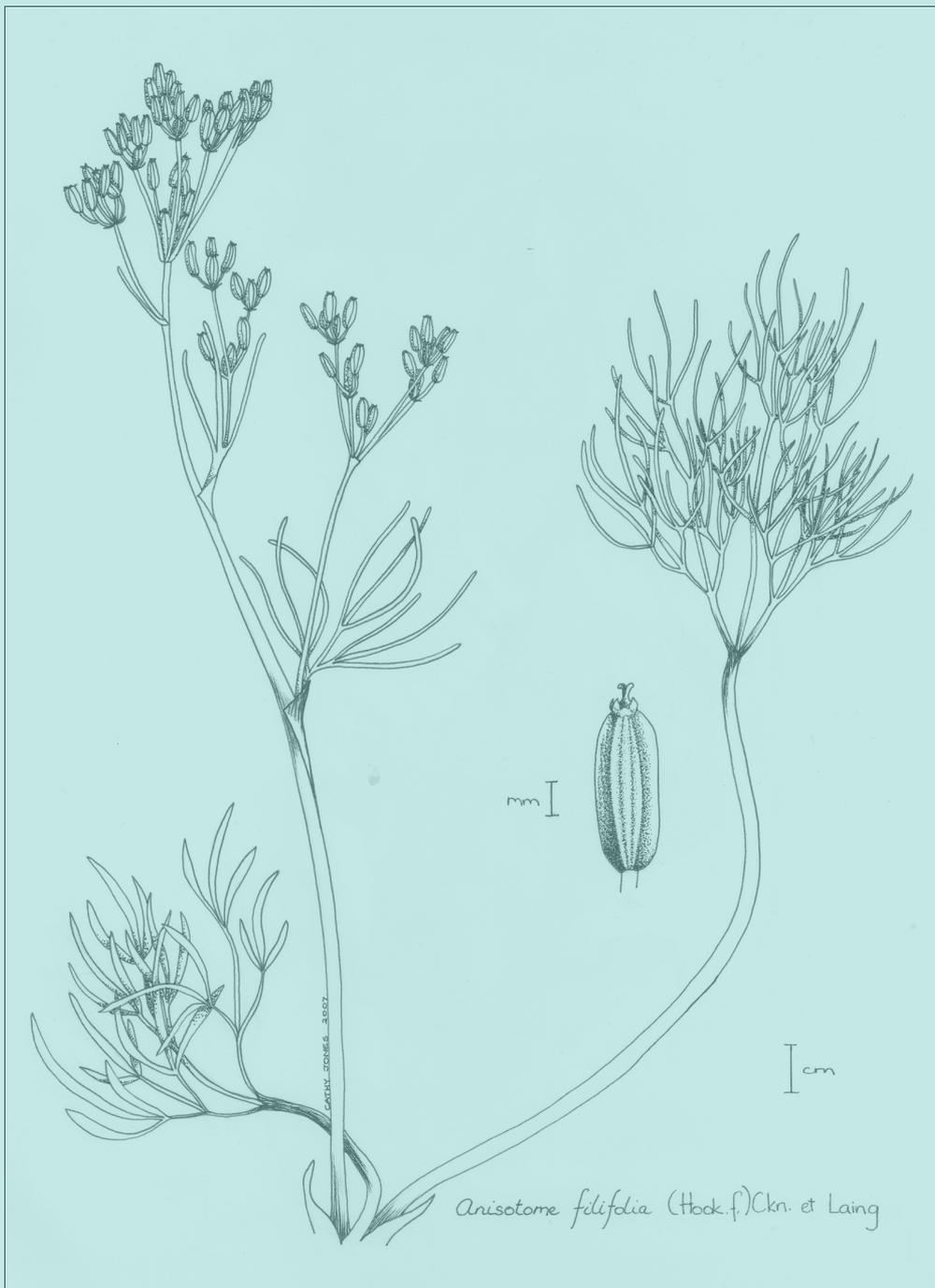


NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 88

JUNE 2007



New Zealand Botanical Society

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

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Subscriptions

The 2007 ordinary and institutional subscriptions are \$25 (reduced to \$18 if paid by the due date on the subscription invoice). The 2006 student subscription, available to full-time students, is \$9 (reduced to \$7 if paid by the due date on the subscription invoice).

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

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

Deadline for next issue

The deadline for the September 2007 issue is 25 August 2007

Please post contributions to:

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

Cover Illustration

Anisotome filifolia (Hook.f.) Ckn. et Laing in seed, collected by Cathy Jones from Bert's Creek, Molesworth Station, South Marlborough on 16 February 2007. Drawn by Cathy Jones.

NEW ZEALAND BOTANICAL SOCIETY
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NEWS

Regional Botanical Society News

■ Auckland Botanical Society

AGM & March Meeting

At the AGM Mike Wilcox was re-elected as President. Following this was a presentation on the January trip to the Chatham Islands, shared by Mike and Ewen Cameron. Ewen outlined some of the botanical highlights, and Mike pondered on the north/south mix of plants (including sea-weeds), and the similarities and differences between the Chathams' flora and that of the mainland.

March Field Trip

Ranger John Staniland led us around the 120 ha. Matuku Reserve, a private reserve in the Waitakere Valley owned by Forest & Bird. The forest, logged in the early 1920s, is regenerating well and is dominated by a broadleaf canopy, but with significant stands of kauri. About a fifth of the reserve is a wetland comprising open water and reedy marshland. Some interesting plants seen were *Pimelea longifolia*, *Phyllocladus toatoa*, *Parietaria debilis* and *Sigesbeckia orientalis*. This latter plant is not considered to be indigenous, yet has the Maori name punawaru.

April Meeting

Sandra Anderson, Field Ecologist, School of Biological Sciences/School of Geography & Environmental Science, University of Auckland, spoke on "Birds as pollinators & seed dispersers of the native flora". The low numbers of pollinating and seed dispersing birds left in our forests have led to shifts in vegetation composition. Intensive predator control will increase the numbers of mutualist bird species.

Easter Camp, Karikari Peninsula

Places visited included Rangiputa, Puheke, Matai Bay and Lakes Rotokawau, Waiporohita, and Ohia on the peninsula. Privately owned forest at Hihi contained hard beech trees (Hihi is the most northerly site for beech), *Pittosporum pimeleoides*, *Sticherus flabellatus* and *Tmesipteris sigmatifolia*. A trip to Kaimaumau revealed many plants of the orchid, *Cryptostylis subulata*, with flowers that are comparative giants in the NZ orchid flora. Lake Ngatu held the tiny *Hydatella inconspicua*, which recently made the scientific headlines when geneticists discovered that it is not a monocot, but is more closely related to the water lilies. On family land our local guide, Kevin Matthews, showed us the unusual habitat of a sphagnum bog under manuka/*Dracophyllum lessonianum* canopy.

April Field Trip

Waharau Regional Park allows for eastern access to the Hunua Ranges. The majority of the park is regenerating forest, although species diversity is high. The ridges support kauri and fine hard beech forest, tanekaha, rewarewa, hinau and some towai. *Metrosideros fulgens* was flowering nicely.

May Meeting

A Special General Meeting was held to bestow an honorary life membership upon Ross Beaver, a former president of the society, and current vice-president. Ross has carried on a family connection with ABS begun by his father, Jim Beaver, in the mid 1950s.

This was followed by a talk by Jessica Beaver entitled "Mosses of Harsh Environments: the Pottiaceae in New Zealand". In her usual entertaining style, Jessica demonstrated the tough conditions that these tiny plants can withstand, and outlined some of the detective work needed to sort out what species we actually have in New Zealand.

May Field Trip

For this trip Bec Stanley and Jonathon Boow, with other ARC staff, guided us over some unusual habitats at Whakatiwai Regional Park. First we visited the strip between the road and the shore, to be shown the mistletoe, *Ileostylus micranthus*, growing on shrubs of *Coprosma propinqua*, both of which had been translocated from nearby Miranda. A pleasant surprise was to find, in a damp hollow, the herb *Mimulus repens*, also known at Miranda. Over the road, on gravel ridges, grew a couple of copses of kowhai, *Sophora chathamica*. Also here, where blackberry and wild carrot were not too thick, grew good numbers of *Psilotum nudum*, and also much lichen on the stones. After lunch we

were taken by 4WD vehicles up the hill to the forest that backs onto the Hunua Range. Here we saw *Pomaderris hamiltonii*, *Schizaea bifida*, and hard beech, *Nothofagus truncata*.

FORTHCOMING ACTIVITIES

6 June Josh Salter: Matai and miro
16 June Trip to Mt Auckland/Atuanui
4 July Catherine Beard: Antarctic vegetation
21 July Trip to Cascades Kauri Park/Ark in the Park
2 August Ewen Cameron: Lucy Cranwell Lecture: Thomas Frederick Cheeseman FLS, FZS, FNZ (1845 – 1923)
18 August Trip to northern Manukau coast

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

President: **Mike Wilcox**

Secretary: **Leslie Haines** lhaines@unitec.ac.nz

■ Rotorua Botanical Society

Recent trips

A successful start to our trip programme for 2007 with five trips going ahead in five months with no cancellations due to weather. We have had trips to Ngatamahinerua in the Kaimais, Oruatawehi Ecological Area in northern Kaingaroa, and Oruareimokoroa Pa high on a ridge high above the Ngongotaha Stream.

Paul Cashmore made the following comments on one of the trips for the upcoming RBS newsletter ...

"However the ultimate trip this year (in my opinion anyway) in the 'places RBS has never been to' category would have to go to the February weekend trip to the Clements Mill Road area. On the Saturday we botanised an almost pristine wetland which no-one present had been through before. On the Sunday, those who stuck around were justly rewarded with a personal tour of the now very exclusive Poronui Station by the station manager herself. We saw some superb specimens of beech mistletoe, followed by the discovery of a new *Pittosporum turneri* population (a very significant and rare event for a RBS trip) and finished with a personal tour of the station's large winecellar (also another very significant and rare event for a RBS trip!!)".

Ngatamahinerua (Graeme Jane)

After two attempts to arrange a field trip to the summit of Ngatamahinerua the highest point on Te Hunga, seven of us set out from the western side to reach it from Thompson's Track. We managed to get halfway to track summit in the vehicles before the mud became treacherous and our courage failed.

The walk to the summit of the 4 WD track was nominated as a "no-botanising" zone but not far from the vehicles John Hobbs spotted *Rorippa divaricata* growing lushly on the road edge. The road mostly passed through pine forest with mangaeo, rewarewa, mahoe, *Pseudopanax laetus* and a variety of shrubs and ferns on road banks.

From the road, the track passed through tall almost pure tawa forest, with kamahi, mangaeo, pukatea, nikau, pigeonwood and an understorey including hangehange, toropapa, raurekau, kawakawa, rangiora, keikei and ferns including *Blechnum nigrum*. As we climbed higher, tawari and miro became more abundant. At one point, we stopped to admire *Pittosporum kirkii* hanging from *Collospermum hastatum*. From there onwards tawari and *Cyathea smithii* dominated, often with dense *Gahnia setifolia*. On the slip heads silver beech, toro, *Cordyline indivisa*, and *Dracophyllum traversii* became common. On the last ascent, a low scrub of kamahi, tawari, raurekau with the odd emergent mature silver beech, miro and large tawari predominated. The ridge soon flattened out and broadened. Here the tiny *Hymenophyllum armstrongii* was quite common amongst the masses of bryophytes on the branches with *H. lyallii* and occasional *H. pulcherrimum*. Finally we reached the elusive summit trig. As we admired the view it disappeared and drizzle began, so the retreat to vehicles began.

FORTHCOMING ACTIVITIES

Saturday 9 June Kohi Point Scenic Reserve, Ohope. Leader: Sarah Beadel
 Saturday 30 June Annual General Meeting: Time: 10:30 am at DOC BOP Conservancy Office, 99 Sala St, Rotorua
 Saturday 30 June Five Mile Gate Wetland, SH 5, south of Rotorua. Leader : John Hobbs Meet: 1:00 pm
 Saturday 14 July Okareka Mistletoe Restoration Project Weed Control/Site Prep Work Day: Leader: Paul Cashmore
 Sunday 5 August Matata-Otamarakau dunes/wetlands :Leader: Grant Milligan
 Saturday 8 September (Sunday 9 September optional) East Coast *Olearia pachyphylla* and environs. Leader: Jenny Lux .
 Saturday 15 September Okareka Mistletoe Restoration Project Host Planting / Weed Control Day. Leader: Paul Cashmore.
 Sunday 7 October Lake Rotoehu by boat: Leader : John Hobbs
 Saturday 3 November Lake Rotokawa and Otumuheke Stream (both near Taupo): Leader Chris Bycroft.

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▪ **Wellington Botanical Society**

January 2007. Stewart Island update: usually unseen forest as seen by a delighted Audrey Eagle.

Some of us were fortunate enough to experience a forest without the usual emergents, canopy trees and shrublands. The sky was not the limit for the 'tree tops'- it was the surface of the sea that restricted any emerging.

A comfortable way to explore this forest was in a boat with sloping windows that enable you to see sideways and below. With the engine silenced, we drifted through a soundless forest of bladder kelp fronds. They appeared to dance as they bowed to the currents whim. The beauty of the motion was enhanced by glowing, warm, apricot-shaded light shining through the semi-transparent kelp. The surrounding water was in shades of aquamarine, a colour no human hand could duplicate as a background scenery to a choreographic display.

Further down, the eye followed the swaying stems or 'trunks' of the kelp forest to where they were rooted in the gleaming white sand, ten or so metres below. There a shrubland of gently waving, brilliant green, sea-lettuce added yet another colour treat to the scene. We felt transported to another world of graceful movement, form, and magical colour. It was certainly a highlight for this plant enthusiast! Oh yes, there were fish, a few large ones in the depths, and small butterfly fish flitting among the tree tops.

3 & 4 February: Dunvegan and Bankview Stations

Wet weather on Saturday failed to dampen spirits as a group of 16 people visited Dunvegan Station north of Masterton to survey the forest remnants on the river flats and scarps above. The bush consists of a fenced area with some very large podocarps, an adjacent tree land that is grazed and another fenced site which adjoins the Trimble Foundation pine forest.

The trip started in a fenced area containing some very large podocarps and black maires. With a season or two without grazing the understorey is starting to come back with ferns and some sedges and grasses on show. Regeneration of the main tree species was also evident. Also found was *Korthalsella lindsayi* growing on *Melicope simplex*. The two larger species of mistletoe, *Ileostylus micranthus* (mainly on *Podocarpus totara*) and *Tupeia antarctica* (on *Pittosporum eugenioides*) were found on the treeland area. A slightly different assemblage of species greeted us in the second fenced bush with some big podocarps and extensive understorey. Five additions were made to the original list. Sunday saw much improved weather conditions for a visit to Bankview Station. The area of interest is locally called Longbush Gully and consists of a broad-bottomed valley, seasonally ranging from boggy to standing water in parts. The valley doglegs, giving a range of aspects to the valley sides with a consequent variance in vegetation. There is an area of permanent standing water surrounded by

raupo towards the head of the valley and another area that has standing water for a good part of the year drying out in summer. The area is grazed but had not had stock on it for some time prior to our visit.

Where we entered the valley the True Right is a shaded, damper bush area with *Hoheria angustifolia*, *Myrsine divaricata* and other species that like these sorts of conditions. On the ground here was quite a bit of *Mazus novaezeelandiae* subsp. *novaezeelandiae* in flower. The valley floor at this point is very wet for most of the year and supports a good population of *Coprosma pedicellata* growing under kahikatea. *Olearia virgata* is also common here.

Of interest also was a population of *Ranunculus macropus* growing on the drying mud. Several "islands" in this wet area were showing two or three *Pterostylis* species in seed so a return visit will have to be made to find out just what they were. We proceeded up the valley while making quite a few additions to our list and crossed over to botanise the True Left side on our return. This side was a bit damper and the vegetation again changes with black beech and an understorey of coprosma species, *Pittosporum divaricatum*, swamp lawyer, a few more *Coprosma pedicellata* bushes and small patches of mazus.

25 February 2007: Wainuiomata water catchment

Twenty-five BotSoccers joined a scheduled, public trip into Greater Wellington Regional Council's (GW) Wainuiomata catchment, part of the recently fenced Wainuiomata-Orongorongo "mainland island". Under the guidance of Ranger Mark McAlpine, we proceeded to George's Creek. There were no off-track sorties permitted, but the quality of this roadside, heritage forest is such that there is plenty of interest for all. Regionally significant, it is virgin southern North Island rata/podocarp forest. 30-m rata, pukatea and rimu are densely clad in luxuriant epiphytes—orchids, lianes, ferns and even an occasional *Pittosporum cornifolium* and *Brachyglottis kirkii*.

We were led to the tunnel which pipes water from the Orongorongo catchment to the treatment plant, and showed the tiny train used for infrastructure maintenance. We passed through former farmland now reverting under kanuka, an educative contrast to what we had seen in George's Creek and noted with concern that *Erica lusitanica* / Spanish heath has colonised many of the steep road cuttings, but before long we were once again in tall forest.

Lunchtime was punctuated with many questions and comments in the company of a *Raukaua edgerleyi* epiphytic on a tree fern, beneath magnificent rata and kahikatea before making our way back through the remainder of this beautiful, pristine, old forest which protects our water supply.

19 March: Evening meeting. Speaker Sean Weaver outlined the role of plant communities in global climate change with particular emphasis on the significance of topical forest removal.

31 March 2007: Druce covenant workbee

The virtually weed-free condition of the Druce Covenant is living testimony to six decades of Tony's and Helen's dedicated, hard work. In recent times tradescantia has become established in the former orchard, and veldt grass has invaded a few places near the house. There is also a small area of gorse ranging from seedlings to 2 m tall, needing regular attention. BotSoccer and Wellington Queen Elizabeth II rep, Robyn Smith, has since sprayed the tradescantia and workbee members weeded veldt grass and gorse. At Helen's request, two of us created a canopy gap around a grove of elegant *Dracophyllum latifolium* collected in Waima Forest, on the BotSoc Jubilee trip to the Far North in the summer of 1988/89. Near the dracophyllums is a tall, slender, sapling *Halocarpus kirkii* collected by Tony about 30 years ago from Kauaeranga Valley, Coromandel, which is at last reaching the canopy. Up the hill, under planted beeches, a dose of Helen's granulated fertiliser was delivered to the *Metrosideros bartlettii*, still a sapling c. 25 years after being planted while others of the 9 person group cleared the tracks of abundant leaf litter and judiciously trimmed overhanging branches.

6–9 April 2007 (Easter): Tautane Station

A party of 22 participants spent Friday exploring Cape Turnagain, a spectacular combination of landforms with massive mudstone cliffs, active sand dunes and a coastal platform of fossil-bearing rock and rock-fall debris. Interesting plants seen included a hybrid flax (*Phormium cookianum* × *P. tenax*), *Coprosma acerosa*, *Pimelea arenaria* and pingao (*Desmoschoenus spiralis*). We worked off a species list developed over several trips in. We didn't find all 120 species on the early 1980s list

compiled by Tony Druce and Geoff Park. To do so we would have had to spend more time perched on the cliff tops to establish the changes since then.

For the next two days we were guided by Queen Elizabeth II Trust representative, Marie Taylor. Saturday was spent exploring two steep covenants on Tautane Station and preparing species lists from scratch. The first covenant, of 32 ha had been fenced for about 10 years and is in good condition with 80% forest cover including some virgin forest with magnificent podocarps, pukatea, rewarewa and a lone northern rata. The second was a smaller, more recently fenced, covenant with less understory and, although it lacked the diversity of the larger area, it did have some species we hadn't found in the morning; for example, lemonwood (*Pittosporum eugenioides*).

Sunday's challenge was three covenants over 2 properties on SH52 subject to severe erosion. The first, of little more than one hectare, had been fenced for two years. Trees included kahikatea, ngaio and black beech that were already producing a healthy crop of seedlings. *Asplenium hookerianum* was surprisingly abundant. The second covenant had been fenced for only a year but featured a big rimu, a big hinau, *Drymoanthus adversus* and a developing understory. The third covenant featured a much different association of plants: ranging from vigorously regenerating manuka/kanuka shrubland, to black beech forest on a dry spur, and broadleaf forest in the gullies featuring a large hinau. We also found *Carex* sp., orchids, nikau and *Helichrysum lanceolatum*.

On Monday we were joined by another Queen Elizabeth II Trust representative, Bill Wallace, from Pahiatua who led us onto two small covenants where the collecting habits of one of the former owners provided us with some new identification challenges; he'd planted a variety of species from outside the area including puriri and mangeao (*Litsea calicaris*).

The fine clear weather allowed us to finish the trip with a visit to the top of the Puketoi Range. In contrast to the dryness of Hawke's Bay, we were now amongst dense mountain horopito (*Pseudowintera colorata*), *Olearia ilicifolia* and mountain cabbage tree, with an understory of filmy ferns.

16 April: Evening meeting. Speaker, Jessica Costall, led a stimulating discussion of the results of a joint post-graduate study on the dispersal and invasion patterns of karaka on a number of sites in the lower North Island.

FUTURE PLANNED EVENTS

- | | |
|-----------|---|
| 21 May | Evening meeting Members' evening. A chance to catch up on trip highlights from slides, photographs, specimens, drawings and any other reminders of trips and occasions members have experienced over the past year. |
| 2 June | Field trip. Redwood Bush. This 10-ha reserve, designated a Wellington key natural ecosystem, borders suburban Tawa. It is one of the few remaining stands of mature tawa / kohekohe lowland forest close to suburban areas within Wellington City, along with regenerating and revegetated margins. |
| 18 June | Evening meeting. Revegetation vs restoration. Speaker: Dr Ian Atkinson, a well-known ecologist. When does revegetation become restoration, and how do we decide which path to follow? |
| 1 July | Field trip. Matiu / Somes Island. We will be joining a Forest & Bird workbee in the morning and will botanise the island after lunch. |
| 14 July | Field trip. Weed control and planting at Te Marua bush. |
| 16 July | Evening meeting. <i>Hebe</i> or <i>Veronica</i> – why change back? Speaker Phil Garnock-Jones, Professor of Plant Science at Victoria University |
| 4 August | Field trip. Belmont Regional Park and Korokoro Dam. |
| 20 August | Evening meeting 1. Annual General Meeting 2. AP Druce Memorial Lecture: Speaker: Ewen Cameron, Curator of Botany, Auckland Museum. Vascular flora and some fauna of small northern NZ islands. |

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■ Nelson Botanical Society

February Field Trip: Mt Lodestone, Kahurangi National Park

Thirteen people arrived at the Flora carpark, having driven through a thick layer of cloud, and spent the whole day in glorious sunshine compiling a full species list. There were interesting changes in plant species from the relatively lush vegetation at Flora Stream, up through beech forest and into a band of limestone near the top of the mountain. Highlights of the day were *Gastrodia cunninghamii*, *Helichrysum intermedium*, *Olearia lacunosa*, *Myosotis "australis small white"*, *Forstera mackayi* and *Gentianella decumbens* in full flower. Other plants of interest were *Olearia ilicifolia*, *Pseudopanax linearis*, three *Dracophyllum* species (*D. rosmarinifolium*, *D. filifolium*, *D. traversii*), *Leonohebe ciliolata* and a sundew, *Drosera spatulata*. *Epacris alpina* and *Libocedrus bidwillii* were seen on the way down on the last small ridge. The birds were wonderful, perhaps as a result of the trapping work done by Friends of Flora in the area: rifleman, bellbird, kakariki, long-tailed cuckoo, brown creeper, kea, grey warbler, and a weka pacing the carpark.

March Field Trip: Mt Robert, Nelson Lakes National Park

An intrepid group of four set off up Paddy's Track in light drizzle. Under the kanuka, an array of *Gaultheria* (*G. antipoda*, *G. crassa* and *G. macrostigma*, with numerous diverse hybrids) was growing along the track edges. Near the shingle slide was *Olearia virgata* and, as the track became steeper, *Brachyglottis rotundifolia*. Further up in the grassland were specimens of very windswept *Coprosma decurva* loaded with red berries. Leaving behind Bushline and Kea huts, the group moved onto the tops and saw, amongst the carpet grass (*Chionochloa australis*), *Coprosma atropurpurea* with its big red berries, pygmy pine (*Lepidothamnus laxifolius*), *Pentachondra pumila* and *Hebe lycopodioides* ssp. *lycopodioides*. *Gentianella montana* ssp. *montana* and *G. bellidifolia* were putting on a beautiful floral display despite the howling gale. *Celmisia* flowering was mostly over but *C. sessiliflora* was still in flower and sporting the elongated seed stalks which aid in seed dispersal by wind, which at this point was blowing horizontal sleet. At the top of Pinch Gut track, the weather had cleared for a gentle descent among large patches of snow totara (*Podocarpus nivalis*), *Olearia lacunosa* flush with new growth and *Chiloglottis cornuta* in flower. A fallen sprig on the track revealed the presence of a healthy clump of red mistletoe (*Peraxilla tetrapetala*) hanging from a mountain beech (*Nothofagus solandri* var. *cliffortioides*) trunk.

April Field Trip: Whispering Falls, Hackett Valley

A beautiful sunny morning saw 17 BotSoc members striding up the Hackett track with only a few pauses to admire *Corokia cotoneaster*, some with yellow berries, some with orange. *Olearia serpentina* was on the track sides in the ultramafic area, with a few late-flowering *Gentianella stellata*. Adjacent to the lunch spot in the clearing above the falls, the group (now 21) saw green-stemmed mistletoe (*Ileostylus micranthus*) loaded with ripe fruit on *Coprosma propinqua*. Totara (*Podocarpus totara*), matai (*Prumnopitys taxifolia*), tanekaha (*Phyllocladus trichomanoides*), rimu (*Dacrydium cupressinum*) and southern rata (*Metrosideros umbellata*) formed the canopy of the dense forest nearby, and miro (*Prumnopitys ferruginea*), Hall's totara (*Podocarpus hallii*) and lovely examples of silver fern (*Cyathea dealbata*) were its understorey. *Asplenium oblongifolium* was the main fern below it. White maire (*Nestegis lanceolata*), thought to be extinct in the Nelson area until recently, was relocated here – a mature tree and two groups of seedlings. *Hebe leiophylla* (formerly *H. gracillima*) and shrubby wineberry (*Aristotelia fruticosa*) were on the forest margin. On the alluvial flats downstream of the falls, the search for shovelmint (*Scutellaria novae-zelandiae*) was successful, and right beside it was another white maire with immature fruit.

Easter Camp (April): Clarence River valley, Molesworth Station, Mt Dumblane, Lewis Pass

Good Friday was one of those calm autumnal days for the trip over Jack's Pass into Molesworth and to the Clarence River terraces upstream of the Leader Dale confluence. The fresh river gravels had the standard mat daisy *Raoulia tenuicaulis* and willowherbs *Epilobium melanocaulon*, *E. microphyllum*, *E. "minutiflorum"* and, in the wetter parts, *Carex coriacea* and the inland form of *Leptinella dioica* with its almost spatulate leaves. On the older and very droughty higher terraces amongst an alarming sea of *Hieracium pilosella* were gems such as woolly daphne (*Pimelea sericeovillosa*), *Raoulia parkii*, scattered rosettes of *Brachyglottis bellidioides* – some still in flower, dwarf heath (*Leucopogon nanum*) and the diminutive *Hebe pimeleoides* unfortunately past flowering. There was an abundance of colourful fruit, the most prolific being that of the heath *Acrothamnus colensoi* (formerly *Leucopogon suaveolens*) with its deep red mesocarps. The annual eyebright *Euphrasia zelandica*, in flower, was scattered over the terrace. Some of the small depressions in one of the wetlands were smeared with the tiny *Limosella lineata* still sporting a rash of minute purple flowers. The wetter places had *Potamogeton cheesemani*, *Isoetes alpinus*, *Myriophyllum*

triphyllum and *Ranunculus foliosus* and supported rarities including *Epilobium chionanthum* and *Aciphylla subflabellata*. The downlands of the Leader Dale hill country presented the group with a confusing array of *Dracophyllum* hybrids (*D. rosmarinifolium* as one of the parents), and with *Olearia cymbifolia*, *Hebe venustula* (= *H. brachysiphon*) and the silver leaved *Pimelea concinna*. Amongst this were a few plants of the handsome *Celmisia semicordata*, *Craspedia incana* and the small speargrass *Aciphylla monroi*. After a break at a small copse of mountain beech (*Nothofagus solandri* var. *cliffortioides*), the group headed towards the Leader Dale and the Leader Fault, whose trace resembled a railway embankment. Here there was *Coprosma petriei* and, below the fault, a wetland with autumnal *Bulbinella hookeri*, swards of *Carex diandra*, *C. echinata*, *Schoenus pauciflorus*, *Uncinia rubra* and a rare shrub or two of bog pine (*Halocarpus bidwillii*). One of the day's highlights came during the walk back across the Clarence terraces, with the discovery of the small mat broom *Carmichaelia corrugata* in pod.

On Saturday, the destination was the west end of Maukuratawhai, Molesworth Station. Starting again from the Clarence River terraces, the group began the climb and soon encountered *Helichrysum depressum* and *Myrsine nummularia*, the latter's magnificent purple berries slowing down all the photographers. Great silvery clumps of *Astelia nervosa* gave way to *Senecio glaucophyllus* ssp. *toa* and then tight little clusters of *Colobanthus acicularis*. Under a sprawling snow totara (*Podocarpus nivalis*) was a treat: *Pachycladon cheesemaniai*, a threatened plant. Another threatened plant, *Vittadinia australis* (a small low-growing daisy) was also found. Once the group made the upper slopes, the weather began to close in. *Carmichaelia monroi* was tucked amongst the tussock and *Brachyglottis cassinioides* was found growing on a bank. There was also *Hebe pinguifolia* scattered around. The descent through dry bush and then along a spur passed through large patches of *Exocarpos bidwillii*, a hemiparasite that attaches to the roots of other plants, and a *Pittosporum anomalum*. One of the group detoured down a steep bank across the gully and found *Traversia baccharoides*, a third threatened plant. Back on the flat was *Rumex flexuosus* in small patches amongst the grass.

The thick mist in Hanmer Springs on Easter Sunday morning didn't deter the group from again heading to Jack's Pass, where it found clear skies that stayed all day. On the lower slopes of Mt Dumblane, much *Exocarpos bidwillii*, some with fruit, was seen and also fruiting was snow totara (*Podocarpus nivalis*). A few more *Celmisia* species were added to the weekend's tally: *C. traversii*, *C. spectabilis*, *C. gracilentata*, *C. sinclairii*, and *C. incana*. On the scree and among the rocky outcrops were tucked *Viola cunninghamii*, *Parahebe decora*, the rhizomatous *Coprosma brunnea*, *Epilobium crassum* and *Helichrysum intermedium* var. *acutum* – here growing at its northern limit. Nearby was *Euphrasia monroi*, *Helichrysum parvifolium* (in full flower) and some *H. filicaule*. Nearer to the top were *Pratia macrodon* and *P. angulata*, and also *Lagenifera cuneata* with its tiny flowers on long slender stalks. The higher outcrops supported a number of plants: *Pimelea traversii*, *P. concinna*, *Heliohebe raoulii*, *Leonohebe cheesemaniai* and *Hebe lycopodioides* in abundance and living up to its species name. It was also here that the rarest plant of the day was found, the narrow-leaved groundsel *Senecio dunedinensis*. On the final walk to the summit, the group encountered *Raoulia bryoides*, *Leucogenes grandiceps*, *Melicytus* aff. *alpinus* "Blondin" and – to crown the day's findings – an intergeneric hybrid of *R. bryoides* and *L. grandiceps*.

Most of the Nelson contingent headed to Lewis Pass on Monday morning, with the aim of climbing the track on the south side of the Pass and into the alpine zone of the Main Divide. Along the track to treeline was an abundance of *Coprosma* species: *C. tayloriae*, *C. rugosa*, *C. propinqua*, *C. microcarpa*, *C. foetidissima*, *C. perpusilla*, *C. cheesemaniai*, *C. serrulata*, *C. fowerakeri* and *C. pseudocuneata*. On the tops, the mat daisy *Celmisia incana* was the dominant herb through the extensive tussocklands of carpet grass (*Chionochoa australis*) and mid-ribbed snow tussock (*C. pallens*). Two of the curious species in the carpet grass were the stunted, tight whipcord form of *Hebe lycopodioides* (= *H. lycopodioides* var. *patula*) and *Gentianella impressinervia* with its stout appearance and large flower heads. Another carpet grass species, rarely encountered in Nelson, was *Anisotome flexuosa* with its diagnostic hairs on the pinnae tips. A few of the party pushed on up to the ridge crest to get a rather windy but stunning view of Mt Technical beyond and all the tops to the west. Hunkering down on the shady rock outcrops were *Leonohebe ciliolata*, *Geum uniflorum*, *Schizeilema "cyanopetalum"* and *Ourisia sessiliflora*, while on the ridge crest was the suite of dwarf associates typical of highly exposed tops: *Chionohebe ciliolata*, *Anisotome "prostrata"*, *Gaultheria nubicola* and *Luzula colensoi*. The only sighting of edelweiss (*Leucogenes grandiceps*) for the day was also here. When we returned to the beginning of the track we were rewarded with a wind-fallen sprig of red mistletoe (*Peraxilla tetrapetala*) thus marking an auspicious end to our 2007 Easter camp.

April Talk: Recent closeups of our local mosses

Bill Malcolm presented a slide show on this group of 'lower' plants and gave the members a preview of his upcoming book on identifying New Zealand's 250 genera of mosses. Identification relies mostly on the structure of the 1-cell thick leaves and the book's format will provide an easy-to-use 'flick through' visual key. We look forward to the book's publication.

FUTURE TRIPS

June 17 Happy Valley, Cable Bay. Leader Rebecca Bowater (03) 545 1260
July 15 Stephen's Bay, Kaiteriteri. Leader Lawrie Metcalfe (03) 540 2295
August 19 Kokorua, Whangamoia River mouth. Leader Sally Warren (03) 546 6637
September 16 Pukatea Track, Hira Forest. Leader Tim McArthur 021 023 26486
Labour Weekend camp (October 19–22): South Marlborough limestones. Leader Cathy Jones (03) 546 9949

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■ **Canterbury Botanical Society**

March Meeting: Origins of the New Zealand Flora: Trying to Keep up to Date - Peter Wardle

Origins of the New Zealand indigenous flora were discussed with reference to DNA research, and illustrated with phylogenetic trees for *Nothofagus*, *Phyllocladus*, *Ranunculus*, *Ourisia*, *Abrotanella*, *Hebe* and the Stylidiaceae. They include Australia, Malaysia-Melanesia, Eurasia, South America and probably Antarctica. Various genera, including some of our most diverse, descend from seed dispersed across the oceans as the New Zealand mountains began to rise in the Pliocene. Some suggestions were made as to ways in which the remote chances of successful long-distance dispersal may have been enhanced.

March Field Trip: Mount Mason

The aim of the visit was to update Brian Molloy's extensive species list compiled in 1976. Three groups explored the limestone scarp, the main ridge and summit of Mt Mason (greywacke) and the various wooded gullies. Species found on the limestone scarp included *Asplenium lyallii*, *Traversia baccharoides*, *Oreomyrrhis rigida*, and *Senecio glaucophyllus* ssp. *toa*. In the scrub covering the slopes of Mt. Mason were several *Coprosma*, *Hebe* and *Olearia* species, *Heliohebe raoulii* ssp. *raoulii*, *Helichrysum intermedium* var. *acutum*, and nice stands of *Podocarpus hallii*. Both *Korthalsella lindsayi* and *K. salicornioides* were seen, on *Coprosma* and kanuka respectively. Interesting climbing plants found included *Clematis afoliata*, *C. petriei* and abundant *Fuchsia perscandens*. *Hoheria angustifolia*, *H. lyallii* and their hybrid were seen in one gully. Species on the tops included *Aciphylla aurea*, *A. subflabellata* and *Bulbinella angustifolia*.
Paul Maurice

April Field Trip: 'Hillside', Okuku, upper Canterbury plains

During the morning we looked at a sizeable wetland dominated by flax, sedges, manuka and *Coprosma tayloriae*. One exceptional *Olearia bullata* (over 3.5m tall) was a real standout (both botanically and physically). It was interesting to see a few *Chionochloa rubra* plants still growing on the plains. In the afternoon we looked into a patch of secondary black beech forest overlooking the Okuku River. A large gully held a good range of ferns, including numerous *Leptopteris hymenophylloides* and sizeable patches of *Blechnum vulcanicum*. Some time was spent differentiating the three *Hypolepis* species present (*H. ambigua*, *rufobarbata* and *millefolium*).

Miles and Gillian Giller

May Meeting: Exotic Skills or Native Talent? Fleshy fruit dispersal in Canterbury

In NZ 70% of our native trees and shrubs have fleshy fruit that is bird-distributed; in addition, many of the adventive "weeds" causing concern are bird dispersed. This 12 month study, funded by a Royal Society Teacher Fellowship, investigated the fruit eating patterns of both native and exotic birds in 3 pairs of study sites - "indigenous forest", "rural indigenous/adventive", and "urban mixed" - within 100km of Christchurch. Bird visits to fruit peaked in autumn. Many native plants studied such as *Coprosma robusta*, *Pseudopanax arboreus*, *Myrsine australis* and *Carpodetus serratus* provide fruit and or nectar over the winter season for longer than many of the adventive plants such as holly, elderberry and rowan. Silvereyes ate the widest variety of fruit, while kereru ate a lot of foliage and flowers in the winter and seem to favour the pea family for this. Overall, native birds were observed eating native fruits more often than exotic birds in all sites and ate the least amount of adventive fruit

which implies that native birds are more important dispersers of native fruit. Kereru are now the only widespread large native bird capable of dispersing the larger fruited native plants. Results also suggest that blackbirds, thrushes and starlings are the major dispersers of fleshy fruited adventive weeds. Silveryeyes are important dispersers of a wide range of smaller fruits. Geoff Henderson

May Field Trip: Coastal Conway Area

Saturday saw us visiting Ploughman Creek where we saw several patches of the diminutive winter-flowering orchid *Pterostylis alobula* in flower and, on a nearby rock face, a sprawling colony of another orchid, *Drymoanthus adversus*, clinging to the southern aspect. In the QEII covenanted bush in Fern Flat Stream, one particularly large kahikatea (estimated to be 700 – 800 years old) was admired by all. Matai and totara were also regenerating strongly throughout. A small clump of *Anemanthele lessoniana* had us wondering why this threatened native grass can be so aggressive in cultivation yet often appears depauperate in the wild. There were numerous fungi, many in spectacularly showy reproductive mode, including one basket fungus (*Ileodictyon cibarius*), an exceptional 20cm across. Sunday saw us looking at a semi-saline wetland with an array of small coastal herbs and *Schoenoplectus pungens*. We then botanised Sawpit Creek covenant, some of us making a dash upstream to see kiekie (*Freycinetia banksii*) approaching its southern east-coast limit. The general abundance of the velvet fern *Lastreopsis velutina* was a surprise to us all. Miles and Gillian Giller

FUTURE EVENTS

July 6	Dieter Steinegg ChCh ageing trees
July 7	Field trip with Sue Molloy in Botanic Gardens
August 3	Gemma Bradford
August 4	Landcare Research Herbarium field trip
September 7	Phil Knightbridge <i>Coprosma wallii</i>
September 8	Church Bay Scenic reserve
October 5	Nick Head, DOC Limestone areas in Canterbury
October	Nick Head, Field trip yet to be decided

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OBITUARY

Nancy Adams, CBE, QSO, 1926-2007

Nancy Adams was born in Levin in May 1926, the only child of Kenneth and Jessie Adams. Christened Jacqueline Nancy Mary Adams, she was known to us all simply as Nancy. She rarely acknowledged her first name, except for some unaccountable reason in the phone book – an uncharacteristic reclusiveness which confounded many of her colleagues when they tried to contact her!

She grew up in the Wellington suburb of Brooklyn and was educated at Wellington Girls College. Her love of botany was encouraged by her father, a keen gardener, and nurtured during regular family holidays to Thames where she learned much about New Zealand's native flora from the surrounding bush. Her natural talent as an artist was evident at an early age, and surviving paintings from childhood hint at the blossoming of her skills that would follow in her teens and adult life.

She left school at the age of 16 and joined Botany Division of the DSIR in January 1943. It was still wartime, and she became technical assistant to Dr Lucy Moore who was engaged in seaweed research, particularly the manufacture of agar. It was here that her interest in seaweeds was kindled, and also where she was introduced to the general duties necessary to maintain a large herbarium. Lucy Moore was an exacting manager, and it was under her tutelage that Nancy learned the meticulous habits that characterised her later work. She studied botany and zoology part-time at Victoria University, but during this period she succumbed to one of the then frequent outbreaks of polio. She survived, but it curtailed her university education and left her permanently debilitated and often in considerable pain, particularly later in her life. It is a reflection of her indomitable spirit that after such a trauma, and without formal qualification in either botany or art, she achieved international recognition in both fields.

The job at Botany Division also supported her initial steps as a professional artist. By 1948 her first work had appeared in the Post-Primary School Bulletin, and in 1949 her first scientific paper was published in the Transactions of the Royal Society of New Zealand – a joint paper with Lucy Moore on the fruit characters of *Pittosporum dallii*. In 1950 she became the official Botanical Artist at Botany Division, establishing herself during the next decade with a series of line drawings of incomparable accuracy and uncluttered style. Exhibitions of her paintings were displayed at the Auckland Institute and Museum, Architectural Centre Gallery in Wellington and the Hawkes Bay Museum. In quick succession she illustrated all the major botanical works of the 1950s and early 1960s – Henry Connor's *The poisonous plants in New Zealand* (1951), G.O.K. Sainsbury's *Handbook of the New Zealand mosses* (1955), H.H. Allan's *Flora of New Zealand* Vol. 1 (1961), Lucy Moore's *Plants of the New Zealand coast* (1963), and *Trees and shrubs of New Zealand* (1963) published jointly with Lindsay Poole. The latter book in particular led to the widespread recognition of her formidable talents. It was the standard text for generations of botany students in New Zealand, and was reprinted and revised so many times that the printers gave up trying to record them on the title page. It remains in print almost 45 years later and is still the first book many people reach for if they want to confirm an identification or check the spelling of a name.

Nancy's career changed course in 1959 when she joined the staff of the then Dominion Museum in Wellington. Here she took up a position as Artist, responsible for the preparation and presentation of exhibitions, the illustration of natural history material, and the registration of early Museum collections – notably colonial furniture and textiles. Her artwork for The Natural History of Cook's First Voyage in the Bicentenary year of 1968 was a tour de force, and the Parade of Colonial Costume during the Museum's centenary in 1965, for which she selected the costumes and wrote the script, lives on in the memories of all those old enough to have witnessed it. Her work with the Museum's costume collection, and with the Wellington Embroiderer's Guild, eventually led to the appointment of the Museum's first full-time textile conservator.

Throughout the early 1960s she maintained a steady output of botanical illustration, virtually all of it done in her own time. Her plant paintings and line drawings adorned the pages of National Park Handbooks and many associated pamphlets and brochures. By the middle of the decade she was publishing popular books on New Zealand mountain flowers, trees and introduced plants, most of

them reprinted in different formats and under different titles. Culminating this period of her career was another of her landmark books. *New Zealand Alpine Plants* was published jointly with Alan Mark in 1973 and illustrated about 450 species in 118 colour plates of paintings – interpreting New Zealand's alpine flora in a way that had never been attempted before, and received with widespread critical acclaim.

In 1969 came another career shift. She was appointed to a professional grade as Assistant Curator of Botany at the Dominion Museum, working alongside the Curator, the late Bruce Hamlin. Sadly this was not a harmonious working relationship. However, it did provide the opportunity for Nancy to develop her interest in marine algae, and allowed her to assiduously build up the Museum's collections of this poorly studied group of indigenous plants from a mere 1000 when she began to around 20,000 when she retired in 1987. She collaborated with, and helped to train, a whole new generation of younger phycologists, and she encouraged them to send her material from all around the country. She kept only the very best material, ensuring that everything was meticulously labelled and identified. Indeed, she was responsible for starting the process of properly ordering and documenting the whole of the Museum's herbarium, bringing it out of the chaos into which it had descended by the early 1970s. Then she started work on the more serious business of algal systematics, gradually building up her scientific contacts. At first, with her lack of formal qualification, she was in awe of some of the big names of the day, both here and overseas, but as her confidence grew she came to realise that even the best were not infallible. With a fresh eye, and constant reference to what she and others collected on the shore, she gradually corrected a series of glaring errors that had been perpetuated for decades in algal taxonomy, opening the way for significant progress to be made by her younger cohorts.

Publications flowed freely through the 1970s and 1980s, starting with floristic lists, moving through systematic revisions and culminating in what is probably her finest work – *Seaweeds of New Zealand* – published in 1994. This was the first comprehensive book ever published on New Zealand's marine algae. With 116 colour plates it provides descriptions and illustrations for three quarters of an estimated 800 species that occur around a diverse coastline, extending from the subtropical Kermadecs in the north to the subantarctic islands in the Southern Ocean. The quality of the illustrations is superb – the essential living characters leap out at you as you turn the pages. Nancy had a unique ability to capture the evocative and characteristic colours of New Zealand's native trees and shrubs, and she succeeded equally well with the seaweeds. The subtle shades of red, green and brown, and the indefinable shapes of the plants, are all captured in a way that words can never adequately express, but which makes the plates instantly recognisable to those who already know them, and quickly helps those who don't to come to terms with them. Our knowledge of New Zealand's algal flora will undoubtedly be improved on by a younger generation of phycologists inspired by Nancy's work. But it is unlikely that there will ever be anyone with her unique combination of scientific knowledge and artistic ability to produce a work comparable to this.

Extraordinary as it may seem, Nancy's talents didn't end there. Not only did she acquire an unrivalled understanding of New Zealand's marine algal flora, she also had a good working knowledge of New Zealand's native and introduced seed plants, and a very broad familiarity with our cultivated plants. Few people in the history of New Zealand botany have had mastery across such a broad range of disciplines, and none, I suspect, have combined it with such exquisite artistic skill as she did. But she also had a remarkable knowledge of earlier botanists, biologists and New Zealand social history in general. From the 1970s she prepared biographies and accounts of earlier New Zealand botanists, beginning with her own great-grandfather, James Adams. Fittingly, perhaps, her very last publication was the culmination of over 20 years work researching the life of John Buchanan, the Colonial Museum's first botanist and, like Nancy herself, an artist of considerable talent.

Those who knew Nancy quickly came to respect her razor sharp mind. She was an inspirational person to work with, setting very high standards and challenging others to do likewise. She often had a blunt view of the world and its people, but her comments were perceptive, and she always recognised and respected people of real ability. Her high standards and self-effacing manner meant that she was frequently a reluctant publisher. She often needed encouragement to put her work forward for exhibition, and sadly there were relatively few occasions when the public had a chance to see the breadth of her talent. However, a major exhibition toured 16 centres in New Zealand between 2003 and 2006, almost double the number originally intended, such was its popularity.

Formal recognition of her abilities came mostly after her retirement. The Royal New Zealand Institute of Horticulture awarded her the Loder Cup in 1964 and, in 1985, invited her to present the Banks Lecture on Botanical Illustration in New Zealand – the Kew connection. After her retirement she was awarded the Queen's Service Order in 1989, a Commemorative Medal for services to Botany in 1990, and made a Companion of the British Empire in 1996.

Just a few weeks before her death on 27 March 2007 in the Wellington suburb of Karori, negotiations were completed for Te Papa to acquire her entire archive of paintings and drawings. This will not only become a hugely valuable resource for future botanists but it also ensures that Nancy's work takes its rightful place alongside New Zealand's most talented artists who are represented in the country's national museum.

Patrick Brownsey, Senior Curator Natural Environment, Te Papa, P.O. Box 467, Wellington

NOTES AND REPORTS

***Hebe pubescens* subsp. *pubescens* on Rotoroa Island, western Hauraki Gulf**

P. J. de Lange, Terrestrial Conservation Unit, Department of Conservation, Private Bag 68908, Newton, Auckland, pdelange@doc.govt.nz

Hebe pubescens subsp. *pubescens* has long been regarded as endemic to the Coromandel Peninsula. There it is widespread occurring from Cape Colville south to at least the Kauaeranga Valley in the west and near Waihi in the east. However, during 1992 I collected it from a remote headland at the eastern end of Papanui Point, Tawhitikino Beach, on the eastern side of the Firth of Thames. That record accepted by Bayly et al. (2003), was later rejected in the recently published *Hebe* monograph (Bayly & Kellow 2006: p. 274) because a critical investigation of the specimens on which that record are based suggested that they were hairy *H. stricta* var. *stricta* – a decision made chiefly because a duplicate of the gathering examined at AK after Bayly et al. (2003) was published lacked a sinus (M. J. Bayly *pers. comm.*). Notably the CHR specimen has a sinus, and as collector I wish to stress that both specimens came from the same plant.

During November 2006, on a field trip by the Auckland Botanical Society, Graeme Jane and I discovered a large population of *Hebe pubescens* subsp. *pubescens* on the southeastern side of Rotoroa Island. On further investigation numerous plants were noted growing in close association with another near Coromandel endemic, *Pomaderris rugosa*. The discovery of a large population of *H. pubescens* subsp. *pubescens* on Rotoroa Island adds support to my earlier Papanui Point Record (Bayly et al. 2003), and accords with our present understanding of the geological development of the Hauraki Depression and the Firth of Thames and also the impact that this recent geological feature has had on the biogeography of the flora and fauna of the inner Hauraki Gulf Islands.

However, critical examination of the leaf bud sinus showed that, as with other populations that I have investigated on the main Coromandel Peninsula, the sinus while usually present and apparently dominant, was in some plants weakly developed, and often varying in proportion and size or altogether absent. Recent hybridisation with another allied species lacking a sinus can be ruled out because, on Rotoroa Island at least, the only other species present, *H. stricta* var. *stricta* (which lacks a sinus, and is known to occasionally hybridise with *H. pubescens*) is scarce and did not occur anywhere along the southern half of that island. Further I have observed that sinus size and frequency is also variable in some other species, most notably *Hebe corriganii* which mostly has a sinus but in some populations, such as on parts of Pureora mountain and the Hauhangaroa Range, it is scarce or completely absent, thus making clear morphological distinction of these plants from *H. macrocarpa* at least, problematic. It was mainly because of samples of these plants that I had sent to the late A. P. Druce in 1983 (Druce *in litt.*) that he came to regard *H. corriganii* as probably a subspecies or even minor montane variant of *H. macrocarpa*.

Because the presence or absence of a leaf bud sinus is accorded high taxonomic significance in the genus (consider for example, the main distinction between *H. corriganii* and *H. macrocarpa* var. *macrocarpa* or between *H. salicifolia* and *H. stricta*), it might be useful to more critically examine populations where the character is either absent or variable. In particular is the sinus a dominant character? Is it influenced by hybridism (suggesting that some populations without a leaf bud sinus are the result of past introgression with another allied species), environment or do some populations

naturally carry plants in which the leaf bud sinus is recessive? Does population size and isolation trigger the loss or reduction or prominence in the leaf bud sinus? I would suggest that these questions would make a fascinating study for any student with a background in modern molecular technologies and standard genetic experimentation.

Herbarium vouchers of the Rotoroa Island *Hebe pubescens* subsp. *pubescens* find have been lodged at the Auckland Museum herbarium. Specimens are also in cultivation at Oratia Native Plant Nurseries, Oratia Valley, West Auckland.

Acknowledgements

I thank Graeme Jane for drawing to my attention his discovery and Auckland Botanical Society members for the pleasure of their company. Ewen Cameron as trip leader for arranged the visit to Rotoroa Island. I thank the Salvation Army for allowing access to their island and also for permitting plant material to be collected.

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BIOGRAPHY/BIBLIOGRAPHY

■ Biographical Notes (66) : Joseph Robert Annabell (1857–1924)

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

In 1906, T.F. Cheeseman introduced his *Manual of the New Zealand Flora with A History of Botanical Discovery in New Zealand*, and at the end of this classic essay he wrote: "Other recent workers are R. Helms, R.J. Kingsley, J. Dall, D.W. Bryant, Elsdon Best, E.W. Andrews, J.B. Simpson, H. Nairn, J.R. Annabell, J.B. Lee, and T.P. Arnold." Some of these names are occasionally cited in the locality records at the end of Cheeseman's species descriptions, but that is the only other information that he gives about these people. Three of them have already appeared in this series: Helms (No. 42), Kingsley (No. 48), and Bryant (No. 49); and I have written about Dall elsewhere (1). J.R. Annabell is commemorated in the present note; and in future I hope to tell you about the remaining 6, although only Best and Nairn will be easy to identify.

J.R. Annabell was born in Melbourne on 15 October 1857, the fourth child of Joseph and Mary Annabell who had emigrated from Derby, England, in 1852. The Annabells brought 2 children with them, Mary & John, and in Melbourne, where Joseph worked as a drayman and carpenter, 2 more were born, Elizabeth and the subject of this note Joseph Robert (2).

In 1859 or 1860 Joseph and Mary brought their family to New Zealand, landing at Napier and settling near Mary's brother who was already at Havelock North. Here Joseph's attempt at farming was unsuccessful and he moved to Hastings, taking up carpentering again (2).

Joseph's younger son, Joseph Robert joined the Survey Department in c. 1878. He worked mainly in the catchment of the Turakina River (between the Wanganui and the Rangitikei Rivers) and in the



catchment of the Waitotara River (west of the Wanganui River) (3). This was difficult hilly country, deeply dissected, and still mainly forested, a refuge for native birds, some already rare. During his field work Annabell gathered specimens of all kinds to augment his collections. As he informed Cheeseman in 1904: "I have what I am told is a fairly good collection of Maori curios, moa bones, native birds and eggs and general curios as I have been collecting ever since I was 10 years old and I am now 47."

In August 1879 Annabell collected a lizard "while engaged on a Government survey in the wooded country of the Wanganui district" which Buller described as a new species of *Naultinus* (4). But Annabell's great interest was in bird skins and he recorded where and when he got them in his diaries as well as any species that he only heard or saw. His surviving diaries show that in the years 1878 to 1885 and in 1887 he killed 6 Huia, 11 North Island thrush, and 12 kokako (3). Thus although he left an invaluable record of the bird fauna of these remote regions he also contributed to the decline of the kokako and the extinction of the huia and the thrush. And, alas, in 1904 he could write to Cheeseman: "The moths are destroying my birds. I have fought them for years but they are winning all along the line." Indeed the only known Annabell specimens of the above 3 species are 4 thrushes in the National Museum, Wellington, and probably 1 of the 3 in the Wanganui Public Museum (3).

In 1881 Annabell married Theresa Braithwaite, a Wanganui girl (2) and in 1890 he and his brother-in-law, George Braithwaite, bought a section at Ngamatapouri on the upper Waitotara River. Annabell had earlier surveyed and pegged the boundaries of these sections. His son wrote: "My uncle, George Braithwaite, came up first with his wife and young son to start clearing some land while my father carried on with his job in the Government Survey Office [Wanganui] to earn enough money to pay off a small mortgage on the farm and keep his partner in groceries. There being no road whatever into the district, my uncle of course came by boat, bringing all his household requirements with him. He first built a three-roomed building with ponga walls and clay floor and felled the bush on the easy country near the river." (5)

In 1893, mortgage paid off, Annabell took his wife, 3 young children, and his mother-in-law to settle at Ngamatapouri. They started from Waitotara "in a Maori canoe carrying, also, as many household goods as possible. They camped two nights on the river bank and on the third day, after hauling the canoe up the Marohema rapids by main strength, reached the farm in the afternoon." (5). And now the work began of pit-sawing timber for a house, scrubbing and burning the bush and sowing grass seed. And well on into his farming years Annabell continued to take surveying jobs, later with the help of his sons.

In 1901 Annabell began writing to T.F. Cheeseman, Curator of the Auckland Museum, and from then until 1911 he sent 8 letters (6). All are headed "Ngamatapouri, Waitotara", and all are signed "J.R. Annabell". The following extracts show the main points discussed.

1901 (1 Feb)

"A couple of months ago I sent a plant to Henry H. Travers for identification, he wrote that he had forwarded it to you and that you said it was *Dactylanthus Taylori* and you would be glad of flowering specimens in the future. I found a plant last week with these miniature flowers which I am now forwarding to you. I am afraid that they have got rather dry but I will find you more if I can find them in flower. I presume you do not want the woody part of the plant but only the flowering sprays."

1904 (5 Oct)

"You may remember writing to me re the *Dactylanthus Taylori* in Feby 1901." "I am posting to you herewith a portion of a curious lump of somewhat [?] appearance which was dug out of my garden." "I have one or two native shrubs that are very scarce in these parts. One is an extra large leaved and strong growing variety of the Rangiora, but quite distinct from the ordinary kind. Another a somewhat dwarfed Houhou but with larger leaves, dark green, and very distinct from the ordinary." "I have also growing in my garden the dwarf cabbage tree called, I think, *Ti Rangitira* or *Ti Tawhiti* (*Cordyline edulis*) which the Maoris used to grow in their plantations as a vegetable and which is somewhat scarce now, I believe."

1904 (6 Nov)

Annabell thanks Cheeseman for his comments on the fungus ball, says that he is sending specimens of his Rangiora and Houhou, and that his cattle have destroyed most of his young trees. He adds that he has grown *Ti Tawhiti* for 12 years and that it has never flowered and — "they grow up until about 4

feet high and then fall prostrate owing to the stalk being too soft to support the young heavy head and they start to reproduce by sprouting out near the ground.”

1904 (30 Nov)

Annabell thanks Cheeseman for the names of the Howhow [sic] and Rangiora and tells him where he has seen them in the wild.

“Re the Ti Tawhiti on receiving your letter I dug up the smallest of my three plants and packed up ready for the post but found that I could not get it any lighter than 17 lbs and as the roads have not yet been put in order for wheel traffic the mail bag is the only way of sending a parcel and they would not take anything over 11 lbs so I planted it again. One of the plants has a solitary shoot and I will look after it and send it to you next winter when it has rooted.”

He concludes with the information about his collection which I have quoted above.

Note: The Maori name Houhou used by Annabell was defined in Cheeseman’s “Manual” (1906) as *Panax arboreum*. But Cheeseman probably named Annabell’s “very distinct” plant as Kirks variety *laetum* because when describing *Nothopanax laetum* in 1923 (7) he cited “Taranaki–Upper Waitotara, J.R. Annabell!”

1905 (11 Jan)

Annabell sends for identification a plant from the forest with “a number of tubers at the root”, and “a grass which is coming up in quantities on last year’s burn where I sowed a number of [?] fescues and poas.” Someone has written on the top of the letter: “Festuca bromoides, tubers of Gastrodia.”

1905 (6 June)

Annabell sends 2 young Ti Tawhiti to Cheeseman.

1911 (29 Jan)

At last has found *Dactyloctenium taylori* in flower and has sent some with part of the woody base attached in a box packed with damp moss. “As regards the scent about which such contradictory reports have been made, to my thinking the scent is rather disagreeable but one of my sons says he found flowers which smelled of honey.”

1911 (13 Feb)

In reply to questions from Cheeseman Annabell says that the specimens were from 2 plants and that “in this district it grows on little else but the patete or Schefflera.” He also says that he would like to tell Cheeseman about some lizards “if you do not mind being bothered to answer such letters.” But Cheeseman does not seem to have replied.

No Annabell specimens have been found in AK (E. Cameron *in litt.* 24 June, 2003).

J.R. Annabell died on 10 May, 1924, at the Braemar Hospital, Wanganui, and is buried in Wanganui’s Aramoho Cemetery. He was survived by his wife, 2 daughters and 3 sons (8). Although only 67 he had helped scientists of 3 generations – Buller, Cheeseman, and L.I. Grange. The latter spent a week at Ngamatapouri in September, 1923, studying the geology of the upper Waitotara Valley. He listed fossils from north-east of Mr Annabell’s house and acknowledged his assistance (9).

John Annabell (1846–1919), Joseph Robert’s elder brother, served in the NZ Constabulary from 1871 to 1874 and then became Assistant Surveyor, Survey Department, Hawke’s Bay until 1877. He then transferred to the Wellington District, becoming District Surveyor in 1887 and retiring in 1890 to Wanganui, where he set up as a Consulting Engineer (10). He is sometimes confused with his younger brother.

Acknowledgments

I am indebted to Mr Ewen Cameron, Curator of Botany, Auckland Museum, for sending copies of the Annabell letters, or summaries of them, and for searching for Annabell specimens. I also thank Ms Tanja Webster, Research Librarian, Landcare Research, Lincoln, for help with references, and Mrs Wendy Weller for her typing.

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D.G. Medway 1968: Records of the huia, North Island thrush and North Island kokako from the diaries of Joseph Robert Annabell (1857–1924). *Notornis* 15(3): 177–192; (4) W.L. Buller, 1879: Description of a new species of lizard of the genus *Naultinus*. *Trans. NZ Inst.* 12: 314–315; (5) B. Annabell 1984: Ngamatapouri. An account of the early settlers of upper Waitotara Valley. Wanganui Newspapers Ltd; (6) held in the Library, Auckland War Memorial Museum; (7) T.F. Cheeseman 1923: New Species of flowering plants. *Trans. NZ Inst.* 54: 568; (8) Death Certificate; (9) L.I. Grange 1926: Geology of the upper Waitotara Valley, Taranaki. *Trans. NZ Inst.* 56: 331–336; (10) F.W. Furkert 1953: Early New Zealand Engineers. Wellington. A.H. & A.W. Reed.

PUBLICATIONS

■ Erratum

Audrey Eagle wishes it to be known that most unfortunately a mistake has occurred in the distributions of two plants in “Eagle’s Complete Trees and Shrubs of New Zealand”. Dr Brian Molloy has brought the following to her attention: The distributions of *Pachystegia* sp (A) pp. 828 & 829 and that of *Pachystegia* sp. (B) pp 830 & 831 have been reversed.

Therefore the distribution attributed to *P.* sp (A) is that of *P.* sp. (B) and vice versa.

Audrey Eagle

Journals Received

New Zealand Native Orchid Journal No. 103 – May 07; 40 pp
Edited by Ian St George [ISSN 1177-4401]

Wellington Botanical Society Bulletin – Issue 50, March 2007; 74 pp
Edited by John Sawyer [ISSN 0110-6708]

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