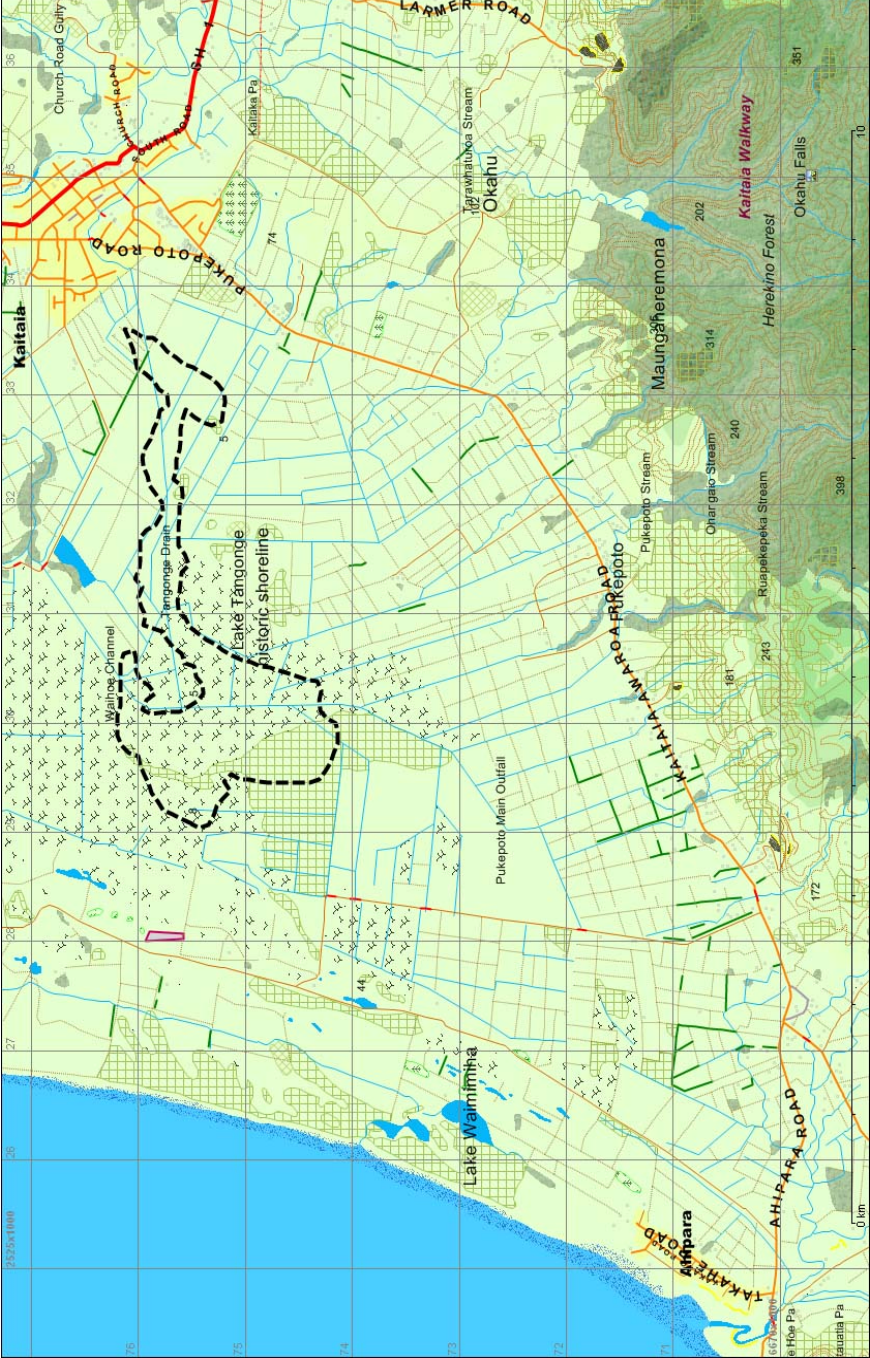


Matthews & Son ON ORCHIDS



compiled by Eric Scanlen



Lake Tangonge from an 1899 Land Transfer map overlaid on Tumonzi Default Scheme showing other orchid hunting grounds of R.H. & H.B. Matthews including Okahu Falls lower right, the Kaitaka Pa, centre right and Okahu Rd. looping down to the onetime Okahu village. Note that most of the area of the now drained lake is still swampy.

Matthews & Son ON ORCHIDS

H.B. Matthews' manuscript descriptions
of New Zealand orchids 1928

with references to orchids in letters
to T.F. Cheeseman
from R.H. Matthews 1896-1912
and H.B. Matthews 1912-1922

compiled by Eric Scanlen
edited by Ian St George

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Eric Scanlen

Introduction

Henry Blencowe Matthews, or Blen as he was known, was an unqualified orchidologist, but gained a thorough grounding in New Zealand orchids from an early age with his father, Richard Henry Matthews (RHM) at Kaitaia. Between them they sought out most of the northern species, sending them to Thomas Frederic Cheeseman, Curator at the Auckland Museum. Cheeseman who had described a few of R.H. Matthews' new species, disappointed H.B. Matthews by terming two of his taxa "freaks". So Blen resorted to Dr R.S. Rogers in Australia who described the "freaks" plus one of Blen's *Pterostylids*. After Cheeseman died, Blen made an attempt to describe some of those orchids which he thought were different from known species but failed to complete the formalities so his work has been seriously neglected.

Blen's first and second draft of hand written manuscripts from about 1928, were well distributed by the late Doug McCrae and Dan Hatch with the blessing of Anthony Wright at the Auckland Museum. But only Dan had a typed copy, transcribed by his late wife, Valerie from Henry's third draft, typed originally by the late Marguerite Crookes. Draft three included a seventeenth taxon, *Prasophyllum debile*. The following descriptions were scanned from Blen's third draft and converted to electronic text with OCR software by Ian St George.

Blen suffered from cataracts which would have progressively limited his abilities so the Latin diagnoses were never added; specimens were deposited in herbaria but the descriptions were not published in a recognised journal hence his taxa never received their due recognition. By 2006, seven or eight remain undescribed (one still in dispute) six have now been re-described with minimal reference to Blen's work, two had been described previously but lumped into other species by Cheeseman but one only of Blen's was a double up on *Pterostylis foliata*. This is a phenomenal record which professional

taxonomists would struggle to better. His Ms descriptions are here presented as an historic record only but some intriguing issues arise.

In 1989 Dan Hatch, our most prolific and hardest working amateur orchidologist, extracted and collated references in the Matthews' letters to Cheeseman², to sixteen of Blen's orchid taxa. Dan's work is herein acknowledged and is extended to other orchid references of the Matthews', firstly to try to identify the many orchids that RHM and Blen encountered but secondly to complete Dan's work in the light of recent discoveries and new classifications.

In the family history, the remarkable young Matthews brothers Joseph and Richard were both missionaries. Joseph came early to New Zealand while Richard sailed in the *Beagle* with FitzRoy and Darwin, in a single handed attempt to found a mission in Tierra del Fuego. In the harsh climate and among the then primitive Patagonians, the venture failed, FitzRoy took Richard back aboard the *Beagle* and eventually delivered him to his brother in the Bay of Islands in 1835.

Joseph arrived at Kaitaia on Sunday 11 Nov. 1834, starting a mission there with William Gilbert Puckey among some 4,000 Maori inhabitants. Matthews and Puckey married two daughters of the Reverend Richard Davis of Waimate and in July 1835 the first pakeha children were born in Kaitaia; William George Puckey on the 3rd and Richard Henry Matthews (RHM) on the 7th.

In 1898 the Government contracted T.F. Cheeseman to write a new *Flora of New Zealand* so he sought the assistance of his contacts in far away places as botanical collectors. RHM had already offered specimens, in his first letter (p. 23) but in his second, takes up Cheeseman's request to nephew E.W. Matthews who was leaving the country. Thus RHM became the specimen supplier by default but it was he who took an interest in the orchids; those plants often spurned by botanists, possibly because of their brief and differing periods above ground.

RHM, in his letters to Cheeseman, never

once mentioned his son Henry Blencowe by name. Blen was just “one of the Boys” with a capital “B”, even when he was 50 but Blen took an active interest in the orchids and was undoubtedly the discoverer of *Thelymitra matthewsii*, named after his father and of *Anzybas carsei* named after the family’s life-long friend Harry Carse who was with Blen when he located it a second time. Blen’s disappointment in having his orchid finds mostly named after others, shows between the lines in his letters of 2 July and 24 Oct. 1912. Cheeseman did name *Pterostylis Matthewsii* after Blen, but H.M.R. Rüpp disclosed² in 1932 that it was the Australian *P. nutans*.

RHM was a diplomat and at times a flatterer (8 Oct. 1900) but did exaggerate at times (19 Sept. 1899). Blen who tried to carry on where father left off after he died in 1912, was more forthright. His dedication was clear but inner thoughts are often revealed between the lines (i.e. 8 Oct. 1912 when he ironically thanked Cheeseman, for intending to name *Caladenia Matthewsii* after his father knowing full well that no such species had appeared in the 1906 *Flora*³) or directly in unconcealed pique when he, the amateur, openly disagreed with the top botanist of the day, T.F. Cheeseman (17 Nov. 1912 *et seq*). One can sense the prickly relationship thereafter especially as Blen was usually right in his assessment of new taxa as history shows. But it was Cheeseman calling Blen’s two species of *Petalochilus* “freaks” which opened the rift followed by Blen’s resort to Dr. R.S. Rogers in Australia to describe these then Cheeseman’s threat to have them “disrated” (12 July 1918). Blen later had Rogers describe *Pterostylis humilis* then crowed to Cheeseman about it in his penultimate letter saying, “You will probably call it another freak!” In fact the Type specimen was a freak with an inverted flower, grown-on in a pot in Remuera.

Even so, Blen sent copious specimens to Cheeseman and belatedly tried to paper over the rift but he seems still to have been held aloof by the great taxonomist.

Cheeseman, like many botanists, wasn’t the

best on orchids but it seems he did get *Chiloglottis formicifera* right and he beat the Australians to naming *Thelymitra matthewsii*. However he split *Nematoceras rivularis*, in error adding var. *pandurata* as detailed later but mostly he lumped or ignored a number of distinct species from the Matthews, even *Thelymitra tholiformis* sent to him with an explicit description by Blen on 28 Dec. 1919.

Blen’s frustration at having many distinct *Caladenia* lumped under *C. minor* shows on p.53 where he listed seven *Caladenia* from the far north. Cheeseman only ever acknowledged two of them, “*C. minor*, his name for *C. bartlettii*, and *C. exigua*, his name for *C. alata*.”

For expert amateurs such as Blen, taxonomy was a hard world and it is harder in 2006 with chromosome counts and DNA data necessary for compelling species identification.

I have been unable to find Cheeseman’s letters to R.H. & H.B. Matthews. A search for his originals or carbon copies, has drawn a blank. The immaculately bound and preserved ccs. of Cheeseman’s letters at the Auckland Museum Library, are devoid of those to R.H. & H.B. Matthews. Blen kept all Cheeseman’s letters to RHM and doubtless to himself but their trail to the late Ross McKenzie, Far North Regional Museum, Doug McCrae’s widow, Christine Gemmell and RHM’s great nephew, Malcolm Matthews at Kaitiāia, has drawn a blank. For now, we can only infer what Cheeseman wrote although one quote from RHM’s 12 April 1906 letter reminds Cheeseman of a new *Thelymitra* about which nothing more is heard in the letters.

However, Malcolm’s son Kevin has recently found a scented, unstriped *T. “sansfimbria”* with all the hallmarks of RHM’s *Thelymitra* as detailed later and in the illustrations.

Blen’s last letter was undated in early 1922. Cheeseman died on 15 October, 1923 ending a singular period of orchid collaboration and discovery in the far north and also as far south as the Waimarino district.

Eric Scanlen

May 2006

Intriguing issues arising from orchid excerpts in the letters to T.F. Cheeseman

Anzybas rotundifolius (JD Hook) DL Jones et MA Clem.⁴

No. 1, pale, flowers 1 July –1 August, letter 15 August 1899

No. 2, dark flowers 1 June to end of July.

R.H. Matthews hinted that he thought these two were separate species because of their different colour and flowering times. He sent more specimens of No. 2 on 17 July 1900. Blen sent No. 1s on 7 Aug. 1912 and was at pains to mention the apparent differences. More modern finds by Ian St George at Warkworth and Allan Ducker at Bream Tail and Brattys Reserves⁵, also found that No. 1 flowered later than No. 2 although morphologically there seems to be little difference. Cheeseman ignored the differences but described “it” as *Corysanthes Matthewsii*³ in RHM’s honour. He did not connect it with William Colenso’s bud of 2 April 1846 from Puehutai (Dannevirke 40° 12’ S. lat.), classified as *Nematoceras rotundifolia* (Hook.f.) Hook. f. by J.D. Hooker⁶ in 1853. Their synonymy was detected by Dr. Brian Molloy⁷ in 1989. Colenso’s almost open bud, with 11 barren leaves on uncharacteristic long petioles, so early in the season and so far south, remains a mystery because *A. rotundifolius* now grows only from Warkworth (35° 24’ S. lat.) north to Te Pahi flowering 3 months later, despite global warming. However Brian’s photos of Colenso’s reconstituted bud are convincing evidence that Colenso Type specimen was RHM’s No. 1 pale form, whenever and wherever it really came from.

Caladenia aff. *bartlettii* (the author’s tag⁸, **Fig. 19.**) has to be the “non-opening flowered variety” of Blen’s, 14 Oct. 1912. Too early! It flowers in late Oct. early Nov. It is rare, hairy, small and pink with obtuse, recurved lateral sepals and one only marginal callus to each side of the midlobe. Found at Sweetwater by Doug McCrae, circa 1988, it is the “most hairy of all vars.” (Letter, 17 Nov. 1912). Brian still has Doug’s plants in cultivation.

Caladenia “**Bronze**” (Blen’s list 17 Nov. 1912), **Fig. 20**, is most likely Bruce Irwin’s red or green stemmed *C. aff. chlorostyla*⁹, included by D. McCrae under *C. “green column”* (pers. com.). It too has the toothed midlobe but has many red glands on its creamy sepal backs giving buds and flower backs a bronzy look. Blen had already mentioned this taxon without tag-naming it on 8 & 14 Oct. 1912 saying “It flowers 3-4 weeks after *C. minor*” [*C. bartlettii* Fig. 18]. Curiously, Blen did not include “*C. “Bronze”*” or the following two taxa, in his Ms descriptions.

Caladenia “**Matthewsii**” On 17 Sept. 1900, RHM mentions *C. minor* “fully out on Sept. 1st” and he thanked Cheeseman on 8 Oct. 1900, for “naming the *Caladenia* after me.” On 8 Oct. 1912, Blen too thanked Cheeseman, ironically it seems because Cheeseman had not named it in the 1906 Manual³. Blen sent Cheeseman specimens of *C. Matthewsii* and *C. exigua* [*C. alata*] on 8 and 14 Oct. 1912 and mentions *C. Matthewsii*’s “greenish yellowish brown colour” being similar to his lipless orchid [*Petalochilus calyciformis*]. *Stegostyla atradenia* fits Blen’s description. My earliest photos of it were from 1 Sept. 1999, Bream Tail Reserve, 105km south of Kaitaia. Blen didn’t include “*C. Matthewsii*” on his 17 Nov. 1912 list but later described it fully as *Caladenia calliniger*; **Fig. 1** and description **1**, herein.

Caladenia minor Hook. f. **Fig. 21.** is undoubtedly Blen’s “Green-white” with the toothed midlobe but no glands on sepal backs. The evidence indicates that Hooker^{6,10} lumped all the northern *Caladenia* that he came across under *C. minor* s.l. and thus confused orchidologists for 100+ years. Five out of these eight taxa are pink, so pink he described it causing much of the

angst. But the four specimens on Hooker's Type sheet at Lindley's Herbarium, Kew (pers. comm. B. Molloy) had the toothed midlobe of Blen's *Caladenia* "Green-white" (letter 17 Nov. 1912). D. McCrae, the guru of far north orchids circa 1988, followed Cheeseman but ignored Hatch (1949) and mistook the wide-spread *C. bartlettii*¹¹ (pink but with obtuse sepals) for *C. minor*¹² so Doug tag-named the "Green-white" (*C. minor* s.s.) plus "bronze" flowered plants (*C. aff. chlorostyla*), as *C. "green column"*¹¹. The tag was formally Latinised in 1997 (green stem only) as *C. chlorostyla*¹⁴ but Molloy (pers. comm. 2005) thought that *C. minor* should take precedence. The Australian taxonomist Mark Clements, had in fact designated a specimen from Hooker's Type sheet¹⁵ as *C. minor* in 1989.

Chiloglottis formicifera. Found by RHM on 17 Sept. 1900 is described clearly by him including significantly, "tubercles glossy black near the throat shading off to reddish or light black towards the outer margin where the tubercles are smaller". Also his specimens at CHR, (on loan from AK) are the epitome of *C. formicifera* but, even before the discovery of *C. trapeziformis*¹⁶ by Leita Chrystall in 2001, doubts had been cast on Cheeseman's identification¹⁷. The two species are similar and they hybridise in northern NSW but *C. trapeziformis* has only a central cluster of black tubercles with no calli near the labellum margin. Cheeseman³, it seems, got this one right. RHM noted in 8 Oct. 1900 how curious it was that an Australian grass, not previously reported, grew close to *C. formicifera*, hinting that they had been introduced, either by accident or design. On 8 Oct. 1909, RHM "found that, where plentiful in 1901-2, there was hardly a plant to be seen, but about 10yds further up the hillside I found several fine patches". An indication of seed propagation which wasn't thought possible in New Zealand because the species arrived without its pollinator.

Corysanthes rotundifolia listed by RHM (p. 38) is still a mystery. It flowered in September and seemed to have an orbicular leaf. RHM first sent it on 12 Sept. 1899 to Cheeseman who identified it in error as *C. rotundifolia* which RHM thereafter referred to as "*the Rotundifolia*". In 2006, none of the known Sept. flowering *N. rivularis* agg. occur so far north. Accordingly it is herein tagged *Nematoceras* "Sep" from RHM's list of p.38. Cheeseman lumped it with RHM's Okahu *Corysanthes* (*Nematoceras rivularis*) which flowers two months later.

Earina aestivalis. On 19 Feb. 1908, RHM reported it from the Tauroa Peninsula, dropping his usual diplomacy and suggesting it "worthy of being called a variety". That may have set Cheeseman to thinking about plants he had himself studied in 1895¹⁸ at Muriwai flowering much later than the October *E. mucronata* and with larger flowers. So, when Carse and Morison also sent him specimens from Kaiaka and Waikanae River, Cheeseman described it in 1919¹⁹ mentioning the much later flowering but omitting other notable differing characters such as lemon leaf perfume, double length ovary and deflexed sepals then erring with "Column short, stouter" whereas the column in fact doubles in length with maturity. Moore & Edgar¹⁷ lumped it back into *E. mucronata* partly on advice from Hatch who noted a clump on a ponga (*Cyathea* spp.) salvaged from high rainfall forest which reverted from October to January flowering, (pers. comm.) possibly from both species being in the clump and only *E. aestivalis* surviving the move to warmer, drier, coastal suburbia. (see NZNOG Journal 87:7,9,10). Bruce Irwin later had a similar experience in Tauranga. Thus Dan and Bruce still dispute this species.

Gastrodia aff. sesamoides. Cheeseman mentions *G. sesamoides* from Kaitaia in both the 1906 & 1925^{3,18} Floras but not *G. cunninghamii*. H. Carse cast doubts on it so RHM asked about his "*G. Cunninghamii*" on 17 April and 17 Sept. 1900. Cheeseman failed to convince RHM who continued calling it *G. cunninghamii* for the rest of his life. On 16 December 1903 he dug up some poor plants to find "3 to 4 large tubers under each." *Gastrodia* are totally parasitic on

fungus so only sprout to breed when conditions are suitable as RHM's experience illustrates. Cheeseman's "*G. sesamoides*" was also amiss. He had linked Petrie's original find (Kellys Ck, Otira River²⁰) to RHM's plant at Kaitaia but D. Petrie's January 1893 flowerer, so far south, had to be *G. "long column"*, tagged by Hugh Wilson in 1982²¹. Thus, linking *G. "long column"* and *G. aff. sesamoides* in error to Australian *G. sesamoides*, means that both taxa are still unclassified in 2006. Moral; if it looks different, *say so!*

Microtis parviflora has to be the "new *Microtis*" that Blen sent on 8 Oct. 1912 but Cheeseman put it aside. Dan Hatch recorded a 1924 specimen of Blen's at AK Herbarium (Trans. RSNZ 76, 1949, 59) so this joint Aussie/NZ species missed the 1925 Manual³ and was announced in the 1970 Flora¹⁷ without mention of either NZ source or amateur botanists Blen or Dan.

Molloybas cryptanthus (Hatch) D.L. Jones et M.A. Clem.⁴ is undoubtedly the "leafless orchid" mentioned by RHM on 1 & 14 Nov. & 27 Dec. 1898. So late in the season, RHM would have found seed capsules on long scapes but not flowers which open there completely hidden under the kanuka (*Kunzea ericoides*) debris. Thus the response from Cheeseman was, "it might be *Corysanthes triloba*, or something new". It was new but was put aside, leaving it to Owen Gibson (pers. comm. J.B. Irwin) to rediscover and Dan Hatch²² first to describe, 52 years later.

Nematoceras rivularis (A. Cunn.) Molloy, D.L. Jones et M.A. Clem.⁴ **Fig. 22.** Cheeseman had this as *Corysanthes rotundifolia* despite his own doubts in both his 1906³ & 1925¹⁸ Floras, "These may not be the *C. rotundifolia* of the Handbook¹⁰." RHM sent specimens on 19 Sept. 1899 from Okahu creek before flowering. The leaf form may have unduly influenced Cheeseman.

Nematoceras pandurata (Cheesem.) Molloy, D.L. Jones et M.A. Clem.⁴ **Fig. 22.** On 19 Nov. 1900, RHM sent Cheeseman specimens with a "lobed leaf" from a colony of *N. rivularis* from the Okahu creek (now Tarawhataroa Stream). It was his Okahu orchid. Cheeseman already had *Corysanthes rotundifolia* Var. *pandurata* (AK 3653) from Titirangi in 1873 from undoubtedly a different species. But he credited RHM with the find in the 1925 Flora¹⁸ with its pandurate leaves, despite, "Other characteristics precisely as in the type." Also, Allan Cunningham's 1826 Isotype at Kew (as *Acianthus rivularis*), had one pandurate leaf out of four specimens²³. All *N. rivularis* agg. grow occasional pandurate leaves but on 29 October 1900, RHM had "three or four patches, in some of these the lobed leaf predominated" maybe! This leaf form was promoted to specific status⁴ in Jan. 2002.

Wayne Cribb and the author checked a huge colony of *N. rivularis* on 23 October 2005 up the "Okahu creek" towards the "Okahu falls" with say 1% pandurate leaves scattered throughout the colony. Both leaf forms had identical flowers, (**Fig. 21**) confirming Cheeseman's findings but giving little basis for specific status.

Petalochilus calyciformis (variously "tongueless", "lipless" and "cup" orchid) in Blen's letters, (14 October 1912 to 11 December 1913) looked "as like as two peas" with the now *Caladenia* aff. *chlorostyla*⁹, "buds . . . a greenish yellowish brown colour . . . flower . . . a greenish pink" with acute lateral sepals; "growing on sod taken off for getting at pipe clay" and "plants seed freely". One plot "4 x 10 ft." and "one other small lot". Shunned by most botanists, *P. calyciformis* was effectively doomed to oblivion when the unprotected sites were cleared for agriculture as Blen reported to Dr. R.S. Rogers in 1919²⁴.

*Petalochilus saccatus*²⁴ (pouch orchid) One lone specimen in spirit (167293 HBM Kaitaia, Oct. 1912) was at AK Herbarium on 5 Sept. 2005, labelled "*Caladenia* sp." It had the requisite

five petaloid tepals or fingers plus the dorsal sepal behind and a column with pouch half way up the front. Blen wrote on 28 Oct. 1912 “Casually it might easily be taken for the green-white” i.e. *C. minor* s.s. Later he wrote that it occurred in “three places in the one locality and as much as a mile apart” a fairly clear indication of seed propagation. Why then did Cheeseman and others deem it a freak? If a mutated taxon with a petaloid labellum succeeds — such as all *Thelymitra* — why should it not be deemed a species?

***Prasophyllum* “patentifolium” Fig. 8** sent to Cheeseman 14 November & 27 December 1898 by RHM, was collected in 2005 by his great, great nephew Kevin Matthews, at his uncle Hackney’s place at Kaitaia. The Nov./Dec. flowering time agrees and Kevin’s photos confirm Blen’s Ms description in every visible detail. But this denizen of swampy manuka (*Leptospermum scoparium*) had not been reported since Blen wrote it up in 1928 although *P. rogersii*²⁵, an alpine Australian and Bruce Irwin’s²⁶ *P. “B”*, (possibly Blen’s *P. debile* Fig. 7) have been mentioned as unlikely synonyms.

***Pterostylis squamata* R. Br. now *Oligochaetochilus squamatus* (R.Br.) D.L. Szlachetko**²⁷ is a red, multi-flowered Tasmanian, quite unlike green *Plumatochilos tasmanicum* with the yellow “plume”, that RHM collected on 7 September 1904; and he noticed. Successive botanists misreported it in NZ and all missed their chances to name a new species. They were A. Sinclair 1850 and Hooker 1853⁶ (*Pterostylis squamata*), Cheeseman 1906³ and Moore & Edgar 1970¹⁷ (*P. barbata*), Dot. Cooper 1981⁴³ and D.L. Jones 1988⁴⁵ (*P. plumosa*) but Jones declared it a new species, *P. tasmanica*, in Muelleria 1994 then revised it to *Plumatochilos tasmanicum* (D.L. Jones) Szlachetko, in 2002²⁷. The NZ taxon may yet prove to be endemic.

***Thelymitra* “sansfimbria” Fig. 25.** RHM sent Cheeseman a *Thelymitra* from the wet flats “west side of Tangonge Lake” on 12 December 1904 likening it curiously to *T. longifolia* or *T. aff. ixioides* except for later flowering and no “plumes” on its column arms. On 28 December 1904, he put its colour as like *T. pulchella* but said nothing about stripes. Cheeseman replied that it was “so different in the structure of the column to *T. longifolia* that I have no doubt that it is a new species which should bear your name”. Did he later decide it was *T. pulchella* and set it aside despite RHM chiding him on 12 April 1906? Blen sent specimens on 17 November 1912, not connecting it with his father’s of 8 years earlier.

Kevin showed the author the in-bud *T. “sansfimbria”* on 26 Oct. then photographed them and checked their perfume in Nov./Dec. 2005. The lack of fimbria, its flowering time, colour and swampy habitat lead us to believe that this is RHM’s December 1904 *Thelymitra*.

Nomenclature. *Caladenia* or *Petalochilus*? Taxonomists differ. In 2001²⁸, Jones et al found that the Australian *Caladenia flavus* typified the genus thus the *C. carnea* alliance with twin rows of disc calli in fancy labella, including NZ species, became *Petalochilus*. In 2004²⁹, Hopper & Brown disagreed, finding that *Caladenia* was typified by *C. carnea* but in 2005³⁰, Jones et al confirmed their previous stand.

In the absence of agreement, *Caladenia* is being used herein as before, not including *Stegostyla*²⁸ with its hooded dorsal sepal and calli atop the midlobe. Jones et al and Hopper & Brown did agree, controversially with Cheeseman and subsequent chroniclers that Dr Rogers’ *Petalochilus* species²⁴ were freaks thus freeing this historic name for another genus. However, the reader can study the above and Blen’s letters to decide whether *Petalochilus* was a distinct genus or a freak. Hope remains that it still exists since Bruce Irwin³¹ came across a solitary *P. saccatus* plant at Scott Point 80km NW of Kaitaia. Subsequent searches have however failed to find more plants. *Petalochilus* is herein used only for Dr Rogers’ two species.

H. B. Matthews' manuscript descriptions of seventeen orchid taxa, c. 1928

1. *Caladenia calliniger* sp. Nov.

[*Stegostyla atradenia*]

Slender, 10-25 cm high with usually a reddish stem moderately hairy. Leaf dark green 10-16 cm long, narrow-linear or acuminate, 1-3 mm wide with a few distant hairs. Flower 1-2 of a greenish lemon colour, more or less speckled and shaded maroon or dark magenta; the ovary and outside of the segments covered with short glandular hairs. Perianth segments free, spreading, except the dorsal sepal. Dorsal sepal about 8 mm long (when extended) falcate, concave, cucullate and costate from about the middle to the apiculate point, projecting above the column and lateral lobes. Lateral sepals about 10 mm long, oblong, acute, 2 nerved, the outer edge slightly incurved. Petals about the same length as the sepals but narrower, linear-lanceolate, usually with curved tips. Labellum 3 lobed set on an irritable claw; 6 mm long (extended) shortly erect at the base, lateral lobes oblong, not as high as the anther, with a rising curve rounded anteriorly and descending to the middle lobe, margins entire. Anterior lobe lanceolate, reflexed and black from about the centre, margined with linear calli increasing in length from near the point. Lamina with double rows of stalked club-headed calli between the lateral lobes, then more or less crowded with fig-shaped calli to near the tip. All calli nearly black, maroon or dark brown, lateral lobes and column blotched with dark magenta markings. Column about 5 mm high., incurved with rather wide wings almost embracing the lower part of the anther and yellow pollinia, a gland at the base. Anther yellowish-green with an acute point. Stigma prominent.

Collected at Kennedy Bay and near Titirangi. H.B. Matthews, H. Carse. Oct 10 to Nov.

2. *Caladenia chloroleuca* sp. nov.

[*Caladenia* "chloroleuca"]

Plant 10-20cm high. Stem, leaf and buds light green, perianth segments usually white with a green tinge, leaf shortly sheathing variable in width, linear-lanceolate or acuminate, often exceeding the scape; channelled, the margins and back distantly hairy. Stem with a bract below middle, densely hairy, with grey-white hairs of various lengths. Flowers 1-3, rarely 5, patent, each subtended by a lanceolate bract. Dorsal sepal 5-7mm high, nearly erect oblong-acuminate, slightly curved and concave, the blunt point recurved; front sepals same length, shortly connate or free at the base, oblong-lanceolate. Petals free as long as the sepals and usually narrower. Labellum 3 lobed set on a short curved claw, erect above base, the lateral lobes oblong, curved forward, not as high as the anther, descending to the middle lobe; anterior lobe lemon colour, lanceolate 3mm long, recurved and reflexed forward, 3 long linear calli on each side, and a glandular fringe to the point. Lamina with a central gland carrying a few small calli and glandular spots, 2 wide basal calli and two rows of 6-8 smaller ones on each side between the lateral lobes; the latter and column broadly barred pink-purple. Column about 5 mm high, curved, winged from base to near anther, the wings incurved at widest parts. Stigma moderately prominent. Anther green, the short acuminate point decurved. Pollinia light yellow. Ovary large on a slender pedicel.

Plentiful in places North of Auckland, in forest or old *Leptospermum* scrub. Oct.20- Nov.

3. *Caladenia nitida-rosea* sp. Nov.

[*Caladenia* “nitida rosea”]

Slender or rather stout, 10-25 cm high. Leaf shortly sheathing below ground surface, linear-acute or acuminate, 1-3 mm wide, rather thick, channelled, glabrous or with distant back and marginal hairs; usually longer than the scape. Stem brown or reddish with an acuminate bract half way, moderately hairy, those on the ovary and back of segments glandular and short. Bud with a basal cleft on each side. Flowers 1-2, colour light or dark glazed pink, subtended by a lanceolate bract partly embracing the ovary, when expanded 14 mm in diameter. Dorsal sepal 8 mm much exceeding the anther, oblong-acuminate, concave and slightly recurved. Lateral sepals, and petals free, hairy towards base, narrow-oblong-lanceolate, slightly concave, about 8mm long. Labellum on a short curved claw, 3 lobed, wide and erect above base, lateral lobes falcate-oblong, erect almost embracing the column; anterior lobe rather long, lanceolate, decurved and recurved, yellow with 3-4 stalked calli on either side and margined to near the tip with short blunt calli. Lamina traversed by a central gland crossed at the base by two rows of 3-4 club-headed large calli with double rows of stalked calli between the lateral lobes, the latter crossed by six purple or magenta bars; all calli dark yellow except where crossed magenta. Column curved, 5 mm high, winged from base to below anther, and crossed by five irregular magenta bars; wings widest at top. Anther conical, glandular with short purple hairs. Stigma prominent. Pollinia brown-yellow.

Northern Counties in vicinity of Kauri trees. H.B. Matthews, October-November.

4. *Calochilus viridi-sanguineus*, sp. nov

[*C. aff. herbaceus*]

Moderately stout, and probably the handsomest of the genus, 20-40cm high, the whole plant when in bud light green with usually a grey bloom. Leaf shortly sheathing and embracing, 10-25cm long, acuminate or linear-lanceolate, channelled, keeled at the back, rather fleshy, widest part 5-10mm nearly erect or curved. Stem bracts 2 shortly clasping, acuminate, and often foliaceous. Flowers 3-8 or more distant, the rather long pedicels each subtended by an acuminate bract; ovaries long and corrugated. Dorsal sepal about 10mm long, ovate or oblong-lanceolate, shortly erect, curved upward and forward, the fine tip slightly recurved and high above the anther, concave, green or with one or more obscure purple stripes or flecks. Lateral sepals oblong-lanceolate, patent, curved as long as and the colour of the dorsal sepal.

Petals much the same shape as the sepals but shorter with a dark purple central line and 3-4 narrower ones, on each side, all abruptly ending near the base. Labellum rather stout, ovate-acuminate, about 13mm long including the flexuose glabrous green ribbon, glandular at the base and violet-blue for about 4mm glabrous, the margins then fringed to near the ribbon with green linear hairs 2mm long topped dark maroon, and in between thinly filled up with longer branched blood-red hairs, the beard inclined forward. From near the base there is a central depressed gland forking at the hairy process where it is more or less glandular. Column about 6mm high, stout, broad in front, widely winged with a nearly black spot or raised gland on each side within the basal margins about 3mm apart with 3-4 dark rose spots between and several lighter flecks above. Anther rostrate, about 4mm long, not horizontal, very dark green with white lateral borders between the long beak and the wings, the point rounded and bevelled downward. Rostellum, stigma, and pollinia much the same as in other species. This may be *C. campestris*. R.B. Prodr. 320, but appears to differ in many respects, so is given specific rank.

Kaimaumu, Mangonui County, H.B. Matthews, Nov.

5. *Corysanthes aestivalis* sp. Nov.

[*Singularybas* “aestivalis”]

Slender 2-4 cm high. Leaf sessile, cordate, ovate or orbicular, often with repand margins: green above, usually pink-lavender beneath, silvery frosted, not so apparent on top where veins show clearly. Flower solitary, pedicellate, the ovary rather long, costate and subtended by a moderately large ovate-lanceolate bract with a much inferior one opposite. Dorsal sepal 9-13 mm long, cucullate, obovate-oblong when spread out, narrow towards the base, wider at its attachment, erect to the curve over the column, then costate with drooping sides, concave, the arched hood well above and projected over the labellum, lamina light greyish green, frosted, and flecked; traversed by 5 dark purple lines.

Lateral sepals 1.5-2.5 cm long, spreading, attenuate-filiform, shortly channelled above the base, dark red, with a half turn towards the tips, the margins finely serrulate. Petals very similar to the sepals but shorter. Labellum about 9mm long, tubular, nearly horizontal, dark blood colour with a wide fimbriate border of various colours to the expanded front, the sides meeting under the dorsal sepal with an auricle open downwards on each side of the basal attachment; there is a spatulate gland in front of the column the adjoining lamina for half way up the orifice more or less papillose. Column 5 mm high (partly visible through the orifice) white with a maroon top and base line; with a large glandular process in front giving a stout basal appearance, inclined backward, the arched neck bringing the mammillate disc perpendicular, the small side lobes giving a triangular shape. Rostellum prominent. Stigma glandular and depressed. Anther obtuse. Pollinia yellow. A handsome little plant differing from *C. oblonga* in many respects and worthy of specific rank.

River banks Waimarino. H.B. Mathews, H. Carse. December, January.

6. *Corysanthes viridis*, sp. Nov.

[*Nematoceras* “viridis”]

Variable in size 4-9 cm high to the tops of the lateral sepals. Leaf 1-2.5 cm long, sessile, cordate, orbicular or ovate-oblong, apiculate, light or dark green, the margins and depressed centre line usually more or less dotted or flecked brown-purple, silvery frosted on the under surface. Flower solitary, shortly pedicellate, green outside with a few dark claret stripes or flecks on the back of the sepals, petals and upper margins of the labellum, the lamina of which is usually greenish-yellow with dark claret around and below the orifice. Ovary 5-6* mm long, costate, often bent, subtended by a lanceolate incurved bract, with a small spur opposite. Dorsal sepal 6-8* mm long, curved forward, with a central midrib, concave for about half its length, narrow-oblong, cucullate; the hood and lanceolate point projecting above and over the labellum. Lateral sepals acuminate-filiform, 2.5-5cm long, erect, spreading, the filiform points sometimes reddish. Petals quite similar to the sepals but shorter. Labellum 4-6* mm long when spread out, erect near the base with a round auricle on each side open horizontally, the sides meeting for about a third of their length under the dorsal sepal and enclosing the column; spreading and convex in front, the anterior margin more or less repand; a rather deep suture leads into the orifice. Column about 3 mm long nearly horizontal, stout, glandular at the base, slightly curved with a prominent rounded border below the mamillately glandular stigmatic disc. Anther wide 2 celled with acuminate point. Rostellum prominent. Stigma glandular. Pollinia light yellow.

Differs structurally from *C. rotundifolia*, Auckland district. August, September.

*[These sizes are too small! A contact print from one of Blen's half plate photos of 18 Sept. 1922 from Birkdale with 17 complete plants at say $\frac{3}{4}$ scale, confirms this as Bruce Irwin's *Nematoceras* "whiskers"³² but even measuring from the photo gives larger dimensions. Unexplained error.]

7. *Prasophyllum debile* sp. nov.

[*Prasophyllum* "B"²⁶]

Rather slender 15-30 cm. high, weak in the stem, light green the flower segments sessile, long and spreading, coppery-brown with yellow and green shadings. Leaf sheathing and embracing the stem for more than half its length, nearly as long or much exceeding it. Flowers 3-10 or more, distant, very shortly pedicellate, the ovaries turbinate, moderately turgid, and each subtended by a short ovate bract. Dorsal sepal about 5 mm. long, lanceolate and slightly recurved; lateral sepals free or very shortly connate, acuminate, about the same length, recurved and spreading laterally towards the ends. Petals shorter than the sepals, acuminate, the points inclined to be obtuse. Labellum glandular near the base, about 5 mm. long, ovate-acuminate, rather abruptly reflexed towards the tip, the callus plate lanceolate with an obtuse end some distance from the point, and not near the margins, most prominent near and beyond the bend. Column wide, scarcely 2 mm. high with a short point. Rostellum long, conical, not quite as high as the anther. Lateral appendages linear with rounded ends and not as high as the point of the rostellum. Stigmatic plate and front base of the column very glandular.

This species has possibly been passed as *P. Colensoi*, Hook f. Fl. Nov. Zel. i. 241 by collectors, but differs materially from that plant.

Marshy wet places Waimarino District. H. B. Matthews, H. Carse. January-February.

8. *Prasophyllum patentifolium* sp. nov.

[*Prasophyllum* "patentifolium"]

A rather slender species 15-30 cm. high. Stem and leaf usually more or less purple and tapering. Leaf sheathing the stem from the base for about half its length or less, shorter than or much exceeding it. Flowers. 5-10 or more, rather distant, green-brown or bluish-brown outside, and yellowish green with bronze or salmon shadings inside: ovaries turbinate, moderately turgid, on short pedicels subtended by small ovate-lanceolate bracts, decreasing in size up the spike. Dorsal sepal about 4 mm. long, ovate-lanceolate, concave and erect or slightly incurved. Lateral sepals about the same length, connate for nearly a third of their length from the base, then acuminate from the sinus and slightly recurved, the margins towards the tips incurved. Petals free, narrow-oblong with acuminate points, about as long as the sepals, recurved and spreading. Labellum sessile, wide at the base, ovate-lanceolate, moderately reflexed about one third from the tip, the point just about touching the sinus of the lateral sepals, the callus plate ovate-acuminate, very prominent, raised and extending from the bend, but not reaching near the end, or to the margins. Column short, rather broad with a rounded lobed top, the anther obtuse. Rostellum prominent with a long acuminate point. Stigma an irregular rounded glandular disc. Appendages oblong, the ends rounded and nearly as high as the rostellum.

Northern Counties, with probably a further distribution Southwards.

Kaitaia, H. B. Matthews, H. Carse. October-November

9. *Prasophyllum rubriflorum* sp. nov.

[*Corunastylis nuda*]

Slender, elongating after flowering, 10-30 cm. high, arising from a rather large bi-ovoid tuber with the succeeding season's tuber attached, the under ground base of the stem invested in fibrous sheaths of previous years. Leaf usually more or less purple, sheathing and embracing the stem, the acuminate end an incurved point just below or exceeding the purple spike. Flowers distant, very shortly pedicellate or sessile, 3-12, seldom more, usually ruby or dark rose-red with a downward set beyond the banana-shaped ovaries. Dorsal sepal like all the other segments sessile, about 2 mm, long ovate-lanceolate, curved and concave: the lateral sepals free, separated by the raised glandular base of the labellum, 3 mm. long, oblong-acuminate, the margins recurved, slightly curved, spreading laterally, the centre of each traversed by a raised gland ending with an aristate point 3 mm. apart. Petals oblong-lanceolate, quite as long as the dorsal sepal, and traversed by a central nerve. Labellum ovate, apiculate, abruptly curved near the base, the callus plate oblong and well within the more or less ciliate margins and extending towards the glandular base. The column, anther, rostellum, stigmatic plate and appendages much the same as in other small species of the genus.
Birkdale, near Auckland. H. B. Matthews. March - April.

10. *Pterostylis allisonii* sp. nov.

[*Pterostylis foliata*]

Moderately stout 7-30 cm high, elongating and more slender after fertilisation. Leaves 3-5 almost rosulate, ovate, oblong or elliptical, 2-4cm. long, widely petiolate, light or dull green with silvery margins. Stem with a basal enlargement, and several radical short ovate leaves, thinly studded with wide rounded semi-transparent scales, and thickly frosted with minute ones; bracts large, 1-2 oblong-lanceolate, shortly clasping. Flower solitary, about 2½ cm long above the ovary and 8mm wide, light green; with darker lines and apex. Galea oblong acuminate, nearly erect for 5mm then slightly curved forward and upward, the depressed point much exceeding the petals. Petals free, falcate, oblong to the angle then oblong-acuminate, partly under, and following the galea to near the ends. Lower lip cuneate, nearly erect for 5mm and embracing the galea, sinus rather round and full, separating the acuminate lateral sepals which pass on each side of the galea about 5 mm from its point, and exceed it 8 mm.

Labellum about 12mm long, set on a short flat irritable claw, linear-oblong, curved and protruding above the sinus, traversed by a raised gland throughout. Lamina yellowish-dull-purple. Appendage rather long, angled near the base and slightly curved, at the green, downy penicillate end. Column nearly erect, over 10mm high, shortly adnate posteriorly to the dorsal sepal; wings oblong, three angled, the upper one of each side with a tooth about as high as the anther, the lower lobes rounded, the margins partly incurved in front, forming a descending scaly ridge from the angle above, with a few marginal hairs and scales below. Anther with a rather blunt point. Rostellum anther shaped. Pollinia yellow. Stigma linear, acute, viscid.

Named after Mr. K.W. Allison who collected specimens in Nov 1922 some distance from Rotorua.

11. *Pterostylis heterophylla* sp. nov.

[*Diplodium brumale*²⁷]

A slender handsome species 6-18 cm. high. Stem slightly tuberculate, light fawn, brown, or reddish, with several radical bracts. Leaves 3-5, rarely more, the lower ones petiolate or all sessile; lamina 1-4 cm. long, 1-8 mm wide, ovate, elliptical or lanceolate, patent, rich dark green, and sometimes glossy. Juvenile plants 2-6 cm. high with 6-9 orbicular, ovate or conical,

petiolate leaves. Flower solitary, green with 5-7 darker lines from the long ovary to above the column, then with the points shading off to yellowish brown or maroon; about 2 cm. 8mm. long to tips of lateral sepals. Galea falcate, acuminate, erect for 8 mm. descending to the ovary and from about the top of the column beautifully curved, the point exceeding those of the petals and decurved. Lower lip cuneate, about 7 mm. high, nearly erect, the sinus, rounded (almost lobed) projected, and widely separating the acuminate lateral sepals which are about 15 mm. long, the filiform points passing on each side of the galea and much exceeding it. Petals shortly connected with lower lip, free, narrow at base, broadening to the angle, then oblong, curved; acuminate towards, the usually free and spreading tips, giving a wide topped appearance. Labellum oblong-acuminate 10 mm. long, set on a rather wide irritable claw, slightly curved, traversed by a raised lanceolate gland, the lamina from the rather blunt tip towards base purple-brown or maroon. Appendage rather long, well curved, branched and penicillate back of the long fine point. Column nearly erect, 10 mm. long slender, wings oblong moderate length, the top lobes purplish-brown with linear-acuminate anterior lobes as high as or exceeding the anther. Rostellum viscid. Anther green, short, obtuse. Stigmatic plate 4 mm long, linear. Pollinia yellow.

Forests near Auckland, H.B. Matthews, Hawkes Bay. H. Guthrie-Smith June, July.

[Note, the Hawkes Bay specimens, out of kauri/*D. brumale* range, was more likely *Diplodium alobulum* whose dorsal sepal can turn down in maturity widening the appearance of the lateral petals like *D. brumale* but the synsepalum still retains its acute sinus. EAS]

12. *Pterostylis pulchragalea* sp. nov.

[*P. irwinii*?³³]

Moderately slender, glabrous, 7-21 cm high, and generally with a brown stem. Radical leaves 1-2, lanceolate and bract-like: cauline leaves 2-3, sessile, linear-lanceolate or acuminate, 3-9 cm long and 3-8 mm wide, distant, spreading, dull green and sometimes with repand margins. Flower solitary and from above the costate ovary to the tips of the lateral sepals 2.5 cm long; yellowish-green with darker stripes, the top third of the galea, petals and sepals light or dark brown or reddish. Galea nearly erect, curved upward and forward, oblong-acuminate, moderately inflated, fine at its junction with the ovary, and following the outline 4.5 cm long to the usually depressed point. Lower lip long, cuneate, the V sinus separating the acuminate lateral sepals which pass on each side of the galea about the apex, and exceed it about 6mm. Petals moderately falcate, shortly adnate at the base, narrow-oblong to and above the angle, then linear-acuminate, partly submerged by and shorter than the galea. Lip or labellum set on a rather long linear base, with a very short claw, lamina about 8mm in length, oblong-linear with a blunt compressed end, yellowish-green margined rose and traversed by a raised central maroon stripe; curved and projecting above the sinus when at rest. Appendage long, shortly curved upwards to the wide tri-pinnately branched penicillate end. Column shortly adnate, slender, nearly 2cm high, the wings long, oblong, straight in front and widest above the lower lobes, the top lobes with a blunt tooth on the anterior angle not as high as the top of the anther, margins rather scaly. Rostellum long with a narrow suture below. Stigmatic plate medium length, prominent, linear with acute ends. Anther conical with a blunt recurved point.

A species with clear characteristics and possibly a wide range in Alpine districts.

Waimarino forests, H.B. Matthews. December-January.

13. *Pterostylis rotundigalea* sp. nov.

[*Pterostylis patens* Col.]

A bold unique species, moderately stout, glabrous, 10-30cm high. Lower leaves 2-4 short, and bract-like, cauline 3-7 distant, spreading, light or dark green, sometimes glossy, 5-20cm long and 8-20mm wide, sessile, or broadly petiolate, shortly clasping, broad-linear-lanceolate, narrow elliptical or acuminate; midrib a lighter colour, clearly defined, lamina thin, veins numerous, branched, with veinlets showing distinctly in dried specimens. Flower solitary (rarely two) large, 3-4cm high above the costate ovary to the top of the galea. Galea light green with darker stripes, the top third (including petals) a reddish-pink, much inflated above the base, acuminate, nearly erect to above the column, then usually curved into a semicircle, or more decurved to or below the sinus. Lower lip broadly cuneate with a small V sinus. Lateral sepals about 4cm long, acuminate-filiform, usually much decurved, passing each side of the galea about half way up, or more or less reclinate, the filiform points sometimes reaching below the ovary. Petals about 4 cm long, shorter than the galea, free, falcate, narrow at their base, widening to and above the angle, then acuminate, following the curve of the dorsal sepal and partly submerged by it. Labellum set on a short wide curved claw, lamina about 17mm long and 5mm wide, oblong-acuminate, reddish, traversed by a central gland, curved towards the point and when at rest protruding above the sinus; appendage wide, slightly curved forward, 5mm long, terminated by a branched penicillate process. Column about 15mm high, adnate for 5mm to the dorsal sepal, rather slender, nearly erect, wings large, oblong, the lower lobes rounded, upper lobes not as high as the anther with a tooth at the angle exceeding the anther, margins with hairs or scales. Anther with obtuse top. Rostellum large. Stigmatic plate 8mm long, linear, as wide as the column, with lanceolate ends, and situated below the wings.

Quite distinct from. *P. Banksii* R.Br. Waimarino, H.B. Matthews, H. Carse, Dec-Jan

14. *Thelymitra carsei* sp. Nov.

[*Thelymitra formosa* Col.]

Moderately stout, seldom exceeding 50 cm high, stem, leaf and bracts usually a bronze or brown colour. Leaf lanceolate-tapering or acuminate, sheathing the stem for some distance above ground level, rather thick and usually deeply channelled, shorter than the stem. Stem bracts 2, rarely 3, long, clasping and lanceolate. Flowers in a raceme 2-10, distant, pedicellate, subtended by rather long lanceolate bracts partly embracing the long costate ovaries, colour metallic-purple or pink with a glazed appearance. Perianth about 2 cm in diameter, the segments 9-12mm long, lanceolate, acute, and lightly veined. Column nearly erect, not hooded, five lobed, 5mm high in front, 3 mm at the back, medium width, top widely open; wings connected at the base, rather wide, the anterior lobes carrying a brush of erect coarse brown-white hairs exceeding the lateral lobes and anther. Lateral lobes long, erect in front, slightly curved below the rather fine points, the denticulate back margins sharply descending to the small intermediate lobes or lobules.

Anther with a long recurved point, inclined to bifid, not as high as the middle of the side lobes, the point shortly protruding only when the flower is mature; the border and lobes chocolate brown. Rostellum not very prominent, merged into upper margin of the stigmatic disc, and nearly submerged by the two deeply bilobed pollinia. Stigma viscid.

A distinct species with probably a wide distribution south of Waimarino. Dedicated to Mr Carse in memory of many years of friendship and botanical association.

Waimarino Erua. H. Carse, H.B. Matthews. December-January.

15. *Thelymitra cheesemanii* sp. Nov.

[*Thelymitra tholiformis*³⁴]

Generally a stout species, 20-60 cm high, light or dark green. Leaf shorter than the stem, shortly sheathing, and embracing it for some distance, acuminate, channelled or flat, more or less corrugated, thick, brittle, and toward the end often dead. Stem bracts 2-3, lanceolate, embracing, and appressed with few exceptions. Flowers in a raceme 2-20, pedicellate, the ovaries subtended by short open or shortly clasping lanceolate bracts. Perianth 13-18 mm in diameter, sepals and petals often with a blue tinge on the outside, variable in width, oblong, or lanceolate, acute, lightly veined and purple or pink of various shades, rarely light creamy-white. Column 4 lobed, stout, nearly erect, and about 5 mm high, the top cleft from the front to near the back with incurved margins; wings narrowly connected at the base, moderately wide with rather long linear curved lobes terminated by spreading rather coarse and long grey, yellowish-white or pinkish hair tufts usually exceeding the top of the column. The lateral lobes more or less open in front and generally yellow with a brown border. Anther with a long slightly recurved stout point seldom exceeding the cleft of the lateral lobes. Rostellum prominent, conical and merged in the upper border of the large glandular stigmatic disc.

Subscripts to Illustrations

Numbered 1-17 as for H.B. Matthews' Ms descriptions

1. *Caladenia calliniger* now *Stegostyla atradenia* is Blen's "*C. minor* . . . of a greenish yellow colour generally - and maroon" (letter 8 Oct. 1912). Hooker^{6,10} had this lumped with *C. minor* s.s. RHM and Blen sent it to Cheeseman who was going to call it *C. Matthewsii* (p. 32) but set it aside, Dan Hatch in 1959 had it as *C. carnea* var. *minor* forma *calliniger*³⁵, Moore & Edgar in 1970 lumped it into *C. carnea*¹⁷, then in 1986, Dan put it as the Australian *C. iridescens*³⁷ (which has four rows of disc calli) but D. McCrae noticed in 1988 it had only two ragged rows³⁸ so Jones et al re-described it¹⁴ in 1997 as *C. atradenia*, 85 years after Blen sent it to T.F. Cheeseman. In 2001 Jones et al put it in the genus *Stegostyla*²⁸ with its calli atop the midlobe and hooded dorsal sepal. As Blen wrote it, the midlobe looks black in this specimen from Silverdale, 23 Oct. 2003, but it is a dark red in bright light.
2. *Caladenia chloroleuca* is now taken as a form of *C. minor* but this twin flowered specimen from Te Pahi, 23 October 1998, shows the "3 long linear calli on each side, and a glandular fringe to the point" of the midlobe as described by Blen also with labellum "lateral lobes... column broadly barred pink-purple". Is it a separate taxon?
3. *Caladenia nitida-rosea* may align with one of the many forms of the Australian *C. fuscata* and would have been one of those included by Hooker^{6,10} under *C. minor*. This Scott Point specimen of 27 October 2001 shows Blen's "3-4 stalked calli on either side" of the midlobe and the acuminate dorsal sepal not obtuse as in *C. bartlettii* which has two stalked calli on the midlobe margins. They grow together with overlapping flowering times. Hybrids do occur.
4. *Calochilus viridi-sanguineus* now *C. aff. herbaceus* because of its close similarity with Tasmanian *C. herbaceus*, remains unclassified in 2006. Note the "violet-blue" base to the labellum in this specimen from Te Pahi, 23 October 1998. The black glands on the column have no known function unless they mimic eyes to frighten away predatory insect larvae. In 1949, Hatch had it as the similar Australian *C. campestris*³⁹, D. McCrae had it informally as the more likely *C. herbaceus*⁴⁰ in 1987 but Peter de Lange, also informally, expressed doubts⁴¹ in 2000.
5. *Corysanthes aestivalis* now *Singularibas* "aestivalis" had been previously lumped with *S. (Corybas) oblongus* but Blen's "cordate, ovate or orbicular" leaf (not oblong), the papillose lamina to the labellum and the irregular fimbria around a round labellum mouth, show up on this specimen from a Te Pahi colony, far removed from any *S. oblongus* with which it freely hybridises.





Stigma very viscid and usually covered by pollen owing to the free dehiscence of the pollinia cells. Some of the ovaries occasionally have an external hair or bristle-like appendage of varying length. The flowers of this species only expand or open in bright sunshine coupled with intense heat. Respectfully named in memory of the late T.F. Cheeseman who encouraged me in research work of native orchids. Not uncommon.

Hab. North Island: Mangonui. October-November. [Nov. Dec. in draft 2]

Note, the following 1919 memo has been transcribed from Blen's penciled page glued to Cheeseman's specimen sheet of orchids at AK, now determined as *T. tholiformis*. The text is less botanical than the above but it has to be the same orchid from some nine years earlier. Neither Cheeseman¹⁸ nor Moore & Edgar¹⁷ recognised this as an unclassified species.

Memo 28 December 1919 attached to specimen 3429AK in Blen's handwriting.

N^o 4 *Thelymitra*

Plant 6 to 20 inches high. *Stem* stout or slender; *leaf* exceeding half the length of the stem $\frac{1}{8}$ to $\frac{1}{2}$ an inch wide, parallel for greater length terminating in a fine point; flat, thin to medium thickness, dark green or brownish when exposed to the sun; midrib well defined. *Stem bracts* two, 2 to $4\frac{1}{2}$ inches long, open for $\frac{2}{3}$ of their length, often set well out from the stem above the sheath and tapering to a point. Flowers in a rather close raceme up to $5\frac{1}{2}$ in. in length, 1 to 16 in number. $\frac{1}{2}$ to nearly 1 inch diam. Peduncles short, bracts medium length embracing capsules; bluish-purple, bronze-blue, or pink in colour, two posterior sepals usually much the largest; petals generally broad and full; both sepals and petals terminating in a well defined extended sharp point. *Column* medium length, stout broad and inclined to squareness in front. Wings large, anterior lobes nearly as high as the top of the column carrying a light brown dense, bold brush of cilia more or less raised above the top of the column. Column $\frac{3}{16}$ in. high

6. *Corysanthes viridis* tag-named *Nematoceras (Corybas)* "whiskers" by Bruce Irwin³² in 1995, occurs on mossy stream banks from north of Warkworth to Nelson where this specimen was on Browning Track, 11 November 1998. *N.* "whiskers" occurs in the Waitakeres but Blen's specimen site in the Nihotupu Stream is now flooded by two water supply reservoirs. It is still not formally described 78 years after Blen wrote it up.
7. *Prasophyllum debile* now most likely *P.* "B", as tagged by Bruce Irwin²⁶ in 2001 is the taxon depicted from Horopito on 28 January 1997. It most closely fits Blen's *P. debile* description including "coppery-brown with yellow and green shadings" and those "lateral sepals free or very shortly connate, acuminate,.... recurved and spreading laterally towards the ends." etc. *Prasophyllums* are not easy to decipher from word pictures or from herbarium specimens.
8. *Prasophyllum patentifolium* as shown here by Kevin Matthews from Hackney Matthews' farm, 1 Dec. 2005, has been growing around Kaitaia since RHM sent it in bud, to Cheeseman on 14 Nov. 1898 but it has not been reported since Blen wrote it up. Attempts to align it with Australian alpine *P. rogersi*²⁵ or NZ's *P.* "B", now fall flat after Kevin's rediscovery of it 77 years later.
9. *Prasophyllum rubriflorum* or *Corunastylis nuda* as we know it in 2006, was first described by Hooker⁶ in 1853 as *Prasophyllum nudum* but Cheeseman had it in error, in the 1906 Manual³ as the Australian *P. rufum* which has long, outstretched lateral sepals. Blen no doubt detected the difference from *P. rufum* so understandably re-described it. The genus was changed to *Genoplesium*⁴² in 1989 then reverted in 2002 to the 1888 *Corunastylis* but this illustration, from Ongarue on 22 January 1995, shows that the orchid hasn't changed despite the classification kaffuffle. The flower still erupts at or near the tip of the terete leaf giving the plant a leafless appearance.

narrowed behind and sloping forward to the top posterior point where it divides and forms a more or less crested, dentate, clenched top usually warted.

Habitat: Kaitia, Mangonui & vicinity of Auckland (plentiful)

An interesting and distinct species. During hot weather the flowers fully expand; during dull weather; half open, forming cup shaped flowers; late Oct. Nov. and early Dec. HBM

16. *Thelymitra crenulata* sp. Nov. [*T. hatchii*¹⁷ in doubt]

Rather stout or slender, 15-20 cm high, dark or light green, the stem and lower part of the leaf often brown-purple. Leaf generally exceeding half the length of the stem and shortly sheathing it, linear-acuminate 4-12 mm wide, usually widely channelled, thin to medium thickness, with a well defined keel. Stem bracts 2, seldom 3, long, embracing the stem about a third of their length, the concave lanceolate ends incurved. Flowers in a raceme, 3-16, pedicellate, the ovaries each subtended and shortly embraced by a short incurved lanceolate bract; bluish-purple, bronze-blue, or lavender pink. Perianth 14-20 mm in diameter, the segments oblong or ovate, concave, apiculate, the dorsal sepal usually the broadest. Column about 4 mm high, slightly curved, stout, the top inclined to be conical, yellow or light brown with a darker border; rather square in front, the wings widely united in front, short and each drawn into a short rather wide lobe terminated by a dense brush of short spreading white or grey cilia, meeting, and as high or exceeding the lateral lobes, the top of the column cleft from the front to near back, the margins finely crenulate or denticulate and almost meeting. Anther as high as the anterior of the lateral lobes, erect, and visible behind the cilia tufts. Rostellum reniform, merged in the stigmatic disc and partly submerged by the pollinia. Stigma large, often concealed by the free pollen. Not uncommon in districts near Auckland with no doubt a wider range. October-November.

17. *Thelymitra scaphifolia* sp. nov.

[*T. intermedia* Bergg. *sensu* Irwin & St George³⁶]

Rather slender, 5-50 cm. high, dark or light green, the stem usually brown or reddish. Leaf generally canoe shape, and much shorter than the stem, shortly sheathing or clasping, linear-lanceolate or acuminate, thin, 3-10 mm. at widest part. Stem bracts 2 rarely 3, long clasping nearly entire length, ends lanceolate. Flowers 1-7 seldom more, pedicellate, distant, the ovary subtended and partly embraced by a lanceolate bract, when fully expanded 14-17 mm. in diam, light blue, lilac or pink, the perianth segments oblong lanceolate or lanceolate, rather acute, the dorsal sepal more concave than the others and much broader.

Column about 6 mm. high 4 lobed, slightly curved, broad, the hood sloping from front to back rounded and dark coloured: wings wide apart slightly curved, the anterior lobes rather long, linear with an upward curve terminated by a tuft of rather long dense fine white cilia, as high or exceeding the lateral lobes: a rather deep V sinus separates the lateral lobes, the anterior ends of which are blunt and rounded. Anther with a rather obtuse point little exceeding the junction of the lateral lobes. Rostellum prominent and partly merged within the large stigmatic disc. Stigma viscid. Pollinia 2, mealy-powdery.

H. B. Matthews

R. H. Matthews reports on 17 December 1907 finding *T. intermedia* Bergg. "in full flower November 22". One has to wonder if this was the same flower Blen described here. Quite possibly it was and the son had lost track of father's doings of 21 years earlier. End

R.H. Matthews' letters to T.F. Cheeseman 1896-1912

Including only significant orchid content with likely 2006 classifications in square brackets.

Kaitaia, 15 December 1896

I venture to enclose a specimen of a flower that is quite new to me in the hopes that you will kindly tell me what it is — I believe it is an orchid, has a large tuber, the largest measuring $2\frac{3}{4}$ inches long and one inch diameter, flower stalk from 1' 6" to over 2' in height. [*Gastrodia* aff. *sesamoides*] So far only one patch has been found. The Maoris formerly used to eat, among other food, the Para, Uwhipara, and Uwhikaho — is this plant the Uwhikaho?

We have growing here a good many varieties of orchids, but the tubers are comparatively very small.

Kaitaia, 16 August 1898

As my nephew, E.W. Matthews has left the District to join his cousin in Queensland, I shall be happy to send you specimens of the new *Corysanthes*. [*Anzybas rotundifolius* "dark"]

Kaitaia, 31 August 1898

I have been out two afternoons to look for the new *Corysanthes* and am sorry to say have not found it yet. Where it was growing fairly plentifully last year, has been cleared and sown to grass, I found some young plants growing in the tea tree but think they will prove to be *Acianthus sinclairii*....

Kaitaia, 15 September 1898

I enclose several specimens of the new *Corysanthes* but unfortunately none in flower

Kaitaia, 10 Oct 1898

I am sending you by this mail... *Corysanthes* ["Sep"?] which I found when looking for the new one.... I have put in an orchid which may be *Thelymitra pulchella* but I fancy there is something different about it. Also a *Sarcochilus*, [*Drymoanthus adversus*] this so far is not at all common about here, it seems to affect the Titoki, only twice have I found it on Taraire.

Kaitaia, 1 November 1898

I enclose several orchids, the leafless one [*Molloybas cryptanthus*], or nearly so, is quite new to me, the other one has little spots on the petals and a kind of fringe on the column [*Thelymitra* aff. *ixioides*] according to Mr. Carse's description it might be *Thelymitra intermedia*.

Kaitaia, 14 November 1898

About the first of this month I found a *Prasophyllum* ["patentifolium" **Fig. 8**]. I don't know the distinguishing name, it can hardly be *Pras^m pumilo* (although very much like it) as that flowers early in May, you got specimens of *Pras^m Colensoi* near Mangonui in January so it can hardly be that — I will try to enclose a specimen. I have planted a few plants of *Corysanthes* so as to have them close to home, dug them up carefully and planted them in similar country, they look all right so far. I have made a note to look for the leafless orchid [*Molloybas cryptanthus*] in

July, I have not found the *Corysanthes triloba* unless, as you say, this leafless one may be it. I regret to say that the *Gastrodia Cunninghamsii* [*G. aff. sesamoides*] has been completely destroyed. I knew of one place only where it grew in this District and my rascally grandsons have dug up every tuber they could find to plant in their gardens, all dead and I have not even a single specimen. It is very vexing however I hope to find more in some other locality. It is rather singular, they were growing in a small isolated wood up a gully facing the Kaitaia Awanui road, left hand side as you go to Kaitaia and have neither seen nor heard of them growing in any other part of this District.

Kaitaia, 5 December 1898

I found an orchid the other day, like *Caladenia Minor*, [*C. aff. chlorostyla*⁹] inside of column beautifully striped with pink markings — grows taller, will enclose a specimen if I can get at them. This is the orchid (*Caladenia minor* Var.) referred to — pickled specimen very like the enclosed on Sep^r 14th. [*C. alata*] growing on uplands, this was picked on Dec^r 4 on low lying land.

Kaitaia, 13 December 1898

I am sorry to trouble you again but I cannot resist the temptation of sending a small orchid for identification [*Paracaleana minor*]. So far have only found three specimens (on the 11th. Inst). The enclosed is not plentiful but no doubt you will recognise it. . . kindly let me know what species it is.

Kaitaia, 27 December 1898

Many thanks for identifying “*Caleana Minor*”, [*Paracaleana minor*] and copy of your paper in which it is fully described, and fits it exactly. I had noticed the singular peculiarity of tilting over, or overbalancing, and after a short time recovering itself, when it had a close resemblance, the profile view, to a teal duck flying, i.e. before the plant is pressed. I have great pleasure in sending you a few specimens of *Caleana*, ... *Caladenias*, *Prasophyllum* (2 sp.). Also orchids for identification. Kindly correct any wrongly named — specimens unnamed are all in duplicate, you choose the best for yourself if you care about them and return one of each, named, for which I enclose stamps.

On looking over Thompson’s Class book of Botany I find that I have representations of all the orchids, save “*Lyperanthus*”, and “*Spiranthes*” & *Adenochilus*. I may recognise *Spiranthes* if I happen to come across an orchid growing in swampy country in January, but have not the remotest idea what “*Lyperanthus*” is like or what sort of country to look for it in, and should be glad of information. I made my mind up to look up the orchids in this District, this season, but unfortunately I was unable to devote the time I intended, and not knowing what to look for is unsatisfactory, but have been fairly successful on the whole, having added some nine or ten this season to my list.

List of orchids collected Kaitaia 1898

Classification at the time	Flowering date	[2006 classification]
<i>Earina Autumnnalis</i>	April 7	<i>Earina autumnnalis</i>
<i>Prasophyllum pumilum</i>	May 4 to 26	<i>Corunastylis pumila</i>
<i>Acianthus Sinclairii</i>	from June 18	<i>Acianthus sinclairii</i>
<i>Pterostylis trullifolia</i>	from June 26 on	<i>Diplodium alobulum</i>

<i>Cyrtostylis oblonga</i>	Sep ^f 1 to 15 th .	<i>Cyrtostylis oblonga</i>
<i>Corysanthes oblonga</i>	Sep ^f 2 to 27 th .	<i>Singularibas oblongus</i>
<i>Corysanthes</i> (new)	not sure of date of flowering	<i>Anzybas rotundifolius</i>
<i>Caladenia</i> sp. — small —	Sep ^f 4 to 14 th .	<i>Caladenia alata</i>
<i>Pterostylis graminea</i>	Oct 5	<i>Pterostylis graminea</i>
Do. <i>Banksii</i>	Oct and Nov	<i>Pterostylis banksii</i>
<i>Earina Mucronata</i>	Oct ^f 1 to 31	<i>Earina mucronata</i>
<i>Corysanthes</i> sp (leafless & in fruit) N.B. you thought it might be <i>Cor^s triloba</i> , or something new	Oct 17	<i>Molloybas cryptanthus</i>
<i>Sarcochilus adversus</i>	Nov 4 to 18 th .	<i>Drymoanthus adversus</i>
<i>Prasophyllum nudum</i>	Nov 4-rather late 15	<i>Corunastylis nuda</i> (Fig. 9)
<i>Caladenia minor</i>	Nov 17 to Dec 4	<i>Caladenia</i> aff. <i>chlorostyla</i> (Fig. 20)
<i>Thelymitra pulchella</i>	(fully out) Nov 24	<i>Thelymitra pulchella</i>
Do. sp. stone quarry	Dec ^f 4	<i>Thelymitra</i> aff. <i>longifolia</i> ?
<i>Thelymitra imberbis</i>	about middle Oct ^f	<i>Thelymitra carnea</i>
<i>Bolbophyllum</i>	not in flower Oct ^f	<i>Ichthyostomum/Adelopetalum</i>
<i>Microtis porrifolia</i>	from 20 Sep ^f to 20 Nov	<i>Microtis unifolia</i>
<i>Orthoceras Solandri</i>	Dec ^f 17 th to 31 st .	<i>O. novae-zeelandiae</i>
<i>Dendrobium Cunninghamii</i>	Dec 1 st . to 15 th .	<i>Winika cunninghamii</i>
<i>Calochilus paludosus</i>	from latter end of Aug ^f not sure of date	<i>Calochilus</i> aff. <i>herbaceus</i> (Fig. 4)
<i>Gastrodia cunninghamii</i>	Dec 25	<i>G.</i> aff. <i>sesamoides</i>

capsules matured, some ripe and in one or two specimens the flowers were just withering - best time say from middle of Nov^f on

[R.H.M. might have forgotten about]

<i>Caleana minor</i>	11 December	<i>Paracaleana minor</i>]
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From Mr. H. Carse

Chiloglottis cornuta

Chiloglottis cornuta

Corysanthes rivularis

Nematoceras acuminata

I think I have other species of *Thelymitra* but am unable to distinguish them.

In the packet I have put a green *Orthoceras*, as well as a purple one for comparison, I think it might be a variety.

What is the *Adenochilus* orchid like and likely locality?

I note you found *Prasophyllum Colensoi* in January — is it anything like the *P. nudum*, I have not got it yet. I find too that I have most of the *Pterostylis* to look up, I suppose they have all the same general characteristics.

Kaitaia, 24 January 1899

Many thanks for the specimens of *Spiranthes*, *Caladenia bifolia* [*Aporostylis bifolia*], *C. lyallii*, *Lyperanthus* and *Adenochilus*, I am glad to have them as I now have representation of all the N.Z. species, I hope next season to fill up the gaps. I have not yet found *Spiranthes*, and think it is very unlikely to be found about here, as for the others you sent me, I am quite sure they will not be found in this District.

The grass "*Imperata arundinacea*" is growing on the same range, and not far from where the *Caleana minor* was found....

Kaitaia, 31 January 1899

[Near Waipapakauri Beach] We looked for *Spiranthes* in the dry swamps, but did not find any.... By this time we had Cormorantine appetites, so we made a fire, put the billy on, brew some tea, and had a most enjoyable snack....

Kaitaia, 13 February 1899

Last Friday, 10th. inst. I stumbled slap on a patch of *Spiranthes*, growing on a wet wiwi [Juncus sp.] flat at the mouth [of] a gully leading down from the range fronting Kaitaia Awanui road, about 2½ miles from here. I was delighted with this find, most of the plant had dried off, but managed to secure a few late specimens, pink colour.

Kaitaia, 24 April 1899

I enclose... a *Prasophyllum* picked by one of my nephews on March 1st growing on sandy ground between Kaikino creek and west coast.

Kaitaia, 15 August 1899

Many thanks for the pamphlet. I feel highly flattered by your dedicating the little *Corysanthes* and naming after myself [*C. Matthewsii*=*Anzybas rotundifolius*], and also for your complimentary remarks. I am sending you a packet containing several species of *Corysanthes*.... The orchids I have numbered 1 and 2 so that you need not return any. You will notice No. 1 in two colours, the paler one is almost transparent and very delicate the pollinia is plainly to be seen even in the dried plants. This *Corysanthes* flowers from 1st. July to the 1st. August. No. 2 flowers from 1st. June to the end of July, [Two forms of *Anzybas rotundifolius*] that is, there are a few late stragglers. I will send specimens of both in fruit later on.

Kaitaia, 12 September 1899

Many thanks for naming the orchids. I found a few late and poor specimens of *Corysanthes Cheesemani* [*Corybas cheesemani*] last year but did not ascertain the name. This season I found several good large patches of it. Commences flowering 1st. of June, and is more plentiful so far than *C. matthewsii* [*Anzybas rotundifolius*]. I am sending a small packet containing *Corysanthes* [*Nematoceras* "Sep"] and several other plants for identification. The *Corysanthes* may be *triloba* but it looks so different that I am sending several specimens in a bottle of spirit (please return the bottle as it belongs to Mr. Petrie). Enclosed in packet is a young and very distinct orchid not in flower, I found about 6 or 8 plants, the most forward were showing the flower stem. I have marked the place and will keep a good lookout for them, these as well as the *Corysanthes* are growing in tall manuka on low lying land. The *Corysanthes* are very plentiful, many hundreds within a radius of three or four yards, outside of which singular to say I could not find any. I enclose in letter a specimen of which may be a very late *C. Cheesemani*.

As the season for *Gastrodia Cunninghamii* [*G. aff. sesamoides*] is approaching I should be glad of a hint how to lay only the flowers for drying to make a good job of it. And, is it necessary to dig up the tubers and all in orchids generally?

The *Caladenias* are just coming out in flower, I will send you some of both (early and late flowering) with pleasure. What do you mean by a "good set" of each, how many do you call a good set? ... The young orchid not in flower has a leaf something like the *Chiloglottis cornuta*, Mr. Carse sent me from Whangarei, but the leaf seems shorter and wider in proportion. Both species in packet are quite new to me, if they are the same as Mr. Carse's they certainly grow

under different conditions, his being found growing on old rotten logs.... In Packet, several *Pterostylis*, differing somewhat from *P. trullifolia* [*Diplodium alobulum?*].

P.S. I forgot to say that Mr. Petrie has also asked me to send him specimens of early and late *Caladenias*, dry and in spirits also *Thelymitras*.

Kaitaia, 19 September 1899

... if you could spare five minutes to look over a small orchid and write a line at your convenience I should be most obliged. This makes the third new species from this month, and perhaps four. Another *Corysanthes* [*Nematoceras rivularis*] not yet in flower found close to the Okahu waterfall some five or six miles in the forest. [exaggeration? 5 or 6 miles from Okahu would take one right across the range into Diggers Valley.]

It will flower in about a month's time or six weeks. I am sending specimens dried & in spirits of the *Caladenia* [*alata* or *Stegostyla atradenia*] you mentioned, and will forward plants of the November flowering species in due time. The *Caladenias* are not quite dry yet, but I thought perhaps they would be better for examination now than when quite dry. I should like to know whether you prefer fresh specimens of any plant or not, i.e. for examination, if it makes no difference, I would keep them until I could make up a larger packet – and not trouble you so often.... This is early yet for the small orchid enclosed, this is the only plant in flower so far, in a week or two I hope to find plenty more.

Packet contains

24 *Caladenias*

24 or thereabouts in bottle

1 orchid with leaf like *Longifolia*

Please return bottle. I loaned it from Mr. Petrie's lot.

Kaitaia, 3 October 1899

I am sorry to say that I have only found two more specimens of the new *Thelymitra* [aff. *longifolia* “stunted” Fig. 23] orchid and rather too far gone to make good specimens.... I regret now that I did not pick them, they appeared to be exactly similar in every respect to the specimen sent to you, the flowers being on very short stems, only just well above the ground. I am afraid we are too late in the season for them but I shall have another good look, being so small and inconspicuous they are hard to find, and easily overlooked in amongst fern and tea tree. So far I have only found three specimens, perhaps you would not consider it safe or expedient to describe the plant on the present evidence. Several days ago I again walked over to the locality and found a few plants with similar leaves, showing a flower stem about an inch high but the leaf is so very much like the leaf of the *Thelymitra pulchella* that I could not determine whether it was or not, but will watch closely and let you know later on when they flower. I am sending you by this mail a small packet containing a most curious little orchid quite new to me. I thought when I first saw the leaf that it was a *Chiloglottis cornuta*, [it was] but it is quite different, a most singular looking plant. Thinking they would now be in flower I went to look them up today but only found two out, a few more will be out in a week or two. I did not see many plants, they grow in low lying tall tea tree scrub not far from where I found *Corysanthes rotundifolia* [*Nematoceras* “Sep”]. I am glad you are pleased with the *Caladenias* and will send a similar set of the Nov^r variety in due course, by the way they grow in the same valley only lower down, than the *Corysanthes rotundifolia*. The bottle arrived safely. I shall have much pleasure in sending flowers of *Gastrodia* and *Thelymitra* in spirits, also of the Okahu *Corysanthes* if I am fortunate enough to catch them in flower.... I picked a nice lot of

Cory. oblonga several days ago as I was rather short, if wanted will send you a few, also *Cory^s rotundifolia* [*Nematoceras* “Sep”]. Many thanks for naming the specimens.

Kaitaia, 10 October 1899

Just a line to say that I am sending you a specimen of the little *Thelymitra* orchid [*T. aff. longifolia* “stunted”? Fig. 23] in spirits. It is rather past its prime, and of a pale pink colour, I think the petals of this are longer than the first specimen. The stem of this one was about one inch in length. I had a good look round this afternoon but only found the one – I planted the tuber. There were a few plants around showing stems 2” high (flower in about 2 weeks or thereabouts) which may or may not be the same – I shall watch them closely. I have several more of the plant something like a *Chiloglottis* [*C. cornuta*]. I sent you a specimen last week.

Kaitaia, 17 October 1899

I have never seen a *Chiloglottis* [*cornuta*] undried before, and am comparing it with a species sent me by Mr. Carse from Whangarei. I thought it was different hence my sending it for identification.... [RHM sent *C. cornuta* which is rare in the far north and he seems to have been chided for it by Cheeseman who has thus touched a nerve.]

P.S. Will forward you *Corysanthes oblonga* [*Singularibas oblongus*] next week if possible, they are hardly properly dry yet.

Kaitaia, 23 October 1899

According to promise, I sent a few specimens of *Cory^s oblonga*, they are not very good, but the best I have. I think I sent you specimens of *Cory^s rotundifolia* [*Nematoceras* “Sep”] last month.

Kaitaia, 27 December 1899

I am sorry to say that I was too late for *Gastrodia*, also for the *Thelymitra*, I was so intent on hunting up the new *Thelymitra* that I allowed the season to pass, & only got a few late ones. The small piece of *Bolbophyllum* [*Ichthyostomum pygmaeum*] is rather fine I’ve not seen such fine leaves before. The other small form I sent you a few months ago has apparently died out. I am going to Awanui tomorrow to meet Mr. Carse who is coming on a visit to us.

Kaitaia, 16 January 1900

I shall watch the large leaved *Bolbophyllum* [*Adelopetalum tuberculatum*] for flowers, and let you know later on.

Kaitaia, 6 February 1900

I have just posted you several specimens of *Bolbophyllum* numbered 1, 2, 3, respectively. N^o. 1 [*A. tuberculatum*] appears to be quite different from either of the others, the bulbils and leaves are larger, I have been watching this closely, and so far have not found it in flower. N^o. 2 is in flower, [*Ichthyostomum pygmaeum*] a small white flower, on top of the oval shaped, hairy bulbils. This is the first time I have seen *Bolbophyllum* in flower. N^o. 3 I have very little of this, could not find any last year, appears to have died out. I sent you a small scrap last year, and you thought it might be the same that Mr Colenso found, or it might be new.

I have only so far found *Bolbophyllum* growing on Rewarewa, and Taraire, and associated

with *Sarcophilus adversus* [*Drymoanthus adversus*] when growing on the Taraire....

Re “*Corysanthes Matthewsii*” [*Anzybas rotundifolius*], in describing this plant you omitted to mention a distinguishing characteristic which cannot be seen in dried specimens. I am afraid I cannot explain intelligibly, it has what I may call two truncated spurs, near the base, and behind, whilst the *Corysanthes Cheesemani* has two spurs produced at the base of the flower, the *Corys Matthewsii* [*Anzybas rotundifolius*] has two at the back, and cut off close up, and showing two small round holes, open into the flower....

P.S. specimens for yourself. I don't know how to dry *Bolbophyllum* – whether they ought to be pressed or not.

Kaitaia, 12 March 1900

I am glad to say that I have found a bit of the large leaf *Bolbophyllum* [*Adelopetalum tuberculatum*] coming out in flower. If you will look at the specimen I sent you in a box, you will find last years flower stalks, that is what first drew my attention, I then found several new ones growing up and will be in flower in a few days. So far as I can judge at present there will be about two to three flowers on a stalk. I have been watching it for some time now and had given it up for this season as a hopeless job but I find I was too soon. I have placed the plant on damp moss in a plate so that I can watch it comfortably.

Kaitaia, 20 March 1900

I have just made up a packet containing a scrap of the larger form of *Bolbophyllum* in flower, [*A. tuberculatum*] unpack carefully and on each side of a bit of lichen you will find two flowers (lichen attached to root of *Bolbophyllum*). The flowers may not be fully out by the time you receive it, but if you place the plant on damp moss I believe it will keep it alive long enough to develop fully.

Kaitaia, 27 March 1900

Have just posted a few more flowers of the large leaf *Bolbophyllum* [*A. tuberculatum*] and hope they will arrive safely. There was not time to choose good specimens as a heavy shower was coming so I had to bolt for it. Mr. Carse writes that he has found the same species in his locality and in flower.

Kaitaia, 17 April 1900

I am sending another specimen of *Bolbophyllum* [*A. tuberculatum*] in a small bottle but am afraid that I have overshot the mark this time, it looks to be in fruit. I thought one of the flowers sent last time was just nicely out, the rest would soon have expanded if the plants or rather roots had been placed either in damp moss or flannel. I intended going out today to look for more flowering specimens but unfortunately it rained most of the afternoon.

Before the flower was put in spirits, it was creamy white, & purple or purplish brown inside, scape pale green with purplish lines or splashes over it. I believe the part that I described as creamy white is the ovary (the tip is also tinged pale purple).

This specimen I took from a plant that I placed in moss about the middle of last month....

Sometime in January I sent you a *Gastrodia*. I am curious to know if it was a *G. Cunninghamsii*? I think Mr. Petrie was inclined to throw doubt about it...[*G. aff. sesamoides*]

I find now that what I took to be the flowers of *Bolbophyllum pygmaeum* [*Ichthyostomum pygmaeum*] were simply the remains of the flowers on the ovaries.

Kaitaia, 5 May 1900

I have just posted a fully developed flower of *Bolbophyllum tuberculatum*, picked the flower today, it opened day before yesterday, but would not pick it until today, to ensure full development in all its parts. It is a beautiful little flower, sepals and petals a delicate white, frosted inside and out, more particularly the inside, the labellum a deep orange colour, shading off a little lighter towards the margin, [see 13 March 1911] pollinia a pale yellow. I shall post it by the Ohinemuri so that you will receive it a day sooner, and hope you will get it in good condition.

I have been so puzzled by what I supposed to be the flowers, that I have watched the plant closely, and am rather pleased to hear that Mr Carse made the same blunder as I had. On looking the plants up about a week ago, I saw a dozen or more flowers not quite out. Thinking that they were in the fruit stage I unfortunately picked some, which when I examined them closely, I was vexed to find that they had not yet flowered and were so many specimens spoilt.

I find one to three flowers on a scape, mostly two — How does this agree with Mr. Colenso's description? I suppose you will get better specimens from Mr. Carse, he being so much nearer, only a few hours instead of days....

P.S. Will you require more specimens of *Bolbophyllum tuberculatum*? ...

I will look up *Prasophyllum pumilum* [*Corunastylis pumila*] first chance but they are rather difficult to find sometimes. If successful will dry a few specimens, and some in spirits.

Kaitaia, 18 June 1900

According to your request I am sending specimens of *Prasophyllum pumilum* [*C. pumila*], dried and in spirits, it is rather a difficult plant to find, and I am sorry to say that it was rather late in the season before I dropped on them, they are the best I could find. In the packet also are six specimens of *Bolbophyllum tuberculatum*, unfortunately I wasted a lot of time picking them when immature, two of the specimens have four flowers each, I believe four flowers on a stem is about the limit. Next year if all's well I hope to secure plenty of good flowering specimens of both species of *Bolbophyllum*. *Bolboph^m pygmaeum* probably flowers about November, I have not seen the flowers yet.

Kaitaia, 9 July 1900

Many thanks for your letter of the 25th. Ulto, and in compliance with your request, I have picked specimens of *Corysanthes Cheesemanii* [*Corybas cheesemanii*] & *Cory^s Matthewsii* [*Anzybas rotundifolius*], which I am forwarding by this mail, in spirits also several fresh specimens of each to enable you to see the true colour.

In the bottle containing *C. Matthewsii* is a specimen with leaf, the stem cut off close up to underside of leaf, please examine closely, it is a much darker coloured flower. There are several dark flowers in the bottle but this one is readily identified.

I am glad to say that I have stumbled on another orchid new to me – two leaves something like *Chiloglottis*, [*C. formicifera*] pale green, covered with minute tubercles, crenate, 2" long tuber round, and large for the size of the plant. Grows on hillside....

The *Cory^s Matthⁱ* in spirits will enable you to see what I call the two truncated spurs at the back of the flower. I will forward specimens of *Corysanthes* in spirits as they come in, as you request, with pleasure

Kaitaia, 17 July 1900

Just a line to say that I am sending specimens of *Corysanthes Cheesemanii* and *Matthewsii* that were overlooked last week. I did not find out the blunder until it was too late. The latter varies very much in colour, from the lightest or palest pink to dark purple, the lightest coloured are almost transparent....

P.S. Could not find any very pale colour flowers but there were several in the bottle last week. Is fairly good whisky too strong for delicate flowers?

Kaitaia, 17 September 1900

The new orchid I mentioned a few weeks ago, flowered yesterday and when digging it up today I unfortunately broke the stem, so I at once decided on putting it into a bottle of spirits instead of drying it and posting it to you. The flower is very delicate and curious, quite new to me. – stem and petals kind of pinkish red, column pale green, labellum palest pink with narrow margin of darker shade, tubercles glossy black near the throat shading off to reddish or light black towards the outer margin [*Chiloglottis formicifera*] where the tubercles are smaller. Although there are plenty of plants I can find only three more that are likely to flower soon. I am in hopes more will flower later on but can see no signs at present. So far I have only found this orchid in one locality, close to an old [Kaitaka] pa. *Corysanthes Cheesemanii* [*Corybas cheesemanii*], *Matthewsii* [*Anzybas rotundifolius*], and *oblonga* [*Singularybas oblongus*] are widely distributed. The very wet weather has prevented me from looking up a patch of *Corysanthes* [*Nematoceras rivularis*] in the forest up the Okahu creek, found last spring too late to find flowers, going soon. This season I found a *Corys* *Matthewsii* [*Anzybas rotundifolius*] with two flowers and later on found one with two capsules and several *Pteros* *trullifolia* [*Diplodium alobulum?*] with two flowers....

By the way I received a letter from Mr. Petrie a few weeks ago in which he promises to describe what I distinguish by calling the “Lowland or late flowering *Caladenia*” [*C. aff. chlorostyla*] in reply I stated that I had sent you specimens dried and in spirits for examination. Did you make out anything of the *Thelymitra* [*aff. longifolia* “stunted”] with the very short scape and other *Thelymitra* from the same locality sent later? I have visited the place three times lately and so far have not succeeded in finding any more....

In one bottle are specimens of *Corys rotundifolia* [*Nematoceras* “Sep”], *Cyrtostylis* and a form of *Corys oblongus* with a rounder leaf than usual and a month earlier in flowering [*Singularybas* “aestivalis” **Fig. 5**] I suppose you are hard at work on the “Flora”³. How are you getting on? I have some little consideration for I have not bothered you for a long time and would not now only I am anxious to hear what my little orchid is?

Caladenia minor [*C. Matthewsii* aka *Stegostyla atradenia* Fig. 1] fully out Sept^r 1st Have you had a look at the *Gastrodia* flowers in the bottle sent in Jan^y last, is it *G. cunninghamii*?

Kaitaia, 8 October 1900

I am glad to hear that you are pleased with the “*Chiloglottis formicifera*” which if not quite new is new to our flora. I am sorry to say the plants are not flowering at all freely, so far have secured only three specimens for drying. The locality where the plants grow, and plenty of them, is cold and exposed to S.W. winds, this may account for not flowering better. The Australian grass specimens [*Imperata arundinacea* p. 25] of which I sent you several years ago (you said had not been previously recorded, or rather reported in New Zealand) grows not far away, on the same range. Rather a curious coincidence for two Australian plants presumably

not introduced, to be found in close proximity in the North. Is it an additional link that Australia and New Zealand were connected in the past?

Many thanks for naming the *Caladenia* [*C. Matthewsii* i.e. *Stegostyla atradenia*, letter 17 Sept. 1900, Fig. 1] after me. I consider it a very great compliment and am sufficiently human to feel proud if it gives encouragement to a tyro, and offers a premium for increased activity. It would be a source of immense gratification to me to find a plant that would puzzle you a little, but it is gradually dawning on me that it is almost hopeless, and that there is "Nothing new under the sun". However I will have a parting shot anyway. I enclose a rough sketch, [following page] drawn the natural size, I believe this will give you a much better idea than any description I could give. No 1 is, I believe, the mature leaf as there were several other plants close by of nearly the same size. Nos. 2-3 may perhaps be young seedlings or *Cyrtostylis* of a different species from specimen enclosed in packet. I am watching the plants, no sign of flowering yet. I followed the Okahu creek the other day for about four miles, [exaggeration? one mile perhaps] special object being to look up a patch of *Corysanthes* [*Nematoceras rivularis* Fig. 22] from last year.... I found lots of patches growing on the banks of the creek, as far as I went, flower buds just showing.... If all's well I shall try and go again first week in Nov^r. The *Corysanthes* looks very much like *Rotundifolia* but is certainly much later in flowering. The *Rotundifolia* flowers here first week in September, [*Nematoceras* "Sep"] A great many leaves were of different shape to the usual type. I enclose a leaf for you to see [*Nematoceras pandurata* Fig. 22]. Before returning I climbed up a steep spur and could see the waterfall quite plainly through an opening between the trees, less than a ¼ of a mile distant. Climbing still higher I found a large landslip on which many orchids (*Thelymitra* apparently) were growing, scapes showing from 2" to 3" high. My attention was more particularly drawn to several plants (maybe *Thelymitra*) with hairy leaves, scape also hairy, these plants were not so forward as the smooth leaf of the usual type, would flower probably 2 or 3 weeks later.

I am sending on a packet of several plants for identification, one, a *Caladenia*, seems quite different from the usual form, I enclose a few of the latter which were growing in the same locality for comparison. This *Caladenia* is a stouter, stronger habit of growth, leaves and scape more hairy, and is a month later in flowering. [*C. minor*? Fig. 21] The small *Caladenia* [*Stegostyla atradenia* Fig. 1] flowers fully out and plentiful on 1st Sep^r. The stronger variety on 1st Oct., the "*Caladenia minor*" [*C. aff. chlorostyla*? Fig. 20] from latter end Nov^r — Dec^r. The latter grows here on low, rather damp soil, the former on clay hills, mostly gum land.

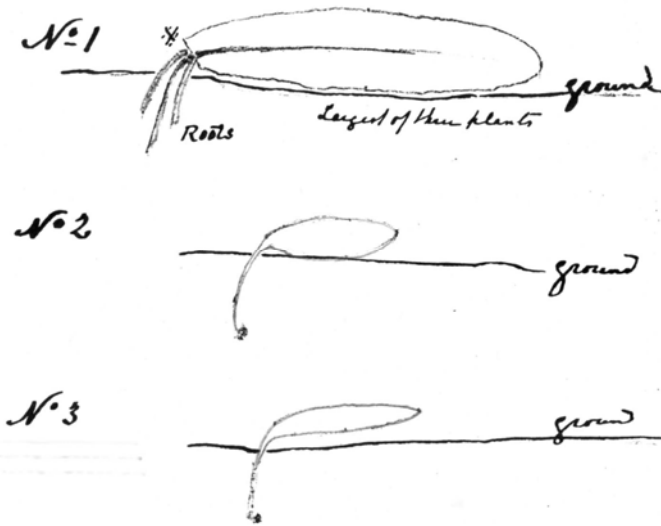
By the way, is *Cory^s rotundifolia* [*Nematoceras rivularis* agg.] another name for *Cory^s macrantha*?

P.S. Enclosed in packet is one specimen of "*Chiloglottis formicifera*". I regret very much that I cannot spare more at present. I have only two left. I want to send one to Mr. Petrie, and keep the other myself — I have only just looked over the patch, and am sorry to say that there won't be any more flowering at present, when I last looked at the plants there was one showing a scape about 1" high, unfortunately this has been eaten either by slugs or birds. None of the rest are showing any appearance of flowering so far. I have enclosed a leaf of the Okahu *Corysanthes* [*Nematoceras pandurata*?], it is different in shape to the usual form of *Cory^s rotundifolia* [*N. rivularis*], both forms being plentiful in the same locality.

I understand that there are two species of "*Cyrtostylis*", I have found one, the *Cyrtos^s oblonga*. I should esteem it a great favour if you would send me a specimen of the other species, that is if you can spare it. I can more easily recognise a plant if I have once seen it. Also a species of *Calochilus paludosus* if you can spare it. I have found one solitary specimen about 3 years ago, which I gave to a friend, it is rather curious that I cannot find any more. I have looked thoroughly all around the locality & have failed to find it again. I omitted to say that I did not

see any tubers on plant N^o 1, on sketch. I carefully exposed one root to a depth of about 4", I was afraid of disturbing the plant too much, but there is no mistaking an orchid root for any other plant. I saw the tuber on the others N^o 2-3 as shown in sketch – you omitted to say which of the *Caladenias* you wanted in spirits.

Orchids, Life size (More novelties?)



N^o 1. quite smooth, soft and velvety to the touch, rather fleshy, well defined midrib, roots penetrate deeply into the ground.

N^o 2. Surface of leaf very glossy, as if highly varnished, base of leaf narrows in, produced under ground & forms the main root.

N^o 3 Somewhat similar to N^o 2, surface of leaf rather hairy, midrib obscure. All natural size.

N.B. I saw about 3 plants like N^o 1, the base of each cut or eaten off like sketch *

Kaitaia, 13 October 1900

In striking across country yesterday... I found one of the prettiest and most curious *Thelymitras* that I have seen yet. At first I could not decide whether to put the plant complete in my book or put the flower in spirits for you. Whilst having a smoke over the situation I hunted all around about but failed to find any more in flower. On looking more closely I saw that there was another stem just beginning to show on the side opposite the flower, dug up the plant and replant it at home where I could watch it. I am sorry to say that with all my care in carrying, it was rather badly knocked about. The flower showed about 1" above the ground, what you see in the bottle is the total length of the scape. You will note that there are only four petals, they were of a rich pink colour with dark pencilling or stripes inside. Altogether it is a beauty. Last year I sent you several specimens with very short scapes. Do you remember if they had four petal like this one, or like *Thelymitras*, three sepals and three petals? The column of this specimen seems to be longer and narrower, and different shape to *Thely^a pulchella*.... I shall look up the locality again shortly, but am rather doubtful whether I can hit upon the spot where this orchid grew, it was off any track & no good land marks.

I hope you will excuse me troubling you so soon but you see the exigencies of the service won't permit delay.

P.S. The leaf of this unique orchid is a true *Thelymitra* leaf; about 9" long, stout and deeply

channelled towards the base.

Re *Caladenias* posted last week, I omitted to state that the larger species [*C. minor*? Fig. 21], whilst found in the same locality as the smaller kind, grows only on higher drier ground, on little knolls, & mounds, & the flower is very short lived, 24 hours at most, while the smaller keeps open for several days.

I found the *Thelymitra imberbis* [*T. carnea*] closes within 24 hours.

Kaitaia, 29 October 1900

Immediately on receipt of your letter I started off to look up *Chiloglottis cornuta*, as I knew it was getting rather late in the season for them, however I found a few, about eight, still in flower, a week earlier there would have been plenty. I found a lot of plants like sketch N^o 2-3. I believe you are right, they are young *Cyrtostylis*. (I enclose a long narrow leaf in packet). Close by I found two plants in flower, with the usual form of leaf, but the flower was I think slightly different, the lateral petals somewhat narrower, and the two prominent glands on the labellum (near the throat) absent altogether, in other respects very similar to *Cyrtostylis oblonga* (flowers from 15th. August to 30th.) except flowering is much later. I had marked down several plants like N^o 1 sketch but could not find them this time, but the plant I brought home is all right so far and have put a circle of zinc around it to protect it from slugs which are plentiful now. I am inclined to believe it is an orchid from what I saw of the root, but I won't stand out against your superior knowledge of plant life.

I have had many a good hunt for the little *Thelymitras* [*T. aff. longifolia* "stunted" Fig. 23] but cannot find any more, in fact it would be a difficult matter to find any small plant owing [to] the thick growth of young tea tree. I am sorry to hear that my pretty little pink *Thelymitra* is an abortion, and regret that I did not dry it, it would have made a pretty, and curious specimen....

Last Friday I went to Okahu to see how the *Corysanthes* [*Nematoceras rivularis* Fig. 22] were progressing, I found that I was about a week too early however I picked a few that were luckily fully open. I looked over three or four patches, in some of these the lobed leaf predominated, [*Nematoceras pandurata* Fig. 22] and the usual form of leaf of *Cory^s rotundifolia* in others. My final specimens of *rotundifolia* [*N. "Sep"*] were picked 3rd. Sep^r, the Okahu on 26th. Oct, and too early to get plenty so that the Okahu are practically two months later. The only locality so far where the *Chiloglottis formicifera* grows here is close to an old Maori pa, called the Kére-kére, [Kaitaka Pa] it dominates Kaitaia proper (i.e. where the church and parsonage stand). It's a well known land mark to all the old settlers. It is well worth anyone climbing up to this old pa, the view is most extensive and beautiful. Old Maoris frequently allude to "Te Kére-kére", and the last battle fought there, when the Rarawa beat off Ngapuhi and the Pātū.

In the bottle containing *Chiloglottis cornuta*, is a specimen from a different locality with a small piece of string tied to it, the upper face of the lip, and tubercles are dark wine or plum colour, all the rest are green.... I omitted to say, the pink *Thelymitra*, the abortion, was from quite a different locality to the other little plants.

P.S. Packet contains... *Caladenias*, *Chiloglottis cornuta*, late flowering *Cyrtostylis*, Okahu orchids.... Many thanks for the *Cyrtostylis* and *Calochilus*, I am keeping a sharp look out for the latter, it is strange I can't drop on it again, but the fact is I have looked too early in the season, being under the impression I found it in Aug. or Sept^r. I shall look up the locality the first opportunity after the weather settles.

It was raining when I found the little pink *Thelymitra* sent in bottle so I did not examine it

very closely, but I thought I saw the column, it appeared long and narrower than usual. When I got home I tried to examine it through a magnifying glass, but it had closed, and I was afraid to handle it.

Kaitaia, 19 November 1900

I am sending a packet containing... *Corysanthes* Okahu [*Nematoceras rivularis/pandurata* Fig. 22] and *Corysanthes rotundifolia* [N. "Sep"] for handy comparison.... Also a packet containing specimens in spirits of Okahu *Corysanthes*, and in same bottle a specimen of *Thelymitra* which is quite different. The Okahu orchid is I think different from *Rotundifolia*. I admit it is very much like it, the Okahu flower looks to me smaller, however I am sending fully developed flowers in the bottle for examination when you have leisure. I went up the Okahu creek on Nov 2nd, (a week after my first trip) and found the plants in full flower and plentiful; I found a large patch growing within reach of the spray of a 40' waterfall, about a ¼ mile below the high waterfall that you see when coming up from Awanui. On my return I narrowly escaped a severe accident, when descending the almost perpendicular rocks my foot gave way and I slipped luckily fell on my feet, my left hand badly cut and bruised, and a good shaking up generally. After resting a while I made another start for I was at least 4 miles up the creek [it may have seemed like 4 miles but could not have been more than 2km from Okahu] and after stumbling & slipping over boulders I finally found myself at the entrance to the bush long after sundown, and after 9 P.M. when I reached home completely tired out. Never felt so tired or done up in my life. I am sorry to say that I have no more specimens of what I suppose is a distinct *Thelymitra* (species in bottle.) It was on this trip to Okahu I picked it — I had passed several growing near the roadside, when it struck me that it was rather early for the blue *Thelymitra* [*T. aff. ixioides* see 27 Oct. 02] to be in flower and pushed on intending to examine it several hundred yards further on where I intended to rest a few minutes. On examining it I was surprised to find the column and appendages very distinct, so I immediately put it in the bottle, intending to look for more on my return, but unfortunately it was too dark to see, and I was so knocked up and cowed by the experience of my last trip that I have not had the energy to go again, and it's too late in the season now. Of course it may prove to be another abortion — I hope not. The colour is about the same shade as *Thelymitra pulchella*, and I believe has generally a single flower, never more than two. I notice that there are two distinct forms of leaves in *Corysanthes Cheesemanii*, one has fringed or undulate margins, the other quite smooth, rather larger and more rounded. I struck a patch of the latter too late for flowers.... The weather is affecting the *Thelymitra*, the flowers won't fully expand....

Nov 20. Bottle contains Okahu *Corysanthes* and one specimen of *Thelymitra* which please examine closely when you have leisure. I believe the column and staminodia are quite different from either *Longifolia* or *pulchella*. *Thelymitra Pulchella* are just beginning to flower I saw the first one today.

[Four letters followed with no mention of orchids]

Kaitaia, 5 August 1901

I picked one flower of *Chilo^s formicifera* on 24th Ult. Last year the first was picked 16th. Sept. however the flower picked on 24th was growing in a very sheltered spot. Very few plants are showing signs of flowering, but it is early yet. I counted 6 only that may flower. *Cyrtostylis* too is fully out in flower. *Corysanthes Cheesemanii*, *Matthewsii* and *oblonga* are over except a stray plant here and there.

Kaitaia, 17 December 1901

I am sorry to say that I was too late for *Gastrodia Cunninghamii* [*G. aff. sesamoides*], however I managed to pick a few late flowers here and there to put in spirits, which I am sending on by this mail, also a poor specimen of the flowering plant, it is not dry yet being picked last Sunday. I got them last year on the 7th Dec. it was rather late then – and these a week later. I hardly expected to find any. I am sorry to say that a large patch I saw in flower last year has quite disappeared, there are now only a few scattered plants.

[Few letters; preoccupied fitting out a dairy factory]

Kaitaia, 19 May 1902

I am posting by this mail a bottle containing specimens of *Prasophyllum pumilum* [*Corunastylis pumila*] in spirit, all I could find, I hope they will answer your purpose....

Chiloglottis formicifera and *Cyrtostylis oblonga* are showing well up and earlier than usual. Another patch of *Chilo^s formicifera* [*Cyrtostylis* see 29 July 1902] has been found by one of the Boys on a hill recently burnt off, about 300yds from the first patch. *Bolboph^m tuberculatum* [*Adelopetalum tuberculatum*] is in full flower.... The other day I received a packet of southern orchids and other plants from Mr. Cockayne. A great prize.

Kaitaia, 23 June 1902

I am sorry to say that your letter arrived too late to pick flowering specimens of *Bolbophyllum tuberculatum*. About the middle of May they are about their best, and all over by 31st May. Luckily I could not resist the temptation to dry some, so that I will forward you a few later on.

You are getting on famously with the Flora⁵, soon be amongst the orchids, I do wish I knew what to look for, and likely localities. I believe that I have most of those that grow in the open country. I believe that I have a poor specimen of *Thely^a ixioides*, pinkish bowl shaped flower with much darker spots on the insides of the petals.

Do you remember me sending you a *Thelymitra* flower in spirits, a single flower, column rather different in shape same colour as *Thely^a pulchella* but much smaller. Do you think it was likely to be *Thely^a uniflora* [*T. cyanea*]? When you have liaison please let me know the characteristics of *Thely^a intermedia*.

Kaitaia, 29 July 1902

I looked carefully over the patch of *Chil^l formicifera* two days ago and am sorry to say that so far there are only two plants showing flower and I do not think that any more are likely to flower this season. The plants generally are much finer than usual owing to the grand weather we have had the last few weeks, but the two plants that are likely to flower are by no means amongst the finest. The patch reported a few weeks ago turns out to be *Cyrtostylis*, now that they are more developed. You are welcome to the two, and let me know soon how you wish them to be treated, one in spirits and the other dried, or both in spirits – one will flower in about two weeks time or thereabouts the other one a little later.

Kaitaia, 8 September 1902

I have posted today per “Ohinemuri” two specimens of “*Chiloglottis formicifera*”, one dried, the other in spirits, as you requested, and hope you will receive them safely. I am very much disappointed that the plants have not flowered better this season.

Many thanks for Dr. Berggren's pamphlet. I see there is a capital illustration of the *Thelymitra* [*intermedia*] I wanted, also a description of *T. ixioides*. With the help of a Lexicon I found no difficulty in translating the text (my Latin is a bit rusty now). Several years ago I picked several spotted *Thelymitras* [*T. aff. ixioides*] that is, the inside of the petals were covered with spots of a darker tint. I was unable to look them up last season.

P.S. You will find dried *formicifera* on top of packet – the tuber was so enveloped by fibrous roots that I could not save it although I was very careful.

Kaitaia, 27 October 1902

I am glad to hear that you have finished with the orchids, you are progressing famously with the "Flora"³.... You have indeed added very much to the number of species, I think I made about 42 or 44 now you say there are 55, and perhaps more.

I enclose a list of the orchids I have found in this district with general time of flowering. I am also sending specimens in spirits and dried *T. imberbis* [*T. carnea*] they were also past flowering. This is the earliest of the *Thelymitras* to flower, and if the weather is in the least cold, and blustery, the flowers will not expand.... I watched them closely but the flowers would not open, so I picked a few not to lose the chance. If the *imberbis* is self fertilising, it will soon be very scarce, it is not plentiful like *pulchella* and *longifolia*. I remember the day, Nov^r 2nd/00 when I slipped down a steep bank up the Okahu creek, it was a special trip to get *Corysanthes rotundifolia* [*Nematoceras rivularis*, *N. pandurata* Fig. 22] of which I got a good supply, plentiful on banks of river and on moss covered rocks. On my way I picked a specimen of *T. ixioides*, after passing several, seeing the staminoda was different I at once put it in a bottle of spirit, intending to look for more on my return from the bush, but unfortunately it was too dark to find them, and before I could go again the season was passed. Last season was too busy at the factory. On the 25th Inst I walked towards Okahu to look for some, thinking I was a month too late, on referring I find the date was 2nd Nov. I found 2 only which I am sending, one in spirits, the other dried, the petals are prettily spotted.... The *T. longifolia* is just coming into flower in sheltered localities. I will get the *Thelymitras* as they come in with pleasure, indeed I like to do anything in my power, perhaps I do not always fulfil a promise but I do my best....

Referring again to *Thelymitras*, I have several specimens picked 3 years ago with long, narrow, sharp pointed petals, and some I sent you from Broadwood, you may remember you thought there was something different about them. I have not had an opportunity of going there since. You reported *Praso*^m *Colensoi* in a swamp near Mangonui, but I have not found it yet. I got my specimen at Whangarei....

List of Orchids Collected in Kaitaia District By R.H.M.

[Classification by RHM	Flowering	2006 classification]
<i>Earina autumnalis</i>	March. Ap ^l	<i>Earina autumnalis</i>
<i>Earina mucronata</i>	Oct. Nov.	<i>Earina mucronata</i>
<i>Dendrobium Cunninghamhamii</i>	-	<i>Winika cunninghamii</i>
<i>Bolboph</i> ^m <i>tuberculatum</i>	May	<i>Adelopetalum tuberculatum</i>
<i>Bolboph</i> ^m <i>pygmaeum</i>	-	<i>Ichthyostomum pygmaeum</i>
<i>Sarcochilus adversus</i>	Nov ^r	<i>Drymoanthus adversus</i>
<i>Gastrodia cunninghamii</i>	Dec	<i>Gastrodia aff. sesamoides</i>
<i>Acianthus sinclairii</i>	Je Jy	<i>Acianthus sinclairii</i>
<i>Cyrtostylis oblonga</i>	Sep. Oct	<i>Cyrtostylis oblonga</i>
<i>Corysanthes Cheesemanii</i>	Je Jy	<i>Corybas cheesemanii</i>

[Classification by RHM	Flowering	2006 classification]
<i>Corysanthes Matthewsii</i>	Je Jy	<i>Anzybas rotundifolius</i>
<i>Corysanthes oblonga</i>	Sept. Oct	<i>Singularybas oblongus</i>
<i>Corysanthes rotundifolia</i>	to 2 Nov	<i>Nematoceras rivularis/pandurata</i>
<i>Corysanthes rotundifolia</i>	Sep.	<i>Nematoceras</i> “Sep”
<i>Microtis porrifolia</i>	Oct. Nov	<i>Microtis unifolia</i>
<i>Caladenia minor</i>	Sep	<i>Caladenia alata</i>
<i>Caladenia minor</i>	Dec	<i>Caladenia</i> aff. <i>chlorostyla</i> (Fig. 21)
<i>Chiloglottis cornuta</i>	Oct	<i>Chiloglottis cornuta</i>
<i>Chiloglottis formicifera</i> (varies)	Aug. Sep	<i>Chiloglottis formicifera</i>
<i>Pterostylis trullifolia</i>	Je. Jy	<i>Diplodium alobulum</i>
<i>Pterostylis banksii</i>	Oct. Nov	<i>Pterostylis banksii</i>
<i>Pterostylis graminea</i>	Oct	<i>Pterostylis graminea</i>
<i>Thelymitra pulchella</i>	Nov. Dec	<i>Thelymitra pulchella</i>
<i>Thelymitra longifolia</i>	end Oct. Nov	<i>Thelymitra</i> aff. <i>longifolia</i> ?
<i>Thelymitra imberbis</i>	early Oct	<i>Thelymitra carnea</i>
<i>Thelymitra ixioides</i>	2 nd Nov	<i>Thelymitra</i> aff. <i>ixioides</i>
<i>Prasophyllum pumilum</i>	Mr. May	<i>Corunastylis pumila</i>
<i>Prasophyllum nudum</i>	Nov	<i>Corunastylis nuda</i> (Fig. 9)
<i>Spiranthes spiralis</i>	Jan	<i>Spiranthes</i> “Motutangi”?
<i>Orthoceras solandri</i>	Dec Jan	<i>Orthoceras novae-zeelandiae</i>
<i>Caleana minor</i>	Dec	<i>Paracaleana minor</i>
<i>Calochilus paludosus</i>	about Oct	<i>Calochilus</i> aff. <i>herbaceus</i> ? (Fig. 4)

Kaitaia, 8 December 1902

I am sending several plants for identification, amongst others a curious form of *Pterostylis* [*micromega*] pressed, and in spirits, the plant grows in the heart of the big swamp lying on east side of the Tangonge lake, and I'm not at all sure that I can drop on the patches again, as they are growing in the tall raupo, a considerable distance from firm ground. When freshly gathered the flowering specimen (dried) showed almost transparent splashes of white, which I hope will be plainly seen when you receive it. *Pteros^s banksii* flowers here from July to October – Sept^f being about the best month... [RHM must have included other species for such early flowering] I am also sending a specimen of *Caladenia* [aff. *chlorostyla* Fig. 20] in spirits, although a single specimen, I decided to send it as it is so very late in flowering, in December, when it generally decides to flower in July [?] – and I believe there is a difference in this.

Kaitaia, 5 January 1903

Dec^f 18th I put 4 *Thelymitra* in one bottle, they are very late flowers from two localities, two I pinched off very short, and two are left longer you will be able to distinguish them by this. Today I took a stroll towards Okahu but could not find any *Thelymitras*. It was later than this when I saw them before, I remember Mr. Carse was here at the time. Today I found some of the short stemmed *Thelymitra* [aff. *longifolia* “stunted”] growing close together, they all have more than one leaf, and the column I believe is different. *Thely^a pulchella* has only one leaf. I tried to get on to the lake swamp to pick more specimens of “*Pteros^s micromega*”, but found too much water out [there], the frequent smart showers we have had lately have raised the level of the Lake.

Kaitaia, 16 December 1903

I regret to say that "*Gastrodia*" has almost disappeared from the only locality known to me. Last year (Dec^r 18th.) I found a large patch in full flower not very far from the old patch, very fine plants but too late to make good specimens. I could not dry them properly as the flowers stuck to the paper and most of them tore off in spite of every care. All the plants have disappeared from this patch to my great disappointment. Owing to this season being generally a fortnight earlier than last, I went on the 5th Inst to look them up expecting to collect a good stock of specimens. You can imagine how disappointed I felt. On looking closely over the old locality, I at last found several very poor plants, from 9" to 12" high. In the hope of trying to save them I dug them up intending to plant the tubers in my garden taking plenty of soil they were growing in. I was surprised to find 3 to 4 large tubers under each plant. Now *Thelymitras* have only one mature tuber, besides the new one produced for next year's growth. I thought all the ground orchids were alike in this respect but the *Gastrodia* is evidently not so. So many tubers under a plant almost suggest the idea that it flowers alternate years only. I should be glad to hear your opinion.

The *Thelymitras* that I asked the Boys to watch during my absence in town, did not flower, i.e. the flowers did not open fully, kept closed like the "Imberbis", so I did not pick any, did not open probably on account of the cold, rough weather about that time.

Kaitaia, 5 October 1903

Last January I posted a bottle containing... a short stemmed *Thelymitra* I have not heard whether you received them or not. [*T. aff. longifolia* "stunted" Fig. 23]

Owing to the unusually wet weather last December I was unable to get more *Pteros. micromega*.

Kaitaia, 26 January 1904

Several days ago I sent one of the Boys to look up what I suppose may be *Pteros^s squamata* [*Plumatochilos tasmanicum*]. He reports that it is not plentiful and difficult to find, he saw only four plants showing signs of flowering, and brought home two with soil around them, which have been carefully planted where I can watch them. The scapes are 1" high now, stout, and apparently have sheathing leaves. Will probably flower in about 3 or 4 weeks, when I shall let you know more about it.

Kaitaia, 27 January 1904

In a dry swamp not far from the Lake [Tangonge] the orchid "*Spiranthes*" is unusually plentiful & very fine, but too late for flowers.

Kaitaia, 29 July 1904

... in the gullies of the Tauroa [peninsula], Ahipara, *Corysanthes Cheesemanii*, *Pteros^s trullifolia* [*Diplodium alobulum?*], *Cyrtostylis*, *Acianthus*, *Earina Autumnalis* were plentiful.

Kaitaia, 12 July 1904

I am glad to say that I have added another Orchid to the Northern list – viz "*Pteros^s squamata* [*Plumatochilos tasmanicum*]. This is the first time I have seen it. [It] grows on the tableland East of Okahu. Unfortunately the plants are not yet in flower, neither do I know the flowering

period. It answers exactly, as far as I can make out, to the description of *Pteros^s squamata*. 12 leaves, just above ground about $\frac{3}{8}$ " long, average width $\frac{3}{16}$ ", oblong, acute, entire, frosted shining appearance, tuber oval. I must try and look them up later on, to find them flowering but the locality is rather an awkward one to get to.

Kaitaia, 7 September 1904

I am posting by this mail a packet containing specimens in spirits of a most singular looking orchid for identification, quite new to me, the long plume is of a beautiful, silky yellow colour, with a rich brown tip on the end, or perhaps more of the colour of a damson when turning ripe. I mention this as the spirits generally causes colour to fade.

This is the orchid I mentioned as growing near Okahu, about 5 mile from here which I thought might turn out to be *Pteros^s squamata*.

I have one specimen of *squamata* but the flower of my plant is quite different, I'm off in a day or two to look for more.

Kaitaia, 8 October 1904

Did you receive a packet posted here on 7th Sep^r containing a specimen of orchid in spirits? I believe it was *Pteros^s squamata* after all, unless a specimen I have from Mercer is not fully developed, it does not show what I call the plume, but on opening it out, it has what might develop into a plume.

I have just heard a report that a very large wingless bird has been seen by a party out cattle hunting in the virgin forest between Manukau (near Herekino) and Takahue, the hunter's dogs could not catch it, its cry is heard at night, sounds something like the low of a cow. Natives have been out hunting it, without success – foot prints plainly seen, one Maori supposes it is an ostrich.

Kaitaia, 12 December 1904

I am posting [a] bottle containing a specimen of *Thelymitra* for identification, I picked it at the foot of the low ranges on the west side of Tangonge Lake, this plant was the only one in flower, the other plants in bud. The column is like *T. longifolia*, but the only longifolias are in flower all through October and late plants on to middle of November, besides, the column of this plant has two projecting lobes like *Ixioides*, but without the plumes – the petals are very small. [*T. "sansfimbria"* Fig. 25]

Kaitaia, 28 December 1904

I am glad to hear that the *Thelymitra* is likely to prove to be a new species. I saw only one with expanded flower. Several other plants with flowers nearly open, I intended on digging up and bringing home and planting in a pot until the flowers were fully out. Unfortunately we returned by another track and so missed them. The colour of the flower is like *T. pulchella*, but darker or deeper shade.

On the 23rd Inst one of the Boys pulled me over to West side of Lake and am sorry to say could not find any plants in flower, plenty of plants past flowering. We crossed over again on 26th but with no better success.

On the 21st Inst I rode to the Tauroa [peninsula]. . . I was agreeably surprised to find a small patch of *Gastrodia* near the beach between a sandy hummock and the wet peaty soil at the foot of the hills. How it has escaped the pigs and cattle is a puzzle.

I omitted to say that the *Thelymitra* [*T.* “sansfimbria”] on the wet flat at the foot of the ranges on west side of Lake, [is] amongst a lot of old Kauri roots.

I picked a lot of the swamp *Pterostylis* [*micromega*] last year, and singular to say could not find any this season, but if you will remind me in good time next season I shall have a good hunt for them, and if successful will have much pleasure in sending you some in bottle as well as dried specimens.

I have not yet found *Prasophyllum Colensoi*, so I cannot promise to send any unless I am fortunate enough to drop on it.

Kaitaia, 10 February 1906

I returned home too late for the early *Thelymitras* – but in good time for *T. ixioides*, but owing I suppose to a rather cold snap the flowers would not open. It appears there is a slight difference, in several localities in the plumes, some being set on to the column lower down than usual. I hope next season will be more favourable when D.V. I shall look more closely into the matter especially as I now know of several localities where the plants are plentiful. I have lost 20 lbs. in weight since my little surgical experiences, but I’m thankful to say that I am fairly well and able to potter about.

Mr Carse is in harness again appointed teacher to Fairburn school....

Kaitaia, 12 April 1906

Re *Thelymitra* that you did not remember anything about when I mentioned it to you in the Museum. In your letter dated Dec 18th 1904 you say,

“Your *Thelymitra* is a very curious little plant, and so different in the structure of the column to *T. longifolia* that I have no doubt that it is a new species which should bear your name”.... “I have always felt sure that additional species would turn up if [a] proper search was made, and must congratulate you on being the first to prove this”

I quote these extracts to satisfy you that I had sent what you considered a new *Thelymitra*, which you appear to have overlooked or forgotten all about it. [*Thelymitra* “sansfimbria” Fig. 25].

Kaitaia, 3 October 1906

I posted you last week a specimen of a green flowered *Cor oblonga* [*Singularibas oblongus alba*] only just in time to catch the mail, had no time to write. I thought that there were several slight points of difference from the usual purple colour plant. The upper petal is longer, oval shape of flower instead of the usual round tubular form [*Singularibas* “aestivalis”] there may be nothing in these slight differences but it looked so delicate I couldn’t resist the temptation to send you one. The patch is quite isolated from the usual purple flowering plant, and growing in very open short tea tree. *Pteros barbata* [*Plumatochilos tasmanicum*] has turned up in two other localities. Much nearer than when first reported. *Thely^d imberbis* [*T. carnea*] out but won’t expand fully.

The more I dip into the Flora³ the better I like it and must congratulate you on the completion of your Magnum Opus.

Kaitaia, 31 October 1906

Enclosed are two specimens to show the colour of corresponding specimens in the bottle. The tied up flowers in bottle [are] the paler the others are the blue. I am a bit mixed up in *Thely^d*

ixioides. I believe the blue is *ixioides*, and has spotted petals and plume exerted but the tied up flowers [*T. malvina*?] have plume exerted too. Neither of these species' flowers open. I picked the flowers on or about 21st October intending to bring them when leaving to attend the synod on Tuesday the 23 but to my disappointment was prevented at the last minute.

Kaitaia, 16 November 1906

Have a few minutes to write by the S.S. Apanui. Many thanks for your letter in reply i.e. *Thely^d ixioides* – quite clear....

Kaitaia, 17 December 1906

I enclose what [I] believe is *Cory^d triloba*, plants very plentiful but no sign of having flowered – in *Myrtle* bush Tauroa.

Kaitaia, 17 December 1907

I also enclose an orchid that I have been watching for three or four years. I never could find it in blossom till this year, it is very like *Ixioides* but I don't think it is, it closely resembles Bergⁿ's description *Thely^d intermedia*, it was in full flower Nov 22. I am sorry I missed the opportunity of sending you flowers in spirits. [c.f Fig. 17]

Kaitaia, 21 January 1908

I am posting a few specimens from Tauroa where my son and family, Carse and family, and myself have camped out for a fortnight, splendid weather and had a very pleasant time. We thought the "*Earina*" [*aestivalis*] flowers unusually large so I enclose some....

Kaitaia, 19 February 1908

The *Earina* [*aestivalis*] is fairly plentiful in the several clumps of bush growing on trees, and is worthy of being called a variety. If all's well we intend to camp at Turoa again in May.

Kaitaia, 6 May 1908

Am posting a bottle containing a few poor specimens of *Bolboph tuberculatum* they are the best I can find. I picked them on the 4th Inst, and was surprised to find that I was too late in the field, flowers were passing off. Never knew them to flower so early before. I enclose a dried specimen showing flowers.

Kaitaia, 14 July 1909

I am sending by same mail a few *Cory^s Matthewsii* [*Anzybas rotundifolius*], and *Pteros trullifolia* [*Diplodium alobulum*?] as requested, pressed and in spirits. I had to put flowers of both plants in one bottle as I had no more spirits on hand. The rest of the orchids you mention will be sent on in due season. I don't think I shall be able to supply *Pterostylis puberula* [*Linguella puberula*], *Pteros graminea* and *Cory^s triloba*, these plants are not to be found in the immediate District, do not depend on me.... I utterly failed in getting plants with tubers, too many manuka roots.

Kaitaia, 3 August 1909.

I have just posted a few more specimens of *Pteros^s trullifolia* with larger flowers. [*Diplodium alobulum*/trullifolium]. The first lot the flowers are always smaller, of a pea green colour, seldom exceed 4" in height. Also a few poor specimens of *Acianthus sinclairii*.

Kaitaia, 21 September 1909

On the sand hills between Lake Tangonge and the beach the Boys found the enclosed *Thelymitra* [*matthewsii*, front cover]. I have not known any to flower so early, I would have sent it on whilst fresh only that the Boys intended going again last Saturday and taking bottle for specimens but the wind was too high for crossing the Lake. [One of the "Boys", H.B. Matthews, was 48 years old]

Kaitaia, 8 October 1909

I have deferred writing hoping against hope, but the weather has been so rough and showery that the Boys have not been able to go to the west coast, the weather just now is fine, and if all's well the Boys intend to make a start tomorrow and camp out for a night, to give time to hunt for the new *Thelymitra* [*matthewsii*].

I had a good search for *Cyrtostylis* the other day but could not find the slightest trace. In 1901 the locality was fairly plastered with them, today not a single plant to be seen. I then walked on to look up *Chiloglottis formicifera* and found that, where plentiful in 1901-2, there was hardly a plant to be seen, but about 10yds further up the hillside I found several fine patches, plants growing thickly together. I can positively affirm there were none growing there before for I searched all around very closely. I note that *Thelymitra pulchella* is not nearly so plentiful as formerly.

I'm afraid it is too late for the new *Thelymitra*, it is a month ago since first picked. Will let you know the result of the hunt.

P.S. Many thanks for the telegram, unfortunately, the Boy who found the *Thelymitra* had to help nurse his Brother and attend to the milking whilst laid up in bed – so with sickness and frequent floods it has been quite impracticable to go. I regret it very much. I am sorry to say I have no *Acianthus sinclairii* in spirits, I sent you all the specimens I had.

Kaitaia, 11 October 1909

The Boys returned from W. coast last night. They found a fair number of the new *Thelymitra* [*matthewsii*], but too late for flowers. All the plants seen were in fruit. They dug up and brought home three plants without disturbing the tubers. I have planted them in a pot with the idea that if they grow and flower would indicate the right time to hunt for them. To judge by appearance of the capsules, full size and mature, it must be at least a month since they flowered. I think it is quite likely that the specimen sent to you was a late flowering plant, no others were seen. Probably should be looked for not later than 1st Sept^r. All the plants seen had only one capsule each. The leaf is comparatively broad at the base but tapers off rapidly to a narrow point, about 1½" in length. I'm sorry the Boys did not find plants in flower and hope more successful next year if all's well.

Kaitaia, 7 December 1909

I am posting, some mail a packet and bottle containing specimens. It has been one of the worst seasons for orchids that I have known, all either much later or not worth getting. For instance, formerly I have picked plenty of *Cory^d rotundifolia* [*Nematoceras rivularis/pandurata* Fig. 22] at Okahu on or about the 1st of November. I went there on the 1st Ult^d, and found the plants not only very scarce, but the flower buds were only just starting. So I wrote to Mr. Carse and he very kindly sent me specimens from Fairburn. I have had difficulty with *Thely^d imberbis* and *T. ixioides*, fairly plentiful but the flowers would not open out properly. Bottle N^o 1 contains a poor specimen of *Caladenia exigua* [*C. alata*], the only one I could find, several unopened

flowers of *Thelyd imberbis* – and a *Thelymitra* with a curiously lobed or cut column, it is the shortest, without any stalk. N^o 2 are flowers of *Ixioides* to accompany some wretched specimens in packet. N^o 3 *Corysanthes rotundifolia*. I am very much disappointed, but have done the best I could. Three besides myself have been on the lookout, and without success.

Kaitaia, 31 January 1910

My son and I went to the North side of Tangonge Lake on 26th Inst.... We found that the big fire last summer had swept the peat flat clean.... We also found a grand flowering specimen of *Spiranthes australis* [S. “Motutangi”?].

Kaitaia, 19 July 1910

My son... brought several specimens of what I took to be *Corys Matthewsii*, but the Boy was confident that it was not identical however they were so crushed that I could not positively identify it. [*Anzybas carsei*]

I am sorry to say that the slugs have eaten through the flower stem of the west coast *Thelymitra* [*T. matthewsii*]. I planted several tubers in a pot for the convenience of watching the growth, and time of flowering and give the Boys an idea when to cross over the Lake to have a hunt with almost a dead certainty of finding plants in flower. It's no joke of a place to get to when there is so much water about.

Kaitaia, 5 September 1910

Two of my boys returned late last night from a trip across the Lake to the W. coast tired and

10. *Pterostylis allisonii* or *P. foliata*⁶ Hook. f. 1853, as it is now known, occurs sporadically from Dunedin to Raglan. the classification, unlike most, has never changed. Blen seemed not to have recognised it or he wouldn't have re-described it. This specimen was from Browning Track, Nelson on 11 November 1998.

11. *Pterostylis heterophylla* or *Diplodium brumale*³⁰ in modern terms, is found only in kauri (*Agathis australis*) areas such as this Waitakeres specimen of 26 June 1998 and was lumped with *P. trullifolia* Hook. f. until Dan Hatch separated them⁴² in 1949. Blen however, had earlier noticed that the “rounded (almost lobed)” sinus to the synsepalum differed consistently from the Vee sinus of *D. alobulum* which species Cheeseman and Darwin had promoted as *Pterostylis trullifolia*⁴⁷ with its irritable labellum for directing pollinators.

12. *Pterostylis pulchragalea* possibly *P. irwini*³³ would have been one of Blen's prizes from his 1920 trip to Waimarino with D. Petrie. This 27 Nov. 2002 plant from Takaka Hill is yet to spread its lateral sepals. Bruce Irwin found an isolated colony by the Waimarino Stream in Dec. 1991. Its seeds may have blown there from Nelson after the 186 AD Taupo eruption which devastated central North Island.

13. *Pterostylis rotundigalea* or, more correctly, *P. patens* Col. 1886, was lumped into its close relative, *P. banksii* by Cheeseman³ so would not have been recognised as a described species by Blen who noted its distinctive shape and montane habitat so of course thought he had a new species. This wet specimen was from Rotokura Lakes south of Ruapehu on 5 December 1998. Many have quite reddish sepal tips and labella.





Clockwise from top left, Figs 14 to 17

very much disappointed. After a long search they at last found only four plants of the new *Thelymitra* [*T. matthewsii*], one of these the flower was closed. I put three into spirits for dissection and pressed the other to show the colour of the flower, and perfect plant. Neither of the flowers was quite open being wide bowl shaped like *T. imberbis*. The Boys feel sure that the single specimen found last year about 14th Sep^r the petals were fully expanded. It is certainly a little beauty and distinct.... I am afraid it is the off season for the coast *Thelymitra*.

Kaitaia, 11 October 1910

I have much pleasure in sending another orchid for identification. It is quite new to me. It was found by my son yesterday, growing on the brow of the table land, overlooking the lower portion of Okahu valley, about 1¼ miles from here. Unfortunately no flowering specimens were to be found. Judging from the appearance of enclosed specimen I think it is a *Pterostylis* [*P. nutans?*] and flowered say two months ago or early in August. The Boy reports he saw a patch of from 10, to 12 plants growing in a space about 12" square, only two plants had flowered, which he dug up and brought home, they were growing on the poorest soil. We shall investigate further after receiving your report.

- 14. *Thelymitra carsei*** or *T. formosa* Col. 1884 was lumped into *T. longifolia* by Cheeseman in the Appendix of his 1906 Manual³ then forgotten about in his 1925 Manual¹⁸ so again Blen would have felt sure he had a new species and named it after his old friend, Harry Carse. Cheeseman's disdain for Colenso's species thus led to further orchid confusion here. This specimen from Erua on 6 January 2001.
- 15. *Thelymitra cheesemanii*** or in modern terms, *T. tholiformis* Molloy & Hatch 1990, was perceived by Blen as different from *T. aemula* and sent in 1919 with a full description to Cheeseman who put it aside. Blen nonetheless named it after this doyen of botany but his efforts went unheeded, also by Moore & Edgar who had it in error in the 1970 Flora¹⁷, as *T. intermedia*. Dan Hatch who found it growing at his home in Laingholm, collaborated with Dr Molloy in finally describing it in 1990, 71 years after Blen's first attempt. The illustration is from 2 December 1996, Albany Scenic Reserve where track overgrowth has all but eliminated this sun orchid in 2006.
- 16. *Thelymitra crenulata*** has been difficult to place without specimens or photographs but Blen's description fits *T. hatchii* L.B. Moore 1969 except for the "the top of the column... margins... almost meeting." Perhaps his specimen's column had wilted somewhat at the time of writing? The apiculate tepals plus the unique shape and colouring of the floral bract on this specimen from Erua 6 January 2001 are good evidence of their synonymy. Dr Moore named it after Dan Hatch in recognition of his contribution to orchid botany as she simultaneously reclassified many of Dan's named species in the 1970 Flora¹⁷.
- 17. *Thelymitra scaphifolia*** has been linked here to *T. intermedia* Bergg. 1877 sensu St George & Irwin³⁶ as depicted in this specimen at Elizabeth McKenzie's place, Hatfields Beach, 31 October 1999. This specimen fits Blen's description well. Berggren's description is unclear, his drawings are stylised and the Type specimen resides in Lund, Sweden so synonymy cannot be guaranteed. This could still be an undescribed taxon.

Kaitaia, 20 September 1910

We are delighted with your report about the new *Thelymitra*, and the Boys are pleased with your suggestion of naming it *T. matthewsii*^[44], and accept it as a great compliment. I have compared notes with the Boys and we believe that you have described the colour of the flower exactly, viz dark violet purple, with darker stripes or veins, the anther and top of the column bright yellow shading to pale pink at base of column. It is a great pity that it is such an awkward country to get to, it is very difficult to get there at this time of the year when the swamps are full of water. In the summer time everything is dried up. So far as I know the country between the Kaitaia river and the W. coast has not been worked i.e. botanically.

Kaitaia, 2 November 1910

I am enclosing a specimen of what I believe to be the long lost "*Calochilus paludosus*" which has disappeared from the District – and is now reported to be plentiful from Kaimaumuau to Lake Rotorua, two or three miles north of Lake Tangonge. In this specimen the petals are green with reddish purple stripes, sepals green. [*Calochilus* aff. *herbaceus* Fig. 4] If I remember rightly the Kaitaia plant had purple flowers.

Kaitaia, 2 February 1911

In the early part of January, a large party of us, including Mr & Mrs. Carse, camped at the Tauroa for two weeks, and enjoyed ourselves very much. During one of our excursions we unexpectedly found a patch of *Gastrodia* growing in sand, past the flowering stage....

Kaitaia, 25 April 1911

Engineers at present taking levels for draining Lake Tangonge.

Kaitaia, 13 May 1911

Having a good chance the other day, I picked a few more specimens of *Bolbophyllum tuberculatum* which I am forwarding by this mail in a bottle. About a dozen flowers including a single flower on its scape without the tuber, there is one tuber with three flowers. I begrudged putting it in the bottle as it would have made a good specimen. I inadvertently said in my last letter [5 May 1900] that the Labellum was a dark orange, shading off lighter towards the margin, it ought to have been Shading off lighter towards the middle or centre. I enclose a dried specimen so that you can see the colour, I think it is rather darker with drying.

Kaitaia, 16 August 1911

In due time if weather and state of the swamps permit the Boys [Henry Blencowe Matthews was one of "the Boys" at 50] will have another try for the W.C. *Thelymitra* [*matthewsii*]

Kaitaia, 27 March 1912. [His last letter at age 76]

I can't write more at present, am feeling tired. Am in a parlous state, heart given out, dropsy from toes to breast, helpless.

Kind regards, [signed] R.H. Matthews

H.B. Matthews' letters to T.F. Cheeseman 1912-1922

Blenville Farm Kaitaia 2 July 1912

I.. sincerely thank you for your kind and sympathetic letter on the bereavement of the late Mr. R. H. Matthews' family. My dear Dad I know was an old and tried friend of yours and he would invariably, upon receiving a letter from you upon botanical questions, read it out to me.... I kept [letters from yourself to him]... each dealt with some botanical matter. [They] form many links with the past happy times I spent with Father and Mr Carse on botanical excursions....

I have a few (orchid) plants in pots now, that may turn out new.... The flowers have not yet been seen. It may turn out to be *Pterostylis Australis*.

I am pleased you named the new orchid found by myself and my old friend H. Carse, *Corysanthes carsei* [*Anzybas carsei*] – it is very distinct in having a spoonbill hood. Your description of it is very interesting. The capsule is similar to that of the *Matthewsii* [*Anzybas rotundifolius*]. I enclose a few rather fine grown *C. Cheesemanii* gathered about 20 June also *Pterostylis Trullifolia* [*Diplodium alobulum?*], N^o 1 bronze stemmed, N^o 2 green stemmed gathered last Sunday

Blenville Farm Kaitaia, 7 August 1912

Thank you for . . . information on *Pterostylis*.

I will have pleasure in hunting up *Caladenia minor* for you later on, and enclose a few dry specimens.

I also enclose a few specimens of *C. Matthewsii* [*Anzybas rotundifolius* “late pale”] which appear to differ from the usual form in as much as the hood is freer and the flower almost transparent. The main lot of plants seen in several places won't flower for about another month*. Those sent you were got from another find of mine where there are a fine lot of plants.

I sent a few *C. Matthewsii* [*Anzybas rotundifolius* “dark”] gathered last season which I take to be the true type.

I have been very busy lately and have to confess that I have to undertake my botanical researches on Sunday.

On Sunday I found a *C. Cheesemanii* with two fine flowers on it. *C. Cheesemanii* this season appears to hold the flowers in good order for a long time, apparently from one to two months.

*[Confusion! *Corysanthes Matthewsii* transparent form [*Anzybas rotundifolius* “late pale”] flowered in August for R. H. Matthews (letter of 15 August 1899) but the dark form flowered in July, a month earlier, not later as Blen here blundered. The same holds true in 2006.]

Blenville Farm Kaitaia, 17 September 1912

I am sending you some *Caladenia*, [*Matthewsii*, now *Stegostyla atradenia* Fig. 1, RHM letters 17 Sept. & 8 Oct. 1900] probably the kind that you think may be a distinct species. I have kept a close watch for them and the first flowered about the 10th Sep – other varieties will not flower for several weeks. I have searched in a radius of about 3 miles and collected generally. One specimen I sent you in bud may be *C. minor* but it will probably be another two weeks before the plants flower.

There is a rather small var. with very hairy leaves & stems [*C. aff. bartlettii* Fig 19] which

are sending up the scapes now and showing in bud, two or three weeks off flowering. I have located several patches – not common here. May be new, as you do not mention *C. Lyallii* having been found in the North Island in your Flora. I think it is quite likely there may be several new *Caladenias* to be found. With the *Caladenias*, I am sending what I take to be *Cyrtostylis oblonga*. The young leaf is glossy, shining and in different places there is a very marked difference in the shape of the leaf as well as the size of flower.

The flowers sent you in bottles are in formalin and I thought the larger bottles may have had too much formalin added to the water so I made the smaller bottle much weaker and gathered and put the flowers into it last Sunday.

Mr Carse may have a week off from his school soon and if the weather is fine we hope to have a few days hunting around for specimens.

Blenville Farm Kaitaia, 8 October 1912

Many thanks for your letter of Sep. 22. I was glad to know you were pleased with the *Caladenia* specimens (*C. Matthewsii*) [*Stegostyla atradenia* Fig. 1, letters RHM 8 Oct. 1900, HBM 17 Sept. 1912] which I am pleased to know you intend naming after my dear Father. After comparing *C. minor* [*C. bartlettii* Fig. 18] with *C. exigua* [*C. alata*] I am, quite satisfied they are distinct varieties. *C. exigua* flowers at least 3 weeks before *C. minor* and the flowers range from a pinky white to rich pink and the plants remain in flower for some days - the lip usually turns under near point and the lobes are either wanting or very small, the petals are very acute, the leaves are also much smaller than *C. minor* and the flowers are quite a different shape. *C. minor* as enclosed under separate cover, are a much more robust plant and the flowers are violet pink with purplish bands and the lip is slightly longer and narrower and deeply fringed.

In a separate parcel I am sending you a selection of *Caladenias* with a few notes upon each. One sort I have carefully watched and am satisfied it is a new var. The buds are not points on tongue or lip curved as in *C. minor* and this season the flowers fail to open – the flowers would be much smaller than *C. minor* or *C. exigua* – plant very hairy usually – sepals not acute [*C. aff. bartlettii* Fig. 19] as in *C. exigua*. I sent in spirits, a number, a few of which I tried to open out.

One lot of *C. minor* seems different, of a greenish yellow colour generally - and maroon. [*Caladenia aff. chlorostyla* Fig. 20]

I am sending some specimens in fruit as “By their fruit ye shall know them.”

In the bottle with the *Caladenia (Matthewsii)* have knots tied) I am sending what I take to be a new *Microtis* [*M. parviflora*] and a common one for comparison – a specimen is also enclosed with *Caladenias* – it may be a *Prasophyllum* – quite distinct – leaf a bronze colour. [*P. “patentifolium”* Fig. 8]

All the *Prasophyllum* plants have been passed flowering as found by me this season so far.

I also sent you two flowering specimens and I think one is in spirits, of the cream coloured *Thelymitra ixioides* – which seems rather different about the column to the pink variety.

In a separate bottle there is a specimen of a beautiful blue *Thelymitra* which was very plentiful back of the Mangonui township but were not out on 29th Sep. *T. ixioides* pink and white (creamy) plentiful there but not out.

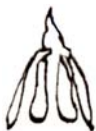
Last Sunday I only saw a single plant of *C. exigua* in flower, the chief flowering period is from 10 to 25th Sep^r. *C. minor* [*C. bartlettii* Fig. 18] starts flowering about 25 Sep, some buds still not very far advanced.

Two small parcels under separate cover. *Chiloglottis formicifera* is overgrown with fern & grass – may come on again after a fire. Father must have given all his specimens away – have none.

Blenville Farm Kaitaia, 14 October 1912

I am sending you what I hope may turn out a new species of *Caladenia* [*Petalochilus calyciformis*]. I have been watching the little patch of plants (maybe 30) for some time and on the 11th I gathered the first flower and although I allowed only one day to elapse before again visiting the patch yet in the meantime a number had flowered and gone off. The new find is remarkable in not having the usual lip or tongue, the column being similar to a *Thelymitra*. I am sending a few flowers in formalin so that you will have no difficulty I trust in getting a good idea of the peculiar column formation, the flower is a light shade of pink and so far does not vary in colour. I am sending you all I have which you may keep as I hope to get about half a dozen more.

There are *C. minor* & *exigua* [*C. bartlettii* & *alata*] growing within a few yards of plants sent you, also the non-opening flowered variety [*C. aff. bartlettii* Fig. 19]. There is one variety of *C. minor* [*Caladenia aff. chlorostyla* Fig. 20] that, when in bud, looks precisely like the new find. I sent you a few last week with the other varieties – the buds are very much larger, a greenish yellowish brown colour and more curved than the usual form of *C. minor* which invariably has a more or less dark purple bud – in flower the centre petals [lateral sepals] of *C. minor* [*C. bartlettii*] are rounded whereas in the others [*C. aff. chlorostyla*] the petals are acute, the colour of the flower is also different being a greenish pink, or [in] others the same shade of pink as my latest discovery, in fact the flowers are as alike as two peas, looked at casually but when you come to examine them, one has a well developed tongue and lips & 4 petals [tepals] in front, the other is lipless has a column after the style of *Thelymitra* and 5 petals in front.



The blue or sometimes pink *Thelymitra* [aff. *ixioides*] with spots on two of the petals, is a beauty & very distinct. I am sending a few flowers with the new find, the column is spiked round the top with a good flange on each side of top in front....

There are several H.B. Matthews in Kaitaia, so that if you would kindly address my letters as per signature I may get them sooner. [signed] H. Blenco Matthews

Blenville Farm Kaitaia, 24 October 1912

Your letter of the 20th inst. to hand for which I thank you and I'm very pleased to know that at last I have scored again in orchids for *C. [Corysanthes] Carsei* [*Anzybas carsei*] was really found by me in the first instance. Your description of the new orchid [*Petalochilus calyciformis*] is most interesting and should it prove to be a new genus and your name is available, I should be delighted that you considered it worthy of bearing your name. However, mine a suggestion, yours the right to name it. So far it has been found in one place covering an area of about 10 ft. by 4 ft. and although *C. minor* grows practically all round the patch (within 4 or 5 yards) yet not a single plant of *C. minor* [*C. bartlettii*] has occurred within the patch. Since sending you the specimens I have gathered about a dozen flowers and I notice that, when the flower is fully matured, the five front perianth segments hang down perpendicularly, the middle one lying against the stem while the back segment stands out at a considerable angle as shown on margin giving the flower a unique look.



Under separate cover (two) I am sending you more specimens. One is I think a *Caleana* [*Paracaleana minor*]. On looking over my father's specimens of which there are a lot of *Caleana* specimens (gathered from the middle of December – January) I note that many of them are two and three flowered and in every instance all the flowers on each stalk are fully out – no buds showing – my plant has one lower only fully out with often 1 or two buds in a rather backward state. The dark bronze tubercle lip when touched or shaken springs back with often a perceptible click. I am

sending you a number of specimens gathered on the 21 inst. most of the plants (which are plentiful) will be out in flower in about a week. I am also sending you a new *Caladenia* I think the one referred to as growing by stone quarry. Most of the flowers will not be out for 2 or 3 weeks – plants plentiful – the plants and flowers are of a uniform dark green (the latter being a green white) [*C. minor* Fig. 21] leaves often longer than the spike. The lip appears a different shape to *C. minor* [*C. bartlettii* Fig. 18]. I enclose a *C. minor* variety gathered at the same place. I also sent a specimen which I think may be *Chiloglottis formicifera*, and *Prasophyllum C. [colensoi]*. Also several flowers of an interesting blue coloured *Thelymitra*. There are also a few flowers of *T. ixioides* which you can throw out as you kindly named it in your last [letter].

Blenville Farm Kaitaia, 28 October 1912

I have pleasure in reporting another rare botanical discovery and, for want of something better, call it the pouch *Caladenia [Petalochilus saccatus]* – like the tongueless var. [*P. calyciformis*] it also has 5 petals, colour white, tinged green, column similar to *Thelymitra*, with an odd shaped spring starting from its front base and so bent that a pretty little pouch or cup is set on the top immediately below but near the top of the column. Casually it might easily be taken for the green-white [*C. minor* Fig. 21] sent you last week as the appearance of the plants are identical – it is one to three flowered and although not plentiful I have found it in three places in the one locality and as much as a mile apart growing adjacent or among the var. sent you last week. I am sending all the specimens collected so far, as I hope to get a few more next Sunday. The way the pouch or cup is arranged is a marvellous creation, altogether unique.



The green-white *Caladenia* (sent you) are very plentiful at any rate in one locality over a mile in length and on Sunday last I noticed that a very large proportion of them showed two buds and rarely three – sometimes an odd plant will have a secondary bract and you will have noticed that the bract or sheath stands well out and away from the stem – the lip is also lobed and fringed to its extreme point.

Under separate cover, I am sending a few specimens in spirits and pressed, of my latest find and also *Prasophyllum C. [colensoi]* – the latter varies in height from 3" to 15". I had several patches marked down but pheasants or something nipped most of the flowering heads off, very annoying!...

I forgot to tell you that I found what I took to be *T. pulchella* with two strong flowering spikes coming out of one leaf, unfortunately my little daughter Blenda plucked it one day when I was looking round close by.

Referring to your last letter and a name for a new genus, was the American botanist's name spelt with one or two ts? for if his name was Mathews, it would not be the same as Matthews – a passing thought.

Blenville Farm Kaitaia, 17 November 1912

Many thanks for your two letters.... The last re the pouch *Caladenia [Petalochilus saccatus]* has caused my sod to fall back in the furrow all the way along or as Father would say, "has put my pipe out."

In the first place, you are in error in stating that the "pouch" *C.* has only five segments for like the "Lipless" [*Petalochilus calyciformis*] it has six – while *C. minor* has five. I may state that I have watched the *Caladenia* family of plants most carefully this season and that before any of them flowered up to the present time. In fact I have not only walked hundreds of miles

but devoted a good deal of time in carefully watching them.

Plants carefully observed and seen in a state of nature, exhibit differences in appearance that are practically lost when dried, withered or put into spirits and I must say I do not believe in desire to boil down varieties. According to your arguments, a nectarine should be a peach because the leaves flowers and plants are identical in appearance and many other cases are similar.

The following dates represent about the time the first flowers appeared and practically the end of the flowering season – for any flowers (odd) appearing after the closing dates would be juvenile plants probably flowering for the first time.

Kaitaia District

[Species or taxon	Flowering period	2006 classification]
<i>Caladenia exigua</i>	Sep. 10 to 25 th	<i>Caladenia alata</i>
<i>Caladenia minor</i> (type)	Sep. 25 to Oct 20 th rare later	<i>C. bartlettii</i> Fig. 18
<i>Caladenia</i> “non-expanding fls” most hairy of all vars.	Sep 25 to Oct 15	<i>C. aff. bartlettii</i> Fig. 19
<i>Caladenia</i> “lipless” 6 segments	Oct. 10 to 31 st	<i>Petalochilus calyciformis</i>
<i>Caladenia</i> “Green-white” generally growing in moss	Oct 20 to Dec	<i>Caladenia minor</i> Fig. 21
<i>Caladenia</i> “Pouch” 6 segments	Oct 27 to Nov 15	<i>Petalochilus saccatus</i>
<i>Caladenia</i> “Bronze”	Nov 13 to Dec	<i>C. aff. chlorostyla</i> Fig. 20

Now all the above show differences when seen actually growing. The tubers vary in size as well as the formation of the root system. You might say the plants, when seen in the ground, vary as much in appearance as the different breeds of sheep appear to do.

With regard to the “Lipless” and “Pouch” varieties, I fail to follow your reasoning. For you must admit that, had these been found half a century ago, they would have been promptly Christened. Of the former, I gathered about 30 specimens, all alike in every respect and the plants seed freely (which hybrids would hardly do). These plants were found growing on the sod that had been taken off for getting at pipe clay some years ago – unfortunately furze [gorse], fern & ti tree have taken possession all around – and if there are any other lots found, it may be that the “Lipless” belonged to a past vegetation and that the pipe clay had in some way preserved the seed. I sent you all my first gathering of the “Pouch” and since then I have found it fairly plentiful in a number of places. In one place there were no other *Caladenias* seen within half a mile. I must have over a hundred specimens and the children also got a lot.

I have found the Green-white *Caladenia* showing 4 buds and sometimes three flowers will be out at once. The leaves in some cases are considerably longer than the stem. In “The Manual” [Hooker’s 1864¹⁰] *C. minor* is described as having the leaf “always shorter” than the stem and rarely flowers. The flowers of the Green-white are often in twos or threes and when a few are placed together are beautifully scented. I don’t think *C. minor* [*C. bartlettii*] is scented....

I failed to find *Pterostylis micromega*, saw some plants of *Corysanthes Carsei* [*Anzybas carsei*], only a few had flowered this season.

I am sending what may be a new *Orthoceras* as it appears different from those sent last season, also two blue *Thelymitras* – you said you would like some specimens. One appears very distinct about the top of the column and I have seen as many as 15 flowers and buds on one stem [*T. “sansfimbria”*] – not common....

Thanks for identifying *Caleana Minor* and *Prasophyllum Colensoi*. I will try and make you

up a supplementary lot of all the *Caladenias* collected by me to date. I claim that the *Caladenias* have been thoroughly looked up this year in the Kaitaia District and that probably the new finds have been in the District for hundreds of years. All more or less grow in ti tree or manuka scrub which gets burnt off occasionally and when it comes to hunting up small plants in 50 or 100 acres of scrub, they require some finding. Most of my late finds have been in scrub 30 or more years old.

[Three letters followed without significant mention of orchids.]

Blenville Farm Kaitaia, 14 April 1913

On an excursion that Mr. Carse and I made together we came upon a patch of white pine that a fire was passing through – a number of trees were on the ground and we found that the upper part of the trunks and branches were covered more or less with *Bulbophyllum tuberculatum* (now in bud). It is rather strange that this plant should be able to stand the exposed situations which here it usually favours; sixty, a hundred feet or more from the ground.... I have also noticed that *B. pygmaeum* is to be found more plentifully on *Knightsia exelsa* than elsewhere here.

Blenville Farm Kaitaia, 14 May 1913

There was a fairly stiff gale here about a week ago which brought down dead limbs and Kahikatea tops which in practically every instance were covered with *B. tuberculatum* and rarely, *B. pygmaeum*. Strange to say, none of these plants last long when the tree or branch carrying them falls to the ground – probably heat, cold & moisture are too much for them – as a matter of fact these plants are rarely found except at a considerable height from the ground – altho I have some very good patches that I have affixed or tied on to a pohutukawa growing here.

The plants sent you are both in full flower and forward in bud – by placing them on a piece of damp sacking or moss, they will keep in good order for some time and you can press them when in the best condition....

I overhauled a few Kahikatea tops that were felled about the second week in March and to show that the Kahikatea is a common habitat found the following orchids fairly plentiful on one tree top, viz. *Dendrobium Cunninghamii*, *Bulbophyllum T. [tuberculatum]*, *B. pygmaeum*, *Earina mucronata* and *Sarcochilus adversus* – probably a record!

Kaitaia. 16 July 1913

I note what you said about *C. exigua*. There is no doubt — you are right — in separating it from *C. minor*. I am in hope that the “Pouch” and “Cup” [or “Lipless”] *Caladenias* will turn out new species. [*Petalochilus saccatus* and *P. calyciformis*]

I have an orchid growing in a pot for two years and I think there will be one flower later on, the leaves in a rosette of six or seven $\frac{1}{4}$ to $\frac{5}{8}$ inch wide in middle and $\frac{7}{8}$ to 1 inch long lie flat on the ground practically. [*Pterostylis nutans*]

Kaitaia, 16 September 1913

The orchids I had in pots for several years were taken by slugs or caterpillars, two would have flowered towards the end of August. I hunted up the original patch and found that fire had passed right over it. From what I could see of the plants before [being] destroyed, they looked like *Pterostylis*.

Blenville Kaitaia, 11 December 1913

The new *Caladenias* of which I sent you specimens last season (Lipless & Cup) [*Petalochilus calyciformis* & *P. saccatus*] came true to character again this season, and I found another small lot of the “Lipless”. By the way, you have never yet let me know what the Expert on orchids had to say about them! You wrote telling me you were sending specimens to the best authority on orchids.

Kaitaia, 11 October 1914

...I too have delayed writing you in the hope of turning up another specimen of the new *Pterostylis* [*nutans*] but so far there is only the one known patch of about 50 plants which extend along the top of a branch ridge on the southerly slope of the main ridges between Pukemiro Pa (Trig) and Kingsford’s farm. A very exposed situation. I expect 3 or 4 plants in a pot to flower next season. I am sending you a life size photo with the edge of the pot cut down – showing the roots (several) of the specimen plant which I have enclosed with *T. matthewsii* under separate cover and ask you to accept it. You will hold the only specimen and I will trust to luck to get one next season. I must thank you for the honour you would do me in naming this plant *P. matthewsii* [*P. nutans*] and to identify it for the time being. I have referred to it in my notes as *P. M.*, if it turns out a known species it is easily corrected. I sent you a photo of the plant soon after it came into flower which gives the true position of the appendages which after the third week started to rise a little as you will see from the last photo taken.

I found 4 flowering specimens of *Thelymitra Matthewsii* on the 13th. Sep and the one sent you is the finest specimen gathered yet. I have only 3 specimens myself.

I brought home a few plants of what I call the “Lipless” *Caladenia* [*Petalochilus calyciformis*] in flower, in bud and a beautiful white *Thelymitra* [aff. *longifolia*] in general in appearance like a *longifolia* – the column is well cupped and edged dark rose or maroon and the lower part of the petals inside are sparingly sprinkled the same colour – it is a beauty – the bracts are large and without examining the flower it might easily be passed for *T. longifolia*. I will try and send you the plants by mail.

Four of the boys have left for the front.... I have sold my place bar 40 acres (the homestead) for £10,000....

Kaitaia, 30 May 1915

... thanks for the *Illustrations of the New Zealand Flora* which came to hand a few days ago.... I... was very pleased to notice *Corysanthes Matthewsii* [*Anzybas rotundifolius*] among them....

Since Bell Brother bought my place and cut it up for a township, the place [Kaitaia] is making rapid progress....

Kaitaia, 7 July 1915

You will be pleased to know that the new *Pterostylis* (*Matthewsii*) [*P. nutans*] is again in flower. There will be about half a dozen flowers and I intend to send you a specimen in spirits later on.

I rediscovered the original patch of *Chiloglottis formicifera* which has been lost for some years. The plants are smaller but a few may flower in September.

We heard on Monday that one of our boys was wounded on 15th. June....

Kaitaia, 8 August 1915

If I succeed in getting any *Chiloglottis formicifera* in flower later, I will certainly send you some!

I delayed writing so as to be able to send you a description of *Pterostylis Matthewsii* [*P. nutans*] as suggested but unfortunately I discovered a minute, red, leaf eating insect, so I promptly put the pot into a card-board box – introduced the stem of my pipe through a hole, and the bowl in my mouth, and blew smoke into the box as if my life depended upon it. Result, in a few days the orchids began to wither and finally succumbed to the treatment. I am very sorry I acted so rashly as I fear specimens will be delayed for another year. I had only gathered one and pressed it before hearing from you. I was comparing the pressed specimen with *P. foliata* in *Illustrations* last night – and it appears to me very distinct. The leaves, 6 to 8, form a perfect rosette. The underground part of the plant is fairly stout, the adult tuber being about $\frac{5}{8}$ ins. long and $\frac{4}{8}$ in. diameter – in addition to a new tuber being formed beside the old one, each of the several roots terminates with a new tuber – see sample enclosed herewith.

I am not aware that any other of the *Pterostylis* family throw off new tubers from the roots!

Our boys at the front, as far as we know, are alright. I do not know where my wounded stepson is but the last report was that he was “Convalescent”. I sincerely trust that your son will return safely to you all after having done his duty....

Kaitaia, 23 August 1915

I feel that you have done me an undeserved honour in “dedicating” the new *Pterostylis* to me. Your description of *P. Matthewsii* [*P. nutans*] appears very accurate as far as I can judge.

I am pleased that you have added var. *gracilis* [*Diplodium trullifolium*¹⁷]. There is a plentiful form about here that is brown coloured in the stems being constant in that respect, even the flowers having a more or less bronzy appearance.

[Four letters with no significant mention of orchids]

34 Clonbern Rd Remuera, 12 July 1918

.. after our recent conversation when you stated that Dr. Rogers was of course at liberty to describe the “Cup” [he meant “Lipless”, didn’t he?] & “Pouch” *Caladenias* [*Petalochilus calyciformis* & *P. saccatus*], but was liable to have them disrated; I wrote him on the 4th July to that effect, and explained that if he was still of the same opinion, I should be pleased for him to describe them – of course I will write him and tell him what you propose doing, when he can use his own discretion. In any case a paper “On some Curious forms of *Caladenia Minor*” would be most interesting. I may say that in the Mangonui County, I have seen thousands of *C. minor* and no variations approaching the “Pouch” and “Cup” have been noted nor are variations common excepting in various types such as *C. minor*, pink [*C. bartlettii* Fig. 18], green white [*C. minor* Fig. 21], bronze [*C. aff. chlorostyla* Fig. 20] etc etc. but the essential parts of the flowers differ but little.

[Two letters without significant mention of orchids]

34 Clonbern Rd Remuera, 23 January 1920

Your kind letter of appreciation I found awaiting me upon my return from a trip to Te Whaiti with Mr Petrie.

I am delighted that you were pleased with the parcel of orchids and shall with pleasure assist you at your convenience to overhaul the *Thelymitra* section of orchids.

[At] Te Whaiti (55 miles south of Rotorua)... we saw many things of interest but, bar 4 specimens of *Prasophyllum patens* [*P. hectori*] and some *Spiranthes* and a small form of *Microtis* [*M. oligantha*] got about 4 mile from Rotorua township, I added very little to my orchid collection.

34 Clonbern Rd Remuera, 5 February 1920

Mr Carse and I were away 5 weeks . . . We spent two nights at Hauhangatai and a week at the “Haunted Whare” the balance of the time having been spent on the Waimarino Plains, Erua and Raurimu. Mr Carse is of the opinion that we collected about 60 odd plants not previously recorded from the District we collected over....

I found two *Thelymitra* – if neither is *T. pachyphylla* [form of *T. pulchella*] – both will be new, a new *Chiloglottis* (4 leaves) only three plants, past flowering – tubers very large – plant larger & stout – also a new *Prasophyllum*, and a form of *Corysanthes oblonga*. [C. “aestivalis”] I got a fine lot of *Thelymitra uniflora* [*T. cyanea*] (some pure white, others white and purple – plentiful), *T. decora*, *T. pachyphylla*, *T. new*, *Prasophyllum Colensoi*, *P. new*, *Pterostylis Banksii* [*P. patens?*] (quite different to the northern form) *Pteros. micromega*, *Pteros.* possibly a form of *australis* two species, *Microtis*. Saw about 20 different species of orchids and have spirit specimens of most of them....

P.S. Will have a good lot of specimens for you when I have time to make them up. Mr Carse has left the drying papers with me and I’m glad to make use of them.

34 Clonbern Rd Remuera, 31 October 1921

I enclose photos of my new orchid [*Pterostylis humilis*] which I believe to be a new genus to this Dominion. You will probably call it another freak!

The photos show the adult dried specimen found within a mile of the “Haunted Whare” last Jan. and a flowering specimen grown at Remuera from a tuber of the dried plant. Three out of four plants attempted to flower but insects destroyed two buds, which anyone could see would have been the same as the flower photographed. The column which is widely winged is beneath the lip and the anther is two lobed. The lip is larger, of a deep red colour with a claw at each side of the base, The lower sepal is tongue shaped. The photos give a good idea of the flower. I have put the photoed specimens in spirits so have nothing to give my friends but photos which are natural size. I have mailed photos to Dr. Rogers to see if he knows this genus – if new, he may possibly describe it.

I have also written to Mr. Meade, Caretaker of the Good Cottages near Ruapehu and sent him photos and have asked him to keep a lookout for it and dry me some specimens if he should come across it.

34 Clonbern Rd Remuera, [date obscure] 1922 [date in pencil on photocopy]

Your favour of 28.12.21 to hand and I must thank you for your good wishes for Xmas and the New Year....

Have returned after a couple of very interesting weeks spent at Waimarino, with my camera. I have got 10 or more splendid negatives of the orchids growing in that district including *Gastrodia Cunninghamii* – a new *Thelymitra* which I intend to call *T. acuta* and a new *Corysanthes* – also *Th. decora*, *T. pachyphylla* [*T. pulchella* with fimbriate column arms], *T. uniflora* [*T. cyanea*], *T. venosa* [also *T. cyanea?*], *Pterostylis micromega* etc. etc...

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Back cover: some orchids mentioned in letters but not otherwise described by H.B. Matthews

18. *Caladenia bartlettii* listed by Blen in 17 Nov. 1912 as *C. minor*, as per Cheeseman³, was lumped into Hooker's description of *C. minor* s.l.^{6,10} but wasn't on the Type sheet. It has its four "fingers" held coplanar, obtuse sepals (unusual in *Caladenia*) and two marginal calli at each side of the narrow midlobe. Dan Hatch first split off this species¹⁰ as a variety of *C. carnea* in 1949.

19. *Caladenia* aff. *bartlettii* has to be Blen's "*Caladenia* 'non-expanding fls' most hairy of all vars." in his 17 Nov. 1912 list. It is rare now and hairy, on tepal backs, ovary and stem but the flower opened freely in this Shenstone, Te Pahi plant of 5 Nov. 2000 also at Scott Point, 31 Oct. 2004. Dr. Molloy's cultivated specimens from Sweetwater c. 1988, show the hairs better. Blen was too early on 14 Oct. 1912 for open flowers. Note: the flower stands only 11mm tall between sepal tips; solitary marginal callus; recurved lateral sepals; midlobe margins deflexed in mature specimens and flowers two weeks later than the bigger *C. bartlettii*. Hairiness here was going out of focus against the dark background.

20. *Caladenia* aff. *chlorostyla* of Bruce Irwin's⁹ has to be Blen's *C.* "Bronze" in the list of 17 Nov. 1912. Doug McCrae included this with *C. minor* s.s. in 1988 as *C.* "green column". He identified it to me at Albany Scenic Reserve on 18 Nov. 1993 including red or green stemmed ones. *C. minor* s.s. and Green stem together were duly re-described as *C. chlorostyla* in 1997. Bruce could not convince Doug, Dr Molloy or me that *C.* aff. *chlorostyla* was different from *C. chlorostyla* (*minor*) until he wrote it up informally⁹, in June 2001 including red or green stemmed forms. Later flowering and red glands on the dorsal sepal particularly, separate it from *C. minor* and give it that bronze look, just visible in this Manapouri South Arm specimen, 21 Jan. 2004.

21. *Caladenia minor* listed by Blen on 17 Nov. 1912 as *C.* "green-white" is this species; Te Pahi, 21 Oct. 2001. Hooker's Type sheet at Kew had four of these specimens. Most of his lumped-other-species are pink as he described but this one, designated by Mark Clements as *C. minor*¹⁵ in 1989, never is. Cheeseman's *C. minor* (pink with obtuse sepals³) is actually *C. bartlettii* so he just set aside Blen's "Green-white" specimens with the acute sepals and serrated midlobe.

22. *Nematoceras rivularis* with *N. pandurata* from RHM's colony of Okahu "*Corysanthes rotundifolia*" along Okahu creek on 23 Oct. 2005. About 1% of the plants had pandurate leaves as occur in all the *N. rivularis* aggregate. Possibly it was precipitate to make *N. pandurata*⁴ a separate species. Cheeseman first denoted a specimen from a different species at Titirangi in 1873, as *Corysanthes rotundifolia* var. *pandurata* but credited RHM with the original find to introduce the variety in his 1925 Manual³.

23. *Thelymitra* aff. *longifolia* "stunted" sent to Cheeseman by RHM on 3 & 10 Oct. 1899, the latter "past its prime, and of a pale pink colour". He hunted again for it on 29 Oct. 1900 but found no more until 5 Jan 1903 (so late?) growing close together and seemingly having more than one leaf each. Probably there were many non-flowering plants in the overcrowded colony. **Fig 23** from a sandy trackside at Scott Point, 10 Oct. 2002, is a healthy specimen only 40mm tall, locally common and white. Height varies, possibly dependent on nutrients available to the plant. There is only one curled and Vee section leaf per plant but it has to be RHM's plant which Cheeseman set aside. RHM asked him about it on 5 Oct. 1903 but that is the last mention.

24. *Thelymitra matthewsii* - also front cover - found by RHM's "Boys" (Blen was 48) on sand hills between Lake Tangonge and the beach then sent on 21 Sept. 1909 to Cheeseman who's classification remains intact in 2006. Earliest of the sun orchids, flowering in Aug/Sept. This one from a north facing and sun drenched pocket of sand in the iron pan crust on old sandhills at Te Pahi, 5 Sept. 2000. Self pollinated soon after opening with its four pollinia on the stigma.

25. *Thelymitra* "sansfimbria" photographed in swampy tea tree at Kaitaia by Kevin Matthews on 30 Nov. 2005, is perfumed and unstriped which sets it aside from striped, non perfumed *T. pulchella* with its similar column. This has to be RHM's 12 & 28 Dec. 1904 *Thelymitra* from a wet flat west of Lake Tangonge with no "plumes" on the column arms and "colour of the flower like *T. pulchella*, but darker or deeper shade." No mention of stripes. Cheeseman wrote on 18 Dec. 1904 that he was going to name it after RHM then seemed to forget all about it.





Clockwise from top left,
Figs 22-25