The New Zealand Native Orchid Journal

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GREEK TREASURES: page 4

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Pterostylis aff. *montana* ("pulchragalea") attracts fungus gnats (photograph Mike Lusk)

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Greek treasures

My journey to Greece and Egypt in April was something of a pilgrimage. I was born in April 1941 and baptised Ian Michael St George in July 1941. I was named for my father's closest brother Ian St George and my mother's closest brother Michael Hanan.

In those three months Ian St George had arrived with the 3rd Echelon of the NZ Army in Egypt, staying in the Maadi camp, to the pyramids and to the great temples at Luxor on his days off. He was later captured in the desert, escaped twice from POW camps, working with the Resistance in northern Italy before eventually breaking out of a German prison train and walking over the Alps to Switzerland where he spent the rest of the War.

Mick had arrived earlier in the 1st Echelon; in the meantime he had fought Churchill's ridiculous political war in Greece, had been evacuated to Crete, and then, under-equipped and poorly commanded, fought in the Battle of Crete before withdrawing over the White Mountains to the south coast whence they were evacuated to Egypt. He was later captured in the desert, but was eventually liberated to recover and fight his way up through Italy.

The War is a huge punctuation mark in my family's life. People spoke about times "before the War" or "during the War" or "after the War". But nobody said what the War was about – and certainly nobody spoke of what happened during the War. My father died silent on his wartime experiences, and Ian and Mick wrote their memoirs only in their 70s.

Egypt

In April 2011 I was in Egypt. Six hours of rain on the day before we arrived flooded the streets so the Cairenes, who have never seen rain in April, were gobsmacked. Our hotel was right by Tahrir square where the revolution centred, and the burned-out shell of Mubarak's "Democratic Party" headquarters, surrounded by burned-out cars, loomed large out the hotel window. Things were bad for Egypt – tourism down, two million Egyptian workers now refugees from Libya and Yemen, yet a sense of confidence and optimism that the political situation would result in a liberal democracy, though people will be hungry in the meantime.

Greek newspapers had reported that Egyptian surgeons were being required to learn Sharia law and to sign oaths that they would amputate hands etc when asked – but that is western propagandist nonsense. This is a popular, not a fundamentalist, revolution. Egypt is a secular country like New Zealand; it has its rabid elements, but this is a revolution by decent people, sick of corruption and repression from the rich and powerful.

I don't know what the answer is to cities like Cairo and Mexico City: 30 million people, the infrastructure impossibly inadequate, the choices wrong (a huge new children's cancer hospital but no proper primary care), pollution the worst in the world (rubbish piled up everywhere, dead horses in canals, small flocks of scruffy urban fat-tailed sheep sharing piles of rubbish with goats, dogs, cats and birds), skinny donkeys carrying impossible loads - yet there is affluence, sophistication and culture.

We spent one of the best days of my life at the pyramids and the Egyptian Museum seeing the Pharaohs' treasures.

At Luxor the empty floating-palace cruiseboats stacked side by side almost stretched across the Nile. Tourist numbers were minimal and this was the high season. The huge riverside restaurant in front of our hotel (the

"Sonesta St George") had only three tables occupied—by elderly English people. Egypt takes 60% of its revenue from tourism, and the downturn since what the local press chooses to call the "Lotus Revolution" (but the local people simply call the "situation") has hurt those who rely on tourism – and of those, the poor, as always, suffer the most.

The temples and tombs of Luxor are quiet and queueless. It is a great boon for us but a sad time for the guides, the persistent peddlers of Chinese-made Egyptian souvenirs, the gowned camel drivers who sell rides and the sad thin men who offer you flat torches or bits of old cardboard cartons to light your way or use as fans inside the stuffy tombs.

What astounds us here is the magnitude of the ancient undertakings. The sheer hugeness of the megalithic monuments, yet the delicate beauty of the wall paintings, the relief carvings and the jewellery. The New Kingdom was one of those golden ages in history, when knowledge and skills came together to create a great surge forward out of a mediocre past - like the Italian Renaissance, or Britain's age of discovery or our electronic age. Our guide Neermin thinks it was a much better time to be alive than now: but then she shows us a 1000 B.C. wall engraving showing a pile of amputated penises ostensibly used as a count of the enemy dead after a battle.

The bathos of its ruin somehow adds to its impressiveness. In the Ramesseum, the temple built by Rameses II, is the largest of all the very many statues of that greatest of all the Pharoahs – each finger a metre long. It was smashed in antiquity, and lies on its side in the sand. It inspired Percy Bysshe Shelley's "Ozymandias of Egypt", and you can feel why….

I met a traveller from an antique land
Who said: "Two vast and trunkless legs of stone
Stand in the desert. Near them on the sand,
Half sunk, a shattered visage lies, whose frown
And wrinkled lip and sneer of cold command
Tell that its sculptor well those passions read
Which yet survive, stamped on these lifeless things,
The hand that mocked them and the heart that fed.
And on the pedestal these words appear:
`My name is Ozymandias, King of Kings:
Look on my works, ye mighty, and despair!'
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare,
The lone and level sands stretch far away".

A fair bit of poetic licence taken by the young poet, but you get his point: pride indeed precedes the fall.

Crete

In April 2011 it was the 70th anniversary of the Battle of Crete. I went there. We stayed in Chania, we drove to Maleme airfield, visited the German graves on Hill 107 above it, visited the Allied graves at Souda Bay, stood in awe at the number of New Zealand men buried there and became emotional when we saw the flax and koromiko planted among the graves. We drove the new tarseal road across the White Mountains to Sfakia on the south coast, whence our men were evacuated by the RN after one of the most gruelling marches in history.

George is a jeweller in Chania. He told me that as the New Zealanders were retreating towards Sfakia in April 1941, his father and Cretan friends found an abandoned machine gun and for some hours held the Germans back, giving the New Zealanders time to get away. His father shot a German colonel, and in reprisal the Germans burned his village and shot all the villagers. George regards Agios Giorgios (St George) as his patron and protector; he carries an antique ivory carving of the dragon-slaying-maiden-rescuer in his wallet when he travels. He thought the arrival in his shop of a New Zealander called St George was some sort of miracle. The air was sweet with the fragrance of orange blossom and tears.

Soon it would be Easter. The Greeks say the weather comes right after Easter and here in the northern hemisphere the timing of Easter in spring really does mean a rebirth, a resurrection of the sunshine and of life - lambs and

blossom everywhere – boiled eggs dyed red for breakfast - an oestrus that seems much more apt than ours in New Zealand.

But it is still cold on the road over the White Mountains and though the wildflowers are a blaze of colours at the roadsides ("Crete is the most floristic of islands" a friend wrote), some of the trees are still bare. I doubt if Mick would have noticed the abundance of wild orchids on that awful trek over here.

> *To my mind, this Cretan countryside resembled good prose, carefully ordered, sober, free from superfluous ornament, powerful and restrained. It expressed all that was necessary with the greatest economy. It had no flippancy, nor artifice about it. It said what it had to say with a manly austerity. But between the severe lines one could discern an unexpected sensitiveness and tenderness; in the sheltered hollows the lemon and orange trees perfumed the air, and from the vastness of the sea emanated an inexhaustible poetry.*
>
> Nikos Kazantzakis, *Zorba the Greek*, 1946.

Homer's wine-dark sea rolls south to Libya.

I turned seventy on Crete at the time of the 70th anniversary of the Battle. Every Anzac Day I feel like crying and it's about that generation: those decent, humble, quiet men and their extraordinary achievements.

I am proud to have been named for them.

What a soft and fortunate generation we are.

Orchids

It was early spring and I wanted to see *Ophrys* species. Crete's orchid flora is rich and varied—a combination of temperate climate, limestone mountains, and such poor soil that agricultural cultivation is, at least in the mountains, either never attempted or soon abandoned.

We went on to the islands of Santorini and Paros, then to the Pelopponese.

The inside front cover shows a few of our finds: we never strayed more than 100m from the car, so most of these are roadside orchids—one very rich area an accidental site when we stopped to help a very slow tortoise cross the road.

I was reminded about stout shoes in foreign countries when, just past Delphi on the way home to Athens, we stopped for lunch, and as I wandered into the nearby scrub, a glistening brown snake, tongue flicking and eyes angry, whipped out from under my feet and downhill. I don't know which of us was more frightened. Well, yes I do really.

I wouldn't be over-confident about the identifications, and I do recommend a colour-photographic field guide. *Orchids: Crete and Dodecanese* by H & G Kretschmar and W. Eccarius was a delightful and essential choice. I think we saw….

Crete

Ophrys cretica **(Fig.1)**
O. ferrum-equinum **(Fig.2)**
O. fusca **(Fig.3)**
O. mammosa **(Fig.4)**
O. oestrifera **(Fig.5)**
O. phryganae **(Fig.6)**
O. umbilicata **(Fig.7)**
Orchis italica
O. papilionacea **(Fig.8)**
O. simia

Paros

Ophrys fusca
O. phryganae
Orchis anatolica

Pelopponese

Anacamptis pyramidalis
Orchis quadripunctata **(Fig.10)**
Serapius bergonii **(Fig.9)**
S. lingua
S. parviflora

The type locality: Ian St George

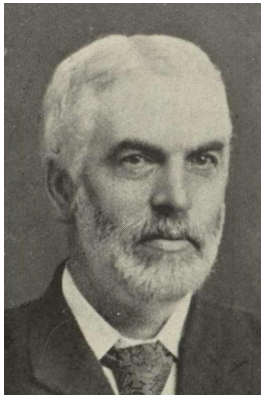
Fortrose: *Thelymitra fimbriata* Col. & *Pterostylis auriculata* Col.

The collector?

When describing a plant it is polite to mention the person who collected it. Of 35 orchids William Colenso described in his lifetime he mentioned the collectors of 32. Of 44 new phaenogamic plants he described in the *Transactions* in 1889 [1] he named the collectors of 42. The collector of *Thelymitra nervosa* is unnamed, and that will be explored in the next issue. The other two lacking collectors' names are the orchids collected in Fortrose: *Thelymitra fimbriata* collected in 1888 and *Pterostylis auriculata* in 1889.

Who sent them from Fortrose and why didn't Colenso name him or her?

BC Aston visited Fortrose collecting specimens – but was born in 1871, so was only 17 in 1888.



Donald Petrie

The only other collector that I can discover with a connection to Fortrose is Donald Petrie. He, like Colenso, was school inspector for his province, and there was a school at Fortrose. There are specimens from the Catlins in Herb Petrie dated 1887 and 1891 [2], and he may well have visited in other years. Certainly the two men exchanged letters and specimens, as Colenso reveals:

- Colenso to Andrew Luff 12 June 1878: *"last night I was engaged till xi, 5 hours, in writing 2 long scientific letters—... one to Petrie (Dunedin) on Botany & Geography: he has lately got out a new 'Geogy. of N.Z.' in which I assisted him; it is printed at Melbourne. Petrie is Inspt. Schools, Otago."*
- Colenso to David Balfour 20 August 78: *"Have you any ferns near you? in 'Bush'.— ... I have also had a lot sent me by Mr Petrie of Dunedin".*
- Colenso to TF Cheeseman 15 March 86: *"Petrie, some 2 yrs. ago, wrote to me for spns. of Coprosma: and I then sent him what I had."*

GM Thomson

GM Thomson accompanied Petrie on field trips, certainly to Stewart Island in 1878 and 1880 [2], and perhaps on later excursions. Colenso had broken off his relationship with Thomson in 1882 after the latter had sunk a number of Colenso's ferns [3], so Thomson seems an unlikely collector for Colenso. But their stand-off just might explain Colenso's very unusual failure to name his collector.

Fortrose

"Fortrose was originally an old whaling station, and so, naturally, it became in the early days a port for the surrounding district; but since the opening of the railway line to Waimahaka, six miles distant, it has become mainly dependent upon road and railway for its communication with other places. The Matau-ra river empties itself into Toetoes harbour, a short distance to the westward of the township of Fortrose, and the Waimahaka river also enters the harbour about midway between

Aboove: **Fortrose in 1898.** ***Below:*** **Fortrose in January 2011.**

The southern South Island, showing the Catlins region

Mataura and the township. In the early days boats ran from Fortrose to Dunedin and the Bluff, and a wharf was constructed for the convenience of settlers and traders. The township and surrounding district are in the Toetoes riding of the county of Southland, and in the electoral district of Mataura. At the census of 1901 there was a population of 131 in the township, with eighty-six other residents in the neighbourhod. The flax industry flourishes in the district, and there are six mills within fifteen miles of the township. Fortrose has a store, a butcher's shop, a boot-and-shoemaker's shop, a blacksmith's shop and a private hotel; the hotel had a license up to the 30th of June, 1903, when prohibition came into force. It has, also, an Anglican and a Presbyterian church, a public hall and a public school. At one time the Bank of New Zealand had a branch at Fortrose, but it was closed in 1900. Formerly Fortrose had three hotels, but two of them were destroyed by fire. Very good agricultural and pastoral country surrounds Fortrose, and in the summer season the township is a popular resort with tourists and visitors. Very fine ocean views are obtainable from many points of the road in the neighbourhood. There is a telephone bureau at the local post office.

"The Fortrose Post And Telegraph Office was opened in 1884. The business was originally conducted in Mr Elliot's store, and was afterwards removed to the present building which is of wood and iron, and contains a public office and a residence for the postmistress. There are fourteen private letter boxes, and mails are received and despatched daily. It is the principal post office for the surrounding district, extending over twenty miles, and there are sub-offices at Tokonui Gorge, Quarry Hills, Waikawa Valley, Niagara, Waikawa, Chaslands, Otara and Haldene.

"The Fortrose Public School, which was founded in 1876, occupies an elevated position on a fine site of ten acres on the main road from Fortrose to Tokonui and Waikawa. The building is of wood and iron, and contains two class rooms, with accommodation for a hundred children. In 1903, the number on the roll stood at 50, and the average attendance was forty-six. The playground has a shelter-shed, and there is a school residence of five rooms." [4].

Colenso's descriptions [1]

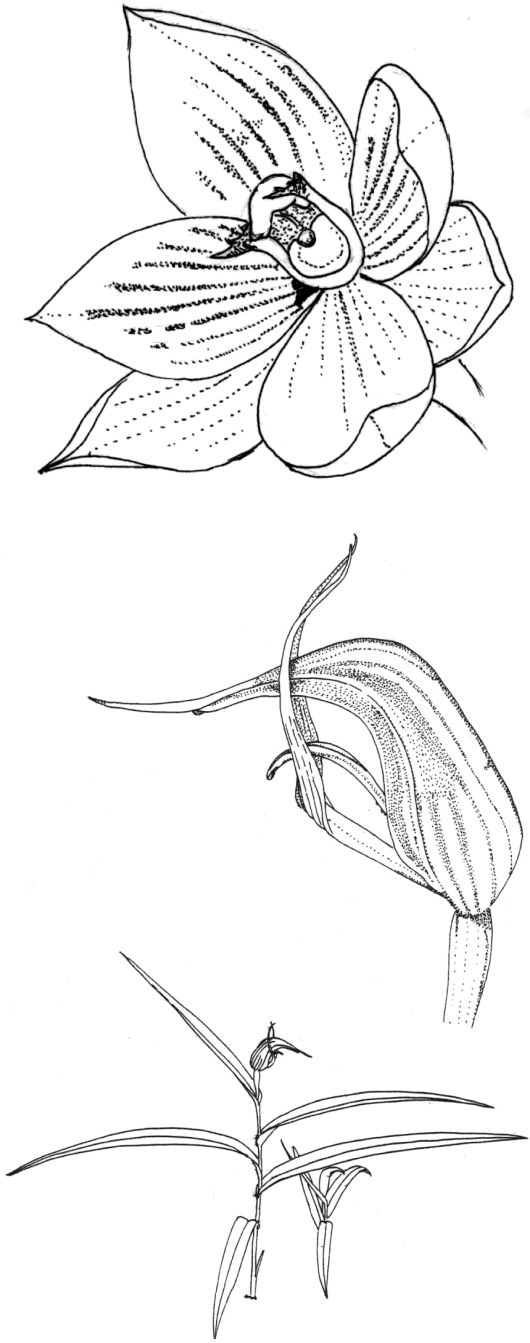
***Pt. auriculata*, sp. nov.**

Plant erect, glabrous, shining, 10in.-12in. high; stems bright-red. Leaves: basal 0; cauline 4, lanceolate very acuminate, 5in.-7in. long, ½in. wide, sheathing at base, pale-green, midrib reddish. Perianth 1½in. long, narrow, graceful, green with a reddish tint. Dorsal sepal and lateral petals narrow, sub-ovate, sharply acuminate, not tailed; lateral sepals erect, connate, sinus large, lobes narrow, long, spreading, tailed—tails nearly 1in. long; tongue dark-red, linear-oblong, sub 1in. long, 2 lines wide, middle nerve stout, flexuous, with 4 flexuous longitudinal veins on each side, the tip truncate and

slightly bifid; appendage wide, shortly curved, coarsely fimbriate. Column long, slender, wings produced upwards in subulate tips nearly 1 line long, with very long and narrow auricles 2½ lines long, their tips closely and finely fringed. Ovary slender, somewhat linear, 1in. long, reddish.
Hab. Open fern land, Fortrose, Invercargill; 1889.

T. fimbriata, sp. nov.

Plant rather slender, stem 11in. high, erect, flexuous. Leaves: basal 0; cauline 1, 3in. from base, sheathing, linear-acuminate, sub-acute, 6½in. long, ½in. wide at base, flat, sub-coriaceous, dark-coloured (with stem and bracts) when dry. Two large cauline bracts, equidistant, nerved, their tips very acuminate much produced and flexuous. Flowers 5, distant in a loose raceme, their pedicels ½in. long (the length of ovary); floral bract broadly ovate (almost sub-orbicular), 8–9 lines long, 5 lines wide, many-nerved, the top suddenly acuminate, acute. Perianth 1¼in. diameter, violet with darker pencillings, much veined; veins branching. Dorsal sepal broad; petals narrower than lateral sepals; lip longer and very narrow. Column truncate, with small toothed wings shorter than staminodia; staminodia largely fimbriate; fimbriæ spreading, irregular, flat, flexuous, sometimes forked at their extreme tips; anther ovate, pointed.
Hab. Open fern lands, interior; also in similar situations, Fortrose, Invercargill, whence specimen received in a packet: 1888.
Obs. A species having affinity with *T. pulchella*, Hook. f., but differing in its larger and otherwise-coloured flowers, its long narrow labellum, and remarkably fimbriate staminodia, &c.



What's there now?

Fortrose is largely open farmland, but after a lull in its fortunes, is seeing something of a revival as the southern gateway to the Catlins; and there, in the Catlins bush, these orchids are still to be found.

Thelymitra fimbriata

JD Hooker described *T. pulchella* in 1853 from plants collected by Colenso (North Island) and Lyall (Otago) [5]; his flowers

had "toothed or fimbriate staminodia". His collection therefore included northern forms with toothed column arms, and southern forms with fimbriate column arms; he saw them as a single species. When Colenso described *T. fimbriata* in 1890 from Southland specimens, he clearly saw it as different from *T. pulchella* by (among other things) its "remarkably fimbriate staminodia". It is in fact the southern form of *T. pulchella*, a variable fertile amphidiploid hybrid between *T. longifolia* and *T cyanea*. It can be seen in profusion on sunny Catlins roadside banks in early summer.

Pterostylis auriculata

Cheeseman wrote to Colenso in 1884, "I am sorry that I find it impossible to accept as distinct species most of the plants you have described in the recent volumes of the *Trans*" [6]. Even in 1906 he would write of *Pterostylis banksii*, "Mr Colenso has made no less than 5 species based upon what appear to me to be exceedingly slight and inconsistent differences. After a careful study of his descriptions and specimens I must confess my inability to distinguish any of them, even as varieties" [7]. He had had an opportunity to catalogue Colenso's herbarium after Colenso's death in 1899 – but of course he was basing his opinion on imperfect dried specimens; we now accept *Pterostylis auriculata* is distinct from *P. banksii.* It survives plentifully in the Tautuku Nature Reserve, and may be more widespread – there are reports of its discovery on Stewart and Kapiti islands.

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4. 1904. Fortrose. Cyclopedia of New Zealand.
5. Hooker JD 1853. Flora novae-zelandiae.

Hawke's Bay notes: Mike Lusk

I missed good opportunities to hunt orchids in the Bay this year because of a SI adventure. Not you may say, a bad thing except that a good part of the trip was travelling to, riding on, and departing from the Rail Trail. I did enjoy the Rail Trail itself which is a pleasant ride with excellent accommodation and interesting rail history all along the way. But the landscape is a devastated one, with scarcely a native plant left and a vast array of invasive exotic 'wildflowers' Beautiful enough in their own right, but combined with an intensively farmed surround made for me, a pretty bleak scene. The Taieri Gorge is in the same sense, a ruin. I searched hard for orchids and was finally rewarded by a patch of about 10 *Microtis unifolia* in a small damp area. But 2 days later on the Abel Tasman walk, in perfect weather I often lagged from our group to enjoy many species including *Thelymitra* x *dentata* in both blue and white.

My first excitement locally was to find, in Sept, *Nematoceras hypogaeum* under black beech at Boundary Stream, a new sighting for me and a new record for the reserve **(Fig.12)**. I visited the Sunrise Track in the Ruahines in early October and was disappointed to find that the *Pterostylis subsimilis* seen in such profusion in 2008 at the AGM, was pretty well absent, hopefully not because it was clear-felled by the track cutters in 2009. There was however, a wealth of *N. trilobum* "triwhite" confined to a narrow altitudinal zone **(Fig.11)**. There was a more conventionally coloured flower or two lower down the track. In the same area was *N. orbiculatum* growing on a papa cliff in the Waipawa riverbed, at site where *N. longipetalum* and *N. rivulare* are also present **(Fig.14)**.

Later in October on the Taupo Rd while checking *Dactylanthus* flowers we came upon a solitary *Pterostylis montana* agg. which had been discovered by numerous small flies, fungus gnats I presume **(cover)**. They swirled around the flower, landing on it repeatedly including on the labellum. The more pragmatic of the creatures simply climbed down into the flower and could be seen through the walls as they supped. But one in particular seemed determined to do it the correct way and proceeded to dance a gnattic fandango on the labellum, which refused to budge. On the same trip we had a quick look at Iwitahi where the beautiful *Chiloglottis valida* is expanding with many new colonies displaying their stunning flowers. In one area some of the "invading" native shrubs had been cleared, presumably by orchid lovers.

Back in the Bay I was pleased to find in the Tangoio reserve just north of Napier a patch of *Pterostylis banksii*, quite uncommon locally probably because there is not much suitable lowland habitat. Notable was the marked variation of leaf shape in the colony.

In early November a trip to the southern Kawekas revealed *Gastrodia minor* growing in a stand of mature Douglas fir, not an association I've seen before though nearby stands of *Pinus radiata* are well populated. The other common pine in the area, *P. contorta*, never as far as I can see hosts orchids, or in fact any other plants at all.

Close by in the Northern Kawekas on Dec 23 were 3 *Caladenia* spp in flower—*Cc. chlorostyla, minor* and *variegata* with only 1 flower of the last, at least 100m lower than the the others **(Fig.15)**. These too suggested an altitudinal preference, with *C. chlorostyla* growing higher, but overlapping with *C. minor*.

January was devoted to family and fishing but in early Feb I was lucky to be invited to join a search for native forget-me-nots on the Maungaharuru Range on the eastern flank of which Boundary Stream Reseve lies. There I was pleased to have my first meeting with *M. oligantha* pushing its way up through dense


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Photographs by Mike Lusk: see page 12


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Eric Scanlen apologises for any distress caused by his attributing Fig. 19 in Journal 120 to Kevin Matthews in error when it was Gary Little who master-minded the excellent photo above of *Thelymitra* “like O’Dea”.

Gary Little emailed images of *Thelymitra pauciflora* and *Acianthus sinclairii*, its buds just emerging from the "keyhole" of the leaf.

Hieracium on the limestone tops (J120, p.20). At the end of Feb I had hoped to resume my acquaintance with *Caladenia chlorostyla* "Kaweka late". But this year it had flowered early so I found only new capsules. The late (for this area) *Microtis*, which may turn out to be *M. longifolia*, was in flower amongst the subalpines but the specimens I sent to Ian were delayed in the the post. Still candidates for DNA perhaps. As is nearly always the case the leaf had shrivelled or been chewed off but the flowers are fewer in number and less closely placed on the stem than in the typical *M. unifolia*.

Finally in early March a trip to Lake Opouahi where to my great surprise was a small patch of *Diplodium alobulum* with overmature flowers, suggesting that flowering had started in late Feb. A common species in the Bay but generally not flowering here before May even at much lower altitudes. But orchids are always springing surprises.

25 June 2011: Needless to say it's pretty quiet here as far as orchids are concerned, but I was pleased to find a large patch of *N.* 'pygmy' Form 3, in tall kanuka at the Cape Kidnappers Sanctuary in late June **(Fig.18).** There was major devastation there when the rain bomb struck in May leaving many mature titoki, mahoe and pigeonwood together with their cargo of *D. adversus* lying in the streambed.

I couldn't find the *Ichthyostomum pygmaeum* I was looking for in the Waipatiki Reserve, a bit north of Napier, but *A. sinclarii* was so abundant as to form a small sward in one place. There were plenty of *D. alobulum* and *D. trullifolium*, and some other spp in bud or early leaf.

Notes etc

Pat Enright and Tony Silbery were doing a survey for *Myrsine umbricola* along the track from Dracophyllum Bivvy to Nichols Hut in the Tararuas on 9 March. At 1100 metres altitude it was "mostly cloud forest with some tussock grassland. Very interesting place". They saw some orchids: *Aporostylis bifolia* (in seed), *Nematoceras trilobum* agg. (unc.), *Prasophyllum colensoi* (unc.) (flower and seed) and *Simpliglottis cornuta* (one in flower). Pat also reported *Corunastylis nuda* flowering in March on the Gentle Annie track at 600m altitude **(Fig. 17)**

Bruce Irwin commented on a number of issues raised in **J119**:

Taeniophyllum norfolkianum intrigues me. How did it reach NZ? and is it identical to the plant I saw on Norfolk Island? Both description & illustration (by David Jones) are lacking in vital diagnostic details. The plant I saw on Norfolk had a VERY abbreviated flower stem with 3 or 4 unripe fruit capsules probably originally subtended by short (3? mm) projecting bracts since apparently shed. Above the capsules a glabrous rachis rose a further 3.5mm bearing about 4 glabrous projecting bracts (possibly caducous). Only 1 open flower was evident though no doubt the rachis would carry a second (or more) bud, yet to emerge. Total length of raceme, less than 15mm. Jones' drawing has a raceme about 8mm long, bare except for a flower at apex. I found it difficult to visualise Jones' flower but his uppermost view from the side (labelled b) seems to match my drawing fairly well so the identification of the NZ plant as *T. norfolkianum* is probably correct…. Gorse seems an unlikely host. Maybe the plant has been here for many years on native trees but when gorse arrived it showed its preference for the Scots.

I enjoy & respect your articles which try to identify some of the species Colenso cut off from *Pterostylis banksii*. On the other hand you seem usually to agree that Colenso was correct in separating out these taxa. To me they are as Colenso states, very close to *P. banksii*. Too close. I think they could be distinguished as varieties or forms or even subspecies, but not as separate spp. Modern botanists seem reluctant to use the taxon "variety". It served a useful purpose for very many years AND it maintained a sense of identity with the original species. *P. banksii* shows many variations including some apparently never seen by Colenso. Variety is still a valid taxon. Why change its status?

Page 29: Gordon Sylvester takes a risk suggesting that *Pterostylis irsoniana, P. giganteum* & one other species were present near Lake Mahinapua on the basis of leaf shape and *P. cardiostigma* on a plant's "orange coloured rib".

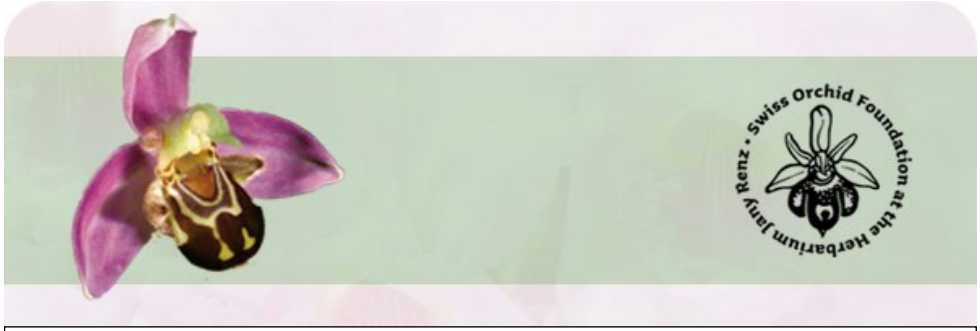
P.29: Graeme Jane's comments about deeply coloured *N.* "kaimai" convince me that my suggestion that *N.* "kaimai" is merely a colour form of *N. rivulare* is very likely to be correct.

P.34: *Caladenia* aff. *chlorostyla* has dark reddish *sessile* calli on the back of the sepals NOT red hairs.

p.45: *Pterostylis silvicultrix* is clearly a form of *P.* aff. *montana* or more correctly, *P.* aff. *montana* is really *P.* aff. *silvicultrix.* But should not professional NZ botanists explain the situation (as above) and also explain why Colenso *et al* ignored the taxon in NZ? Further: why have so many professional botanists visited the Chatham Is, reported *P. banksii* var. *silvicultrix* or *P. silvicultrix* but not mentioned *P.* aff. *montana*?

Bill Liddy emailed "I went out to Waipataki Reserve just north of Napier; first time I've been in there for about 20 years. The photos show a few of the plants seen today 23 May 11. The following were seen in large numbers,

Diplodium alobulum, Diplodium trullifollia and *Cyrtostylis reniformis*. A few leaves in one patch of *Acianthus sinclairii*, and the first for me and the area *Corybas cheesemanii* **(Fig.16)**, so in the next book we can add area 29 to the range."



15th EUROPEAN ORCHID CONGRESS AND SHOW BUDAPEST, 12-15 APRIL, 2012

The Hungarian Orchid Society (H.O.S), on behalf of the European Orchid Council (E.O.C.), is happy to invite you to attend

The 15th European Orchid Congress and Show 2012

"Enjoy and catch the fever"

at SYMA Event Centre, Budapest, 12-15 April, 2012

Exhibition: displays by orchid societies, botanical gardens, commercial nurseries and amateur growers.

Conference: lectures and conferences hosted by the most important orchid scientists and experts.

Professional and social programs: the Botanic Garden of the Hungarian Academy of Science, at Vácrátót, Budapest sightseeing and an unforgettable excursion to Lake Balaton and Badacsony Hill.

Gala Dinner: Saturday 14 April aboard Cruise Budapest, on a three-hour cruise on the River Danube, with quality Hungarian food and premium wines .

On behalf of the Organizing Committee and the Hungarian Orchid Society, I kindly invite you to attend this most important European Orchid Congress and Show: www.eocbudapest.hu.

Ildikó Pálmai, President of EOC, 2012, Budapest, 16 May 2011.

What	7th National Australasian Native Orchid Society Show and Conference
When	21 to 25 August 2013
Where	Community Centre, Strathpine, Brisbane
More Information	Add your email to the conference newsletter list.

From ANOS Kabi: in 2012 Samoa will be included in the Australasian Native Orchid Society area. The eastern border of the ANOS area is specified as the international dateline. The Samoan parliament has voted to change the Samoan time zone in 2012 which will cause the international dateline to move from the west of Samoa in 2011 to the east. Thus Samoa will be included in the ANOS area in 2012. There are 110 orchid species found in Samoa (according to Orchidwiz), but none are endemic.

ANOS Kabi has produced an updated copy of the Australasian Orchid Hybrid Check List. Mail: PO Box 424, Aspley 4034. E-Mail: ANOS.KABI@gmail.com. Web: www.ourshopfront.com/kabi.

The latest issue of *Kew Scientist* (the science and conservation newsletter of the Royal Botanic Gardens, Kew) is now available at http://www.kew.org/kewscientist/.

eColenso, the electronic newsletter of the Colenso Society Inc., is published monthly; *eColenso* is available free at http://www.colensostudy.id.au/.

STOP PRESS: *The Orchadian* reports that *Serapius lingua* (p.6) is now a weed in the Adelaide Hills.

The Hatch Medal 2011

This medal was struck in 2009 in memory of E.D. "Dan" Hatch and his contributions to New Zealand orchidology.

It is awarded annually to a person who has made an outstanding contribution to New Zealand orchidology, as outlined in the Group's aims. This person can be nominated by any member of the group and if there is more than one nomination, be determined by the Executive.

The first recipient of the Medal was Ian St George in recognition of his tireless work on the *Journal* and *Historical Series*, as well as the many years he spent as chair of the Group.

Last year the Medal went to Bruce Irwin in recognition of the many decades he has spent illustrating New Zealand's native orchids as well as other plants and the knowledge arising from his observations that he has freely shared.

Who will the 2011 recipient be? **Nominations are now open.**

—David McConachie, Chair.

WILLIAM COLENSO
BICENTENARY

A CELEBRATION
OF HIS LIFE
AND IDEAS

HAWKE'S BAY
9-13 NOVEMBER 2011

PLEASE CONTACT
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WILLIAM COLENSO BICENTENARY CELEBRATIONS

9-13 NOVEMBER 2011
HAWKE'S BAY

Printer of some of the most significant documents in New Zealand history, missionary, explorer and botanist, a free-wheeling politician and controversialist. William Colenso was a maverick.

This year, on the bicentenary of Colenso's birth, Hawke's Bay Museum and Art Gallery will be hosting a celebration of his life and ideas with a programme of events, centred on an academic conference.

A wide range of events will be taking place and there are still opportunities for your organisation to get involved, wherever you are in the world, as part of the celebrations.

HAWKE'S BAY **MUSEUM & ART GALLERY** NAPIER

Visit the website: http://www.williamcolenso.co.nz/.

The New Zealand Native Orchid Group Inc.

2011 Annual General Meeting

Will be held in Napier on Saturday 12 November, in association with the William Colenso bicentenary meeting 9-13 November 2011 (Visit the website: http://www.williamcolenso.co.nz/)

Please send agenda items to the Chair, David McConachie, on pleione@orcon.net.nz.

Accommodation and field days will be advised later.

please register your interest with Bill Liddy: wflid@xtra.co.nz.

New online key to our native orchids

Murray Dawson – Landcare Research, PO Box 40, Lincoln
Jeremy Rolfe
Ian St George

A new project has just been launched to produce a free online interactive identification key to New Zealand's indigenous orchids.

Interactive keys are cutting-edge identification tools. Lucid™ keys are powerful but simple to use and are revolutionising the way we identify plants. Unlike traditional (printed dichotomous) keys, they are multi-access and not restricted to one start point or reliant upon floral characters. Lucid keys can also incorporate many more images and botanical illustrations than traditional print-media.

The orchid key is a collaborative project among Murray Dawson, Jeremy Rolfe and the New Zealand Native Orchid Group. Murray Dawson is leading the project and has recently completed an online key to New Zealand weeds (http://tinyurl.com/weedkey). Jeremy has co-authored two orchid guidebooks (*Wild orchids of the lower North Island* and an *Illustrated guide to New Zealand sun orchids*) and has contributed his photographic collection to the new project. The NZNOG is the third collaborator and we hope that our members will come onboard and contribute their outstanding images and expertise.

This year, we are assembling the image collections and finalising more than 120 orchid names to be used in the key – including synonymies and tag names. We will also decide which identification features to use – there will be at least 30 characters and 120 character states. By March 2012 we will produce a demonstration key for evaluation and testing.

The second year will be refining and completing the key. Links will be added to the NZ Native Orchids (www.nativeorchids.co.nz), NZPCN (www.nzpcn.org.nz) and Landcare Research plant names database (http://nzflora.landcareresearch.co.nz) websites. The key will be publicly launched on the internet in May 2013.

Our new orchid key should prove to be a useful and popular identification tool to a family with probably the highest conservation values of any in New Zealand. Development is being funded by the Terrestrial and Freshwater Biodiversity Information System (TFBIS) Programme.

To see how these online keys work, visit the Australian tropical rainforest orchid key at http://tinyurl.com/orchidrfk.

We need your help

Please contact Murray (dawsonm@landcareresearch.co.nz) if you are willing to provide images , would like to test the key or if you are able to provide other assistance. All image contributors will be fully acknowledged.

Aussie notes: David McConachie

Pterostylis lustra & P. tenuissima

Presented by Leigh Deutcher with summary by Wendy Probert ANOS Vic. Bull. Vol 43 No.5 December 2010

Leigh Deutscher was an Honours student in Applied Biology (Ecology and Sustainability) at Victoria University in 2010 and kindly agreed to tell us about his orchid research on *Pterostylis lustra* and *P. tenuissima.* He was supervised by Dave Pitts from DSE in the South-West and by Dr Randall Robinson at VU.

P. tenuissima and *P. lustra* are species listed under the Victorian (FFG) and Federal (EPBC) Acts, meaning that they are in need of conservation. They both inhabit Swamp Scrub, found within Woolly Tea Tree wetlands. Only 5% of the original Swamp Scrub found in Victoria remains and is thus itself endangered. Swamp Scrub comprises dense thickets and a canopy to about eight metres formed by Woolly Tea Tree (*Leptospermum lanigerum)* and Scented Paperbark (*Melaleuca squarrosa).* Underneath are a range of herbs, orchids, sedges, grasses, reeds and mosses.

Leigh was interested in studying the microtopography of Swamp Scrub, this being a system of small hummocks, hollows and flats. Microtopography leads to variations in salinity, pH, light level, soil moisture and vegetation, generating the potential for increased biodiversity.

Leigh intended to compare the distribution of the two greenhood species and determine their particular habitat requirements. He had to consider two possibilities (hypotheses): that the species occupied separate micro-habitats in terms of hummocks, hollows and other features, or that the microtopography had little or no effect on the distribution of the species.

Leigh chose a number of sites for investigation where each species was known to occur. He was able to find more sites and plants of *P. tenuissima* as it can flower at any time of the year. These sites were at Long Swamp near Nelson and at Piccaninnie Ponds just across the border into South Australia. *P. lustra,* however, flowers from late spring to summer and it was difficult to find rosettes earlier in the year, particularly as more and more rain fell, inundating the potential sites. Leigh resorted to using sites on private property near Timboon.

He set up experimental quadrats (squares) where the plants occurred, as well as control quadrats of similar habitat where plants did not occur, and took a range of measurements without removing any plant material. He recorded the structure and coverage of the vegetation, measured UVA and light levels, and took soil cores to analyse them for moisture holding capacity, pH, salinity (via conductivity) and organic matter using standard published methods. He noted whether the plants were growing on hummocks, in hollows or on the flat, and took his measurements from immediately around the plants (microsites), and further away.

This was no easy task as it has been a wet year. Every time Leigh went back to his sites, there had been more rain, and they were deeper in water. You can see from the photo that it wasn't easy to get a soil core! It turned out that both species could inhabit hollows, hummocks or flat places, although *P. tenuissima* was found somewhat more often on hummocks. It was harder to work out what was happening with *P. lustra* as all the sites were flooded or even submerged. More sites would need to be investigated under less abnormal weather conditions, and it would be interesting to investigate a particular site where both species are known to occur close together.

P. tenussima sites showed evidence of disturbance by animals, for example wallaby tracks, but not by weed invasion or grazing.

The *P. lustra* sites were undisturbed due to being fenced off from grazing.

Leigh had divided up the 30 cm soil cores into ten centimetre portions and found that the soil moisture holding capacity of the samples increased with depth and was much greater for the soil from *P. tenuissima* sites than for *P. lustra.* The *P.tenuissima* soil contained much more organic matter and less mineral content than for *P. lustra* soil. *P. tenussima* soil samples were also significantly more saline, as indicated by electrical conductivity measurements. This is to be expected as the *P. tenuissima* sites are very close to the sea and have outlets to it. The pH of the soil for both species was slightly alkaline, and varied from 7.00 – 8.00, with a couple of results outside this range. The soil became more alkaline with depth.

The light measurements were somewhat difficult to interpret as they were taken at different times of the day, and with different days and light conditions between sites. It appeared that Ultra Violet A (UVA) levels were higher around *P. tenuissima,* but illumination levels were higher around *P. lustra.*

Leigh found that all quadrats, whether experimental or control, contained at least one of the two dominant species, Woolly Tea Tree or Scented Paperbark. He also found that the canopy was higher for *P. lustra* (6 metres compared with 4 metres for *P. tenuissima)* and the understorey more open, allowing for more light, whereas *P. tenuissima* had a very dense understorey.

The composition of the understorey plants in which each species grew differed too, as determined by a cluster analysis. *P. lustra* grew in more open patches of ground with species typical of those found along flowing watercourses (riparian) whereas species growing with *P. tenuissima* were more typical of swamps.

Therefore, although both species inhabit Swamp Scrub, they grow in different conditions and occupy different ecological niches determined by a range of environmental factors.

The New Zealand Native Orchid Journal

Although the **New Zealand Native Orchid Group** owns copyright of this material, because our main aim is informing people about native orchids, we do not guard material in our *Journals* as exclusive intellectual property. Other botanical publications may copy it, 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. The Group's website publishes Journals six months after publication.

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The Column: Eric Scanlen

1. Extended range of *Thelymitra purpureo-fusca*

Gary Little of Diggers Valley fame, keeps turning up unusual orchids that the Column can scarcely believe. This time it is *Thelymitra purpureo-fusca,* (**Fig. 22**) once thought to be an oddity from Cheeseman's disallowed Colenso species, from high in the "fagus woods" of "the Seventy Mile Bush". In other words, beech forests of the Ruahine Range, as we know it today. Gary spotted it by the Diggers Valley Roadside on 4 Nov 2007and also some 400m away on his Possum Ridge, on 1 Nov 2009, at his incomparable home-stay in the bush. Flowering here in November tallies with December in ER9 and January in ER68, in these more southerly sites. (see J113:29,30,**32**).

Gary's colonies have the purple brown buds with white sepal margins and some have Colenso's rim of green between the sepal's purple patch and the white margin. Dense white cilia tufts collide right in the post anther cleft as expected, sometimes one tuft pushing the other up out of its way. There are also three traits present which Colenso didn't mention, i.e. a dorsal sepal apiculus like a rose thorn which appears on all pix of this species in the Column's files, intact pollinia, unlike *T. longifolia*'s friable pollen and perfume. However, stems at Diggers Valley are often green or light brown, not the specified purple brown. Also the purple on sepal backs seeps right though to colour the inner surface. No doubt the species is allowed to vary this much at the northern end of its territory.

Bill Campbell also found *T. purpureo-fusca* on 8 Sept 2009, west side of SH1F, Te Paki, ER3. Bill's photos finally tripped the Column's attention, as he processed some old emails. This was not the *T. longifolia* that Bill and Gary had named their pix, it was none other than *T. purpureo-fusca,* just like Joachim Cochlovius had figuratively rubbed the Column's nose in at Repeater Rd., see J113. The flower looks very much like *T. longifolia* so Bill's was early even for so far north. However, its specification otherwise lines up better than Gary's as in **Fig. 23**.

Kevin Matthews had known for some time, of this *plentiful* species from the Ahipara Gum -Fields so sent **Fig. 24** to the Column taken on 24 Nov 2010. Kevin's specimen *does* have the purple brown peduncle plus all the other described traits and thus removes any lingering doubts about this species thriving from the far north to Graham Dickson's lot in the Lammermoors, ER68, some 1,200km nearer the pole. Kevin's orchid sensitive nose picked up the perfume in a 24 Oct 2009 specimen from the Ahipara Gum-fields and his eyes spotted the intact pollinia on it, labelled *T.* aff. *longifolia*. The Column checked all *T. purpureo-fusca* on his files and can confirm, no sign of friable pollen in any! Why do such valuable pennies take so long to drop?

The Column ventured to Repeater Rd in the Hunuas on 8 Dec 2010 in an attempt to recapture Joachim's colony of *T. purpureo-fusca.* This little used gravel road had not been graded since before 14 Dec 2009 when the orchid was in little clumps on one shoulder. Flowering then had finished except for one fine bloom. No sign of them in 2010! Conditions, it seems, were not to its likings, probably too dry, so the vexed orchids had stayed comfortably below ground as tubers, gorging on their mycorrhizal fungus, much to the Column's disgust. Philosophically though, many terrestrial orchids follow this pattern thus seeming to be rare yet the place can be teeming with them, all waiting for suitable conditions and abundant resources before sprouting and spreading their seed.

Do please keep alert for *T. purpureo-fusca* as distinct from *T. longifolia* and do check for intact pollinia and perfume if you have sensitive olfactory gear. Gordon Sylvester will be interested in order to keep the orchid mapping up to date and we can all learn where this elusive beauty is hiding.

2. *Pterostylis agathicola* has two forms

What are the particular traits common to both forms of *Pterostylis agathicola*? Slightly right twisted labellum, appearing from the side to be thickened due to a pronounced, arched, midrib. The tip of the mid rib can be a deep arch or a helix (J77:**23**). The base of the galea is inflated when viewed from behind. "It has a mycorrhizal association with the kauri and is seldom found far away from it." [Dan Hatch J94:14]. Then what differences are exhibited by the two forms?

Kevin Matthews' 2-4 months late flowering form, *Pt.* "Herekino" with a bright red labellum, from the Herekino Range, 4 Dec 2008, as in **Figs. 25** & **26.** The tip of the labellum has the requisite twist with raised centre arch and raised margins. The tip of the up-curved dorsal sepal has a little droop snoot. Otherwise details are sparse.

The common or garden form (**Fig.27** Sept 1958) flowers from July to September and sometimes stretches into October at Awhitu. The dorsal sepal is sometimes straight but is usually turned up at the tip like a small *Pt. banksii*. The Column got these three at Walkers Track, Mountain Rd in the Waitakeres. They were smaller than the *Pt. banksii* by the same track. His text, Laing & Blackwell, mentioned only two greenhoods. So these three specimens had to be the other one, *Pt. graminea*. Beginner's misleading enthusiasm! Even so, these became the Column's mental type specimen for *Pt. graminea* for years. Well, Cheeseman had done the same, hadn't he? in his 1925 manual, advised by H.B. Matthews who had seen red stemmed specimens, so it then became *Pt. graminea* Var. *rubricaulis,* unbeknown to the Column in 1958. This was definitely clarified (?) in 1959 in Dan Hatch's *Auckland's Orchids* where it became *Pt. montana* var. *rubricaulis* because of its "labellum, unevenly constricted at the tip" (J94:**14**) as per Dan's *Pt. montana* s.s. Dr. Moore's 1970 *Flora* then reverted to *Pt. graminea* var. *rubricaulis* H.B. Matthews ex Cheesem., because the labellum, although slightly twisted, was quite different from that in *Pt. montana* "sensu Moore". So the Column was in esteemed company with the wrong species epithet "graminea". Just a moment though; H.B. Matthews, in his 1920s B&W photo, depicted eleven specimens of *Pt. agathicola* and tagged them *Pt. media*! (J119:**41**). Treachery! The Column and the Editor, when viewing these pix at the Auckland Museum's library, were hoodwinked. The column saw the likeness with his 1958 so-called "*Pt. graminea*" so suspected he'd named that wrongly but still didn't twig. HBM's specimens were all lying on their sides so neither the twisted labellum nor the inflated base to the galea showed anywhere. However, the thick labellum profile was there at top left and middle, had they looked critically.

Epilogue

a). Scrub *Pterostylis* "media", it was a temporary tag-name only and can now be corrected in the Museum's archives to *Pterostylis agathicola* D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 266 (1997).

b). In *Colour Field Guide* second edition (CFG2), cover the pic **122** of so-called *Pt.* "media" and revert there to *Pt. emarginata* (*Pt.* aff. *banksii*) as per J117:**2**,6-14. For illustrations, refer to pic **109** in CFG1 and/or J80:**19** and/or J119:**51** Figs 37 & 38.

c). In J119:50, note that the similarity mentioned there, now means between *Pt. emarginata* and *Pt. agathicola*! It is a superficial similarity, only in side view. The seeds of doubt can be detected in the Column's brief article there.

Apologies to anyone who got as misled as the Column and the Editor.

23

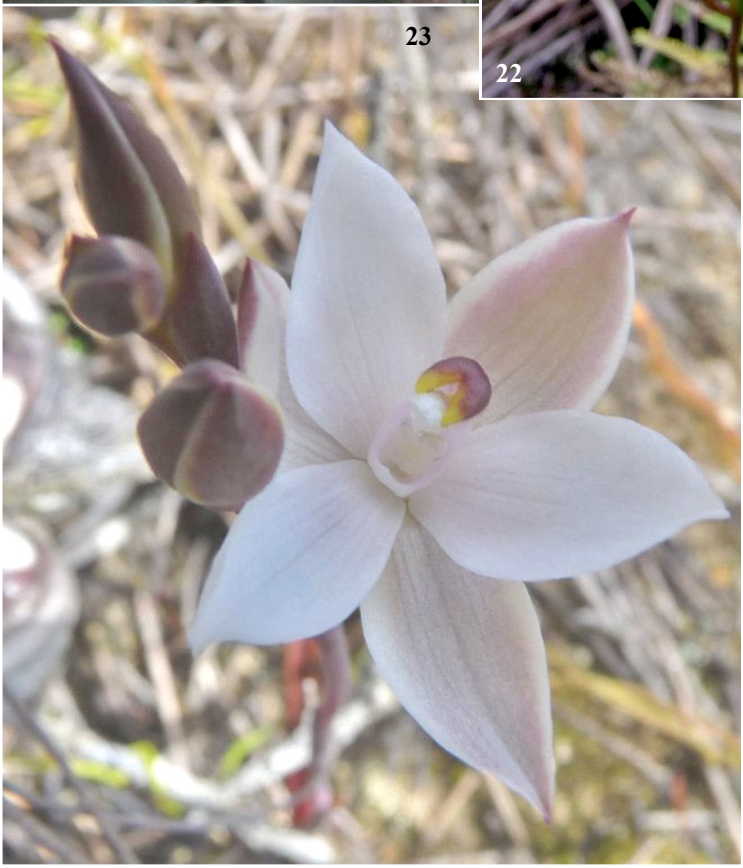

Fig. 22: ***T. purpureo-fusca*** by Gary Little at Diggers Valley, 4 Nov 2007. Note purple brown buds, white flowers with sepal-back colour seeping through to the inside; rose thorn type apiculus to the dorsal sepal; tight wads of white cilia jammed into the yellow post-anther cleft with dark purplish saddle behind. Atypical pale peduncle.

Fig. 23: ***T. purpureo-fusca*** by Bill Campbell at Te Paki. An early one, 8 Sept. 2009 but remaining traits are all typical.

Fig. 24: ***T. purpureo-fusca*** by Kevin Matthews from Ahipara Gum-Fields, 24 Nov 2010 with all the visible traits as described by W. Colenso from 1885.

The Column

Fig. 25 The normally right twisted labellum with raised margins but it is bright red and the labellum tip is a simple arch, not corkscrewed or otherwise deformed as it often is in the standard form.

Fig. 26. From the side, the blood red labellum tip is obvious. The turn-down at the tip of the dorsal sepal may vary from specimen to specimen but the unusually late flowering in December makes it special. More info please Kevin.

Fig. 27. Standard form of *Pt. agathicola* backed by the Column's 1958 Mecablitz flash gun. Thickened, dark red tip to the labellum is all that clearly shows it different from *Pt. emarginata* in the side view.