

## Plant Distribution Records (2)

A. P. Druce

As in the previous list (Bulletin No. 26), the records have been placed in alphabetical order for each botanical district. In this list eight further species (indicated by an asterisk) are recorded from the North Island for the first time.

### EAST CAPE BOTANICAL DISTRICT

- Abrotanella caespitosa* Petrie ex Kirk. Maungapohatu, bog, 4200 feet, A.P.D.
- Aciphylla squarrosa* var. *flaccida* Kirk. Hikurangi, Maungapohatu, and Panekiri, cliffs, 3600-5400 feet, A.P.D.
- Agrostis alpina* Scop. Hikurangi, fine rock-debris in steep south-facing gullies, 5000-5500 feet, A.P.D.
- A. perennans* (Walt.) Tuck. Hikurangi, 4800 feet, and Maungapohatu, 4200 feet, bog, A.P.D. (*A. parviflora*).
- Alseuosmia pusilla* Col. Whakapunake and Panekiri, beech forest, 2500-3000 feet, A.P.D.; near Opotiki, R. M. Greenwood.
- A. quercifolia* A. Cunn. Raukumara, forest, 3000-3500 feet, A.P.D.
- Apteropteris malingii* (Hook.) Cope. Maungawaru, on cedar, 3900 feet, A.P.D. (*Hymenophyllum*).
- Archeria racemosa* Hook. f. Maungawaru and Arowhana, beech forest, 2500-3000 feet, R. D. Creswell, N. L. Elder, A.P.D.
- Aristotelia fruticosa* var. *microphylla* Hook. f. Hikurangi and Maungapohatu, forest margins, 4200 feet, A.P.D.
- Asplenium anomodum* Col. Maungapohatu and Panekiri, cliffs, 3800 feet, A.P.D.
- Caladenia lyallii* Hook. f. Maungawaru, rocky ground, 4600 feet, A.P.D.
- \**Carex cirrhosa* Berggr. Margins of small lakes near Waikaremoana, 2000 feet, A.P.D.
- C. sinclairii* Boott. Maungapohatu, bog, 4200 feet, A.P.D.
- Celmisia incana* Hook. f. Arowhana (rare) and Maungawaru, bog, 4500-4700 feet, R. D. Creswell, N. L. Elder, A.P.D.
- Coprosma banksii* Petrie. Aorangi, Maungawaru, Arowhana, and Panekiri, beech forest, 2500-3900 feet, A.P.D.
- C. brunnea* (Kirk) Ckn. Te Pora, inland from Tokomaru Bay, clay banks, 1000 feet, R. D. Creswell, A.P.D.
- C. microcarpa* Hook. f. Panekiri and Ngamoto, beech forest, 3000-3500 feet, A.P.D.
- C. pseudocuneata* Oliv. Maungawaru and Arowhana, forest and scrub, N. L. Elder, A.P.D.

- Cotula squalida* (Hook. f.) Hook. f. Pukeamaru, 500 feet, and near Waikaremoana, 2000 feet, river-banks and lake margins, A.P.D.
- Cyathca colensoi* (Hook. f.) Domin. Raukumara, beech forest, 4000 feet, A.P.D.
- C. cunninghamii* Hook. f. Waitahaia R., 2400 feet, N. L. Elder, A.P.D.
- Cystopteris fragilis* Bernh. Maungapohatu, cliffs, 4200 feet, A.P.D.
- Dacrydium bidwillii* Hook. f. ex Kirk. Near Waikare-iti, bog, 3000 feet, A. M. Jones!
- D. bifforme* Pilger. Raukumara, Hikurangi, Whanakaoa, Maungawaru, Arowhana, Waikare-iti, and Ahimaniwa Mts., 3000-5000 feet, R. D. Creswell, N. L. Elder, A.P.D.
- D. colensoi* Hook. Aniwaniwa V., Waikaremoana, bog, 2200 feet, A.P.D.
- D. laxifolium* Hook. f. Hikurangi (rare), Whanakaoa, Maungawaru, and Arowhana, rocky ground and bog, 4500-5200 feet, R. D. Creswell, N. L. Elder, A.P.D.
- \**Danthonia buechanani* Hook. f. Maungapohatu, Waikaremoana, and Titiokura, cliffs and rocky ground, 2000-3800 feet, A.P.D.
- D. flavescens* Hook. f. aggr. (narrow-leaved form). Hikurangi, Arowhana, and Maungapohatu, 4400-5700 feet, A.P.D.
- D.f.* var. *cheesemaniai* (Hack. ex Cheesem.) Zotov. Panekiri and Ngamoto, silver-beech forest, 3500-3800 feet, A.P.D.
- D. petriei* Zotov. Hikurangi, bog, 4500 feet, V. D. Zotov! (*Triodia*).
- D. rigida* Raoul. Maungapohatu, bog, 4200 feet, A.P.D. (*D. raoulii* var. "rubra").
- Deschampsia tenella* Petrie. Hikurangi and Maungapohatu, scrub, 4400 feet, A.P.D.
- Dracophyllum adamsii* Petrie. Hikurangi, Maungawaru, and Arowhana, scrub, 4000-4900 feet, A.P.D.
- D. recurvum* Hook. f. Maungawaru, bog, 4600 feet, N. L. Elder, A.P.D.
- Eleocharis pusilla* R. Br. Rosy Bay, Waikaremoana, 2000 feet, N. M. Adams! (*E. acicularis*).
- Epilobium cockaynianum* Petrie. Hikurangi, Maungawaru, Arowhana, and Maungapohatu, 4200-5000 feet, A.P.D.
- \**E. gracilipes* Kirk. Maungapohatu, cliffs, 4200-4400 feet, A.P.D.
- E. linnaeoides* Hook. f. Hikurangi, Maungawaru, Arowhana, and Maungapohatu, wet open ground in forest, A.P.D.
- E. novae-zealandiae* Haussk. Hikurangi, tussock grassland, 5000 feet, A.P.D.
- E. pedunculare* var. *viride* Ckn. Widely distributed in damp situations, especially wet rocks, A.P.D.
- E. pernitens* Ckn. et Allan. Hikurangi, rocky ground (eroding), 4800 feet, A.P.D.
- Erechtites glabrescens* Kirk. Hikurangi, 4000-4500 feet, A.P.D.
- Euphrasia zealandica* Wettst. Hikurangi, tussock grassland, 5000-5500 feet, A.P.D.

- Gahnia procera* Forst. Raukumara, Hikurangi, Maungawaru, Arowhana, Panekiri, and near Waikare-iti, forest and scrub, 3000-4900 feet, A.P.D.
- Gaultheria paniculata* Burt et Hill. Hikurangi, Maungawaru, Arowhana, and Maungapohatu, scrub, 4000-4800 feet, A.P.D.
- Hymenanthera crassifolia* Hook. f. Hikurangi, 5200 feet, rocky ground, D. R. McQueen, A.P.D. Recorded by Petrie and Adams (*T.N.Z.I.*, 30), but omitted by Cheeseman (Manual, 1925).
- Hydrocotyle hydrophila* Petrie. Margins of small lakes near Waikaremoana, 2000 feet, A.P.D.
- Isolepis merrillii* Palla. Near Waikare-iti, bog, 3000 feet, A. M. Jones!
- I. pottsii* (Cook). Maungapohatu, 4400 feet, and Panekiri, 3800 feet, bog, A.P.D.
- I. setacea* (L.) R. Br. Hikurangi, stream-bank, 2000 feet, A.P.D.
- Isotoma fluviatilis* (R. Br.) Muell. Near Waikare-iti, lake margins, 3000 feet, A. M. Jones!
- Luzula campestris* var. *floribunda* Buchen. Hikurangi, Aorangi, Arowhana, Maungapohatu, and Panekiri, tussock grassland and rocky ground, 3800-5700 feet, A.P.D.
- \**L. leptophylla* Buchen. et Petrie. Hikurangi, bog, 4500 feet, A.P.D.
- Lycopodium australianum* Nerter. Hikurangi and Arowhana, 4700-5400 feet, A.P.D. (*L. selago*).
- L. ramulosum* Kirk. Maungawaru, 4600 feet, and near Waikare-iti, 3000 feet, bog, A.P.D.
- Nertera granadensis* (Mutis) Druce. Widely distributed in damp situations, near S.L. to 4700 feet, A.P.D. (*N. depressa*).
- Mecodium rufescens* (Kirk.) Cope. Near Waikare-iti, 3000 feet, A. M. Jones! (*Hymenophyllum*).
- Microsorium novae-zealandiae* (Willd.) Cope. Maungawaru, Arowhana, and Maungapohatu, beech forest, 3000-4000 feet, A.P.D. (*Polypodium*).
- Myriophyllum pedunculatum* Hook. f. Maungapohatu, 4200 feet, and near Waikare-iti, 3000 feet, tarns, A. M. Jones!, A.P.D.
- Olearia colensoi* Hook. f. Raukumara, Kapua, Maungawaru, and Arowhana, 4000-4700 feet, R. D. Creswell, N. L. Elder, A.P.D.
- Ourisia macrophylla* var. *robusta* (Col.) Simp. et Thom. Raukumara, Wharekia, Aorangi, Hikurangi, Maungawaru, Arowhana, Maungapohatu, and Panekiri, 2500-4500 feet, A.P.D.
- Parahebe hookeriana* (Walp.) Oliv. Maungapohatu, cliff, 4200 feet, A.P.D. (*Veronica*).
- P. olseni* (Col.) Oliv. Hikurangi, Arowhana, and Maungapohatu, cliffs, rocky ground, and scree, 4200-5700 feet, N. L. Elder, N. Potts!, A.P.D.
- Phyllocladus glaucus* Carr. Hikurangi, Maungawaru, Arowhana, and Aniwanuiwa V., Waikaremoana, 2200-3500 feet, R. D. Creswell,

- N. L. Elder, A.P.D. Recorded from Hikurangi by Petrie and Adams, but omitted by Cheeseman.
- Pimelea buxifolia* Hook. f. Wharekia, 2500 feet, Maungawaru and Arowhana, 4000-4700 feet, scrub, R. D. Creswell, N. L. Elder, A.P.D.
- P. lyallii* Hook. f. Hikurangi, 5000-5600 feet, and Maungapohatu, 4000 feet, cliffs and rocky ground, R. D. Creswell!, A.P.D.
- Pittosporum rigidum* Hook. f. Raukumara, 4000 feet, A.P.D.
- Poa novae-zealandiae* Hack. Maungapohatu, cliffs, 4200-4400 feet, A.P.D.
- Pseudolepyrum ciliatum* (Hook. f.) Dandy. Maungawaru, Maungapohatu, and near Waikare-iti, bog, 3000-4600 feet, A.P.D. (*Gaimardia*).
- Pterostylis banksii* var. *patens* (Col.) Hatch. Aorangi, Hikurangi, Maungawaru, Arowhana, Maungapohatu, and Panekiri, 3500-5200 feet, A.P.D.
- P. humilis* Rog. Hikurangi, Maungawaru, Arowhana, and Maungapohatu, scrub, 4300-5000 feet, A.P.D.
- Raoulia australis* var. *albo-sericea* (Col.) Kirk. Waikaremoana, lake beach, 2000 feet, E. A. Hodgson!
- R. glabra* Hook f. Hikurangi, Arowhana, and near Waikaremoana, rocky ground, 2300-4700 feet, A.P.D.
- Stellaria gracilentia* Hook. f. Hikurangi and Aorangi, rocky ground, 4000-5700 feet, A.P.D. Recorded from Hikurangi by Petrie and Adams, but omitted by Cheeseman.
- Tillaea purpurata* Hook. f. Margins of small lakes near Waikaremoana, 2000 feet, A.P.D.
- Trisetum antarcticum* var. *lasiorrhachis* Hack. ex Cheesem. Hikurangi (type locality) and Maungapohatu, cliffs and rocky ground, 4000-5000 feet, A.P.D.
- Uncinia filiformis* Boott. Maungawaru, Maungapohatu, and Panekiri, forest, 3600-4000 feet, A.P.D.
- \**U. nervosa* Boott. Maungapohatu, bog, 4200-4400 feet, A.P.D.
- U. tenella* R. Br. Arowhana and Maungapohatu, scrub, 4400 feet, A.P.D.
- Schizilema allanii* Cheesem. Hikurangi, Maungawaru, and Arowhana, scrub, 4000-5000 feet, A.P.D.
- S. colensoi* Domin. Whakapunake, Maungapohatu, Panekiri, and Ngamoto, cliffs, 3000-4000 feet, A.P.D.
- S. trifoliolatum* (Hook. f.) Domin. Maungapohatu, forest, 3000 feet, A.P.D.
- Thelymitra pauciflora* R. Br. Pukeamaru and Whakapunake, manuka scrub, 1000 feet, A.P.D.
- Schoenus pauciflorus* (Hook. f.) Hook. f. Hikurangi, bog, 4800 feet, A.P.D. Recorded by Petrie and Adams, but omitted by Cheeseman.
- Wahlenbergia ramosa* Simp. Near Rosy Bay, Waikaremoana, rocks, 2500 feet, A.P.D.

WELLINGTON BOTANICAL DISTRICT

- Aciphylla squarrosa* Forst. Pahaoa Taipos, 16 miles E. of Martinborough, 1000 feet, and Mt. Barton and Mangatoetoe, Aorangi Mts., near S.L. to 2800 feet, rocky ground, D. R. McQueen, A.P.D.
- Ascarina lucida* Hook. f. Near Taita, Hutt Valley, Wellington, steep gully in beech forest, A. L. Poole, A.P.D. Only one tree seen.
- Brachycome adorata* Hook. f. Pahaoa Taipos, 1500 feet, and Mt. Barton and Mangatoetoe, Aorangi Mts., 1500-2800 feet, rocky ground, D. R. McQueen, A.P.D.
- Carex resectans* Cheesem. Ohau Bay, Wellington, grass-covered terrace near S.L., A.P.D.
- Celmisia spectabilis* Hook. f. 15 miles S. of Waipukurau, Hawkes Bay, N. L. Elder; Mt. Barton and Mangatoetoe, Aorangi Mts., cliffs and rocky ground, 1600-2900 feet, D. R. McQueen, A.P.D.
- \**Colobanthus strictus* (Cheesem.) Cheesem. Mangatoetoe, Aorangi Mts., rocky ground, 1500-2800 feet, A.P.D.
- Corybas aconitiflorus* Salisb. Pukerua Bay, Wellington, J. B. Irwin. (*Corysanthes cheesemanii*).
- Danthonia bromoides* Hook. f. Mangatoetoe, Aorangi Mts., cliffs, near S.L. to 2800 feet, D. R. McQueen, A.P.D.
- \**D. buchmanii* Hook. f. Pahaoa Taipos, rocky ground, 1500 feet, A.P.D.
- D. flavescens* var. *cheesemanii* (Hack. ex Cheesem.) Zotov. Mt. Barton and Mangatoetoe, Aorangi Mts., 2500-2800 feet, D. R. McQueen, A.P.D.
- \**Deyeuxia avenoides* (Hook. f.) Buch. var. *avenoides*. Mangatoetoe Aorangi Mts., rocky ground, 2000-2800 feet, A.P.D.
- Dracophyllum filifolium* Hook. f. Mt. Barton and Mangatoetoe, Aorangi Mts., 1800-2800 feet, D. R. McQueen, A.P.D.
- Epilobium novae-zealandiae* Haussk. Pahaoa Taipos, 1000 feet, and Mangatoetoe, Aorangi Mts., 1000-2800 feet, rocky ground, A.P.D.
- Festuca multinodis* Petrie et Hack. Pahaoa Taipos, 1000-1500 feet, and Mangatoetoe, Aorangi Mts., near S.L. to 2800 feet, cliffs and rocky ground. A.P.D.
- Gaultheria rupestris* var. *subcorymbosa* (Col.3 Burt. et Hill. Mt. Barton and Mangatoetoe, Aorangi Mts., cliffs and rocky ground, 1800-2900 feet, D. R. McQueen, A.P.D.
- Hebe laevis* (Benth.) Ckn. et Allan. Mangatoetoe, Aorangi Mts., cliffs and rocky ground, 2000-2800 feet, D. R. McQueen, A.P.D.
- Hymenantha crassifolia* Hook. f. Pahaoa Taipos, rocky ground, 1200 feet, A.P.D.
- Isolepis cartilaginea* R.Br. Te Ikaamaru Bay, manuka scrub on coastal cliff, A.P.D. (*Scirpus antarcticus*).

- I. pottsii* (Cook.) Aorangi Mts. and hills behind Wellington, wet ground and stream-banks, near S.L. to 2800 feet, A.P.D.
- Juncus antarcticus* Hook. f. Mt. Barton, Aorangi Mts., 2700 feet, D. R. McQueen!
- Luzula banksiana* Mey. Wellington Coast, from Ohau Bay to C. Palliser, rock crevices, A.P.D.
- Microlaena polynoda* (Hook. f.) Hook. f. Pahaoa Taipos, forest, A.P.D.
- \**Myosotis pygmaea* var. *minutiflora* Simp. et Thom. Ohau and Te Ikaamaru Bays, Wellington, raised beaches, R. Mason, S. Natusch, A.P.D.
- Pimelea gnidia* (Forst.) Willd. Mangatoetoe, Aorangi Mts., rocky ground, 2400 feet, A.P.D.
- Poa colensoi* Hook. f. Pahaoa Taipos, 1500 feet, and Mangatoetoe, Aorangi Mts., 2500-2800 feet, cliffs and rocky ground, A.P.D.
- Raoulia glabra* Hook. f. Pahaoa Taipos, rocky ground, 1500 feet, A.P.D.
- Schizeilema trifoliolatum* (Hook. f.) Domin. Pahaoa Taipos, forest, 1000 feet, A.P.D.
- Senecio greyii* Hook. f. Pahaoa Taipos, 500-1500 feet, R. Mason, N. T. Moar, D. R. McQueen, A.P.D.; Mangatoetoe, Aorangi Mts., near S.L. to 2800 feet, D. R. McQueen, A.P.D.
- Uncinia strictissima* Petrie. Pahaoa Taipos, and Aorangi Mts. near C. Palliser, scrub, near S. L. to 1500 feet, A.P.D.
- Wahlenbergia ramosa* Simp. Pahaoa Taipos, 1000-1500 feet, Mangatoetoe, near S.L. to 2800 feet, and Wellington Coast, from Ohau Bay to C. Palliser, rocks, A.P.D.

## Plants and Vegetation of New Caledonia

K. H. Marshall

THIS article is adapted from a letter written from New Caledonia in November 1943, while the writer was in the New Zealand armed forces.

Botanically, New Caledonia is a link between New Zealand and Australia, many families from both countries being represented here. I shall try to give you a general picture of the vegetation, as seen through the eyes of a New Zealander. There are about five main belts, determined partly by altitude and partly by other ecological factors. The first is that of the salt marshes and mangrove swamps along the coast, but I know very little about them, having never troubled to go into either; there are too many mosquitoes for one thing. I believe there is a species of kowhai there, which I would like to see.