

The New Zealand  
Native Orchid  
Journal

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**Forms of *Thelymitra hatchii*:** 1. The column of the type of *T. concinna*; 2. *T. concinna* from the Tararuas; 3. *T. hatchii* Erua, photo Eric Scanlen; 4. *T. hatchii*, Southland; 5. *T. hatchii*, Tararuas.

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# Editorial: Ian St George



I HAVE ALWAYS HAD difficulty with Darwin's contention, in *The fertilisation of orchids* (1862) that "nature abhors perpetual self-fertilisation". After all, the majority of New Zealand native orchids are predominantly self-

fertilised. Thus I was happy recently to discover at least a partial retraction of his statement, made 16 years later in his *The Effects of Cross & Self Fertilisation in the Vegetable Kingdom* (1878).

"In 1862 I summed up my observations on Orchids by saying that nature 'abhors perpetual self-fertilisation.' If the word perpetual had been omitted, the aphorism would have been false. As it stands, I believe that it is true, though perhaps rather too strongly expressed; and I should have added the self-evident proposition that the propagation of the species, whether by self-fertilisation or by cross-fertilisation, or asexually by buds, stolons, etc. is of paramount importance."

In other words, survival of the species is what *really* matters, no matter how it is done. Darwin's observations led him to conclude further,

"It is an extraordinary fact that with many species, flowers fertilised with their own pollen are either absolutely or in some degree sterile; if fertilised with pollen from another flower on the same plant, they are sometimes, though rarely, a little more fertile; if fertilised with pollen from another individual or variety of the same species, they are fully fertile; but if with pollen from a distinct species, they are sterile in all possible degrees, until utter sterility is reached. We thus have a long series with absolute sterility at the two

ends; – at one end due to the sexual elements not having been sufficiently differentiated, and at the other end to their having been differentiated in too great a degree, or in some peculiar manner."

We know that the New Zealand orchids that self-fertilise set copious seed. While cross-fertilisation allows greater *vigour* of the offspring, self-fertilisation appears to provide greater *numbers* of them, thus increasing the chances, in turn, of cross-fertilisation.

Darwin deduced this. He wrote, "Why the descendents of plants which were originally dioecious, and which profited by always intercrossing with another individual, should have been converted into hermaphrodites, may perhaps be explained by the risk which they ran, especially as long as they were anemophyllous, of not being always fertilised, and consequently of not having offspring. This latter evil, the greatest of all to any organism, would have been much lessened by their becoming hermaphrodites, though with the contingent disadvantage of frequent self-fertilisation..... Dioecious plants, however fertilised, have a great advantage over other plants in their cross-fertilisation being assured. But this advantage is gained, in the case of anemophyllous species at the expence of the production of an enormous quantity of pollen, with some risk to them and to entomophyllous species of their fertilisation occasionally failing. Half the individuals, moreover, namely, the males, produce no seed, and this might possibly be a disadvantage."

One would have to maintain, in defence of New Zealand orchids and in defiance of Darwin, that an hermaphroditic plant that can be cross-fertilised, but that will always revert to self-fertilisation if disappointed, has the best possible shot at success – in numbers and in vigour.

# The Type Locality: Ian St George

## 6: Tarawera and *Thelymitra concinna*



In 1887 William Colenso described *Thelymitra concinna* [1] from a single plant collected by Augustus Hamilton from open country near the east bank of the Mohaka River, north of Napier. Cheeseman and

Hatch ignored it. Moore discussed it under *T. pulchella*, but could not find the Type [2].

### Colenso's description

#### *Thelymitra concinna*, sp. nov.

Plant small, stem 4½ inches high, slender. Leaf single, narrow, 3 inches long, thin, rather membranaceous. Flowers 2, small, sub ½ inch diameter; sepals ovate, acuminate, nerved, brown; petals blue with a tinge of purple, broadly ovate, apiculate, broader than lip; column slightly hooded; margins plain, largely winged below; staminodia arising from a strong nerve, long, curved, erect, finely filiform, with only a few long and free hairs at tip, springing from 2–3 branches; hairs reddish, clavate.

*Hab.* Open country near the east bank of the River Mohaka, north of Napier; 1884: *Mr. A. Hamilton*.

*Obs.* I regret that I have only had a single specimen of this interesting little plant, which I believe to be a very distinct species. Mr. Hamilton was also struck with its peculiar and neat appearance when he gathered it, and though he sought other specimens he was unsuccessful; sheep being pastured there in that locality, soon destroy all small tender indigenous vegetation. Hitherto I have deferred publishing it, although I had examined and noted its characters (as above) while fresh, wishing first to obtain more specimens. Its small and graceful appearance, thin leaf, blue petals, narrow lip, and few reddish hairs springing in distinct bundles or branches from its staminodia, are peculiar characters. It is to be hoped that its discoverer may meet with more of the same plant when again in those parts.

### Augustus Hamilton 1854–1913



Augustus Hamilton was a scientist and collector, latterly Director of the Dominion Museum. He was born in 1853 at Poole, Dorset. In 1876 he came to New Zealand and became a teacher.

He taught in primary schools

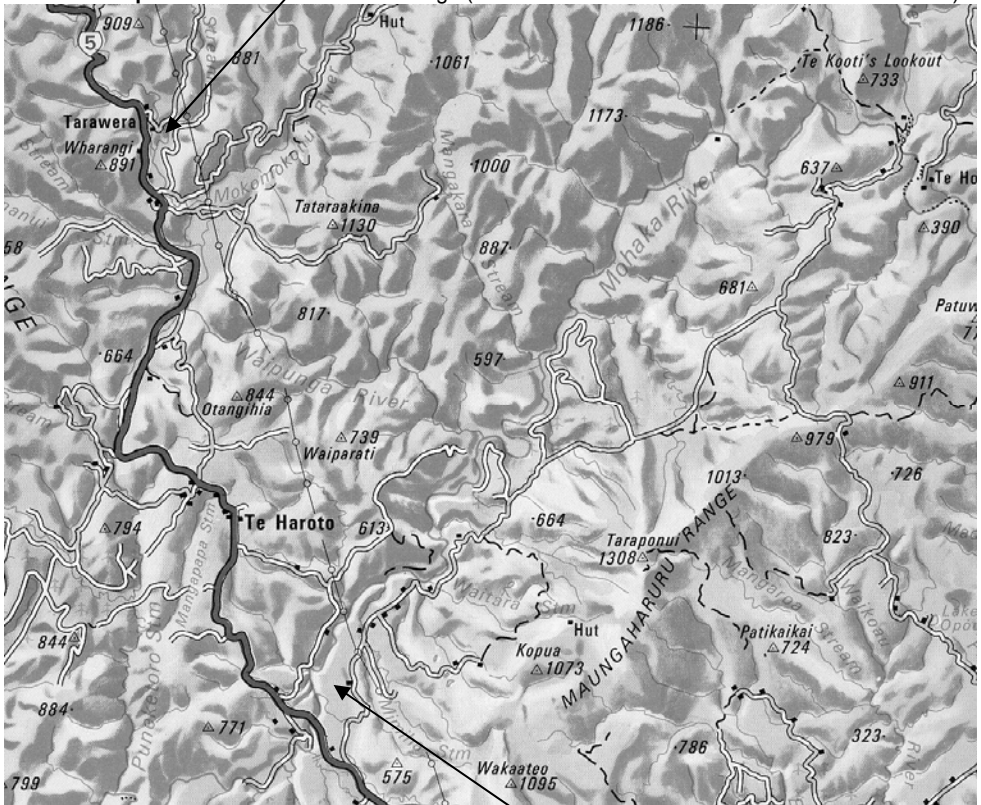
at Thorndon, Okarito, and Petane. At Petane he joined the Hawke's Bay Philosophical Society (becoming secretary), and established the first Napier Museum, founded largely on items of ethnographic interest which he had collected from Maori sources. The museum was destroyed in the earthquake of 1931 and many valuable pieces disappeared. In 1890 he was appointed Registrar of the University of Otago, and the most productive period (1890–1903) of his life began, with a long list of papers on botany, zoology, and ethnology in the *Transactions*. He also began his outstanding work – *The Art Workmanship of the Maori* – which dealt with all aspects of Maori material, culture, and life. In 1903 he was appointed Director of the Colonial (later, Dominion) Museum and from then until his death, 10 years later, he worked on increasing that institution's ethnological, historical, and entomological collections [4]. Hamilton collected *Earina quadrilobata* (1883), *Bulbophyllum tuberculatum* (1893) and *Thelymitra concinna* (1883) for Colenso. His diaries have been transcribed by Ross O'Rourke[5], but there are no diaries for 1883-4, so Hamilton has not left a record of exactly where he found *T. concinna*.

### What's near the Mohaka now?

Highway 5 crosses the Mohaka river about 10km south of Tarawera village. The land on the west bank is occupied by Tarawera Station. Along the side road up the east bank of

**Road to Taupo**

Tarawera village (but all the area NW of the river is Tarawera Station)



**Road to Napier** "Open country near the east bank of the River Mohaka"

the river sheep are still in evidence, along with polled Charolais cattle. There is very little other than grassed pasture and forestry, and the roadside papa banks are a tangled mass of exotic weeds, with only an occasional dried *Microtis*. Not a single *Thelymitra* did I see.

**What might *T. concinna* be?**

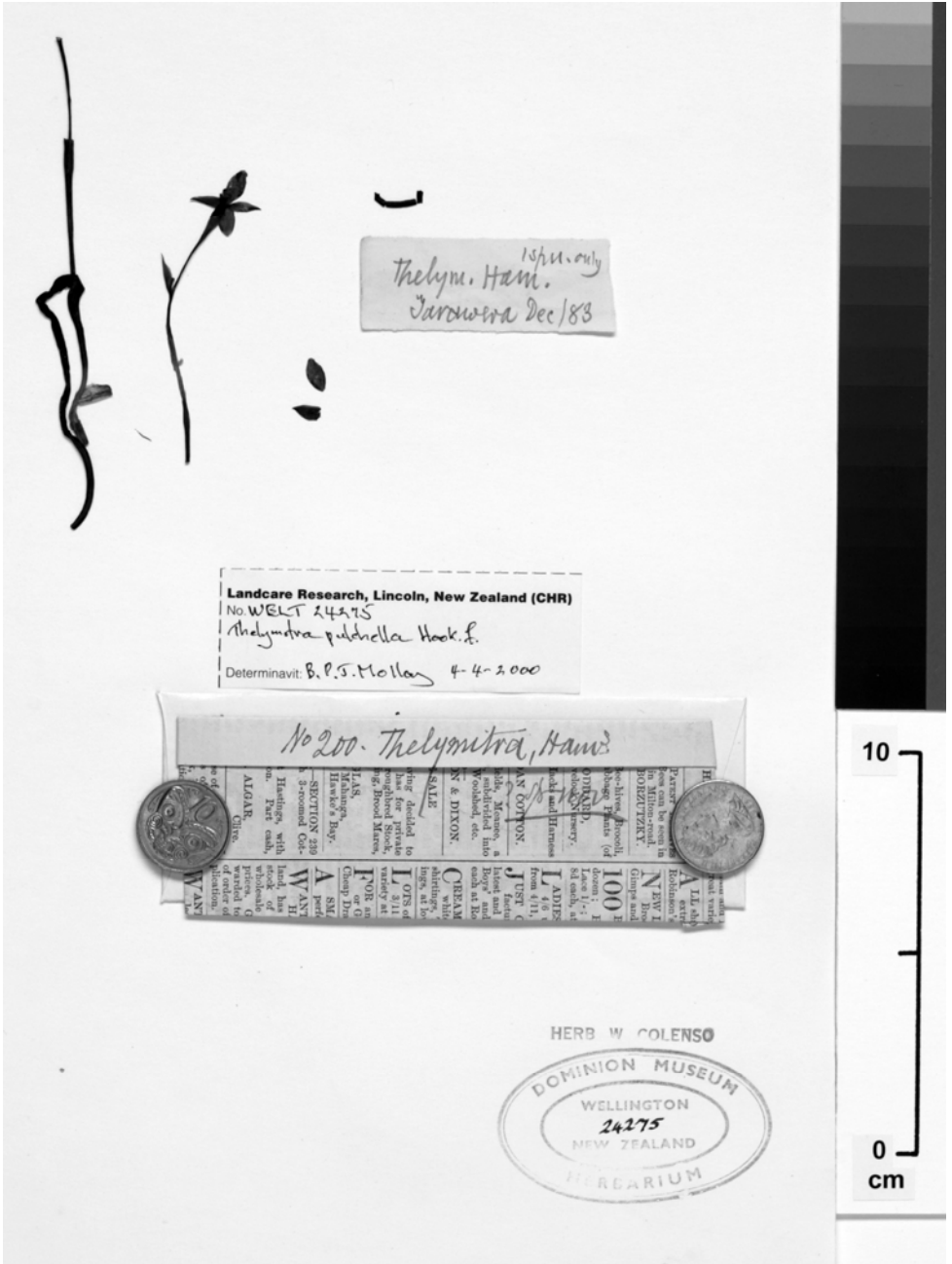
Apart from *T. Formosa*, the only reddish-ciliated *Thelymitra* I know of in the middle North Island is a slender plant regarded as a form of the variable amphidiploid *T. hatchii*. It has been reported from one Taranaki locality, now lost (Margaret Menzies) and from two Wairarapa tracks in the Tararuas (Waohine, Pat Enright, and Mt Holdsworth, *mihī*), flow-

ing in December. I have seen specimens as small as that Colenso described, but always with a good clump of pink cilia, which would not be described as a few long reddish hairs.

Alternatively it could be one of the forms of the variable *T. pulchella*. Against that would be that I have never seen *T. pulchella* with reddish hairs, and Colenso proceeded within three years to publish *T. fimbriata*, which he clearly regarded as different.

**The type specimen**

Although Moore could not find the Type, there is, among Colenso specimens at WELT, one (WELT 24275) labelled, in Colenso's handwriting, "No.200. Thelymitra. Ham ?



The Type of *Thelymitra concinna*, WELT 24275 in Herb. Colenso (Fig.1 shows detail) reproduced with permission from the Museum of New Zealand Te Papa Tongarewa

sp.nov.” and elsewhere in his hand “Thelym. Ham. Tarawera Dec/83 1 spn. only”. Tarawera is in the *Mohaka ki Ahuriri* block, which was confiscated in 1868 after the Hauhau incursions into Hawkes Bay, and is the subject of current Waitangi Tribunal claims [3].

The specimen sheet is shown on p.7, courtesy of Te Papa. The plant is 116 mm (4.55 inches) high, its leaf about 71mm (2.8 inches) and it must be the type of *T. concinna*. It now bears an additional label by Brian Molloy identifying it as *T. pulchella* (but is not typified as *T. concinna*).

I think the column (Fig.1, IFC, and my tracing below) is that of the slender pink-ciliated form (Fig.2) of *T. hatchii* (Figs 3-5) and not that of *T. pulchella*.

### A brief history of *Thelymitra hatchii*

*T. hatchii* was first described by Lucy Moore in 1969 [6]. It is a big strong plant: why had it not been noticed until then?

It had, of course. Colenso described *T. formosa* from plants collected between Norsewood and Dannevirke in 1882 [7]. His collection (WELT 22571 Herb. Colenso) includes *T. formosa* and *T. hatchii*, so clearly he did not distinguish between them. Moore chose specimen B on that sheet as the lectotype, and indeed that specimen and Colenso’s description fit our modern concept of *T. formosa* rather better than *T. hatchii* (although he described the “fimbria” as yellow).

Cheeseman ignored *T. formosa* completely. He was thinking about *T. pulchella*. His concept of that species was based on northern specimens, with bare column arms, lacking any cilia or fimbria (opposite page). When he was sent Westland plants with fimbriated column arms, he described them in 1906 as *T. pachyphylla* [8]. In 1919 Petrie described them as *T. caesia* [9]. Both appear to have ignored Colenso’s *T. fimbriata* described in 1890 from Southland specimens [10].

Hatch seems to have ignored Colenso’s name *T. formosa* too. He was sent North Island specimens of *T. hatchii* by various collectors, but misidentified them as Cheeseman’s *T. pachyphylla* and Petrie’s *T. caesia* [11] (illustrations opposite). When his paper was in press he was sent specimens of *T. formosa*

from the South Island and recorded them as a second jordanon of *T. pachyphylla*. Thus Hatch had examined *T. hatchii* and *T. formosa*, and regarded both as *T. pachyphylla*. (Interestingly, though, his figures of “*T. pulchella*” are also more like *T. formosa* than *T. pulchella* in any of its currently recognized forms).

Colenso had examined *T. hatchii* and *T. formosa*, and regarded both as *T. formosa*. When he was sent *T. concinna* he thought it was new. It is not, as Lucy Moore clearly suspected it was, the first described of the list of currently accepted synonyms of *T. pulchella*.

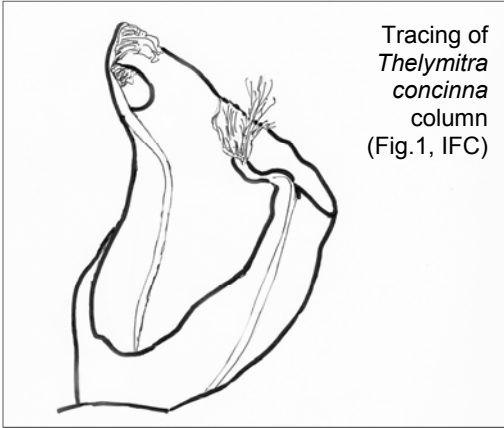
If *T. concinna* is really a form of *T. hatchii*, then the species should strictly revert to the older name. (Brian Molloy has identified the pollen of *T. concinna* as typical of an amphidiploid—[“Notes” J108]). But we have no certainty that *T. concinna* and *T. hatchii* share the same parentage [12]—there is more than one taxon in the *T. longifolia* aggregate and amphidiploids may have resulted from any of them crossing with *T. formosa*.

In my opinion, until the parentage of both is shown to be identical, the name *T. hatchii* should continue for the yellow ciliated robust plant, and *T. concinna* should at present be reserved for the slender pink-ciliated taxon.

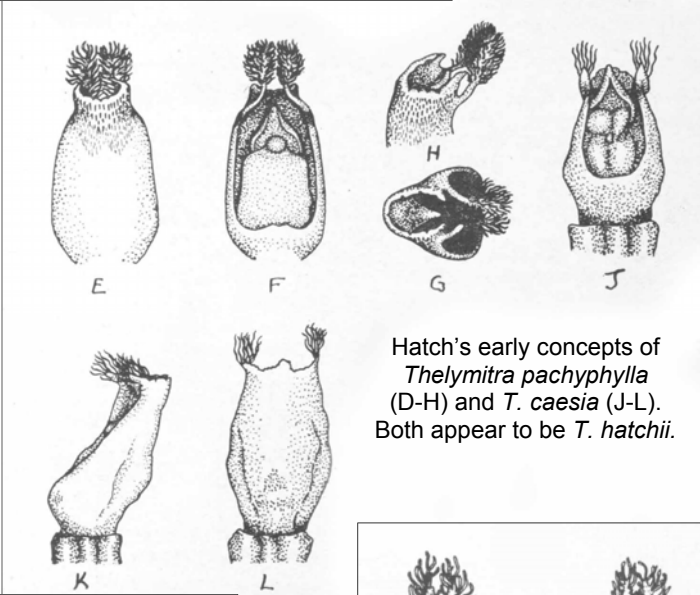
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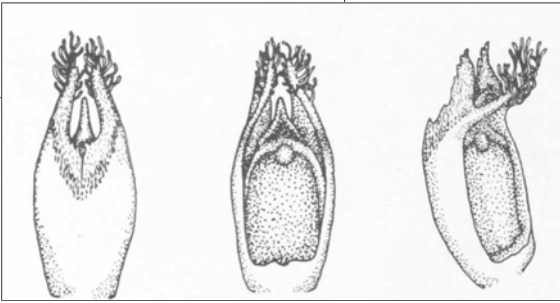
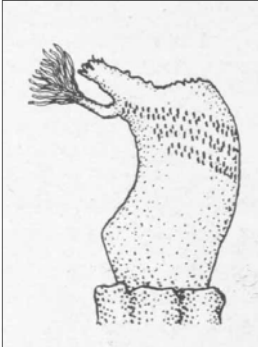
▲ Cheeseman's concept of *Thelymitra pulchella*.



Hatch's early concepts of *Thelymitra pachyphylla* (D-H) and *T. caesia* (J-L). Both appear to be *T. hatchii*.



Hatch's concept of *Thelymitra pulchella*, which appears to be *T. formosa* ▼



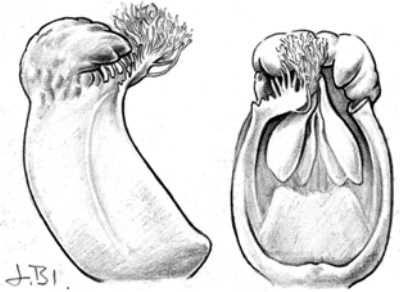
◀ Hatch's illustration of what he regarded as the S.Is. "jordanon" of *T. pachyphylla*. It looks rather like *T. formosa* too.

# Elementary: ED Hatch

## 22. *Thelymitra* 2: drawings by Bruce Irwin

### 5: *Thelymitra* × *dentata* ►

(the toothed margins of the secondary column lobes)  
A natural hybrid between *T. longifolia* and *T. pulchella*.  
Flowers pink to blue, heavily striped. Midlobe of the column-wings tuberculate, red with yellow margins. Lateral lobes with toothed margins and tufts of yellow-brown cilia. **Distribution** – endemic – North and South Is. **Flowers** – Nov.-December – self pollinated.



### 6: *Thelymitra formosa*

(beautiful)

Flowers blue-purple. Column pale with a broad pinkish band near the top. Midlobe bright-red, irregularly toothed along the upper margin. Lateral lobes red with coarse yellow cilia

**Distribution** – endemic – N, S and Chatham Is.

**Flowers** – November-January – self pollinated



### 7: *Thelymitra hatchii* ►

(for E.D.Hatch)

Flowers bright-blue, shading to mauve. Column brownish, paling towards the top. Midlobe hardly hooded, pinkish-yellow, with a minutely toothed, truncate margin. Lateral lobes with coarse, bright-yellow

cilia. **Distribution** – endemic – N, from the Central Plateau southwards; S.

**Flowers** – November-December – self pollinated



### 8: *Thelymitra* aff “ixioides”

(the Australian *T. ixioides* is insect pollinated)

Flowers blue, the petals spotted or plain (both flower-forms often occurring in the same colony). Column pale-blue, with a transverse violet band near the top. Midlobe not hooded, the upper margin bright-yellow or red, and studded with tall calli. Lateral lobes with thin tufts of white or mauve cilia

**Distribution** – endemic – North and South Is.

**Flowers** – October-December – self pollinated.



*These are original outline descriptions from the late Dan Hatch. To update readers on recent developments, T. X dentata is a sterile back-cross so its mode of pollination is irrelevant. T. formosa normally has an orange/brown post anther lobe, bright red only rarely. Species 6, 7 & 8 open widely on hot sunny days for chance cross pollination but resort to fall-back self pollination as a survival measure —Ed.*

# Original papers

## Further thoughts about *Nematoceras rivulare* agg.

Bruce Irwin, Tauranga

In 1826 Allan Cunningham found an orchid on rocks in the bed of a stream near Whangaroa. Eleven years later he described it in the *Precursor to Florae Insulare Novae Zealandiae* 1837; not in the correct genus, *Nematoceras* (*Corysanthes*) but as *Acianthus rivularis*, unfortunately without mention of leaf shape or length of dorsal sepal.

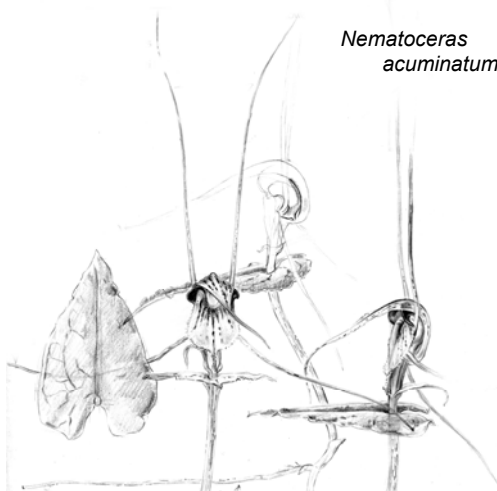
Thomas Kirk in 1864 collected the same plant at Great Omaha near Leigh, but in error named it *Corysanthes rotundifolia*. A year later Kirk found a brand new *Corysanthes* on Great Barrier Island. This plant had a leaf very like that of *Acianthus sinclairii*, so Kirk not aware that he had actually seen *Corysanthes rivularis* at Great Omaha, reasoned that this must be Cunningham's *Acianthus rivularis* and incorrectly identified it as such.

This series of misidentifications resulted in utter confusion of *Corysanthes* species for more than 100 years, until Mark Clements located the type specimen of *Corysanthes rivularis* in the Lindley herbarium at Kew and recognised it as the plant then known as *Corybas orbiculatus*.

The foregoing notes, which demonstrate how easily an imbroglio can be spawned, drew heavily on Dan Hatch's more complete account on pages 3-4 of NZNOG Journal No.17. I recommend you read it.

The revelation by Clements left Kirk's great Barrier plant, previously erroneously called *C. rivularis*, without a name. Clements and Dan Hatch jointly named it *Corybas acuminatus*.

Actually by then it had become clear that the name *C. orbiculatus* was applied, not to a single species, but to an aggregate of several undescribed species of which *C. orbiculatus* with its comparatively short tepals and long, scoop-shaped labellum was an uneasy component.



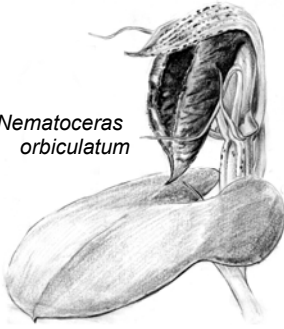
*Nematoceras acuminatum*

So now the identity of *C. rivularis* is clearly understood? Well not quite. Several different taxa are included under the name *C. rivularis*. They are now regarded as the *Nematoceras rivulare* aggregate.

Since 1985, with willing help from Taranaki orchid enthusiasts, I had recorded distributions of the two forms I was aware of and had tag-named *Corybas* "A" and *C.* "Mt. Messenger", neither of which extend as far north as Kerikeri (*C. rivularis* territory). Almost every year a quite distinctive form of *Corybas* came to our attention and could not be ignored. The first of these (tag-named *C.* "short tepals") was shown to me by Rob Ward at Rerekapa in north Taranaki. I immediately recognised it as a plant I had seen 40 years previously near Wanganui. Subsequently Dr Molloy found identical plants at the type locality of *C. orbiculatus*, so that is now its valid name.

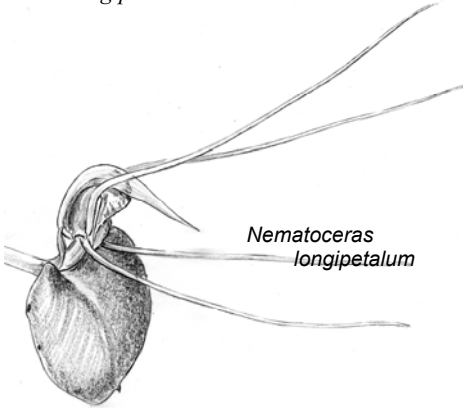
*C.* "Waiouru" also had a "valid" name, *C. macranthus* var. *longipetalus* Hatch. However it

*Nematoceras orbiculatum*



clearly belonged in the *C. rivularis* aggregate. By then it had been deemed worthy of specific rank but could not be named *C. longipetalus* as an overseas species al-

ready bore that name. The problem was solved a few years later when the genus *Corybas* was revised and split into several genera. At last the plant has a correct valid name as *Nematoceras longipetalum*.

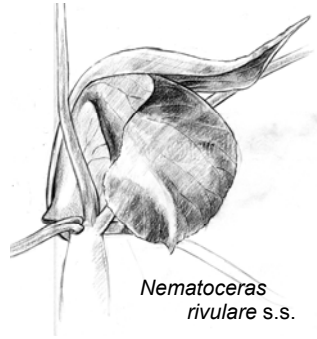


*Nematoceras longipetalum*

While I was studying these plants, the generic name *Corysanthes*, after acrimonious discussion was changed to *Corybas*. Up to this point I have used both these names in this account because at that time those were the generic names in use. Now however, the genus name *Nematoceras* has been reinstated to accommodate most New Zealand species, so it is appropriate to use that name for the remainder of this article. I hope this will not be confusing.

So what is the plant we must regard as *N. rivulare* s.s.? *N. "Kerikeri"* was the obvious contender for that title and is now universally accepted as such (because it is found near Cunningham's original collection locality).

Several further forms have not yet been dealt with. They are *Nematoceras* "whiskers", *N. "rest area"*, *N. "Kaimai"*, *N. "ratty"*, *N. "sphagnum"*, and *N.*

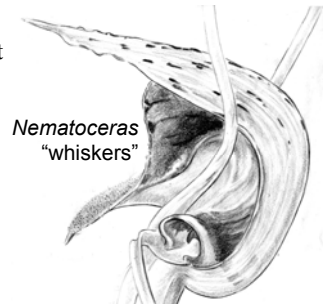


*Nematoceras rivulare* s.s.

"Mangahua". What is to become of them? They do exist and should be acknowledged by botanists.

In my opinion the first two orphans ("whiskers" and "rest area") should be accorded specific rank. *Nematoceras* "whiskers" has been recorded from many North and South Island localities. It is probably the same taxon for which HB Matthews prepared a manuscript description as *Corysanthes "viridis"*. Diagnostic features are

1. Although very much like *N. papa* in general appearance, *N. "whiskers"* appears much more rounded when viewed from the side. *N. papa* on the other hand is ± compressed from front to rear.)
2. Labellum auricles are very large, flaring and often strongly tilted forward.
3. The colour pattern of *N. papa* is unique among known New Zealand *Nematoceras* species. When seen in longitudinal section, the upper / rear labellum margins show a plain green stripe. *N. "whiskers"* (and other forms) do not. Admittedly this clear stripe is often not noticed, due to inward folding of the upper labellum margins, but is there on *N. papa* only. Unfortunately my illustration accompanying the description,



*Nematoceras "whiskers"*

does not show a green margin (on the longitudinal section). However it is evident in the view of flower from the front. At that time I was not aware of the significance of this character.

4. The pale stubble of short hairs on the inner surface of the labellum, responsible for the tag-name “whiskers” is not prominent unless side lit. However it effectively obscures the pattern of veining on the apex.
5. *N.* “whiskers” is often found in damp, shady habitats. It can however, also be found in apparently well drained sites, near ridge tops. Other green flowered forms can not.
6. Unlike any other greenish forms, *N.* “whiskers” is quite strongly scented and therefore attractive to small flying insects. I suggest that a future name for this taxon should if possible acknowledge its scent.

The other form which I consider deserves species status, is another green flowered plant tag-named *N.* “rest area”. Its distinguishing characteristics are

1. It may sometimes show a very short leaf petiole, whereas *N. papa* seems strictly sessile and *N. longipetalum* normally has an obvious petiole. Perhaps not a useful character - a very short petiole may escape notice.
2. The dorsal sepal is rather narrow and quite often arches up well clear of the labellum which itself adopts a chin up attitude so that its apex reaches down only to auricle level.

*Nematoceras* “rest area”

It is tempting to think that the plant is afraid of drowning if it relaxes this very erect attitude.

3. After all it chooses very wet habitats in bogs

or the very beds of shallow watercourses where the root system is probably below water-level for weeks, even months at a time.

4. I have seldom found a viscid disc on *N. orbiculatum*, on *N.* “rest area” never. This lack encourages self-pollination, so unlike other known N.Z. species, both taxa form viable seed pods on almost every flowering plant.

I am much less confident about the status of the several remaining forms I have tag-named. I think it necessary to carry out careful field work before they are finally categorised.

Now let us consider *Nematoceras* “Kaimai”. I have long considered this form worthy of specific rank but was always conscious of its resemblance to *N.* “Kerikeri” (*N. rivulare* s.s.). Why is *N.* “Kerikeri” apparently restricted to the far north of the North Island, apart from one or two small colonies on the banks of the Te Henui River in New Plymouth? Also why does the much more plentiful form, *N.* “Kaimai”, apparently not invade the territory of *N.* “Kerikeri”?

Could they be rather unlike forms of a single species? I now think they are. You may think this suggestion is outrageous. Perhaps it is. I’d welcome your opinion. *N.* “Kerikeri” has a dark red labellum, *N.* “Kaimai” has not, and the distribution of red in the longitudinal section is usually quite different. Also although both forms have unusually long labellum floors between the inner and outer flexures, that of *N.* “Kerikeri” is a little longer. Yes, they appear so different it is hard to believe that they are a single species. Ah, but here is an interesting point. I was one of a family of five. Both parents had black hair



*Nematoceras*  
“Kaimai”

and brown eyes, as did four of their children. Joyce, the third born, however had flaming red hair, freckles and blue eyes. Even her facial features were different. How could that possibly happen? Uncle Tom (our mother's brother) was a male replica of Joyce. He even shared her sunny disposition.

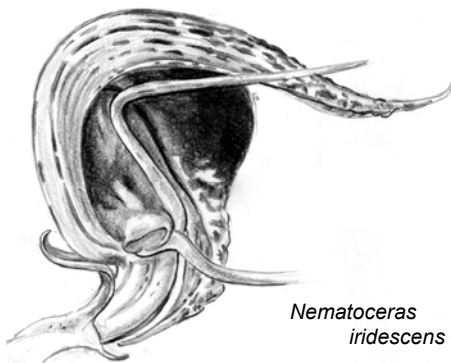
Do I have any evidence to support my belief that *N. "Kaimai"* and *N. "Kerikeri"* could be a single species? I think I do

1. Both forms are structurally similar, though not identical.
2. Both are late flowering; *N. "Kaimai"* in late October near Tauranga, *N. "Kerikeri"* in November. Remembering that *Nematoceras* generally flower later at lower latitudes, flowering times could be regarded as identical.
3. Although *N. "Kerikeri"* is usually much "redder" than *N. "Kaimai"*, especially on the "cheeks" within the throat of the labellum, occasionally *N. "Kaimai"* approaches *N. "Kerikeri"* in this respect.
4. The peduncle of *N. "Kerikeri"* is usually a strange purple colour, (almost violet). Other forms of *N. rivulare* aggregate generally show little purplish flecks or flushes but occasional flowers of *N. "Kaimai"* approach this peduncle colour. More significantly some Te Henui flowers of otherwise very average *N. rivulare* s.s. has an almost totally green peduncle.

Tricia Aspin's *Nematoceras* "Pollok" is possibly even closer to *N. rivulare* s.s. than *N. "Kaimai"*. Perhaps they both would be comfortable as sub-species of *N. rivulare*.

Before discussing the remaining forms I have tag-named, I need to comment on *N. iridescens*, *N. longipetalum* and *N. papa*.

*N. iridescens* has always troubled me. It seems very susceptible to changes in growing conditions. I once found a small colony on a particularly sour spot on a long, weeping *N. iridescens* clad bank. The flowers on the sour spot appeared so different from *N. iridescens* that at first I thought them to be a separate species. Close examination revealed that all apparent differences must have been due to poor nutrition and consequent arrested devel-

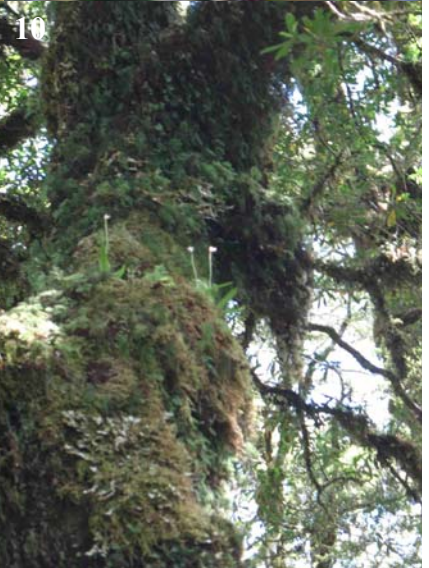


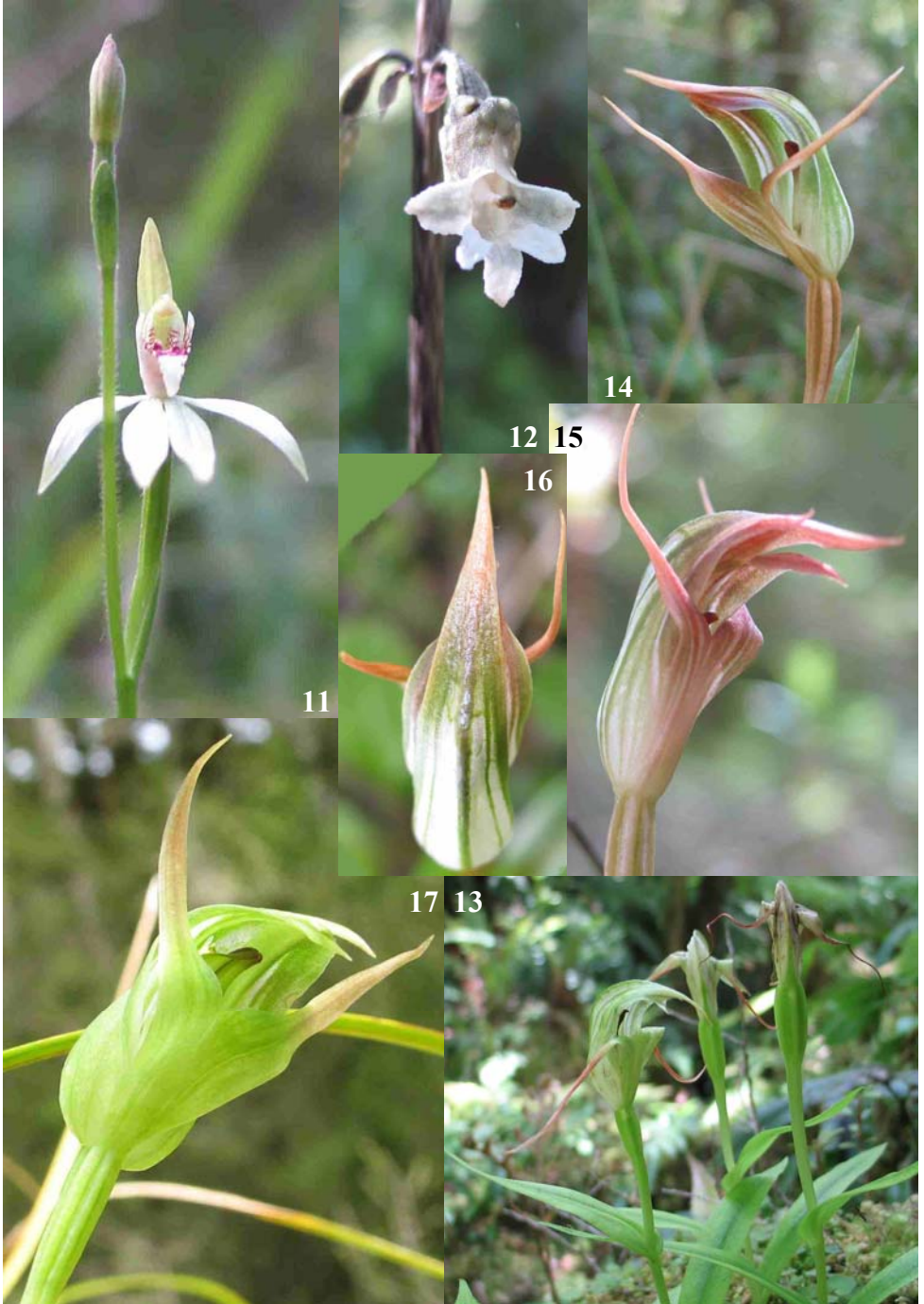
*Nematoceras  
iridescens*

opment. One common aberration is poor development of the bead-like gland at the drop-off into the column cavity, said to be prominent in the published description. Can all these faults be attributed to arrested development? Perhaps not. Until October 2000, I thought *N. iridescens* kept very much to itself and never hybridised with other species flowering alongside it. However strange colonies exist near Makatote Viaduct. None of the plants are quite like *N. iridescens*: none are quite like *N. papa* nor *N. longipetalum* but every conceivable combination of the three. *N. iridescens* and *N. papa* seem the most likely parents, but I had long wondered if *N. iridescens* and *N. longipetalum* had shared a



*Nematoceras  
papa*









18



19



20



21



22



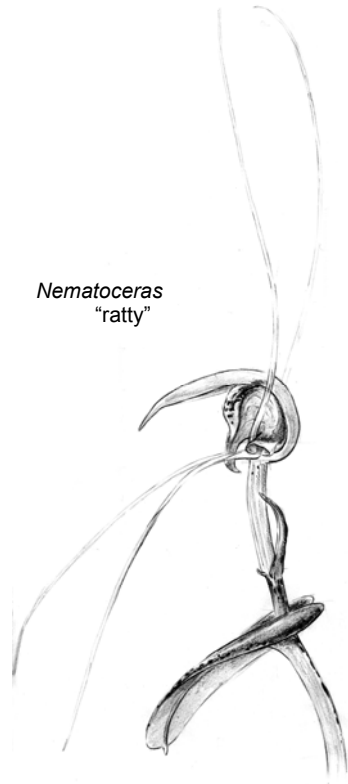
common ancestor in the dim past. Both have distinctly petiolate leaves and though near its type locality, *N. longipetalum* is mainly green with reddish markings; in some areas, the flowers can appear almost as dark red as *N. iridescens*.

Now let us consider the large number of *Nematoceras* tag-named *Nematoceras* “a” (not quite *Nematoceras* “A”). They do not fit snugly the description of *N. iridescens* so perhaps they should be regarded as a separate species. I think not. Perhaps the description of *N. iridescens* could be amended to admit these non-conformists.

*N. “Mangahuia”* on the other hand leans towards *N. longipetalum*. It would not be comfortable as *N. iridescens*. Also it is known from a single locality, so I think it (and possibly *N. “sphagnum”*) should remain tag-named until more fully understood.

Oh! One more tag-name springs to mind - *N. “ratty”*. Maureen Young sent flowers from near Warkworth before I had realised that *N. “whiskers”* was a distinct species. *N. “ratty”*, I realised was just a very small form of *N. “whiskers”*. The column has chided me for not publishing the demise of that name. I do so now.

*Nematoceras*  
“ratty”



The chart below was compiled by Graeme Jane—Ed.

### ***Nematoceras rivulare* and confounders**

#### **First described**

*Acianthus rivularis* Cunn. 1837  
(isotype Hooker 1853)

*Corybas acuminatus* Clem. & Hatch 1985

*Corysanthes orbiculata* Col. 1891  
(lectotype Clem. 1985)

*Nematoceras rotundifolia* Hook.f. 1853

#### **Taxonomic history**

=====> *Nematoceras rivulare* (Cunn.) Hook. 1853  
 =====> *Corysanthes rivularis* (Cunn.) Hook. 1864  
 =====> *Corybas rivularis* (Cunn.) Reichb. 1871  
 =====> *Corysanthes rotundifolia* Kirk 1864  
 =====> *Corysanthes rotundifolia* Cheesem. 1906

=====> *Corysanthes rivularis* Kirk 1864  
 =====> *Corysanthes rivularis* sensu Cheesem 1906  
 =====> *Corybas rivularis* sensu Moore 1960

=====> *Corybas macranthus* var *longipetalus* Hatch 1947  
 ++++++> subsumed in *C. rivularis* by Clem. & Hatch 1984  
 - - - - -> *C. orbiculata*, restored by Molloy & Irwin 1996  
 =====> *Nematoceras orbiculatum* (Col.) Molloy, Jones & Clem.

=====> *Corysanthes rotundifolia* (Hook.f) Hook.f. 1864  
 =====> *Corybas rotundifolia* (Hook.f.) Reichb. 1871  
 =====> *Corysanthes matthewsii* Cheesem. 1899  
 =====> *Azybas rotundifolius* (Cheesem.) Jones & Clem. 2002

# Southern summer orchids

Gael Donaghy, Tauranga

With five weeks holiday during Dec 2008 – Jan 2009, Graeme and I chased fine weather and orchids from Farewell Spit to deep Fiordland. First serious hunting was for *Pterostylis puberula* and *P. tasmanica*, around Pillar Point, in a wind that was hard to stand up in at times. Here we were rewarded with many *Thelymitra* and *Pterostylis alobula* and, clearly identifiable by the leaves and hairy stem, one *P. puberula*.

En route south, we stopped briefly at the Boyle River, on the Eastern side of the Lewis Pass, one of our happy hunting grounds when we lived in Nelson. The weather was not kind on this day, and we walked briefly up the access track for 20 minutes or so in the pouring rain. We were rewarded with scattered flowers of *Caladenia chlorostyla* (both green and red stem variants) and *C. lyallii*.

Further south, we botanised a friend's covenanted area at Tuapeka West, across the Clutha River from the Blue Mountains. In the past I was sure I had seen either *Corybas cheese-manii* or *C. cryptanthus* in deep litter under an old *Nothofagus solandri*. But alas, although the owners, keen botanists, were able to take us back to the spot, the tree had died, and without it to pump the water out of the ground, it had become boggy and unsuitable. So I will never know! Still, elsewhere we were tantalized by plants of a smallish *Pterostylis* aff. *montana* with flowers largely over.

After Christmas with family, our target was the Dusky Track. Initially, the weather was very wet in Fiordland, so we spent time around Cromwell. Here we kept coming across a *Corybas* under tussock on the tops, always in very damp areas. We found it up the Roaring Meg (Fig.6), in a high basin below Mt Pisa, and on a hill above the Old Dunstan Rd on the Eastern side of Lake Dunstan. We have also seen it as far south Mt Eldrig (off the Borland Saddle Rd) and the Hump Ridge, usually above 5000 ft. But always without

flowers, sometimes in seed. Was this the *Corybas* “tussock” we had photographed in flower at Island Pass in Marlborough (and Bruce Irwin had illustrated for the NZNOG Journal)? Only flowers will tell.

In the last week of my stay, a big anticyclone promised fine weather for a week, so finally we hired a helicopter to fly into Lake Roe hut, just above bushline on the Dusky Track (Fig.7). It was a great base to explore the Pleasant Range, which lies to the West of the hut, and the Merrie Range which lies to the East, towards Lake Manapouri.

Orchids flower later here, with the second week in January about peak flowering for many. In the tussock we found a few pale *Caladenia lyallii* (Fig.8), some *Aporostylis bifolia* in late flower, and many *Wairea stenopetala*, which ranged from tiny miniatures with one flower to large plants about 40cm in height, with up to four flowers. The mystery *Corybas* was also ubiquitous there – found only by parting the heavy tussock in wet mossy seepage areas (Fig.9).

The vegetation seemed in good condition, with little evidence of damage from deer. There were mountainsides of Mt Cook lilies (not yet in flower), lovely swathes of both the bright yellow *Dolicoglottis lyallii* and the white *D. schorizonioides*, and pale yellow hybrids. The unusual native anemone was common, and the flowers were a striking brick red. After the orchids the best find was a lovely shiny yellow buttercup with cut leaves, like parsley.

The following two day walk out to Lake Hauroko to catch the boat was also rewarding. In the wet bush, we saw many *Aporostylis bifolia* perched as epiphytes, including one group at least 5m up a beech tree (Fig.10). A few *Adenochilus gracilis* were still in flower, and many, usually solitary *Caladenia chlorostyla* (Fig.11) in flower, were scattered along the track. Also, two *Gastrodia cunninghamii*

plants were spotted in flower (Fig.12). Most of the *Pterostylis banksii* were over, but *P. australis* still had quite a few good flowers in the colonies. (Fig.13).

The most interesting find was a *Pterostylis* in a boggy clearing where we stopped for lunch. It was highly coloured which made me think of *P. irsoniana*, but there was no callus on the tip or base of the labellum (Fig.14-16). There were many juvenile (nonflowering plants), and about half a dozen in full flower. The closest call is another *P. aff. montana*? Further on we found more typical *P. aff. montana* (Fig.17).

This was my third trip in this area; the previous two trips were before I had much knowledge of our wonderful flora. I feel really privileged to return to these areas with Graeme and see them with "botanical eyes".

#### Photos pp. 15-16

6. *Corybas* "tussock" - Roaring Meg Creek.
7. General view around Lake Roe hut.
8. *Caladenia lyallii* - Pleasant Range.
9. *Corybas* "tussock" - Pleasant Range.
10. *Aporostylis bifolia* - epiphytic on silver beech.
11. *Caladenia chlorostyla*.
12. *Gastrodia cunninghamii*.
13. *Pterostylis australis*.
- 14-16. *Pterostylis aff. montana*. - different views.
17. *P. aff. montana*.

## Diary ahead now!

6th ANOS Conference & Show  
25-30 August 2010.  
Venue: Club Panthers-Newcastle

## The New Zealand Native Orchid Journal

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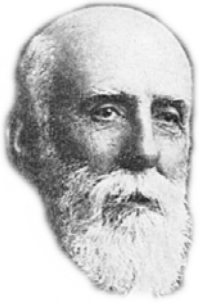
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THE EDITOR, THE EDITORIAL BOARD AND THE GROUP MAY NOT SHARE AUTHORS' OPINIONS.

# Eponymous orchids: Val Smith



## Thomas Frederic Cheeseman (1845-1923) and *Corybas cheesemanii*

Born in Hull, Yorkshire, Thomas Frederic Cheeseman was the oldest of five children of Thomas Cheeseman, a Methodist minister, and his wife Eliza Cawkell. In 1854 the family immigrated to Auckland, New Zealand, where Thomas senior soon took an active part in local affairs. Thomas junior was educated at the Grammar School in Parnell and St John's College, Tamaki until the age of 19, and then was mainly self-taught. His early interest in natural history was stimulated by Hooker's newly published *Handbook of the New Zealand flora* (1864), and as well as book learning, he made many botanical excursions in the Auckland area.

In 1867 Cheeseman sent a native orchid to Sir Joseph Hooker at Kew, for identification. Hooker named it *Corysanthes cheesemanii* (now *Corybas cheesemanii*); it was the first of sixteen plant species from New Zealand and Raratonga to be named after him. Cheeseman continued to correspond with Hooker, who passed on his orchid observations, including that of the unique pollination system of *Pterostylis*, to Charles Darwin.

Cheeseman's botanical work was becoming well known – two of his papers had already been published – and in 1874 he was appointed secretary of the Auckland Institute and curator of the museum, a position he held for fifty years. He botanised widely in the North and South Islands, often during his vacations, and also accompanied expeditions to Raratonga, the Kermadec Islands and Three Kings, building up a large and comprehensive herbarium.

In 1889 Thomas Cheeseman married Rosetta (Rose) Keesing, the daughter of a prominent Auckland family. Photos of him show a fully bearded, balding man with a kindly face. He had a reputation for punctuality, and was said to be relaxed and patient with young people and those wanting to learn, at times revealing an innate sense of humour, but could be remote – or even abrupt on occasions – if confronted by pomposity.

During his career Cheeseman published numerous scientific articles, mainly on botany, but also on zoology and ethnology. His *Manual of the New Zealand flora*, commissioned by the government in 1900, was published in 1906. Following this major work, he edited the two-volume *Illustrations of the New Zealand flora*, which appeared in 1914. His many distinguished awards include the Hector Memorial Medal and Prize in 1918, and in 1923 the prestigious gold medal of the Linnean Society.

Unfortunately he did not live to see the fulfilment of his plans for a new Auckland War Memorial Museum. It opened in 1929. Thomas Cheeseman had a heart attack and died at his Remuera home on 15 October 1923, survived by his wife, a son and a daughter

### ***Corybas cheesemanii*** (Kirk) Kuntze *Rev. Gen. Plant.* 6:657 (1891)

The tops of the dorsal sepals look like pearls sprinkled in the forest floor litter, and sometimes they are all that can be seen of the orchid. Lateral sepals reduced to small needles, lateral petals similar in the south but often hidden behind spurs in the north. Two closed spurs on the labellum determine this as NZ's only *Corybas*. Pellucid flower stem rises to 200mm with ovoid capsule symmetrically on top and green leaf still below in November to December. Favours litter beneath kanuka, taraire or beech. Lowland. *Flowers* May to August. *Distribution*: 3K, N, S, Ch. *Conservation status*: not threatened. *Note*: largely fungus-dependent.

*Corybas cheesemani*

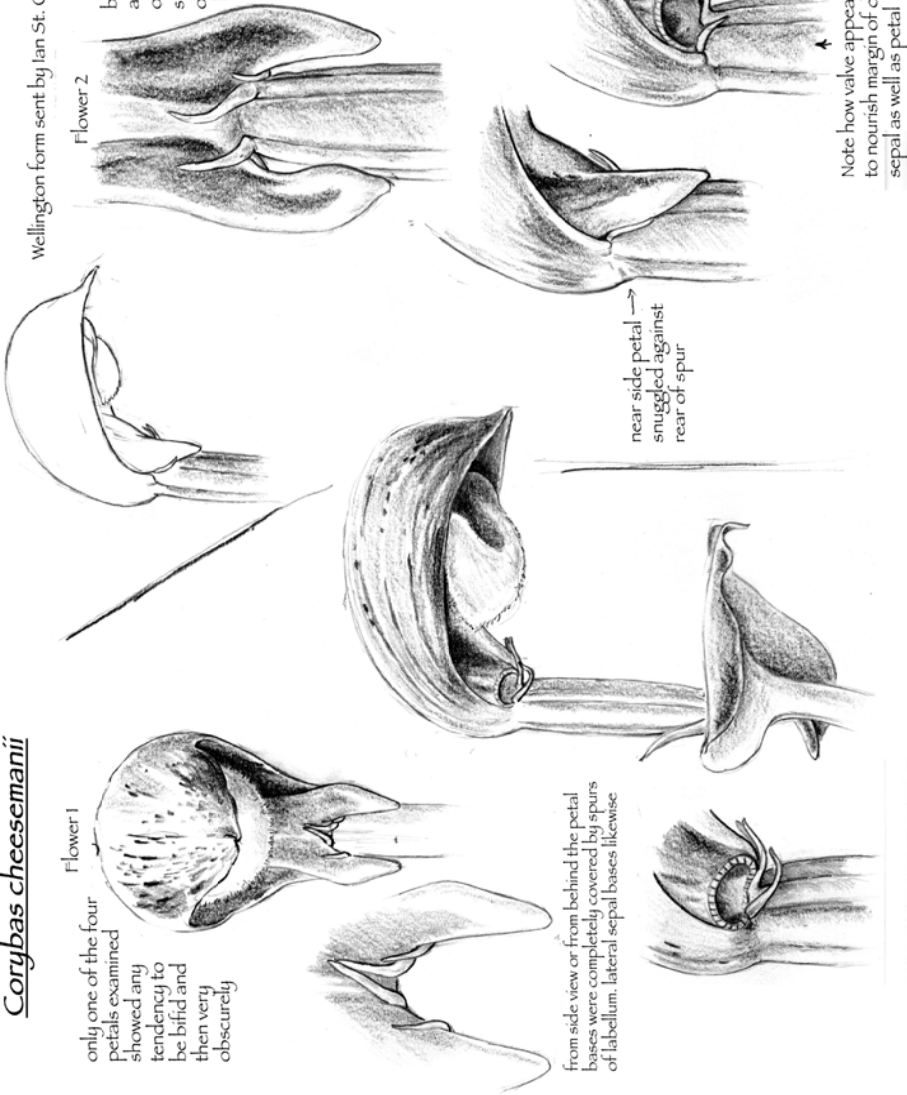
Wellington form sent by Ian St. George 24 Jun 1999.

Flower 1

only one of the four petals examined showed any tendency to be bifid and then very obscurely

base of labellum atop ovary, showing origin of sepals, smaller petals originate under labellum spurs, left hand petal has failed to emerge in front of spur

Flower 2



from side view or from behind the petal bases were completely covered by spurs of labellum, lateral sepal bases likewise

near side petal snuggled against rear of spur

nearside petal freed from spur now tries to adopt normal position

Note how valve appears to nourish margin of dorsal sepal as well as petal

Drawing by Bruce Irwin, from Brian Tyler's *Bruce Irwin's drawings of New Zealand orchids*. NZNOG, Wellington, 2007.

# Notes etc

**WORDS DARWIN DIDN'T SAY:** Darwin wrote about *natural selection*, the process by which favorable heritable traits become more common in successive generations of a population of reproducing organisms, and unfavorable heritable traits become less common; he compared it to *artificial selection*, when man breeds plants or animals for specific characters. It was not Darwin but Tennyson who wrote,

Man...

*Who trusted God was love indeed*

*And love Creation's final law –*

*Tho' Nature, red in tooth and claw*

*With ravine, shrieked against his creed.*

...and others (not Darwin) who used the phrase to describe evolutionary competition. **Evolution** is a word applied to Darwinism by Herbert Spencer, who was described by the great Darwin scholar Stephen Jay Gould as a “pundit of nearly everything”. Spencer also coined the phrase *survival of the fittest*.

**D**ARWIN DID WRITE, “I have seen more than once a minute **Thrips**, with pollen adhering to its body, fly from one flower to another of the same kind; and one was observed by me crawling about within a convolvulus with four grains of pollen adhering to its head, which were deposited on the stigma” (*The Effects of Cross & Self-Fertilisation in the Vegetable Kingdom*).

**P**ETER DE LANGE EMAILED (20 April), “Here is *Pterostylis silviculturalis* – as you commonly see it on the Chatham Islands (**Cover & Figs 18, 19**). In forest – not epiphytic either. It often grows with *P. banksii*. This image is from Rangiauria (Pitt I.), Ellen Elizabeth Preece Conservation Covenant (known widely as “Caravan Bush”). We also saw *P. auriculata* from Caravan Bush (**Fig.20**): it is not common there and we didn't notice it anywhere else”.

**J**OHN TERRY TOOK THE PHOTO of *Orthoceras* (**Fig.21**) in the Catchpool on Sat 14 March (sorry for poor quality, he wrote). *That's late for O. novae-zelandiae, even when large with child as this one is—Ed.*

**V**ONNIE CAVE EMAILED (14 April), “I thought you could be interested in the group of *Pterostylis* (**Fig.22**) found on a visit to native bush in the Hollyford Valley during January this year. It was my first visit to that area and was raining of course and by the time these plants were found was really hosing down and cameras should have been packed away. The shots I took aren't good - lack of light etc - and reduced for email will look even worse but I thought that you might know whether this is a common form of *Pterostylis* for the area.” —*It looks like Pterostylis aff. montana unzipped—a “trident” form, with its lateral petals unattached to its dorsal sepal (the whole colony looks the same)—Ed.*

**F**IGS 23-25 SHOW PHOTOGRAPHS by June Niejalke of the *Thelymitra matthewsii* from South Australia detailed in Aussie Notes in the last issue. Note the clear mauve of the column—a different shade from ours (**Fig.23-25**).

**K**EVIN MATTHEWS EMAILED (2 May 09), “I took this (**Fig. 26**) today for your insect orchid collection... rather a fatal attraction. You can still see the remains of the white abdomen spots familiar to the *Lissopimpla excelsa* also known as the Orchid Dupe. I couldn't work out how he became trapped because he should have approached the labelum from the underside with head pointing out; maybe he got confused and died happy anyhow. I've never been able to catch an Orchid Dupe on a *Crypotstylis subulata* so I was rather pleased to stumble across this captive specimen in the Kaimaumu wetland.”



## The Hatch Medal: call for nominations

Edwin Daniel (Dan) Hatch was the amateur who made the greatest contribution to our knowledge of New Zealand native orchids since Colenso, and who inspired many others in their studies of native orchids.

The Hatch Medal is to be awarded annually by the New Zealand Native Orchid Group to the person who has made an outstanding contribution to NZ orchidology, as outlined in the Group's Aims ("to make information about the New Zealand native orchids easily available, and to promote their conservation"). Such contributions might include, but are not restricted to, those listed at the foot of this page.

A candidate may only be nominated by a member of the Group. If there is more than one nomination the recipient is chosen by a majority of a quorum of the Executive. The medal will not be awarded to a candidate with criminal convictions. The medal is normally presented at the AGM by the Chair of the Group.

Nominations must be received by the Secretary by 1 October.

### Examples of work that furthers the Group's aims

The Group's aims are to make information about the New Zealand native orchids easily available, and to promote their conservation.

- Conservation**; influencing DoC and/or other Parks and roadside administrators in maintaining bush tracks and/or orchidaceous road berms and batters, only in autumn and/or installing more tracks and/or not closing tracks and/or improved control of browsers such as possums, rabbits and hares. Care and management of orchid sites.
- Description** of new species including bringing possibly new taxa to members' attention informally, and illustrating why they differ significantly from other taxa.
- Research** with reports on all aspects including but not limited to; pollination and pollinators; effects of isolation in separated pockets of habitat; historical research; propagation and cultivation; rescue and relocation; sources and means of seed transport from sources to destination especially to and within New Zealand, longitudinal studies of colonies, anatomical and physiological studies.
- Organisation** of orchid field parties and meetings, in sites with suitable accommodation and conference facilities. Contributing as officers of the Group.
- Publication**: spreading the word about New Zealand orchids to boost public interest and attract new members – not limited to print publication.
- Work** in Heritage Protection Areas for NZ native orchids including obtaining approval, organising Heritage Protection Authorities, funding and maintenance

### Nomination

I, \_\_\_\_\_ being a member of the New Zealand Native Orchid Group, nominate \_\_\_\_\_ as a candidate for the Hatch Medal.

**G**EORGINA UPSON OPINED (email 5 May 09), “Pat Enright’s pale *Pterostylis* [Fig. 28 J112] is likely to be a *Pt. irsoniana* of the pallid stargazing fraternity. Rarely seen but I have attached a pic for you to see one that I found in the Baton area.” *Hmmm. I’m not convinced—Ed.*



### NZNOG *Historical Series*

#### #16: Colenso to Balfour

Orchid extracts from William Colenso’s letters to his collector David Balfour of Glenross.  
\$10 in NZ

#### #17: Orchids in Black & White

Fifty important monochrome halplate photographs of NZ native orchids  
by HB Matthews.  
\$22 in NZ

from Brian Tyler, [bandj.tyler@xtra.co.nz](mailto:bandj.tyler@xtra.co.nz).

## NZNOG AGM

13-15 November 2009

As the Iwitahi Camp is no more, we have booked

### Sika Lodge, Clements Mill Road, Iwitahi, Taupo

for the weekend. The lodge is about 13 km from the Reserve and about 30 km from Taupo.

The lodge can accommodate about 36 people and is set up with bunk rooms, lounge, kitchen, showers, toilets and laundry facilities.

There will be time for presentations on Friday and Saturday nights and there may be a field trip and/or working bee at the Iwitahi Reserve as well.

If you are interested in attending please email

David McConachie  
[pleione@orcon.net.nz](mailto:pleione@orcon.net.nz) so we can get an idea of numbers.

# Aussie notes: David McConachie

**Bracalba Section of the D'Aguilar Range Walk, April 2009.** Abridged from David James *The Kalhari* pp.12-14 ANOS (Qld) Kabi Group May 2009

A group of five Kabi members met near the intersection of the D'Aguilar Highway and Raaen Road at 9 on the morning of Sunday 26 April 2009 as part of Kabi's monthly bush walk program. Raaen Road meets the D'Aguilar Highway just past the top of the Bracalba section of the D'Aguilar Range. The area walked was part of the Beerburum West State Forest. The walked area was within the ridges and gullies on the southern side of the D'Aguilar Range adjacent to the Bracalba Quarry.

The subsurface materials in the area were residual soils derived from granite or granitic rocks. This resulted in sections of the tracks being very "slippery" due to the surface covering of loose granite gravel (grains within the granite are left where the rock weathers). The soils were also very dispersive resulting in deep erosion gullies along the sloping sections of the tracks. And I mean deep. The deepest were three to four feet deep and two feet wide at the surface. Dispersion means that contact with water causes the soil to go into suspension in the water.

No orchids were found along the ridge tops. The first orchids were not seen until we were a substantial way down the range slope. These orchids were in the bottom of a narrow gully on the southern side of a main ridge. The gully ran from west to east. These orchids were all terrestrials growing on the steep sides of the gully and track side cuttings. Leaves of *Chiloglottis*, *Acianthus* and *Corybas* were the first found. Inflorescences and buds were starting to arise from the *Acianthus* and *Corybas*. A couple of the *Chiloglottis* were in flower but this didn't help very much with identification

The group then proceeded up the gully and was rewarded with many more leaves of *Chiloglottis*, *Acianthus* and *Corybas*. Again some of the *Chiloglottis* were in flower. Also inflorescences and buds were starting to arise from the *Acianthus* and *Corybas*. The lower section of the western side of this gully rewarded the group with a large colony of *Pterostylis baptistii*. Seven plants were in flower and two flowers were already spent.

Mid way up the eastern side of the gully the first couple of flowers on some of the *Acianthus* inflorescences were open. These flowers identified the plants as *Acianthus fornicatus*.

The group then proceeded back up the main ridge and investigated the gullies to the north. These gullies had a wide bottom which was overgrown with *Lantana*. The only orchid sightings in these gullies were a lone *Cymbidium sauve* in a hollow side limb of a eucalyptus stump and a *Dendrobium aemulum* on an Iron Bark. Both these orchids were on the eastern side of the gully.

The group then returned to the top of the main ridge and proceeded down a track heading towards the north-east. This track quickly joined the disused Caboolture to Kilcoy rail line formation (right-of-way). The stone-pitched abutments of a road bridge crossing still able to be seen. A number of plants of *Dipodium variegatum* were seen along the northern side of the railway formation cuttings. These plants had up to three old inflorescences. One plant had eight to ten green seed capsules. These still showed the spotted pedicle and withered spotted flowers which allowed them to be identified as *D. variegatum*. These capsules were probably only a couple of months old.

The walk concluded with lunch (BYO) in the park along the main street of Woodford township.

# The Column: Eric Scanlen

## 1. Three thrifty thrips

Photos of the three forms of suspected thrifty pollinating *Thrips*, Figs 27-30 discussed in the Column's "*Thrips as Thelymitra* pollinators" in J108:31, prove amongst other things, that these minuscule insects are difficult to photograph, at least until portable electron microscopes are invented. Kevin Matthews has produced the best pix so far, through his modest home microscope, after keeping them in the fridge for a bit to slow them down.

**Fig.27** (IBC) is Kevin's photo of the burnt sienna *Thrips* he caught in *Spiranthes* "Motutangi" flowers, both at Sweetwater and at Motutangi. These orchid-pink flowers — on knee high stems, mark you, about twice the height of *S. n-z* — have the forward margin of the labellum, in-folded to form a slipper toe (J112:2) which he has yet to see unfolded at Sweetwater although a new population at Motutangi did have open labella. Closed labellum tips do not phase the tiny *Thrips* which can easily slip through to feed on the insides of these dainty flowers, where they are protected from the elements and any fat predated lady birds which wouldn't make it through the little gap. Dr Brian Molloy was sent a white form of this orchid and he described the pollinia in Newsletter 22, June 1987 as "acute pointed pollinia that are difficult if not impossible to remove. The tips of the pollinia remain firm and intact even after the flowers wither and die." This doesn't sound like the friable pollen in *Thrips* —fall-back self-pollinated *Thelymitra* but then, this is a more active and different coloured species of *Thrips* and not the white but the pink form of *S.* "Motutangi". Some delicate observation is required to ascertain if these burnt sienna *Thrips* do access the pollen and do carry it to other flowers. Kevin's photos have yet to show pollen grains attached.

**Fig.28.** The Column's pic from Mt Messenger Saddle of 19 September 1993, shows a number of creamy *Thrips* agitated at a white ankle crane fly that had been sipping their nectar. The drawing in J59:13 was made using the same slide from which this image was scanned. Contrast has been increased on Adobe Photoshop just to make the *Thrips* visible. There are about 10 in frame; the one on the far right has a pollen grain stuck to its left side; the one to the left of the column appears to be biting the interloping crane-fly's foot. That could explain why it has three feet arrayed in mid air and only three — above its back, note — hanging onto the flower. The black dot eyes on the *Thrips* gave away their presence, using a x20 lens on the slide, three years later! They are so small and so well camouflaged, that they were not noticed until then. A solitary specimen showed up in another of the Column's slides from Mangatangi Dam in the Hunuas from 19 October 1986, also on *E. mucronata*. This is just visible on the pedicel of the third flower up in Fig 2, J75:19. The fact that these bugs were *Thrips*, only became clear in 2000; a millennium enlightenment?

**Fig.29.** Kevin spotted a creamy *Thrips* in a spider web (how would he do that?) at home near Kaitaia and caught this image with his microscope on 12 February 2008. This is about 4 months late for *E. mucronata* flowering so could explain why there is no adhering pollen. Note those coal black eyes, the giveaways in the Mt Messenger pic.

**Fig.30.** The black *Thelymitra Thrips* in the post anther lobe of *T. nervosa* from Shag Point, Palmerston, 30 November 2007. This looks to be the same species as those that Kevin has captured in a variety of sun orchids around Kaitaia. Compare it with his J108: 35, 36 pix.

**Fig.31.** Kevin also captured a good one of

the endemic *Thrips obscuratus* at Kaimaumu on a *Calystegium sepium* flower, on 10 February 2008. This species is credited with pollinating a number of our small flowered trees as discussed in J108:31.

**Fig.32.** The Column, vainly trying not to be outdone, photographed a probably introduced species from his *Fuchsia* bush with reversed 28mm lens and 324mm of extension tubes on 35mm film. This beastly little wrecker, at just 1.53mm long, is almost twice the size of the black *Thelymitra Thrips*. It is one of some 3,000 species world wide but the family resemblance is unmistakable.

What do you think?

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## 2. *Thelymitra purpureo-fusca*

William Colenso's *Thelymitra purpureo-fusca* was lumped by T.F. Cheeseman into *T. longifolia*. The flowers are almost indistinguishable but Colenso's species flowers late (although his description [1, 2] doesn't mention a flowering time) with only a few white flowers on short, all purple stems and it really deserves specific mention, in the Column's view. The sepals, with purple/brown backs but with white margins give the buds a typical appearance. Graham Dickson stirred a new interest in this species when he sent **Fig. 33**, from Lammermoor Range ER 68, at say 920m altitude, about 15km north of Lawrence. This was on 14 January 2009 which is too late for its close relative, *T. longifolia*. **Fig. 34** shows the green leaf(?) Colenso wrote, "The whole plant ... of a dusky purple brown or purplish-red colour" ... but he didn't mention the leaf. Could it be he didn't take much notice of the leaf? so didn't mention it? or is the leaf variable?

*T. purpureo-fusca* flowers in bud look much the same as blue striped *T. fimbriata* also at this Lammermoor site, with flowers also on purple/brown stems even mimicking the white margins to the purple backed sepals as in **Fig. 35**. Graham, a NOG member by default for decades but who now has joined the ranks,

showed the Column his first *Ichthyostomum pygmaeum* at Mangatangi Dam site in 1966 and his first *Adelopetalum tuberculatum* at Clevedon Reserve in 1975 then turned up *Stegostyla alpina* in ER 67 [J109:32,39] and now *Thelymitra purpureo-fusca* in ER 68 from whence very few orchids have been reported.

Much further north and a month earlier, the Column and Pastor Dr. Joachim Cochlovius were on Repeater Rd. in the Hunuas on 14 December; this being the nearest likely site for orchids so late in ER 9's season. Joachim soon had his camera aimed at an open flower, the last on a cluster of short, purple stemmed *T. purpureo-fusca*. It was sprouting from the grader-trimmed shoulder of this little used access to a TV repeater station. The Column stood there puzzled as to why a "*T. longifolia*" was still in flower two months late and on a diminutive, all-purple stem but he still didn't mobilise his camera for this common(?) species. However, when Graham's pix arrived on a CD and his identical looking sun-orchid was revealed, the penny started to drop. Joachim, back in Germany, was good enough to send **Fig. 36**, his pic of *T. purpureo-fusca*, from Repeater Rd. some 961km north of Graham's find.

Some of us were once under the illusion that Colenso's type locality, somewhere up in the Ruahine Range near Norsewood, was the only site for *T. purpureo-fusca*, however Bruce Irwin and the Column found it by SH 5 near Tarawera Village [J74:12] on 4 December 1999, Ian St George reported it from Wellington and the Southern Wairarapa in Nov/Dec 2003 [J90:1-11] and now it shows up at its new extremes, Lawrence and Hunua. Do please keep your eyes peeled for this species, wider afield and of course, in areas in between.

## Reference

- Colenso, W. *Thelymitra purpureo-fusca*  
Trans. New Zealand Inst 1885, 17: 249  
St George, I.M, *Thelymitra purpureo-fusca*  
NZNOG Historic Series No. 1: 52

NZNOG Books

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From Brian Tyler, 4 Byrd St,  
Levin. [BandJ.Tyler@xtra.co.nz](mailto:BandJ.Tyler@xtra.co.nz).

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### Photos on outside back cover

**Fig 33** *Thelymitra purpureo-fusca* by Graham  
Dickson from the Lammermoor Range  
with purplish ovary, floral bract and stem  
but the purplish backs to the sepals have  
a white margin. The flower close to that of  
*T. longifolia*.

**Fig 34**, *T. purpureo-fusca* whole plant show-  
ing few flowers, green leaf and some  
green showing in the stem bracts.

**Fig 35**. *T. fimbriata* in the Lammermoor  
Range with similar purplish parts to the *T.*  
*purpureo-fusca* but the characteristic blue  
striped flower.

**Fig 36**. *Thelymitra purpureo-fusca* by  
Joachim Cochlovius from the Hunua  
Range 961km north of Graham's find but  
so similar that they could have sprung  
from the same plant.



28



27



29

# Thrips....



30



31



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33



35



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