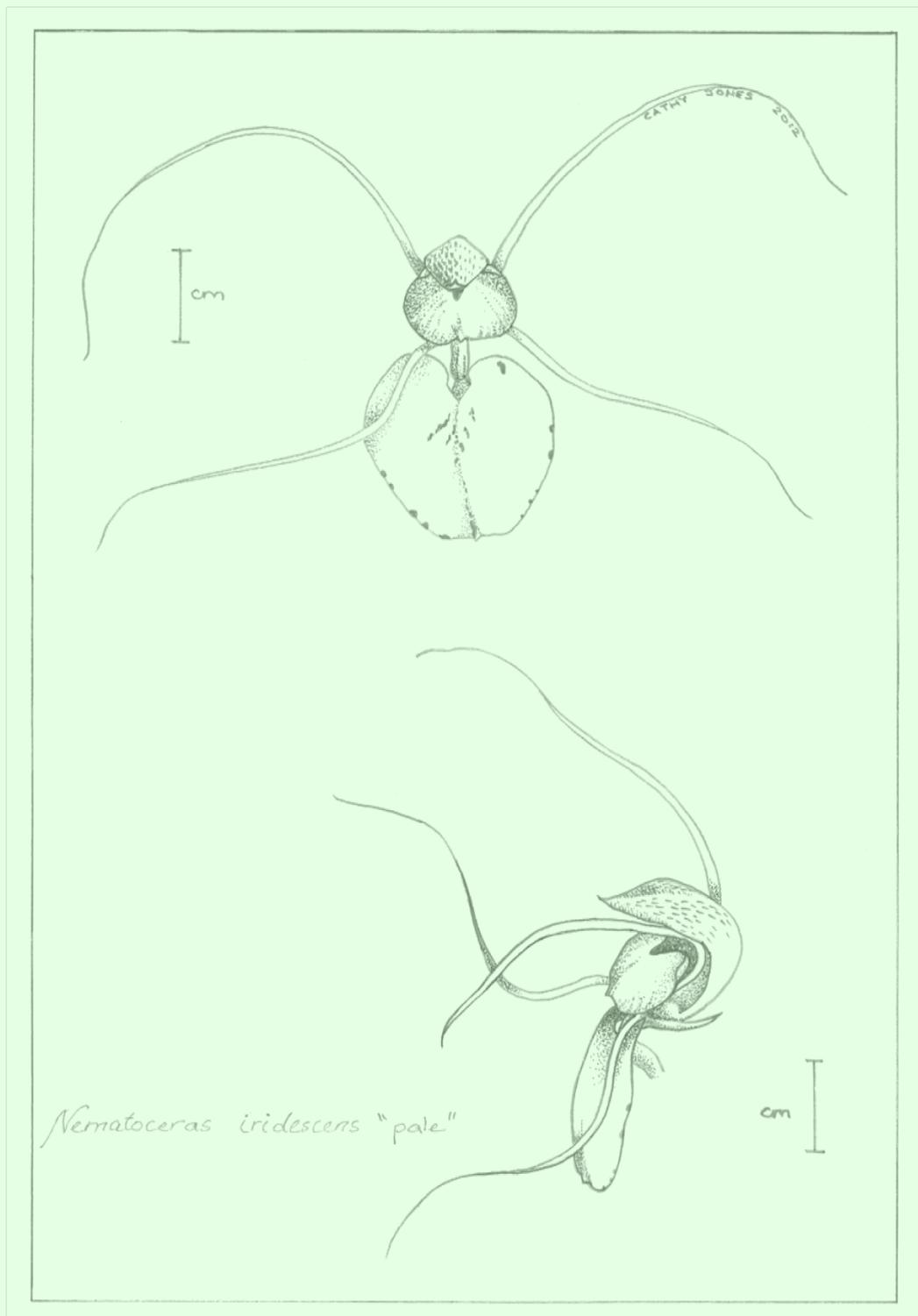


NEW ZEALAND BOTANICAL SOCIETY

# NEWSLETTER

NUMBER 110

December 2012



## New Zealand Botanical Society

President:	Anthony Wright
Secretary/Treasurer:	Ewen Cameron
Committee:	Bruce Clarkson, Colin Webb, Carol West
Address:	c/- Canterbury Museum Rolleston Avenue CHRISTCHURCH 8013
URL:	<a href="http://www.nzbotanicalsociety.org.nz">www.nzbotanicalsociety.org.nz</a>

### Subscriptions

The 2012 ordinary and institutional subscriptions are \$25 (reduced to \$18 if paid by the due date on the subscription invoice). The 2012 student subscription, available to full-time students, is \$12 (reduced to \$9 if paid by the due date on the subscription invoice).

Back issues of the *Newsletter* are available at \$7.00 each. Since 1986 the Newsletter has appeared quarterly in March, June, September and December.

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 March 2013 issue is 25 February 2013.

Please post contributions to:  
Lara Shepherd  
Museum of New Zealand Te Papa Tongarewa  
169 Tory St  
Wellington 6021

Send email contributions to [editor@nzbotanicalsociety.org.nz](mailto:editor@nzbotanicalsociety.org.nz). Files are preferably in MS Word, as an open text document (Open Office document with suffix ".odt") or saved as RTF or ASCII. Macintosh files can also be accepted. Graphics can be sent as TIF JPG, or BMP files; please do not embed images into documents. 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.

### Cover Illustration

*Nematoceras iridescens* "pale", drawn by Cathy Jones from a specimen collected at Mistletoe Bay, Marlborough Sounds on 5 August, 2012.

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### Regional Botanical Society News

#### ■ Auckland Botanical Society

##### September Meeting – The Lucy Cranwell Lecture

Members of ABS and the Auckland Institute enjoyed a full and entertaining lecture by Philip Simpson on his latest enthusiasm – "Heartwood: Totara in New Zealand's Natural and Cultural History". Philip started with an overview of the world's conifers, with particular reference to the Podocarp family. He then described the various species of totara, finally focusing on *Podocarpus totara*, the lowland totara. No other plant in New Zealand has been so important to both Maori culture and to the Pakeha in developing the infrastructure of the country.

##### September Field Trip

The Fletcher Track, Huia, although rather wet and slippery on the day, proved to contain much of interest to the group. In the unfortunate absence of leader Sandra Jones, not everything on the list she provided was seen, but all enjoyed fossicking along the track.

##### Auckland Botanical Society 75<sup>th</sup> Jubilee celebration

Auckland Botanical Society, the oldest in New Zealand, was formed in October 1937 by the Auckland Museum botanist of the day, Lucy Cranwell. Seventy-five years later we are still celebrating the botany of Auckland and the northern North Island. The Jubilee took the form of a day of lectures by members, covering history, trips, Waitakere Ranges, lichens, offshore islands, Little Barrier Island, urban forest, weeds and threatened plants. During the celebratory dinner Cathy Jones was made a life member of the society, Geoff Davidson led us through some of the more comical moments on field trips, and founding member, Rich Afford, cut the cake.

##### November Meeting

Two botanical forays in Spain were described at this meeting. First, Alison Wesley spoke of a summer trip to the Picos de Europa Mountains in Northern Spain. This area of limestone is renowned for wildflowers, butterflies and birds. Traditional agriculture is practised to maintain the herb rich meadows which provide a range of diverse habitats. Various plant families were photographed, with emphasis on the many intriguing orchids seen. Ewen Cameron visited Southern Spain, mainly the Andulucia Province, and photographed in National Parks and along roadsides.

##### November Field Trip

A fine day was spent on the sands of Whatipu, walking from the car park northwards to the Pararaha Stream and back. Dunes, damp dune slacks, wetlands and the stream were explored. Of most interest were the tiny herbs of the native herb fields, including *Myriophyllum votschii*, *Limosella lineata*, *Lilaeopsis novae-zelandiae* and *Eleocharis neozelandica*. A sighting in the streambed of the seldom seen horse's mane weed, *Ruppia polycarpa*, complete with coiled under-water stems and "flowers", was one of the highlights of the day.

#### FUTURE EVENTS

25-28 January 2013	Anniversary Weekend camp at Lake Waikaremoana
16 February	Te Muri, Mahurangi Heads
6 March	AGM. Lepidium, speaker, Lucy Cranwell recipient, Esther Dale
16 March	Tapapakanga Regional Park

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

**President:** Mike Wilcox

**Secretary:** Kristy Hall [aucklandbotanicalsociety@gmail.com](mailto:aucklandbotanicalsociety@gmail.com)

#### ■ Rotorua Botanical Society

##### August Field Trip: Lake Atiamuri

This was the last of the hydro lakes for us to explore. We headed into the Whangapaoa stream mouth looking out on slopes of radiata pine. Much of the shore was inaccessible because of trees

felled into the lake so we stuck to the cliffs, noting species such as kanuka and mahoe, *Pomaderris amoena* and *Olearia furfuracea*. At one point we managed get ashore into a raupo swamp but apart from *Ranunculus amphitrichous* no native plants were seen. Finally at the end of the navigable waterway we lunched on a mudbank and found a few turf species including *Callitriche petrei*, *Crassula sinclairii*, and *Potamogeton ocheatus*. Then we explored some strange pedestals, which turned out to be pine stems rotted off to the usual lake level (it was about 1 m below normal). To circumnavigate the lake we continued up to the Ohakuri power station outlet with pines to one side and grass on the other until the river narrowed to a gorge. Here we at last saw a good range of native plants including tanekaha stands with kamahi and emergent rewarewa, rimu and totara.

#### September Field Trip: Lathams Track

Lathams track is a popular local walkway over private land forming a loop from the Awakeri Hot Springs. After a short walk across pasture the walkway enters a tall kanuka forest and follows a gully. Immediately across the fence we were confronted by a rich regeneration of native species including a good range of ferns. As the track proceeded deeper into the gully puriri, kohekohe, mangleo became dominant over mahoe, mamaku, *Deparia petersonii*, *Diplazium australe*, *Adiantum hispidulum* and *Hymenophyllum scabrum*. Climbers included supplejack, kiekie, *Clematis cunninghamii*, *C. paniculata* and *Parsonsia heterophylla*. Along the ridge-top track to the trig the forest was kanuka dominated but we looked out on tawa forest and the range of species changed to plants such as *Leucopogon fascicularis*, *Carmichaelia australis*, *Pomaderris amoena* and rewarewa (on the pa sites especially), with several patches of *Pimelea tomentosa*. *Drymoanthus adversus* was eventually found but the previously recorded *Ichthyostomum pygmaeum* was not seen. Near the springs, a large farm pond was completely covered by duck weeds the dominant one being *Landoltia punctata* (purple backed), with *Lemna disperma* and *Wolffia australiana* also present.

#### October Field Trip: East Cape Weekend

A small party of six spent Saturday visiting coastal forest blocks on Cape Runaway. Kemps Bush, a large fenced remnant on the main slope above the Whangaparaoa River flats, was dominated with pohutukawa, tawa, puriri and kohekohe in canopy with secondary kanuka forest on ridge margins surrounding. Abundant regeneration was present with fencing out of stock. We made our way up through the remnant to admire the views along the coast. In the afternoon we headed to another block on the immediate tip of the Cape itself. This block had extensive pohutukawa coastal broadleaf forest on steep hill-slopes which we traversed part of before returning along grazed coastal margins examining coastal plants on rocky knobs and in seeps leading to beach.

On Sunday the party headed west along coast to Torere where we met the chairperson of the Torere 64 Trust, which owns this large block of mainly pine forest with some magnificent wetlands in between. We explored Rawea Stream - an extensive stream gully surrounded by areas of kahikatea forest, raupō swamp and manuka/sphagnum bog perched above the stream. The latter two vegetation associations were in very good condition with few weeds present.

#### FUTURE EVENTS

3-4 February Whakapa weekend  
3 March Galaxy Rd wetlands

**President:** Paul Cashmore (07) 348 4421 [pcashmore@doc.govt.nz](mailto:pcashmore@doc.govt.nz)

**Secretary:** Elizabeth Miller

#### ■ Taranaki Botany Group

#### September Field Trip - Onaero Scenic Reserve

Our inaugural trip visited two of several discontinuous sections within Onaero Scenic Reserve. We used the species list in Clarkson & Boase (1982) *Scenic Reserves of West Taranaki*, with numbered areas below following their map. At area 1c we kept to the top of the precipitous slope to the north of the river, often among the earthworks of a possible pa site (not mentioned in the 1982 report). There was little ground cover under the tawa-kohekohe-rewarewa canopy, although we did find a number of ferns and other plants not on the earlier list. Sadly, there were a number of adventives, notably climbing asparagus (*Asparagus scandens*), *Euonymus japonica* and banana passionfruit (most likely *Passiflora tripartita* var *mollissima*), the only new weed added to the 1982 list.

We then visited areas 1a and 2, accessed via a track from the Onaero Domain. The bush was notable for the luxurious undergrowth of ferns, several of which were additions to the list. Higher up towards the burial ground, there were extensive patches of *Asparagus scandens*, smothering everything up to 1.5-2m high around some mature kowhai. One of the party commented that the *Asparagus* wasn't as widespread as this on a visit 7 or 8 years earlier. *Tradescantia* was also lush on the edge adjacent to the Domain, and hadn't been noted in 1982. One mature, but not flowering, specimen of *Metrosideros carminea* was found scrambling up a sub-canopy tree. Some immature plants were found along the road edge.

We had hoped to see *Sophora chathamica* and *S. microphylla*. The large, mature trees seen mostly had tall, multiple trunks, a feature of *S. chathamica* but we could not see leaves so this could not be confirmed. It was also noted that there could be recruitment problems for this kowhai – we saw some seedlings, but no juvenile trees.

After visiting the magnificent large puriri (*Vitex lucens*) at the high spot of the reserve, we plunged down into the swamp to the SW, and were rewarded with large swamp maire (*Syzygium maire*) and pukatea (*Laurelia novae-zelandiae*). One very large pukatea was host to a myriad of epiphytes, including several flowering *Pittosporum cornifolium*. In 1982, there was a patch of raupo swamp adjacent to the road. On our visit this was not seen, potentially because ecological processes had changed the habitat over this time span. We didn't find a number of the species on the 1982 list, but this isn't surprising given we had insufficient time to visit the other areas of the reserve.

On the way back to town some of us visited a bank above the Waiongana River to look at a patch of immature *Metrosideros carminea*, the southernmost record of this climber.

#### October Field Trip 1: South Taranaki coastal herbfields.

A new sealed road extension gives easy access to the stream mouth at Arawhata Beach 18 km south of Cape Egmont and, just a few metres above sea level, a narrow strip of herbfield. Exposed to wind from all directions, and spray from the sea, it is one of only four South Taranaki herbfield sites where the endemic *Notoreas* 'Taranaki' moth is found, its caterpillars feeding exclusively on the leaves of pinatoro, prostrate *Pimelea carnososa*. These were the dominant plants as we entered the reserve, up to a metre or more across and in full flower, hugging the ground, sometimes with strongly coloured kokihi, native spinach (*Tetragonia implexicoma*) pushing through. Other species attracting our attention included coastal woodrush (*Luzula banksiana* var. *banksiana*) with red-tinged hairy leaves and burr-like flower heads, and white, furry-leaved cudweed (*Pseudognaphalium* sp.). 'Down to earth' botanising revealed tiny treasures nestled amongst native *Zoysia minima*, creeping *Leptinella squalida* and the fleshy yellow-green leaves of remuremu (*Selliera radicans*). Hand lenses and cameras came out for closer study of *Dichondra* species, *Colobanthus muelleri*, yellow-flowered *Oxalis exilis* and finally *Myosotis pygmaea*, its presence given away by its tiny white flowers and its identity verified by the short, flattened hairs on its fingernail sized leaves. More common in the South Island, *M. pygmaea* is rare in the North Island and currently restricted to this one herbfield remnant on the Taranaki coast, exposed to the elements 'twixt farmland and sea.

#### October Field Trip 2: Stent Rd Beach coastal turfs.

Our first stop was the paddock immediately at the seaward end of Stent Rd. We found good populations of *Pimelea carnososa* (syn. *Pimelea prostrata* var. *urvilleana*) (pinatoro, shore daphne) in flower (this is an addition to the list we were working from, possibly because this particular site had not been investigated before). There was no sign of the moth *Notoreas* "Taranaki".

At the carpark *Zoysia minima* has colonised an area immediately over the wooden rail by the sea edge. The exotic pasture grasses appear to be being kept in control by pedestrian foot traffic and salt water. Looking through hand lenses we found a large number of *Plantago triandra* subsp. *masoniae*. We also saw the tiny succulent *Crassula manaia*, the carrot relative *Oreomyrrhis* sp. (both of which were in flower), another small grass, *Agrostis muscosa*, and the rosette plant *Colobanthus muelleri*, all growing amongst the *Zoysia*.

Over the wooden stile at the north end of the carpark we immediately found a population of *Myosotis brevis* (syn. *Myosotis pygmaea* var. *minutiflora*) (pygmy forget-me-not) in flower. Finally we came across a patch of *Lepidium flexicaule* (nau, coastal cress) struggling to grow among the pasture

grasses. Grazing has been excluded from this area; however, they are hoping to introduce controlled grazing again in the future. Sheep would be most desirable to minimise hoof damage.

#### November fieldtrip: York Road end.

This spot is on the north side of the Manganui River exit from the Egmont National Park. The long history of human activity within the park at this point is now well disguised by regrowth. At the road end we found a dazzling display of *Brachyglottis kirkii* in flower with curtains of the tree orchids *Earina mucronata*, *E. autumnalis* and *Winika cunninghamii*. An edge thicket of *Alseuosmia macrophylla* along with the common *Coprosma tayloriae*, *C. propinqua* and *C. areolata* filled the gaps between many small trees that included *Schefflera digitata*, *Pseudopanax arboreus*, *P. colensoi*, *Raukawa edgerleyi* and *Pseudowintera axillaris*. Just in from the edge we also found *A. pusilla* and *Euchiton japonicus*.

Though there were at least three *Uncinia* present, we were a little too early in the flowering season to be sure of the species. The trackside featured *Pterostylis banksii* and *P. montana* in flower and *P. cardiostigma* just coming into flower. In the damper areas *Ranunculus amphitrichus* blanketed the track. Although there were open areas from previous disturbance we found only a single *Polystichum silvaticum* and a few very old *Dicksonia fibrosa*. The damper banks featured *Blechnum colensoi* and *B. fluviatile*, and what we thought was *Nematoceras macranthum*. Trackside the thick forest made it hard to see any tree top 'gardens' of the massive *Metrosideros robusta*, miro and rimu that dominate the skyline. We managed to identify some black maire, *Nestegis cunninghamii* within the predominant broadleaf and kamahi canopy.

#### FUTURE EVENTS

- |            |  |
|------------|--|
| 6 December | Ahukawakawa Swamp via Mangorei Track. <i>Melicytus drucei</i> ; <i>Olearia quinquevulnera</i>  |
| 3 February | Moumahaki Lakes & Catchment KNE near Waverley. <i>Olearia townsonii</i> (which should be in flower) is near its southern limit here.                                   |
| 1 March    | East Taranaki Environmental Trust, Purangi. Has one of the southernmost stands of hard beech ( <i>Nothofagus truncata</i> ) in the North Taranaki Ecological District. |
| 7 April    | Upper Kahui Rd. An excellent example of young regenerating swamp maire. It is a low intensity grazing block that is gradually reverting to swamp maire forest.         |

**Contacts:** Barbara Hammonds 06 7597077; Email: [barbara\\_h@xtra.co.nz](mailto:barbara_h@xtra.co.nz)  
Janica Amore 06 7520830. Email: [waiongona@clear.co.nz](mailto:waiongona@clear.co.nz)

#### ■ Wellington Botanical Society

##### 4 February 2012: Korokoro Valley, true left branch

A small group met at Belmont Regional Park and botanised down to Korokoro Dam. A highlight was the epiphytic orchid *Drymoanthus adversus*. Not-so-pleasing were *Pseudopanax* hybrids and the weedy fern *Pteris cretica*. We returned via the old tramping track, which featured a range of colonising species including wineberry, hangehange, *Coprosma lucida*, *C. robusta*, kohuhu, māhoe, māpou, rangiora, mamaku and ponga. Common weeds included Himalaya honeysuckle and gorse. Additions to the plant list included tarata, *Solanum laciniatum*, *Tmesipteris tannensis*, *Loxogramme dictyopteris*, *Polystichum vestitum*, *Drymoanthus adversus*, *Pterostylis banksii*, *Dichelachne crinita*, *Gahnia setifolia* and *Wahlenbergia violacea*, and numerous weeds.

##### 6–8 April 2012: Western Wairarapa.

Day 1: Highden Station, near Masterton: Our hosts Tom and Helen Holmes described how they came to covenant their native forest. After descending to the stream we noted how the newly-fenced banks had already begun to show a green fuzz of seedlings, many of them still too tiny for accurate identification. Under a canopy of tall tītoki and kānuka was some very large barberry, which Trevor Thompson, Wellington-Wairarapa QEII Trust representative, says will be removed.

We climbed to the covenanted wetland inside the recently constructed fence and admired the lone *Nestegis montana* on the edge of the previously-grazed area. Among indigenous additions to an earlier plant list were *Prumnopitys ferruginea*, *Coprosma grandifolia*, *Histiopteris incisa*, *Hypolepis*

*lactea*, *Lastreopsis velutina*, *Polystichum oculatum*, *Prasophyllum colensoi* agg., *Astelia solandri* and *Potamogeton suboblongus*. Adventive additions were *Sambucus nigra*, *Taraxacum officinale* and *P. crispus*.

Day 2: Zbell Farms Ltd covenants: After our host Aidan Bichan briefed us on the farm, we botanised the bush block, through young, regenerating podocarp/broadleaf forest, then climbed through mixed beech and epacrids, to the lookout on the boundary with Fensham Reserve. From here we descended the Fensham track system, then crossed back onto Zbell Farm and the wetland covenant. This newly-fenced area featured sedges such as *Carex geminata* and *Machaerina* (= *Baumea*) species, emergent shrubs and small trees, and a dense, extensive stand of mānuka. It also features a colony of the threatened mudfish. We then traversed the lower part of the Bush Block covenant, which featured some of the biggest tōtara we had ever seen.

Day 3: Carter Scenic Reserve: We were fortunate to have copies of a substantial plant list originally compiled by A. P. Druce and later added to by Pat Enright, Olaf John and Tony Silbery. Our role was to assist the local care group with plant identification. We noted that *Coprosma pedicellata* (= *C. "violacea"*), categorised as in Gradual Decline, was conspicuously in fruit. Long term, the extensive stands of tall raupo may contribute to drying the site. Discussion centred on whether other processes such as draw-off of water for agricultural purposes which should be investigated, in order to restore the site's hydrology, and stop the dieback of species such as kahikatea.

#### 5 May 2012: Seton Nossiter Park

This park lies in a valley running between Woodridge, Newlands, Paparangi and Grenada Village with a tributary of the Porirua Stream flowing down the valley towards Glenside. We first descended into "Pukatea Gully" (a planned scenic reserve) through mānuka, where we removed the weedy male fern, *Dryopteris filix-mas*, and came to an impressive forest of tawa, pukatea and kohekohe. We next descended a track off White Pine Ave to the valley floor and noted plantings including wharangi and tōtara. In a fine stand of tawa and tītoki we saw the orchid, *Drymoanthus adversus*.

#### 7 July 2012: Makara Hill, Karori

We found a cycling gala on the day of a visit with relays of lycra-clad bodies flashing past. The Koru Track provided our group with a challenging selection of weeds such as several *Gamochaeta* species, as well as several native herbs. Among 21 native fern species were two young *Dicksonia fibrosa*, an uncommon fern in the city, possibly planted. Some of the 50 tree and shrub species we listed were planted since 1998. We saw the following *Asplenium* hybrids: *A. bulbiferum* × *A. flaccidum*; *A. bulbiferum* × *A. hookerianum*, and *A. flaccidum* × *A. gracillimum*. Near the Koru Track summit we saw *Tmesipteris elongata* and flowering *Microlaena stipoides* var. *stipoides*.

#### 4 August 2012: Three Karori reserves

Leader Chris Horne had planned the trip as an urban cross-country traverse. We climbed Burrows Ave. Reserve's zig-zag track, connected with the Wright Hill summit track, descended it to the track along the Karori Sanctuary fence, and then descended Birdwood Reserve's zig-zag track to Waiapu Road. Just inside Burrows Ave Reserve, we admired several huge *Fuchsia excorticata*. Part way up we saw a huge old *Hoheria* and on a shaded rock wall, three uncommon fern species growing together: *Loxogramme dictyopteris* (= *Anarthropteris lanceolata*), *Hymenophyllum flexuosum* and *Trichomanes endlicherianum*. Later we added *Polystichum neozealandicum* × *P. silvaticum*, *Dicksonia fibrosa*, kāmahī, *Earina mucronata*, and *Coprosma foetidissima*.

#### 1 September 2012: Horoeka Street Scenic Reserve, Stokes Valley, Lower Hutt

We joined the Friends of Horoeka Street Reserve to resurvey the vegetation in the reserve and adjoining bush. Several species were added to the list, including *Clematis forsteri*, *Polystichum neozealandicum* subsp. *zerophyllum*, *Thelymitra* sp. (?*hatchii*) *Lepidothamnus australe*, *Senecio minimus* and *Gonocarpus aggregatus*. A highlight on the ridge was *Griselinia littoralis*, uncommon in the area. In the main valley we found hard beech seedlings. Along the bridle path we found nine species of filmy fern, four species of tree fern, and swamp maire.

#### FUTURE EVENTS

29 Dec-7 Jan Field trip: Arthur's Pass. Contact Rodney Lewington ([rodneyjl@clear.net.nz](mailto:rodneyjl@clear.net.nz)) to register expression of interest in attending.

- 2 February      Field trip: Wainuiomata Water Works. Leader: Chris Hopkins 564 3980  
 18 February    Meeting: New Zealand spider orchids: new species and pollination studies. Carlos Lehnebach, Curator of Botany, Te Papa.  
 2 March        Field trip: Cannon Point walkway, Upper Hutt. Leader: Sheelagh Leary 527 7380.  
 18 March       Meeting: Puangiangi Island, Marlborough Sounds. Barry Dent and Sue Frietag.

**President:** Chris Moore, 04 479 3924. [Moore.c@xtra.co.nz](mailto:Moore.c@xtra.co.nz)

**Secretary:** Barbara Clark, 04 233 8202. [Bj\\_clark@xtra.co.nz](mailto:Bj_clark@xtra.co.nz). <http://wellingtonbotsoc.org.nz/>

## ■ Nelson Botanical Society

### August Evening Meeting: Taxonomy of *Pseudopanax*– Leon Perrie, Te Papa.

Leon, a Botany curator, gave a brief overview of the plant collection housed in Te Papa's herbarium. He explained that the Flora of New Zealand series will be continued online at the website [www.nzflora.info](http://www.nzflora.info) and that all databased collections in all the New Zealand herbaria can now be searched using the NZ Virtual Herbarium ([www.virtualherbarium.org.nz](http://www.virtualherbarium.org.nz)). Leon, who is currently researching *Pseudopanax*, gave an outline of the 12 species currently recognised and how to distinguish them. He explained that the species now included in the genus *Raukaua* are not closely related to *Pseudopanax*. Important features for distinguishing *Pseudopanax* species include the length of the stalk attaching the leaflets and the presence/absence of a sheathing stipule where the leaf attaches to the stem. Leon explained that *Pseudopanax crassifolius* and *P. lessonii* hybridise readily wherever they grow together and the hybrids backcross giving a wide range of leaf shapes.

### August Field Trip: Blackwater methane flare.

Eleven of us met at Blackwater deer farm and in 4WD vehicles negotiated a rutted, wet and muddy track. We began the walk in two groups – some doing true botanising while the rest forged ahead through beautiful silver, black and red beech forest in search of the flare. The track took us through swampy meadows and streams, along steep slopes, and up muddy, slippery banks. After about an hour's walk everyone was awed by the natural methane flare. Being a cold day the group was pleased to congregate close to the flare where it was very warm. Common shrubs in the area included *Coprosma propinqua*, *C. rigida*, *C. rotundifolia*, *C. rhamnoides* and *C. dumosa*, *Neomyrtus pedunculata* with its square twigs, *Raukaua anomalus*, *Pseudopanax crassifolius*, a magnificent example of *Myrsine divaricata* in full blossom and *Pseudowintera colorata* with bright red leaves. *Nertera balfouriana* was of particular interest. There was a wealth of fern species including *Cyathea colensoi*, *Leptopteris superba*, *Blechnum colensoi*, *B. membranaceum*, *B. penna-marina*, *B. vulcanicum*, *Grammitis billardierei*, *G. magellanica* subsp. *nothofageti*, *Hypolepis ambigua* and *H. rufobarbata*.

### September Evening Meeting: Allan Mere presentation; The Forests of Poland, by Craig Potton

For a summary of the Allan Mere presentation see separate article in this newsletter. The ceremony was followed by Craig Potton talking on a little known remnant of primeval temperate lowland forest in Poland – the Bialowieza Forest. It is the last piece of natural temperate lowland forest in Europe. It lies in a wet, thinly populated area on the north-eastern border of Poland and central Belarus. It contains a mixture of broadleaved species, mainly oaks and limes in the drier areas, with firs in wetter areas and extensive grassy peat in frost hollows. The forest is open, and has much softer green hues than New Zealand's native forests and with a super abundance of flowers, mostly wild alliums. Luxuriant mats of moss under the darker, wet, pine and fir forests provide a Grimm's fairy-tale like setting. Wild animals still roam there including wolf, bear, deer and beaver. Craig's photos evocatively captured this special forest.

### September Field Trip: Brown River Scenic Reserve

Ten Nelson Botanical Society members found their way through one of the few remaining lowland alluvial forests in our area at Brown River Scenic Reserve. Brown River is a tributary of the Rai River, and snakes its way through a stand of magnificent podocarps right beside the highway. We all crossed the river and then split into two groups, so that some could stride out to the top of the hill. The bush on the far side of the river was drier and here were found *Nothofagus solandri* var. *solandri*, *N. truncata*, *Podocarpus cunninghamii*, *Cyathea dealbata*, *C. smithii*, and *Dicksonia fibrosa*. On the top of the hill *Pittosporum divaricatum* and *Nertera depressa* were found whereas on the alluvial terrace matai, rimu, kahikatea, lowland totara, tawa, pokaka, and tawhai (silver beech) predominated. *Coprosma rhamnoides* presented itself sometimes in three variations on one bush, evidence of its old name *C. polymorpha*. Cathy was excited to find *Coprosma rubra*, which is

classified as 'Data Deficient'. We found several orchids including a member of the *Nematoceras trilobum* aggregate in full flower, *Pterostylis graminea* and what is probably *P. aff. montana*. We spotted *Fuchsia excorticata*, and *F. perscandens* on the riverbank. There was an abundance of *Lophomyrtus bullata*, *L. obcordata* and the hybrid *L. bullata* x *L. obcordata*. Despite searching, we did not find *Poranthera microphylla*, which had been previously reported from here.

#### October Field Trip: Wairoa forest remnant weedbusting.

Six eco-warriors started at the northern end of the bush amongst the now burgeoning *Teucrium*, mopping up seedlings and re-sprouts of old-man's beard in this Wairoa River bush remnant. We have at last got the northern bush margin in a state that is adequately weed-free to start chopping out some of the large barberries. The chainsaw and an application of glyphosate on the stump was the most efficient method of removal, allowing seedlings such as totara and titoki a chance to grow. After lunch we walked the length of the bush marvelling at the size of the totara, matai and kahikatea as well as re-familiarising ourselves with the plethora of small-leaved shrubs and trees in the reserve. The coprosmas alone tallied around 10 species, including the rarely-encountered *Coprosma obconica* and *C. rubra*. Hybrids between mahoe and *Melicytus micranthus* had us all intrigued with a broad range of leaf forms and sizes. *Scutellaria* and *Senecio sciadophila* were still in good numbers, with a newly found population of the latter actually climbing along the northern boundary. We finished the day with a burst of weeding at the southern end of the alluvial stretch.

#### FUTURE EVENTS

14 - 16 December	December Camp: Cobb Valley. Leader: Cathy Jones 03 546 9499
20 January	Inwoods Lookout and up to alpine plants on the track to Gordon's Knob, Richmond Forest Park. Leader: Marie Firth 027 227 4959
1-4 February	Anniversary Weekend Camp: Hanmer/Southern Molesworth. Leader: Cathy Jones 03 546 9499
17 February	Mt Campbell (4WD). Leader: Beryce Vincenzi 03 528 4549, contact Cathy Jones 03 546 9499
17 March	Chrome Mine & Whispering Falls, Bryant Range. Leader: Susan Cook 03 544 6175
28 March – 1 April	Easter Camp: Puponga, Golden Bay, Mt Burnett. Leader: Shannel Courtney 03 546 9922

**President:** Cathy Jones 03 546 9499. Flat 1/47A Washington Rd, Nelson 7010.

[cathy.jones@xtra.co.nz](mailto:cathy.jones@xtra.co.nz)

**Treasurer:** Uta Purcell 03 545 0280. 60 Marybank Rd, Atawhai, Nelson. [mupurcell@xtra.co.nz](mailto:mupurcell@xtra.co.nz)

#### ■ Other Botanical Society Contacts

##### Waikato Botanical Society

**President:** Paula Reeves

**Secretary:** Kerry Jones

**General contact:** [secretary@waikatobotsoc.org.nz](mailto:secretary@waikatobotsoc.org.nz)

**Website** <http://waikatobotsoc.org.nz>

##### Manawatu Botanical Society

**Jill Rapson:** Ecology Group, Institute of Natural Resources, Massey University, Palmerston North. Ph (06) 350 5799 Ext 7963; [G.Rapson@massey.ac.nz](mailto:G.Rapson@massey.ac.nz)

##### Wanganui Museum Botanical Group

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

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

##### Canterbury Botanical Society

**President:** Jason Butt (03) 355 8869 PO Box 8212, Riccarton, Christchurch 8440

**Secretary:** Alice Shanks Website: [www.canterburybotanicalsociety.org.nz](http://www.canterburybotanicalsociety.org.nz)

##### Wakatipu Botanical Group

**Chairman:** Neill Simpson (03) 442 2035

**Secretary:** Lyn Clendon (03) 442 3153

##### Botanical Society of Otago

**Chairman:** David Lyttle [djlyttle@ihug.co.nz](mailto:djlyttle@ihug.co.nz)      <http://www.botany.otago.ac.nz/bs/>  
**Secretary:** Allison Knight, P O Box 6214, Dunedin North.

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## ANNOUNCEMENTS

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■ **Allan Mere Award Presentation, 17 September 2012**

**Elaine Marshall**

New Zealand Botany's highest award, the Allan Mere, was presented to Cathy Jones, at a special potluck dinner in Nelson attended by renowned guests from the botanical and conservation fields. These included Anthony Wright, Director of Canterbury Museum and president of the New Zealand Botanical Society; Dr Carol West, Department of Conservation Wellington, a committee member for the New Zealand Botanical Society and past president of Wellington Botanical Society; Dr Jessica Beever of Landcare Research and Auckland Botanical Society; Craig Potton, president of Nelson Forest and Bird and conservationist, publisher, photographer and film maker; Bill and Nancy Malcolm, long time conservationists, photographers and authors, and Jan Clayton-Greene, Department of Conservation Marlborough and long time colleague of Cathy's.

After the dinner came the official presentation of the greenstone mere by Anthony Wright. The mere was donated by Dr Lucy B. Moore, DSIR Botany Division, in 1982 to commemorate the 100th Anniversary of the birth of Harry Howard Barton Allan, the first director of DSIR Botany Division and author of *Flora of New Zealand Vol 1*. The award was presented to Cathy for her meritorious services to botany in New Zealand. She has been president of the Nelson Botanical Society for 12 years and has worked as a botanist for the Department of Conservation in the Central North Island and in Nelson-Marlborough for the last 23 years.

Anthony has known Cathy a long time. He gave a short welcome in Maori and after some banter about now being a "proper grown up botanist", handed Cathy the greenstone mere. Because the mere itself has to remain lodged at Landcare Research, Lincoln, Anthony presented Cathy with a hand calligraphied certificate to keep as a record of the award. He then showed the audience the official record book containing citations of all previous winners of the award. Cathy subsequently gave all those in the audience a chance to hold the mere.

The presentation was not over. Dr Jessica Beever then presented Cathy with a huge flower arrangement and a card from Auckland Botanical Society, saying "Cathy belongs to all NZ Botanical Societies". Sally Warren, vice-president of the Nelson Botanical Society then gave Cathy a further bouquet from local members.

Dr Carol West, longtime Department of Conservation colleague of Cathy's said that the award is given to botanists who make an all round contribution across the broad field of botany. Cathy has led many botanical society field trips and camps, and mentored many botanical initiates. Her wide range of plant knowledge and her down-to-earth teaching style enable her to impart the subtle details that help people distinguish between plants. Cathy's artistic talents have been given freely and many of her botanical line drawings have graced the covers of New Zealand Botanical Society Newsletters. In addition, through her bold and colourful paintings, often of rare plants in their habitats, she has reached out to a NZ wide audience beyond botanical circles.

Cathy gave an emotional thanks to all the people in her botanical career. The award was particularly special as she had met Dr Lucy Moore at her home in Warkworth with Bruce Irwin. Cathy thanked Ann Graham, Forest and Bird Tauranga and Native Forest Action Council who first took her to the Kaimais and introduced her to native plants in about 1980. She then joined the Rotorua Botanical Society where she met Chris Ecroyd, Sarah Beadel and Willy Shaw. While studying botany at Waikato University she became part of the re-established Waikato Botanical Society with Warwick Sylvester, Catherine Beard, Paul Champion and Peter de Lange. In 1989 she joined the Auckland Botanical Society where she continued her botanical learning with Anthony Wright, Ewen Cameron, Jessica and Ross Beever, John Braggins and Maureen Young. She continued these affiliations during her 6 years with DOC in Turangi and then when she moved to Nelson in 1996. There, Julie McLintock and Graeme Jane of Nelson Botanical Society, and Shannel Courtney of the Department of Conservation became her mentors in learning the local flora. Cathy specially acknowledged Jan

Clayton-Greene who has been a friend and colleague for over 20 years, sharing with her the Department of Conservation work on threatened plants in South Marlborough.

▪ **University of Canterbury summer course: Practical Field Botany**

Practical Field Botany (BIOL305) is an intensive, short summer course designed to meet the need for training in the collection, preparation, and identification of botanical specimens. This course will be of interest to amateur botanists, members of the workforce (e.g. Crown Research Institutes, DOC, Local and Regional Councils, Botanic Gardens, horticulturists and teachers) and biology students who need to acquire or upgrade taxonomic skills and are interested in field ecology, conservation, biodiversity and biosystematics. The course is targeted at participants with various entry levels: from students with limited plant knowledge to experienced career professionals.

**Venue:** Mountain Biological Field Station at Cass, Canterbury; 15 January – 23 January 2013

**Goals of the course are to enable participants to:**

- become familiar with the common plants of the Cass and surrounding areas quickly,
- identify and name plants correctly and accurately,
- maximise usefulness and minimise environmental impact when collecting specimens,
- prepare high quality voucher specimens of plants,
- use scientific names to access detailed information about New Zealand plants,
- understand the patterns of variation within populations, and
- appreciate unique and unusual aspects of the New Zealand flora.

**Contact** Dr. Pieter Pelsler (pieter.pelsler@canterbury.ac.nz; 03-364-2987 ext 45605).

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## NOTES AND REPORTS

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- **“Hoping to hear from you soon...”: John Ross’s letters to John Buchanan (1860-1867), an early Glasgow-Otago botanical connection. Part II (10 August 1861 – 16 July 1867)**

**David Galloway**, Landcare Research, Private Bag 1930, Dunedin 9054, [gallowayd@xtra.co.nz](mailto:gallowayd@xtra.co.nz)

As we have seen (Adams 2002; Galloway 2012b), John Buchanan’s enthusiasm as a botanical collector was actively encouraged by his friend and mentor Dr John Ross of Busby, to whom Buchanan sent collections of mosses, ferns, seaweeds and flowering plants. Ross’s letters Buchanan kept for the rest of his life, and they now provide us with a valuable guide to Buchanan’s early development as a botanical observer and collector in the rapidly developing Province of Otago before widespread pastoralism and the discovery of gold initiated major changes to the Otago landscape and its plant cover. Besides fostering Buchanan’s botanical interests, Ross helped place Buchanan’s discoveries in a wider context by referring them on to specialists such as William Wilson, the bryologist (Cash 1873; Lawley 2008a, 2008b), and George Walker Arnott who held the Regius Chair of Botany at Glasgow (Stevenson 2011). By 1860, Buchanan’s Otago plants were being studied at the highest level and he was soon to be guided by Arnott’s strictures on specimen collection and preservation (see below) that would thereafter make him such a careful and widely observant field botanist who would please both Glasgow and Kew with the quality and extent of plant material sent to them for study. It was a steep and demanding learning curve for Buchanan, but one that he accepted with enthusiasm, and it was to help him also gain employment, as the following letters show: As well, Buchanan also sent a collection of filmy ferns and fern fossils to Ross, who arranged for them to be examined by William Keddie. William Wilson, in particular, was warmly complimentary of Buchanan’s efforts with the mosses, listing several new species with manuscript names that he, alas, never lived to publish. In Wilson’s account of New Zealand mosses in *Flora Novae Zelandiae*, John Buchanan is recorded as having collected *Isothecium gracile* from Otago, Wilson having seen a specimen from William Gourlie’s herbarium (Wilson 1854: 106). Obviously Buchanan sent mosses and perhaps other plants back to Scotland from soon after his arrival in Otago in 1852. Thus by 1861, John Buchanan was known and accepted at the highest level in British botanical circles, as a botanical collector of note and promise. The story from John Ross continues:

**(10)** “...Busby 10 August 1861

My Dear Sir

I sent the specimens of trees and Ferns you sent to Professor Arnott with the exception of B which is *Todea hymenophylloides* and C which is the *Dicksonia antarctica* and have received from him the following communication:

“... I have devoted most of this forenoon to a critical examination of the New Zealand specimens.  
- Shrub No 1. I have not in my herbarium it is a species lately (that is 8 or 9 years ago) described for the first time.  
- Fern A is also not in my herbarium being described about the same time as Shrub No 1.  
- Fern D I have but not precisely the same variety, your is paler underneath than mine  
- Fern No 1 & 2 are both the same, they seem small specimens of one I have but from not being large enough I cannot speak positively  
- Fern 3. Of this I have not the New Zealand variety at one time figured as a distinct species  
-\* Fern No 16 – I never saw before but it is very well figured by Sir W. Hooker so that no doubt can be about it.

Of course from not having specimens or at least specimens of the same variety in my herbarium I have been obliged to make them out by dissection and books aided by plants occasionally. This has made the difficulty much greater than I anticipated for it requires one to examine with vastly more attention than if the probable name could be checked at once by the herbarium. I reckon Shrub No 1 is a species of *Dracophyllum* and is the *D. filifolium* of Hook. fil. *Flora of New Zealand*<sup>1</sup>. But let me say that there are several (4 or 5) other closely allied New Zealand species of the same genus so that it is more probable that the one that Mr Buchanan wrote about as being a tree 20 feet high is *Dracophyllum longifolium* and not the same as the specimen No. 1. All these are so similar to the unpracticed eye that they would be taken for the same species. I can therefore only speak with certainty of the specimens you have sent me.

- Tree no 2 is *Leptospermum scoparium* Forst. At one time called “New Zealand tea”. I do not appear to have wild specimens (that is from New Zealand) in my herbarium. At the time it was cultivated in our Greenhouses.

- Tree No 3 is a species of *Cordyline* nearly allied to *Dracaena*. It appears to be *Cord. Australis* of Bridlicher [= Endlicher] but without the leaves and the knowledge of whether the panicle of flowers is erect or drooping when growing it is impossible to say with certainty whether it be *Cord. australis* or *Cord. indivisa*; this last has a drooping panicle.

Fern A fruit-bearing specimens. Of these there are three pieces. Two are *Cyathea Smithii* Hook. fil. The other is the closely allied *Cyathea Cunninghamii* Hook. fil. having copious scales on the underside of the leaflets. The specimen not in fruit and possibly what you mean by the finer type are *C. Smithii*.

D is *Lomaria discolor* W No 1 & 2 are *Lomaria procera* Spr. One of the most variable of ferns.

No. 3 is *Lomaria elongata* Blum. Variety *Colensoi* and at one time described as *Lomaria colensoi* but it is now thought only a variety.

No 16 is *Asplenium Adiantoides* of Raoul var.  $\alpha$  *Hookeriana* of Hook. fil. but I see that since then it has been made a distinct species and it is *Asplenium hookeriana* of Colenso in the *Tasmanian Journal of Natural Science* Vol. 2 p. 169.

Now what am I to do with the specimens? All of them are useful to me but at the same time I do not like to deprive you of them” (in reply to this query I wrote that I never had any thought of him returning them, that I was sorry they were so few, and that you had sent off the specimens before you could receive my letter in which his strong recommendation to you to send a good many specimens of each plant was contained).

“It is too bad in Mr Buchanan. Why does he not send a dozen of good sized specimens of every thing he wishes named? It looks vastly like as if he did not care about pleasing us and cared only for getting the names to himself.

My usual practice is never to return any specimen sent me for a name. To make out a name will often cost an hour or even two hours and when one’s time is valuable (for time is money) the least recompense is to enable me to retain 5 or 6 good specimens of each that is submitted to me wither for my own Herbarium or to be given to others. He must learn to dry, not for the mere selfish purpose of getting names to his own specimens but for enabling us in this country to reap some benefit. We may turn selfish also. There can be no difficulty in drying 10 or 12 of each packing them up in paper forming a huge parcel or putting them in a box.

As to the Sea Weeds I have a set of Dr Harveys. I did not wish the Weeds for the sake of the Weeds but for what might be parasitical upon them and so minute as to require a good

microscope to see them giving often a gray tint to the weed when dry like as if it were dust or mud. Such weeds are often cast ashore even on a sandy beach. It is almost impossible to pick up red coloured weeds without some good things being parasitic thereon but quantity is requisite. From 5 or 6 oz weight of such weeds as he sent one may only get 2 or 3 grains of what I wish and that often after a [two illegible words] and boiling in weak nitric acid”.

Now you must not take offence at Professor Arnott’s plain speaking for he really is a capital fellow and a decided acquisition. He has been more prompt in replying to any communications of mine than any other of my botanical correspondents and then he is a high authority on such matters. By means of the book post (the parcel having the ends open but a string may be across it, less than 2 feet in length and breadth – and having numbers attached but no writing which can be sent in a letter) you can send under four ounce for fourpence and under eight ounce for eightpence. Hoping to hear from you soon and that you will be able to gratify the Professor who seems quite an enthusiast in his profession.

I remain

Yours very truly

John Ross...”

(11) “...Busby 18 November 1861

My Dear Sir

I received your last with the two Mosses and immediately inclosed them in a letter to Mr Wilson of Paddington requesting that if he knew Sir Roderick Murchison<sup>2</sup> or Dr Hector<sup>3</sup> he would write to them in your favour or if he preferred it he might send a certificate in your favour as a collector of Mosses which I would forward in an application to Dr Hector for you. Strange to say I have not heard from Mr Wilson since neither in answer to my letter nor any acknowledgement of having received the large parcel of Mosses sent to him two or three months ago. I am afraid he is either unwell or away from home. I will write you as soon as I hear from him.

On looking up the Medical Directory I found that Dr Hector lived in Edinburgh and not in Glasgow and on making inquiry about him at Mr Patrick Graham a nephew of Mrs Graham who is at present here a patient of mine ill with consumption he said he was a College companion of his and promised to write him which he did and received immediately a reply of which the following is a copy.

44 Northumberland Street

Edinburgh Oct 25 1861

My Dear Graham

You are quite right in supposing that I am going to New Zealand to make a Geological Survey of the Province of Otago and I thank you heartily for your congratulations.

I shall only take one assistant from the country and any others I shall require for the service I shall trust to get out in the Colony. You may tell Dr Ross that I shall keep his friend Mr John Buchanan in mind but that I must feel my way out there a little before I propose or offer appointments to any one. I am extremely sorry to hear that you are in bad health but I trust you are past the worst of it now.

I return to London shortly and expect to leave England before the end of the year.

Ever yours sincerely

James Hector”

I have no doubt from the above that on making application you will be at once appointed one of the surveying party. I will be glad to hear from you by return and receive any Ferns Algae or Mosses you may have collected. With best wishes for your success.

I am

Yours very truly

John Ross...”

(12) “...Busby 19 September 1861

My Dear Sir

I received your letter of Mosses and immediately forwarded them to Mr Wilson. I have not yet heard from him but will write you when I do. Some of the Mosses look very pretty and I hope are new.

The Printworks are rather slack at present the workers being only employed four days a week. You will probably have heard that Mr James Hall the Manager has left Busby. His place is filled by Mr McAdam and partly by Mr Marsden.

I had a letter from Mr Brown a few days ago. He sailed from Sydney to Auckland from thence to Bay of Islands, Russell, Kohu Kohu etc.

I cannot subscribe to your opinion that Money is the only source of happiness having seen many rich men wretched and many poor men happy. It is produced more by the state of the mind than the size of the purse and is generally the result of Christianity.

Hoping to hear from you soon.

I am

Yours very truly

John Ross..."

On 22 October 1861, James Hector, who by then had accepted the Directorship of the Otago Geological Survey, wrote from 44 Northumberland Street Edinburgh to his friend Joseph Hooker at Kew. "My Dear Hooker, I think I can now almost venture to say what my plans are to be – but the agreement is not yet finally drawn up.

I shall send my assistant (when I get one) out from London direct by a ship that leaves for Otago on Dec 20<sup>th</sup> with all the outfit of instruments etc and I shall start as soon after as possible by the overland route to Australia and spend the time I shall thus gain in visiting the "diggings". The Agents have agreed to allow me the greater part of the extra passage money so that I can do this.

I am getting some of the things I am going to take made here so that I shall not return to London till the 7<sup>th</sup> of Nov. I must give up all idea of the Lecture for the Royal Institution as with all my other bother I would be sure to make a mess of it. Besides I will in all probability be away before even the first lecture is given and that I could hardly expect them to allot to me ..." (Hector<sup>4</sup> 1861a; Burns & Nathan 2012). On the 27<sup>th</sup> of December Hector wrote again to Hooker "My Dear Hooker, I start for London this evening so you may depend on my being with you on the 3<sup>rd</sup> January. Thanks for the report by Haast, I shall take care to return it. The Contract is now signed and all the things are off and I have nothing to do now but go after them...With kindest regards and seasonable wishes to Mrs Hooker the bairns and yourself..." (Hooker<sup>5</sup> 1861b; Burns & Nathan 2012)

(13) "...Busby 18 December. 1861

My Dear Sir

Since I wrote you I have received two letters from Mr Wilson of Paddington in the first of which he apologises for not writing sooner in consequence of severe dyspepsia and a great pressure of engagements. He says he is not acquainted with either Sir Roderick Murchison or Dr Hector but could apply to them either thro [sic] Sir William Hooker or Dr Hooker.

In reply I said to Mr Wilson that an application from him to either Sir William Hooker or Dr Hooker would I thought secure the appointment.

I received the enclosed a day or two ago which I think it will be better to send to you as in the event of Dr Hector leaving before Dr Hooker communicates with him you can shew it to him.

I send a copy of enclosed list received from Mr Wilson.

"...86. Dicranum Billardierii (Schimper) barren in mixture with Bryum nr. Sanguineum Brudel & Hypnum polygamum Bryol. Europ. (barren)

90. Dicranum setosum (see 69 sent before)

100. Campylopus introflexus a more robust state than No 68 sent before (observe C. attenuatus MSS had better be called C. macilentus Wils. MSS the name attenuatus having already been applied to another Moss in my MSS WW)

84 Barbula antarctica Hampe

83. Trichostomum laxifolium Hook. fil. & Wils.

92. Grimmia pulvinata var.  $\beta$  africana

87. Rocmitrium fasciulare var.

98. Zygodon intermedius Br. & Schimp.

97 Zygodon Brownii Schwgr.

89. Leptobryum australe Wils. MSS (nov. sp.)

B Bryum Billardieri? Tall state with Fissidens adiantoides (not the male plant of it)

93. Meesia australis W MSS (nov. sp.)

91. Eremodon octoblepharis (Splachnum Hook.)

88. Polytrichum commune var.

Pleurocarpi

95 *Pilotrichum flexicaule* (Taylor) barren

96 *Cryphaea acuminata* Hook. fil. & Wils. & *Cryphaea obtusa* Wils. MSS (nov. sp.) a larger Moss than *C. acuminata* with blunt roundish concave leaves and long pinnate branches

94 *Isoetecium pandum* var.  $\beta$  Hook. fil. & Wils.

85 *Hypnum rutabulum* var.

(86) *Hypnum polygamum* Bryol. Europ. (nodiflorum Flor. N. Zeal.)

(*Hypnum ambrosium* W MSS now received proves to be truly dioicous male plants numerous W.)

101. *Racopilum australe* Hook. fil. & Wils.

Hepaticae

99. *Lepidozia* (compare *L. capilligera* Lindb.) I do not profess to know the Hepaticae..."

Hoping to hear from you soon and that every thing will go right in regard to your application.

I remain

Yours very truly

John Ross

PS I hope you will be able to satisfy Mr Wilson with suitable specimens of your new species of *Meesia*, *Leptobryum* and *Cryphaea*... JS..."

True to his word, William Wilson wrote to Joseph Hooker at Kew, sending a personal reference for Buchanan and the following letter to Ross that was then posted on to Buchanan..

"...Paddington, nr Warrington

Decbr. 14, 1861

My Dear Sir

I wrote to Dr. J.D. Hooker on the same day that I received your last, & I have no doubt he will do all he can to secure Mr Buchanan's appointment –

It was very careless of me to report as I did about Mr. B's mosses lately sent. I wrote from vague impression only, not having the mosses convenient for reference at the time – I have since looked them over, with some care, & find some new and interesting species as you will see by the enclosed list – I wish very much to see the new mosses in more suitable state for examination both the *Meesia* & the *Leptobryum* being quite out of season – I wish also to have specimens sufficient for giving away to friends – Schimper<sup>6</sup> and the Hookerian Herbarium have especial claims upon me – The *Cryphaea* is also out of season, & only one specimen is sent, on same paper as *C. acuminata*-

Excuse haste

Yours most truly

W. Wilson..."

(14) "...Busby 24 February 1862

My Dear Sir

I received your note from Tuapeka Creek<sup>7</sup> with the small fern. It is a small variety of the *Ophioglossum coriaceum* of Allan Cunningham<sup>8</sup> but that supposed species seems not to differ from *Ophioglossum lusitanicum* and again *Oph. lusitanicum* is reduced by Dr Hooker to *Ophioglossum vulgatum*.

In Dr Hooker's Flora of New Zealand he enumerates five varieties, the one sent is the *Ophioglossum vulgatum* variety  $\epsilon$  *minimum*. All the five varieties are said to occur in New Zealand.

You appear not to have received my two last letters containing the steps which I took to get you appointed as one of the party for the Geological Survey of the Province of Otago under Dr Hector. As Dr Hector left London for New Zealand at the end of December or beginning of January last I think you should endeavour to see him as soon as possible after he lands as you can. In that case there is little doubt of your being appointed one of the staff.

As you may remain for a few months at Tuapeka Creek perhaps I should direct to you there. The likelihood however is that you will have returned to North East Valley before my letter reaches New Zealand.

Hoping to hear from you soon

I remain

Yours very truly  
John Ross..."

(15) "...Busby 18 April 1862

My Dear Sir

Accept of my thanks for your very interesting letter. I did not receive Professor Arnott's letter till the 27 of last month so had to delay writing till this mail. In his letter he says "...The ferns arrived safely but although I got all but the two *Hymenophyllums* (3 & 4) named at once I postponed writing you till I had examined these also. I have however been so engaged that this is still not done, I hope to be able to compare them in a day or two.

No.1 is a variety of *Lomaria procera* a very polymorphous species.

2. *Gleichenia hecistophylla* Cunn. But is now allowed by all to be only a variety of *Gleichenia semivestita* of Labill.

3. *Hymenophyllum*

4. *Hymenophyllum* very near if not a variety of *H. tunbridgense*

5. *Lomaria alpina* variety

6. *Lomaria alpina* variety only differs by the lower pinnules not conspicuously smaller than the others

7. *Lomaria fluviatile* of Sprengel but very small"

I hope by the time you receive this you will be on Dr Hector's staff of Explorers and making many discoveries both botanically and geologically.

I have never heard from Mr Wilson since I wrote you and am afraid that he is laid up.

Yours very truly  
John Ross

PS I was to inform you that Mr Alexander Millar is Captain of the Busby Rifles in room of Captain Hall and Mr Williams Ensign...JR..."

On 29 August 1862, John Ross wrote to William Wilson at Paddington sending more Otago Mosses, his letter indicating just how carefully Buchanan collected mosses for Wilson.

"...Busby 29 August 1862

My Dear Sir

I send you a few more Mosses from Mr Buchanan New Zealand. He has been unwell lately or he would likely have sent a greater quantity. He has a prospect in consequence of your letter & in his behalf of being one of the Geological Survey Party under Dr Hector and will then have greatly increased opportunities for collecting. In his letter he says "...There is nothing grieves me more than my inability to supply Mr Wilson with the Mosses he wants. Some of them are surely very rare as I generally collect all I see and send the lot except a small bit for reference. Independent of some of them being local and I not likely to visit the same locality again there are others just at hand in the Valley [North East Valley, Dunedin] that I have been watching for years and have never found in fruit and some others the only specimens ever I found in fruit I sent you and never got any more".

Hoping that you are in the enjoyment of much better health than formerly and that you will find something new amongst the enclosed.

I am Dear Sir

Yours truly

John Ross..." (WMS 54b Warrington Municipal Library).

By this time Hector had been in Dunedin for four months. He had found and taken Buchanan onto the staff of the Otago Geological Survey and was pleasantly surprised at Buchanan's facility as a botanical collector, as a letter written to Hooker at Kew on 1 September 1862 elaborates (Galloway 1998: 46). The latter parts of Hector's letter also make fascinating reading for his comments on forest cover. He writes "...I don't know whether you are aware that this Province is nearly treeless. It took me very much by surprise I know when I found that excepting a patch of Forest around [sic.] Dunedin, and a few other clumps of bush as they are called, nestled generally on the SE slopes of the hills, there are no more trees here than in the American Oregon Country.

This is of course in the Eastern half of the Province which I have alone seen as yet. The surface of the country is very broken, but the hills and mountains have smooth outlines to their

summits, and inclose large basins which are filled with terraced plains of Tertiary deposits, exactly the same as those in British Columbia. Indeed I always fancy the country to be exactly the same as if instead of the Rocky Mtns you had the sea bounding British Columbia to the eastward and as far as I have seen the Geological structure also agrees with this. The pasturage however is wonderfully rich even to an altitude of 3500 ft on isolated hills. Burnt timber is found lying on the ground over most of the ranges and often it is said of specimens of trees only found now in the North Island. I shall try and find this out. The residents here seem all to think that the hole country was wooded at one time but I think there has been also very extensive tracts of open country, especially in the basins, which I don't believe were ever covered with timber after the drying up of the lakes which occupied them in later Tertiary times. However there is no doubt that the forests were at one time much more continuous than now. The wooded districts which still remain may be grouped thus [here Hector inserts a sketch map of Otago, including Stewart Island, showing the main forest formations which he numbers 1 to 5]:

1. The Dunedin Bush including a good many patches along the coast to the northwards. The NE Valley collections will give an idea of this botanical district.
2. The SE Bush [Catlins] is quite unknown excepting a few parts along the coast. It is very close and of great extent and is said to be different in appearance to the Dunedin Bush.
3. West Coast Bush [Fiordland] which you know as much about and more probably than anyone else.
4. The Lake District Bush. In the valleys of the highest mountains in the Province, and bordering the enormous lakes which have lately been discovered there.
5. Stewart Island Bush.

All this I think we may fairly expect to yield something or other peculiar to itself and my wish is to have each of them collected from separately.

The intermediate pasture country is of two kinds. We have a range of high ground running across the Island at right angles to the Backbone. North of this the grasses are of the arid type – in tufts and exactly similar in habit to the Oregon bunch grass... On the other hand, south of the transverse range there is none of this kind of grass and as a rule the pasture is more luxurious... I enclose as copy of a piece of a suggestion report that I have sent in to Government and if you could only write to me and back me up I have no doubt we could get the thing inaugurated rightly. I also send you a copy of a letter I have written about the gold fields..." In a marginal note Hector adds – "I don't know if I was quite justified in saying so much but I hope I have done no harm – I had to say something" (Hector<sup>9</sup> 1862). See also Burns & Nathan (2012: 36-38).

Joseph Hooker responded warmly to Hector's letter, writing, *inter alia* ... "A thousand thanks for your long and interesting letter... I never had before the least idea of the general features of Otago and certainly the treeless character of the East Coast is as new to me as it was to you. I am delighted to hear that you have secured Buchanan's services to collect, it is the very best thing you have done..." (Yaldwyn & Hobbs 1998: 35)

(16) "...Busby 25 September 1862

My Dear Sir

Not being acquainted with the Ferns you sent I transmitted them to Professor Arnott and had the following remarks in reply "...I had gone to Cove this morning with Dr Hooker to see Mrs Arnott presently there with some of my young people and got yours on my return. We have just looked at the two ferns together.

The *Botrychium*, both specimens is clearly what is called *B. virginicum* in Dr Hooker's Flora of New Zealand (Antarctic Flora) but he informs me that his father (Sir William) has lately been revising the genus and in consequence has discovered numerous mistakes in the names, even names given by himself some years ago. This paper of Sir Williams is not yet published but in the meantime it is near enough this month to say that the only specimen found in the Southern Hemisphere beyond the tropics is what is called by the late Robert Brown<sup>10</sup> and by Allan Cunningham *Bot. virginicum* and that its native New Zealand name is Patotara. *B. virginicum* is found in the United States, Canada and the mountains of East India unless as I have hinted the New Zealand one has been within these few weeks split off by Sir William which is not likely.

The *Pteris* is *Pt. scaberula* of A. Richard for *Pt. microphyllum* of A. Cunn."

As Prof Anott keeps all the ferns I send him I will feel obliged be receiving specimens of the *Botrychium*.

I have also received last night a letter from Mr Wilson in regard to the Mosses dated 23<sup>rd</sup> September in which he says "...I have been from home or should have answered your kind letter sooner. Many thanks for the New Zealand Mosses. I have not yet had time to examine them under

the microscope but they are in good state and at least one of them (a *Trematodon* growing with a *Bryum* & curates as *purpureus*) is new to me as a New Zealand Moss. All will be useful and interesting one of the *Bartramias* may be new. My health is not adequate at present to any close application and I just write to thank you and Mr Buchanan. I wish him not to be at all concerned about any inability to gratify me in the way he so generously intends. I shall accept all as a boon and not at all as a debt therefore he must feel perfectly at ease. I am glad to have assisted him in any way and I trust his health will be restored in time to take advantage of the opportunities that may occur..."

Hoping that this will find you again restored to your usual health and as able to look for Mosses on trees sixty feet high as formerly.

I remain

My Dear Sir

Yours very truly

John Ross..."

(17) "...Busby 24 March 1866

My Dear Sir

I received your packet yesterday enclosing some very beautiful ferns for which accept of my best thanks. I think they must also be very rare. We had a conversazione lately in the Faculty Hall Glasgow when I was asked to send in some things for exhibition. The only things I thought of were a book of New Zealand mosses named and four books of New Zealand Ferns in addition to a microscope I received about six years ago and for which Forty Pounds were paid. The Mosses and Ferns were the only thing of that kind shewn and looked very well.

I sent you by last mail Henney's Clydesdale Flora<sup>11</sup> thinking you might not have seen it but it appears I was mistaken. I have found two new plants for the next editor of it, the *Polygonum minus* got at the Black Loch and the *Limosella aquatica* got at the Long Loch in the Mearns. I would like much to have a paper from you on the subject you mention and will either read it or get it read by Mr Henney at the Natural History Society<sup>12</sup> in Glasgow.

We have had a very wet winter this year and the weather still keeps very cold but we hope for warmer weather in a week or two when the borrowing [?] days are over. The Rinderpest [?] is prevailing much among cattle in this district several farmers having lost nearly their whole stock, There is a good deal of excitement over the country about a new Reform Bill<sup>13</sup> which has been introduced into Parliament by the Ministry under Lord John Russell or rather Earl Russell giving Seven Pound householders in cities a vote and Fourteen Pound householders in country. To add to the excitement the Fenians are causing much uneasiness especially in Ireland and they appear to be getting considerable assistance from America but I must stop.

Expecting to hear from you soon and wishing you all success in your explorations.

I am, My Dear Sir

Yours very truly

John Ross..."

(18) "...Busby 16 July 1867

My Dear Sir

I have been unwell lately and have been from home for five weeks which will account for my irregularity in correspondence. I was seized suddenly about seven weeks ago with great giddiness, surrounding objects whirling about, sickness and vomiting recurring every half hour for a day and have not yet got back to my former state. I sent to Glasgow for Dr Coats who was afraid of something being wrong with the brain. The stomach and liver were evidently out of order. I rather think I have had too much to do for many months. I have now got an assistant and hope to get on more comfortably and with less strain on the brain for the future. This is Alexander Millar's marriage day and many flags are stuck up round about. He is to be married to a daughter of the late Baillie Millar who had a shop at the Cross. I hope he will get a good wife for he is a very deserving young man. In your letter of the 6<sup>th</sup> May there are two Mosses one of which is very like the *Dawsonia polytrichoides* perhaps the *Dawsonia superba* Grev. The other may be the *Polytrichum dendroides* of Commerson but if I am not correct please let me know. I have bought Dr Hooker's two parts of the "Handbook of the New Zealand Flora"<sup>14</sup> and am very much gratified by the frequency of "Hector and Buchanan" as authority. I am sorry that Mr Wilson was unable to undertake the revision of the New Zealand Mosses as the Handbook would have been much more useful to me and have done more

credit to your discoveries. As you are much more versant with the mosses than I am I will feel obliged by receiving Hooker's synonyms when you have leisure.

I will require to give the brain a good deal of rest for some time to come and may be unable to do much for Botany but I will have more leisure and will be glad to hear from you at your convenience.

Hoping this will find you in good health and with best wishes I remain

Yours very truly  
John Ross..."

Whether Buchanan knew it or not, the sentiments expressed in this letter from John Ross were both the elder man's farewell to Botany, and an end to a productive decade that saw the emergence of Buchanan as a field botanist of both regional and international standing. Ross acted as both the catalyst and the active supporter and encourager of Buchanan's transformation to an active field botanist. For this reason he deserves our warmest thanks for his quiet encouragement and stimulation of southern Botany.

Buchanan's friend from Busby days, Alex Dick (then resident in Melbourne) wrote to Buchanan on 7 October 1869 "...I hear from Busby very bad accounts of the health of your old friend Dr Ross he seems to have quite broken down" (Buchanan Papers, Mitchell Library Sydney). The following year while on board ship (the *Swiftsure*) in December 1870 returning from a visit back to Busby and a reunion of the "Busbyites" Alex Dick wrote "...Of the Busbyites I will begin by giving you a list of the survivors who appeared at a gathering held in honour of my visit in Sandy Wilson's...Dr. Ross, your old friend is now quite imbecile in mind and body being both reduced to a very low ebb indeed! He said he remembered me "yes, Oh Yes Dick. Yes, oh I remember, Dick, oh yes" and when I spoke of you he replied much in the same way, but I think it would have been all the same if I had asked him if he remembered Cromwell and Monk. It is the end of a well spent useful life..." (Buchanan Papers, Mitchell Library Sydney).

On 1<sup>st</sup> January 1870, Dr William Dove Macfarlane took over Dr Ross's practice in Busby as Ross himself was now mortally ill. He died on Sunday 2 April 1871, aged 62 and was buried in Carmunnock Churchyard, his funeral procession being followed from Busby Free Kirk by almost the entire male population from Busby and its surrounding districts. Since his arrival in Busby in 1829, Ross worked tirelessly among the people (often without payment); he established two Banks for the villagers; and he laboured without rest to improve the lot of its poorest inhabitants. It was a long and dedicated episode of humanitarian service, enlivened perhaps only by his interest in and love of Botany. His headstone, raised by public subscription reads:

"In Memory of John Ross, Fellow of the Faculty of Physicians and Surgeons of Glasgow, who for forty two years practised at Busby with great assiduity, kindness and skill, and being a humble and devoted follower of Christ. Did what in him lay to promote the highest well-being of those among whom his lot was cast. Born May 19<sup>th</sup> 1808. Died April 2<sup>nd</sup> 1871. Who shall separate us from the love of Christ? Erected by grateful patients and admiring friends" (John S. Macvicar, *pers. comm.*)

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### Notes

- 1 This refers to *Flora Novae Zelandiae* the second part of Hooker's *Botany of the Antarctic Voyage* (Hooker 1853-1855).
- 2 Sir Roderick Impey Murchison FRS (1792-1871). Scottish geologist and palaeontologist who recognised and named the Silurian and Devonian geological periods. For many years (1843-1871) he was President of the Royal Geographical Society. His name is commemorated in New Zealand in the Murchison Glacier and in the Murchison Mountains.
- 3 Sir James Hector MD, FRS (1834-1907) Scottish geologist. Geologist and Surgeon British North American Exploring Expedition under Sir Hugh Palliser, 1857-1860. Kicking Horse Pass in the Canadian Rockies commemorates the incident when Hector was kicked by his horse.

- Otago Provincial Geologist 1861-1865. Director Colonial Museum and New Zealand Geological Survey 1865-1903. Manager and President New Zealand Institute 1867-1903. Chancellor of the University of New Zealand 1885-1903.
- 4 Letter from James Hector to J.D. Hooker, 22 October 1862. Director's Correspondence, Library and Archives, Royal Botanic Gardens, Kew. Vol. 174. New Zealand Letters 1854-1900, A-H, p 407. See also Burns & Nathan (2012: 30-31).
  - 5 Letter from James Hector to J.D. Hooker, 27 September 1862. Director's Correspondence, Library and Archives, Royal Botanic Gardens, Kew. Vol. 174. New Zealand Letters 1854-1900, A-H, p 408. See also Burns & Nathan (2012: 31).
  - 6 Wilhelm Philippe Schimper (1808-1880). French bryologist, who was Professor of Geology and Natural History in the University of Strasbourg, 1862-1879 (Lamy & Robin 2003). He was a close friend and correspondent of William Wilson.
  - 7 Tuapeka River. Lower tributary of the Clutha River. It flows south-westward past Lawrence to the Clutha River. Forever associated with the discovery of gold (Mayhew 1949), it drew John Buchanan to try his luck there as a prospector in 1861-1862 (Adams 1990b). Earlier, he had explored the Tuapeka River to its mouth in 1857-1858 while on the Reconnaissance Survey with Alexander Garvie, and had even obtained specks of colour in several places.
  - 8 Allan Cunningham (1791-1839). British botanist and explorer (McMinn 1970). Employed by Sir Joseph Banks as plant collector firstly in Brazil (1814-1816), then in Australia where he made large collections and explored widely. He was made Colonial Botanist in New South Wales in 1837 in succession to his brother Richard. He visited New Zealand in 1838 and botanised for 6 months, publishing several contributions to New Zealand botany (Cunningham 1836-1840).
  - 9 Letter from James Hector to J.D. Hooker, 1 September 1862. Director's Correspondence, Library and Archives, Royal Botanic Gardens, Kew. Vol. 174. New Zealand Letters 1854-1900, A-H, pp. 410-412, including sketch map. The James Hector Otago Correspondence at Kew comprises 23 letters [Vol. 174, pp. 410-461] spanning the period 1 September 1861 until 18 July 1865 when Hector left Dunedin for Wellington. See also Burns & Nathan (2012).
  - 10 Robert Brown FRS (1773-1858). Possibly the greatest of all British botanists, and widely known for his discovery of the cell nucleus, of protoplasmic streaming and the nature of pollination and fertilisation. His name is commemorated through his description of the phenomenon now known as "Brownian Movement". Brown was Botanist to Matthew Flinders on the circumnavigation of Australia in the *Investigator* (1801-1805), and later became Botanist-Librarian to Sir Joseph Banks at Soho Square. Banks bequeathed a life-interest in his collections to Brown who eventually transferred them to the British Museum, becoming the Museum's first Keeper of Botany (Stearn 1981; Mabberley 1985).
  - 11 Hennedy's *Clydesdale Flora* (Hennedy 1865) a volume that ran to five editions, two of which were published after his death. An informative biography of Hennedy was written by his friend William 'Crimea' Simpson, the famous war artist and published in the "In Memoriam" edition of the *Flora* (Hennedy 1878). Hennedy's herbarium is held by the University of Strathclyde, Glasgow (Kent & Allen 1984). Hennedy was a long-standing friend of John Buchanan and his brother James as letter from Agnes Small (Buchanan's sister) of 14 November 1876 (Buchanan papers, Mitchell Library Sydney) makes plain.
  - 12 The Glasgow Natural History Society was established in July 1851 by nine "gentlemen interested in the pursuit of natural science". Roger Hennedy was one of its earliest members. Its journal *The Glasgow Naturalist*, was first published in 1908.
  - 13 In 1866 the British Liberal Prime Minister, Lord John Russell (or Earl Russell as he became) introduced a very moderate Bill to extend the franchise to householders of a certain level of wealth. There was a right wing revolt within Liberal ranks at the notion of such a concession to Radicalism and the Bill was defeated. Russell resigned and was defeated in the general election by Lord Derby. The ensuing (minority) Conservative government surprised everyone by bringing in a more far-reaching Reform Bill (Wilson 2007), known as the Second Reform Act, or *Representation of the People Act 1867*.
  - 14 Hooker's *Handbook* (Hooker 1864-1867) was substantially added to by exciting new discoveries made by Hector and Buchanan from the Otago hinterland, leading Hooker to note in his Preface "...and more recently very extensive and valuable collections, containing much novelty, from the Alps of the interior and the west coasts, by another eminent geologist. Dr. Hector, F.G.S., Government Geologist, and Mr. Buchanan, his assistant. The most important of these last collections arrived whilst the sheets of this work were passing through the press, and have materially delayed its publication; for the discoveries which they contained seemed to me to be of sufficient importance to render it desirable that they should be

embodied in the portions that had already been printed, which had to be recalled for the purpose. Again, since the completion of the Flowering plants, I have received two more contributions from these surveyors, including various new discoveries and new habitats, which must be reserved for the Supplement “ (Hooker 1864: 13).

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### ■ Biographical Sketch – Norman Ambrose Potts (1886-1970)

**Val Smith**, 80 Mill Road, New Plymouth 4310.

Norman Potts was born in Christchurch in 1886, two years before the death of his grandfather, Canterbury runholder, conservationist and naturalist Thomas Henry Potts. Norman's father, Ambrose, one of Thomas and Emma Potts' thirteen children, managed a large sheep station near Waipukurau in central Hawke's Bay, where young Norman spent his childhood. One of his early memories was of a trip with his mother to Napier, during which she pointed out a white-bearded old man walking along the street. She said he was Mr Colenso, the famous botanist, diarist and printer who, when his Maori workers at Paihia rebelled at their tedious printing tasks, would pursue them back to their villages and drive them back to work!

Norman Potts became a lawyer, and in 1916 founded the Opotiki law firm Potts and Hodgson that still carries his name. He was also an avid botanist, plant collector and explorer of the more inaccessible places in New Zealand, especially in the Raukumara and Urewera areas. In Opotiki he is remembered mainly for his work in the Hukutaia Domain. Centred on an area of forest containing the sacred Maori burial tree Taketakerau, Hukutaia was set aside as a reserve in 1918. In 1933 Potts was appointed chairman of the Domain Board, and largely due to his planning and energy, Hukutaia Domain became one of the finest public collections of native plants in New Zealand. By 1970 an estimated 7,000 plantings had been made, almost all by Potts, of local coastal species augmented by other natives from around the country, especially those in danger of extinction. These were labelled with places of origin and Maori or common names, if known.



***Myosotis petiolata* var. *pottsiana***

On his explorations he undertook botanical transects, describing species sequences as well as topographical information. He gathered plant material and corresponded with other botanists, and made seeds, plants and information about New Zealand flora available to public gardens and societies. One of his discoveries, a small and rare tutu known only from near East Cape, was named by WRB Oliver as *Coriaria pottsiana*. His name was also commemorated by Lucy Moore in one of the few native forget-me-nots found at low altitudes, *Myosotis petiolata* var. *pottsiana*. In 1944 he was awarded the Loder Cup for his work on the protection and cultivation of New Zealand plants.

Norman Potts died on 16 November 1970, at the age of 84 years, and was buried in the Opotiki Cemetery. K-force veteran and orchardist Wardill Frederick Potts (1932-2011), whose grave is also there, was probably their son. The Hinuera stone gateway and seat at the entrance to Hukutaia Domain was dedicated by the many friends of Norman Potts as a memorial to him.

***Myosotis petiolata* var. *pottsiana***

**Boraginaceae**

*Myosotis*: 'mouse-ear', referring to the leaves; *petiolata*: 'with a petiole or leaf-stalk'. The genus of about 50 annual and perennial herbs, commonly known as forget-me-nots, is mostly in temperate regions, with 34 species native to New Zealand. There are three named varieties of *Myosotis petiolata*, although some consider that each merits full species status. *Myosotis petiolata* var. *pottsiana* was first found around 1952 in a small area near Opotiki, and brought into cultivation by its discoverers, Marc Heginbotham and Norman Potts. Thought extinct in 1981, it was later rediscovered in a few other localities in the region. The plant is openly branched with stems up to 10 cm or more; leaf blades are rounded, 1.5-2.5 cm in diameter, suddenly narrowing to a long slender petiole. The white flowers, 9-12 mm in diameter, are borne prolifically throughout summer. Plants in the wild favour forested riverside banks and gorges, usually in sites prone to frequent flooding. A naturally uncommon and sparsely distributed species, it is threatened by animal browsing and weeds.

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**PUBLICATIONS**

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▪ **Book review: An illustrated guide to common grasses, sedges and rushes of New Zealand.**

By Paul Champion, Trevor James, Ian Popay and Kerry Ford

Published by the New Zealand Plant Protection Society, Christchurch, 2012

Paperback, 208 pages, 170 × 244 mm

ISBN 978-0-473-21660-3

\$NZ60.00

Available from Touchwood Books and Manaaki Whenua Press

Reviewed by **Murray Dawson**, Landcare Research, PO Box 40, Lincoln, 7640, New Zealand

This new identification guide covers grasses (of the Poaceae family, also known as the Gramineae), sedges (Cyperaceae), and rushes (Juncaceae), both native and introduced, commonly found in ornamental plantings, pastures, lawns, crops, roadsides and coastal habitats of New Zealand.

Of all the vascular plant groups, true grasses and grass-like plants are probably the most off-putting (but not necessarily difficult) to identify because many look superficially similar. The *Flora of New Zealand* series is comprehensive, but because these 'botanical bibles' are written by and for experts they are of necessity laden with terminology that can be confusing to casual users. *An illustrated guide to common grasses, sedges and rushes of New Zealand* translates the information of these technical floras and does an admirable job teaching us that there are good characters available to distinguish these plants.

Recent taxonomic and molecular research has resulted in changes to plant names since each flora was published. It is reassuring to see that botanical names in this guide are up-to-date and largely concordant with the treatments followed in the Landcare Research Ngā Tipu o Aotearoa – New Zealand Plants database (<http://nzflora.landcareresearch.co.nz>). Former names are usefully cross-referenced (e.g., *Androsachne* is the current genus for some species of *Elymus*, *Cenchrus* spp. was *Pennisetum* spp., *Danthonia decumbens* was *Sieglingia decumbens*, *Ficinia spiralis* was *Desmoschoenus spiralis*, *Machaerina* spp. was *Baumea* spp.).

This book follows the same full-colour and user-friendly format of *An illustrated guide to common weeds of New Zealand*<sup>1</sup>, and fills a major gap in coverage of vascular plant groups. Three authors are the same on both titles, with the welcome addition of grass and sedge expert Kerry Ford.

Illustrations throughout are outstanding and clearly show diagnostic characters defining the groups and species. This is thanks mainly to author Trevor James's excellent photography; other image contributors are acknowledged in the book.

The Introduction (p. vi) tells us "New Zealand currently has at least 230 introduced grass species, 35 rushes and 41 sedges". On the following page (p. vii) there are useful comparison estimates of "191 native grass species, 39 rushes and 173 sedges", but a disparate closing sentence stating "In all but the sedges, introduced species outnumber native species in these three very large groups". According to their figures only the introduced grass species outnumber the natives.

Other introductory sections include plant lists and discussion of pest plants (p. ix), a useful précis on how to distinguish grasses, sedges and rushes (starting from the rhyme "sedges have edges, rushes are round, grasses have nodes from their tips to the ground", p. x), other plants that are grass-like (p. xiv), and discussion of the habitats where grasses, sedges and rushes are to be found (p. xv).

The introductory material concludes with mention of useful books, including Lambrecht's *What grass is that?* (a forerunner book now out of print and for which this new illustrated guide could be considered a replacement), acknowledgements, and an easy to follow and beautifully illustrated glossary of terms.

The main body of the book comprises plant descriptions for the sedges (pp. 2–37), rushes (pp. 38–55) and the largest group, the grasses (pp. 56–172). Prefacing each group (sedges, rushes and grasses) are well-written notes, illustrations, and keys nicely displayed as tables to aid identification. Like the *Common Weeds of New Zealand*, this book has succinct descriptions for each species with

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<sup>1</sup> The latest edition was reviewed in the *New Zealand Botanical Society Newsletter*, Dec 2010, No. 102: 21–23.

a paragraph on key features (in bold), descriptive text on features appropriate to each group (e.g., flower stems, roots, rhizomes, leaves, flower heads, spikelets), notes on Distribution, habitat and comments, Derivation of botanical name and Related (and Similar) species. Comments include applicable Regional Pest Management Strategies.

This guide concludes with a useful appendix of books and websites (pp. 173–175) and an index of common and botanical names (pp. 176–182). It is inevitable that some of the website addresses in the book have already changed since publication. For example, due to a website restructure, the interactive plant identification keys hosted by Landcare Research are now to be found at [www.landcareresearch.co.nz/resources/identification/plants](http://www.landcareresearch.co.nz/resources/identification/plants).

Like the earlier title, *An illustrated guide to common weeds of New Zealand*, I highly recommend *An illustrated guide to common grasses, sedges and rushes of New Zealand*. This book succeeds admirably in meeting the needs of a wide audience and being a user-friendly and practical guide.

#### ■ Publications Received

Manawatu Botanical Society Newsletter No 47 September 2012 Past meetings and trip reports including Keeble's Bush, Porangahau Estuary; obituaries for Margaret Neilson and Gregor Yeates.

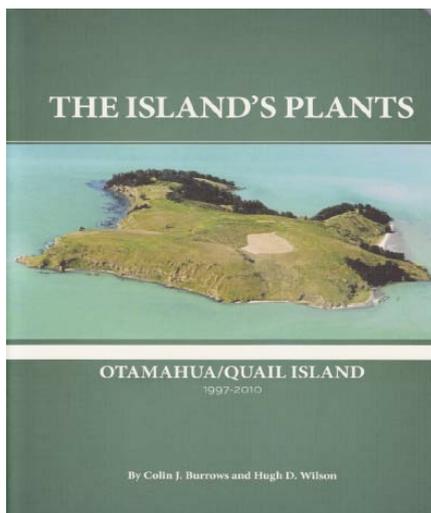
Wellington Botanical Society Newsletter September 2012 ISSN 1171-9982 Fieldtrips and meetings, President's and Treasurer's reports, obituaries for Muriel Fisher and Nancy Williams, trip reports.

Canterbury Botanical Society Newsletter October 2012 Report on Hawaiian flora, upcoming trips and meetings.

Canterbury Botanical Society Newsletter November 2012 Trip report on Bank's Peninsula *Pittosporum obcordatum*, upcoming trips and meetings.

Canterbury Botanical Society Newsletter December 2012 Report on dispersal and regeneration of alpine plants, trip report on Hakatere Conservation Park, upcoming trips and meetings.

#### ■ New Book



#### **The Island's Plants**

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