a once over, which was successfully accomplished (see report following this).

We arrived at Borland Lodge early afternoon. There are 3–4 short walks about the environs of the Lodge. Two of them are about 6km. We made the first foray into the Nature Walk. A

gentle amble revealed several species, as well as the red mistletoe in flower

Spent the evening recording a small herbarium in one of the Lodge buildings. This herbarium, created by Mrs Janette West, had set off Melanie's interest in native orchids when she was a school pupil on camps there.

An early start on Wednesday, recording the herbarium on digital camera. Grabbing some lunch and hot water we headed up the Pylon Road to the top of the Borland Pass. The views on this part of the road were spectacular, particularly to Missouri horticulturalist Jen Mistretta, whom we had connected with at Borland. As we rose higher the wind and rain made its presence felt. On the top we called into the Borland Bivvy much to the surprise of a man on fur recovery business. Going down the Zigzag to the Grebe Lookout was an exercise in caution. We stopped at the Grebe Lookout—with some success, at last orchids in full flower.

Reaching the bottom and travelling down the Grebe River we stopped at Percy Stream Bridge where some *Pterostylis* showed themselves to our eager eyes; moving onwards we eventually arrived at South Arm Lake Manapouri. We took a well earned Lunch break.

The highlight of this point of the trip was the sighting of several epiphytic orchids down on the waterline of the lake. There had been a windfall which had several epiphytic orchids as well as a small *Thelymitra* growing in the wet sand on the beach. Weather can be described as bleak. Deciding not to stop on the return leg we moved out—but a small waterfall drew the photographers' attention.

Thursday saw the party being dropped off by a kind soul so as to walk down the Borland Burn Track back to the Lodge. We were in for a surprise with an extremely high cliff of glacial debris about 40m high and about 500m long. We returned to camp tired and satisfied. Melanie wanted to locate a site she had visited

with her father in 1980. So into the Nature Walk again. After making enquires with the Lodge Manager we did locate the site of the previous visits. But light was failing us. We decided to return in the morning. After marking out an entrance to the area we went back to the Lodge.

Next morning we returned to Pig Creek to search for the *Nematoceras* face. No sign of the face was found quite possibly overgrown in the last 30 odd years. The afternoon saw us heading towards Burnt Ridge to look at the *Gastrodia* species known to be growing there, *en route* to Lake Monowai. After alerting a couple of deer we eventually attained the lake shore. Faced with a 10 km walk back to camp we used the universal sign and obtained a lift back to camp in time to enjoy a beautiful Southland Fiordland evening.

Saturday was heading homewards day which was accomplished without incident. A short stop was made at Trotters Gorge before making Oamaru for the last night stop. I carried on to the coast this time with a large clump of *E. autumnalis* that had graced an orchid growers collection with instructions to return it to the bush if appropriate.

Finally I can say without any shadow of a doubt that had we been present about a month earlier we would have seen a very different sight to that we actually found but for all that the trip was a success.

The herbarium was set up by a Mrs. Janette K. West who was a science teacher. She was remembered as an elderly but still spritely woman in the early 1980s. The date range of the orchids was restricted to two visits she made one in 1978 the other in 1980.

Borland Lodge was one of the camps set up for the men working on the Manapouri Power Project. On completion of the project the site passed to a trust to use as a camp and outdoors pursuits location. Over the years the standard of the building has risen but there are still some of the original buildings on site. Users can either use a tent, hire a cabin, or park a mobile home in the grounds. There are cook-

ing facilities and washing/toilet facilities. Broadcast and cellphone reception is not possible. The managers (Peter and Lynn Illingworth) are genial hosts and will attempt to satisfy most requests. Costs are reasonable and good value.

Trip plant List 21–26 Jan 2013

Franz Josef Glacier Carpark 50.06

Earina mucronata
Nematoceras macranthum, *N. aff. trilobum*
Pterostylis areolata?, *australis*, 'Franz'

S.H. 6 between Franz and Fox 50.06

Earina mucronata

Gates of Haast 51.05

Pterostylis sps.
Microtis unifolia?

Haast Pass Track on right side of road (North) 51.05

Adenochilus gracilis
Aporostylis bifolia
Chiloglottis cornuta
Gastrodia sps.
Nematoceras aff. *trilobum*

Wilderness Scientific Reserve S.W. of The Key 76.01

Corunastylis nuda
Microtis oligantha, *M. unifolia*
Prasophyllum green/brown
Prasophyllum green
Thelymitra colensoi. Small thin triangular leaf
2 flowers/capsules
Thelymitra longifolia

Borland Nature Walk 72.03

Adenochilus gracilis
Aporostylis bifolia
Caladenia bronze leaf 2 flowers/capsules
Caladenia "red stem"
Caladenia sps. Seedpod only
Gastrodia cunninghamii, *G.* 'long column'
Nematoceras aff. *trilobum*
Thelymitra sp. narrow V section leaf 2 flowers
capsules

Pylon Road 72.03

Caladenia sp. green stem and capsule
Thelymitra longifolia.

Borland Saddle and Zigzag below Bivvy
72.03

Prasophyllum colensoi
Thelymitra colensoi, *T. hatchii*

Percy Creek 72.03

Aporostylis bifolia
Pterostylis australis in flower
Pterostylis montana agg. in flower

South Arm Lake Manapouri 72.03

Earina autumnalis, *E. mucronata*
Microtis unifolia, *M. oligantha*
Th. colensoi? Small V section leaf 2 spent
flowers/ capsules
Th. longifolia
Winika cunninghamii

Pylon Road Waterfall 72.03

Nem. trilobum agg.

Pig Creek 72.03

Aporostylis bifolia
C. chlorostyla
N. trilobum

Borland Pump Track 72.03

Adenochilus gracilis

Burnt Ridge Track 72.03

Adenochilus gracilis
Aporostylis bifolia. Both spotted and unspotted leaves
Caladenia nothofageti
Nem. acuminatum, *N. macranthum*, *N. trilobum*,
Thelymitra sp. Narrow leaf 2 capsules

The Mire 72.03

Aporostylis bifolia
Corunastylis nuda
M. unifolia
Pr. colensoi
Th. hatchii, *T. sp.* red stem & leaf base,
stunted *T. colensoi* type.

Trotters Gorge 66.03

N. trilobum.

With the exception of Grebe River area almost all plants noted at Borland were in capsule stage or un-flowered (*Earina*). Hence the short descriptions inserted. A follow-up would be preferable to clearly identify these species.

Gordon added, “While *en route* to Borland Lodge to join the rest of the party we passed by the **Wilderness Scientific Reserve**. The decision to stop was not difficult to make.

“Within 20m of the road the first orchids showed up: *Microtis unifolia* almost finished. The reserve presented a very serene environment but we decided to persevere and spend a little time exploring. As we got further away from the road the endemic herbage became more prominent and started to afford a little more protection to the lower growing plants. For the North Islanders if you think of the Rangipo Desert with a lot less cover and a lot of a hard moss and lichen cover you will get somewhere near to the environment.

“We spent some 1½ hours wandering about not more than 60–70m from the road, without actually penetrating the larger bush patches.

“Given the stark exposed nature of the Reserve, it was surprisingly warm in the small clearings with little breeze to cool down the air. It was in these small clearings we found the larger colonies of plants.

“There had been visits by two other members of the group in 1988–89 and 1990. Our visit was in Jan 2013. Research on the internet revealed nothing about the orchids present on the site so this list is the only list covering the entire reserve. All plants seen with the exception of *M. unifolia* and *M. oligantha* were well and truly finished flowering. But sufficient was visible to make an identification. The location will certainly see me again in the near future. Nov–Dec 2013 hopefully.

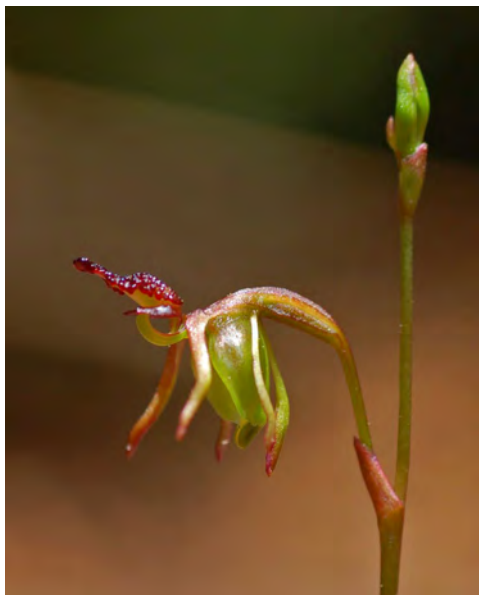
“Historical records 1988-1990: *Aporostylis bifolia*, *Chiloglottis cornuta*, *Microtis unifolia*, *M. oligantha*, *Nematoceras trilobum* agg., *Prasophyllum colensoi*, *Pterostylis australis*, *P. banksii*, *P. montana*, *Thelymitra hatchii*, *T. longifolia*, *T. pauciflora*, *T. pulchella*,

“2013 records: *Corunastylis nuda*, *Prasophyllum colensoi* ‘green’, *P. colensoi* ‘green/brown’, *Thelymitra colensoi*? Thin narrow leaf with 2 capsules.”
(*I’ve seen it there—Ed.*)

The Column: *Eric Scanlen*

Sullivania minor under fly raid

Pastor Joachim Cochlovius, on orchid tour with his wife Lieselotte, arranged with Elizabeth Miller of NZFRI, to photograph the only known colony of *Sullivania minor* in New Zealand. After Elizabeth kindly removed her anti-browser gauze from the cage, on 28 November, a complete colony was revealed without any bug-eaten plants.



1. The flying duck orchid, non-resupinate, with slender tepals and a relatively huge column all hanging down with anther cap and pollinia protruding below. The labellum mimics a female wasp well enough to attract male suitors in Australia.

The orchids were set, not as the mini-flying ducks they appear to be, but as mimics of a female Australian wasp. Sadly — or fortunately — the wasps have never made it to NZ so the males cannot mount the mimic females and the orchids get no natural pollination here. They periodically

arrive from Oz as microscopic seeds on the breeze, flourish briefly then disappear due to no vegetative propagation for this species.

Chris Ecroyd discovered this colony by the geysers at Whakarewarewa and ensured their survival by hand pollinating them. His steel mesh cages kept out the rats and opossums but the gauze was still needed lately to keep out the insect browsers.

Whilst the party were watching, a fly landed expertly onto a duck's head (labellum), no doubt seeking nectar or pollen...



2. A colony of *Sullivania minor* in flower showing their red leaves and an approaching fly with landing gear lowered.



3. The fly has landed more under than over the duck's head but stimulus enough to trigger the flick-down.

...but the orchid reacted swiftly to this stimulus by clicking its labellum down 180° into the large column, attempting, as they do, to ram the insect's thorax against the pollinia protruding from the lower edge of the column.

However, this fly was no preoccupied wasp so vacated at the first sign of movement.

Joachim took these excellent pix and captured the whole proceedings including the labellum half-way down; no mean feat when it completes



4. The fly was no fixated wasp so has fled as the labellum dips.



5. The labellum has completely disappeared into its own column pouch but without the fly that it was trying to dash against its pollinia and/or stigma.

the flick-down in about 1/25th. sec. (Allan Ducker caught this total action on 28 Nov 03 with three frames of his 50 fps video, when the Column triggered the action with a twig).

Joachim expects this to be his last trip to New Zealand escaping the worst of the German winters. That is a pity really, because whenever he arrives things happen in the orchid world such as discovering *Thelymitra purpureo-fusca* in the Hunuas, getting his own commendable photo-file of NZ orchids and now capturing a fly triggering *Sullivania minor*. Do come again if you can manage, Lieselotte and Joachim.

HELP PLEASE

I am a Masters student at the University of Auckland and am researching some New Zealand orchids, in particular *Diplodium brumale* (kauri greenhood). I'm wanting to know if anyone might have records of first flowering dates of *Diplodium brumale*, as I am interested in looking at the relationship between flowering dates and weather patterns before flowering. Any help would be greatly appreciated.

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