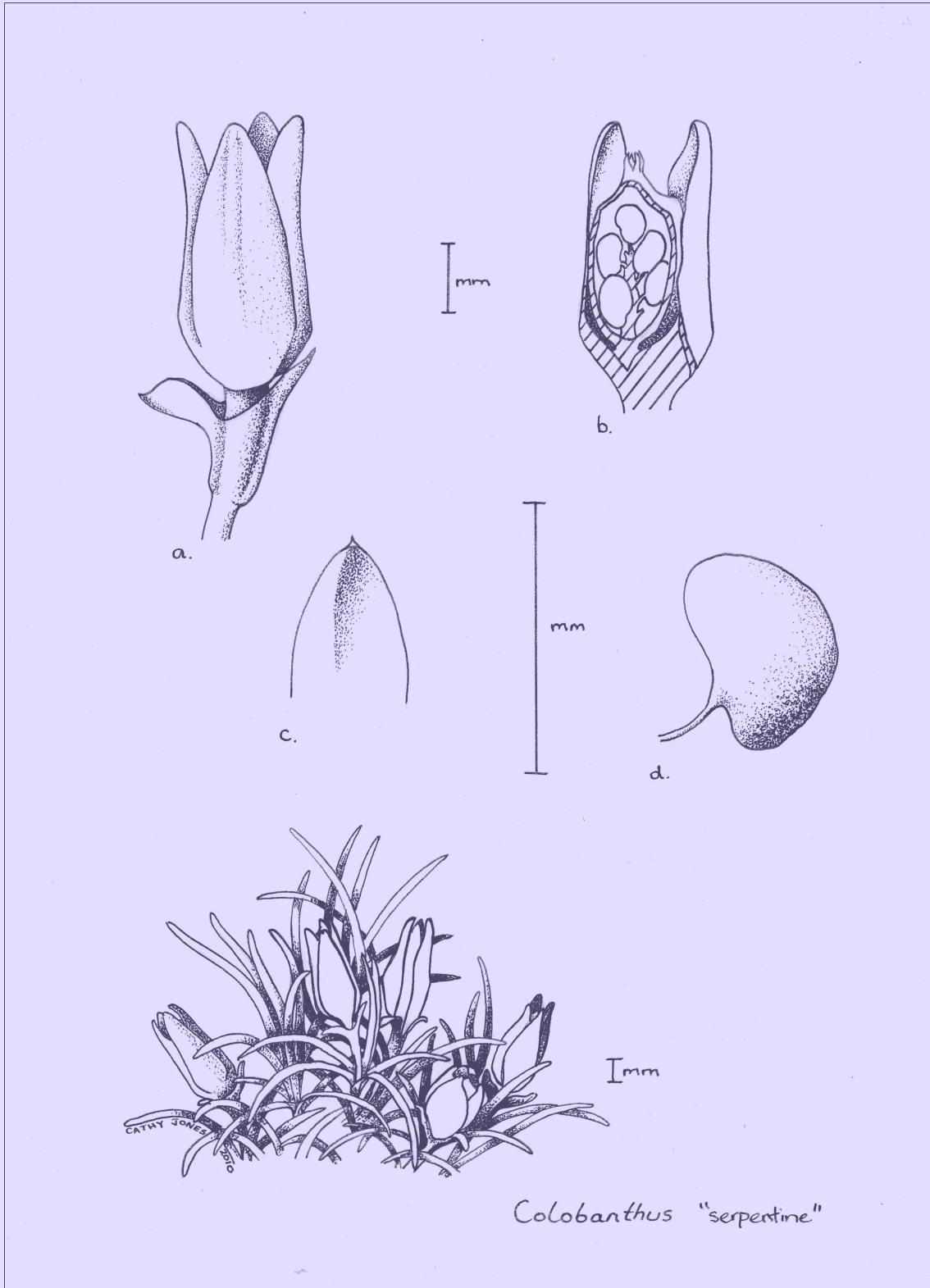


NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 102

December 2010



New Zealand Botanical Society

President: Anthony Wright
Secretary/Treasurer: Ewen Cameron
Committee: Bruce Clarkson, Colin Webb, Carol West

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Subscriptions

The 2011 ordinary and institutional subscriptions are \$25 (reduced to \$18 if paid by the due date on the subscription invoice). The 2011 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 2011 issue is 25 February 2011.

Please post contributions to:
Melanie Newfield
17 Homebush Rd
Khandallah
Wellington

Send email contributions to editor@nzbotanicalsociety.org.nz. Files are preferably in MS Word, 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.

Editor's note

There is a new email address for sending *Newsletter* submissions - editor@nzbotanicalsociety.org.nz. This is a permanent email address for the *Newsletter* editor; if the editor changes the email address will remain the same. In addition, submissions sent to this email address are automatically backed up should something happen to my computer. Submissions sent to my personal email address will still be received, but they are not automatically backed up.

Also, I can now open documents created using newer versions of Word (with the suffix ".docx").

Cover Illustration

Colobanthus "serpentine" drawn by Cathy Jones from a plant found on ultramafic soil on the lower slopes of Mt Starveall on 21 September 2010. a. flower, b. flower showing cross-section of ovary, c. leaf tip, d. seed.

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N E W S L E T T E R
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NEWS

New Zealand Botanical Society News

■ Committee for 2011

Nominations for positions of President, Secretary/Treasurer and three committee members for the New Zealand Botanical Society closed on 19 November 2010.

The following nominations, equalling the number of positions available, were received and are declared elected: President Anthony Wright, Secretary/Treasurer Ewen Cameron, Committee members Bruce Clarkson, Colin Webb and Carol West.

Melanie Newfield has agreed to do the March issue, but is currently uncertain whether she can continue as editor for the whole of next year, due to work commitments. If anyone is interested in becoming the *Newsletter* editor, please contact Ewen Cameron.

Ewen Cameron, Secretary/Treasurer NZBS

Regional Botanical Society News

■ Auckland Botanical Society

September Meeting

Dr Allison Knight from Otago Botanical Society attended our summer camp at Bannockburn, and so impressed were the campers with her talk on lichens that she was persuaded to travel north and speak to the whole society. Her talk, "Lichens 101 – 404" educated us on the structure, the origins and the often over-looked roles of lichens in our ecosystems. We learned of her plans for an introductory Field Guide and viewed some of the Bannockburn and some threatened lichens.

Spring trip to Norfolk Island

Fourteen Bot Soccers spent an interesting week exploring the botanical highlights of Phillip and Norfolk Islands. We were delighted to find that, despite horrendous weed problems, there are still good plant associations, and much work is being done to protect and restore the natural biota.

September Field Trip

Pukekaroro is the kauri-covered hill a few km north of Kaiwaka. It was the scene of pre-European battles in times gone by, and has impressive earthworks near the summit. Kauri was extensively logged in the latter years of the nineteenth century and is now regenerating well. In places toatoa (*Phyllocladus toatoa*) is nearly as common as kauri. A slow ascent allowed us to spread out over the slope and admire the kauri associates, such as *Schizaea dichotoma*, *S. fistulosa*, *Lycopodiella laterale* and one of the most southerly sites of *Alseuosmia banksii*.

October Meeting

On a busy and stimulating evening we heard first from Leslie Haines, who chose *Muehlenbeckia astonii* for her Plant of the Month talk. It was a pleasure to hear from our Lucy Cranwell Grant recipient, Ben Myles from the University of Otago, speaking enthusiastically about his studies on variation in the unicellular green algal photobiont *Trebouxia*, in the lichen genus *Menegazzia*. The main talk for the evening was a combined presentation by Lara Shepherd and Robin Atherton. They spoke on the domestication of karaka, whau, rengarenga and coastal kowhai, plants that are thought to have been restricted to the northern half of the North Island prior to human arrival. Genetic data and oral histories help to understand Maori settlement routes.

October Field Trip

A group of 33 journeyed from Gulf Harbour to Motuora Island on the DoC boat "Hauturu". Under the leadership of Ewen Cameron and guidance of environmental stalwart Helen Lindsay, we checked the remarkable progress over 20 years of restoring native vegetation and fauna to the island, and removing large, old pine trees. Weeds and pests are being kept at bay, while seabirds such as the

diving petrel have been translocated there as chicks and breeding has begun. The oldest planted vegetation, with ngaio, karo and taupata to the fore, has now become a dense, young forest. Natural coastal vegetation, with pohutukawa, karo, kawakawa and rengarenga lily, survives on some of the steep coastal cliffs.

Labour Weekend camp – Waipoua Forest

A small party enjoyed summer weather while staying at McGregor House, Waipoua Forest. Our leader, Waipoua Forest Trustee Stephen King, inspired us with his vision for restoring the land adjacent to the forest, using natural revegetation methods rather than wholesale planting. He took us off-track into ancient forest where the processes of decay and new life were displayed before our eyes. To our dismay the numerous pigs were causing severe damage, even right on the doorstep of Tane Mahuta. Other trips took us to see gumland scrub, regenerating forest, and a magnificent forest and river walk.

November Meeting

Prior to the meeting, members enjoyed dinner at a nearby restaurant where the New Zealand Botanical Society's Allan Mere was presented posthumously to Ross Beaver. Jessica, Rosemary and Graham Beaver received the award from Anthony Wright, president of NZBS.

The meeting opened with the Plant of the Month talk by Peter Hutton, whose subject was the unusual Northland endemic, *Colensoa physaloides*, which Peter has growing in numbers in his garden. Peter de Lange then reported on a visit by himself and David Havell in May 2009 to Raoul Island in the Kermadecs. After an overview of some of the vascular plants found there, the talk concentrated on the bryophytes and lichens that were found during a very hurried stay.

November Field Trip

Marunui Conservation Area comprises 423ha of QEII-covenanted second growth bush on the south face of the Brynderwyn Hills, Mangawhai, and is in multiple ownership. Regeneration is well underway since the logging of kauri early last century. The large group attending the field trip was divided into three and walks were undertaken along different tracks which led by wetlands, gullies, ridges and hilltops. Plants of interest included *Calystegia marginata*, *Thelymitra aemula*, *T. tholiformis*, *Caladenia chlorostyla*, *Tmesipteris sigmatifolia* and an intriguing small-leaved member of that varied assemblage gathered together under the all-embracing label of *Alseuosmia quercifolia*.

FUTURE EVENTS

4 December	End of year picnic at Shakespear Regional Park, Whangaparaoa.
28 Jan – 1 Feb 2011	Anniversary Weekend camp, Waikawau Bay, Coromandel Peninsula
19 February	Muriwai Regional Park
2 March	AGM. Alison Wesley – “Flora of Chile & Patagonia”
19 March	Awhitu Dune Lakes

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

President: Mike Wilcox **Secretary:** Kristy Hall aucklandbotanicalsociety@gmail.com

■ **Rotorua Botanical Society**

September Field Trip: Whirinaki

The trip was actually postponed to October 10 on a brilliant day with a large attendance. The route took us up a ridge and down into and down the Mangamate Stream through magnificent forest with emergent podocarps above a tawa canopy. The climb to the spur passed many large rimu and one huge totara. The forest floor was often a carpet of *Hymenophyllum demissum*, but throughout ferns were diverse and abundant. Other species of note were *Microsorium novae-zelandiae*, perched as usual, kidney fern and *Hymenophyllum scabrum*. The area was largely weed free apart from buddelia along the river and common weeds such as ragwort and foxglove where the track had recently been gravelled.

The descent along the Mangamate Stream, with many stream crossings and stream in flood, meant wet feet but allowed sampling the valley forests. Here tree ferns were abundant, clothed in *Trichomanes venosum* or *Hymenophyllum frankliniae*, and beneath, *Nematoceras trilobus* (with a

prominent green dorsal sepal) and *Nertera dissecta* were common, and *N. scapaniodes* occasional. Along the final return section of the Whirinaki Track, the wet banks provided several patches of *Nematoceras iridescens* (a new record) and rocky overhangs were clothed in *Trichomanes endlicherianum*. Finally *Botrichium biforme*, just coming in to leaf, was nearly missed beside the track.

October Field Trip: East Cape

The weekend of 2-3 saw 11 RBS members and partners make the annual RBS trek up to East Cape to spend a weekend based at Whanarua Bay, botanising a dune system and a coastal forest block.

The first day was spent on the Whangaparaoa Dunes between the coast and SH 35. This dune system is recognised as one of the better examples of coastal dune systems remaining in the Bay of Plenty and one of the few with extensive backdune systems including intact wetlands. The area is mainly pohuehue dominated, with local areas of bracken, grass and blackberry. A range of wetlands in backdune swale are present, mostly small and dominated by *Baumea articulata*. However some larger open water areas are fringed with a mosaic of raupo reedland and *Baumea articulata* sedgeland. A more extensive wetland at the north end comprises of flax-manuka-karamu-*Baumea articulata*-flax shrubland interspersed with areas of raupo.

The second day was spent on the steep face and hills of Whanarua Bay Scenic Reserve above Whanarua Bay township. Once through a pine cutover area which had been left to naturally regenerate we followed a track on the main ridge to a junction where a large pa had been. The vegetation on the face in the gully behind the main ridge was mainly relatively young kohuhu-fivefinger-mamaku-manuka-karamu forest. Along the spurs and ridge we could see mature unlogged forest with rimu emergent above stands of hard beech. The remainder appeared to be rimu-northern rata over a canopy of tawa-rewarewa-puriri forest, typical of the semi-coastal zone. We returned to the pa site for lunch and followed the track off the ridge to the east. Following the track further down towards the block boundary and SH 35 we were soon in tawa-rewarewa-kohehohe-(puriri) forest with some occasional large pohutukawa and northern rata.

November Field Trip: Whakaipo Bay, Taupo

The area at the eastern end of Whakipo Bay between the stream and Tahunatara Point was explored on a fine but windy day. The track leads through regenerating forest of mainly fivefinger, kohuhu, and mahoe with very little kanuka (most of which seen appears to have recently died). The first 100 m of the track was quite weedy but later under the dense fivefinger and mahoe canopy there very were few weeds. Here there was an often light understorey of plants such as wheki, matipo, rangiora and karamu with a scattering of ferns including *Pellaea rotundifolia*, *Microsorium pustulatum* and *Asplenium oblongifolium*. *Clematis forsteri*, in perfumed flower, was quite common and *Pterostylis banksii* frequently lined the track. The odd *P. patens* with its strongly hooked sepals added an element of debate.

Near the track end the canopy became lower (and younger?). Here, plants of interest included the odd akeake and native broom (*Carmichaelia australis*). At the track end we decided to bush bash to the foot of the nearby bluffs and were rewarded by quite a few new species including pohutukawa and hybrids with rata, ngaio, kamahi, *Sophora tetraptera*, and a few orchids. But patches of bracken and large rocks soon deterred further progress so we returned to explore the lake shore (through dense blackberry and willow). Here the lake margin was mainly *Apodasmia similis* with some *Schoenoplectus tabernaemontani* or *Baumea arthropphylla* in the deeper water.

FUTURE EVENTS

4-6 February Matawai Reserves
March Burma Road and Piripae Spit, Ohope

President: Paul Cashmore (07) 348 4421 pcashmore@doc.govt.nz
Secretary: Sarah Crump (07) 3497 412 scrump@doc.govt.nz

■ Wellington Botanical Society

Taonga returned

At the August AGM Prof Phil Garnock-Jones gave a black-and-white framed photograph of *Euphrasia cuneata* to the Society. The picture was taken by Tony Druce and had originally been given to Lucy Moore by BotSoc when she left for Lincoln. Lucy passed the photo to Phil when she retired from Botany Division. The committee is delighted to have the picture and has agreed that it will be held by each President for the term of their office.

May field trip: "Solomon Knob" spur, Wainuiomata Catchment

Twelve set off in sunlight and on a good foot-pad, to climb gently through mānuka, kānuka and unfortunately too much tree heath, Spanish heath and pig-rooting. A *Cordyline banksii*, *Gahnia pauciflora* and *G. setifolia* were found trackside and, in a clearing, a dead orchid stem with just enough capsule material was able to be identified as *Orthoceras novae-zeelandiae*, horned orchid. Similarly, a wispy, dying stem and capsule was thought to be *Petalochilus chlorostylus*, taking our orchid list to seven. We moved through regenerating broadleaved forest, then continued up into tall, mixed podocarp/beechn forest where someone spotted epiphytic *Pittosporum cornifolium*, an addition. Later, higher-altitude herbaceous species such as *Luzuriaga parviflora* and *Libertia micrantha* greeted us among a wealth of fern species, and it was here we heard NZ falcon. Those of our group with high-register hearing capability were even able to identify a "riflerperson", taking our indigenous bird count to twelve species. Returning, we saw one plant of *Hymenophyllum franklinii* to make ten additions to our plant list.

Te Marua Bush: a joint Wellington BotSoc – Upper Hutt Branch of Forest and Bird Society project

Nine went on the May workbee that involved filling in gaps and weeding the southern section as well as weeding along the Te Marua Lakes Road section. Some time was spent demolishing and removing a campsite complete with tarpaulin, sofa, chairs, a coffee table, timber and bottles. Nail holes that secured the framing to six matai were sealed with Vaseline. Fifteen years ago a similar incursion resulted in the deaths of four matai in this forest remnant, noted for its rare type not known elsewhere within the catchment.

At the October workbee there were eleven participants. They found the bush itself and the two extension areas in good order and latest plantings thriving. Since this workbee was planned for filling gaps in the plantings, rather than for weeding, we were lucky that the weather had been wet enough, for long enough, to make planting still practicable. In the new northern extension, rank grass has been deliberately left around the plants to deter rabbits and hares. Checking the canopy with binoculars showed that the previously-thinly-foliaged black maies appear not to have declined further. In the northwest corner, the *Ileostylus micranthus* mistletoe was in flower.

Most of the weeds are concentrated on the northeast edge, resulting from the realignment of SH2 a few years ago. In the bush itself, wisps of tradescantia appear from time to time and montbretia is becoming a problem again near the west side.

Broom still persists in the northern section and also appears in the narrow access strip beside the fences separating the bush from the pony paddock.

5 June 2010: Brew Covenant, Plimmerton

Despite strong winds, a group of sixteen led by Tim Park set off on the track to the bush and took in some great views of the Taupo Stream basin and glimpses of the Taupo swamp in the early winter light. We noted the recent refusal for resource consent to build on the edge of the bush where the unusual kaikōmako shrubland is a feature, and pōhuehue and bracken out-compete the rank pasture. The profusion of kohekohe flowers and the regeneration of matai and wharangi was evidence of the 14 years of possum control that GWRC have undertaken within the Karehana Bay Key Native Ecosystem. We added wharariki to Pat Enright's plant list, and spent time studying the *Libertia* population along the dry north facing ridge before continuing through to the northwestern boundary of the bush, where we found a clearing on the ridge for lunch. Karaka, karo and pōhutukawa, non-local natives, have established in the bush. We agreed that BotSoc should write to Porirua City Council to

encourage them to fence the bush and kānuka in the paddock north of the Brew's land, leased by council and grazed by a neighbour.

July field trip: Midwinter bryophytes – Otari-Wilton's Bush

Beginning at the Information Centre, Peter Beveridge and Rodney Lewington gave a half-hour introduction to the characteristics that distinguish mosses from liverworts, before spending the next hour with hand-lenses examining bryophytes among the rocks and gravel of the alpine garden, and discussing what differentiated one from another. Then we studied a variety of habitats: well-rotted logs in the 38° garden, sunny banks at the edge of the lawn near Wilton Memorial Gate, deep shade on the soil banks along Richard-d'Urville Path, tree trunks at Burns Bridge, rocky banks along J D Hooker Path, damp rocks at the water's edge of Mackenzie Burn. We lunched at the shelter at the Troup Lawn before a slow trip back to the Information Centre. Here we used microscopes to see some of the smaller details – cell structure, the lamellae of a *Pogonatum* leaf, oil bodies and vita in liverwort leaves. The leaders' hope was that at the end of the trip participants would know a liverwort from a moss, and remember the names of a few genera. How much was learned we will discover on future botany trips.

September field trip: Dune forest restoration, Queen Elizabeth Park

At 9.30 a.m., 5 hours after a 7.1 earthquake hit Canterbury, we met at MacKays Crossing on a calm, sunny morning. Our guide, Robin Fordham, aimed to show us how the Friends of Queen Elizabeth Park (QEP) were conserving, restoring and enlarging the 1.2 Ha remnant of dune-swamp podocarp forest within the 630 ha park, the most visited and accessible of all the regional parks. Ecologically, dune forest has national significance. Efforts to conserve this remnant forest began in 1990 to repair damage by early farming attempts, the occupation of US marines in WWII, and, more recently, by wind, horses and cattle. They were still unaware that the dominant kahikatea, the odd mataī, rātā and pukatea, and a few swamp maire and milk trees, were significant locally and regionally. In 2009 a grant of \$60000 from DOC's Community Conservation Fund allowed a start to a plan of enlarging the remnant to 12 ha. This included fencing and preparing detailed planting plans using eco-sourced plants, with the object of reconstructing at least 20ha of forest as part of a corridor between the Akatarawa Range and Kapiti Island.

Plants used for dry areas included kānuka, mānuka, māhoe, karamu, ngaio; for wet zones, tī kōuka, flax, kahikatea, toetoe, mānuka, sedges and rushes and, for enrichment plantings, tōtara, akiraho, tarata, wharangī, kohekohe, nīkau and kahikatea.

We traversed the recently planted wet areas and then moved into the original remnant. Cores of kahikatea had indicated an age of 92 years. This compares with a kahikatea and a tōtara on the adjacent Waharoa farm of 87 and 102 years respectively. Photos and land-use history support the view that the remnant arose after land was cleared for farming, from a seed bank and/or immigrant seeds. *Macrocarpa* on the northwest edge of the remnant are 72 years old, and may have been planted for shelter or fuel. Current threats other than weeds and mammal pests—both being tackled—include: a proposed four-lane expressway that would wipe 60ha off the park, drainage by the farm lessee and reduction in support from GWRC. There are also plans for soccer fields and lobbying for a printing-press museum in a large 'heritage precinct'. A huge whale sculpture is mooted to be among the dunes and a new 'Raumati' rail station is proposed, all of which would require extensive car parks, shops, buildings and services. Besides these specific threats, developers in Kapiti remove c. 60 ha/yr.

Along the way we discussed the interesting suite of weeds, including *Lythrum hyssopifolia* submerged in the lake now accommodating Canadian geese. We concluded with a visit to the on-site nursery before driving to Whareroa Beach for lunch among marram grass, *Ammophila arenaria*, and a range of other weeds including ice plant, *Carpobrotus edulis*. Some of us then walked along the bank of the estuary of Whareroa Stream. We found some planted *Carex testacea* propagated from a single local plant recorded by Barbara Mitcalfe on a botanical survey in 2000. A small area of *Carex pumila* was surviving away from the ubiquitous tall fescue, *Schedonorus phoenix*, that dominated the area. Tucked against the banks of the stream within the tidal area was a small clump of *Schoenoplectus tabernaemontani*, with its side-mounted inflorescences.

November field trip. Wainuiomata wetland

Led by Chris Hopkins, ten of us set off in a cold southerly along the true right margin of the wetland under tall kānuka and manuka. On the adjoining hillside was beech forest featuring two hard beech cohorts interspersed with a number of older black beech. We saw narrow-leaved māhoe/*Meliclytus lanceolatus*, *Pterostylis graminea* agg., *Simpliglottis cornuta*, *Drosera peltata* subsp. *auriculata*, *Schoenus maschalinus* and *Gahnia xanthocarpa*. Later we noted strong regeneration of kahikatea, with large trees covered in leather-leaf fern, supplejack, clematis and lichens, but no sign of epiphytic orchids on them. Behind the kahikatea, in the main tributary, we saw small-leaved milk tree, swamp maire, *Syzygium maire* and *Hymenophyllum frankliniae* at an unusually low altitude for this fern.

Olearia virgata of great age is throughout this 4 Ha swamp, often smothered with *Clematis foetida*. It was also pleasing to find the "In Decline" native buttercup *Ranunculus macropus* here. Plants dominating the wetland cover include: *Baumea rubiginosa*, *B. tenax*, *Carex geminata*, *C. secta*, putaputawētā, *Coprosma tenuicaulis*, *Coprosma robusta*, swamp flax and raupō.

Though compromised by the sale of land close to its margins on either side and drainage channels dug across the top of Mohaka Street, this wetland and the whole catchment is worthy of protection in perpetuity by gazettal as a Scenic Reserve under the Reserves Act 1977.

Problem weed species in the catchment include flowering cherry, karaka, gorse (in wetland), Himalayan honeysuckle, tree heath and *Juncus effusus*. Possum control is by bait stations placed along cut lines, but we saw heavy deer browse on large-leaved *Coprosma* species, patē, etc.

Future trips

- | | |
|-----------------------|--|
| 4 - 5 Dec. | Otaki Forks area, Tararua Forest Park.
Leader: Chris Moore 479 3924, co-leader Chris Horne 475 7025. |
| 29 Dec. - 7 Jan. 2011 | Northern Fiordland: Joint trip with Botanical Society of Otago
Contact: Mick Parsons 04 972 1148 |
| 15 Jan. | Druce garden workbee, 123 Pinehaven Rd, Pinehaven, Upper Hutt.
Leader: Barbara Mitcalfe 475 7149. |
| 5 Feb. | Kaitoke Weir - "Warrens Saddle"
Leader, Owen Spearpoint 027 285 8083w or 04 562 8780h. |
| 21 Feb. | Evening meeting: Physical and social dimensions of ecological corridors
Barry Wards, President, Forest & Bird Protection Society. |

President: Chris Moore, 04 479 3924. Moore.c@xtra.co.nz

Secretary: Barbara Clark, 04 233 8202. Bj_clark@xtra.co.nz <http://wellingtonbotsoc.org.nz/>

■ **Nelson Botanical Society**

The May and June field trips were cancelled owing to bad weather.

May Meeting: Don Pittham's plant pictures

After showing images of very local *Clianthus puniceus* and *Carmichaelia williamsii*, Don proceeded to deftly explain and illustrate orchid structure. He went on to show the results of his travels all over New Zealand chasing the flowering times of various plants. For example, a trip to Arthur's Pass in November yielded shots of *Ranunculus haastii* and *R. monroi*, and the Canaan Downs camp yielded images of *Myosotis venosa* and *Herpolirion novae-zelandiae*. The talk concluded with some beautiful botanical studies accompanied by music.

June Meeting: "Alpine Plants of the Otago South-West Mountains". David Lyttle

David Lyttle of the Botanical Society of Otago presented his photographs taken in the Hector, Garvie, Eyre and Remarkable Ranges. We saw a wide range of *Celmisia* species, including great drifts of *C. semicordata* var. *aurigans*, large bushes of *C. ramulosa*, and a hard-to-access *C. philocremna*. Of *Ranunculus* species, David showed images of *R. buechananii* and the scree-loving *R. scribthalis*. The many species of *Aciphylla* ranged from the small *A. pinnatifida* to the giant *A. scott-thomsonii* and the Eyre Mountain endemic *A. spedenii*. Other highlights were red-flowered *Raoulia buechananii*, shrubs of *Brachyglottis revoluta*, and the delightfully named *Hebejeebie trifida*.

July Field Trip: Two nurseries, 1 covenant and a DOC reserve

Titoki Nursery (Brightwater), run by Tim Le Gros, is a wholesale nursery. Martin Conway talked to us about its history and their particular interest in locally rare plants (e.g. *Pseudopanax ferox*, *Nestegis montana*, *N. lanceolata*, *Pittosporum patulum*, *Sophora molloyi*, *Raukaua edgerleyi* and *Brachyglottis sciadophila*). There are large areas of plants in pots and root trainers. Lifestyle block and revegetation requirements make up the bulk of the sales, the latter being supplied with plants eco-sourced from the Waimea Plains, Richmond Ranges, Kahurangi National Park, Golden Bay and the Marlborough Sounds. The next part of the day was spent at Martin's QEII covenant near the Wai-iti River. This 1/2-ha area supports tall trees and a thick layer of regenerating understorey species and forms part of a bird corridor between nearby landowners' bush patches and Snowden's Bush. Some of the trees included *Beilschmiedia tawa*, *Lophomyrtus obcordata*, *Nestegis montana*, *Plagianthus regius*, *Hoheria angustifolia*, *Podocarpus totara*, *Prumnopitys ferruginea* and *P. taxifolia*. Snowden's Bush itself has been subject to revegetation, a giant barberry hedge having been replaced with plants from Titoki Nursery. Also at Snowden's Bush are large old totara trees festooned with *Ileostylus micranthus*. The last stop of the day was Mainly Natives (Appleby), a smaller nursery that is at present supplying thousands of eco-sourced plants for wetland areas in Mapua and Golden Bay. Some interesting plants were: *Scutellaria novae-zelandiae*, *Asplenium bulbiferum*, *Astelia* spp., *Carex comans* "frosted curls" and many hebes and coprosmas.

July Meeting: "A botanist's photo diary, July 2008–July 2010", Shannel Courtney

The talk began with a survey along the coast from Hori Bay to Delaware Bay. Substantial lowland forest just inland of the coast supports big old rimu with wonderful aerial gardens of epiphytes. A weed survey on Farewell Spit found no bad weeds but much gorse, which is interfering with swamp coprosma (*Coprosma tenuicaulis*). Next stop: the Fyfe River, the only location known for *Craspedia* "Fyfe", which covers about 2 ha. Test spraying is being undertaken as two invasive exotic fescues there can blot out the native plants. A general survey of the Lockett Range, west of the Cobb Valley, yielded images of *Celmisia bellidioides*, *Craspedia* "elongata", *Lobelia (Pratia) angulata*, *Parahebe cheesemanii*, *Leucogenes grandiceps*, and the find of the trip – *Poa buchananii*, which hadn't been recorded in North-West Nelson before. Lake Henderson is home to a monitored population of *Lobelia fugax*, and threatening weeds were sprayed there. A trip to Mt Newton revealed that, indeed, there was far too much tussock, and no carpet grass, for *Hebe societatis* to grow or transplant there. Then at Westhaven Inlet, there were *Dracophyllum urvilleanum* and the tiny orchid *Drymoanthus adversus*. Paynes Ford was visited to check the extent to which rock climbing activities have stripped away the plants from the rocks (a compromise must be reached to protect at least part of the area). At Otuwhero Swamp, which there are plans to revegetate, *Astelia grandis* was good to see. A survey of Glasgow Island (Cook Strait) revealed that the weed team has a big job ahead with boxthorn and boneseed control. However, it was encouraging to see *Melicope ternata*, *Streblus banksii*, Cook Strait *Melicytus* and lots of geckos. Next was a *Pittosporum obcordatum* survey (Owen River) of a newly discovered stand of tall trees that appear to seed but from which no young trees develop. The site is also home to needle-leaved totara (*Podocarpus acutifolius*) and the interesting almost leafless *Melicytus flexuosus*. Lastly, Shannel showed images of two critically threatened plants, *Pseudognaphalium ephemereum* and *Crassula multicaulis*, from the high country in the upper Awatere Valley, and of rafting down the Clarence River with Craig Potton and a TV crew.

August Field Trip: Jimmy Lee Creek and Will's Gully, Richmond

Will and Shirley Rickerby lead a tour of some of the native bush in the hills behind Richmond. First stop: Jimmy Lee Creek and the new bird hide of Native Bird Recovery Richmond. Silver eyes, tui and bellbirds visit this bush-surrounded asset so close to a built-up area. Next stop: Will's Gully, an area of regenerating bush being cleared of weeds, replanted with natives and trapped for pests. In the last 10 years, over 3000 plants have been planted. From there, we walked (and walked) past a glow worm grotto, across a stream, past a fossil-peppered bank (*Monotis richmondiana*, extant 200 million years ago) to an area of replanted hillside once thickly covered with hawthorn and barberry. One standing hawthorn supports a large clump of green mistletoe (*Ileostylus micranthus*) and beyond the replanted area is a bush gully with quite large matai and titoki, beneath which were kawakawa, many pigeonwood (*Hedycarya arborea*) seedlings and a good diversity of ferns. Near the marked site of Archie's Dam was one of 18 owl nesting boxes. One of the nesting boxes has attracted a morepork and these birds have been seen roosting in nearby trees. Exploration of a new loop track, which took us past several self-sown seedlings of tree fuchsia (*Fuchsia excorticata*), was our last activity before heading home.

August Meeting: “Spring flowers in Europe”, Lawrie and Lena Metcalf

The tour company NatureTrek leads small group tours in Europe, each with a special natural history interest. The first of the two tours that the Metcalfs took focused on the foothills and slopes of the Pyrenees. Brooms and several other low-growing members of the pea family, vetches, wild garlic (in flower) and *Helianthemum* species were seen, as were fruiting junipers. As a special treat, the group was taken to a private vulture feeding station, one of several set up to attract these rare birds back to the area. Four different species were present, among the more than 100 birds. The second NatureTrek tour was based in the Vercors region of France, south-east of Lyons. This was limestone country, and it featured endless meadows of wild flowers – dandelions, *Narcissus poeticus*, *Ranunculus pyrenaicus* and *Crocus biflorus*, salvias and red clover, to name a few. Over 40 species of butterflies and moths enjoyed the wide variety of flowers. Prostrate thyme was also in flower and the varied plants perched among the limestone rocks. Interestingly, although yellow seemed the predominant flower colour in the Pyrenees, blue flowers seemed to dominate here – like the brilliant blue of *Gentiana clusii*. Down in the valleys, lavender farms were evident. Finally, the tour ‘found’ the orchids, including the pyramid orchid (*Anacamptis pyramidalis*), the bee orchid, the military orchid, species of lady orchid and the lizard orchid. The *pièce de résistance* was the lady slipper orchid (*Cypripedium calceolus*).

September Field Trip: Sunday Creek Coggins QEII covenant

Joy Coggins and Steven Johnston welcomed us to their 8-acre podocarp forest, which is protected under a QEII covenant. We quickly saw that the years of weeding were paying off, as we wandered the two tracks they have established. Various tree ferns were tucked among matai, miro, rimu and kahikatea, as were *Fuchsia excorticata*, *Hedycarya arborea*, *Olearia rani*, *Pseudopanax crassifolius*, *Pseudowintera axillaris*, *P. colorata* and *Schefflera digitata*. As is often the case, there was considerable discussion over the understorey’s more ‘wirey’ components: *Coprosma rhamnoides*, *C. rotundifolia*, *Lophomyrtus obcordata*, *Neomyrtus pedunculata* and *Raukaua anomalus*. At knee level and below was a huge variety of ferns – *Asplenium hookerianum*, *Blechnum chambersii*, *Hypolepis ambigua*, *Lastreopsis glabella*, *Leptopteris hymenophylloides*, *Leptolepia novae-zelandiae* and *Pteris tremula*, to name a few. Also present were occasional *Astelia fragrans* and *Urtica incisa*, and climbers such as *Muehlenbeckia australis*, *Parsonsia heterophylla*, *Ripogonum scandens* and *Rubus cissoides*.

September Meeting: “Coastal Restoration: Kokorua Sandspit and Otuwhero Wetlands”, Roger Gaskell

Kokorua Sandspit is at the mouth of the Whangamoia River, about 13 km from Nelson, near Delaware Bay (the river mouth is surrounded by private land). 90% of the dune vegetation there is marram, the rest is mainly gorse and bracken. None of the dune systems in eastern Tasman Bay are legally protected for their conservation values and application has been made for Kokorua to become a “scientific reserve”. DoC’s work (since 1996) has focused on preserving and extending a small remnant of pingao there. Material grown from collected seed has been planted and fenced from hares and rabbits but plantings have suffered from erosion by high tides and scouring by strong winds. Spinifex has been planted at the front of the dune to reshape the dune into a more natural and durable profile. A study of pingao DNA, sampling plants at Kokorua, Rarangi (Marlborough), Farewell Spit and Taranaki, will investigate whether Maori brought it to these areas. Sand coprosma (*Coprosma acerosa*) has been planted recently at Kokorua with seeds sourced from D’Urville Island (there are no woody plants at Kokorua) but a few weeks ago a naturally occurring plant of sand coprosma was found growing on sheltered back dunes at Kokorua together with *Meliccytus crassifolius* and *Coprosma propinqua*. Otuwhero Wetland is an extensively modified 26-hectare area of river delta near Marahau, long known as a haven for wildlife (including fernbirds) and is an important cultural site. The Otuwhero and Holyoake streams run through the wetland in artificial channels, there is logging in the country behind and a complex tenure of land on the flats, which includes grazing pasture. Between the two streams is a granite bush-covered ridge. In 2007, crack willow was removed from the edges of Holyoake Stream and much native planting was done on the streamsides. In 2009, a DoC study found a small population of *Astelia grandis*, kiekie (*Freycinetia banksii*) – rare in that area – and *Carex litorosa* (only scattered infrequently in this area). A restoration plan for Otuwhero Wetland has been drawn up.

October Field Trip: Maitai track to Dun Mountain

Starting in the bush, we quickly came upon *Clematis paniculata* and *Rubus cissoides* in flower. One of the day's highlights was a small bush of *Myrsine divaricata* smothered in *Korthalsella lindsayi*. Later, in the more open, stunted vegetation of the ultramafic area, we saw *Clematis forsteri* in bud, *Dracophyllum filifolium* and *Pimelea suteri* in flower and, higher up, *Chionochloa defracta* with its long delicate flower stems. *Gonocarpus incanus* was a low-growing tangled mat on the bank and we distinguished two species of *Huperzia* – *H. varia* and *H. australiana*. Higher still, a *Pittosporum anomalum* cowed into dwarf habit by climate and soil type was found. The robust mineral belt form of *Astelia graminea*'s narrow grey-brown leaves dotted the open ground and we saw just one *Celmisia gracilentia*. Eventually, the inclement weather halted our progress but on our return walk along the valley track, we spotted a butcher's fern (*Rumohra adiantiformis*) growing on a tree fern and an *Astelia grandis* near the Maitai Dam.

Labour Weekend Camp: 23–25 October 2010

Saturday 23 October - Endeavour Stream: The area behind Endeavour Resort had been the site of an antimony mine (1873–1908). The farmed flats, now dotted with a few tailing heaps, yielded a large pink-flowered tree, possibly Japanese walnut (*Juglans ailantifolia*). Also on the open flats were *Pterostylis graminea*, *P. banksii* and *Parsonsia heterophylla*, all in flower. Along a 4WD track, past two old mine tunnels, we saw flowers of a corybas orchid (*Nematoceras macranthum*), the above-mentioned *Pterostylis* species and one plant of *P. irsoniana*. There were many species of filmy ferns (e.g. *Hymenophyllum bivalve*, *H. demissum*, *H. dilatatum*, *H. flabellatum*, *H. multifidum* and *H. sanguinolentum*) and *Olearia rani* was in flower everywhere. Also abundantly flowering was *Leucopogon fasciculatus* (soft mingimingi). The larger trees included tawa (*Beilschmiedia tawa*), hinau (*Elaeocarpus dentatus*) in flower bud, toro (*Myrsine salicina*) and some large rimu (*Dacrydium cupressinum*). Tucked amongst other trees was a small tree of *Raukaua edgerleyi*, with a late-flowering *Metrosideros fulgens* beside it. Eventually, we reached Titirangi Bay road, where the highlight of the day was found – a roadside *Cordyline indivisa* bearing a beautiful but immature inflorescence.

Sunday 24 October - Queen Charlotte Track, from Endeavour Resort to Resolution Bay: Orchids were in abundance along the side of the track: *Pterostylis graminea*, *Diplodiodium alobulum*, *Acianthus sinclairii* (heart-leaved orchid) and *Cyrtostylis rotundifolius*. In addition to the 'filmies' seen the previous day, we found *Hymenophyllum minimum* and *H. revolutum*. Behind Furneaux Lodge was *Tmesipteris elongata*, which later was compared with *T. tannensis*. Part of the track ran in front of a group of baches where it was disturbing for us to see much egress from gardens into the bush of weedy exotic garden plants and native plants of the North Island. Further along the track were many natives in full flower, including *Geniostoma ligustrifolium* var. *ligustrifolium* (hangehange). Lunch was taken on a small beach, right next to *Libertia ixioides* and *Apium prostratum* in flower. On a dry ridge, we saw one specimen of hutu (*Ascarina lucida* var. *lucida*), which was in contrast to the many (similar looking) pukatea (*Laurelia novae-zelandiae*) found in damp gullies.

Monday 25 October - Endeavour Estuary and Furneaux Waterfall track: The first trip of the day was an exploration of the delta of nearby Endeavour Stream. The delta supported a good diversity of salt marsh species, dominated by the rush *Juncus kraussii* ssp. *australiensis* and oioi (*Apodasmia similis*), but also supporting a herbfield of fine-leaved sea celery (*Apium filiforme*), remuremu (*Selliera radicans*), sea primrose (*Samolus repens*), arrowgrass (*Triglochin striata*), shore lobelia (*Lobelia anceps*) and glasswort (*Sarcocornia quinqueflora*). The small area of delta forest, though mainly manuka, was also home to *Parsonsia heterophylla* and tree nettle (ongaonga/ *Urtica ferox*) – both in full flower. A healthy population of marsh ribbonwood (*Plagianthus divaricatus*) fringed the estuary. The second trip was to the valley floor forest behind Furneaux. Although partly logged earlier last century, it still holds many large trees. The trunks of overarching rimu, kahikatea, miro, pukatea, kohekohe, hinau and black beech were huge, giving a small insight as to what these coastal forests would once have been like. *Collosperrum hastatum*, *Astelia solandri*, *Asplenium polyodon*, and the hanging tassels of *Huperzia varia* were perched high, while thick climbing rata vines (*Metrosideros fulgens*, *M. perforata* and *M. diffusa*) and deeply striated roots of puka (*Griselinia lucida*) ran along many of the trunks. At the waterfall, the inconspicuous filmy fern, *Trichomanes endlicherianum*, was found. Lastly, our coastal walk between Furneaux and Endeavour head revealed a generous display of *Nematoceras macranthum* – some of the patches had over a thousand individuals and many of these were in deep maroon flower.

FUTURE EVENTS

Dec 17–19: December Camp: Boulder Stream. Leader: Cathy Jones (03) 546 9499
Jan 16: Walker Property, Rainey River. Leader: Sally Warren (03) 546 6637
Jan 28–31: Anniversary Wkd Camp: Cobb Reservoir. Leader: Shannel Courtney (03) 546 9922
Feb 20: Parachute Rock, Nelson Lakes National Park. Leader: Bee Grant (03) 539 6364
Mar 20: Lodestone, Mt Arthur National Park. Leader: Don Pittham (03) 545 1985

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

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Wakatipu Botanical Group

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NOTES AND REPORTS

- **Three new endemic scale insect species described from New Zealand's pygmy mistletoes**

Rosa Henderson (hendersonr@landcareresearch.co.nz), **Amir Sultan** and **Alastair Robertson** (a.w.robertson@massey.ac.nz)

Three new endemic scale insect species specific to New Zealand's pygmy mistletoes (genus *Korthalsella*), *Eriococcus korthalsellae* (Eriococcidae), *Leucaspis albotecta* and *L. trilobata* (Diaspididae) have recently been described in the following paper:

Henderson RC, Sultan A, Robertson AW. 2010. Scale insect fauna (Hemiptera: Sternorrhyncha: Coccoidea) of New Zealand's pygmy mistletoes (*Korthalsella*: Viscaceae) with description of three new species: *Leucaspis albotecta*, *L. trilobata* (Diaspididae) and *Eriococcus korthalsellae* (Eriococcidae). *Zootaxa* 2644: 1–24.



Leucaspis trilobata on *Korthalsella lindsayi* (image reproduced with permission from Zootaxa).

The felt scale, *Eriococcus korthalsellae*, was recorded on all three *Korthalsella* species, while armoured scales *Leucaspis albotecta* and *L. trilobata* were recorded on *K. salicornioides* and on *K. clavata*/*K. lindsayi* respectively. Given the patchy occurrence of pygmy mistletoes in fragmented habitats, these insects are also presumably quite rare and therefore these associations highlight the importance of conserving the declining populations of NZ's mistletoes in order to save the rare insect fauna entirely dependent on them. *Leucaspis trilobata* is currently known only from a few locations in the southern South Island. This paper also reports the first records of adventive (exotic) scale insects on *Korthalsella* species in New Zealand – *Ceroplastes sinensis*, Chinese wax scale, *Coccus hesperidum*, soft brown scale, *Saissetia coffeae*, hemispherical scale, *S. oleae*, black scale (Coccidae), and *Aspidiotus nerii*, oleander scale, *Hemiberlesia lataniae*, latania scale, *H. rapax*, greedy scale (Diaspididae), while three native scale insects are also first records: *Kalasis perforata* (Coccidae), *Eriococcus pallidus* (Eriococcidae) and *Paracoccus glaucus* (Pseudococcidae).

BIOGRAPHY / BIBLIOGRAPHY

■ Further Eric Godley reminiscences

During one of my last visits I told Eric that we are starting work on a dynamic, continually updated, electronically-based Flora for New Zealand that will be based on new systematic research and will bring together information from our network of databases and online resources. I told him that in addition to information presented in traditional Floras, it will provide dynamically presented distribution maps, diagnostic images, images of types, interactive keys, links to phylogenies, revisions and other research papers, and access to specimen databases in all New Zealand herbaria via the NZ Virtual Herbarium. Eric was so excited that he said: "That is the best news I have heard for a very long time". His support gives us encouragement and will help us through the harder times of Flora planning and development.

Ilse Breitwieser

In April 1975 I joined Geoff Park in the newly-created Nelson substation of Botany Division, DSIR. Our patch was the top third of the South Island. Our brief from Eric was to strive for "the best deal for conservation", or that is how we chose to interpret his guiding instructions. This was in a time of great tension: the West Coast Beech Scheme threatened most of the remaining unlogged lowland forests on Crown land; wetlands were being drained and regenerating native vegetation was being cleared assisted by Government subsidies; dam proposals hung over many wild rivers; exotic forestry was threatening to invade the Marlborough Sounds and *Pinus contorta* was still being planted and aerially sown in the mountains. Eric encouraged us to champion the indigenous flora and fauna, to challenge the Government departments involved with hard ecological facts and to work creatively to establish a network of protected areas throughout the region. He trusted our judgement and backed us at senior level. Quite radical for a career public servant and a measure of his outstanding leadership.

In 1975-6 we were working with Ecology Division team-mates in the Ohikanui Valley, northern Paparoa Range, studying the ecology of that superb untouched valley system that was earmarked for logging. Our base camp was eight hours' walk in from the Buller, requiring many river crossings, clambering over windfalls and rocky sections, and trudging through waist-high crown fern. We had a budget for an initial helicopter drop of supplies and tents, but that was all. So each trip involved a long day's heavy packing each way, needing another day to recover and no chance of exploring the whole catchment. Rowley Taylor and Geoff put the case for chopper support but were greeted with scepticism. So they invited the two Directors (Eric and John Gibb) on the next trip. To their credit, both made the walk in without complaint, but there were a few comments about the TVP (textured vegetable protein, barely recognisable as food) we'd carried in to save weight. We were able to fly in and out after that and get to the head of the valley and onto the tops. Eric was a delightful field companion, doing his share of camp chores, entertaining us with stories and asking tricky ecological questions. I have an abiding vision of Eric and Geoff, deep in conversation, absent-mindedly walking into the river in a wrong spot to cross, realising their mistake and wading to a better place without a pause in the discussion.

Geoff Walls

Some random reminiscences of Eric Godley

Eric Godley was the Director of Botany Division, DSIR, when I was writing up "Vegetation of Mount Cook National Park" at the Lincoln Campus in the mid 1970s. I think this was the first time I met him. I was young and green, and a little in awe of this famous botanist and administrator. Years later when he was a good friend and not just "Director", he mentioned to me that he hoped I hadn't felt neglected by him that year; he had left it to Henry Connor to give me the guidance (much needed!) to bring the book to publication. I laughed and told him I hadn't felt neglected at all. Indeed he had facilitated everything for me – a workplace, an exacting supervisor, access to library, herbarium, microscopes and typists, and numerous discussions with stimulating colleagues. But I'm glad that in later years I got to know him well as a person, and discovered something of his unique nature – keenly enquiring, skeptical but never arrogant or judgemental, caring and generous, well-read and hugely knowledgeable.

After his retirement he occupied a flat on Salisbury Street in Christchurch, ten minutes walk away from my own flat on the same street. The proximity was a good enough excuse to visit him from time to time. The conversations were mostly botanical at first, but increasingly wide-ranging. When he bought a house in Pigeon Bay I was also establishing myself as a Banks Peninsula resident. He loved it here, and I loved visiting him whenever I passed that way. It seemed to me to be the perfect retirement for Eric – a beautiful rural environment, continuing botanical scholarship in a garage converted to a study behind the house, interspersed with rambles in the surrounding countryside, and lots of contact with botanical and non-botanical friends.

Once I told him about a huge fuchsia we had just discovered in a shaggy part of Hinewai called "Wildbush". I am looking at a photo of him and me as I write this, admiring the tree's massive curving trunk after a challenging scramble from the nearest track at Hinewai Lookout. He was venturing an estimate of the tree's age. The photo is dated 23 April 1990, 20 years ago. Eric was 71. I was 45.

In recent years I have much to thank him for. He read through drafts of the book I am currently writing ("Plantlife on Banks Peninsula"), and was firmly critical of some verbose passages. I regret he won't see the published version, much improved from his sharp suggestions. He was deeply interested in Hinewai Reserve, and a marvellously generous supporter. I miss him.

Hugh Wilson

Anthony Wright will talk about Eric Godley's role in the establishment of the New Zealand Botanical Society in a future issue of the *Newsletter*.

▪ **Lichenological memories of John Child (1922-1984) and notes on the publication of Martin & Child (1972)**

David Galloway, Landcare Research, Private Bag 1930, Dunedin 9054 gallowayd@xtra.co.nz

John Child returned to Otago University in 1967 as a Research Fellow in the Department of Economics, having lectured for 10 years before that at the University of New South Wales. In 1967 I was an Assistant Lecturer in Biochemistry, working on a PhD [enzymology of polyhydric alcohol metabolism in *Acetobacter suboxydans*] and squeezing lichens into whatever spare time was available. I first met John Child towards the end of that year at a meeting of the Otago branch of the Royal Society of New Zealand, where the late Kaj Westerskov was giving a talk on birds of the Subantarctic Islands. John, as always, nattily dressed in a corduroy jacket, asked some penetrating questions that quite impressed me, as he seemed to have a good command of ornithology and refreshingly also, was not at all averse to making the speaker rather uncomfortable by pointing out parts of the talk with which he was not in agreement. After the lecture, I was introduced to him by Alan Mark, who suggested that I might be a suitable field companion for John, who was at that time interested in the natural history of the Rock & Pillar Range.

So, on a sunny January day early in 1968 we had a long trip together up on the summit ridge of Rock and Pillar accessible from the Leaning Lodge track. John was a very lively companion on all sorts of different levels. To him, getting into the field and observing Nature was the real business of living. Lecturing and tutoring in Economics was decidedly secondary; only something to be fitted in when absolutely necessary as it paid the bills. John had begun a survey of invertebrates in the snowgrass

up on Rock and Pillar, and was keen to check a line of pitfall traps (old baked bean cans) that he had buried around number of schist outcrops up on the summit. He waxed lyrical about insects, arthropods, moths and butterflies and how useful and helpful it was to the man in the street to be apprised of this other "world of Nature" through simply and clearly written field guides. "This is what I did in Sydney" he said, "and I hope to get material for a book on the natural history of this mountain range too". He then told me about the success of his own imprint, Periwinkle Press, books that were sufficiently successful for him to purchase two Hasselblad camera bodies, one for black and white and one for colour. "You don't really have to be a good photographer either" he declared, "just take lots and lots of photos and at least one or two should turn out OK or even quite well".

When he asked me what I was working on I launched into an enthusiastic account of my attempts to purify an inducible NAD-linked mannitol dehydrogenase enzyme from *Acetobacter*. John was not very impressed, telling me "there's not much of a future in that is there?" It was to be another 5 years before I realized that he was absolutely right.

We slogged up the slope to his trap line and off he went, checking what had fallen into his tins leaving me to search for *Neuropogon antarcticum* that I had only recently found on the summit rocks of Mt Pisa. I sent material to Ivan Mackenzie Lamb, the Keeper of the Farlow Herbarium at Harvard and for the past year or so we had corresponded fairly regularly, partly about *Neuropogon* [as we then referred to it], which interested me as a mountaineer, because it occurred widely on the mountains of southern New Zealand. Mack Lamb as I was then told to call him, was preparing a comprehensive world monograph of the lichen genus *Stereocaulon*, and he asked me to send him a range of material from New Zealand. At this time too, I was corresponding regularly with the Tasmanian industrial chemist and lichen collector, Geoff Bratt, another mountaineer who had climbed in Patagonia with Eric Shipton and who (like me) had been introduced to lichens by Peter James of the British Museum. Geoff and I exchanged ideas on alpine lichens in Tasmania and southern New Zealand to see what areas of "common ground" that we had. Both of us were writing to Mack Lamb and collecting *Stereocaulon* for him, and as Lamb was also then recognised as the authority on *Neuropogon*, I sent him material for determination, and he it was who confirmed that I had found *N. antarcticum* on Mt Pisa, the first record of this polar lichen from New Zealand. On that January day with John Child I was very much involved with searching the tors for *N. antarcticum* [currently known as *Usnea antarctica*], in the great covering of more common species that so spectacularly clothe these schist monoliths.

John asked me what I was doing. When I told him, he became very attentive and offered to take photos of lichens for me. He then asked me whether I had thought of writing a book about New Zealand lichens. I demurred, saying I didn't really know enough about the subject, to which John breezily replied "I've never let ignorance put me off writing any of my books!" This refreshing attitude was typical of John who insisted that, as I knew a lot more about lichens than he did, I had something useful to teach him and others.

So began a lively series of meetings at his house, 19 City Road, preceded by an excellent meal cooked by his wife Shirley, who invariably looked on our rather messy photographic sessions with wry amusement. John experimented with sticking sprigs of alpine species of *Stereocaulon* (the genus I was most closely involved with at that time) into grey plasticine in an effort to get a lifelike effect with close ups. But the results were not really very satisfactory, and lichens photographed on a dining room table inside, always rather looked like "lichens photographed on a dining room table inside". But it was a start, and it made John keener than ever to begin photographing lichens seriously for a book that he was determined should be prepared for the general public.

Notes on Martin & Child (1970-1972)

After I left Dunedin for Palmerston North in 1969, John persuaded William Martin that they should do a popular book together on New Zealand lichens, John's enormous enthusiasm spurring Bill Martin to write a text that would complement John's colour and black & white plates. In March 1970 Bill Martin sent me a copy of his text asking for comments on it and also asked if I would be agreeable to be a referee for the proposed volume which they hoped to submit to either Whitcombe & Tombs or Reeds as possible publishers.

I sent Bill notes and comments on the book to which he replied on 16 April 1970 "...thank you for the return of the manuscript and for the most valuable notes accompanying it. I wished to have it with all

necessary amendments when I visited the publishers of Whitcombe & Tombs on my way south from Wellington. I was aware that Santesson was hoping to monograph the *Siphulas* and Lamb the *Stereocaulons* but was unaware that their preliminary results were available and I am most grateful. As I was over 70 before I took a serious interest in the lichens you will understand that there are vast gaps in my knowledge of the lichens. I have collected or seen most of the lichens named in the book, but age limits my alpine excursions. I have scaled very many mountains at a time when I was not so interested in the lichens as in the mosses and flowering plants and though I have a sizeable collection of the lichens – a good many thousands – I have no adequate knowledge of the alpine lichen flora. My use of such names as caustic potash for KOH and bleaching powder was because they were the names most likely to be known by the layman. Personally, I use chloramine T or VIM for the C reactions. I have agreed with almost all your suggested amendments and the book will be all the better for your help and suggestions. If and when the book reaches the bookshelves you will certainly receive a copy, so there will be no need to order one.

John Child has made a very good job of the photographs but it remains to see how many the publishers are prepared to accept for publication. We are keeping our fingers crossed. I have insufficient information to prepare a key to the *Psoromas* as I have not particulars of several of the species. When I spoke of over thirty species I have the names for 25 and Peter James has several new species two of which I sent him. You were kind enough to supply many other names but I was unaware whether they were projected names or published names. I could locate no reference to any of them, so felt I could not refer to them. I have not tackled a key to the *Usneas* and in any case I doubt if it would be of much use to the average reader....I can only repeat we are most grateful for your help which will be acknowledged...”

On 5 June 1970 I received a letter from Arnold Wall, Reed's Editor "...Mr William Martin, of Dunedin, is sending us a fairly substantial book on lichens, prepared by himself in collaboration with Dr J. Child, of the University of Otago,

It sounds as though the partners' qualifications are quite unimpeachable, but as Mr Martin has mentioned you as being the leading New Zealand authority on the subject we would be glad – as ignoramuses on this subject – if you'd be so kind as to let us know whether, in your opinion, Mr Martin is qualified to write such a book. Your reply will, of course, be treated by us as entirely confidential...”

I replied to Wall on 9 June, and Bill Martin wrote to me on 14 June "...Just a line to express appreciation of your action in writing Reeds re publication of the lichen book. I had a letter today from the editor indicating his interest and the hope publication can be undertaken. I had written him to say that a few days delay in forwarding the manuscript and sample illustrations was due to having the book typed in duplicate just in case of any mishap to the original. I asked for his reply within a month of receiving the manuscript which he undertook to do and also for the number of illustrations he was prepared to include (I suggested 100). When I know how many colour and how many black and white the editor will accept we can then make our selections from about 150 or 160 available and make the necessary insertions in the text of (Plate number and figure number). The next move is over to Reeds. In any case the best thanks of John Child and myself for your interest and encouragement. The editor (Arnold Wall) is contacting each of the universities to learn their reactions to such a book. He is hesitant re colour illustrations. My reply to that is "no colour, no book". The latest colour slides are superb and we rely on them to sell the book. Reed's local editor (Mrs E. Powell) [correctly Judith Powell, Reed's Otago editor – Judith was the wife of the well-known mountaineer and author, Paul Powell] is keen as mustard to have the book published especially after seeing the illustrations...”

Then on 26 June Bill Martin wrote "...Just a line to say Reids [sic] have decided to publish the book and have allowed for 160 illustrations including not less than 25 in colour. Again thank you for writing to Reeds and for your help. Mrs Powell was thrilled with the illustrations and wrote to Arnold Wall a very enthusiastic letter, so the book is on its way to publication. You promised to let me have a key to the *Siphulas*, so if convenient that would need to be formulated fairly soon. You will in due course receive a presentation copy, so there is no need to order one. I'm hoping to get over the 25 coloured illustrations but am grateful to have a minimum of 25. I wrote earlier and told Wall, "No colour – no book", because we rely on colour to sell a good many more copies than had they been excluded. This is just as hurried note to let you know the result of your and our efforts to secure publication and again to thank you for your assistance...”

I sent John Child a few of my slides of lichens including a number taken especially for me by Don Weston, the Medical School Photographer. To these John replied on 1 August, 1970 "... Thank you very much for sending some colour slides for possible inclusion in our book. We have selected the one of *Cladonia hypoxantha* [actually *C. murrayi* from Swampy Summit] for possible inclusion; the method we are trying out is that we have sent them about 50 slides, hoping they will increase their allocation of colour (at present it is only 8 pages, which will accommodate about 32 pictures) and we hope that rather than exclude some, they will increase the plate number to 12.

I will return the other slides in a packet in a day or two when I can sort out the piles on my desk. The coincidental finishing of the moss book and the lichen book has reduced the place to a bit of a shambles, but it is all due to be cleaned up tomorrow...with a bit of luck. Peter and I are having a great time chasing up the lichens of Central Otago, and are sorry that you are not here to guide our prentice footsteps. It is amazing to us what a variety of forms there are of apparently limited families such as the Umbilicariaceae, and we are continually finding what seem to be aberrant forms. On the whole we are not doing much on the crustose ones, but we collect some now and again.

I wonder if you have any idea what the enclosed slide is. It is about life size, of a patch of lich on sandy silt, under lupins on a wet coastal bank at Bruce rocks. There were several patches in the area, and the colour when damp is pretty truly recorded in the slide. It is so attractive that I should like to send it up for consideration, but Mr Martin apparently has no idea what it is. [I suggested it was *Placopsis parellina* f. *microphylla* now known as *P. microphylla*, a common colonist of soil and clay as well as rocks].

If there is anything we can try to get for you down here, please let us know; we are always glad of an excuse to have a collecting trip. How are you getting on with the North Island collecting? I imagine that the National Park area will be very interesting...".

On 23 May 1972 I wrote to Bill Martin "...Just a short note to see how you are, and to say that I am looking forward very much to the publication of the book which I imagine must be imminent. I have been telling a number of people about it; I expect that sales will be quite brisk. It is such a gap which so many appear, on the surface at any rate to be interested in. Over the past few months I have been looking at some lichen surfaces with the scanning electron microscope, a tool which opens up tremendous new vistas for the biologist. I am doing this work in collaboration with a colleague at the Physics and Engineering Lab of DSIR in Lower Hutt. I fancy it will be a most useful tool in taxonomic studies and I hope to look at a large number of species. I am enclosing with this note some prints of a couple of magnifications of *Cladia retipora*. I think you will agree that it makes light microscopy and macro-photography look pale in comparison. The exciting thing about SEM is that it enables you to look inside things which I find most illuminating. The upper and lower surfaces of various lichens are also most intriguing when seen under SEM; and by fracturing the thallus you can easily see the internal arrangements of the individual hyphae.

At the moment I am negotiating the change to Botany Division and am still hopeful of getting to London at the end of the year to work with Peter James on a volume of keys to the macrolichens of New Zealand. There is so much to do that I feel the sooner I get started the better. I'm glad that you were able to meet Fritz Mattick [Director of the Botanical Garden at Berlin-Dahlem], I found him a very charming person indeed...".

Within a few days more, Martin & Child was published (Martin & Child 1972) and I bought a copy from Bennett's Bookshop in Palmerston North. On 31 May, 1972 I wrote to both John Child and to William Martin about my reactions it.

To Bill I sent the following "...Thank you very much for your letter of May 27. I reply at once for I have just seen the Lichen book at the local booksellers. It is a splendid effort and should have a wide success; I certainly hope that it does. In fact to help sales along I bought a copy myself. Your offer to send me an autographed copy is very kind indeed and I shall accept such with very real pleasure. The copy that I have bought I can send overseas, in fact I shall probably buy several to do this, for it will make a very useful gift for a number of people.

I haven't been through the text thoroughly but when I do I shall give you my honest comments on it. At first sight with a good proportion of empty space on a few pages it seems a pity that perhaps a greater emphasis on the ecology of the group could not have been made. However, as you rightly point out, the layout was beyond your control and there was much that you could have added to it if you had known in advance what the end result of layout was to be. No matter, the result is pretty good, and the colour plates quite sumptuous. This business of rendering greens at all faithfully is a

very common problem, so far technology hasn't been able to present to us the colours as the eye really sees them. But it really doesn't detract very much and the overall quality of plates is vastly superior to those in Salmond's book. I felt I had to write straight away and say how pleased I am for you that it has turned out so well. It has been a great pleasure to have been associated with it even in a small way..."

And to John I wrote "...I've just seen a copy of the Lichen book and bought one to help sales along. The cover is splendid in every way and that. Along with the other colour plates, should make it a most attractive book to very many people. You deserve a considerable success with it. It is very satisfying to have a good proportion of the group now publicly accessible; I'm quite sure many people's botanical horizons will be widened as a result of your, and Bill's labours

I was especially pleased to see the shot of the Rock and Pillar tor, so generously coated with *Neuropogon*; these formations are wonderfully photogenic. The study you have made is very apt.

I myself intend to devote much more of my time to lichens and have made the decision to transfer to Botany Division at the end of the year to work full-time on the group. I hope to go overseas at the end of the year to work with Peter James initially and then spend a bit of time in all the major herbaria really getting to know well the NZ type material, as well as getting to know what is going on in the world of Lichenology. I have started a project with John Troughton of P.E.L. in Lower Hutt on lichen surfaces as seen with the aid of the Scanning Electron Microscope; a magnificent tool which opens up huge new worlds as far as morphology goes. The lichen collections continue to grow and I have quite a number of new things which need attention, however from next year hopefully I shall have the time to put into these. My interest in Biochemistry has been getting less and less over the years; the field is far too full of people and the whole business is now desperately competitive. What I really need is a more reflective field of study and I think lichens are it.

Musically life is very full and happy. I bought a magnificent old German 'cello a couple of years ago and it sounds simply marvelous. I have more musical commitments than I can handle up here, however I really wouldn't have it otherwise. The Alpine Journal also takes a bit of time but it is rewarding work. When I get back from Britain I should be based in the South Island (thank God), though there is much of interest up here too. Hopefully we'll be able to get out a bit together. Well John my congratulations again on your part in a very worthwhile effort. May your interest continue to flourish..."

To this, John replied "...Thank you very much for your letter and the kind remarks about the lichen book. We hope it will serve its purpose in breaking the ice for a number of people and enabling them to take more interest in this very interesting and beautiful group of plants. We were agreeably surprised by the quality of the final product – as a book – as there were one or two incidents on the way along which made us very suspicious of Reeds' standards; however they came good in the end, and treated us rather generously with the colour plates.

For the past year I have been more or less immersed in the liverworts, and Mr Allison and I are trying to work out an introductory book on this group, similar to our moss book. It is rather more difficult, though in some ways the liverworts are an easier group – they show more variation in leaf structure, for example, but we have made rather slow progress, mainly because I have had so many interruptions. I am teaching a new course – economic history – this year and lecture preparation is taking up more time than I had anticipated. Then I have given a few talks and papers on subjects I didn't know much about – recklessly; and that involved more reading. However, I am pretty well clear of all that now, and hoping to get back to my Rock and Pillar study, and the liverworts... I envy you your prospect of going overseas and then taking up lichens in full swing – sounds most exciting, and I hope we will be able to join forces down here in some field work. No field work in biochemistry...

Thanks again for your letter, and also for introducing me to the mysterious world of lichens."

Once I arrived at the British Museum (Natural History) in January 1973 and lichen work started in earnest, my correspondence with John Child lapsed, though every so often, when I was in need of a wide range of comparative material (such as in the *Parmeliaceae*, *Ramalina* and *Usnea*) I would ask John for his collections, which he was only too pleased to send across.

In response to one such request he wrote on 15 May 1976 ... Thank you for your letter of 30 March; I quite appreciate that you would have a busy schedule during your short stay in Dunedin. We were delighted to hear that you intend returning next year, and look forward to continued illumination on the subject of lichens... My own investigations in that field have been halted rather, partly by the death of

Bill Martin, as I now have nobody to consult with, and partly because I seem to have become exhausted after rushing through the production of the book on liverworts – I was rather afraid that Mr Allison, my co-author, might not live to see it in print, but he is still quite well, though now in Fulton home for the aged at Caversham. I try to pop out and see him once a week, but I'm afraid that sometimes other obligations intervene. I was pleased to hear that you were going to use some of my material in the obituary of Bill Martin – of course both he and I realized, at the time, that that was what it was for, though we didn't say so explicitly...

If you have sorted out any keys to any groups of the N.Z. lichens that you would like tested, or that you think would be helpful to Peter and me, we should be very grateful for them; Peter is still collecting, though perhaps not as energetically as a few years ago.

I hope your work is going well and that you are enjoying your spell in London; I have applied for study leave in 1977, and have just heard that it has been provisionally approved; I now have to work out a more detailed itinerary. I will send my *Ramalina* and *Usnea* collections by separate parcel...".

Eventually, John's interest in lichens waned completely and he began dividing and sending parts of his collections to various herbaria, mainly to CHR, though with a number remaining at OTA as well. He enquired whether the BM would be interested in purchasing a set, so I asked him to write to the Keeper of Botany, John Cannon, which he subsequently did. John Cannon asked me whether the collection offered would be useful, and since the BM collections held only Peter James's 1962-63 collections from Otago, I said that John Child's collections from southern New Zealand would be a really good addition to the BM holdings. So John Cannon arranged payment from one of the Botany Department collection funds and in due course several hundred of John Child's lichen packets arrived and are now part of the BM's foreign lichen herbarium. From an idle comment to me on the Rock and Pillar Range back in 1968, John Child made an indelible mark on New Zealand lichenology and his enthusiasm and interest continues to live on in the pages of his book with Bill Martin, and in his cheerfully gathered collections. It is a significant legacy from his short but energetic 8 years of lichen collecting and photographing, and he is in the history books for both activities.

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■ Biographical Sketch – Frederick Hunt (1817-1891)

Val Smith, 80 Mill Road, New Plymouth 4310.

Frederick Hunt, a Lincolnshire agricultural worker, his wife Mary (née Preswood) of Hereford and their young son, along with Frederick's parents, his three brothers and four sisters, left England on the *Martha Ridgeway*, and after 130 days at sea arrived at Port Nicholson (Wellington) in mid-November 1840. Shelter was hastily built, and a few days later Mary gave birth to their second son. With the family settled, Frederick took work with surveyors cutting lines from Porirua towards the Manawatu River. He declined Te Rauparaha's invitation to stay and teach his tribe musket skills, and after several months' absence he returned to Wellington and his family.

A Maori chief had told him about the Chatham Islands, and in 1841 he checked them out for himself. Prospects looked good, and he returned to collect Mary and the children, together with stores, clothing, seeds and fruit trees. He built a hut and started a large garden at Owenga, but these were largely destroyed during skirmishes between the local Maori. After a fresh start and another setback 25 miles to the north, in early 1843 he re-established his family on a large tract of land on Pitt Island, bought from the Owenga chief Apitea for the price of a red jacket.

Through hard work, initiative and shrewd business sense, Frederick Hunt turned virgin bush into a prosperous farm named "Flowerpot" after an unusually shaped rock on the beach. A temporary hut served his family until he was able to build their new three-bedroom house. Later additions were made using timber and fittings salvaged from the whaler *Franklin* that was wrecked nearby in 1859. From the 1850s Hunt was providing fresh vegetables, fruit and meat to the whalers who called, bartering them for other comforts of life. However, he also attracted the attention of customs officers, and was angry at being ordered to pay duty – he was king of Pitt Island, and would pay taxes to no one!

Frederick Hunt could not read or write, but wanting his six children to be educated, he built a cottage and engaged one of the German missionaries on Chatham to come to instruct them. When he left after two years another teacher was found – John Amery, “an educated gentleman and lover of Shakespeare”, to whom Hunt dictated his memoirs. In the 1860s, to help him raise sheep on his steadily developing pastures, Hunt encouraged two young men (James Langdale and Matthew Gregory) to settle on Pitt Island. Both married Hunt daughters! Tragedy struck in 1866 when two of the Hunt children, Alexander (24) and Naomi (18), left for Wellington on the *Sea Serpent*, which apparently foundered and was lost.

Hunt’s common sense and rough humour made him an entertaining host to his many visitors, among them plant collector Henry Travers, who he periodically joined on Chatham excursions. However, to others he was a wily and sometimes unscrupulous rascal. Frederick Hunt died in 1891, aged 73, predeceased in 1884 by his wife Mary. Both are buried in the Hunt graveyard on Pitt Island. The Frederick and Mary Hunt Memorial Reserve in the centre of the island protects a considerable number of the endemic rautini (*Brachyglottis huntii*), which was named after Frederick Hunt and described in Mueller’s *Vegetation of the Chatham Islands* (1864).



Brachyglottis huntii

Asteraceae

Brachyglottis: from the Greek, *brachys*: short; *glotta*: tongue, describes the short ray florets.
huntii: after Frederick Hunt of Pitt Island.

Rautini (*Brachyglottis huntii*) is a forest tree sometimes reaching 10 metres in height. The leaves are oblong, bright to bluish green on top, grey-green below, with somewhat rolled margins, and occur in clusters near the branch tips. When in flower during the summer, rautini is a striking sight with its bright yellow pyramids of daisy heads, giving it the popular name of Chatham Island Christmas tree. It was formerly much more widespread on the Chatham Islands, but habitat destruction and animal browsing have led to its decline. Nationally endangered, *Brachyglottis huntii* was voted Plant of the Year in the New Zealand Plant Conservation Network’s 2006 poll.

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PUBLICATIONS

■ Book Review - An Illustrated Guide to Common Weeds of New Zealand

By Ian Popay, Paul Champion and Trevor James

Third Edition, published by the New Zealand Plant Protection Society, Christchurch, 2010

Paperback, 448 pages, 170 × 244 mm, ISBN 978-0-473-16285-6

Available from Touchwood Books and Manaaki Whenua Press \$NZ55.00

Reviewed by Murray Dawson

Editions of this guide are the standard popular reference for information on New Zealand's weeds. The authors have aimed to include all common weeds, comprising garden escapes, naturalised plants and some native species that can become weedy.

The first edition was published in 1998 followed by a second edition in 2004. The second edition recently went out of print so the availability of this extensively revised third edition is most welcome.

As rightly stated in the Foreword (p. ix), each new edition gets bigger and better. This third edition is 448 pages long compared to edition two which had 320 pages. More than 50 new weed species have been added raising the total to some 380 main entries with a further 230 related or similar species mentioned. Some 1800 new photographs were selected to replace many of those used in the previous editions. The layout of the book has also been refined thanks to the Australian design and editing team Fiona and Rob Richardson – who are also weed experts in their own right.

Two authors of the previous editions (Bruce Roy and Anis Rahman) are not authors of this third edition but it is good to see their earlier contributions acknowledged (p. x).

The Introduction (pp. xi–xvi) begins by telling us that (like earlier editions) this book is aimed at a wide audience. It fully succeeds in being a user-friendly and practical guide that should appeal to gardeners, farmers, and others who are interested in weeds. Manaaki Whenua Press (a New Zealand natural history and science bookstore) tells me that these editions are one of their biggest sellers.

As discussed in the Introduction, a weed is a plant growing where it is not wanted and one person's weed in another's treasure. This includes introduced species that may be useful pasture plants but weedy elsewhere. The examples are given of red and white clover (*Trifolium pratense* and *T. repens*), valuable pasture plants but included in this book because they can be nuisances in the garden or in horticultural crops. Native New Zealand species are listed when they are weed problems of pastoral land in some regions. For example, the native mānuka (*Leptospermum scoparium*) is valued for its honey, medicinal properties and firewood, but included here because it is also a scrubby weed of poorer pastures.

The Introduction also mentions the *Flora of New Zealand* series (Vol. III–V, and especially Vol. IV), technical references that provide the extensive botanical descriptions upon which some of the information in *Common Weeds of New Zealand* is based.

The authors concede that grasses, sedges and rushes are not covered in detail in the main body of the book, but they do provide a good overview of them within the introductory sections (pp. xiii–xvi).

Acknowledgements (p. xvii) thank those who contributed to this and earlier editions (including my help in checking the botanical names used). Photographers are thanked although Trevor James (one of the authors) has provided the great majority. He is a keen photographer and his outstanding plant images are both diagnostic (showing key characters) and stunning (yes, weeds can be beautiful).

The Guide to Flower Colour and Size (pp. xviii–xxvi) is a handy colour-coded reference that helps broadly identify a plant from information about flower colour and size, the kind of plant it is and the habitat it occupies. Page numbers to the plant descriptions are included within this section.

Next are a useful book list (including some classic out-of-print references on weeds), websites (pp. xxvii–xxviii), and a Glossary (pp. xxix–xxxii).

The main body of the book (pp. 1–400) contains the Plant Descriptions. Every second page has a full colour plate of photos and looks much tidier than previous editions where the photos were rather scattered. Also new to this edition is the addition of coloured plant names that indicate their status – red for naturalised species (the majority) and green for native (indigenous) species that can also be weeds. This usage at first seems inconsistent until you realise that naturalised species are not coloured *within* each entry – only the natives are.

Plants are arranged according to four groups: Plants with spores (ferns and fern-like plants), Plants with cones (conifers), Flowering plants (dicotyledons – the majority) and lastly Flowering plants (monocotyledons). Within each group, the plants are then arranged alphabetically by family, genus and species.

Plant names and families follow the most recent treatments. There have been numerous changes in botanical names since the second edition as a result of taxonomic (botanical) revisions and recent molecular-based (phylogenetic) studies. Some of the genus- and species-level changes include (with older names used for the second edition in brackets):

Acacia spp. (*Racosperma* spp.)
Allium neopolitanum (*Nothoscordum inodorum*)
Aponogeton distachyos (*Aponogeton distachyus*)
Araujia hortorum (*Araujia sericifera*)
Brugmansia ×candida (*Brugmansia candida*)
Carpobrotus chilensis (*Carpobrotus aequilaterus*)
Chamaesyce maculata (*Euphorbia maculata*)
Conyza sumatrensis (*Conyza albida*)
Delairea odorata (*Senecio mikanioides*)
Dipsacus fullonum (*Dipsacus sylvestris*)
Fallopia spp. (*Reynoutria* spp.)
Genista monspessulana (*Teline monspessulana*)
Hypochoeris spp. (*Hypochoeris* spp.)
Jacobaea vulgaris (*Senecio jacobaea*)
Lamium galeobdolon 'Variegatum' (*Galeobdolon luteum* subsp. *luteum* 'Variegatum')
Landoltia punctata (*Spirodela punctata*)
Lepidium didymum (*Coronopus didymus*)
Lepidium squamatum (*Coronopus squamatus*)
Malva assurgentiflora (*Lavatera assurgentiflora*)
Malva dendromorpha (*Lavatera arborea*)
Malva linnaei (*Lavatera cretica*)
Passiflora tripartita var. *azuayensis* and *Passiflora tarminiana* (*Passiflora mixta*)
Passiflora tripartita var. *mollissima* (*Passiflora mollissima*)
Persicaria decipiens (*Polygonum salicifolium*)
Persicaria maculosa (*Persicaria persicaria*, *Polygonum persicaria*)
Pilosella aurantiaca (*Hieracium aurantiacum*)
Pilosella officinarum (*Hieracium pilosella*)
Pilosella piloselloides subsp. *praealta* (*Hieracium praealtum*)
Potentilla indica (*Duchesnea indica*)
Potentilla vesca (*Fragaria vesca*)
Solanum nodiflorum (*Solanum americanum*)
Tetrapanax papyrifer (*Tetrapanax papyriferus*)
Watsonia meriana var. *bulbillifera* (*Watsonia bulbillifera*).

The new names used in *Common Weeds of New Zealand* are largely concordant with those followed in the Landcare Research Ngā Tipu o Aotearoa – New Zealand Plants database (<http://nzflora.landcareresearch.co.nz>) and the National Pest Plant Accord (NPPA) identification key

(www.landcareresearch.co.nz/research/biosystematics/plants/nppakey/)¹.

Each botanical name in *Common Weeds of New Zealand* is usually followed by one common name and sometimes also by a main synonym (an earlier name by which the plant was widely known). Like earlier editions of this book, each description is succinct. There is a paragraph on key features (in bold), a short description (usually covering Flowers, Fruit, Leaves, Stems, and Roots), then notes on Habitat, Distribution, Comments, Derivation of botanical name, and Related or similar species. These headings are self-explanatory and the format works well – there is a lot of interesting and useful information packed into a minimum of space. Comments include the usefulness or toxicity of a weed and this section has also been updated to include changes to legislation governing pest plants. A few native and exotic plants that are not weeds are included under Related or similar species when they may be mistaken for weeds that they resemble. Nearly all of the related or similar species are illustrated, which is another improvement over the second edition where few were pictured.

This book concludes with the Plant name index (pp. 401–416) that combines the common and scientific names – previous editions index them separately. Within this index, some green-coloured text makes an accidental appearance (p. 412) for *Reynoutria sachalinensis* (an introduced species).

Editions of this book provide well-proven and comprehensive resources on the weeds of New Zealand and I have no hesitation in recommending this latest edition.

■ Publications Received

The New Zealand Native Orchid Journal no. 118 November 2010 ISSN 1177-4401 40 pp. Orchid mapping, new orchid species found, *Pterostylis patens*, *Nematoceras acuminatum*, *Acianthus rivulatus* type locality, *Gastrodia* tea, spider orchids and fungus gnats, Aussie notes.

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¹ This online identification key is currently being expanded to include the DOC consolidated list of environmental weeds. This key is part-authored by two of the *Common Weeds of New Zealand* authors – Paul Champion and Trevor James.

■ **New Book**

New Zealand indigenous vascular plant checklist 2010

Peter J. de Lange & Jeremy Rolfe

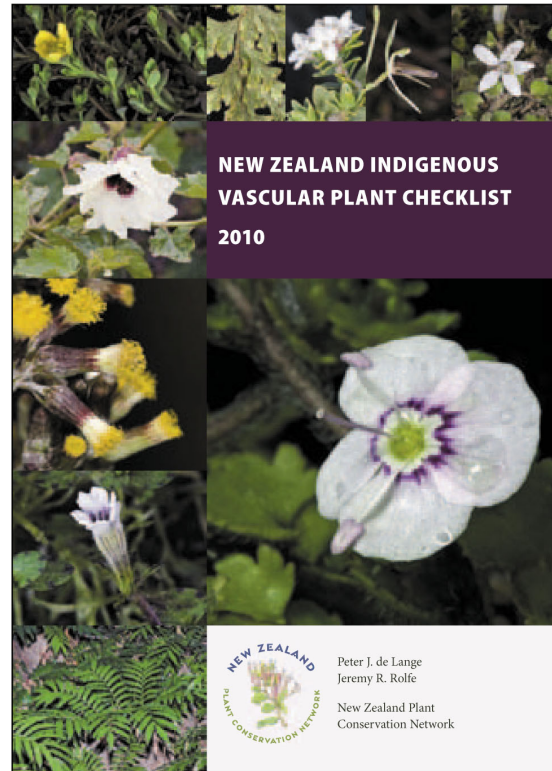
New Zealand Plant Conservation Network

A4, 131 pages, soft cover

ISBN: 978-0-473-17544-3



A new indigenous vascular plant checklist for the New Zealand Botanical Region is now available from the New Zealand Plant Conservation Network. The checklist builds considerably on that published by the Network in 2006, providing a comprehensive summary of the New Zealand indigenous vascular flora. As before, it documents the levels of endemism, chromosome counts, threat status, and provides a full listing of families, genera, species and lower ranks (a total of 2414 taxa), but it also includes significant improvements on the 2006 listing. A comprehensive introduction details the nature of the New Zealand flora and the New Zealand Botanical Region, discusses phylogenetic relationships in the flora and the arrangement of taxa listed, and provides summary statistics on several aspects of the flora. The checklist of the vascular flora is rearranged to accord with current understanding of plant phylogeny, as documented by the Angiosperm Phylogeny Group. To aid finding species in the re-arranged phylogenetic list, a cross-referenced alphabetical list is provided. Both versions of the list are also cross-referenced to a detailed and fully referenced concordance documenting and explaining names that have changed since the 2006 listing. The concordance also provides a detailed assessment of 192 species aggregates and information on newly recorded or accepted species, providing an up to date assessment on the progress being made by plant biosystematists to describe our flora. Additional sections provide comments on some other taxa whose names have not changed and also names which have been rejected.



The revised checklist is a 'must have' for any person with an interest in the New Zealand flora or its biogeography. Designed to be used as a quick off-the-shelf reference, the checklist has been prepared for the Network in cooperation with the Department of Conservation by Peter J. de Lange and Jeremy Rolfe, who have published a number of books dealing with the New Zealand indigenous flora, and who co-authored, with John Sawyer, the 2006 checklist.

The checklist is available from the Network shop on-line at: www.nzpcn.org.nz/shop_products.asp. The price for Network members is \$18 (including post and packaging); non-members (\$25).