

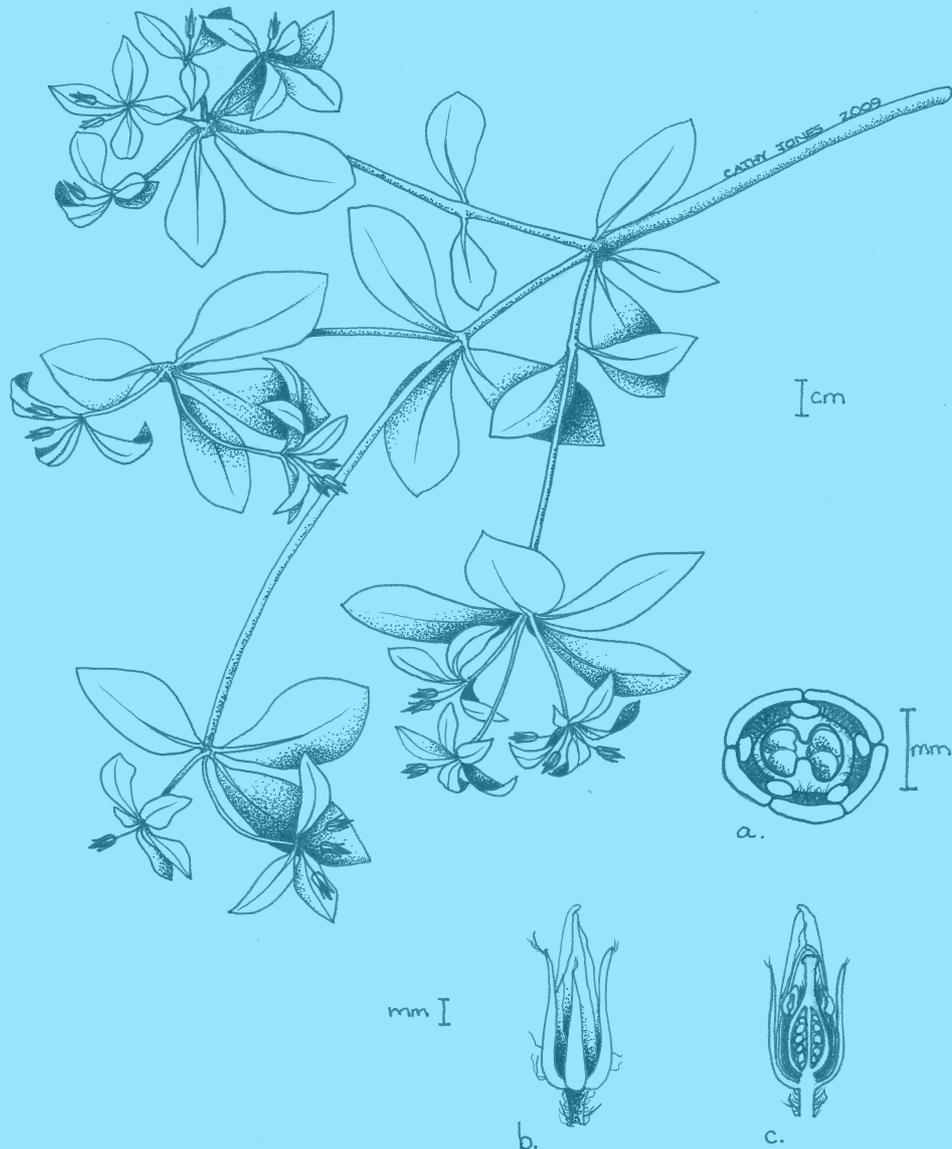
NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 96

June 2009

Pittosporum cornifolium A.Cunn.



New Zealand Botanical Society

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The 2009 ordinary and institutional subscriptions are \$25 (reduced to \$18 if paid by the due date on the subscription invoice). The 2009 student subscription, available to full-time students, is \$12 (reduced to \$9 if paid by the due date on the subscription invoice).

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New subscriptions are always welcome and these, together with back issue orders, should be sent to the Secretary/Treasurer (address above).

Subscriptions are due by 28 February each year for that calendar year. Existing subscribers are sent an invoice with the December Newsletter for the next years subscription which offers a reduction if this is paid by the due date. If you are in arrears with your subscription a reminder notice comes attached to each issue of the Newsletter.

Deadline for next issue

The deadline for the September 2009 issue is 25 August 2008.

Please post contributions to:

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Send email contributions to atropa@actrix.co.nz. Files are preferably in MS Word (with the suffix ".doc" but not ".docx"), as an open text document (Open Office document with suffix ".odt") or saved as RTF or ASCII. Graphics can be sent as TIF JPG, or BMP files. Alternatively photos or line drawings can be posted and will be returned if required. Drawings and photos make an article more readable so please include them if possible. Macintosh files cannot be accepted so text should simply be embedded in the email message.

Cover Illustration

Pittosporum cornifolium A.Cunn. in bud, drawn by Cathy Jones from a cultivated plant on 1 June 2009. a. cross section of bud, showing petals, filaments, ovary, seeds. b. flower bud. c. vertical section of bud showing sepals, petals, anthers, pistil.

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NEWS

Regional Botanical Society News

■ Auckland Botanical Society

March Meeting & AGM

After the AGM, when Mike Wilcox was reinstated as President, Lucy Cranwell student grant recipient Mieke Kapa gave a presentation on her studies of the sedge, *Eleocharis sphacelata*. She outlined the three aspects of her thesis – ethnobotany, germination, and growth of both seedlings and vegetative propagules. Mike then showed some of the highlights of the several camps held in the past year.

March Field Trip

After scrubbing and spraying boots as part of the new PTA protocol to protect our beloved kauri forests, we followed the well-maintained tracks in Alice Eaves Bush at the north end of Orewa to view the variety of plants present. A few red fruits remained on the plentiful *Alseuosmia macrophylla*, and there were lovely specimens of the entity contained within *Asplenium gracillimum* that was called *A. bulbiferum* var. *laxum* in “New Zealand Ferns” by Dobbie and Crookes. Lunch was eaten at the nearby Wenderholm Regional Park, and on the subsequent climb up the hill through the healthy coastal forest the main item of discussion was a large *Melicope* tree – a hybrid between *M. simplex* and *M. ternata*. This hybrid is reasonably common, and in the past has been named *M. mantelli*.

April Meeting

Peter de Lange of the Department of Conservation presented a comprehensive and enlightening overview of plants on the Chatham Islands. Of the 859 higher plant taxa now recorded from there, 50 % are natives, of which 36 species are endemic. There are just 14 species of native trees there (nearly all endemic), with notable absences being conifers, *Nothofagus* and *Metrosideros*. Several native trees were evidently introduced from New Zealand by the Moriori and/or Maori, examples being *Corynocarpus laevigatus*, *Sophora chathamica* and *Cordyline australis*.

April Field Trip

Led by John Smith-Dodsworth, a large party enjoyed the botanical wonders of the Kauaeranga Valley, Coromandel Peninsula, as we slowly climbed the Webb Creek Track. Huge northern rata trees were a feature of the lower reaches, and it was a treat for Aucklanders to see the many plants that we don't find locally. Included among these were *Pittosporum huttonianum*, *Pseudopanax discolor*, *P. colensoi*, *P. laetus*, *Lepidothamnus intermedius*, *Halocarpus kirkii*, *Olearia townsonii*, *Lindsaea viridis*, *Loxosoma cunninghamii*, *Celmisia adamsii*, *Hebe pubescens*, *Archeria racemosa*, *Drosera spathulata* and *Brachyglottis myrianthos*.

May Meeting

The newly instituted “Plant of the month” talk was given by Bec Stanley, taking as her subject the kakabeak (*Clianthus puniceus* and *C. maximus*), and the difficulties faced by those trying to protect the remaining plants. Members were dismayed by a video clip showing a hare devouring a complete plant in a few short minutes. A combined presentation by Bec and Ewen Cameron on the botany of Rarotonga, started with the work done by Cheeseman in 1899, then proceeded to describe the flora of the main island, and the outer islands of Miti'aro and Aitutaki.

May Field Trip

Oakley Creek reaches from Mt Roskill across the isthmus to the Waitemata Harbour at Waterview, a total of 15 km. Friends of Oakley Creek is a community-based restoration group that works to protect, preserve, enhance and restore the ecological health of the creek and its environs. Their members accompanied Bot Soc on the trip. A group of 28 explored the river banks and slopes, and were pleased to find 18 species of fern growing wild, the commonest being *Pteris tremula*, *Diplazium australe*, *Blechnum chambersii* and *Deparia petersenii*. Two exotic fern species, *Pteris cretica* and *Adiantum raddianum*, were also plentiful. Numerous native trees, shrubs and monocots have been planted, and there are plentiful exotic trees (pine, plane, privet, crack willow etc) and shrubs there, both planted and naturalised, amongst which the natives are getting well established.

FORTHCOMING ACTIVITIES

3 June	<i>Pittosporum</i> in the South Pacific – Chrissen Gemmill
20 June	Upper Huia Dam, Waitakere Ranges
1 July	Kauri PTA disease – Nick Waipara
18 July	QE II forest, Whitford
5 August	Forest remnants of the Waikato – Bruce Burns
15 August	Kepa Bush

Auckland Botanical Society, PO Box 26391, Epsom, Auckland 1344

President: Mike Wilcox

Secretary: Bec Stanley rebecca.stanley@arc.govt.nz

■ Manawatu Botanical Society

[The following trip reports were intended for a 2008 issue of the Newsletter, but were accidentally missed by the editor.]

Saturday 5 April - Fernbird Flats, Foxton

A rather unusual trip to the back of the Foxton (AKA Manawatu) Estuary, an area called the Fernbird Flats, made good use of a 4WD to bounce in along an old, and in places rather boggy, track to one of the large maimai ponds. From there we headed out further across maimai ponds and muddy creeks into the lower and wetter vegetation types. These were mostly rushland of sea rush (*Juncus kraussii*) or oioi (*Apodasmia similis*), with huge swathes of *Bolboschoenus caldwellii* and quagmires of *Schoenoplectus pungens* further towards the river. An adventurous day out and a great opportunity to look into this rather inaccessible area.

Thursday 1 May - Fog and scrub – Seven days in the Paparoa Wilderness

Peter van Essen gave an account of a trip along the northern Paparoa Range (Westland) from Buckland Peaks to near Mt Mendel in early December 2007. This gazetted wilderness area is rugged granite country with impressive jagged peaks. Botanical highlights included a hidden forest of bryophytes protected from goats and deer by a massive jumble of boulders over-grown by large silver beech. The bryophyte mats were thick and completely festooned the huge boulders and fallen silver beech trees that made up the forest floor. It was too early in the season for most alpine flowers but the diversity of sub-alpine vegetation made up for this and there was plenty of leatherwood to make a Ruahine trumper feel at home.

Saturday 14 June - Three Mile Creek, Manawatu Coast

We drove along the beach from Himitangi towards Foxton, past foredunes largely covered by marram, although patches have a lovely soft spinifex slope. Much of the behind-foredune vegetation, on private land, was actually in pines or acacias, but at 3 Mile Creek (which was at low flow!) we spent some time exploring the deflation plain vegetation. Where vegetated, the plant communities were rather disappointing, being mainly weeds overtopping a carpet of *Selliera rotundifolia*. Some *Juncus caespiticus* was a novel find. Apparently there used to be some *Pimelea actea*, formerly known as *Pimelea* "Turakina", in the area but none were spotted.

Thursday 3 July - Azorian Adventures - Jill Rapson

Jill got to attend the International Association for Vegetation Science conference in Lisbon (or as the locals call it, Lisboa) in 2004. The city itself is full of stone houses (which are cool like caves), with red tile rooves, packed into narrow streets, all overviewed by the castle Sao Jorge, which has great views, huge walls, and was apparently formidable in its day. The conference hosts made a special effort to provide much interesting and unusual entertainment, such as the dancing horse cavalry which performed in the Botanic Gardens of Ajuda. Jill was a bit late for the performance, getting stuck at the garden's gateway, where there were two trees which turned out to be New Zealand's native karaka!

Jill had elected to go on the post-conference excursion to the Azores, a group of volcanic islands which served as a sailing "refuelling" stop mid-ocean. The highest of the islands, Pico, became an important vine-growing area, the vines tucked into individual little lava stone alcoves, creating an extraordinary patterned landscape now a World heritage area. Botanists were most interested here in the rather depauperate coastal flora, growing also in rock crevices, this time natural, on old coastal platforms (fajas).

But the most peculiar feature of the area is the scarcity of fresh water, volcanic islands being notoriously porous. All the rain (and there is a lot of it!), apparently drains through the lava, and sits as a lens of fresh water underneath the mountain, floating on top of the seawater which readily permeates the lava rock. Wells to access this freshwater were originally only diggable close to the coast. Today constant removal of fresh water has meant there is now insufficient to support agriculture. *Sphagnum* moss cushions are very extensive in the most remote parts of the island today, and they are really important in catching rain water, and holding it like a gigantic sponge (*Sphagnum* is famous for being able to hold about 15 times its own weight in water) for slow release into the freshwater aquifer. Loss of those moss carpets has increased the island's water problems, and today all such mossy areas are protected as water catchments.

The islands have about 900 vascular plants, 300 of them indigenous, and about 430 species of bryophytes. About 27% of the flora is endemic, a very low proportion. Forests originally covered much of the islands. Fayal forest (*Myrica faya* and *Picconia azorica*) were found near the coasts, with, further inland, laurel forests of *Laurus azorica* in various combinations with other woody species. A fascinating place to visit!

Saturday 2 August - Te Angiangi Marine Reserve, Waipukurau coast

We went for a look at this relatively new marine reserve, on a low tide. The day was extraordinarily kind to us amidst a nationally nasty spell of weather. We had a good look over the huge tidal platform, which forms the terrestrial portion of the reserve, demonstrating to ourselves that we know nothing about marine macro-algae. The platform appeared shorn, with no large algae at all, and although the carpet of Neptune's necklace was extensive, all plants were small and flat. We wondered if the recent storms had mown the platform. The clearest evidence of wave damage though was the absence of much of the foredune. The foredune toe in places contained extensive mats of marram roots, all recently exposed, and many small dunes of *Carex pumila* were also eroded. We concluded our trip with inspection of some coastal plantings, and also a look at an impressive stand of karaka, planted this far south.

Thursday 4 September - The Three Passes - Peter van Essen

Peter van Essen took us on a vicarious tour from Klondyke Corner to Hokitika. The three passes were the Harman (1321m), Whitehorn (1753m) and Browning (1426) Passes, with two peaks thrown in - Mt Campbell (1829m) and Mt Isobel (2182m). The walk started with mountain beech, occasionally interrupted by recent slips in the friable greywacke, as is typical of the eastern side of the alps. Higher altitude vegetation included *Olearia ilicifolia*, meadows of *Ranunculus lyallii*, *Dracophyllum longifolium*, *Hebe* sp., *Anisotome haastii*, *Dolichoglottis scorzonerooides*, and saddles of *Chionochloa pallens*. On Whitehorn Pass, with its permanent snowfield, vegetation was just a small patch of *Phyllachne colensoi*, *Haastia recurva* (some in full flower), *Raoulia grandiflora* and *Celmisia sessiliflora* herbfield, with lots of alpine grasshoppers. An inspection noted a curious behaviour by pipits, which would make grasshopper sounds until dinner hopped out.

Then on to Lake Browning, which is just above the Browning Pass. Amongst the *Chionochloa pallens* the flora here consisted of *Wahlenbergia albomarginata*, *Hypolepis millefolium* and many *Celmisia* species, including one with the inflorescences nipped off, presumably by hares intent on eating the stalk, something rabbits and hares do to the petioles of *Olearia colensoi* leaves. Down past the Arahura River, the route then joined a bridle track, cut at enormous effort as part of gold-mining in the area. Here the greywacke gave way to schist rock, and since this area is in the Westland beech gap, the subalpine vegetation changed into a broad belt of *Olearia ilicifolia*, *Olearia colensoi*, and *Olearia lacunosa* shrubland. Peter followed the bridle track down the Styx River, past Lake Kaniere and onto the Kaniere Water-race Track, to finish on the beach near Hokitika. A great cross-section of the Main Divide.

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Full details of the events mentioned below can be obtained from Newsletter No. 39 of the Society. A copy of the newsletter is available as pdf on <http://tur-www1.massey.ac.nz/~grapson/service.html>

■ Wellington Botanical Society

November 2008: Field trip, Eastern Hutt River.

Led by Owen Spearpoint, twelve botSoccers took advantage of this unique opportunity to use 4WD transport to enter this water supply catchment area at Phillips Stream, a true left tributary of the Eastern Hutt River. From the swingbridge we began botanising on the true right, along the track that leads up the valley using a plant list last updated by Owen and a Bot Soc trip to the true left bank in April 2008.

Despite a lousy forecast, "Hughie" held off until after lunch, when heavy rain began. But by then we had added *Coprosma rigida*, *Neomyrtus pedunculata*, kohuhu/*Pittosporum tenuifolium*, common maidenhair/*Adiantum cunninghamii*, Prince of Wales feathers/*Leptopteris superba*, a shield fern/*Polystichum silvaticum*, the orchid *Simpliglottis cornuta*, and the dicot herb, *Nertera villosa*. Near the saddle where the route to Quoin Ridge branches off, we saw red mistletoe, *Peraxilla tetrapetala*, high in a beech tree. On the saddle, three, single, separate, orchid leaves in the leaf litter had us puzzled. The consensus is that they were *Simpliglottis cornuta*, which usually has two or three leaves but does occasionally have a single leaf.

6-7 December 2008: field trip, Eastern Taranua Range

The Atiwhakatu Valley has been botanised in the past, starting with the doyen of field botanists, Tony Druce. Sixteen of us led by Pat Enright made several additions to the list, e.g., a mature, narrow-leaved maire/*Nestegis montana*, a seedling titoki/*Alectryon excelsus*, shining spleenwort/*Asplenium oblongifolium*, and the small, ephemeral, orchid *Petalochilus chlorostylus*.

Red mistletoe/*Peraxilla tetrapetala*, almost in full flower on a closed part of the track past Donnelly Flat was spectacular. Although not as showy, other additions included the semiparasitic member of the sandalwood family, *Mida salicifolia*, growing near the track and the bridge. At least one showed the alternate leaf arrangement that distinguishes it from white maire/*Nestegis lanceolata*.

Unfortunately it was too early to botanise the streambed to see the interesting species that grow there in the short season allowed when Atiwhakatu Stream is a sufficiently low level. Grasses such as *Deschampsia tennella* and *Poa breviglumis* and the small herbs *Colobanthus apetalus*, *Geum cockayneanum*, and *Coriaria plumosa* grow in the stream gravels and along the banks.

On Sunday, we botanised up Gentle Annie Track, and from the bush edge near Rocky Lookout, across Pig Flat, to Mountain House Shelter. Above here along the Powell Hut track we saw seedlings, and shrubs to c. 4 m, of the recently described, Nationally Threatened, *Myrsine umbricola*. Found only in the Taranua Range, it occurs in silver beech forest and has a more spreading habit and larger leaves than its close relative, weeping matipo/*Myrsine divaricata*. Other species we saw included the fern, *Microsorium novae-zelandiae*, the yellow mistletoe, *Alepis flavida*, and the orchids, *Pterostylis montana*, and *Singularlybas oblongus*.

February 2009: Jack's Bush, Waikanae

Owned by Kapiti Coast District Council, this dune-wetland forest remnant is now protected as part of a larger QE II covenant. Greater Wellington Regional Council also does possum and rodent control within the site.

Equipped with Pat Enright and Tim Park's plant list a group of eleven led by Lisa Clapcott first botanised the bush edge over the top of a grass covered dune at the end of Jack's Road, then the flat forest floor, and wetland margins. Large swamp maire/*Syzygium maire* were impressive. A surprise list addition was a large kāmahi/*Weinmannia racemosa*. Two native species which are weedy in Foxton Ecological District – pūriri/*Vitex lucens*, and karo/*Pittosporum crassifolium* were also listed. Other pest plant threats included holly fern/*Cyrtomium falcatum* identified by Leon Perrie growing on a kānuka near a neighbouring garden (<http://blog.tepapa.govt.nz/category/plants/>).

7-8 March 2009: Turakirae Coast to Barney's Whare

A group of fifteen led by Chris Hopkins botanised the coast from Orongorongo River mouth to Turakirae Head, seeing many sand tussocks/*Austrofestuca littoralis* growing in association with the sand-binding sedge *Spinifex sericeus* and behind the dunes on more consolidated ground, large mats

of *Raoulia australis*/scabweed. At Turakirae Head, on a cluster of large rocks was *Sophora molloyii*/kowhai, shaped against the rocks by this exposed site's severe winds. Further inland, were the dwarf mistletoes, *Korthalsella clavata* and *K.lindsayi*, heavily infesting their preferred hosts *Olearia solandri*/coastal tree daisy and *Coprosma propinqua* ssp. *propinqua*; to the point that some hosts were dying.

From Turakirae Head to Barney's Whare is an interesting mosaic of earthquake-raised beaches, that impound peaty bogs, and standing water, or have drier areas, depending on how the water seeps through the scree and fractured rock from the coastal hills behind. The exception is the larger catchment of Barney's Stream which has laid gravels and angular rocks over the raised beaches. Some plants of interest along this section were *Drosera binata*/forked sundew, *Euphrasia cuneata*/eyebright, and what may be a discovery of *Coprosma virescens* at three sites along the crest of an older raised beach.

We were concerned to see, beyond Barney's Whare, the purple plumes of *Cortaderia jubata*/pampas grass covering an extensive area of a scree fan, which should be eradicated urgently. Also of concern, *Erica lusitanica*/Spanish heath, is threatening the *Drosera binata* site.

The plant species list used covered from the Wainuiomata River to Windy Point. It was compiled from surveys by Aston, Bagnall, Wassilieff, and Druce, who later extended it up to 1000ft elevation. The list includes c. 530 vascular native and adventive plants, with just over 360 being native. Of note also is that about 90 native species are listed as uncommon. This is owing to the unique landscape of raised beaches, rocky terrain, and the sheer variety of wetland and drier areas along the coast. A trip during October-November, when most of the smaller plants, including sedges, grasses and more orchids, are in flower would allow easier identification. Examples include the tiny *Isolepis basilaris* (Serious Decline), *Limosella lineata* and *Hypericum pusillum*.

11-13 April 2009: Moanaroa Covenant, Akitio and Pongaroa scenic reserve.

Nine members were accompanied by the Ramsden family in their 23.5 ha Moanaroa covenant established in 2003. It protects broadleaf coastal forest on a dry site dominated by steep slopes. The forest canopy was dominated by karaka (*Corynocarpus laevigatus*) with titoki (*Alectryon excelsus*) and tawa (*Beilschmiedia tawa*). Rewarewa (*Knightia excelsa*) emerged above the canopy. Other notable species present were pukatea (*Laurelia novae-zelandiae*), two species of milk tree (*Streblus heterophyllus* and *S. banksii*), matai (*Prumnopitys taxifolia*) and totara (*Podocarpus totara*). Seedlings were mainly karaka and titoki and there were two groups of whau (*Entelea arborescens*) saplings that had been subject to some browsing. Lianes are also well represented in the covenant. A feature was bush lawyer (*Rubus schmidelioides*) over 14cm diameter. The overnight stay in woolshed facilities dating back to 1883 was also a feature before heading back to Pongaroa the next day.

The scenic reserve at Pongaroa featured all the 'maire': *Nestegis cunninghamii*, *N. lanceolata* and *N. Montana*. Also noted were *Syzygium maire* and a *Mida salicifolia* well over 6m. We compared *Melicope simplex*/*Melicytus micranthus*/*Raukaua anomalus*. Of the five species of podocarp there, the grand kahikatea at 'Kahikatea corner' was the most impressive. We ate lunch under it with many tui feasting vocally on the seed receptacles above. Seven additions to the plant list provided by Pat Enright were made.

FUTURE EVENTS

- 6 June: Field trip, Owhiro catchment and Tawatawa Reserve.
Leader: Paul Blaschke 398-9545
- 15 June: Evening meeting. Vegetation and ecosystems on your doorstep.
Speaker: Dr Paul Blaschke
- 4 July: Field trip. Otari-Wilton's Bush
- 20 July: Evening meeting. Biogeography, phylogeny, and taxonomy of Ourisia - A research synopsis. Speaker: Heidi Meudt, Research Scientist (Botany), Te Papa.
- 3 August: Field trip Orongorongo Track and valley. Co-leaders: Jill & Ian Goodwin; 475 7248

President: Carol West (04) 387 3396 cwest@doc.govt.nz

Secretary: Barbara Clark (04)233 8202 bj_clark@xtra.co.nz PO Box 10412, Wellington 6143
<http://wellingtonbotsoc.wellington.net.nz/>.

■ Nelson Botanical Society

February Field Trip: Mt Arthur

Four-wheel-drive vehicles “ferried” 16 enthusiasts up the steep Mt Arthur road. The group walked through beech forest, then a zone of mountain cedar and *Dracophyllum traversii*. *Simpliglottis cornuta* was just at the end of flowering and *Luzuriaga parviflora* sported green berries amongst its white flowers. Near Mt Arthur hut, *Hebe albicans* was a mass of flowers and the last *Wahlenbergia albomarginata* were evident. Some of the day’s treats included “black stitch-edged” *Celmisia dallii*, *Pterostylis humilis* tucked under *Hebe topiaria* and, further on, scattered *Aciphylla anomala*. On marble outcrops were rock-loving *Epilobium glabellum* with a myriad of feathery seed heads and small clumps of *Gentianella filipes*.

March Field Trip: Adele Island

Disembarking from a water taxi at Stream Cove, 17 BotSoccers entered the birdsong-filled bush to begin exploring the island. Botanical highlights included the many ferns (e.g. *Microsorium pustulatum* and *M. scandens*), two fern allies (*Tmesipteris elongata* and *Huperzia varia*), and four orchids (*Acianthus sinclairii* in bud, *Earina autumnalis* in full bloom, *Thelymitra* sp. in seed and *Orthoceras* sp. just past flowering). Hinau and very large-leaved *Griselinia lucida* indicated the island’s mild climate. On the sunny top of the island, there was much *Korthalsella salicornioides* growing on kanuka (*Kunzea ericoides*) and a patch of *Ileostylus micranthus* on gorse! *Hakea salicifolia* was abundant here. A new plant for most was *Streblus banksii* – at least one large tree and many seedlings. Footnote: The Birdsong Trust and its workers can be proud of the island’s birdlife.

April Special Event: 20th Anniversary dinner and speaker

Forty past and present members assembled at Fairfield House to celebrate our Society’s 20th birthday. Set up for perusal during the evening was a splendid display promoting the Society. After the current president’s welcome, and the traditional BotSoc potluck dinner, there was a tribute to Graeme Jane, our founding president, followed by Graeme’s collection of slides and videos from the “old days”. These covered camps and field trips, and provided much hilarity. In addition to Graeme, two of the other three original botanists were present – Bill Malcolm and Shannel Courtney. Peter Williams was out of Nelson but wished us a “happy birthday”.

Easter Camp: Mangarakau and the West Coast:

Mangarakau Wetland and environs: Friday, 10 April

The morning was spent on the track to the Lake Mangarakau Lookout. Sedges became the focus along the swamp edge, the finest being *Tetraria capillaris* with its terminal seed heads and red bases. *Lepidosperma filiforme* was likened to fibre optic lamps of the 1980s. On the other side of manuka, kanuka and gorse scrub was a short heath with a few *Epacris pauciflora* still in flower. The orchid *Corunastylis pumila* and the fern *Lindsaea linearis* were loci of discussion. There were three lycopods too: *Lycopodium volubile* (sporangia that hang down), *L. scariosum* (terminal, upright sporangia) and *Lycopodiella lateralis* (sporangia along the stem). A return to the swamp revealed *Juncus lomatophyllus* (a weed Graeme had seen only on the West Coast), *Hypericum pusillum* still with orange-yellow flowers and *Gratiola sexdentata*. After lunch, the group set off uphill past a former coalmine, where hutu and pukatea grew side by side. Away from the disturbed vegetation, was mature rimu and hard beech forest, with an understorey of *Neomyrtus pedunculata* and *Melicope simplex*, several different filmy ferns and *Alseuosmia macrophylla*, a few still with their bright red berries.

Outer Coast: Saturday, 11 April

Day two was an 8 km wander northwards along the coast from Paturau River mouth to Te Hapu farm. On the large dunes were pingao, some *Spinifex sericeus*, a lot of *Cyperus ustulatus* and *Calystegia soldanella*. In the limestone bluffs was tucked the regionally rare *Hypolepis dicksonioides* and native puha (*Sonchus kirikii*), for which this area is a stronghold. In the rocks of Waikaki beach was *Chenopodium glaucum* ssp. *ambiguum*, seen only once before on this coast. Coastal turfs provided many of the day’s highlights, with *Leptinella dioica*, *L. calcarea*, *Selliera radicans*, *Scleranthus brockiei*, *Samolus repens*, *Leptostigma setulosum* and spiky sea holly (*Eryngium vesiculosum*) drawing out the hand lenses. Other interesting finds included *Collospermum hastatum*, *Lilaeopsis novae-zelandiae*, *Peperomia urvilleana*, and two native plantains: *Plantago raoulii* and *P. masoniae*.

The group split later, taking several routes back to base, one of which resulted in a variety of seaweeds on the display table that evening.

Whanganui Inlet–Westhaven: Sunday, 12 April

A day in coastal forest on a ridge between the estuary and Dry Road. The forest skirting the estuary held *Libocedrus plumosa*, *Podocarpus hallii*, tanekaha, *Metrosideros robusta*, *M. umbellata*, and some *M. fulgens* in flower. Further along the estuary were several perching orchids – *Earina mucronata*, *E. autumnalis* in flower, *Winika cunninghamii* with large seed capsules and the tiny *Ichthyostomum pygmaeum*. En route to the ridge top, we passed 1-metre high *Pimelea longifolia* and the hairy-backed *Trichomanes elongatum* was found (not common in this area). Along the ridge top, we saw another tiny orchid, *Drymoanthus adversus*, which was prolific in this area. A small patch of *Brachyglottis hectorii* grew on the rich soil near there. Despite the tangles of kiekie that had to be negotiated, only one was found in fruit. Back on the estuary, highlights included a large patch of *Drosera binata* with seed pods, on a low cliff; *Lindsaea viridis*, *Singularybas oblongus* and *Nematoceras* "whiskers" in a few wetter patches; and *Lycopodiella cernua*, *L. lateralis* and some comb ferns (*Schizaea australis*) in the drier places. The last small bay showed a complete zonation of coastal alluvial forest through to water's edge, an unspoilt environment now rarely seen.

Murray Gavin's property: Monday, 13 April

Local environmentalist Murray Gavin's 200-ha tract of native forest is on the SE side of Westhaven Inlet. He led us through regenerating kanuka forest with clusters of young tanekaha, northern cedar and rimu in the understorey. There were frequent saplings of silver pine (*Manoao colensoi*) and the odd green mistletoe on both *Coprosma foetidissima* and *Podocarpus hallii*. Some typically northern understorey species were also growing here: *Dicksonia lanata*, *Blechnum fraseri* and *Astelia trinervia*. At one point, four species of *Dracophyllum* were growing within a stone's-throw of each other – *Dracophyllum elegantissimum*, *D. townsonii*, *D. trimorphum* and *D. urvilleanum*. The latter, a species with a very patchy distribution in Nelson, was abundant here. From a bluff top, we looked out over the middle reaches of Bone Creek onto canopies of kahikatea, nikau and black mamaku. Later in the day, Murray took the group to a small population of *Drymoanthus adversus* on kanuka trunks below the house.

FUTURE EVENTS

- June 21: Orinoco QE II covenants. Leader Pamela Sirett (03) 542 3414
June 23: "DNA Story of New Zealand Plants", 2009 Cockayne Lecture by Peter Lockhart
July 19: Wai iti forestry reserve. Leader Diana Pittham (03) 545 1985
July 20: An evening talk on her trip to Nepal by Uta Purcell
Aug 16: Marsden Valley. Leader Sue Hallas (03) 545 0294
Aug 17: An evening talk by Peter Heenan, "New insights into the diversity and origins of the Chatham Islands Flora"
Sept 20: Petterson QE II covenant, Golden Bay. Leader Trevor Lewis (03) 547 2812
Sept 21: "Alpine plant adaptations", a slide talk by Rebecca Bowater

President: Cathy Jones (03) 546 9499. Flat 1 47A Washington Rd. Email: cjones@doc.govt.nz

Treasurer: Trevor Lewis (03) 547 2812. 22 Coster St. Email: tandjlewis@actrix.co.nz

■ Canterbury Botanical Society

March Meeting – Miles Giller spoke on the flora of California, Nevada and southern Oregon.

Miles showed and discussed a number of pictures that showed clear similarities between the growth habits and distributional patterns of plants in western USA and those of the South Island of NZ. Both have weather patterns approaching from oceans to the west with interception by mountain chains, and thus share similar west/east responses in both climate and vegetation. Excellent examples of lowland flora of the San Francisco Bay area (the trees a mixture of evergreen and deciduous angiosperms) were found in public parks. The coastal coniferous forests dominated by the Coast Redwood *Sequoia sempervirens* were 'worth the trip alone'. Inland in the higher Sierra Nevadas, other conifers, including the majestic Sierra Redwood *Sequoiadendron giganteum*, dominate. In the drier inland basins on the eastern side of the Sierra Nevadas a number of species closely resembling the flora of the eastern South Island of NZ occur. Issues of land management (such as the spread of trees into open shrublands) were similar to those of NZ. These parallels reminded us that ecological constraints and responses are universal, and can so easily lead to similar outcomes.

Miles Giller

March Field Trip - High Peak Station shrublands, QEII covenant, Rakaia Gorge

11 members explored a range of habitats at High Peak Station, near the headwaters of the Selwyn River. Greywacke outcrops revealed *Helichrysum intermedium* (only found on cooler south-facing slopes), *Heliohebe raoulii*, and *Muehlenbeckia ephedroides* (plus a whole range of likely hybrids with *M. axillaris*, *M. complexa* and *M. australis*). The tiny *Clematis quadribacteolata* and the aromatic creeper *Scandia geniculata* were found sprawling through the matagouri-coprosma scrub. A small group of *Hoheria lyallii* trees on open flats concealed a healthy population of *Olearia lineata* trees emerging through shorter divaricating shrubs. Near the northern end of the covenant the slopes were covered in deep red tussock, with scattered *Olearia bullata* and *Carmichaelia torulosa* bushes, the latter carrying a good number of the distinctive torulose (constricted at regular intervals) seed pods.

Miles Giller

April Meeting - 3 speakers: Margaret and Bert Geerkens showed highlights of the camp at Totaranui, Abel Tasman National Park, including the dark red/green orchid *Orthoceras novae-zeelandiae* which obligingly flowers right through to March. Trevor Blogg showed scenes from Totaranui, and studies of alpine from the Craigieburn Range and up the Cobb Valley, NW Nelson. Alice Shanks showed her trip with Carol Jensen to the upper Maitland Stream, west of Lake Ohau especially to establish the abundance of *Rytidosperma horrens*. This grass is known only from this locality and was described in 2005. It is green and tufted with a bristling appearance and was quite common in wet flushes.

May Meeting and May Field Trip to Kowai Bush, Springfield

Jerry Cooper gave a lively overview of the Kingdom(s) of fungi in New Zealand, with beautiful slides. Our habitats are dependent on fungi for the breakdown of all organic terrestrial matter. Conversely fungal species become endangered through loss of habitats. While some 7,500 species have been described these are estimated to be only 30% of the probable flora (Johnston, P. *et al.* 2007). Kowai Bush proved to be a very useful area for the beginner's study of plants with visible fruiting bodies – a confined habitat of well-defined association, cool *Nothofagus solandri* lowland forest. Jerry led us around the paths demonstrating representatives of the different groups, pouches, brackets, jellies, cups, bird's nests, boletes, mushrooms and paint splash, with many comments on their natural history and aids to identification.

FUTURE EVENTS

- June 6 AGM plus talk by Trevor Partridge, Christchurch City Council – A journey through my favourite plant family
- July 3 Jenny Ladley – Biological Sciences, University of Canterbury – Recent research in pollination and germination.
- July 4 Field Trip: Christchurch Botanical Gardens newly renovated fernery and the new Native plant demonstration gardens.
- August 7 Colin Meurk – The state of Botany and Conservation in Canterbury 2009
- August 15 Field Trip: Landcare Research Gardens – Lincoln
- Sept 4 Max Visch – Foreign Invaders and their Contribution to the Garden City
- Sept 12 Field Trip: Victoria Park with Di Carter to help her ID some small leaved shrubs in the garden at the visitor centre
- Nov 13-15 Show weekend camp: covenanted areas in Banks Peninsula's south-eastern bays. Based at Akaroa & Hinewai.
- Jan 15-22 Summer Camp 2010: Glen Mary Ski Club, Lake Ohau.

President: Bryony Macmillan, 351 2886, or 351 9241 (for messages)

Secretary: Margaret Geerkens (03) 352 7922 PO Box 8212, Christchurch. bert.marg@xtra.co.nz

■ Botanical Society of Otago

November Field Trip: Ross Creek, Dunedin City

A small group met leader Brian Heenan at the Cannington Road entrance to Ross Creek Reserve. Brian outlined his thoughts on the reserve as we walked one of the many tracks leading down towards Leith Stream. Brian would like to see the reserve have a visionary management plan, a task that would among other things, require a detailed systematic baseline documentation of the reserve's natural environment. This is where the BSO has a contribution to make using its expertise to help

document the flora. We walked down to the Leith, admiring the diverse fern understorey, before returning back up towards and around the Reservoir. Our route then followed the "Podocarp Track" past some impressive rimu and kahikatea through to "The Glen" and along the "Golf Course Track" back to Cannington Road. Our walk covered only a small portion of the many tracks that crisscross the reserve leaving plenty of future opportunities to expand our modest plant list.

John Barkla

November Meeting: David Lyttle talk on Alpine Plants of the Southern Mountains

At very short notice David Lyttle turned up trumps with a superb photographic survey of the alpine plants found in the Otago/Southland region. He mesmerized us with 150 brilliant images – mostly of alpine flowers, with a smattering of stunning landscapes and local botanists to put things in perspectives. It was a magic carpet tour of the southern mountains; over the more centrally placed Manugatua, Blue Mountains, Rock & Pillar Range, Old Man Range and Pisa Range, on to the Ohau Range, St Marys Range, Hawkdun Range and Ida Range further north, then south west to Mt Bee in the Eyre Mountains and Mt Burns in the Hunter Mountains and finally a flight over the sea to the Chatham Islands. Amazingly, nearly everything was in flower! A small selection of the many plants that caught my eye included the bright yellow *Ranuncululus pachyrrhizus*, so characteristic of the Central Otago mountains, the shy white *Psychrophila obtusa*, which flowers as soon as the snow melts, and the recently described *Lobelia glaberrima*. There were great drifts of *Celmisia brevifolia* on the Old Man Range, clumps of hedgehog-like *Aciphylla simplex* on a rocky herbfield and the internationally famous plant of *Celmisia densiflora* in the Pisa Range. We were treated to the endemic *Celmisia philocremna* from the Eyre Mountains and a perfect *Ranunculus lyallii* on Mt Burns. The St Marys Range yielded, among others, the cryptic, black-flowered *Leptinella atrata*, the low, spiky *Aciphylla dobsonii* and the vegetable sheep, *Raoulia eximia*, both characteristic of N. Otago and S. Canterbury alpine ridges. Two less sheepish *Raoulia*, *R. youngii* and *R. petriensis* also came from there.

Allison Knight

FUTURE EVENTS

10 June Talk by Emeritus Prof. Alan Mark on China
20 June Field trip to look at Ross Creek ferns with John Steel

Chairman: David Lyttle djlyttle@ihug.co.nz

Secretary: Allison Knight, P O Box 6214, Dunedin North

More information available on website:<http://www.botany.otago.ac.nz/bsol/>

■ Other Botanical Society Contacts

Waikato Botanical Society

President: Liz Grove eg3@waikato.ac.nz

General contact: bot_soc@waikato.ac.nz

Secretary: Andrea Brandon abrandon@doc.govt.nz

Our newsletters are available on <http://cber.bio.waikato.ac.nz/Waibotsoc/WaikatoBotSoc.html>

Rotorua Botanical Society

Address for correspondence:

c/- The National Forestry Herbarium
Scion, Te Papa Tipu Innovation Park
Private Bag 3020
Rotorua 3046

President: John Hobbs 07 348 6620 jffhobbs@paradise.net.nz

Secretary: Sarah Crump 07 3497 412 scrump@doc.govt.nz

Wanganui Museum Botanical Group

President: Clive Higgie (06) 342 7857 clive.nicki@xtra.co.nz

Secretary: Robyn Ogle (06) 3478547 22 Forres St, Wanganui. robcol.ogle@xtra.co.nz

Wakatipu Botanical Group

Chairman: Neill Simpson (03) 442 2035

Secretary: Lyn Clendon (03) 442 3153

ANNOUNCEMENTS

■ John Child Bryophyte Workshop

The 2009 John Child Bryophyte Workshop will be based at Pukeora Estate (<http://www.pukeora.com/>) near Waipukurau in Hawke's Bay, 15th-20th October. This is a great opportunity to learn more about bryophytes (mosses, liverworts, and hornworts) and lichens. Novices are welcome, with guidance provided for beginners. The estimated cost for accommodation, meals and transport during the workshop is \$340 per person.

Contact Leon Perrie (leonp@tepapa.govt.nz, 04 381 7261, or Te Papa, PO Box 467, Wellington) for more details.

■ Tom Moss Student Award in Bryology

The next annual Award will be made at the John Child Bryophyte Workshop to be held in October 2009, based at Waipukurau, Hawkes Bay.

Tom Moss was an active member of the Wellington Botanical Society for many years. He had an interest in bryophytes and was a participant in the very first John Child Bryophyte Workshop in 1983. To commemorate his name the *Tom Moss Student Award in Bryology* provides a small annual prize for the best student contribution to New Zealand bryology.

Contributions that would qualify for the Award include:

A student presentation at the Workshop relating to New Zealand bryology.

A paper relating to New Zealand bryology.

Only one application per student will be accepted (i.e. either a presentation or a publication). This can be published, or accepted for publication, or a significant unpublished report. This should be published or written in the twelve months immediately prior to the Workshop and submitted for judging by 21 September 2009 (see below). It is not necessary to attend the workshop where a paper is submitted for consideration.

Contributions are invited and will be considered from any student enrolled for a B.Sc., M.Sc., Ph.D., or equivalent degree in the twelve months immediately prior to the Workshop. Students may be enrolled in a New Zealand or overseas university, and may include work on overseas bryophytes as long as the work relates in some significant way to New Zealand bryology.

An Award of \$200 will be made by a panel of three judges attending the Workshop and appointed by the Wellington Botanical Society. The panel may reserve the right to make no award if there are no suitable contributions.

Publications for consideration should be submitted with a covering letter by 21 September 2009 to:
Tom Moss Student Award, Wellington Botanical Society, PO Box 10 412, Wellington 6143.

Students intending to make a qualifying presentation at the Workshop should indicate this when they enroll for the Workshop.

Further information about the Award may be obtained from Dr Patrick Brownsey, Te Papa, P.O. Box 467, Wellington (04) 381 7135; e-mail patb@tepapa.govt.nz.

THESES

■ Recent theses from the University of Otago, Department of Botany

Schweikert, Katja (2007): The functional biology of *Porphyra* sp. in New Zealand. Ph.D. Dissertation, University of Otago, Dunedin. 257 pp.

Brandes, Ursula (2008): Investigating the life cycle of *Tropaeolum speciosum* to improve future management. MSc Ecology Thesis, University of Otago, Dunedin. 106 pp.

NOTES AND REPORTS

■ *Pimelea* news

Colin Burrows, Research Associate, Biology School, University of Canterbury

My revision of the classification for *Pimelea* in New Zealand is gradually progressing with (mid March 2009) *Pimelea* 1 published; 2 being refereed for N.Z. J. Botany; 3 peer-reviewed and nearly ready to send to the journal; the last two articles (4 and 5) are now in draft form.

Corrections:

Unfortunately *Pimelea* 1 contained some errors:

- a) p.127 (also in running heads), the correct Vol. No. is 46.
- b) p.136, mid-page – the symbols for sexes are reversed. *Female* flowers have long stigma papillae, *hermaphrodite* flowers have short papillae.
- c) p.150, caption for Fig.11 should read lectotype (not holotype).
- d) p.152, *Pimelea* misspelt in heading.
- e) p.155, here and elsewhere in text *boreus* should be *borea*.
- f) p.170, *Pimelea* misspelt in heading.

Of these I am guilty of (b) and (c) through inadequate proofreading. The others, (a), (d) and (f) arose after the proofs had been returned to the Editor and (e) is an orthographic error that was detected by Elizabeth Edgar.

Taxonomy:

The taxonomic accounts in papers 2-5 must remain secret until each paper is published, but some general points can be made:

1. **Typification and nomenclature:**

As many of the named taxa have not been properly typified there has been uncertainty about what names apply to what forms. Expect some nomenclatural changes for this reason, e.g. in the *P. prostrata* and *P. urvilliana* groups of species (*Pimelea* 2).

2. **New Taxa:**

My work is based on sets of morphologic features that vary from species to species but are uniform within species (whole plant habit, stem, leaf, flower and fruit characters). Now that I have a fair understanding of the whole genus in this country (through comparisons of herbarium specimens, field specimens and some cultivars) I am aware that numbers of entities at specific and subspecific rank remain undescribed.

In the Druce era (Tony Druce was a prolific collector whose gatherings, especially in North Island and northern South Island have been very beneficial for this revision) some new entities were recognised (see Audrey Eagle, 2006, for these). However, over and above those, there are other hitherto unnoticed entities that I shall be describing. I am also recognising numerous subspecies with regional distributions. Friends have suggested that some of these could well be species, as there are sometimes overlapping distributions near the margins of distribution ranges. I refer those who think along these lines to the comments of Peter Raven and Tamra Engelson (1971) who were dealing

with boundaries of taxa in Australasian *Epilobium*. Expect to see a considerably longer list of New Zealand *Pimelea* taxa than we now have.

3. **Hybrids:**

As for the genera *Epilobium*, *Ranunculus*, *Hebe* and others in New Zealand, hybridism is common between various species of *Pimelea*. There is evidence that hybrid processes have played an important evolutionary role in the genus. Raven and Raven (1976) made this point also in relation to exceptionally richly speciated *Epilobium* in New Zealand.

Hybridism can create taxonomic difficulties. In *Pimelea* 1 I dealt with the boundaries between *P. longifolia* and *P. gnidia*, two hybridising species, by arbitrarily separating them according to their leaf dimensions. This or similar ploys may be needed to demarcate other species pairs. Taxonomists have formally named hybrids in many genera (see e.g. Stace, 1976) but this would be impossible among the welter of shapes and sizes found in the *P. longifolia* x *P. gnidia* hybrid swarms.

Introgressive hybridisation (Anderson, 1953) is another facet of the hybrid processes apparent in *Pimelea*, where mixed characters of pairs of different species are subtly expressed in widespread populations, usually as a result of back-crossing to one parent. Further taxonomic problems can arise from these phenomena. In *P. pseudolyallii* populations of plants with constant morphology, believed to be the genuine species, have no stomata on their adaxial leaf surfaces. Living near some of them are hybrids with *P. oreophila* that are variable and *do* have adaxial stomata. Widely spread in the South Island are variable *P. pseudolyallii* - like plants, also with adaxial stomata. How are we to treat these apparently introgressed populations taxonomically? I have no answer to this question as yet.

In a few instances introgressed hybrid forms (of other *Pimelea* species pairs) are relatively uniform and widespread. It would be reasonable to treat them as distinct species. This is the scenario that Raven and Raven (1976) invoked for the homoploid hybrid origins of many New Zealand *Epilobium* species. "Marker" characters enable the parentage of the *Pimelea* "stable hybrids" to be detected. These gynodioecious *Pimelea* species are facultative outbreeders, so the "stable hybrids" must have remained isolated from their parents for considerable periods, as the uniform populations developed.

Another outcome of hybridisation in New Zealand *Pimelea* is that some uncommon species are being overwhelmed by crossing with other common species. Expect some surprises when all the *Pimelea* revision papers are published!

References:

Anderson E. 1953. Introgressive hybridisation. *Biological Reviews* 28: 280-307.

Burrows C.J. 2008. Genus *Pimelea* (Thymelaeaceae) in New Zealand 1. The taxonomic treatment of seven endemic glabrous-leaved species. *New Zealand Journal of Botany* 46: 127-176.

Eagle A. 2006. Eagle's complete trees and shrubs of New Zealand. Wellington, Te Papa Press.

Raven P., Engelhorn T. 1971. New taxa and new combinations in Australasian *Epilobium* (Onagraceae). *New Zealand Journal of Botany* 9: 345-350.

Raven P.H., Raven T.E. 1976. The genus *Epilobium* (Onagraceae) in Australasia: a systematic and evolutionary study. N.Z.D.S.I.R. Bulletin No 216, 321 pp.

Stace C.A. (ed.) 1975. Hybridisation and the flora of the British Isles. London, Academic Press.

■ **Porta-Plant Platters for dune restoration programmes**

Jill Rapson, Ecology, Institute of Natural Resources, Massey University

Curiosity about the relatively high failure rate for foredune sandbinder plantings along the Manawatu coast induced a close inspection of activities during a normal planting day by primary school volunteers. This promptly revealed that the core of the problem (aside from the usual vagaries of

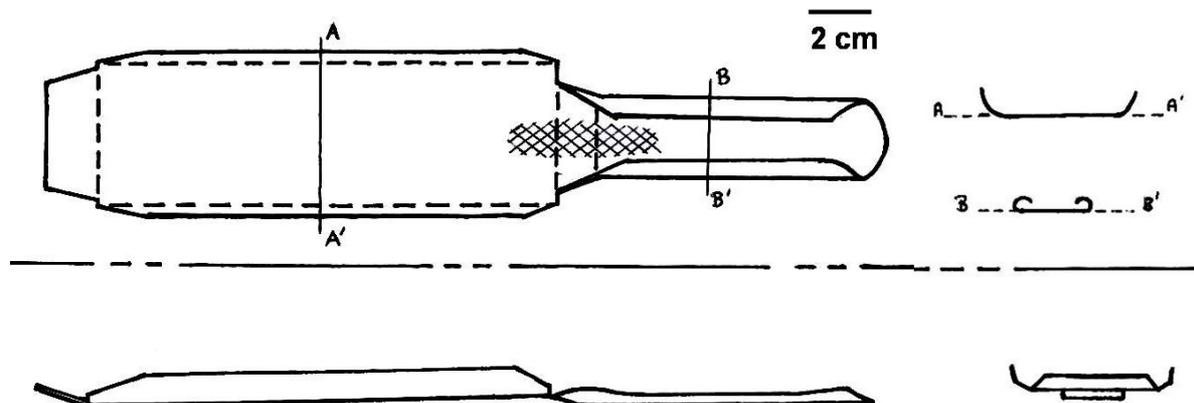
wind, tide, storm and dune buggy), was that roots and shoots of less than strongly rooted specimens were being inserted asynchronously into their pre-prepared excavated sites.

It seems that the hands of small children were not broad or strong enough to safely support a plant grown in a very sandy, and therefore very friable, substrate for the duration of its traumatic journey from the root trainer tray to the intended destination. And the excitement of the exercise and impending DoC sausage sizzle usually meant that the second hand was unable to assist the primary protector in its duties, due to a regrettable tendency to wave about to the accompaniment of high-pitched vocalisations. Consequently, new plants were being left with their essential tissue portions in close proximity but otherwise incommunicado.

Experts from Massey University (well, Paul Barrett and Jill Rapson actually) were brought in to ponder the problem. Their erudite deliberations concluded with a call for design of Porta-Plant Platters. Trial PPPs were machined in the Ecology Group workshop at the University, colour coded (bright orange) for ease of recovery in the field situation, and trialled on an unsuspecting (oops, forgot about Ethics Approval!) group of student planters from Ratana School, on a DOC supervised planting day at Turakina Beach. The design proved excellent, with the students finding the existence of the platter helped them to focus on supporting the plant on its journey, so that most shoots were able to be planted contemporaneously and conjointly with their roots. Additional on the ground training (an intensive 2 minutes) enabled students to readily establish the technique for filling PPPs to be handed to other willing volunteers.

Sadly an (other) administrative mishap meant that the device has not been successfully patented by Massey University, and hence its crucial features can be here presented for promulgation amongst other dune planting programmes facing similar difficulties in plant portage.

The PPPs are readily cut to the pattern below, from light aluminium sheeting (possum banding will do), using a metal guillotine for the straight edges and tin snips for the curvy bits. Then they are bent into shape using a vice or wooden template, to fit whatever size and shape of root trainer may be in use. The edges are ground lightly to round them, and prevent damage to sensitive young skin. A dimple is pressed in to increased strength across the lower handle. Painting is essential for successful relocation. A dozen can easily be made in an afternoon, and can be re-used repeatedly provided they are not also (ab)used in the task of excavating the planting holes.



Unpatented Porta-Plant Platters, to be used in transporting dune plants to revegetation sites. Pattern sizes are in cm, dotted lines show visible folds, and the cross hatching is the dimple.

Thanks to Kay Davies, DOC for organising the planting days, Paul Barrett for all the work, and Rosemary van Essen for the drawing. Massey University kindly "donated" the materials and labour for the prototype PPPs.

BIOGRAPHY / BIBLIOGRAPHY

- **Biographical Notes (73): Ellen Wright Blackwell (c. 1864–1952) & Frank Bartram Blackwell (c. 1862–1934)**

E.J. Godley, Research Associate, Landcare Research, P.O. Box 40, Lincoln

In 1906 there appeared one of the most successful botanical books ever to be published in this country. It was called *Plants of New Zealand*, and was published by Whitcombe & Tombs Ltd. The authors were “R.M. Laing, BSc and E.W. Blackwell”, and there were “160 original photographs by E.W. and F.B. Blackwell”. It was to run for 7 editions: 1906, 1907, 1927, 1940, 1949, 1957, and 1964.

At the time of publication there was no doubt of the identity of R.M. Laing. He was Robert Malcolm Laing (1865–1941), a teacher at Christchurch Boys’ High School, a member of the Canterbury Philosophical Institute, and a distinguished amateur botanist who had already published 12 papers in the *Transactions of the New Zealand Institute*, mainly on seaweeds. On the other hand, the identity of E.W. & F.B. Blackwell would probably only be known to friends, or to the few botanists and others associated with the production of the book such as Leonard Cockayne. The general reader could not even know their gender. It is not given on the title page, nor is it given in the Preface which is signed “RML” & “EWB”.

My main aim, therefore, in this note, is to describe the sources of some of our basic information about E.W. and F.B. Blackwell. I will do this in chronological order – the order in which the exploration proceeded – and intersperse this with reviews and comments in the appropriate places. I thus hope to give the reader a better grasp of the scattered writings dealing with “Laing and Blackwell” which are often a mixture of fact, fiction, and controversy.

1. *Plants of New Zealand* Edn 1 : Preface dated Mar. 30, 1906

The text of *Plants of New Zealand* is arranged as follows:

A. INTRODUCTION (57 pp)

- 1...General Introduction [outline of the main types of vegetation in NZ]
2. The age and affinities of the flora.
3. Botanical Introduction [the parts of a plant, and a key to the NZ families of flowering plants].

B. THE GYMNOSPERMS (20 pp)

C. THE ANGIOSPERMS (359 pp)

1. The Monocotyledons [rushes, sedges and grasses are not dealt with]
2. Dicotyledons with free petals [beginning with the Pepper Family]
3. Dicotyledons with united petals [beginning with the Heath Family]

This is the classification system of Engler and Prantl which Laing & Blackwell introduced to New Zealand in favour of that of Bentham & Hooker which Cheeseman continued to use in the first edition of his “Manual” (1906).

The Preface does not indicate whether the above sections were written jointly or whether the authors took responsibility for different sections.

As for the photographs, the statement on the title page that there are “160 original photographs by E.W. and F.B. Blackwell” needs two corrections:

- There are 159 photographs, with 157 in the text, a frontispiece, and a small photo on the title page.
- 31 of the 159 photographs are not by the Blackwells. They are by L. Cockayne (1); J. Deans (3); A.C. Gifford (3); A. Hamilton (4); H. Larkin (8); S. Page (7); J. Crosby Smith (4); R. Speight (1).

These corrections do not detract from the fact that the Blackwells made a major contribution to the success of the book with their photographs. Unfortunately, however, it is impossible to decide which of the 128 photographs are by E.W. or by F.B. Blackwell, or which are joint efforts. The only

photographic credits are for the 8 contributors given above. Their names are to be found in the List of Illustrations.

Miss Irene Wilson prepared the glossary, and Mr J. Christie read the proofs.

2. Dr L. Cockayne's review: The Press, Christchurch, 26 May, 1906 (1)

Leonard Cockayne was still living in Christchurch when *Plants of New Zealand* appeared in 1906. The Preface stated: "We have to thank Dr L. Cockayne for helping us over many slippery places and for much generous assistance freely given". Cockayne also donated a photo and wrote a wide-ranging review, in the Christchurch *Press*, taking up 2 full columns and a bit more. He noted that "Thanks to the laudable enterprise of Messrs Whitcombe and Tombs, a most attractive work, which cannot fail to be a factor for great good, has just appeared written by Mr R.M. Laing, B.Sc., and Miss E.W. Blackwell." And his conclusion about "Mr Laing's and Miss Blackwell's admirable book" was that "although a popular work on any science is the hardest thing in the world to write, and that probably the ideal popular book will never be written, the one under discussion is excellent, and should be in the hand of every nature-lover in New Zealand." As for the illustrations Cockayne described them as "a striking feature of the book" and "of a high class". And he emphasised the importance of the new art of photography to the new science of ecology suggesting that the camera "may be claimed to hold the same position for the plant geographer as the microscope for the histologist." But Cockayne's review also contains criticisms. He disliked, for example, the translation of the specific epithet to make a common name (e.g. "*Clematis indivisa* – the entire-leaved Clematis" etc.) a feature which I, for one, always found instructive.

Thus, Cockayne's review, by any standards, would appear to be an excellent one. He describes the book fairly, praises it, does not hesitate to criticise, and he emphasises the importance of the book for fostering Botany and its teaching in New Zealand. But his review is flawed by a small interpolation. He wrote: "Mr Laing – for it is an open secret the matter of the book is his work – has collected together etc." Cockayne's evidence for making this statement is not known, but the claim inevitably led to debate about the authorship of "Laing and Blackwell".

3. The Rev. T.F. Robertson's Rejoinder, 7 July 1906 (2)

In Auckland the Rev. Robertson noted Cockayne's "open secret" statement and felt it "a Christian and chivalrous duty to repudiate on behalf of our colony any unjust and unkind treatment of a lady who has served us well, and may yet serve us well in the future". To this end, and unknown to Miss Blackwell, he wrote a long article for the *Herald* headed "Miss E.W. Blackwell. Her services to the literature of New Zealand". Mr Robertson's views on the part played by Miss Blackwell in the creation of *Plants of New Zealand* are best seen in the following extracts:

"It seems such a short time since Miss Blackwell, to whom the chief credit of the production of this volume undoubtedly belongs, came from England to our shores and since I had the pleasure of welcoming her at Mount Roskill and Ponsonby."

"Miss Blackwell felt, as many before her, the need of some trustworthy guide to the treasures of nature of a more popular order than the standard writings of Cheeseman, Kirk, and Hooper — a guide also to the treasures of knowledge hid in the wide fields of the transactions of our New Zealand Institute, from the contributions of the above and other specialists such as Cockayne, Diels, Thompson [sic], and Petrie. Miss Blackwell determined to supply this national need. Obtaining the effective help of a distinguished friend and teacher of science in Christchurch evidently inspired by her gentle and unselfish influence, her noble purpose at the expenditure of much toil and strength and money has reached its goal in this captivating treatise. In the pleasant rural home of a brother, in sympathy with her efforts, and whose careful observation of nature and artistic tastes have been of great service in the work, she has been able, with the commanding and somewhat overshadowing aid of her scientific friend, to offer to the public one of the ablest and most interesting and, in spite of a few errors amidst a bewildering multiplicity of details, one also of the most accurate volumes of comparatively popular science of our New Zealand – perhaps also of our British scientific literature."

In other words the Rev. Robertson was claiming that *Plants of New Zealand* was the brain-child of Ellen Blackwell and that Robert Laing was recruited to help. This unexpected letter embarrassed Miss Blackwell exceedingly and she wrote to the "Herald", Cockayne and Cheeseman about it. To the latter

she said: "I believe that he thought he was doing me a kindness and does not seem to understand the wrongful and unpleasant position in which he has placed me" (3).

A curious *lapsus* should be noted. The Rev. Robertson writes of Miss Blackwell's "careful observations such as the fine descriptions of the aerial breathing roots of the mangrove, a description ascribed by a leading scientific critic in Christchurch to the brilliant pen of Mr Laing —". And he turns this into a compliment to Miss Blackwell. But I cannot find that Cockayne wrote anything like this about mangroves. The closest that I can find is his reference to Laing's "brilliant page of word-painting" of a beech forest.

4. Plants of New Zealand Edn 3 (1927)

The title page states: *Plants of New Zealand* by R.M. Laing B.Sc, FNZ Inst. and E.W. Blackwell (Mrs Thomas Maidment) / with 175 original photographs by E.W. and F.B. Blackwell and others.

The Preface is signed "Robt M. Laing" and notes: "Most unfortunately we have not had the assistance of Miss E.W. Blackwell (Mrs T. Maidment), who is now in England, in the preparation of this new edition, nor of Mr F.B. Blackwell, who gave us much help in many ways in the preparation of the original volume. We have to thank those who provided fresh illustrations for this edition, particularly Mr C.E. Foweraker and Mr J. Speden."

5. Dr H.H. Allan: 1943 (4)

Dr H.H. Allan, Director of the Botany Division, DSIR, wrote as follows in his obituary notice of R.M. Laing (4) "No account of Laing's work and influence should fail to stress the value of his *Plants of New Zealand*, published in the first instance (1906) with the assistance of Miss E.W. Blackwell, and culminating in the fourth edition in 1940."

6. Mr A.W. Anderson: 1962 (5)

Mr A.W. Anderson, Superintendent of Parks and Reserves, Timaru, resurrected Cockayne's "open secret" statement as follows in an article about R.M. Laing (5) "If you look on the title page you will find R.M. Laing and E.W. Blackwell (Mrs Thomas Maidment) are given as the authors. But it has been what is known as an open secret that the book is almost entirely the work of R.M. Laing. Miss Ellen Blackwell, as she then was, seems to be something of a mystery. So far as I have been able to discover she helped with some of the classifications, and supplied 160 photographs, which were used as illustrations, while her brother F.B. Blackwell helped with indexing. There is a tale of a romance between the two authors. Miss Blackwell went home to England and Laing went haring after her, had no luck and returned home to remain a bachelor to the end of his days. There is no truth in this little bit of gossip and I mention it only to kill it. Laing did go for a trip to England, but it was in 1903 and the *Plants of New Zealand* didn't see the light of day until 1906."

7. Dr E.J. Godley: 12 Jan. 1965

In the 1960s when writing a history of the first 100 years of Canterbury botany, I realised how little we knew of Ellen Blackwell. Research was clearly needed, and I began some desultory fossicking which struck oil during a chance conversation with Sir Gilbert Archey, Director of the Auckland War Memorial Museum. Knowing that he was a Cantabrian I asked if he knew anything about the North Canterbury Blackwells. He didn't, but gave me the following address to which I wrote. Miss Ella Wilson, Astley House, 55 Allandale Road, Mt Albert, Auckland.

12 January 1965

Dear Miss Wilson,

A few months ago I was talking with Sir Gilbert Archey about a short history of botany in Canterbury which I am preparing. I mentioned that I had no information at all about Miss Ellen Blackwell who was co-author with Mr R.M. Laing of "Plants of New Zealand." Sir Gilbert suggested that you might be able to give me some information about Miss Blackwell, or tell me where I could find out something.

I am interested to know where she lived, what she worked at, and even perhaps how she came to be co-author of the book. Perhaps she was a photographer? I would be most grateful for anything which you could tell me.

Yours sincerely,
(E.J. Godley)
Director

8. Miss Ella Wilson: 22 Jan. 1965

Mr E.J. Godley

Dear Sir,

I have got in touch with Mrs N. Elley, a niece of Miss Ellen Blackwell's and am posting your letter on to her to-day. I remember Miss Ellen Blackwell visiting Paparoa many years ago. I was very young then. Mrs Elley thinks she could tell you quite a lot about her Aunt. I am sorry for the delay. It has taken a while to find out Mrs Elley's address. She has no telephone at her home. This is Mrs Elley's address — Mrs N. Elley, 86 Beach Road, Campbells' Bay, Takapuna, Auckland.

Yours sincerely

Ella Wilson

I did not receive anything from Mrs Elley and decided not to bother her myself. The letters were put on file against the day they might be useful.

9. Dr F.A. Stafleu: 14 Oct. 1977

The following letter was sent to Mr Roger Chapman, Librarian at the National Museum, Wellington.

International Association for Plant Taxonomy

UTRECHT – 4.10.1977

Dear Mr Chapman,

May I appeal to you for the first time for information on a botanical book published in New Zealand.

Would you have information on the dates of receipt at your library of the five editions of R.M. Laing and E.W. Blackwell, *Plants of New Zealand?* (ed.1: 1906; ed.2: 1907; ed.3: 1927; ed.4: 1948; ed.5: ?)

If these books are at your library could you send me xerox copies of the title pages of these various editions with a note on pagination and plates and possible dates of prefaces?

Last of all could you give me the full name and years of birth and death of the co-author, Ellen W. Blackwell (later Mrs Thomas Maidment)?

I hope that I am not asking too much. Any information you might have would be very welcome!

Thank you in advance and with all good wishes.

Yours sincerely,

F.A. Stafleu

The Librarian, National Museum, supplied the bibliographic information but knew nothing about Miss Blackwell, and therefore asked Mrs Blackmore, our Librarian at Botany Division, DSIR, Lincoln for help. When Mrs Blackmore showed me the letter I suggested that she take up the search where I had left it in 1965 and write to the North Canterbury Blackwells as well as to Mrs Elley. This she did. Mr David Blackwell, of Blackwells Ltd, Rangiora replied that his mother regretted to advise that no relationship was claimed to Ellen Blackwell by the Kaiapoi family and that they only knew of her through the book. Mrs Elley replied as follows.

10. Mrs Nancy Elley: late Nov. 1977

Mrs Nancy Elley proved to be Frank Blackwell's eldest daughter and in an undated reply to Mrs Blackmore's enquiry of 16 Nov. 1977, wrote that she and her sister had searched old books and letters but could find no records concerning "Aunt Nellie". "As far as she could recollect, she returned to England about 1908, having spent 5 or 6 years in NZ compiling the book "Plants of New Zealand" with Mr Laing. "She died about 1952, I think, & was then in her eighties, but the date of her birth is unknown to us, also her second name. A vague guess is Winifred." Mrs Elley also recollected that Aunt Nellie "wrote some religious books for children under the pen-name of Grace Winter"; and she also gave us the very valuable advice to write to her second cousin, Mrs Vera Moreland (born Blackwell) of Laings Beach, Waipu, Northland.

11. Mrs Vera Moreland: 5 Dec. 1977

Mrs Moreland was the niece of Annie Blackwell (Mrs Skelton), Ellen Blackwell's niece who accompanied her out to New Zealand. In reply to Mrs Blackmore's letter of 28 Nov. she gave the following new information.

1. "Auntie Nellie was the 6th daughter and 9th child of John and Maria Blackwell of 1 Billing Rd, Northampton, England."
2. "I was lucky to find in my own "Birthday Book" Auntie Nellie's birth which was 7th October, 1864."
3. Like Mrs Elley she would have guessed "Winifred" as Auntie Nellie's second name, but her cousin, Norah Cox, told her it was "Wright", and she has since seen this on legal documents.
4. Auntie Nellie also wrote 2 other books *The Loveliest Life* [of Jesus] and *Paul the Ambassador*.
5. Mrs Moreland sent the following extract from a booklet on the Blackwell family written by her aunt, Mrs Annie R. Skelton.

"In 1903, Auntie Nellie decided she would pay a visit to her 2 brothers William and Frank who had emigrated to N.Z. and become acquainted with their wives and children."

My Aunt Nellie had for some time been gathering material for a book "Plants of New Zealand" in which she was to collaborate with Mr. R. Malcolm Laing, B.Sc., a master at Canterbury Boys' High School in Christchurch. Mr. Laing had been a passenger on the "Omrah" when we came out to N.Z. in 1904 having joined the ship at Naples. My Aunt had always been especially interested in Botany, and when Mr Laing made the suggestion, the idea appealed to her. She and her brother Frank travelled widely through the North and South Islands photographing many specimens for illustrating the book. Mr Laing supplied much of the written detail." Photos of N.Z. bush are taken on her brother Frank's farm.

"My future husband Mr Heber Skelton helped secure specimens for Aunt Nellie; he went with her to the kauri forest at Trounson Park and is seen in a photograph taken by her, standing at the foot of a giant kauri tree. The photograph is reproduced in the book. For his help he received from her a presentation copy of the book."

12. Mrs M.E. Blackmore

Supplied with Mrs Moreland's information, Mrs Blackmore was able to send the following letter.

G. Dunbar,
National Museum of New Zealand,
Private Bag,
Wellington

8 December 1977

Dear Mr Dunbar,

As last I can supply the information requested by Dr F.A. Stafleu re Ellen W. Blackwell (later Mrs Thomas Maidment).

Full name: Ellen Wright Blackwell
Born 7 October 1864. Northampton, U.K.
Died 1952. Waterlooville, U.K.

A member of our staff leaving for England next week will look at Somerset House for the day and month of death, but you probably don't require these details.

I am sorry this search has taken so long but it entailed a number of letters to various members of the Blackwell family.

Yours sincerely
M.E. Blackmore (Mrs)
Librarian

This information appeared in 1979 in *Taxonomic Literature* (6) under item 4127 *Plants of New Zealand*

"Co-author: Ellen Wright Blackwell (later Mrs Thomas Maidment) (1864–1952) (inf. M.E. Blackmore, Christchurch, N.Z.)"

Note that this is the first time that this information had been published. Miss Blackwell's date and place of death was later found at Somerset House, London as: "Blackwell, Ellen Wright, of Pinecroft, London Road, Horndean, Hampshire, widow, died 24 January, 1952, at Royal Portsmouth Hospital".

13. Dr A.D. Thomson: 19 Dec. 1985

In late 1985, Dr Thomson of Botany Division, DSIR, received a request for information about Miss Blackwell from Dr R.C. Cooper (lately Botanist at the Auckland War Memorial Museum). Dr Cooper was writing on behalf of a Mr D. Scott who, as Dr Thomson notes (7) "had been visiting gardens round the Kaipara and had found a "Blackwell garden" near Pahi; the present owner had heard that this Blackwell was a relative of Ellen Blackwell (in fact a brother)."

Dr Thomson could not find anything published about Ellen Blackwell, but wrote "I did vaguely recall Eric Godley and Molly Blackmore tracing data relating to Ellen Blackwell, and the library card index directed me to the glass cabinet which contained an envelope of data on her."

Dr Thomson sent the information to Dr Cooper and then wrote an article about Ellen (7). Note that this contains the first published record of the fact that she came to New Zealand on the *Omrāh*.

14. D. Scott: 1987 (3) (the positives)

Dick Scott's book "*Seven Lives on Salt River*" brought to light much new and valuable information about the Blackwells, making it possible to enlarge our story as follows.

In 1903 Ellen Blackwell decided to visit her two brothers, Frank and William, in New Zealand. She sailed on the *Omrāh* accompanied by her niece Annie Blackwell (later Mrs Heber Skelton). During the voyage she made friends with Robert Laing, a Christchurch school-teacher and botanist, and they discussed writing a book on New Zealand plants. They arrived in January 1904 and first stayed with Frank Blackwell.

Frank Bartram Blackwell was born at Northampton England in c. 1862 (8) son of a successful master hosier. At first apprenticed to an ironmonger, he emigrated to New Zealand for health reasons in 1881 *aet.* 19, accompanied by his brother William, 2 years his senior. In 1883, financed by their father, they became owners of the "82-acre Karepo block on the left bank of the Pahi River just before Tokatapu" (3) in the Kaipara district. The Pahi River is here still tidal and lined by mangroves. It flows southward into the Arapaoa River, which then flows into the northern Kaipara Harbour.

Frank Blackwell was a versatile handyman and "an amateur botanist and talented photographer", who set out to live a life of self-sufficiency in New Zealand. This was facilitated in 1898 when his father died, leaving him the considerable sum of £6,000. When William married and moved to Auckland (presumably having received a similar sum) Frank bought his share of "Karepo", and in February, 1900, married an Auckland girl, Nan Browne. By the time that Ellen arrived in New Zealand they had 2 children with another to come.

Ellen settled down at "Karepo", learning about New Zealand plants, and probably photography, from her brother. She was "in the pleasant rural home (as the Rev. T.F. Robertson wrote), of a brother, in sympathy with her efforts, and whose careful observation of nature and artistic tastes have been of great service to the work."

Scott (3) states, repeated by Thomson (9) that Ellen "enlisted her brother Frank to travel the country with her, photographing and researching". But I wonder how true this is? We certainly know that Ellen went north with Heber Skelton to Trounson Park to photograph Kauri. But we can also calculate that only 4-5 of the 128 Blackwell photos could not have been photographed in the wild within the Auckland Province. And we could suggest that these 4-5 were either photographed or gathered when Ellen made the single trip to Mt Cook and Ball Hut mentioned by Scott (3).

Ellen was probably based at "Karepo" during her 4-5 years in New Zealand, and Scott (3) has published some very fine photos of her taken by Frank during this time. Then in c. 1908 this talented lady returned to England.

Frank Blackwell lived on at "Karepo" until his last years, becoming a leading Rationalist. He and his wife were still in the 1928 Kaipara Electoral Roll, but not in the 1931 Roll. He died on 4 Nov. 1934 *aet.* 72, at "Mt Pleasant Private Hospital Auckland from Campbells Bay" and was buried at O'Neills Point (8). It looks as if he stayed his last years at Campbells Bay with his eldest daughter, Mrs Elley.

Frank's diaries still exist (3) and their study could tell us more about his contribution to *Plants of New Zealand*. His collection of some 300 glass negatives is at the Auckland Museum (3).

15. D. Scott: 1987 (3) (the negatives)

The Blackwell chapter in Mr Scott's book is entitled *The silencing of Frank Blackwell's sister*, which is an indication that, like the Rev. T.E. Robertson before him, Scott is seeking to defend Miss Blackwell against the "open secret" allegations of Cockayne in 1906, since repeated by Anderson in 1962. Unfortunately Scott does not throw new light on the matter but devotes much space to denigrating Cockayne ("one of the most blatant offenders") and even Robert Laing. In so doing he makes the following erroneous statements.

1. Scott p.117: Cockayne "declared the "open secret" to be justification for using his (Laing's) name only throughout a lengthy review in the Christchurch Press"
Ans. I cannot find such a declaration. Readers of my Section 1 will see Miss Blackwell's name in Cockayne's review.
2. Scott p.117: "The campaign [against Miss Blackwell] was ugly enough to prompt an Auckland clergyman, the Rev. T.F. Robertson, to write a 1,000-word article—"
Ans. Would readers consider Cockayne's review to constitute an "ugly campaign"?
3. Scott p.119: "Frank Blackwell, whose photographic credits were dropped from later editions—"
Ans. There were no photographic credits to drop.
4. Scott p.119: "Cockayne's *NZ Plants and Their Story*, published 1910, went out of print after the third edition, 1927".
Ans. A fourth edition appeared in 1967.
5. Scott p.119: "For all his distinction, he [Dr Cockayne] held views on the human female as crudely unscientific as the rest of society." What does he mean?
Ans. I assume that Mr Scott means that Dr Cockayne (and the rest of us) believed that babies were born through the female navel. An accompanying anecdote simply appears to show Cockayne as a prude.

16. A.D. Thomson: 1995 (9)

In this note Thomson summarises what is known about Ellen Blackwell, and then comments on Scott's book, mainly his treatment of Cockayne. In this connection he brings in comments from Dr Lucy Moore. Thomson considers that Cockayne has been misrepresented and writes that Cockayne's preview "clearly attributes" *Plants of New Zealand* "to both authors". This despite the fact that Cockayne wrote "for it is an open secret that the matter of the book is his [Laing's] work."

17. Some thoughts in conclusion

I suggest that by the time Robert Laing boarded the *Omrah* at Naples, *aet.* c. 38, it is highly improbable that he hadn't thought of writing a book on New Zealand plants. In fact I go further and suggest that he was already writing one. Thomson (9) has noted that "they reached New Zealand in 1904 and it seems quite remarkable that "Plants of New Zealand" was completed and published within two years. Although this timing is a bit short — they arrived in Jan. 1904 and the Preface is dated March, 30, 1906 — his point is still important. I can imagine the photographs being done in that time but not the text. But Mr Laing had a problem which Miss Blackwell easily solved. He needed illustrations and she had a photographer-brother. The co-operation suggested was easily extended to her taking over the northern plants, outside Laing's territory. This seems sensible and fits in with the only account we have of the writing she did. The Rev. Robertson noted "the complete descriptions in large and small print of the pine, and palm, and lily families are from her graphic and sometimes poetic pen. Various pages of large print through the treatise contain her careful observations — such as the fine descriptions of the aerial breathing roots of the mangrove—."

As for photographs we only know that Scott (3) attributes "five studies of nikau" to Miss Blackwell, but, unfortunately, does not give the source of his information. But whatever else Miss Blackwell contributed towards *Plants of New Zealand* it seems to me that perhaps her most important contribution was to bring Robert Laing into touch with her brother, Frank Blackwell, and act as an

intermediary between them. Her contribution to New Zealand botany was acknowledged in 1996 with an entry in the *Dictionary of New Zealand Biography* (10).

Acknowledgments

I am indebted to Mrs Denise O'Neill, Landcare Research, Lincoln, and Ms Elizabeth Jensen (Christchurch) for help with References and to Mrs Wendy Weller for help with typing.

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PUBLICATIONS

■ Book review: *Chatham Islands Heritage and Conservation*.

[Chatham Islands Heritage and Conservation](#). Edited by Colin Miskelly. Published in 2008 by [Canterbury University Press](#) in association with the [Department of Conservation](#). ISBN 978-1-877257-78-0. \$40.

This is the book for you if you have been to the Chatham Islands, are planning to go, or you just want to read about this fascinating outpost of New Zealand. In it you will find information and illustrations about the human history, geology (essential reading), marine life, wetlands, vegetation and flora, insects and spiders, birds and lizards, management, and the people who have contributed to the exploration and ecological understanding of these islands.

There are numerous pictures spread through the book, beginning with a remarkable series of historical pictures and sketches, including an 1870s photo of a Moriori group. All the important plants and animals and geological features are illustrated, and there are three maps: a double-fold general location map inside the front cover, a geological map, and a double-fold map inside the back cover showing the location of the public scenic reserves and private reserves, the latter (including *kawenata* or covenants on Moriori/Maori land) being a particularly important conservation feature of the Chatham Islands. Disappointingly there is no vegetation map. The pictures vary in quality of detail and contrast. Some of the best are those of insects and spiders by John Marris. A good many others are drab, dark or somewhat blurry.

Chatham, the largest island, has an area of 92 000 ha, a quarter of which is covered in lakes and lagoons. Pitt Island is 6400 ha in area. Pasture of exotic grasses is the dominant vegetation over large areas of these islands but this farmland does not get a mention in the book.

The botanical and zoological content in this revised edition originally published in 1996 has been strengthened in that “text boxes” have been tacked on to several of the chapters so as to include succinct accounts of other species groups. For instance, the excellent Flora chapter by Peter de Lange, Peter Heenan and John Sawyer, covering the vascular plants, has informative vignettes on mosses, liverworts and hornworts, lichens, and fungi. There are others on spiders and harvestmen, land snails, the Chatham Island skink, freshwater fish and frogs, and seaweeds. The latter mentions the main brown algae forming beds around the rocky shores, though surprisingly, nothing is said or illustrated of the rich and conspicuous flora of red and green algae at the Chathams.

The botanical visitor to the Chathams will first want to get to grips with the 35 endemic higher plant species there, and there is a good chance of seeing most of them in the field during a one-week visit.

Not to be missed are *Leptinella featherstonii*, *Aciphylla dieffenbachii*, *Myosotidium hortensia*, *Embergeria grandifolia*, *Geranium traversii*, *Brachyglottis huntii*, *Coprosma chathamica* and *Olearia traversiorum*, to name a few. The endemics are all listed, and many are discussed and illustrated, in the Flora chapter, including the latest information on the peculiarities (e.g. lack of the divaricating habit), and likely origins and relationships of the Chathams' flora. The book went to press before a major change was published in 2008 regarding the former *Olearia traversii*. Two species of akeake are now recognised – *Olearia traversiorum* (the sand dune akeake) and *Olearia telmatica* (the swamp akeake).

An appreciable proportion of the native flora is shared with New Zealand, in species such as *Macropiper excelsum*, *Rhopalostylis sapida*, *Australina pusilla*, *Urtica australis*, *Calystegia tuguriorum*, *Lobelia arenaria*, *Muehlenbeckia australis*, *Crassula moschata*, *Gunnera monoica*, *Baumea rubiginosa*, and most ferns. Another group the visitor will find fascinating (and puzzling), and which are well discussed in the book, are the New Zealand natives which are considered to be introduced to the Chathams, some by the original colonising Moriori. Included here are *Corynocarpus laevigatus*, *Cordyline australis*, *Fuchsia excorticata*, *Sophora chathamica* (despite its name), *Phormium tenax*, *Myoporum laetum* and *Coprosma repens*.

I like this book very much. It is very attractively produced, authoritatively written, and highly readable, and does justice to the history of human occupation and endeavour, the natural history of the land and sea, and the ongoing conservation challenges.

Mike Wilcox

■ **Book review: Colenso's Collections**

Colenso's Collections. Compiled by Ian St George, incorporating previously unpublished work of Bruce Hamlin. Published in 2009 by the NZ Native Orchid Group. ISBN 978-0-9597931-4-7

Botanists are probably the only people in New Zealand who think of William Colenso firstly as a botanist and not a defrocked missionary. While he made an important contribution to New Zealand as a printer, as a translator and as an explorer, these achievements are often overshadowed by the scandalous end to his career as a missionary. However his botanical contribution is something that stands alone and his collections remain important to botanists today.

While his collections are important, they are not always the most accessible. The most important collection of his specimens, spanning nearly sixty years of collecting, is held at Kew (K). These are the specimens sent to the Hookers (father and son) and later Thistelton-Dyer. The collections are accessible, but inconveniently distant, for a New Zealand botanist. More than three hundred specimens, including many types, were sent to Cheeseman and are held at the Auckland Museum (AK), however these specimens cover only Colenso's later years of collecting. The specimens that Colenso himself retained ended up, by a somewhat circuitous route, in the Herbarium at Te Papa (WELT).

The book "Colenso's Collections", compiled by Ian St George and incorporating unpublished work from the late Bruce Hamlin, is an important step in making this collection of specimens more accessible. It comprises a catalogue of the specimens held at WELT, including the unlabeled collection of cryptogams and fungi, and a large amount of information relevant to those collections. It is preceded by two introductions, one about Colenso and the content of the book by Ian St George, and another more specific to the collections written by Bruce Hamlin before he died in 1976. Also included are an obituary for Bruce Hamlin, extracts from Colenso's Church Missionary Society journals (outlining where he visited), an itinerary for his travels in later years, a list of place names he used by, a series of letters and specimen lists written by Colenso, an annotated list of people referred to in his letters or who collected for him, and an index.

Colenso was not alone among early collectors in giving his collecting localities colloquial names meaningful only to a few. These types of locality names, helpfully precise to the collector, are frustratingly ambiguous to anyone who works on the specimens later. Untangling just where specimens listed under obscure or informal names may have been collected requires many hours of

patient detective work. The inclusion of a catalogue of place names used by Colenso, including a number of colloquial names, is very welcome. Many apparently obscure names have been located, for example using by protologues or the labels from specimen bundles. Not all the names could be located – we still don't know where the Hydrocotyle River or Snail Tree were – but the locality list will save much work.

While Colenso's collections at Te Papa are the basis of this book, the bulk of it (more than 250 pages) is taken up with letters and accompanying specimen lists written by Colenso to a number of British botanists, in particular William and Joseph Dalton Hooker. Sadly the replies have been lost. The primary purpose of including these letters in the book is that the specimen lists provide information useful in answering questions relating to the specimens at Te Papa. However the letters are rather more than that. This is a remarkable series of letters, spanning sixty years and giving a fascinating insight into the life and views of an important historical figure.

Points from the letters that I found particularly interesting included finding that this former missionary was a staunch defender of Darwin, in fact he makes a number of references to having met him when the Beagle stopped in Paihia in 1835. Interesting also was finding him drawn back into the church in his later years, occasionally filling in as a minister. What the congregations made of the Darwin-themed sermons he mentions to Hooker I can only imagine.

One of the common frustrations of a large book of this kind is reading a piece of information, then later needing to refer to it again but being unable to find it. A good index can help, but even the best index is slow and clumsy compared to the flexibility offered by computers. Colenso's collections comes accompanied by a CD containing a searchable electronic file (PDF), a real help to anyone making serious use of the book. I found it useful even for writing the review.

This is undoubtedly written largely as a specialist book. There are probably not many who will need to use an annotated list of specimens collected by Colenso, although those who do will be grateful for this comprehensive publication. On the other hand, to anyone interested in New Zealand and botanical history, I suggest that the collection of letters alone makes the book well worth the \$35 price.
Melanie Newfield

Available from the New Zealand Native Orchid Group <http://www.nativeorchids.co.nz/Publications.htm>

■ Publications Received

Wellington Botanical Society Newsletter, December 2008, ISSN 1171-9982 12 pp.

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