The New Zealand Native Orchid Journal

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

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HELP WANTED

The editor seeks cover photographs in landscape format. Please give us your best shots.

From the Chair

1. Take photographs and share them

Currently the Publications sub-committee is assisting Ian to update the *Pocket Guide* for the publication of its 2nd edition. One thing that the work on the guide has re-emphasised to me is the need to think about what I am photographing and why. Personally, I take photos because I can't draw very well.

I used to take a photo of a flower, partly as a way of ticking off a find. As time has gone by, and as the result of listening to advice and the falling price of storage, I am now taking more photos.

The advice I was given is that to understand a plant you need to know where it grows, how it grows, what the flower looks like in all views and what its key features are.

What this means in reality is taking a wide angle photo to show the plant in its habitat, a photo of the whole plant, and several of the flower itself including front-on and side-on. I tried to put this into action consistently last year when I was in Europe.

Hopeful the weather will be better this year and I will be able to be able do the same here. I know that for *Thelymitra* I will also try to take close-ups of the column from several directions as the shape of the column and column arms are key features in identifying species. Likewise, with *Pterostylis* the shape of the back of the flower and shape of the labellum tip may provide important visible information.

Another why of taking photos is to share them. What I would like to do is to challenge all the members of NZNOG to put together a series of photos of an orchid and share it with Ian or via the Yahoo Group.

Also, I would echo Gordon Sylvester's plea for orchid observations. I think that the recording of this information in the mapping database is some of the most important work that has been done on behalf of NZNOG.

The record of multiple sightings over time, in the same area, of common species is as important as one-off sightings. However single sightings may be useful for arranging field trips to try to verify what's been seen. This sort of verification could also be applied to parent or new species mapping.

All this work might provide Ian with a surfeit of material when it comes time to do the next refresh of the *Pocket Guide.*

2. Come to the AGM & field days in Picton

I would like to invite everyone to Picton, 3–5 November for the 2017 AGM. Hopefully it won't be a repeat of last year's attempt, foiled by earthquakes. Likely field trips are to the Wairau end of the Wakamarina Track, Whites Bay, Queen Charlotte Walkway with tracks of several levels of fitness offered in other walks if preferred. The Blairichs may also be considered for those with 4wd. Venues and booking details will be announced in the August journal.

3. The Hatch Medal 2017: call for nominations

At the AGM on Saturday 4 November there will be the presentation of the 2017 Hatch Medal, but who will be the recipient? Nominations are now open. If you are a member of the Group and know of a suitable recipient, please forward your nomination to pleione@orcon.net.nz by 1 September.

David McConachie

Have you seen these new species?

The recent formal descriptions of several new NZ orchids and the recognition of others are necessarily based on a few reports and collections from just a few sites. Perhaps these species have a wider range than we are currently aware of, so the distribution maps will be incomplete. We ask you to report new sites for these new species to the NZNOG Mapping Scheme coordinator Gordon Sylvester at southcol@xtra.co.nz. Photographs and descriptions from a forthcoming 2nd edition of the *Pocket guide* are published here to guide you. If you are unsure of your identifications, please take photographs and send them to Gordon or to Ian St George at istge@yahoo.co.nz; if they are uncertain they will contact somebody local to help you.

Gordon writes, "Can we expand it for all future observations? I am sure there have been a lot of observations made but not forwarded on—because they are 'common' and someone may have already made the observation—or 'no one is really interested in that'. Whatever the reasons we should record all and anything as it gives us a platform to plot futures—boundaries, status, and subtle changes in distribution."

Corybas confusus

Heart shaped leaves. Deep red to blackish purple waxy flowers, easily identified by the long blunt to subacute dorsal which projects well past the labellum wings. Dorsal sepal colour range dark purple to green with dark blotches. Sepals often very long.

Habitat: Seepages in elevated open beech forest and subalpine meadows to forest fringes.

Conservation: Not threatened, locally common.

Notes: Central North Island plants have a more acute dorsal sepal and are slightly succulent and waxy in appearance, but they seem more delicate in other regions. Was tagged *C.* "roundleaf".

Corybas dienemus

Tiny plants in sometimes large colonies, the fleshy leaf orbicular, 15–20mm diameter. Flower almost clear, translucent with green and red markings, tepals stiff and erect. Labellum pointed, the edges scalloped. **Habitat:** wet alpine areas in the Rimutaka. **Flowers** in October at Rimutaka sites. **Conservation:** a plant originally discovered on Macquarie Island and only recently identified in New Zealand so likely to be found in southern districts. Similar plants are reported from Campbell Island.

Notes: three colonies have so far been found, two in the Rimutaka, southern North Island. This is similar to (and may be the same as) *C.* "rest area".

Corybas obscurus

Blackish red flower with small green area on labellum, the dorsal sepal noticeably rough and warty, often with traces of green towards base. Flowers above or below the leaf which is straight-sided in flowering plants. Leaves often dotted or striped in purple.

Habitat: Montane to subalpine forest floor in good seepages and small ponding areas. Grows in the Nelson Lakes region.

Flowers November to December.

Conservation: not threatened.

Note: was tagged *C.* "darkie".

Corybas sanctigeorgianus

Leaves in colonies, three-lobed. Dorsal sepal linear, grooved, projecting well clear of the labellum, ending in an acute point. Labellum opens dark reddish purple, almost flat with a broad, pale centre at maturity. Sepals very long.

Habitat: forest, sporadic. So far found only in Hunua & Pirongia-ranges.

Flowers September.

Notes: distinguished by long dorsal sepal—otherwise similar to *C. hypogaeus*.

Corybas sulcatus

A small sub-antarctic form which seems to have close relatives in parts of New Zealand. Recognized by its ball shaped flower. Either side of the deep labellum opening are prominent ridges which are more noticeable in mature flowers. Dorsal sepal helmet-like, pimpled and flecked in dull to blackish red; labellum with very short, red striped bib and pale green throat which often matures to pale orange. Lateral petals short and weak.
Flowers October to November

Distribution: Chatham Is and isolated locations in the South Island. Sparse. Data deficient.

Notes: New Zealand plants appear to be the same as *Corybas sulcatus* from Macquarie. Compare with

Corybas "Craigielea" ►

A tiny form from the eastern Wairarapa, close to *C. sulcatus*.

Corybas vitreus

Common low to sub-alpine form with leaves typically three lobed. Broad, spoon and helmet shaped dorsal sepal of bright apple green , occasionally with a central red stripe down back and random red flecks. Labellum face is pale green, the upper labellum wings purple, lower edges translucent, often striped purple and often quite ragged. Flower usually somewhat nodding.

Habitat: moist forest floor, and shady manuka.

Flowers August to October.

Conservation: very common throughout eastern areas of Central NZ. Sporadic elsewhere. Not threatened.

Notes: similar to *C.* "pygmy" which flowers 2 months earlier. Often shares habitat with *C.* "triwhite" and *C.* "hypogaeum" but has separate pollinator. Was tagged *Corybas* "Eastern Hills"

Corybas walliae

A pale green montane to alpine form. Flower easily recognised by the almost complete lack of red on the green rather translucent labellum. Often has a pimpled surface on the broad helmet-shaped dorsal sepal which occasionally has a few pale reddish markings.

Habitat: Moist areas in mountain beech forests and alpine fringes in both main islands. Tolerates snow.

Flowers September to November

Conservation: Common and unthreatened.

Notes: close alliances to *C. trilobus* s.s. and *C. obscurus*. Was tagged *C.* "triwhite".

Gastrodia cooperae

A darker coloured plant overall than its close relation *G. molloyi* and less robust. Terrestrial, parasitic, tubers producing several stems. Fragrant. Column long and visible at opening of flower. Labellum tip dark.
Habitat: known from one Wairarapa site (under kanuka) and from NW Nelson (under beech).
Flowers December to January.
Conservation: Known in the past from other sites near Wellington. Regarded as threatened / nationally critical.
Notes: the whole plant very closely allied to *G. cunninghamii* but distinguished by the long column. Was tagged "long column black".

Gastrodia molloyi

Plants with many knobbly yellow to yellow green flowers heavily marked greenish brown to almost black. Column long, showing beneath the yellow tipped labellum. Some smell of freesias. Labellum tip yellow.
Habitat: wide range of disturbed vegetation. **Flowers** December to February.

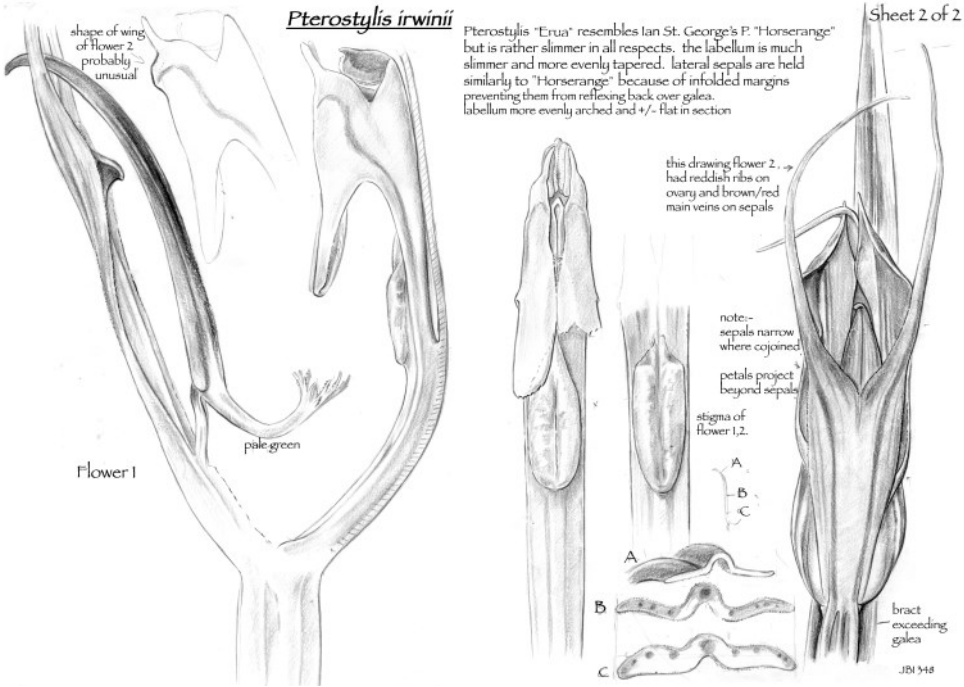
Notes: almost a mix of characters of *G. cunninghamii* and *G. sesamoides*. Distinguished from the former by its long column and the latter by warts on the flower exterior. Often more robust than either. Was tagged *G.* "long column".

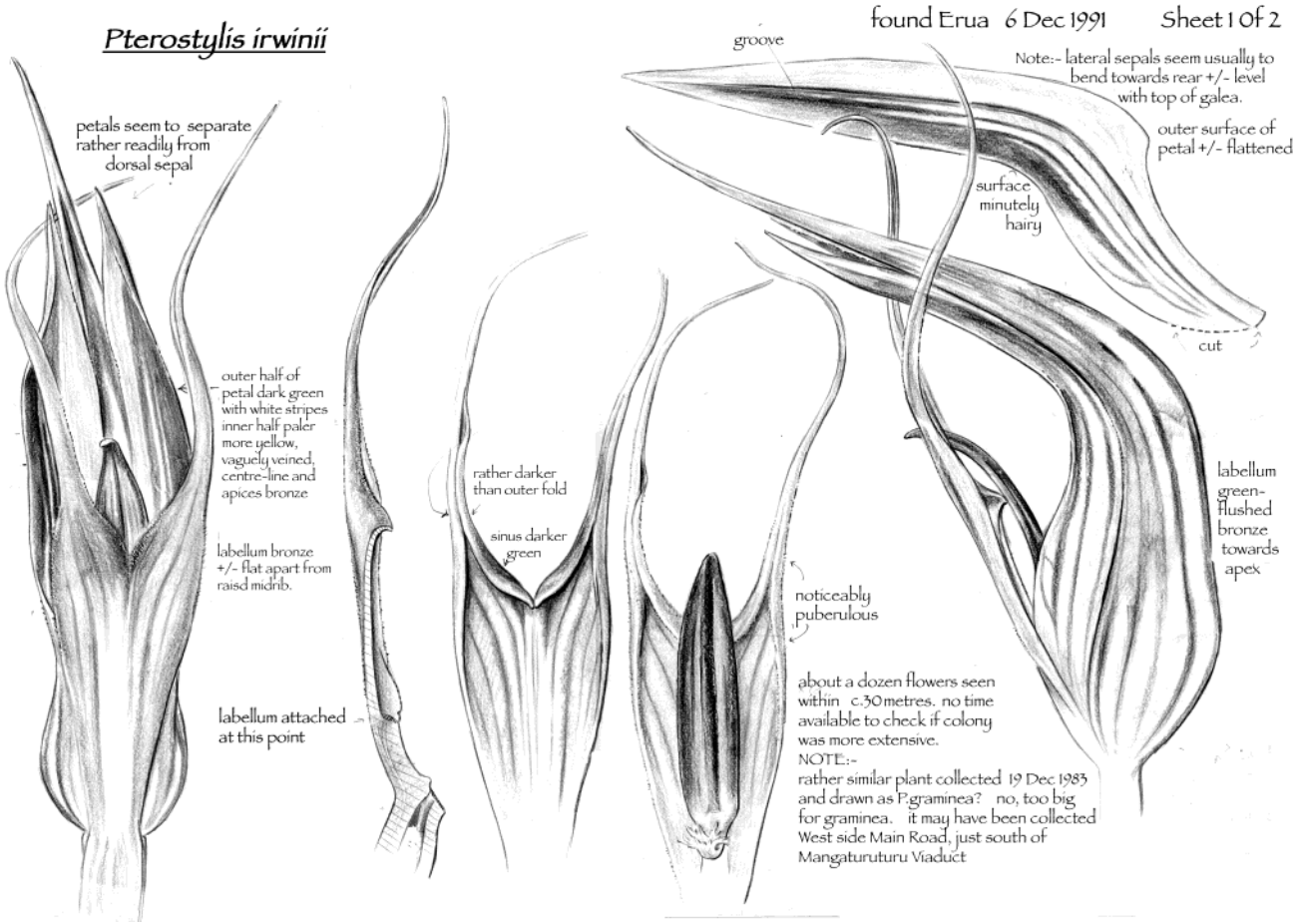
The type locality Ian St George: *Pterostylis irwinii* from Erua

In 1997 David Jones, Brian Molloy and Mark Clements described six new pterostylises from New Zealand, one of them *P. irwinii,* which they thought was "endemic to the North Island of New Zealand where so far known from two colonies at one locality, near the township of Erua… where local and uncommon. … The specific epithet honours J.B. (Bruce) Irwin for his outstanding contribution to the knowledge and illustration of New Zealand orchids, and who discovered this species during his orchid explorations in Central North Island".

The paper was accompanied by drawings by Bruce Irwin, derived from those reproduced here, first published in the *NZNOJ* in 1993 (45: 15–17), but sent to me by Bruce in 1991. He tagged it *Pterostylis* "Erua" and took me to the spot in 1993.

Since then the plant has been found in the southern Wairarapa and in good numbers in several sites in the northern South Island.




Pterostylis irwinii
found Erua 6 Dec 1991
Sheet 1 Of 2
groove
Note:- lateral sepals seem usually to bend towards rear +/- level with top of galea.
outer surface of petal +/- flattened
surface minutely hairy
cut
petals seem to separate rather readily from dorsal sepal
outer half of petal dark green with white stripes inner half paler more yellow, vaguely veined, centre-line and apices bronze
labellum bronze +/- flat apart from raisd midrib.
labellum attached at this point
rather darker than outer fold
sinus darker green
noticeably puberulous
labellum green-flushed bronze towards apex
about a dozen flowers seen within c.30 metres. no time available to check if colony was more extensive.
NOTE:-
rather similar plant collected 19 Dec 1983 and drawn as P.graminea? no, too big for graminea. it may have been collected West side Main Road, just south of Mangaturuturu Viaduct

Orchids in 3d

Eric Scanlen

Pterostylis irwinii at Erua on 12 December 1996: look at this with your 3d glasses!

Notes

Cheryl Dawson emailed, "I have just arrived home from a "summer" tramp on the Routeburn track; we did have good weather between the shelter and falls hut but after that we had rain and snow with the southerly storm that came through. Still we had a great trip but not so good for photos with rain on the lens. There were a lot of orchids in flower. Quite a few *Gastrodia* around the lower part of the track (sadly no pics)." *Aporostylis bifolia, Pterostylis australis, Prasophyllym colensoi* (x 2), *Caladenia lyallii, Waireia stenopetala* and (centre) a short pterostylis—*Ed.*

Alan Stephenson reported (ANOS Illawarra *Bulletin* January 2017) on a trip "To the Falls and beyond" looking for *Danhatchia australis* at a previously visited site in New South Wales. After his last visit he had not wanted to return: the first 500m of the track is "very steep, with steps cut into the rocks and earth and no sensible person would construct a stairway in their home with such steep risers and short steps." In wet weather there is "a large population of leeches aroused by persons walking through wet vegetation" (but luckily it was dry; though) "We did see one python near the four plants". *Yes, they found four Danhatchia in fruit and were delighted to have been able to collect samples for DNA and not to have encountered venomous fauna —Ed.*

Preparations for the The 21st Australian Orchid Council Conference & Show "Orchids in the Foothills" to be held 18-22 July 2018 are progressing well. We have been in contact with many potential speakers who have expressed an interest in presenting a talk and also in bringing along flasks to be sold. Early Bird registrations are now open until 31 December 2017; time is flying so take advantage of the discount now. http://aocc2018.orchidsocietynsw.com.au/registrations.html

Mike Lusk sent a photograph of *Gastrodia minor* from exotic pine forest: midjanuary.

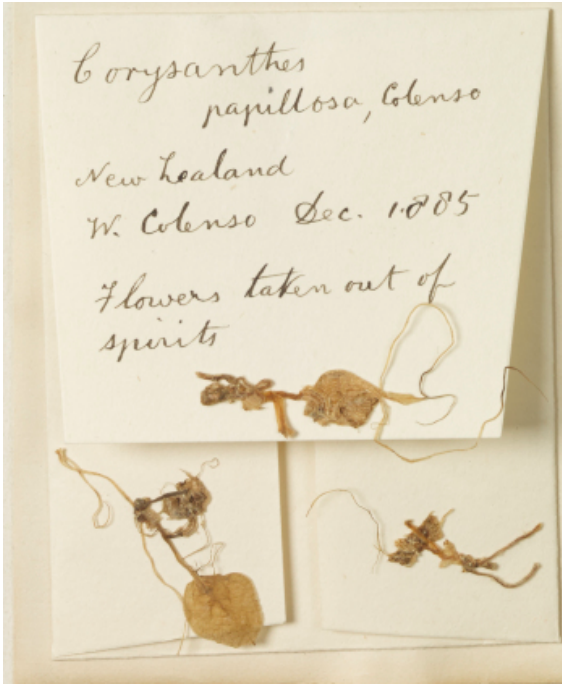
Philip Simpson emailed with "The same clump that was photographed by Don Pittham [*Danhatchia* shown in J144], one month later, showing the breakdown of shoots after the onset of cool wet weather and burial of the bases in new leaf litter. The rhizomes survive under the ground." ▼

Mike Lusk emailed (2 April), "Good old *Pterostylis alobula* ► heralds, for me at least, the new season, with *Acianthus sinclairii* developing buds. Curiously enough I regard *Earina autumnalis* as seeing out the old one.

If you would like to read Anne Fraser's 2008 thesis on *Thelymitra matthewsii* it is online at http://researchcommons.waikato.ac.nz/handle/10289/2291

Jack Warden emailed, "I am a relatively new member to the New Zealand Native Orchid Group and enjoy the journal every month. It was quite fitting that the day after I observed *Genoplesium pumilum* on Great Barrier Island the first page of the latest journal was on this orchid. I thought you maybe be interested in a couple of photos of the GBI specimens."
Indeed we are thanks Jack—Ed.

In J116 I wrote, in "The Type Locality" for *Corybas papillosus* (Col.) Lehnebach, that although Colenso had mentioned in a letter dated 15 October 1885 to David Balfour, its discoverer, that he had sent specimens to Kew, I had been unable to find them there when I visited in 2009. In fact Colenso sent plants in spirits to JD Hooker on 14 October 1885 and they were taken out of the bottle and mounted. Detail from the online Type sheet ▼



Whoops! we erred editorially, our errors escaping even Eric's eagle eye; Eric avers (and we apologise—for inadvertent errors *and* unnecessarily added alliteration)...

1. Mike Lusk's *Caladenia* "Kaweka" ► on p15 of J144 is called *C. chlorostyla* with no flowering date. Mike took the photograph on the Sunrise Track on 2 March 2017 at altitude 1,100m. It is 3 or 4 months late for *C. chlorostyla* so has to be *C.* "Kaweka", new taxon, as on p19.

2. On p19 of J144, Fig. 3 is a repeat of Fig. 4, instead of Gary Penniall's late flowering *Caladenia chlorostyla* from the Bridal Veil Falls, Arthur's Pass as now shown at left ◄.

The Column Eric Scanlen

Pterostylis banksii s.s. & *Pt. banksii* "south"

Pterostylis banksii **Fig. 1,** has been sadly misrepresented by the botanical community from the word go! The Column waded through the literature for clear definitions, with help from Ian St George, as follows.

Sir Joseph Banks first collected it at Opurangi (Whitianga) in 1769. His specimen is in the Banksian Museum. See [1, p7] Ian St George's type Locality article in Journal 139. Banks' specimen got Solander's briefest of descriptions as *Arethusa tetrapetala.* [2 p4] It is no help and mentions only its "leaves, often a span long." Not being described in detail etc it was not installed as the Type for *Pt. banksii.*

Allan Cunningham, however, took specimens from the Bay of Islands in 1826. He took some to Robert Brown in Sydney, and sent live tubers to Kew. The tubers, acclimatised at Kew, produced a flower in April 1832 which Allan took to Franz Bauer [1, p7] either as a wilted flower or as a pressed specimen, he didn't say. But Franz drew it beautifully [1, p8] in good colour, as in a fresh flower, but with down-curled dorsal sepal and a floral bract as short as the shrivelled one in the pressed specimen. However, the down-curled dorsal sepal in both Franz's painting and the pressed specimen is reminiscent of *Pt. patens,* not *Pt. banksii.* Perhaps it grew deformed like that after the acclimatisation of the shrivelled tubers, six months out of season? Curiously Allan doesn't even mention this gross variation from Bay of Island specimens, so Bauer's painting was

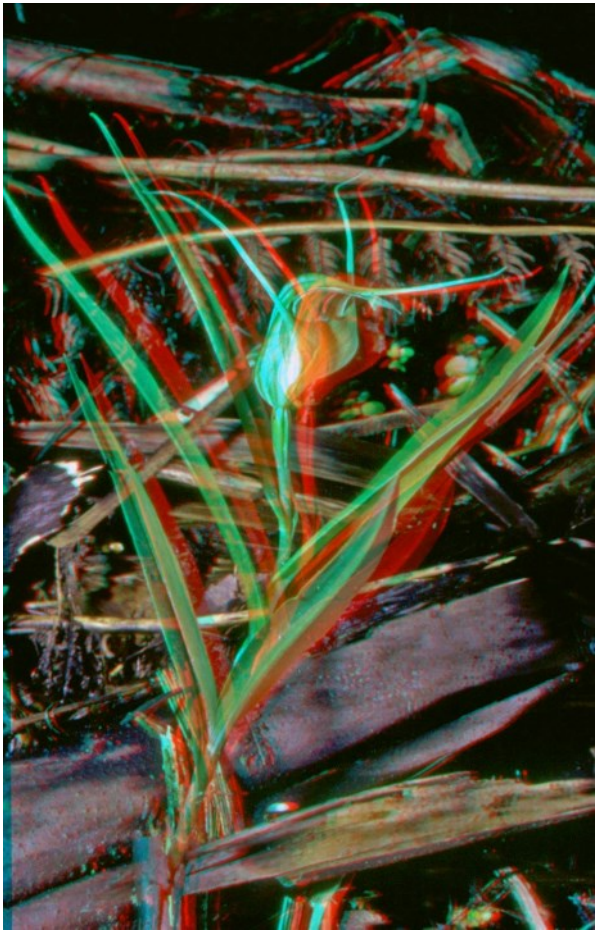


Fig.1: *Pt. banksii* proper in anaglyph 3-D (view with red/cyan spectacles). The specimen was from Webb's Track, Coromandel, 10 Nov. 2000, showing narrow, stiff, floral bract standing well above the flower and a long, upturned tail to the dorsal sepal. It stood alone, undamaged so had to get the 3-D treatment, despite the field party's groans at the delay.

then taken as true to Type, and has ever since had some influence on botanical writers loath to forgo precedent. Allan's 1832 Type description of *Pt. Banksii*, was inserted by W.J. Hooker [3, p7] in Latin. It doesn't particularise either the dorsal sepal or the floral bract so falls short of ideal. Allan too may have had his doubts so avoided those crucial details?

J.D. Hooker, in 1853 [3 p27] described *Pt. Banksii,* also in Latin and briefer than Allan's description, so is less help. But Hooker's 1864 description [3, p68] mentions the "upper sepal arched forwards" like Franz Bauer's painting? Hooker wouldn't have seen anything like Bauer's in his 1841 stay at the Bay of Islands. Yet he had others collecting for him, so why did he revert to Allan's specimen and Bauer's drawing, for his description, 23 years later? It seems that he was invoking precedent from the Type specimen.

Pt. banksii proper, which is common in the far north, is most likely characterised in healthy, well-nourished plants, by the previously non-accentuated traits, normal around Auckland and Coromandel, of,

1, **long, up-curved dorsal sepal and**,

2, **slender, long and stiff, floral bract,** Veed on centreline, with the flying seagull section, considerably overtopping the flower.

Excepted, are plants which are pale and sickly, lacking some leaves or young, just unfurling or old and failing. These can display the drooping dorsal sepal and limp floral bract.

T.F Cheeseman, [4, p349] in1925, despite having seen multiple specimens in his travels, followed Hooker's, precedent, word for word in places, such as, re leaves, "'the whole stem,'" usually overtopping the flower but often shorter…". TFC amended that last bit himself, possibly in reference to Franz Bauer's painting with the short floral bract. Both Hooker and TFC used the word "stem" unusually, for "all the leaves". TFC had the "upper sepal produced into a long caudate often filiform point;" so he was getting there, but made no mention of up-turned. TFC curiously, also lumped five of Colenso's species into *Pt banksii.* They comprise *Pt. patens* with the long hooked-down dorsal sepal; *Pt. speciosa* with shorter, hooked down d. sepal (J115:4,**7**) now languishing as *Pt. patens*; *Pt. emarginata,* about half the size of *Pt. banksii* and always with an emarginate labellum; *Pt. auriculata,* southern, small, with broad, flat, floral bract and straight, down-pointing dorsal sepal; *Pt. subsimilis,* with short leaves and sepals, plus a down-turned dorsal sepal.

All five are quite different from *Pt. banksii* and four have since been reinstated. So TFC's concept seems to have had conflicts between Type precedent, field observation and distrust of Colenso? Whatever are the reasons, discount T.F. Cheeseman's description of *Pt. banksii*.

Moore and Edgar, in the 1970 Flora, [6, p143] also refer to the floral bract, only as one of the leaves which are "linear-lanceolate, ± keeled, acuminate to long acuminate…usually overtopping the flower." *Pt. patens* was also included in their concept of *Pt. banksii,* with its hooked-down dorsal sepal! Moore included three of Bruce Irwin's drawings of *Pterostylis* species [6, p143] but none of iconic *Pt banksii.* Was that further conflict with Type precedence and observation? Regardless of that, forget Moore's & Edgar's concept of *Pt. banksii*.

Dan Hatch, whose home at Laingholm was in abundant *Pt. banksii* country, had for his *Pt. banksii* var. *typica*, [5, p78] "leaves 1-8, strictly cauline, linear-lanceolate, acuminate, and erect, up to 20cm long by 8mm broad." Close, but Dan omitted mention of the floral bract narrower and stiffer—due to its seagull cross section—than the other leaves. Like Dan, the Column hadn't taken notice of this quite distinct trait until recently, some 61 years after first photographing *Pt. banksii* in the Waitakeres. Who goes around closely studying common *Pt. banksii*? But Dan also had, "Dorsal sepal longer than the petals, filiform-caudate, the tip horizontal or sub-erect." The Column's underline. No one else had mentioned the up-curved dorsal sepal so Dan

was ahead here but exaggerated with his "sub-erect"! The horizontal tip does occur occasionally, in the north. The Column took **Fig. 2**, on 29 Oct. 1960, by Walker's Track, in the Waitakeres.

Fig. 2, *Pt. banksii* colony showing two specimens with stiff floral bracts and long upturned dorsal sepals then two rare ones on the right with down-turned ±straight d. sepals and less stiff floral bracts; they may still be unfurling or were hybrids with *Pt. banksii* "south".

It's his only pic of *Pt. banksii* showing the straightish dorsal sepals on the two specimens on the right, plus their limp floral bracts only just overtopping the flower. These are either still unfurling or are hybrids with the southern form, herein tagged ***Pt. banksii* "south"**

3

4

5

Bruce Irwin's drawing, [7] of one *Pt. banksii,* a specimen from Lunds Rd. Katikati, 13 Oct. 1992, has a straight dorsal sepal. It has flower internals, **Fig.3**, closely matching the Column's **Fig. 4**, from Bald Hill Rd. in the Longwood Forest near Invercargill, over 1,000kms further south than Katikati. This is the variable *Pt. banksii* "south". **Fig. 5** is a whole and mature, Bald Hill plant showing distinctive *Pt. banksii* "south" traits like, shorter leaves and floral bract, shorter, straight, or downward tending dorsal sepal. Otherwise there are distinct similarities with *Pt. banksii* from the north.

Bruce had most drawings of *Pt. banksii* with the dorsal sepal upturned and on p 479, attributes wide leaves [and limp floral bract] to indicate that a plant from Taita was "half way to *P. australis"* as he put it. Bruce's dual

Fig. 3, Bruce Irwin's drawing of a sectioned *Pt banksii* "south".

Fig, 4, Sectioned *Pt. banksii* "south" flower, with closely similar stigma, labellum, column wings and anther to Bruce's Katikati flower, 1,000kms away.

Fig 5, Whole *Pt banksii* "south" plant, one form of several in this variable taxon, showing shorter leaves, shorter dorsal sepal, level to down-trending, otherwise similar to *Pt. banksii* proper.

forms of dorsal sepal were an improvement on Bauer's down-coiled one, but were still wanting. Bruce kept the dual dorsal-sepals concept through three issues of the black and white Field Guides. So the Column reverted to *Pt. banksii* proper, in both the 2010 & 2011 colour field guides but omitted inclusion of the southern form, not then being fully aware of it, as discrete from *Pt. australis*. However, the dual concept had become an institution among botanical writers and continues to this day as a single species, in the *Pocket Guide.* So this write-up had to be penned to clarify the issue for all until some dedicated soul properly describes our iconic *Pterostylis banksii*.

Any of you orchidologists, visiting Type locality in the Bay of Islands, in October, November, do look carefully, particularly around black ponga (*Cyathea medullaris*) and kauri, and you will surely find that all healthy, mature, *Pt. banksii* have long up-curved dorsal sepals and slender, long, stiff, floral bracts, standing well above the flower. Lateral sepals stand back and up, mutually at 90º to each other.

Fig. 6, shows Ross Donald's healthy *Pt*. aff. *banksii* by the Four Sister kauris in Waipoua Forest, some 60km from the Bay of Islands. Could this be *Pt. banksii* s.s. in a last stand? Kauris were decimated around Bay of Islands for masts and for building, by early settlers. *Pt banksii* s.s. may have retreated with them? just a thought.

One does occasionally strike somewhat smaller specimens in NZ, with straight to drooping dorsal sepals and broader, more flexible floral bracts. Some of these are *Pt. banksii* s.s., either just unfurling, over-mature, or pale and under-nourished. The healthy mature specimens in the south, with straight to drooping dorsal sepals and wide, flat floral bracts, will be *Pt. banksii* "south". These become more common the further south one goes and largely supplant *Pt. banksii* proper but still get mistaken for it. Do not be deceived.

Fig. 6, by Ross Donald 13 Nov, 2011. It is quite late flowering and unique with their baby pink lateral sepals outstretched in line. Is this *Pt. banksii* s.s?

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