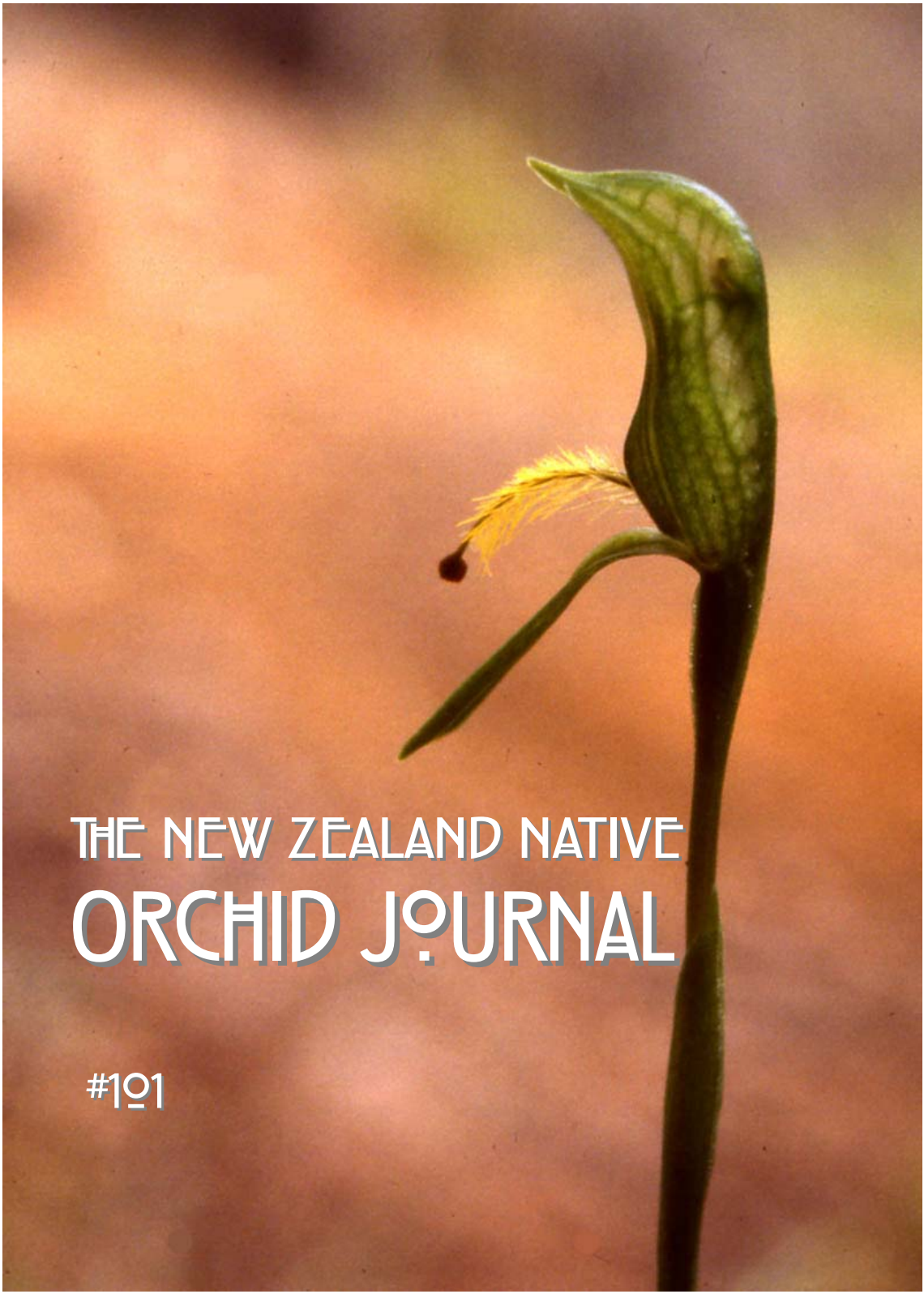

THE NEW ZEALAND NATIVE ORCHID JOURNAL

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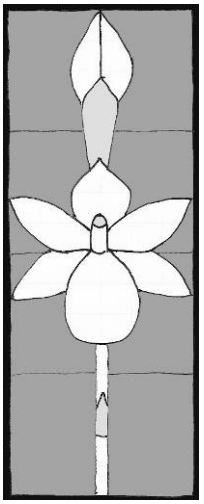

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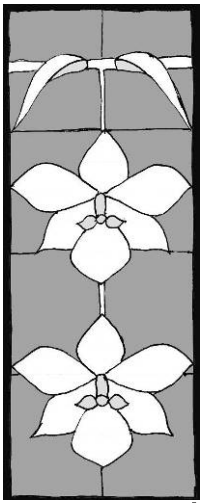


EDITORIAL: IAN ST GEORGE

Ernie's orchid

The Alexander Turnbull Library in Wellington has a microfilm of RH Matthews's diaries 1896-1912. There are cryptic items on orchid discoveries scattered through the pages, but the detail covered in his letters to Cheeseman is absent from the diaries. Every December he ended the year with his financial accounts, and every January he began the year with a "memorandum", a summary by date of things to look out for this year. The memoranda contain a lot of orchid entries, many not covered in the previous year's diary, suggesting he must also have kept a botanical notebook, now lost.

The memorandum for January 1904 has

July 2 Ernie discovered Pteros squamata (not in flower).

Sep. 4 (Ernie's orchid came out in flower

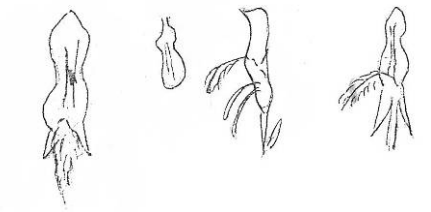
Sep. 5 (picked Ernie's orchid.

Sep. 13 Pamaddius elliptica. Beautifully out. 40yds before peg 312 on new road to Herekino, near a young tree & Ernie's new orchid.

Sep. 21 Second of Ernie's new orchids.

Sep. 24 Another of Ernie's orchids.

Further down there is a drawing labeled "Ernie's orchid Sep.5 04".



This is Matthews's account of *Pterostylis (Plumatichilos) tasmanica.*

There are tantalizing references to unidentified orchids…

1897 memorandum: *Sep.17 tulip orchid sent to Cheeseman.* No 1897 letters survive in the Matthews correspondence, but is *Anzybas rotundifolius* the "tulip orchid"?).

1898 *Sep 4. looked for Bearded Griffin (Calochilus paludosus) but couldn't find any. Too early I believe. Sep.6 Blen found a new orchid below the quarry, something like Corysanthes triloba. Nov.14 Prasophyllum medium. 16 Dec Walked to Waiorepa and picked a few fairly good specimens of Caleana minor and then down to the little bush below and got specimens of Gastrodia, rather late for them.*

1900 *Aug.8 Dug up a fine lot of Chiloglottis formicifera to transplant near home.*

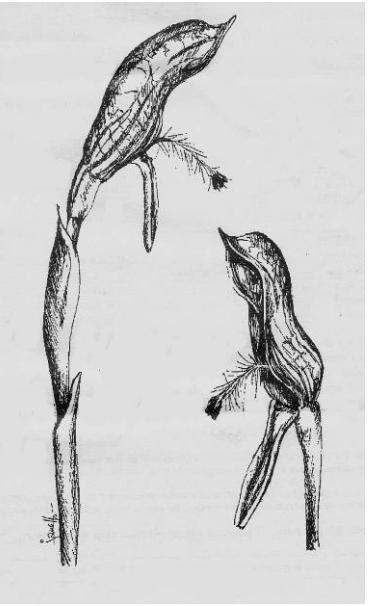
1902 *Aug 23 Picked Chiloglottis formicitis (sic). Oct.29 Corysanthes rotundifolia Kaiharehare creek. Nov.24 Pteros micromega too late, mostly in fruit. Dec.9 Lake swamp orchid found by Ernie.*

1903 *Aug.16 Corysanthes Matthewsii still out. Sep.14 Caladenia minor small form.…*

1910 *Oct 10 Ernie found another new orchid slope hillside overlooking Kingsford's valley. Oct 11 sent to Cheeseman.* A letter dated 11 October is among the Matthews correspondence, and is reprinted in Eric Scanlen's *Matthews & Son on orchids.* Buy a copy now and find out what Ernie discovered.

Pterostylis squamata is a West Australian of a different form altogether. *P. tasmanica* has been known as *P. plumosa* and *P. barbata.* Ernie was Ernest William Matthews, the nephew of RH Matthews. The road to Herekino has some interesting stopping places, but peg 312 is long gone.

"P. barbata* and *P. squamata".
From Rica Ericson's *Orchids of the west*. Paterson Brokenshea, Perth, 1965.



Plumatichilos plumosum, Jane Hutchinson, from the cover of *J Nossa.*

Pterostylis turfosa,
photo Ron Heberle,

The New Zealand orchids:

the editor's annual list of New Zealand orchid taxa.

– a personal opinion, wrested from observation, discussion, plagiarism and taxonomic punch-ups. I am indebted to Murray Dawson of Landcare Research, Lincoln, for carefully cross-checking the names against independent lists, correcting typos, and standardising the author and journal titles. Author abbreviations are standardised following Brummitt & Powell (1992) [1], and publication titles are abbreviated (where possible) according to Botanico-Periodicum-Huntianum, Suppl. (BPH/S) (1991) and Taxonomic Literature (TL2) (1976–1988) and its Supplements (TL2/S) (1992–2000). These resources are available electronically at the International Plant Names Index (IPNI, see http://www.ipni.org/index.html).

Acianthus R.Br. Prodr. Fl. Nov. Holland.: 321 (1810) Acianthus alliance

Acianthus sinclairii Hook.f. Fl. Nov.-Zel. 1: 245 (1853).
Acianthus fornicatus var. sinclairii (Hook.f.) Hatch. Trans. & Proc. Roy. Soc. New Zealand 75: 369 (1945).

Adelopetalum Fitzg., J. Bot. 29: 152 (1891) Bulbophyllum alliance

Adelopetalum tuberculatum (Colenso) D.L.Jones, M.A.Clem. & Molloy. Orchadian 13(11): 498 (2002).
Bolbophyllum tuberculatum Colenso. Trans. & Proc. New Zealand Inst. 16: 336 (1884).
Bulbophyllum exiguum as meant by Buchanan. Trans. & Proc. New Zealand Inst. 16: 397 (1884), is not that of F.Muell. (1861).

Adenochilus Hook.f. Fl Nov.-Zel. 1: 246 t.56 (1853)

Adenochilus gracilis Hook.f. Fl. Nov.-Zel. 1: 246 t.56 (1853).

Aporostylis Rüpp & Hatch. Proc. Linn. Soc. New South Wales 70: 60 (1946)

Aporostylis bifolia (Hook.f.) Rüpp & Hatch. Proc. Linn. Soc. New South Wales 70: 60 (1946).
Caladenia bifolia Hook.f. Fl. Nov.-Zel. 1: 247 (1853).
Chiloglottis traversii F.Muell. Veg. Chath. Is. 51 (1864).
Caladenia macrophylla Colenso. Trans. & Proc. New Zealand Inst. 27: 396 (1895).
Chiloglottis bifolia (Hook.f.) Schltr. Engl. Bot. Jahrb. 45: 383 (1911).

Caladenia R.Br. Prodr. Fl. Nov. Holland. (1810)

Caladenia alata R.Br. Prodr. Fl. Nov. Holland.: 324 (1810).
Petalochilus alatus (R.Br.) D.L.Jones & M.A.Clem. Orchadian 13(9): 406 (2001).
Caladenia minor Hook.f. var. exigua Cheeseman. Man. New Zealand Fl. 688 (1906).
Caladenia exigua Cheeseman. Trans. & Proc. New Zealand Inst. 45: 96 (1913).
Caladenia carnea R.Br. var. alata (R.Br.) Domin. Bibliotheca Botanica Heft 85: 549 (1915).
Caladenia carnea R.Br. var. exigua (Cheeseman) Rüpp. Proc. Linn. Soc. New South Wales 69: 75 (1944).
Caladenia holmesii Rüpp. Victoria Naturalist 70: 179 (1954).
Caladenia catenata (Sm.) Druce var. exigua (Cheeseman) W.M.Curtis. Stud. Fl. Tasman., 4A: 133 (1979).

Caladenia bartlettii (Hatch) D.L.Jones, Molloy & M.A.Clem. Orchadian 12(5): 227 (1997).
Petalochilus bartlettii (Hatch) D.L.Jones & M.A.Clem. Orchadian 13(9): 406 (2001).
Caladenia carnea R.Br. var. bartlettii Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 402 (1949).

Caladenia chlorostyla D.L.Jones, Molloy & M.A.Clem. Orchadian 12(5): 223 f1 (1997).
Petalochilus chlorostylus (D.L.Jones, Molloy & M.A.Clem.) D.L.Jones & M.A.Clem. Orchadian 13(9): 406 (2001).
Caladenia catenata as meant by Cooper. Field guide to the NZ native orchids 17 (1984), is not that of Druce (1917).
Caladenia "green column" tagname.
Scanlen argues that C. chlorostyla may be a synonym for C. minor. A similar but distinct plant is known as C. aff. chlorostyla.

Caladenia minor Hook.f. Fl. Nov.-Zel. 1: 247 t.56b (1853).
Petalochilus minor (Hook.f.) D.L.Jones & M.A.Clem. Orchadian 13(9): 410 (2001).
Caladenia carnea var. pygmaea (R.S.Rogers) Rüpp. Proc. Linn. Soc. New South Wales 69: 74 (1944).
Caladenia carnea R.Br. var. minor (Hook.f.) Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 401 (1949).
Caladenia catenata var. minor (Hook.f.) W.M.Curtis. Stud. Fl. Tasman., 4A: 106 (1979).
The identity of Caladenia minor is not clear: it may be a synonym for C. alata, C. chlorostyla or C. aff. chlorostyla: there are 4 on the Type sheet.

Caladenia nothofageti D.L.Jones, Molloy & M.A.Clem. Orchadian 12(5): 226 f.1 (1997).
Petalochilus nothofageti (D.L.Jones, Molloy & M.A.Clem.) Jones & M.A.Clem. Orchadian 13 (9): 410 (2001).

Caladenia variegata Colenso. Trans. & Proc. New Zealand Inst. 17: 248 (1885).
Petalochilus variegatus (Colenso) D.L.Jones & M.A.Clem. Orchadian 13(9): 410 (2001).
Caladenia "big pink" tagname. Some flowers have a clear two rows of calli on the labellum, others have extra calli scattered to either side of the two rows.

Caladenia aff. fuscata a small pink Caladenia which appears similar to this variable Australian species, with 1–3 flowers (see Scanlen. NZNOG Journal 72: 22 [1999]). It appears to be identical with Matthews's Ms. Caladenia "nitida-rosea".

Caladenia aff. pusilla a tiny pink Caladenia with broad oval sepals and petals, an incurved dorsal sepal and a triangular labellar midlobe; grows near Wellington, Taranaki and in Northland (W.M.Curtis. Stud. Fl. Tasman., 4A: 133 [1980]).

Caladenia subgenus Stegostyla (D.L.Jones & M.A.Clem.) Hopper and A.P.Br. Austral. Syst. Bot. 17: 171–240 (2004).

Caladenia atradenia D.L.Jones, Molloy & M.A.Clem. Orchadian 12(5): 221 (1997).
Stegostyla atradenia (D.L.Jones, Molloy & M.A.Clem.) D.L.Jones & M.A.Clem. Orchadian 13(9): 414 (2001).
Caladenia carnea R.Br. var. minor forma calliniger Hatch. Trans. Roy. Soc. New Zealand, Bot. 2: 187 (1963).
Caladenia iridescens as meant by Hatch. NZNOG Newsletter 16: 1 (1985), is not that of R.S.Rogers (1920).
"Caladenia calliniger", Caladenia aff. iridescens tagnames.

Caladenia lyallii Hook.f. Fl. Nov.-Zel. 1: 247 (1853).
Stegostyla lyallii (Hook.f.) D.L.Jones & M.A.Clem. Orchadian 13(9): 413 (2001).
There seem to be a number of taxa currently included in C. lyallii agg., including a small form from Iwitahi and Nelson Lakes.

Caladenia aff. alpina. Plants closer to C. alpina than to C. lyallii are in NZ. See St George. NZNOG Journal 63: 4 (1997).

Calochilus R.Br. Prodr. Fl. Nov. Holland.: 320 (1810)

Calochilus aff. herbaceus.
Calochilus herbaceus as meant by McCrae NZNOG Newsletter 24: 9 (1987) is not that of Lindl.
Calochilus campestris as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 248 (1949), is not that of R.Br. (1810).

Calochilus paludosus R.Br. Prodr. Fl. Nov. Holland.: 320 (1810).

Calochilus robertsonii Benth. Fl. Austral. 6: 315 (1873).
Calochilus campestris as meant by Fitzg. Austral. Orchids 1(4): t.6 (1878), is not that of R.Br. (1810).
Calochilus campestris as meant by Cheeseman. Man. New Zealand Fl. 686 (1906), is not that of R.Br. (1810).

Chiloglottis R.Br. Prodr. Fl. Nov. Holland.: 322 (1810)

Chiloglottis cornuta Hook.f. Bot. Antarct. Voy., Vol. 1, Fl. Antarct.: 69 (1844).
Caladenia cornuta (Hook.f.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
Simpliglottis cornuta (Hook.f.) Szlach. Polish Bot. J. 46(1): 13 (2001).

Chiloglottis trapeziformis Fitzg. Austral. Orchids 1 (3): t.8 (1877).
Myrmechila trapeziformis (Fitzg.) D.L.Jones & M.A.Clem. Orchadian 15: 37 (2005).
Chiloglottis formicifera as meant by Cheeseman Trans. & Proc. New Zealand Inst. 33: 312 (1900), appears not to be that of Fitzg. (1877), but argument continues.

Chiloglottis valida D.L.Jones. Austral. Orchid Res. 2: 43-44 t 54 p154 (1991).
Simpliglottis valida (D.L.Jones) Szlach. Polish Bot. J. 46(1): 14 (2001).
Chiloglottis gunnii as meant by Molloy. Native orchids of NZ 9 (1983), is not that of Lindl. (1840).

Corunastylis Fitzg. Austral. Orchids 2(3): t.1 (1888) Prasophyllum alliance

Corunastylis nuda (Hook.f.) D.L.Jones & M.A.Clem. Orchadian 13(10): 461 (2002).
Prasophyllum nudum Hook.f. Fl. Nov.-Zel. 1: 242 (1853).
Prasophyllum tunicatum Hook.f. Fl. Nov.-Zel. 1: 242 (1853).
Prasophyllum variegatum Colenso. Trans. & Proc. New Zealand Inst. 20: 208 (1888).
Genoplesium nudum (Hook.f.) D.L.Jones & M.A.Clem. Lindleyana 4(3): 144 (1989).

Corunastylis pumila (Hook.f.) D.L.Jones & M.A.Clem. Orchadian 13(10): 461 (2002).
Prasophyllum pumilum Hook.f. Fl. Nov.-Zel. 1:242 (1853).
Genoplesium pumilum (Hook.f.) D.L.Jones & M.A.Clem. Lindleyana 4(3): 144 (1989).

The Corybas alliance (Corybas Salisb. Parad. Lond. t.83 [1805])

Anzybas carsei (Cheeseman) D.L.Jones & M.A.Clem. Orchadian 13(10): 443 (2002).
Corybas carsei (Cheeseman) Hatch. Trans. & Proc. Roy. Soc. New Zealand 75: 367 (1945).
Corysanthes carsei Cheeseman. Trans. & Proc. New Zealand Inst. 44: 162 (1912).
Corybas unguiculatus as meant by L.B.Moore. Fl. New Zealand Vol. 2: 116 (1970), is not Corysanthes unguiculatus of R.Br. (1810).

Anzybas rotundifolius (Cheeseman) D.L.Jones & M.A.Clem. Orchadian 13(10): 443 (2002).
Corybas rotundifolius (Hook.f.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
Nematoceras rotundifolia Hook.f. Fl. Nov.-Zel. 1: 251 (1853).
Corysanthes rotundifolia (Hook.f.) Hook.f. Handb. N. Zeal. Fl. 266 (1864).
Corysanthes matthewsii Cheeseman. Trans. & Proc. New Zealand Inst. 31: 351 (1899).
Corybas unguiculatus as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 75: 367 (1945), is not Corysanthes unguiculatus of R.Br. (1810).

Corybas cheesemanii (Hook.f. ex Kirk) Kuntze. Revis. Gen. Pl. 2: 657 (1891).
Corysanthes cheesemanii Hook.f. ex Kirk. Trans. & Proc. New Zealand Inst. 3: 180 (1871).
Corybas aconitiflorus as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 75: 367 (1945), is not that of Salisb. (1807).

Molloybas cryptanthus (Hatch) D.L.Jones & M.A.Clem. Orchadian 13(10): 448 (2002).
Corybas cryptanthus Hatch. Trans. Roy. Soc. New Zealand 83: 577 (1956).
Corybas saprophyticus Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 366 t.71 (1952), is not that of Schltr. (1923).

Nematoceras acuminatum (M.A.Clem. & Hatch) Molloy, D.L.Jones & M.A.Clem. Orchadian 13 (10): 449 (2002).
Corysanthes acuminata (M.A.Clem. & Hatch) Szlach. Richardiana 3(2): 97 (2003).
Corybas acuminatus M.A.Clem. & Hatch. New Zealand J. Bot. 23: 491 f.2 (1985).
Corybas rivularis as meant by Cheeseman. Man. New Zealand Fl. 697 (1906), and others (1906–1985), is not Acianthus rivularis of A.Cunn. (1837).

Nematoceras hypogaeum (Colenso) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corysanthes hypogaea Colenso. Trans. & Proc. New Zealand Inst. 16: 336 (1884).

Nematoceras iridescens (Irwin & Molloy) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corysanthes iridescens (Irwin & Molloy) Szlach. Richardiana 3(2): 98 (2003).
Corybas iridescens Irwin & Molloy. New Zealand J. Bot. 34:1 (1996).
Corybas "A" tagname.

Nematoceras longipetalum (Hatch) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corybas macranthus (Hook.f.) Rchb.f. var. longipetalus Hatch. Trans. & Proc. Roy. Soc. New Zealand 76: 580 t.60(1) (1947).
Corybas longipetalus (Hatch) Hatch. NZNOG Journal 47: 6 (1993), is not that of Schltr. (1923).
Corybas orbiculatus (Colenso) L.B.Moore. Fl. New Zealand Vol. 2: 118 (1970), is not Corysanthes orbiculata of Colenso (1891).

Nematoceras macranthum Hook.f. Fl. Nov.-Zel. 1: 250 (1853).
Corybas macranthus (Hook.f.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
Corysanthes macrantha (Hook.f.) Hook.f. Handb. N. Zeal. Fl. 266 (1864).
There are several forms in this aggregate. Probable hybrids with insect-pollinated members of the N. trilobum aggregate have been reported.

Nematoceras orbiculatum (Colenso) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corysanthes orbiculata Colenso. Trans. & Proc. New Zealand Inst. 23: 389 (1891).
Corybas "short tepals", Corybas "C", tagnames.
Corybas orbiculatus as meant by L.B.Moore. Fl. New Zealand Vol. 2: 118 (1970) and others

(1970–1996), is not Corysanthes orbiculatus of Colenso (1891) - see Molloy & Irwin . New Zealand J. Bot. 34 (1): 5 (1996).

Nematoceras panduratum (Cheeseman) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corysanthes rotundifolia var. pandurata Cheeseman. Man. New Zealand Fl. 366 (1925), is not Nematoceras rotundifolia of Hook.f.
This is regarded as a synonym of Nematoceras rivulare.

Nematoceras papa (Molloy & Irwin) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corybas papa Molloy & Irwin. New Zealand J. Bot. 34(1): 5 (1996).
Corybas "Mt Messenger " and Corybas "B" tagnames.

Nematoceras papillosum (Colenso) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Corysanthes papillosa Colenso. Trans. & Proc. New Zealand Inst. 16: 337 (1884).
This has been regarded as a synonym of Nematoceras macranthum, and it may be a distinct member of that aggregate.

Nematoceras rivulare (A.Cunn.) Hook.f. Fl. Nov.-Zel. 1: 251 (1853).
Acianthus rivularis A.Cunn. Companion Bot. Mag. 2: 376 (1837).
Corysanthes rivularis (A.Cunn.) Hook.f. Handb. N. Zeal. Fl. 266 (1864).
Corybas rivularis (A.Cunn.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
Corysanthes rotundifolia as meant by Cheeseman. Man. New Zealand Fl. 695 (1906), is not Nematoceras rotundifolia of Hook.f. (1853).
Corybas orbiculatus as meant by L.B.Moore. Fl. New Zealand Vol. 2: 118 (1970) and others (1970–1996), is not Corysanthes orbiculatus of Colenso (1891)
Corybas "Kerikeri " tagname. The Nematoceras rivulare complex includes unnamed taxa tagged N. "Kaimai", N. "restarea", N. "Kaitarakihi", N. "whiskers" (aka N. "viridis"), N. "Mangahuia", N. "sphagnum", N. "veil" and N. "Pollok".

Nematoceras trilobum Hook.f. Fl. Nov.-Zel. 1: 250 (1853).
Corybas trilobus (Hook.f.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
Corysanthes triloba (Hook.f.) Hook.f. Handb. N. Zeal. Fl. 265 (1864).
About 25 taxa in the N. trilobum complex are of speculative taxonomic status; they include the tiny May to July flowering forms tagged N. "pygmy"; the later-flowering N. "Trotters" (NZNOG Newsletter 28: 10–13 [1988]), N. "Rimutaka" (NZNOG Journal 58: 8–9 [1996]), N. "round leaf", N. "craigielea", N. "darkie", N. "trisept", N. "triwhite" and many others, including perhaps a tetraploid form on the Chathams (Molloy BPJ Orchids of the Chatham Islands. DOC, 2002).

Singularybas oblongus (Hook.f.) Molloy, D.L.Jones & M.A.Clem. Orchadian 13(10): 449 (2002).
Nematoceras oblonga Hook.f. Fl. Nov.-Zel. 1: 250 t.57B (1853).
Corysanthes oblonga (Hook.f.) Hook.f. Handb. N. Zeal. Fl. 266 (1864).
Corybas oblongus (Hook.f.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
There are two or three taxa included in this complex. One was named in manuscript by Matthews as Corysanthes "aestivalis".

Cryptostylis R.Br. Prodr. Fl. Nov. Holland.: 317 (1810)

Cryptostylis subulata (Labill.) Rchb.f. Beitr. Syst. Pflanzenk. 15 (1871).
Malaxis subulata Labill. Nov. Holl. Pl. 2: 62 t.212 (1806).

Cyrtostylis R.Br. Prodr. Fl. Nov. Holland.: 322 (1810) Acianthus alliance

Cyrtostylis oblonga Hook.f. Fl. Nov.-Zel. 1: 246 (1853).
Acianthus reniformis var. oblonga (Hook.f.) Rüpp & Hatch. Proc. Linn. Soc. New South Wales 70: 59 (1946).

Cyrtostylis reniformis R.Br. Prodr. Fl. Nov. Holland.: 322 (1810).
Cyrtostylis rotundifolia Hook.f. Fl. Nov.-Zel. 1: 246 (1853).
Cyrtostylis macrophylla Hook.f. Fl. Nov.-Zel. 1: 246 (1853).
Caladenia reniformis (R.Br.) Rchb.f. Beitr. Syst. Pflanzenk. 67 (1871).
Cyrtostylis oblonga (Hook.f.) var. rotundifolia (Hook.f.) Cheeseman. Man. New Zealand Fl. 685 (1906).
Acianthus reniformis (R.Br.) Schltr. Engl. Bot. Jahrb. 34: 39 (1906).
Acianthus reniformis var. reniformis (Hook.f.) Rüpp & Hatch. Proc. Linn. Soc. New South Wales 70: 59 (1946).

Danhatchia Garay & Christenson. Orchadian 11(10): 469 f.471 (1995)

Danhatchia australis (Hatch) Garay & Christenson. Orchadian 11(10): 470 (1995).
Yoania australis Hatch. Trans. Roy. Soc. New Zealand, Bot. 2: 185 (1963).

Drymoanthus Nicholls. Victorian Naturalist 59: 173 (1943)

Drymoanthus adversus (Hook.f.) Dockrill. Australasian Sarcanthinae 32 t.3 (1967).
Sarcochilus adversus Hook.f. Fl. Nov.-Zel. 1: 241 (1853).
Sarcochilus breviscapa Colenso. Trans. & Proc. New Zealand Inst. 14: 332 (1882).

Drymoanthus flavus St George & Molloy. New Zealand J. Bot. 32: 416 f.1 (1994).

Earina Lindl. Bot. Reg. sub t.1699 (1834)

Earina aestivalis Cheeseman. Trans. & Proc. New Zealand Inst. 51: 93 (1919).

Earina autumnalis (G.Forst.) Hook.f. Fl. Nov.-Zel. 1: 239 (1853).
Epidendrum autumnale G.Forst. Prodr. 60 (1786).
Earina suaveolens Lindl. Bot. Reg. 29 (1843).
Earina alba Colenso. Trans. & Proc. New Zealand Inst. 18: 267 (1886).

Earina mucronata Lindl. Bot. Reg. 20 sub t.1699 (1834).
Earina quadrilobata Colenso. Trans. & Proc. New Zealand Inst. 15: 325 (1883).

Gastrodia R.Br. Prodr. Fl. Nov. Holland.: 330 (1810)

Gastrodia cunninghamii Hook.f. Fl. Nov.-Zel. 1: 251 (1853).
Gastrodia leucopetala Colenso. Trans. & Proc. New Zealand Inst. 18: 268 (1886).

Gastrodia minor Petrie. Trans. & Proc. New Zealand Inst. 25: 273 t.20 f.5–7 (1893).

Gastrodia "long column" agg.: there are a number of undescribed Gastrodia with a long column.

Gastrodia aff. sesamoides. Gastrodia sesamoides as meant by Cheeseman. Man. New Zealand Fl. 697 (1906), is not that of R.Br. (1810).
Gastrodia "city" appears to be a variant.

Ichthyostomum D.L.Jones, M.A.Clem. & Molloy. Orchadian 13(11): 499 (2002) Bulbophyllum alliance

Ichthyostomum pygmaeum (Sm.) D.L.Jones, M.A.Clem. & Molloy. Orchadian 13(11): 499 (2002).
Dendrobium pygmaeum Sm. in Rees. Cycl. (Rees) 11: n.27 (1808).
Bulbophyllum pygmaeum (Sm.) Lindl. Gen. Sp. Orchid. Pl. 58 (1830).
Bolbophyllum ichthyostomum Colenso. Trans. & Proc. New Zealand Inst. 26: 319 (1894).

Microtis R.Br. Prodr. Fl. Nov. Holland.: 320 (1810) Prasophyllum alliance

Microtis arenaria Lindl. Gen. Sp. Orchid. Pl. t.306 (1840).
Microtis biloba Nicholls. Victoria Naturalist 66: 93 f.O–L (1949).

Microtis oligantha L.B.Moore. New Zealand J. Bot. 6: 473 f.1 (1969).
Microtis magnadenia as meant by Hatch. Trans. Roy. Soc. New Zealand, Bot. 2: 185–189 (1963), is not that of R.S.Rogers (1930).

Microtis parviflora R.Br. Prodr. Fl. Nov. Holland.: 321 (1810).
Microtis javanica Rchb.f. Bonplandia 5: 36 (1857).
Microtis benthamiana Rchb.f. Beitr. Syst. Pflanzenk. 24 (1871).
Microtis porrifolia (Sw.) R.Br. ex Spreng. var. parviflora (R.Br.) Rodway. Tasman. Fl. 159 (1903).
Microtis aemula Schltr. Bot. Jahrb. Syst. 39: 37 (1906).
Microtis bipulvinaris Nicholls. Victoria Naturalist 66: 92–94, f.A–F (1949).
Microtis holmesii Nicholls. Victoria Naturalist 66: 93 f.G–I (1949).

Microtis unifolia (G.Forst.) Rchb.f. Beitr. Syst. Pflanzenk. 62 (1871).
Ophrys unifolia G.Forst. Fl. Ins. Austr. 59 (1786).
Epipactis porrifolia Sw. Kongl. Vetensk. Acad. Nya Handl. 21: 233 (1800).
Microtis porrifolia (Sw.) R.Br. ex Spreng. Syst. Veg. (ed. 16) [Sprengel] 3: 713 (1826).
Microtis banksii A.Cunn. Bot. Mag. 62: sub 1.3377 (1835).
Microtis frutetorum Schltdl. Linnaea 20: 568 (1847).
Microtis viridis F.Muell. Fragm. (Mueller) 5: 97 (1866).
Microtis longifolia Colenso. Trans. & Proc. New Zealand Inst. 17: 247 (1885).
Microtis papillosa Colenso. Trans. & Proc. New Zealand Inst. 18: 269 (1886).
Microtis pulchella as meant by Lindl. Gen. Sp. Orchid. Pl. 395 (1840), is not that of R.Br. (1810).

There are a number of different taxa in the Microtis unifolia aggregate, perhaps including some of the taxa currently placed in synonymy.

Orthoceras R.Br. Prodr. Fl. Nov. Holland.: 316 (1810)

Orthoceras novae-zeelandiae (A.Rich.) M.A.Clem., D.L.Jones & Molloy. Austral. Orchid Res., 1: 100 (1989).
Diuris novae-zeelandiae A.Rich. Essai Fl. Nov. Zel. 163 t.25 f.I (1832).
Orthoceras solandri Lindl. Gen. Sp. Orchid. Pl. 512 (1840).
Orthoceras rubrum Colenso. Trans. & Proc. New Zealand Inst. 18: 273 (1886).
Orthoceras caput-serpentis Colenso. Trans. & Proc. New Zealand Inst. 22: 490 (1890).
Orthoceras strictum R.Br. forma viride Hatch. Trans. Roy. Soc. N.Z. Bot.2; 195 (1963).

Orthoceras strictum R.Br. Prodr. Fl. Nov. Holland.: 317 (1810).

Paracaleana Blaxell. Contr. New South Wales Natl. Herb. 4: 281 (1972)

Paracaleana minor (R.Br.) Blaxell. Contr. New South Wales Natl. Herb. 4: 281 (1972).
Caleana minor R.Br. Prodr. Fl. Nov. Holland.: 329 (1810).
Caleya minor (R.Br.) Sweet. Hort. Brit. (Sweet) 385 (1827).
Caleya sullivanii F.Muell. Australas. Chem. Druggist 4: 44 (1882).
Paracaleana sullivanii (F.Muell.) Blaxell. Contr. New South Wales Natl. Herb. 4:281 (1972).
Caleana nublingii Nicholls. Victoria Naturalist 48: 15 (1931).
Sullivania minor (R.Br.) D.L.Jones & M.A.Clem. Orchadian 15: 36 (2005).

Petalochilus R.S.Rogers. J. Bot. 62: 65 (1924) Caladenia alliance

Petalochilus calyciformis R.S.Rogers. J. Bot. 62: 66, (1924).
Moore (1970) treated this as an aberrant form of Caladenia.

Petalochilus saccatus R.S.Rogers. J. Bot. 62: 66 t.571, 4–7 (1924).
Caladenia saccata (R.S.Rogers) Hopper & A.P.Br. Austral. Syst. Bot. 17: 171–240 (2004).
Moore (1970) treated this as an aberrant form of Caladenia.

Prasophyllum R.Br. Prodr. Fl. Nov. Holland.: 317 (1810)

Prasophyllum colensoi Hook.f. Fl. Nov.-Zel. 1: 241 (1853).
Prasophyllum pauciflorum Colenso. Trans. & Proc. New Zealand Inst. 18: 273 (1886).
Prasophyllum rogersii as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 76: 290 (1946), is not that of R.S.Rogers & Rees (1921).
Probably a number of taxa, possibly including Irwin's P. “A” and P. “B” (NZNOG Journal 79: 9–10 [2001]).

Prasophyllum hectori (Buchanan) Molloy, D.L.Jones & M.A.Clem. Orchadian 15: 41 (2005).
Gastrodia hectori Buchanan. Trans. & Proc. New Zealand Inst. 19: 214 (1886).
Prasophyllum patens as meant by Cheeseman. Man. New Zealand Fl. (1906), is not that of R.Br. (1810).
Prasophyllum suttoni as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 76: 291 (1946), is not that of Rüpp (1928).

Pterostylis R.Br. Prodr. Fl. Nov. Holland.: 326 (1810)

Pterostylis agathicola D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 266 (1997).
Pterostylis montana (Hatch) var. rubricaulis (Cheeseman) Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 240 plate.23 (1949).
Pterostylis graminea (Hook.f.) var. rubricaulis H.B.Matthews ex Cheeseman. Man. New Zealand Fl. 351 (1925).
Pterostylis “rubricaulis” tagname.

Pterostylis alobula (Hatch) L.B.Moore. New Zealand J. Bot. 6: 486 f.3 (1969).
Diplodium alobulum (Hatch) D.L.Jones, Molloy & M.A.Clem. Austral. Orchid Res. 4: 70 (2002).
Pterostylis trullifolia as meant by Cheeseman. Man. New Zealand Fl. (1906), is not that of Hook.f.
Pterostylis trullifolia Hook.f. var. alobula Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 244, t.30, f.3E–H (1949).

Pterostylis alveata Garnet. Victoria Naturalist 59: 91 (1939).
Diplodium alveatum (Garnet) D.L.Jones, Molloy & M.A.Clem. Austral. Orchid Res. 4: 70 (2002).

Pterostylis areolata Petrie. Trans. & Proc. New Zealand Inst. 50: 210 (1918).

Pterostylis auriculata Colenso. Trans. & Proc. New Zealand Inst. 22: 489 (1890).
Pterostylis "Catlins" tagname

Pterostylis australis Hook.f. Fl. Nov.-Zel. 1: 248 (1853).

Pterostylis banksii A.Cunn. Companion Bot. Mag. 2: 376 (1837).
Pterostylis emarginata Colenso. Trans. & Proc. New Zealand Inst. 15: 328 (1883).
Pterostylis speciosa Colenso. Trans. & Proc. New Zealand Inst. 22: 488 (1890).
Pterostylis subsimilis Colenso. Trans. & Proc. New Zealand Inst. 28: 611 (1896).

Pterostylis aff. banksii A smaller taxon than true P. banksii, common around Wellington, and apparently found elsewhere (see NZNOG Journal 80: 14,19 [2001]).

Pterostylis brumalis L.B.Moore. New Zealand J. Bot. 6: 485 f.3 (1969).
Pterostylis trullifolia Hook.f. var. rubella Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 244 (1949).
Diplodium brumalis (L.B.Moore) D.L.Jones, Molloy & M.A.Clem. Austral. Orchid Res. 4: 70 (2002).

Pterostylis cardiostigma D.Cooper. New Zealand J. Bot. 21: 97 f.1,2 (1983).

Pterostylis cernua D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 267 f (1997).

Pterostylis foliata Hook.f. Fl. Nov.-Zel. 1: 249 (1853).
Pterostylis gracilis Nicholls. Victoria Naturalist 43: 324–326 (1927).
Pterostylis vereenae R.S.Rogers. Trans. & Proc. Roy. Soc. South Australia 38: 360–361 f.18(2) (1914).

Pterostylis graminea Hook.f. Fl. Nov.-Zel. 1: 248 (1853).
There may be several taxa in the P. graminea complex, including one tagged P. "sphagnum".

Pterostylis humilis R.S.Rogers. Trans. & Proc. Roy. Soc. South Australia 46: 151 (1922).

Pterostylis irsoniana Hatch. Trans. & Proc. Roy. Soc. New Zealand 78: 104 t.18 (1950).

Pterostylis irwinii D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 269 (1997).
Pterostylis "Erua" tagname.

Pterostylis micromega Hook.f. Fl. Nov.-Zel. 1: 248 (1853).
Pterostylis polyphylla Colenso. Trans. & Proc. New Zealand Inst. 22: 489 (1890).
Pterostylis furcata Lindl. var. micromega Hatch. Trans. Roy. Soc. New Zealand 80: 326 (1953).

Pterostylis montana Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 239 t.22 (1949).

Pterostylis aff. montana agg.: includes several undescribed taxa.

Pterostylis nutans R.Br. Prodr. Fl. Nov. Holland.: 327 (1810).
Pterostylis matthewsii Cheeseman. Trans. & Proc. New Zealand Inst. 47: 46 (1915).

Pterostylis oliveri Petrie. Trans. & Proc. New Zealand Inst. 26: 270 (1894).

Pterostylis paludosa D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 271 (1997).
Pterostylis montana Hatch. var. linearis Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 243 plate.29, 2 (1949).
Pterostylis "linearis" tagname.

Pterostylis patens Colenso. Trans. & Proc. New Zealand Inst. 18: 270 (1886).
Pterostylis banksii Hook.f. var. patens (Colenso) Hatch. Trans. & Proc. Roy. Soc. New Zealand 75: 370 (1945).

Pterostylis porrecta D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 272 (1997).
Pterostylis aff. graminea.
P. "Hackett" tagname.

Pterostylis puberula Hook.f. Fl. Nov.-Zel. 1: 249 (1853).
Linguella puberula (Hook.f.) D.L.Jones, M.A.Clem. & Molloy. Austral. Orchid Res. 4: 75 (2002)
Pterostylis nana as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 77: 237 (1949), is not that of R.Br. (1810).
Pterostylis aff. nana.

Pterostylis silvicultrix (F.Muell.) Molloy, D.L.Jones & M.A.Clem. Austral. Orchid Res. 4: 66 (2002).
Pterostylis banksii var. silvicultrix F.Muell. Veg. Chath. Is. 51 (1864).

Pterostylis tanypoda D.L.Jones, Molloy & M.A.Clem. Orchadian 12(6): 273 (1997).
Hymenochilus tanypodus (D.L.Jones, Molloy & M.A.Clem.) D.L.Jones, M.A.Clem. & Molloy. Austral. Orchid Res. 4: 74 (2002).
Pterostylis cycnocephala as meant by L.B.Moore. Fl. New Zealand Vol. 2: 135 (1970) and others (1970–1997), is not that of Fitzg. (1876).

Pterostylis tasmanica D.L.Jones. Muelleria 8 (2): 177 (1994).
Pterostylis squamata as meant by Hook.f. Fl. Nov.-Zel. 1: 249 (1853), is not that of R.Br. (1810).
Pterostylis barbata as meant by Cheeseman. Man. New Zealand Fl. 683 (1906), is not that of Lindl. (1840).
Pterostylis plumosa as meant by Cooper.

Field guide to NZ native orchids 51 (1981), is not that of Cady (1969).
Plumatichilos tasmanicum (D.L.Jones) Szlach. Polish Bot. J. 46(1): 23 (2001).

Pterostylis tristis Colenso. Trans. & Proc. New Zealand Inst. 18: 271 (1886).
Hymenochilus tristis (Colenso) D.L.Jones, M.A.Clem. & Molloy. Austral. Orchid Res. 4: 74 (2002).
Pterostylis mutica as meant by Cheeseman. Trans. & Proc. New Zealand Inst. 15: 300 (1883), is not that of R.Br. (1810).

Pterostylis trullifolia Hook.f. Fl. Nov.-Zel. 1: 249 (1853).
Pterostylis rubella Colenso. Trans. & Proc. New Zealand Inst. 18: 271 (1886).
Pterostylis trullifolia Hook.f. var. gracilis Cheeseman. Trans. & Proc. New Zealand Inst. 47: 271 (1915).
Diplodium trullifolium (Hook.f.) D.L.Jones, Molloy & M.A.Clem. Austral. Orchid Res. 4: 72 (2002).

Pterostylis venosa Colenso. Trans. & Proc. New Zealand Inst. 28: 610 (1896).
Pterostylis confertifolia Allan. Trans. & Proc. New Zealand Inst. 56: 32 (1926).
Pterostylis trifolia Colenso. Trans. & Proc. New Zealand Inst. 31: 281 (1899).

Spiranthes Rich. De Orchid. Eur. 20, 28, 36 (1817)

Spiranthes novae-zelandiae Hook.f. Fl. Nov.-Zel. 1: 243 (1853).
Spiranthes australis as meant by Hook.f. Handb. N. Zeal. Fl. 272 (1864), is not that of Lindl. (1824).
Spiranthes sinensis as meant by Rüpp & Hatch. Proc. Linn. Soc. New South Wales 70: 58 (1946), is not that of Ames (1908).
Spiranthes lancea as meant by Hatch. Trans. Roy. Soc. New Zealand 82: 614 (1954), is not that of Backer, Bakh.f. & Steenis (1950).
The name Neottia sinensis was never used for NZ plants. Nor was the name Spiranthes sinensis var. australis (R.Br.) H.Hara & Kitam. Acta Phytotox. Geobot. 36 (1-3): 93 (1985).

Spiranthes "Motutangi" tagname for endangered Far North taxon similar to S. australis.

Thelymitra J.R.Forst. & G.Forst. Char. Gen. Pl. 97 t.49 (1776)

Thelymitra aemula Cheeseman. Trans. & Proc. New Zealand Inst. 51: 94 (1919).

Thelymitra aff. brevifolia Jeanes - a form of T. aff. pauciflora with orange column midlobe, similar to the Australian sp.

Thelymitra carnea R.Br. Prodr. Fl. Nov. Holland.: 314 (1810).
Thelymitra imberbis Hook.f. Fl. Nov.-Zel. 1: 244 (1853).
Thelymitra carnea R.Br. var. imberbis (Hook.f.) Rüpp & Hatch. Proc. Linn. Soc. New South Wales 70: 59 (1946).

Thelymitra cyanea (Lindl.) Benth. Fl. Austral. 6: 323 (1873).
Macdonaldia cyanea Lindl. Bot. Reg. 25 (1840).
Thelymitra uniflora Hook.f. Bot. Antarct. Voy., Vol. 1, Fl. Antarct.: 70 (1844).
Thelymitra venosa as meant by Cheeseman. Man. New Zealand Fl. 671 (1906), is not that of R.Br. (1810).
Thelymitra venosa R.Br. var. typica Hatch, var. cedricsmithii Hatch, var. cyanea Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 390–391 (1952).

Thelymitra X**dentata**: a sterile hybrid of T. longifolia X T pulchella.
Thelymitra dentata L.B.Moore. New Zealand J. Bot. 6: 478 f.2 (1969).

Thelymitra formosa Colenso. Trans. & Proc. New Zealand Inst. 16: 338 (1884).
Thelymitra circumsepta as meant by Hatch. NZNOG Journal 65: 8 (1997), is not that of Fitzg. (1878).

Thelymitra hatchii L.B.Moore. New Zealand J. Bot. 6: 477 f.2 (1969).
Thelymitra pachyphylla as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 394 plate 79 D–H (1952), is not that of Cheeseman (1906).

Thelymitra intermedia Berggr. Minneskr. Fisiog. Sallsk. Lund 8: 21 f (1878).
Thelymitra longifolia J.R.Forst. & G.Forst. var. stenopetala Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 396 plate 80 F–H (1952).
Thelymitra longifolia J.R.Forst. & G.Forst. var. intermedia Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 396 plate 80 J (1952).
Was tagged T. "pseudopauciflora" for a time.
Thelymitra colensoi Hook.f. Handb. N. Zeal. Fl. 271 (1864) has been identified with T. intermedia but the description does not fit well.

Thelymitra aff. ixioides.
Thelymitra ixioides as meant by Hook.f. Handb. N. Zeal. Fl. 669 (1864), is not that of Swartz. (Kongl. Vetansk. Acad. Nya Handl. 21: 253, t.3, f.L [1800]).
Thelymitra ixioides var. typica (Hook.f.) Rüpp & Hatch. Proc. Linn. Soc. New South Wales 70: 59 (1945).

T. ixioides is insect pollinated in Australia – the NZ taxon is not.

Thelymitra longifolia J.R.Forst. & G.Forst. Char. Gen. Pl. 98 t.49 (1776).
Serapias regularis Banks & Sol. ex G.Forst. Prodr. 59 (1776).
Thelymitra forsteri Sw. Kongl. Vetensk. Acad. Nya Handl. 21: 228 (1800).
Thelymitra nemoralis Colenso. Trans. & Proc. New Zealand Inst. 17: 249 (1885).
Thelymitra alba Colenso. Trans. & Proc. New Zealand Inst. 18: 272 (1886).
Thelymitra cornuta Colenso. Trans. & Proc. New Zealand Inst. 20: 206 (1888).
Thelymitra longifolia J.R.Forst. & G.Forst. var. alba (Colenso) Cheeseman. Man. New Zealand Fl. 339 (1925).
Thelymitra longifolia J.R.Forst. & G.Forst. var. forsteri Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 396 p1.80 B–E (1952).
Thelymitra aristata as meant by Hatch. Trans. & Proc. Roy. Soc. New Zealand 79 pl. 79–80 (1952), is not that of Lindl. (1840).

Thelymitra aff. longifolia agg.: some undescribed taxa that appear to be insect-pollinated.

Thelymitra malvina M.A.Clem., D.L.Jones & Molloy. Austral. Orchid Res. 1: 141 (1989).

Thelymitra matthewsii Cheeseman. Trans. & Proc. New Zealand Inst. 43: 177 (1911).

Thelymitra nervosa Colenso. Trans. & Proc. New Zealand Inst. 20: 207 (1888).
Thelymitra decora Cheeseman. Man. New Zealand Fl. 1151 (1906).

Thelymitra aff. pauciflora agg.
Thelymitra pauciflora as meant by Cheeseman. Man. New Zealand Fl., ed. 2: 340 (1925), and others until now, is not that of R.Br. (Prod. 314 [1810]).

Thelymitra pulchella Hook.f. Fl. Nov.-Zel. 1: 244 (1853).
Thelymitra concinna Colenso. Trans. & Proc. New Zealand Inst. 20: 207 (1888).
Thelymitra fimbriata Colenso. Trans. & Proc. New Zealand Inst. 22: 490 (1890).
Thelymitra pachyphylla Cheeseman. Man. New Zealand Fl. 1151 (1906).
Thelymitra caesia Petrie. Trans. & Proc. New Zealand Inst. 51: 107 (1919).
T. pulchella is a very variable species, yet all of these appear to have features that are relatively stable in some populations.

Thelymitra purpureofusca Colenso. Trans. & Proc. New Zealand Inst. 17: 249 (1885).
Thelymitra "Whakapapa": undescribed taxon from Ruapehu, may be this, or may be distinct.

Thelymitra sanscilia Irwin ex Hatch. Trans. & Proc. Roy. Soc. New Zealand 79: 397 pl. 81 B–E (1952).

Thelymitra tholiformis Molloy & Hatch. New Zealand J. Bot. 28: 111 f.6 (1990).
Thelymitra intermedia as meant by L.B.Moore. Fl. New Zealand Vol. 2: 129 (1970), is not that of Berggr. (1878).

Thelymitra "Ahipara": a cleistogamous, unnamed taxon from the far north.

Thelymitra "Comet": a large, late-flowering Thelymitra from the Kaweka range. Appears to be sterile, so probably a hybrid.

Thelymitra "darkie": undescribed taxon from the Far North. See McCrae NZNOG Journal 24: 11; 77: 22 (1987).

Thelymitra "rough leaf": undescribed taxon from the Far North. See McCrae NZNOG Journal 24: 11; 77: 22 (1987).

Thelymitra "sky": undescribed taxon from the Far North. See Scanlen NZNOG 70: 30-35 f.6 (1998).

Townsonia Cheeseman. Man. New Zealand Fl. 692 (1906) Acianthus alliance

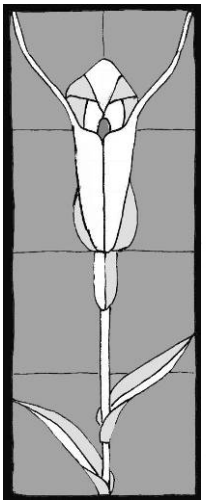
Townsonia deflexa Cheeseman. Man. New Zealand Fl. 692 (1906).
Townsonia viridis as meant by Schltr. Repert. Spec. Nov. Regni Veg. 9: 250 (1911), is not Acianthus viridis of Hook.f. (1860).
Acianthus viridis as meant by L.B.Moore. Fl. New Zealand Vol. 2: 107 (1970), is not that of Hook.f. (1860).

Waireia D.L.Jones, M.A.Clem. & Molloy. Orchadian 12(6): 282 (1997)

Waireia stenopetala (Hook.f.) D.L.Jones, M.A.Clem. & Molloy. Orchadian 12(6): 282 (1997).
Thelymitra stenopetala (Hook.f.) Bot. Antarct. Voy., Vol. 1, Fl. Antarct.: 69 (1844).
Lyperanthus antarcticus Hook.f. Bot. Antarct. Voy., Vol. 1, Fl. Antarct.: 544 (1847).

Winika M.A.Clem., D.L.Jones & Molloy. Orchadian 12(5): 214 (1997) Dendrobium alliance

Winika cunninghamii (Lindl.) M.A.Clem., D.L.Jones & Molloy. Orchadian 12(5): 214 (1997).
Dendrobium biflorum as meant by A.Rich. Essai Fl. Nov. Zel. 221 (1832), is not that of Sw. (1800).
Dendrobium cunninghamii Lindl. Bot. Reg. 21 sub. t.1756 (1835).
Dendrobium lessonii Colenso. Trans. & Proc. New Zealand Inst. 15: 326 (1883).



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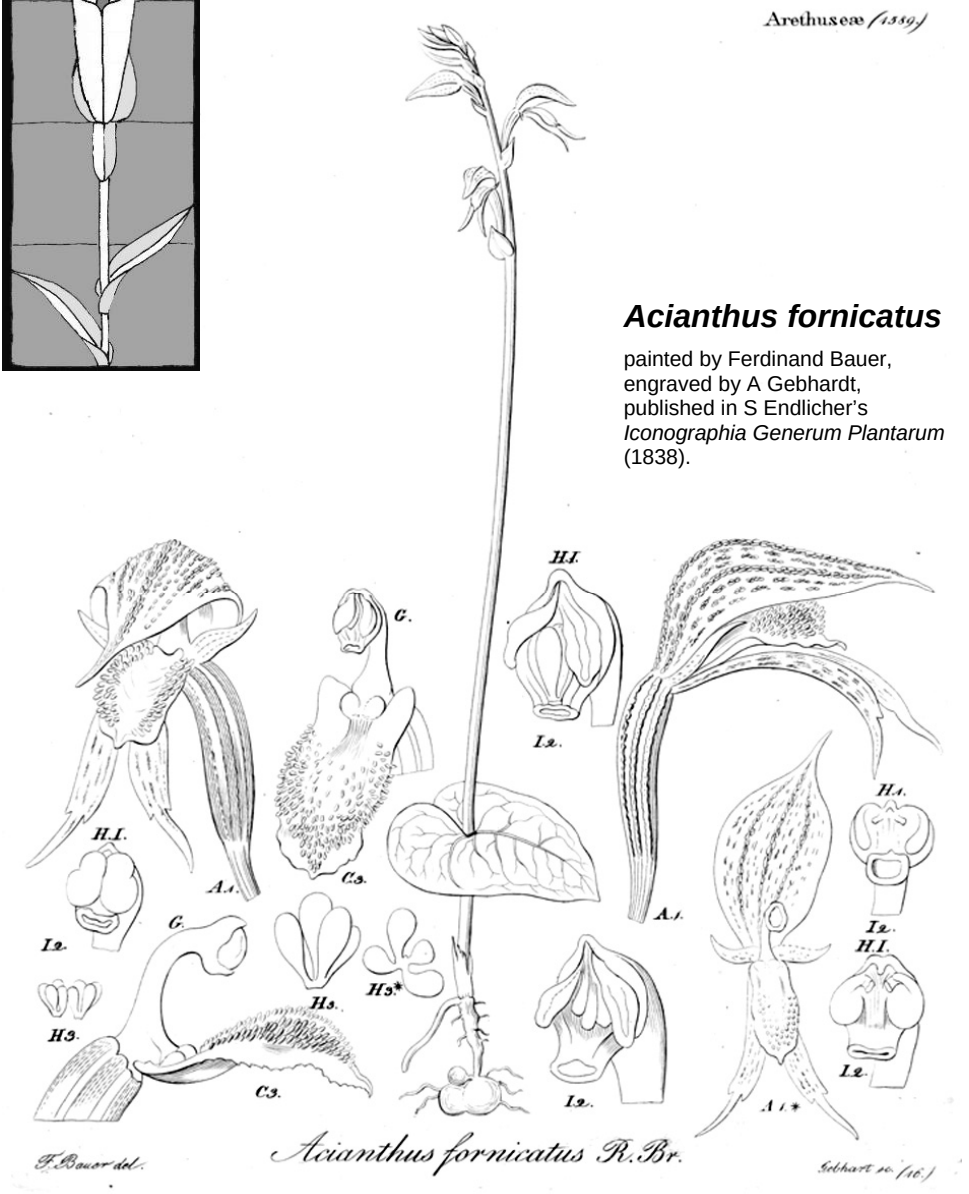
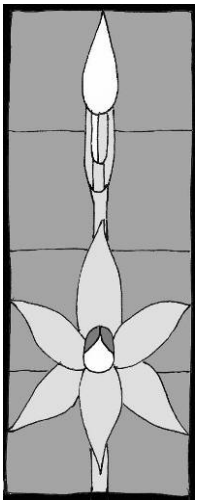


Acianthus fornicatus

painted by Ferdinand Bauer, engraved by A Gebhardt, published in S Endlicher's *Iconographia Generum Plantarum* (1838).

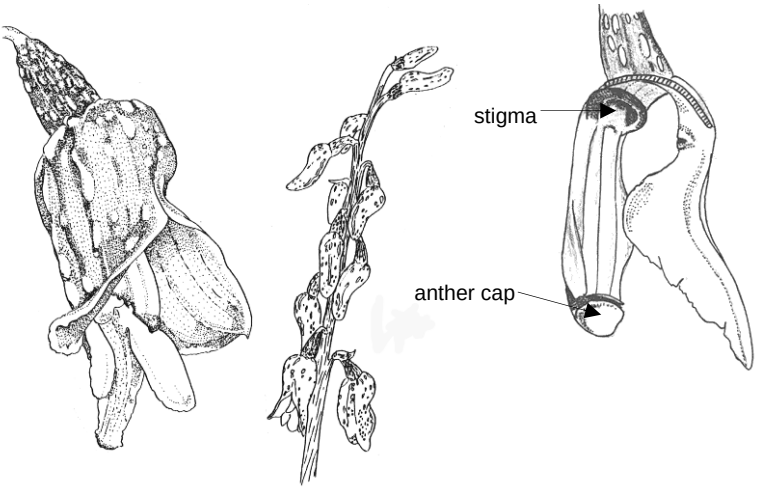


THE VARIOUS CONTRIVANCES

The New Zealand terrestrial orchid flora is unique because most can self pollinate: the various contrivances by which the New Zealand orchids are fertilised by themselves are recounted here.

2. Gastrodia

Gastrodia "long column" appears nicely adapted for insect cross pollination: it is highly fragrant at least at some sites and at some stage of flowering, its pollinia and anther cap are easily dislodged by visiting insects, and the pendant flowers prevent the dislodged pollinia from falling onto its own stigma. Presumably an insect crawling into, then out of, the tubular flower, will take pollen with it in some fashion.

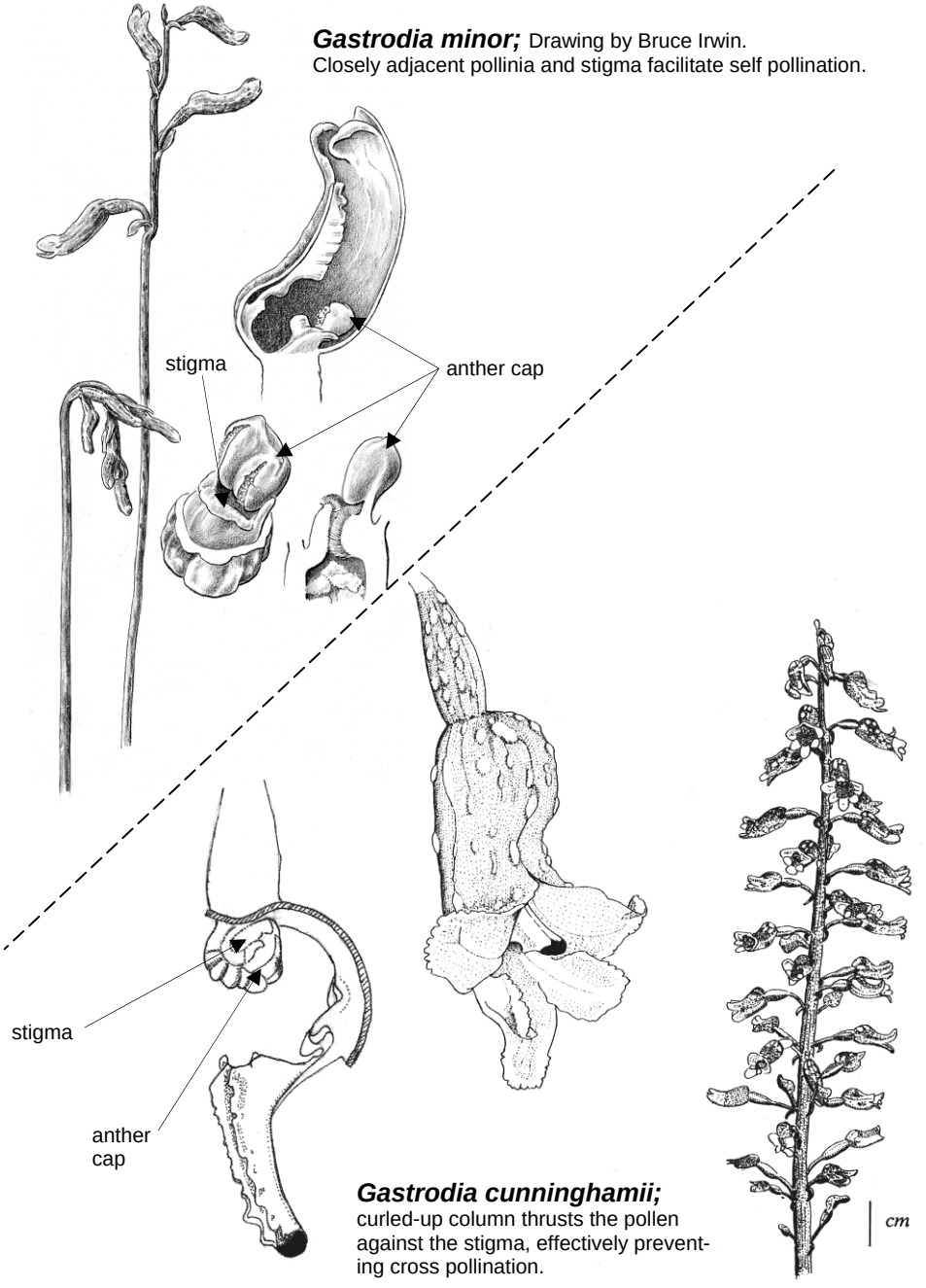


***Gastrodia* "long column"**: pendant perfumed flowers, with a long column separating the pollinia from the stigma, appear to favour insect pollination.

In fact *Gastrodia* "long column" flowers turn upwards as they mature, allowing pollinia to fall onto their own columns, so that self pollination can occur as a reserve position. The observation of many bare stalks just after flowering suggests however, that neither insect pollination nor self pollination is very efficient in this taxon. *Gastrodia* aff. *sesamoides* has similar structures but sets more fruit.

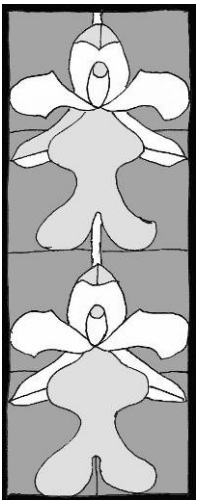
By contrast, *Gastrodia cunninghamii* and *G. minor* have short columns, apparently a uniquely New Zealand adaptation for self pollination in the whole genus of *Gastrodia*.

The closed tubular flower of *G. minor* hardly permits an insect to enter, and even if it did, any disturbance of the anther cap and pollinia, placed directly above the stigma, would cause self pollination.



Gastrodia minor; Drawing by Bruce Irwin.
Closely adjacent pollinia and stigma facilitate self pollination.

Gastrodia cunninghamii;
curled-up column thrusts the pollen against the stigma, effectively preventing cross pollination.



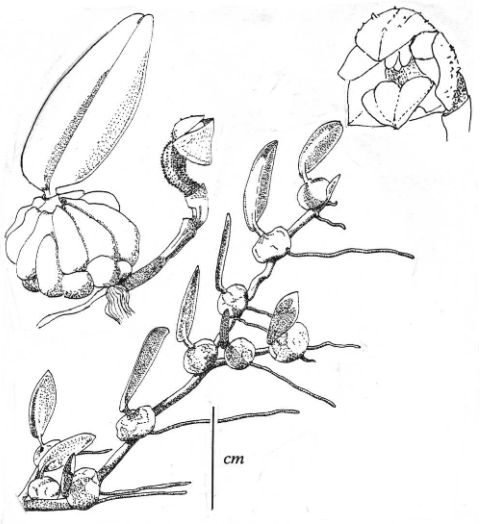
ELEMENTARY: ED HATCH

10. The epiphytes 1.

Drawings by Ian St George

Evergreen plants growing on trees and rocks. These are tropical forms at the southern limit of their distribution, and the flowers are consequently small and insignificant.

Bulbophyllum (bulb-leaf – the swollen pseudobulbs at the base of the leaves)
Mat forming epiphytes growing in a mycorrhizal association with specific lichens

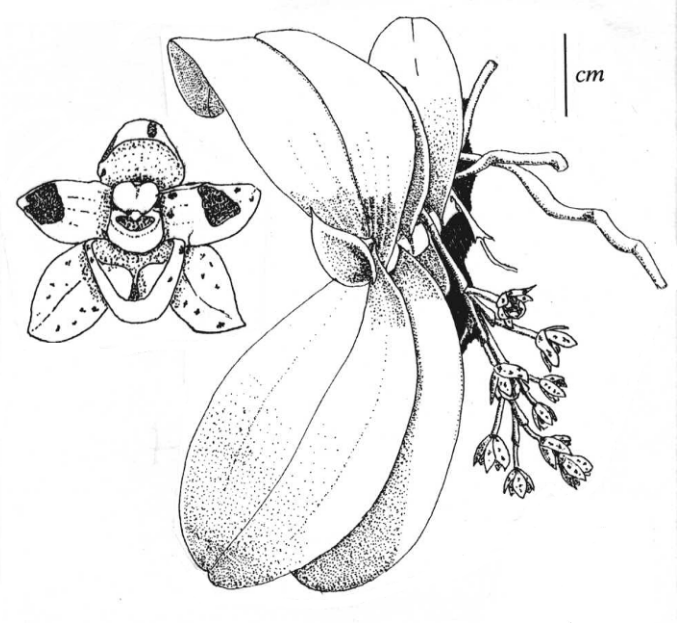


1: *Bulbophyllum pygmaeum*

(the small plant)
Pseudobulbs, small, round, Flowers solitary, labellum white
Distribution – endemic – Three Kings Is., North, South and Stewart Is.
Flowers – October-March – self pollinated

2: *Bulbophyllum tuberculatum*

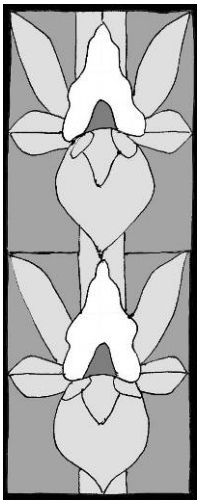
(the warts on the mature pseudobulbs)
Pseudobulbs large, oblong. Flowers several labellum orange
Distribution – endemic – North and South Is.
Flowers – April-June – self pollinating



Drymoanthus
(forest flower)
A small genus of 4 species, 1 in Australia, 1 in New Caledonia, and 2 in NZ

3: *Drymoanthus adversus*
(a misnomer – the apparently opposite leaves)
Distribution – endemic – Three Kings Is., North, South, Stewart and Chatham Is.
Flowers – October-December – insect pollinated

4: *Drymoanthus flavus*
(the yellow of the flowers)
Distribution – endemic – North, South and Stewart Is.
Flowers – October-November – insect and/or self pollinated



EPONYMOUS ORCHIDS: VAL SMITH

Joseph Banks (1743-1820)
Pterostylis banksii

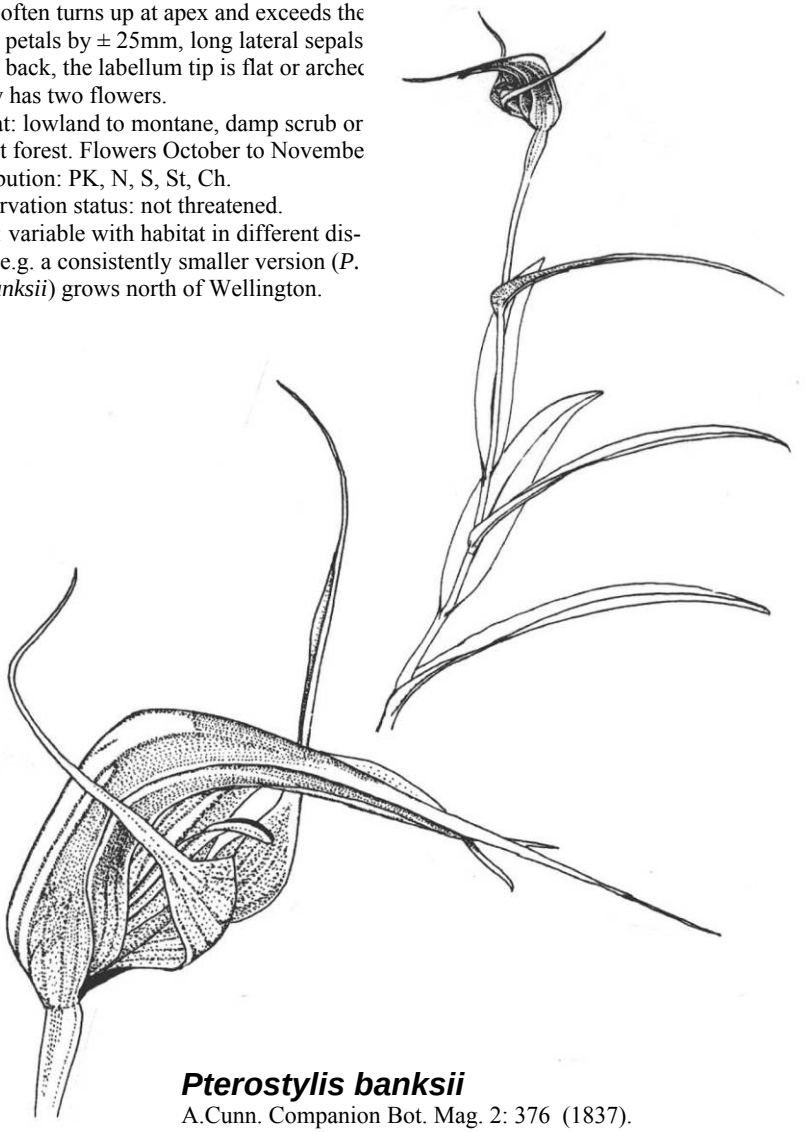
Born in London, the son of Lincolnshire landed gentry, Joseph Banks had no inclination to follow the political paths of his father, grandfather and greatgrandfather, who had all been Members of Parliament. Nor did he show enthusiasm for the classics during his early education at Harrow and Eton. Instead, he developed a passion for the natural world, and studied botany at Oxford, engaging a Natural History lecturer at his own expense! In 1761, while he was still at Oxford, his father died, leaving a large estate and considerable wealth, which Joseph Banks inherited when he turned 21.

In 1766 Banks travelled as a naturalist/passenger on *HMS Niger* to Newfoundland and Labrador, and returned with a large collection of biological specimens and information about the indigenous people. He was elected a fellow of the Royal Society the same year. A year later the Royal Society arranged with the Admiralty for him to join Cook's 1769 voyage to the South Pacific, again at his own expense. Banks took a staff of eight: Solander (botanist), Parkinson and Buchan (artists), Spöring (clerk/secretary) and four collectors/servants.

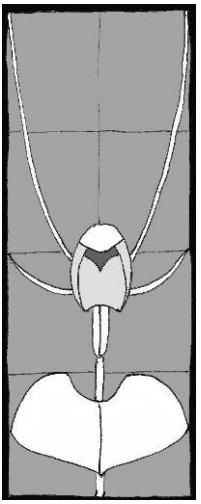
The *Endeavour* sailed to Tahiti where Banks enjoyed three idyllic months with new plants and attractive women in abundance. After the observation of the transit of Venus, Cook headed south and spent six months in New Zealand waters, circumnavigating the whole country. Banks, in his Journal, left an invaluable description of this exploration, the natural features of the coast and the appearance and customs of the Maori people. And, of course, every opportunity was taken to go ashore with Solander and collect plant specimens, which then had to be drawn, described, classified and prepared for the return voyage. Most of the plants made it back safely – sadly, five of his team did not.

He was appointed special adviser and director of the Royal Gardens at Kew in 1773, and in 1778 was elected President of the Royal Society, holding that office for the remaining 42 years of his life. In 1781 he was awarded a knighthood. One of his greatest contributions to science was the promotion of scientific research and the encouragement of promising young botanists. He made his extensive library and collections freely available for the use of others, and made provision in his will for the artist Francis (Franz) Bauer, to enable him to continue drawing new plants at Kew. In New Zealand, a land feature (Banks Peninsula) and several plant species carry his name, honouring Sir Joseph Banks and the first botanical explorations in this country.

NZ's largest orchid flower. Similar to *P. australis* except: leaves are narrower, longer usually extending above the flower, long dorsal sepal, often turns up at apex and exceeds the lateral petals by ± 25mm, long lateral sepals sweep back, the labellum tip is flat or arched. Rarely has two flowers.
Habitat: lowland to montane, damp scrub or well lit forest. Flowers October to Novembe
Distribution: PK, N, S, St, Ch.
Conservation status: not threatened.
Notes: variable with habitat in different districts: e.g. a consistently smaller version (*P.* aff. *banksii*) grows north of Wellington.



Pterostylis banksii
A.Cunn. Companion Bot. Mag. 2: 376 (1837).



HISTORICAL REPRINT

— from TF Cheeseman's *Illustrations of the New Zealand Flora*, Vol.II, Government Printer, 1914. Drawings by Miss Matilda Smith, engraved by John Nugent Fitch.

PTEROSTYLIS FOLIATA.

FAMILY ORCHIDACEÆ] [GENUS PTEROSTYL1S, R. BR.

Pterostylis foliata, *Hook. f. Fl. Nov. Zel.* i, 249 ; *Cheesem. Man. N.Z. Fl.* 681.

This is one of the numerous species the discovery of which is due to Mr. Colenso, who for many years was, to use the words of Sir J. D. Hooker, the foremost New Zealand botanical explorer." He first collected it near Cape Palliser in 1845; and again in 1847 near the summit of the Ruahine Mountains, where it was associated with *Caladenia bifolia,* figured in the following plate. Subsequently he obtained it in several other localities on the eastern side of the North Island, where it has also been gathered by Mr. Tryon, Mr. Guthrie-Smith, and others. In 1863 Mr. Buchanan collected it on the uplands of eastern Otago, where, some years afterwards, it was also observed by Mr. Petrie. Mr. Kirk obtained it in a single station in Marlborough; but these two districts are the only known localities in the South Island. It is usually found in Sphagnum bogs, and it ranges from sea-level to 3,500 ft. elevation.

I have never had the good fortune to examine *Pterostylis foliata* in its native habitat, and am consequently greatly indebted to Mr. Guthrie-Smith for an ample supply of specimens in a fresh state collected by him on the margin of Lake Tutira, in northern Hawke's Bay, and from which the accompanying plate has been prepared. His specimens proved that the species varies greatly in size, some of them barely exceeding 4 in. in height, while others reached quite 18 in. When fresh the leaves are rather fleshy, and the reticulated veins are by no means obvious; but when dried the leaves become much thinner, and the veins decidedly conspicuous, as shown in the plate. The upper part of the peduncle, the ovary, and occasionally the lateral sepals, are more or less glandular-pubescent, a character that has not been mentioned in previous descriptions of the plant.

As a species *P. foliata* is allied to *P. micromega*, but differs in the stouter habit, larger more reticulate and usually rosulate radical leaves, in the cauline leaves being reduced to sheathing-bracts, and in the smaller flowers with much shorter points to the lateral sepals. *P. Oliveri* is separated by the same characters, and by the much larger conspicuously decurved flower. According to Dr. Schlechter, it is closely, allied to the New Caledonian *P. Bureauviana*, a species with which I am not acquainted.

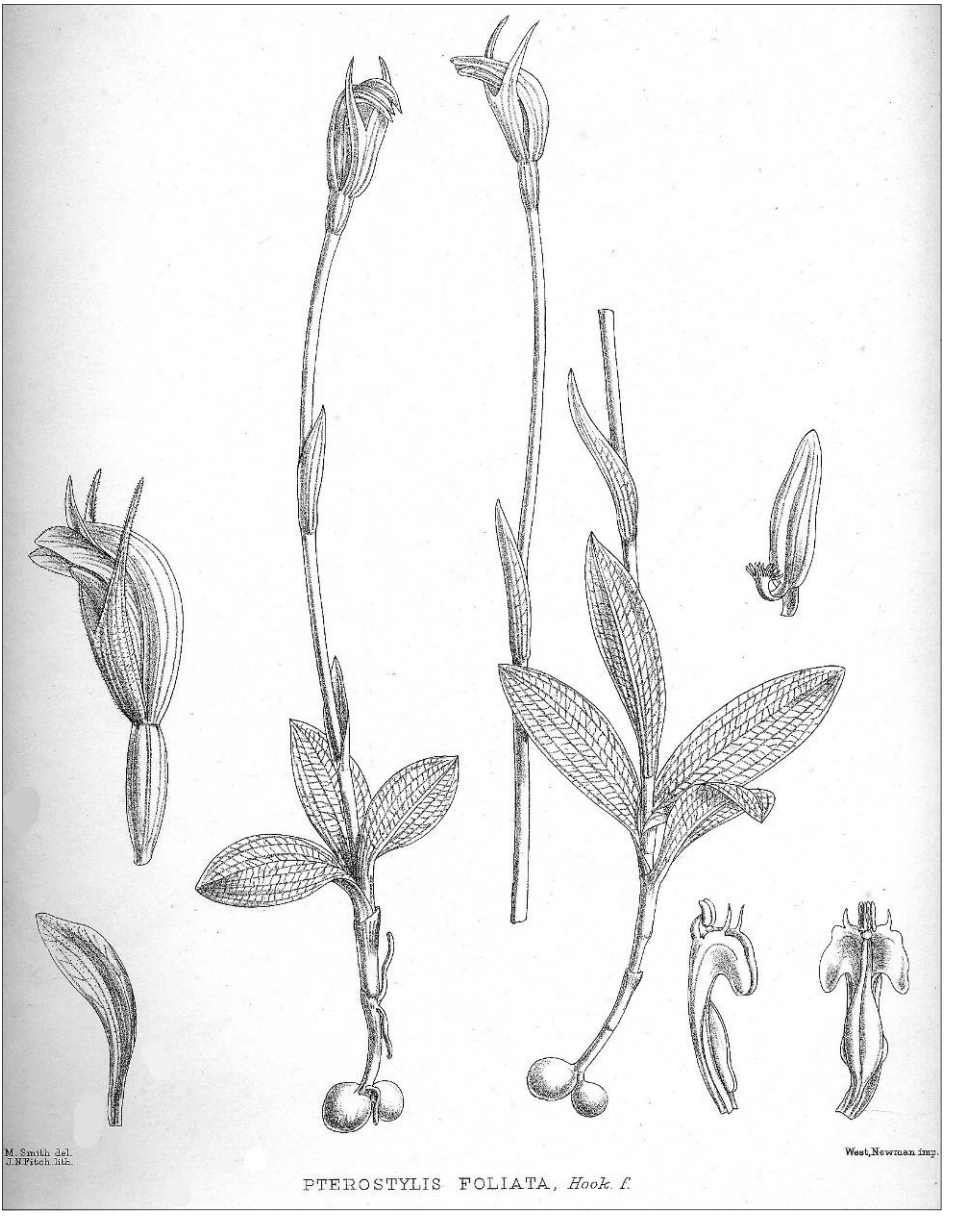
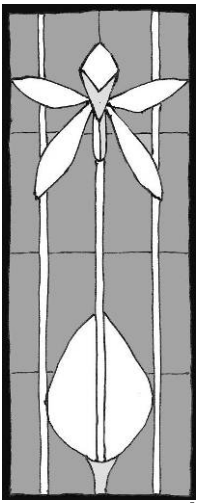


PLATE 196. *Pterostylis foliata*, drawn from specimens collected by Mr. Guthrie-Smith on the margin of Lake Tutira, Hawke's Bay. Fig. 1, flower (x 2); 2, petal (x 2); 3, lip (x 3); 4 and 5, front and side view of column (x 3).



NOTES ETC

Dr Michael Fay, Chair of IUCN Orchid Specialist Group, emailed, "A brief note to let you know that our webmaster Graham Smith has made quite a lot of changes and updates on the **Orchid Conservation International webpages** (including new trustees etc.). If you would like to see what these changes are, visit http://www.orchidconservation.org/. He will now begin to make changes to the OSG site, so watch this space. In the meantime, he has set up the standard address for the OSG webpages to http://www.orchidconservation.org/osg/".

Ken Davey (New Plymouth) wrote, "In November several years ago I made a rough record of **orchids growing on a farm in the Motu/ Matawai area high in the Raukumara ranges** between Gisborne and Opotiki.

"The farm runs from 650m (1900') a.s.l. to 1030m (3100') a.s.l. and has heavily grazed areas to bush remnants at the higher elevations. The bush was logged in the 1930s and is now winter grazed, but with all year round access when feed is short.

"Growing on the roadside banks at the lower parts of the farm were many clumps and single plants of *Thelymitra* spp with a range of leaf forms, habits, flower numbers per stem and flower colour, where the banks were crumbling the pale carrot shaped tubers were very noticeable. One particular form wherever it occurred was infected with a rust like disease.

"*Microtis* spp (at least 3) or similar were present on several banks in the same area.

"On a damp stream bank with no stock access were 2 small colonies of *Corybas* but no flowers or seed capsules.

"On the way up to the bush edge were several areas of exposed rock, often with good patches of *Earina* sp. (poss *E. autumnalis*) out of reach of stock, with thick coriaceous leaves and thick stems with very short internodes.

"There are several small gullies with small bush remnants in them and it was possible to find plants of *Earina autumnalis, E. mucronata, Winika cunninghamii* and occasionally *Drymoanthus* sp.

"As the altitude rose the numbers of *Thelymitra* dropped off but it never disappeared.

"Just inside the lower altitude bush edge *Pterostylis* sp. were still flowering (with seed pods present) on the shady side of the track and there were a few *Thelymitra* flowering on the sunny side. In the bush the *Pterostylis* occurred as solitary plants or at best widely spaced clumps.

"On some of the tracks a few *Chiloglottis* sp. occurred as small clumps, green flowers with reddish calli.

"In a boggy area near the top of the bush with very little stock access were a few colonies of a *Corybas*? with very small green flowers.

"At the top of the bush in a steep and more exposed area of poor stunted open bush with a track through it were a large number of plants that were in many cases still to flower, these I tried to identify mainly by their leaves and came

Iwitahi Native Orchid HPA
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Lake Taupo
(07) 377 0469
email: robbie@wildwoodgallery.co.nz

Friends of Iwitahi

Hi All,

That time of year again to organise the Iwitahi camp.
Firstly some of you already know that the main hall at Iwitahi camp has been gutted by fire. This year's camp has been confirmed and will be on the same weekend as usual, 8th - 10th December. We will be using the smaller hall which they have cleaned up (I hope). A small stove and kitchen utensils have been added.
On a lighter note, we have 580 seedling nigra trees up to 1m in height ready to plant. I'm hoping that we can plant on the mounds we prepared last camp. The remainder of the seedlings will be stored at no cost to us at the Taupo Native Nursery until we need them.
We have had contractors in clearing and spraying the regrowth over the last year and the reserve is looking a lot clearer and will allow the orchids that need more light to come through and multiply, in particular the Thelymitra. The fern that was spreading on the eastern side has been pretty much eliminated. Max suggested that we clear away all the dead fern at the next camp. Any suggestion or ideas for the next camp will be gratefully accepted.
Max is presently working on moving the HPA to a more secure Inc Society due to the Taupo Orchid Society winding up. Max will give us an update at the camp.
Looking forward to seeing you all at Iwitahi Dec 8th - 10th. Please book in with me if you would like to attend. The usual fee of $10 per person per night applies and bring your own food, including a potluck dish to share on the Saturday evening, as we always do.
Bring all your own bedding etc. and a torch is also a good idea. Remember to bring warm clothes as it can still be very cold out there. If you could bring gardening gear, such as spade and gloves, that would be great, too. Just let me know if you have any other questions.

Regards,

Robbie.

up with *Microtis, Prasophyllum, Orthoceras*, and *Caladenia* (with hairy leaves).

"On a neighbouring property that goes even higher, in open scrubby grassland were a number of solitary plants of an *Orthoceras* sp. about 50-60 cm tall in full flower.

"I don't know if this general area has been botanised very much and suspect that a number of other orchids could be found with a proper search."

Steve Reekie emailed, "I was out on point Elizabeth, just north of Greymouth on Tuesday afternoon, and espied this **pretty *Nematoceras* flowering on a mossy bank**, on a cliff high above the sea. I'll leave it to you to put a name to it, if the photographs give you enough to go by. There were a few flowering there. Any ideas?" - *see* **Figures 2 and 3**. *This is one of the N. rivulare complex, perhaps closer to the Type species than to N. longipetalum—Ed.*

Mark Clements emailed, "The desciption of ***Nematoceras sulcatum*** has been accepted for publication in the next issue of *Telopea* and has also been used by David Jones in his new book on Australian orchids. *This is the name given to the newly discovered N. aff. trilobum from Macquarie Island—Ed.*

New CD: *Australian Orchid Genera Key*: at http://www.orchidaceousbooks.com.au/OB12286.html.

Mark Moorhouse emailed, "My daughter Kendyll sent the attached pic of the *Nematoceras* we couldn't identify last year at Bullock Creek, just North of Punakaiki, West Coast, because we arrived too late in the season. This year she visited 3 weeks earlier only to find that on 30 July she was looking at the last flowering plant in the colony, others all done. It seems to be *N. longipetalum*. This falls at the early end of the known flowering season but raises a question. Why are the plants at the southernmost part of its known range flowering at the earliest known times in the seasonal variance? It seems anomalous. Surely it's logical to expect just the opposite." **Fig. 4.**

Mark Moorhouse also sent the convincing photograph of his two local forms of *Steogastyla: S. lyallii* and *S.* "minor"—**Fig. 5.**

Mark emailed again, "I thought you would find these two attached pics pretty interesting. They were taken by Georgina Upson in the Wairoa Valley, Eastern Ranges of Nelson on Sept. 3rd. I can't say that I have ever seen one quite like it, even after several years of intensive study of local *Nematoceras* populations. … the short tepals almost certainly preclude it from anything but *N. orbiculatum*, which it's not remotely like." **Fig.6.**

J101 crashed when my computer became infected with some nasty spyware, and could not be recovered. I apologise for the small rewritten-in-haste edition, and to anyone who sent material I have forgotten, or misattributed: please let me know and I will fix it in J102…. Ed.

Ruahine Ramble

The educational centre Sixtus Lodge at Apiti, North of Fielding and East of Mangaweka, has been booked for 17-19 November.
It is right at the foot of the Ruahine Ranges where there are good native orchid sites.
As the lodge is very comfortable it is a great spot for nonwalkers.
The fee: $10 a person per night.

■

To register your interest or queries, contact
Don Isles 06 3569609
or e-mail dawn.don@inspire.net.nz
33 Swansea St Palmerston North.

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GIVE ONE TO A FRIEND THIS CHRISTMAS

Iwitahi06: 8-10 December

See page 25 of this Journal

Contact Sue & Robbie Graham,
141 SH1, Waitahanui, Taupo. 07 3770469
robbie@wildwoodgallery.co.nz

Depth of field for digital cameras? What we are all trying to achieve is good sharp photographs. In flower photography (as in portrait photography) we may want artistically to blur out the background to help the viewer concentrate on the subject, so at best we would like control of depth of field.

Basic fact: 1. *At any given focal length depth of field increases as the lens is stopped down – ie, the f setting increases.*

Basic fact 2. *At the same f setting and the same subject distance, depth of field is greater for short focal length (wide) lenses than for long focal length lenses.*

Basic fact 3. *At the same focal length and f setting, depth of field increases with the subject distance – ie it is shallow in macrophotography.*

Thus, to get enough depth of field for close ups of little NZ orchid flowers I need a short focal length lens with a high f setting. My old 35mm film Olympus OM4's 50mm lens stops down to f 32, and with enough light (flash outside, or long exposure inside away from the breeze) I can get clear as crystal shots of orchid flowers, all the flower parts acceptably sharp.

My Sony F707 DSLR (digital single lens reflex) has a 38-190mm f2.0-2.4 lens, and on "aperture priority" it allows me up to f8.0. How can you get enough depth of field with that?

Basic fact: 4. *The human eye can accept dot sizes of 0.4mm at 40cm as sharp. This is called the circle of confusion (CoC).*

Reduced onto a 35mm film the CoC is 0.03mm. Most digital cameras have sensors smaller than the 35mm film frame. The Sony has 8.8x6.6mm. Reduced to that size the acceptable CoC is .0065mm. (You begin to see why a dust speck on the sensor can ruin your photos).

The CoC size used to define "acceptably sharp" is thus much smaller for digital than film cameras. That would cause less depth of field in small sensor cameras, except for this:

Basic fact: 5: *A smaller sensor requires a shorter focal length lens.*

For instance a 100mm lens on a 35mm film camera gives the same field of view as a 25mm lens on a digital camera with a sensor the size of the Sony's. The "focal length equivalence ratio" is thus 4 for my Sony.

The rule: *the depth of field of a digital camera with focal length equivalence ratio of* ***N****, at a given aperture of* ***f****, is the same as that of a 35mm camera with a lens of the same angle, closed down to an aperture of* ***N x f.***

For my digital Sony, **N** = 4, **f** = 8.0: N x f = 32. It will thus take photos with the same depth of field as my 35mm OM4 with an f setting of 32.

What about the newer DSLRs (digital single lens reflex cameras)? I looked at the Olympus E-500 with its 17.5-45mm f 3.5-5.6 lens, and N = 2. The greatest depth of field would be at f = 29 x 2 = 58. Extraordinary. I looked at the Canon 350D with its standard 18-55mm f 3.5-5.6 lens, and N = 1.6. Depending on the lens you can stop down to an incredible f = 91!

You would never need more depth of field!

Pat Enright sent specimens of *Nematoceras* to Brian Molloy, whose reply is a nicely instructive description of the species: "Your collection matches Colenso's description and type material of ***Nematoceras hypogaeum*** which he collected between 1880 and 1883 from beech forest at Norsewood. The leaves are much broader than long, distinctly trilobate at the apex with broad spreading basal lobes, shiny above and below with occasional purplish spots and suffusions and with a purplish sheen below. The flowers are small, distinctly recurved on the peduncle. The dorsal is narrow, greenish with purple striations and the labellum is dark purple with a greenish central boss, laciniate margins especially at the base, and copious long pale and purple papillae on the inside towards the base. The petals are relatively short and the plant overall has a purplish hue."

Notice of Annual General Meeting NZNOG Inc.
Iwitahi Outdoor Recreation Centre,
6 pm 9 Dec 05

Agenda

- Present
- Apologies
- Minutes of 2004 annual general meeting will be tabled
- Matters arising
- Treasurer's report
- Iwitahi report

  Max Gibbs: Should NZNOG Inc. become a registered Heritage Protection Authority (HPA)?

  Discussion: Future of Iwitahi native orchid Heritage Protection Area and the transfer of the responsibilities of the Taupo Orchid Society HPA to another HPA.

  Background: Taupo Orchid Society Inc. has indicated that it is preparing to go into recess. This action has yet to be ratified at a special general meeting of TOS, but it is intended that this action could take place early in 2007 before the TOS AGM in February-March 2007.

  Consequences of this action include the transfer of the responsibilities of the HPA held by TOS to another HPA or returning these to the Minister for the Environment (MfE) to make that decision.

  Currently, there are only 4 HPAs in New Zealand including the Taupo Orchid Society and Royal New Zealand Forest and Bird Protection Society (F&B). TOS can negotiate have the HPA responsibilities transferred to F&B or any other HPA which is in existence, or let MfE decide. MfE have the same options plus the right to pass the HPA responsibilities to the Department of Conservation (DoC). Whichever option is taken, the responsibilities for the HP include the management of the Iwitahi native orchid HPArea, and it is in our interest to be able to negotiate a continuance of management of the orchids with the new HPA.

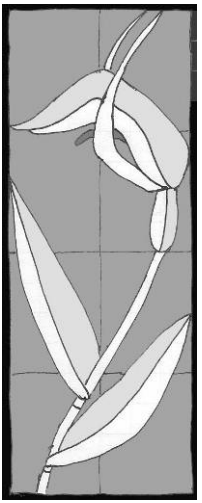
  Option 1: Transfer to F&B. I have talked to Mike Britton at F&B about the possible transfer of the HPA responsibilities to F&B and working with them on the continuing management of the native orchid HPArea. His initial response was favourable and he was going to raise this topic with the local region group at a meeting at Thames in early October 2006.

  Option 2: Allow the HPA responsibilities to be transferred by MfE with the possibility that these would pass to DoC. Although when directly approached about taking over the HPA, DoC were making positive sounds, their comments were along the lines that they had no funds for this and thus it fall back to the management committee within the limits of how DoC see the native orchid HPArea .. it is an exotic pine forest to them .. it is valuable native orchid habitat to us.

  A third option arising from the above is that NZNOG could become an HPA (for a fee of $250 +?) before TOS goes into recess and thus be in a position to take over the HPA responsibilities from TOS.
- Other matters
- General business
- Election of officers for 2006

  Ian St George wishes to step down as chair of the executive. Nominations for chair are therefore sought.
- Close

In accordance with the Group's Rules of Incorporation, an AGM open to all Members is to be held between September and
February; the financial accounts and minutes of the previous AGM will be available; all Members have the right to speak or to nominate Executive members; a quorum will be nine Members.



AUSTRALIAN NOTES

Australasian Native Orchid Society, The Warringah Group Inc.

By Peter Eygelshoven. *Peter is also editor of The Orchadian—Ed.*

Our Group was formed in October 1964. It was the third ANOS Group to be created under the ANOS Council. Meetings were originally held in a small hall at the Stoney Range Flora Reserve in Dee Why on Sydney's northern beaches. In return for free access to the hall members maintained the orchid collection around the reserve and bush house, they also helped with maintenance around the 7.5 hectare reserve, building dams and bridges. When the hall became too small the Group moved to a slightly larger church hall in Curl Curl. They again outgrew this hall and moved to our present hall at Forestville. The larger Senior Citizen Hall is ample for the monthly benching of around forty to sixty plants each month. Our meetings usually have around the thirty members each month and we hold a membership list of about eighty five members. Our yearly Spring Show is held in the much larger community hall next door on the second weekend in September. We meet at 8.00pm on the third Tuesday of each month in the Senior Citizen Hall, Forestville and visitors are most welcome.

The club logo is *Caleana major*, The Flying Duck Orchid, and is still quite common in the area. As a Bicentennial Project in 1988, several members surveyed the bushland in the northern beaches area finding around sixty five different species. They produced a booklet and with the financial help of the local council in producing this booklet, copies were given to the Warringah Shire Council, the local National Parks and Wildlife Service and local libraries. Now, nearly some twenty years later, the Group will endeavour to update the list of orchids by surveying the bushland reserves and National Parks in the northern beaches area. This project will go over the next three or four years with monthly walks as a group or by individuals volunteering to go out in their own time to see what can be added to the known species list. With two large National Parks and many other reserves in our immediate area we should be able to increase this list by another ten to twenty species.

The Blue Mountains are less than two hours away and Warringah Group often has day trips to see the orchids of this region and we invite the other Sydney Groups to join us. The orchids and the habitat are different to what we see around the coast line so it becomes a wonderful change and a great day out. We organise reciprocal visits with other groups, with them visiting our meeting one month and us visiting theirs another.

Our group celebrated its 25th with a wonderful dinner in the community hall at Forestville and recently celebrated its 40th with a delicious Chinese banquet. From all the members of ANOS Warringah Group we wish your group the best for your 25th birthday anniversary and hope your Group enjoys many more and bigger anniversaries in the future.

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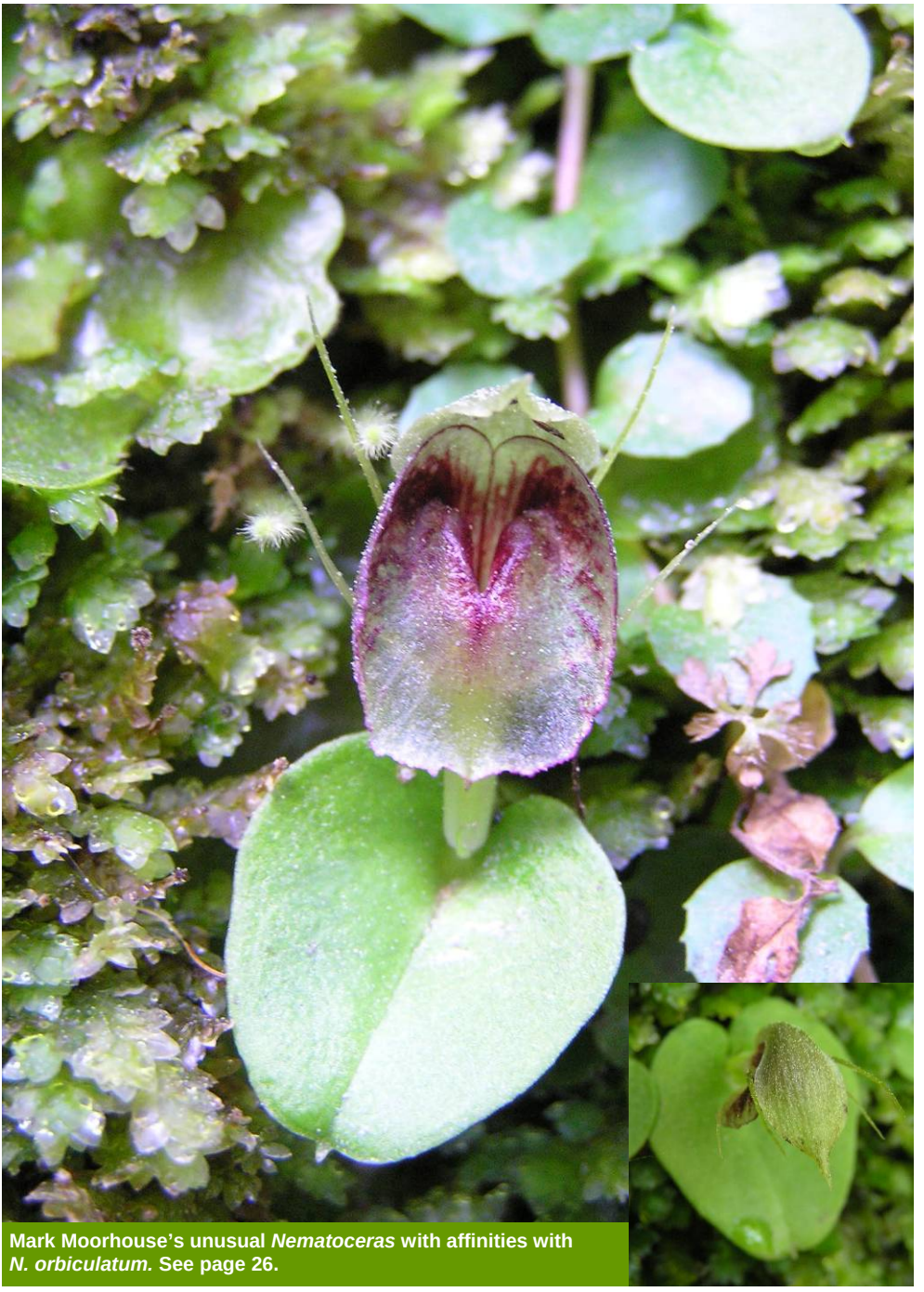

Mark Moorhouse's unusual *Nematoceras* with affinities with *N. orbiculatum.* **See page 26.**