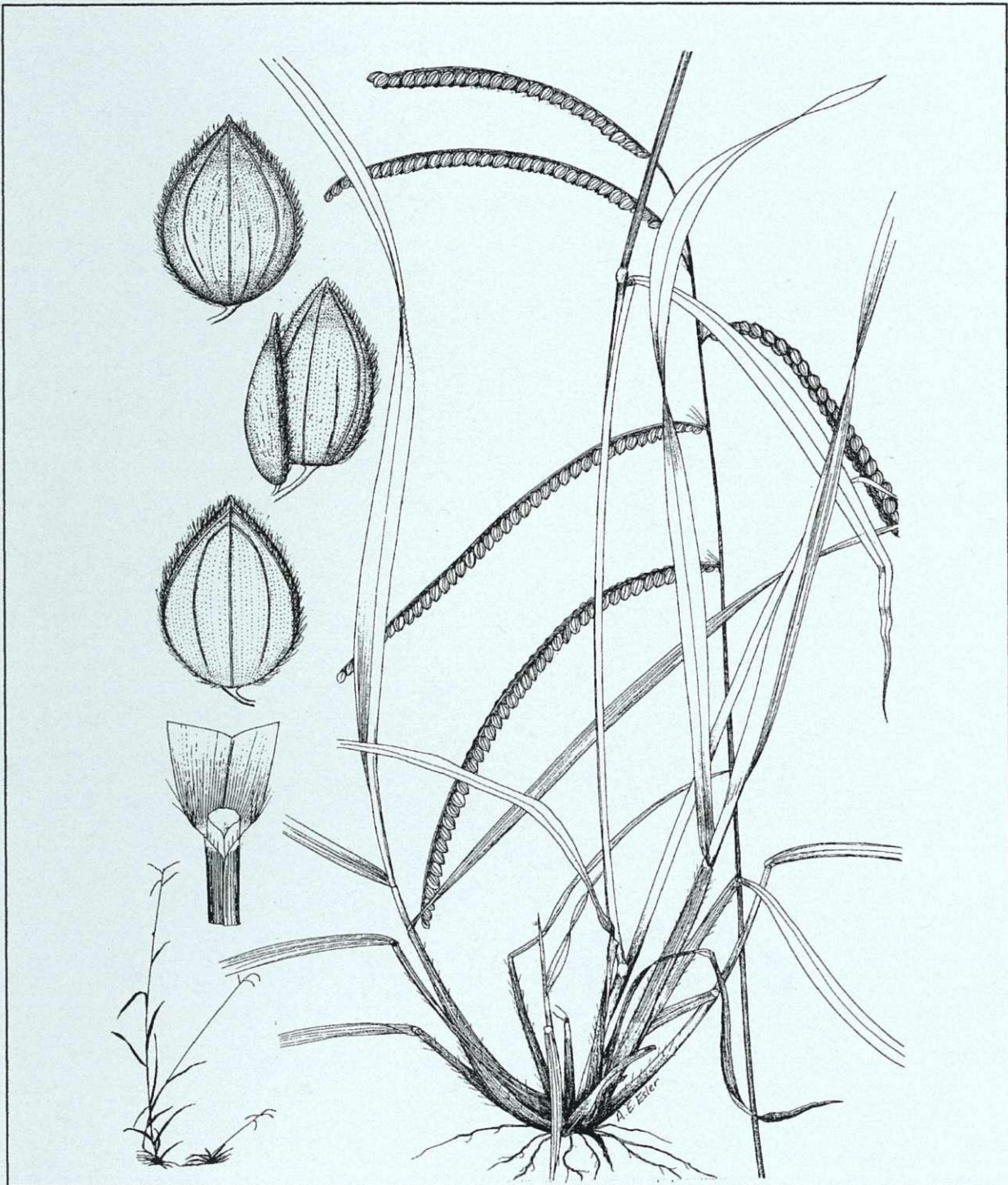


NEW ZEALAND BOTANICAL SOCIETY  
**NEWSLETTER**

NUMBER 68

JUNE 2002



## New Zealand Botanical Society

President: Anthony Wright  
Secretary/Treasurer: Doug Rogan  
Committee: Bruce Clarkson, Colin Webb, Carol West

Address: c/- Canterbury Museum  
Rolleston Avenue  
CHRISTCHURCH 8001

### Subscriptions

The 2002 ordinary and institutional subscriptions are \$18 (reduced to \$15 if paid by the due date on the subscription invoice). The 2002 student subscription, available to full-time students, is \$9 (reduced to \$7 if paid by the due date on the subscription invoice).

Back issues of the *Newsletter* are available at \$2.50 each from Number 1 (August 1985) to Number 46 (December 1996), \$3.00 each from Number 47 (March 1997) to Number 50 (December 1997), and \$3.75 each from Number 51 (March 1998) onwards. 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<sup>th</sup> 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 2002 issue (69) is 25 August 2002.

Please post contributions to: Joy Talbot  
37a Neville Street  
Christchurch 8002

Send email contributions to [joytalbot@free.net.nz](mailto:joytalbot@free.net.nz). Files can be in WordPerfect (version 8 or earlier), MS Word (Word 97 or earlier) or saved as RTF or ASCII. Graphics can be sent as Corel 5, TIF 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

*Paspalum* (*Paspalum dilatatum* Poir.) is naturalised from South America, where it grows from Brazil to Argentina. In New Zealand it is dominant in pasture in Northland, Coromandel and the Bay of Plenty and occurs as far south as the Taieri River in Otago where it is still spreading. Winter dormant, it grows vigorously in late spring and summer. It is a troublesome weed in lawns, often forming conspicuous tufts, and is common on shingly roadsides where it can form extensive patches. Drawn by **Alan Esler**.

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**CONTENTS**

---

**News**

**New Zealand Botanical Society News**

From the Secretary/Treasurer.....	2
From the Editor .....	2

**Regional Botanical Society News**

Auckland Botanical Society .....	2
Waikato Botanical Society .....	4
Wanganui Botanical Group .....	5
Wellington Botanical Society .....	7
Nelson Botanical Society .....	8
Canterbury Botanical Society .....	9

**Research Request**

Grasses needed to complete chromosome counts for the family Gramineae/Poaceae .....	10
--	----

**Conference Report**

Araucariaceae Symposium .....	12
-------------------------------	----

**Notes and Reports**

**Report**

Never seen that before! .....	13
-------------------------------	----

**Research Report**

New genera, reinstatements and combinations for New Zealand Orchidaceae (Tribe Diurideae) .....	14
--	----

**Biography/Bibliography**

Annotated summaries of letters to colleagues by Leonard Cockayne – 3 .....	18
Biographical Notes (46): George Valentine Biggar (1855-1931) and Dugald Louis Poppelwell 1863-1939) .....	22

University Theses .....	25
-------------------------	----

For Sale/ Request to buy .....	28
--------------------------------	----

**Publications**

**Journal Received**

New Zealand Native Orchid Group Journal No. 83 .....	28
--	----

Corrigendum .....	29
-------------------	----

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## New Zealand Botanical Society News

### ■ From the Secretary/Treasurer

#### Call for nominations for Allan Mere Award 2002

Nominations meeting the following conditions are invited for the award of the Allan Mere for the year 2002.

1. The Award shall be made annually to a person or persons who have made outstanding contributions to botany in New Zealand, either in a professional or amateur capacity.
2. The award shall be administered by the New Zealand Botanical Society.
3. Nominations for the Award may be made by regional Botanical Societies, or by individuals, to the Secretary of the New Zealand Botanical Society. Nominations shall close on 30<sup>th</sup> June each year. Nominations shall be signed by a nominator and seconder, and accompanied by two copies of supporting information that must not exceed one A4 page.
4. Selection of the successful nominee/nominees shall be made by the Committee of the New Zealand Botanical Society, normally within three months of the closing date for nominations.
5. If, in the opinion of the Committee, no suitable nomination is received in any particular year, the Committee may refrain from making an award.
6. The Mere shall be formally presented to the recipient on an appropriate occasion by the President of the New Zealand Botanical Society or his/her nominee, but otherwise shall remain in the custody of, and to be displayed by, the Herbarium Keeper of CHR at Landcare Research, Lincoln, together with the book recording awards.
7. The recipient shall receive an appropriately inscribed certificate.

**Nominations should be forwarded by 12 July 2002 (note the slightly extended deadline) to:**

**Doug Rogan**, Secretary, New Zealand Botanical Society,  
C/- Canterbury Museum, Rolleston Avenue, Christchurch 8001

### Award

Congratulations to Ross Beever, for his award of a New Zealand Science and Technology Bronze medal. The medal was recently presented by Professor Paul Callaghan (President of the Academy Council of the Royal Society of New Zealand) at a ceremony at the Auckland Museum, for 'significant contributions to mycology and plant pathology'. So far in his career with DSIR and Landcare Research Ross has collaborated in publications with over 50 fellow science workers, in areas as diverse as mechanisms of phosphorus uptake by fungi; proteins, termed hydrophobins, which keep fungal cells dry (nature's answer to 'Gore-tex'); the genetics of grey mould (*Botrytis cinerea*), particularly as it relates to fungicide resistance; the phytoplasma diseases of native plants including *Cordyline australis*; the natural variability of *C. australis*; and the systematics of New Zealand's truffleoid fungi.

### Doug Rogan

### ■ From the Editor

Please note that my address for sending contributions has changed (see inside front cover) but my email remains the same.

Joy Talbot

## Regional Botanical Society News

### ■ Auckland Botanical Society

#### AGM & March Meeting

After the AGM, at which Ewen Cameron was re-elected as President, Steve Benham and Ewen gave a combined presentation on the January camp at Molesworth, with a few scree plants from the Torlesse Range included for good measure.

### March Field Trip

Sandra Jones led this outing in the Waitakere Ranges, from the Anawhata Road to Piha. The lacebark trees and rata vines (*Metrosideros fulgens*) were flowering well, but many plants were advertising this autumn season as being one of heavy fruiting. The route included the Centennial Track to the Black Rock Dam, where we lunched seated on the remains of the old kauri dam, the Forbes and Maungaroa Tracks, and the Nikau Grove Walk. A five-headed nikau was admired on this last segment.

### Easter Camp at Mimiwhangata

Sixteen members camped in the shearing shed on this beautiful DoC coastal park, south of the Russell Peninsula. Walks were taken on the beaches and headlands and through the regenerating bush on the hinterland. Huge pohutukawas are a feature of the area, and ponds and dams are home to brown teal and many other birds.

### April Meeting

Drs Peter Buchanan and Eric McKenzie of Landcare Research spoke on "The Year of the Fungus". After an account of some fungi and their activities, and a light hearted discussion of stamps and fungi, members were taken for a tour of PDD, the NZ Fungal Herbarium.

### April Field Trip

Privately owned land on the Pukapuka Peninsula in the Mahurangi River, is beginning to show the benefit of fencing the entire coastal margin and all bush areas, and targeting animal and plant pests. A range of habitats, from shoreline, saltmarsh, freshwater swamp and bush, were explored during the day.

### May Meeting

Mike Wilcox and Wyne Johns spoke on the botanical tour of New Caledonia run by the International Dendrology Society in conjunction with the Araucariaceae Symposium held in Auckland recently. With a size roughly the same as Northland, New Caledonia has many more species of native higher plants (c. 3400) than the whole of New Zealand. Naturally enough the Araucariaceae were highlighted, but photos of other intriguing plants were also shown.

### May Field Trip

As a follow-up to the April meeting a fungal foray was held on the Workman Track in the Hunua Ranges. Only a short part of this lovely track through hard beech and kauri was covered, travelling at a mycologist's pace. Although not a good year for fungi, a range of specimens was gathered for later study. The walk was followed by an identification session at the Botanic Gardens.

### FORTHCOMING ACTIVITIES

5 June	<i>Peter de Lange</i> - "The Botany of Norfolk Island"
15 June	Shoal Bay and Le Roys Bush, North Shore
3 July	<i>Fanie Venter</i> - "Dracophyllum"
20 July	Bryophytes in Spragg Bush

**Maureen Young**, 36 Alwick Street, Warkworth. Email: [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz)

### ■ **Waikato Botanical Society**

#### TRIP REPORTS AND TALKS

#### "Botany of the Waikato" Book Launch - 20 March 2002

The "Botany of the Waikato", compiled by the Waikato Botanical Society, was launched in style at the WEL Energy Academy of Performing Arts Kapa Haka room. Sponsors and authors were acknowledged with complimentary copies, followed by an illustrated overview of the book. The evening concluded with drinks and nibbles. The book is on sale for \$35 per copy, which includes postage. To purchase, fill out the order form at the end of the Waikato News.

#### Tui in my backyard - 25 March 2002

John Innes from Landcare Research presented an interesting talk at the last AGM on the "Tui in my Backyard" project. John and other scientists are researching the abundance, distribution, movements and diet of tui, bellbirds and kereru (native pigeon) in the central Waikato. Surveying has found low



numbers in the forested blocks, and that birds travel only 3-4 km from kahikatea forest remnants. Information obtained will help to develop planting and pest management strategies that increase the presence of these birds within the Waikato region.

#### Kaimai Ranges from top to bottom – 21 April 2002

The first part of the trip involved a one hour walk in the summit cloud, where more than 80 indigenous vascular species were recorded. Highlights included the sizeable patches of *Blechnum nigrum* and a possible hybrid of *Melicytus lanceolatus* and *Melicytus ramiflorus*. We then travelled back down to the foot of the range where the forest visited was dominated by tall (> 30 m) tawa with occasional taller emergent rimu. The ground cover and understorey layers were showing excellent recovery, due to many years of fencing. More than 90 indigenous vascular species were recorded here. To conclude the trip we had a guided walk around David McNeil's magnificent garden featuring an impressive bamboo collection and many interesting exotic trees and shrubs.

#### New Caledonia – 13 May 2002

Bruce Clarkson and Chrissen Gemmill presented a highly informative and amusing summary of their expedition to New Caledonia to look at *Pittosporum* species. Bruce provided a quick overview of the main island's physical characteristics and floral similarities to New Zealand, and Chrissen showed us some excellent slides of *Pittosporum* species. Much of the fieldwork involved moving around the island sniffing for the unmistakable smell of "pitts". Bruce and Chrissen hope to return to New Caledonia in the near future to collect more specimens.

#### UPCOMING EVENTS

- Monday 10 June** Field ecology in the deserts of Mexico: - a photographic essay  
Presented by Jake Overton: Plants, landscapes and seascapes, as well as desert animals and the people of the desert. Also, some interesting points on dispersal and distribution of desert mistletoes.  
Venue: McMeekan Centre, Ruakura Research Centre, 7:30 pm.
- Monday 8 July** Weaving with native plants  
Presented by Rana Kete, an experienced weaver and weaving tutor.  
Venue: McMeekan Centre, Ruakura Research Centre, 7:30 pm.
- Saturday 17 August** Tips for gardening with native plants  
This session aims to give some tips about planting with native species. Presented by Merylyn Merrett, plant ecologist and keen gardener.  
Venue: Landcare Research, Waikato University, Gate 10 (off Silverdale Rd).
- Saturday 14 September** Hakarimata Range  
Explore the Hakarimata Range and hear about the vision of the recently formed Hakarimata Restoration Trust for this special area.  
Trip co-ordinators: Karen Denyer (ph 07 823 0405 a/hrs) and Jo Mc Queen (ph 07 858 4556 a/hrs).
- Monday 14 October** Breeding systems and rarity in New Zealand Myosotis  
Talk by DoC Waikato Conservancy botanist, Andrea Brandon.
- Sat/Sun 9-10 November** QEII covenants in the Western Waikato/ Northern King Country
- Sunday 24 November** End of year Botanical Rally



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## WAIKATO BOTANICAL SOCIETY

### Book Order Form

#### Botany of the Waikato

Please photocopy the order form on the opposite page and return with payment to:

Book Order, Waikato Botanical Society  
C/- Department of Biological Sciences  
University of Waikato  
Private Bag 3105, Hamilton

Please print clearly

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Name: ..... Number of copies .....

Address: .....

.....

Phone: .....(day) .....(evening)

Payment enclosed: ..... (\$35 per copy including postage and packaging)

Please make cheque payable to "Waikato Botanical Society Inc"

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**President: Bruce Clarkson** b.clarkson@waikato.ac.nz

**Secretary: Karen Denyer** Karen.Denyer@ew.govt.nz c/- Department of Biological Sciences,  
University of Waikato, Private Bag 3105, Hamilton.

■ **Rotorua Botanical Society**

**President: Willie Shaw** 07 362 4315

**Secretary: John Hobbs** 07348 6620, c/o The Herbarium, Forest Research, Private Bag 3020,  
Rotorua. See also [www.wildland.co.nz/botanical.htm](http://www.wildland.co.nz/botanical.htm)

■ **Wanganui Museum Botanical Group**

Evening Meetings: first Tuesday of each month in Wanganui Museum's Davis Lecture Theatre, commencing 8 pm summer (i.e. daylight saving) time; 7.30 pm winter time.

COMING MEETINGS

7 May: *Vonnie Cave* – trip around southern oceans including the Falklands and Tierra del Fuego

4 June: *Astrid Dijkgraaf* – food of kereru

2 July: *Nic Peet* – lowland Nepal, management of grasslands

6 August: *AGM* – members' contributions

3 Sept: *Nick Singers* – threatened plant management, Tongariro/Taupo Conservancy of DoC

1 Oct: *Ian Moore* – trip around Vietnam, Cambodia, Laos

COMING TRIPS

Sat 4 May: Mt Hiwi, Waverley

Sat 1 June: Virginia Lake, Wanganui<sup>f</sup>

Sat 29 June: Gordon Park weeding

Sun 4 August: Naumai Park, Hawera

Sat 31 August: Brunswick area reserves

Sat 28 Sept: Hollards' gardens, Kaponga

TRIP REPORTS

Congratulations: Neill Simpson

We extend our congratulations to Neill Simpson on his receiving of the Allan Mere last November, an award for his outstanding contributions to NZ botany. Neill was our Group's founding President.

1 December 2001, Castlecliff Beach

A trip to explore more of the dunes and cliffs west of Castlecliff Beach. Jim Campbell from DoC provided transport so that we could explore further than previous trips. We rediscovered the original group of *Pimelea* 'Turakina', then another patch further along the cliffs, with 30 flowering plants and 14 'juveniles'. Mudstone sea cliffs seem quite unlike dune slack habitats for *P. 'Turakina'* in the Manawatu, but the sites share a number of species, including *Schoenus nitens*, *Leptocarpus*, *Lobelia anceps* and *Samolus*. The sites must have a lot in common in their soil and water characteristics?

Ian Bell.

#### 2 February 2002, Karioi- Rangipo Desert

Nick Singers from DoC Turangi led us to 2 of 23 natural wetlands he had surveyed in and around the Karioi pine forests. One at the toe of the Rangataua lava flow (6000 years old) is fed by 3 copious springs that gush from under the lava. The small area we explored had tall manuka on the edges and *Olearia virgata* further out. *Carex* and *Uncinia* sedges dominated the dryish understorey, with *Schoenus pauciflorus* in damper sites. Fertile parsley ferns (*Botrychium australe*) caused much interest. Later we drove gravel tracks to the eastern edge of the pines by the Whangaehu River. The river had a sulphurous smell and rocks along the edge were stained yellow. Jokes about imminent lahar flows didn't seem totally funny in this landscape. The braided riverbed had mats of *Raoulia albo-sericea* and a few cushions of *R. australis*, *Pimelea prostrata*, *P. microphylla*, *Carmichaelia nana*, *Muehlenbeckia axillaris* and *Leucopogon fraseri*. All were in flower and/or fruit. Red tussock was flowering particularly well this summer. We saw 2 shrubs of a seemingly unnamed, divaricating, upright *Melicytus* (aff. *M. alpinus*). A short distance up-river we saw 25-30 matagouri shrubs on both banks, with a number of seedlings among the red tussock. Nick had found these matagouri last July, a very important find because it is declining around the North Island and is close to extinction west of the main ranges.

Colin Ogle

#### 29 September 2001, Forest remnant off Smith Road, southeast of Kai Iwi

Forest remnants are very rare on the coastal fringes of the Wanganui marine terraces. We explored less than 0.5 km of about 3 km of riparian forest in a branch of the Kai Iwi Stream where titoki and mahoe were the dominant trees, with *Coprosma areolata* and kawakawa common in the understorey; climbing blechnum was the most common ground cover. Stock have access, but invasive woody weeds were absent, except for clumps of butcher's broom (*Ruscus aculeatus*) in an isolated grove of karaka trees. Two regionally uncommon species were *Adiantum viridescens* and *Carex spinostris*.

Colin Ogle

#### 4 August 2001, Massey University Campus

A small group met with Dave Bull, the university grounds director/curator. Where to begin? The grounds are very extensive on attractive topography, with a heavy clay soil and subject to strongish winds. Dave has used existing shelter and planted an amazingly wide range of trees, shrubs and climbers. A few of the many that appealed to me: *Mangletia insignis*, a magnolia relative from Asia; *Quercus suber* (cork oak); *Quercus xalapensis*, another evergreen oak, from Mexico; *Hagenia abyssinica*, African, which, for example, grows on Mount Kilimanjaro; *Chorisia speciosa*, the silk floss tree; *Polyscias elegans*, a colonising tree from Australia. An exciting day, much enjoyed by all.

Clive Higgie

#### Tribute: Alf King

On 31st December 2001 we lost a confidant, sincere friend and most respected life member, Alf King, a reserved and quiet man with a profound love of plants.

Alf was born in England but the Second World War interrupted his formal education. Alf had no desire to be a combatant soldier and, when called up, joined the Medical Corp where he quickly gained the rank of Captain. Because of his scientific qualifications, he was sent to North Africa with a unit that assessed the pest and disease status of areas to which troops were to be sent. Whilst in Africa he met Pam, who was attached to a nursing unit. After the war, he completed teaching qualifications in England, married, and then embarked to Northern Rhodesia on a three-year teaching contract. At its conclusion he returned to England for six months' furlough. After completing a number of these contracts he was appointed as a Headmaster and, ultimately, as an Inspector. His time in Africa necessitated a considerable amount of travel. With his interest in botany he collected many plant specimens that he sent to Kew.

In 1964-65 Alf and his family moved to New Zealand, to a teaching post at Wanganui High School. Following his retirement here he relieved at Wanganui Collegiate, St Augustine's and Wanganui Girls' College.

A dedicated teacher, he was gifted with the ability to enthuse others. He was the Wanganui Museum's honorary botanist for many years, a member of Forest and Bird and, shortly after its inception, joined the Wanganui Museum Botanical Group. He was an active and enthusiastic member of our group and, in 1976, became its second Chairman, holding this post until 1990. For his services to the group he was made a life member.



Alf continued collecting plant specimens for both Kew and the herbarium (WELT) at Te Papa Museum. About 350 specimens, all ferns and mostly from around Wanganui, are lodged at WELT. He was widely read, with an extensive library, and was prepared to share his knowledge and books with anyone. His well-prepared and documented talks were always extremely interesting, and easily understood by all. His simple hand drawn charts were so explicit that there was no member unable to understand after viewing. Alf's other interests included bookbinding in which he excelled, restoring many old and loved books for friends.

Alf was a gifted and humble man whose contribution in many areas helped all who had contact with him. He will be missed. Pam, his wife of more than fifty years, and three sons survive him. *Ian Bell*

**Chairman: Ian Bell** 06 343 7686, 115 Mt View Road, Wanganui  
**Secretary: Robyn Ogle** 06 347 8547, 22 Forres Street, Wanganui

## ■ Wellington Botanical Society

### PROGRAMME

- Saturday 6 July:* Field trip in three parts – 1. Industrial Research Ltd, Gracefield, 2. rare Leptinella hunt, 3. Petone Esplanade native plantings.
- Monday 15 July:* "some aspects of the botany of the Bay of Plenty" – *Graeme Jane*
- Saturday 3 August:* Field trip to private forest, Western Hutt hills.  
The 3.9 ha remnant includes stands of tawa, hinau, rewarewa and nikau.
- Monday 19 August:* AGM  
"Tony Druce, field botanist extraordinaire" – *Dr Brian Molloy*
- Saturday 7 September:* Field trip to Otari-Wilton's bush – Johnston Hill Reserve.
- Monday 16 September:* Evening meeting – tba
- Saturday 5 October:* Field trip to the Strathmore area.
- Monday 21 October:* Evening meeting – tba
- Saturday 2 November:* Field trip to Kapiti Island
- Monday 18 November:* "Ecological monitoring in Wellington Conservancy" – *Dr Steve Ulrich*.
- Saturday 7-Sunday 8 December:* Field trip to South Wairarapa.
- 2-12 January 2003* Field Trip: Bay of Plenty

We will visit Mt Te Aroha and several other places along the Kaimai Range; coastal pohutukawa, puriri and kohekohe forests; coastal wetlands, dunelands and mangroves; the thermal areas of Rotorua, pohutukawa/hard beech forests and the dense podocarp forests of the Urewera fringes.

To be assured of accommodation you will need to book by September.

### REPORTS (All reduced in length by the Editor)

#### 19-20 January: South Wairarapa

We began our weekend with a visit to a remarkable kahikatea/tawa swamp forest. In this 1.9 ha remnant, protected since 1998 by a QEII Open Space Covenant on the property of Eileen Brindle and David Stone, we listed 94 species during a three-hour visit. We were impressed by the stature of the canopy and emergent trees, including kahikatea, rimu, totora, miro and matai, the range of smaller tree and fern species and the overall good condition of the forest. Four years of possum poisoning was clearly seen by the many seedlings present. Unfortunately, a strong southerly with heavy rain, which arrived that afternoon, disrupted the rest of the weekend. *Chris Horne*

#### 2 February: Te Marau Bush workbee

Our team of 10 worked very hard releasing last winter's plantings from convolvulus, blackberry, broom and fennel. The *Tradescantia* spraying carried out last spring has mostly been successful and seedlings are already beginning to appear. Most exciting was to find a silvereye's nest with nestlings in a koromiko, one of the recent plantings! *Sue Millar and Glennis Sheppard*

18 February: Dr Paul Blaschke, Boffa Miskell – Ecological sites in Porirua City

Paul spoke about a survey commissioned by Porirua City Council of 171 sites with a wide range of tenure within the Council area. Sites were assessed relative to each other and included private land, Mana Island, some Maori land and large parts of the Pauatahanui catchment north of Haywards Hill Road. With reasonable representation across eco-domains, Paul and his colleagues were able to advise that the management priorities of the PCC should be to maintain/improve the health of PCC's own sites, rather than acquire more sites. Barbara Mitcalfe

3 March: Boulder Hill Key Native Ecosystem, Belmont Regional Park

In heavy NW rain, 14 stalwart members began the day botanising the more sheltered parts of the KNE in the basin at the head of Speedys Stream. We were impressed by the abundant covering of bryophytes, and the variety of ferns, a total of 46 species. After lunch, sunshine led us onto a grassy spur from which we traversed on an old benched track back to the Boulder Hill track. Here we found another young *Raukaua edgerleyii* to add to the two previously found. We also noted a small population of *Melicytus lanceolatus* near the junction with the Boulder Hill track. Peter Beveridge

29-31 March: Rimutaka Range

On Friday afternoon, from our base in the Tararua Tramping Club's Waerenga Hut on the true left of Browns Stream, we botanised up the spur above the hut to about 425 m asl, seeing plants ranging in size from the tiny *Grammitis ciliata* to a large karaka and northern rata.

On Saturday, we botanised from the Orangorongo River up the Mt Mathews Track to the summit at 941 m. Highlights of the climb were additions to Tony Druce's species list including young *Melicytus lanceolatus* and a sapling *Raukaua edgerleyii*, the roar of the gale, and the heaving of the root plates of the silver beech trees lurching in the wind. On the Sunday we botanised up the spur on the true right of Browns Stream. We saw about 12 *Hericium coralloides* fungi on the side of a northern rata windfall. It was this spectacular fungus which featured on the \$1.30 stamp issued by NZ Post, with other fungi stamps, earlier this year. Chris Horne

4 May: Te Oranga Whenua, QEII Covenant, Stokes Valley

Joy and Phil Waddington welcomed over 30 of us to their newly covenanted site. In the valley bottom, kahikatea and totara towered above the wetland with its *Dicksonia squarrosa* and *Gahnia xanthocarpa* understorey and occasional swamp maire, *Syzigium maire*. A benched track, nearly 150 years old, wound in and out of gullies with massive hard beech in the canopy and luxuriant ferns clothing the banks, including eight species of *Hymenophyllum*. A gully where keikei, *Freycinetia baueriana* ssp *banksii*, was in fruit was a tribute to the successful pest control being carried out. Manuka and shrubby species such as *Leptocophylla* (= *Cyathodes*) *juniperina* and *Coprosma rhamnoides* dominated drier slopes.

Ropey Japanese honeysuckle reaches to the tops of some of the podocarps but fortunately the QEII Trust has obtained funding for initial control at least. Barbara Mitcalfe

**President: Vicky Froude** Ph: 04 233 9823 (h)

**Secretary: Barbara Clark**, P O Box 10 412 Wellington 6036. Ph: 04 233 8202 (h); 04 233 2222 (fax)

■ **Nelson Botanical Society**

WALKS PROGRAMME 2002-2003

TIME	PLACE	LEADER
16 June	Glengyle Downs covenant	Melanie Newfield, 03 546 9335
21 July	Cable Bay Road, covenant	Julie McLintock, 03 545 0989
18 August	Beuke's property, covenant, Neudorf Rd	Sally Warren, 03 546 6637
15 September	Sharlands Creek, Maitai Valley	Lisa Seckler, 03 545 1413
20 October	Lower Wangapeka	Rob Landau, 03 522 4472
17 November	Orchids, Pelorus Trig	Lisa Seckler, 03 545 1413 Rebecca Bowater, 03 545 1260

15 December	Sabine/D'Urville delta	Edith Shaw /Pamela Sirett, 03 548 1726, 03 542 3414
19 January	Horseshoe Basin, Mt Arthur	Lisa Seckler, 03 545 1413
16 February	Barron's Flat, Golden Bay	Shirley Hayward, 03 525 9656
16 March	Whangamoia River mouth	Shannel Courtney, 03 548 7537
20 April	No trip (Easter Camp)	
18 May 2003	Brook Valley	Gay Mitchell, 03 548 3351

#### TALKS PROGRAMME

20 May	<i>Bill Malcolm</i> – Mosses, Lichens, Liverworts
17 June	<i>Rebecca Bowater</i> – NZ Alpines
22 July	<i>Hugh Wilson</i> – Stewart Island – Meeting at Suter Gallery with viewing of Stewart Island paintings beforehand
19 August	<i>Phil Garnock-Jones</i> – Parahebes
16 September	<i>Cathy Jones</i> – Mt Ruapehu plants

#### CAMPS

Labour weekend 2002	Northwest Nelson (north of Maungarakau) – <i>Cathy Jones</i>
Anniversary weekend 2003	Upper Wangapeka – <i>Edith Shaw/Pamela Sirett</i>
Easter 2003	Karamea – <i>Sally and Guyon Warren</i>

Camp contact: Julie McLintock, 03 545 0989

**President: Cathy Jones**, Flat 2, 5 North Rd, Nelson. Phone 03 546 9499.

Email: [cjones@doc.govt.nz](mailto:cjones@doc.govt.nz)

**Treasurer: Gay Mitchell**, 13 Albert Rd, Nelson. Phone 03 548 3351

#### ■ Canterbury Botanical Society

REPORTS (The first two reports have been reduced in length by the Editor)

##### April Field Trip: Kaituna Lagoon, Te Waihora (Lake Ellesmere)

The area we looked at was beside the eastern-most tip of Te Waihora. The most obvious vegetation was the black mounds of *Plagianthus divaricatus*. On the lakeside is an extensive flat where the salt level is higher than in the lake as a result of evaporation and here we found *Sarcocornia quinqueflora* in great abundance. Other salt-tolerant species included *Juncus maritima* var. *australiensis*, *Mimulus repens*, *Lilaeopsis*, *Triglochin striata* and, in the really shallow areas, patches of *Leptinella dioica*. Nearer the Christchurch/Akaroa highway a boggy area contained *Bulboschoenus caldwellii*, *Leptocarpus similis* and *Elymus rectisetus* while across the road on the cliffs a bush of *Linum monogynum* was thriving. *Daphne Banks*

##### May Meeting

Matt McGlone's talk on "Our Gondwanan flora: dispersal or persistence?" drew a capacity audience. He began by describing how biogeographic opinions, from those of Charles Darwin to New Zealand's Charles Fleming, fluctuated between attributing shared biota to dispersal, land bridges and, more recently, continental drift. Leon Croizat developed the school of panbiogeography, which has been enthusiastically adopted by several NZ biologists. This claims that New Zealand bears its original Gondwanan cargo of plants and animals and advocates land connections, while rejecting long-distance dispersal in all but trivial cases.

A recent burst of work on evolutionary relationships among plants based on molecular genetics and

cladistics and re-examination of the fossil record in the light of this, has strongly swung the pendulum the opposite way. Molecular phylogeny has assigned most of our forest trees to an origin during the Tertiary, and many of our shrubs and herbs, even those shared with South America, arrived within the last few million years. Matt discussed Mike Pole's work on plant fossils, that indicated that through the Tertiary, the NZ flora mirrored the changes in the Australian flora, but with a time lag. This led Mike to suggest that our flora has been constantly renewed through dispersal across the Tasman Sea, which had reached its present width by the end of the Cretaceous. Matt conceded that successful dispersal over oceanic distances, especially of large-fruited plants such as karaka, is hard to envisage, but suggested two mechanisms. One is that plants 'surfed a wave' of temporary islands sited along the deep-sea ridges that extend from NZ to the north-west, including New Caledonia. The other is that during the mid-Tertiary NZ largely consisted of a scatter of volcanic islands, providing open habitats where invaders would have been less subject to competition from resident vegetation. Finally, Matt proposed that the term "Gondwanan" has little relevance in relation to our present flora, and that a term such as "South Temperate" would be more appropriate. *Peter Wardle*

#### May Field Trip: Tour of Southern Hemisphere plants, Christchurch Botanic Gardens

This tour was a fitting sequel to the previous evenings talk. Max Visch located the plants, and Matt McGlone outlined current knowledge as to their affinities. Highlights included Australian araucarias and *Podocarpus*, Chilean and Australian *Nothofagus*, South American *Drimys* and the related Australian *Tasmannia*, and Chilean *Laurelia* and *Lapageria*, the latter in the same family as our *Luzuriaga*.

#### COMING EVENTS

Friday July 5      *Ingrid Gr/ner*: More about *Carmichaelia*  
Saturday July 6      Heathcote River, Leader *Colin Burrows*

**Secretary: Roger Keey**      03 315 7510, 03 358 8513, P O Box 8212, Riccarton, Christchurch.  
Email: wrtc@cape.canterbury.ac.nz

#### ■ **Wakatipu Botanical Group**

##### CONTACTS

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#### ■ **Botanical Society of Otago**

**Chairman: Bastow Wilson**      Email: bastow@otago.ac.nz

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## RESEARCH REQUEST

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#### ■ **Grasses needed to complete chromosome counts for the family Gramineae/Poaceae**

The chromosome numbers have now been counted for approximately 2/3 of the endemic species of grass (Dawson, 2000; de Lange & Murray, 2002; de Lange & Murray, in preparation) and we would be pleased to receive seed or plants from known localities of any of the following species so that the survey can be completed. In general, grasses are easily dug up and transplanted and just a few tillers with the leaves trimmed and a small amount of the root ball will usually be successfully transplanted.

Because grasses can be difficult to identify we encourage people to enclose (if at all possible) a suitable flowering/seeding piece with the live plant as this will help provide the all important voucher specimen we need to confirm the specimen's identity.

All contributions will be fully acknowledged.

We also recognize that many of the species listed below are endemic to or mainly found on subantarctic islands. But dreams are still free aren't they?

## References

- Dawson MI 2000: Index of chromosome numbers of New Zealand indigenous spermatophytes. *New Zealand Journal of Botany* 38: 47-150.
- de Lange PJ, Murray BG 2002: Contributions to a chromosome atlas of the New Zealand Flora – 37. Miscellaneous families. *New Zealand Journal of Botany* 40: 1-23.

## List of grasses needed to complete chromosome counts for the NZ endemic species

Genus	species
Agrostis	<i>imbecilla</i> <i>oresbia</i> <i>pallescens</i> <i>petriei</i> <i>subulata</i>
Cenchrus	<i>caliculatus</i>
Chionochloa	<i>conspicua</i> subsp. <i>cunninghamii</i> <i>cheesemanii</i> <i>crassiuscula</i> subsp. <i>crassiuscula</i> subsp. <i>directa</i> subsp. <i>torta</i> <i>defracta</i> <i>flavescens</i> subsp. <i>brevis</i> subsp. <i>hirta</i> subsp. <i>lupeola</i> <i>flavicans</i> f. <i>temata</i> <i>juncea</i> <i>lanea</i> <i>pallens</i> subsp. <i>pallens</i> <i>rigida</i> subsp. <i>amara</i> <i>rubra</i> var. <i>inermis</i> <i>rubra</i> subsp. <i>cuprea</i> subsp. <i>occulata</i> <i>vireta</i>
Deschampsia	<i>gracillima</i> <i>pusilla</i>
Deyeuxia	<i>lacustris</i>
Elymus	<i>saccandros</i>
Festuca	<i>actae</i> <i>deflexa</i> <i>luciarum</i> <i>matthewsii</i> subsp. <i>matthewsii</i> subsp. <i>aquilonia</i> subsp. <i>pisamontis</i> <i>ultramafica</i>
Hierochloa	<i>cuprea</i> <i>fusca</i> <i>brunonis</i> <i>novae-zelandiae</i> <i>equiseta</i>
Koeleria	<i>riguorum</i>
Lachnagrostis	<i>elata</i> <i>littoralis</i> subsp. <i>salaria</i> <i>glabra</i> <i>leptostachys</i> <i>pilosa</i> subsp. <i>nubifera</i> <i>tenuis</i> <i>uda</i>
Lepturus	<i>repens</i> var. <i>cinereus</i>
Poa	<i>acicularifolia</i> subsp. <i>ophitalis</i> <i>antipoda</i>

	<i>aucklandica</i> subsp. <i>rakiura</i>
	<i>celsa</i>
	<i>cookii</i>
	<i>incrassata</i>
	<i>intrusa</i>
	<i>maia</i>
	<i>schistacea</i>
	<i>senex</i>
	<i>sublimis</i>
	<i>sudicola</i>
	<i>tonsa</i>
	<i>xenica</i>
<i>Puccinellia</i>	<i>walkeri</i> subsp. <i>walkeri</i>
	subsp. <i>antipoda</i>
	subsp. <i>chathamica</i>
<i>Rytidosperma</i>	<i>merum</i>
	<i>nudum</i>
	<i>pulchrum</i>
	<i>viride</i>
	<i>tenuis</i>
<i>Stenostachys</i>	<i>deceptorix</i>
<i>Zotovia</i>	<i>acicularis</i>

**Brian Murray**, School of Biological Sciences, The University of Auckland, Private Bag 92019, Auckland; **Peter J. de Lange**, Science & Research Unit, Department of Conservation, Private Bag 68908, Newton, Auckland.

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## SYMPOSIUM REPORT

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### ■ Araucariaceae Symposium

The International Dendrology Society hosted a symposium in Auckland 14-17 March 2002 on the Araucariaceae. Some 120 people attended, and 55 papers were presented on genetics, taxonomy, ecology, palaeontology, entomology, forestry, conservation, and dendrology of the family, which comprises *Araucaria* (19 spp.), *Agathis* (21 spp.), and *Wollemia* (1 sp.). David de Laubenfels, the noted American taxonomist of the Malesian and New Caledonian gymnosperms, got the programme off to a fine start by announcing that he is splitting *Araucaria* into two genera – *Araucaria* for the “prickly” leaved group (*A. araucana*, *A. bidwillii*, *A. hunsteinii*, *A. angustifolia*), and *Eutassa* (an earlier name resurrected) for the others, with *Eutassa heterophylla* (Norfolk pine) as the type species.

Before the symposium, 60 delegates toured Northland for three days visiting kauri forests at Trounson Park and Waipoua Forest, and various historic sites. The Whangarei District Council has recently opened an aerial boardwalk in the A. H. Reed kauri forest: it is well worth a visit.

In conjunction with the symposium there was a comprehensive tour of Auckland to look at cultivated Araucariaceae, including notable examples of Queensland kauri (*Agathis robusta*), parana pine (*Araucaria angustifolia*), monkey puzzle (*Araucaria araucana*), bunya pine (*Araucaria bidwillii*), pin colonnaire (*Araucaria columnaris*), and the ubiquitous Norfolk pine. Bunya cones were falling, and the delegates were treated to roasted bunya nuts at an evening dinner at Ayrliès Gardens at Whitford. Delegates were also able to visit the Cascade Kauri Forest or travel on Watercare’s magnificent “Rainforest Express” in the Waitakere Ranges.

After the symposium 37 delegates visited New Caledonia for 12 days. This was a very busy and productive tour, greatly assisted by the botanical leadership of John Dawson and David de Laubenfels. The group was able to visit most of the local *Agathis* and *Araucaria* populations, other intriguing local conifers, including the parasitic podocarp *Parasitaxus ustus*, and to study the remarkable flora of the ultramafic massifs.

The symposium and tours were organised and conducted by IDS members Graeme Platt and Mike Wilcox, and we believe it was a botanically significant event. The proceedings are to be published by the International Dendrology Society as a book – “Natural history of the Araucariaceae”.



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## NOTES AND REPORTS

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### Report

#### ■ Never seen that before!

Ewen Cameron reckons that anyone who finds three new flowering plants in as many days should give an account of his good fortune. My opportunity came at Great Island in the Three Kings Group, which is about 33 nautical miles off Cape Maria van Dieman at the top of the North Island. It was T.F. Cheeseman who drew attention to the botanical significance of these islands when he was landed for a few hours from government steamers looking for castaways – the *Stella* in 1887 and *Hinemoa* in 1889. He found five new flowering plants and a fern.

The island was inhabited by Maori when Tasman discovered it. They had cleared the forest and made garden plots but by Cheeseman's time they had been gone for maybe fifty years. So he collected in regenerating forest, noting the absence of well grown trees. But with him goats were landed for castaways to hunt. Their breeding was not checked and by the 1930s the island was kanuka and grass.

Great Island is about 3 km long and 300 m high. With time spent getting ashore Cheeseman would not have traversed much of it. Yet half a century elapsed before a scientific party camped to study more thoroughly what was now a sadly depleted place. At the end of the war the Navy had time on their hands and agreed that H.M.S Arbutus would land a party from the Auckland Museum to camp for a week. I was lucky enough to be the botanist, having been there before when the Museum's "Will Watch" Expedition paid a brief visit in 1934. We camped in Castaway Valley by the ruins of the Marine Department's hut.

I was making my way with another of our party from this base to the headwaters of the main Tasman Valley when we were halted in our tracks by some large glossy leaves contrasting sharply with the kanuka supporting them. We had never seen anything like this in the bush. Thus was the tropical liane *Tecomanthe speciosa* discovered. It was not in flower but Graham Turbott, camping eighteen months later with the goat shooting party, managed to relocate it and get flowers.

The plant, still living, is rooted between two trickles of water that are part of the headwaters of the principal valley. It is now certain that there is no other plant growing in the wild. It seemed that it might be dependent on a really moist root run, but Jim Hunter at the Plant Diseases Division, DSIR, soon had it growing strongly from cuttings. It is not self-sterile and sets large pods of abundant seed. In cultivation it may defer climbing for a year or two but it then moves fast. It adds the tropical family Bignoniaceae to our flora and can be bought at any garden centre.

Next day I was approaching a rocky knoll when I saw a few trunks with corky bark like cabbage trees but with a crown of rangiora leaves devoid of the usual billowing inflorescences. Instead there were short sprigs of florets shorter than the leaves. Dr Oliver did not hesitate to establish the species *Brachyglottis arborescens* though Allan gives it only varietal status. It is not at risk as a second clump turned up across the island: it is on West Island and has spread well in today's regenerating forest. But it is a tricky garden plant, prone to root rot and to frost.

It was not difficult to get along in the kanuka forest but you couldn't see far. Frequently I climbed up for an overview and made my way to anything that broke through the kanuka canopy. Always it was pohutukawa but usually, there would be mahoe and litsea beneath. My third surprise was beneath a pohutukawa down a boulder slope leading to the cliffs not far from the highest point of the island. At first I took this small tree to be a karaka, but there were no big yellow berries, only a few little black fruits coming off stems below the leaves. I had not a clue as to what this might be and Dr Oliver was misled by the resemblance to karaka into putting it into a related family. It was not a good fit and a new genus *Plectomirtha* had to be erected for it. It has since been placed in *Pennantia* and though it is

vegetatively substantially unlike the mainland *P. corymbosa* it crosses readily with it.

The sole surviving tree could live indefinitely as it has several trunks and adds to them by shoots from its base. I was nevertheless concerned lest some disaster befall it and relieved when a shoot from its base took root in Dunedin to produce a tree now about seven metres tall. There are a few comparable trees round Auckland raised with difficulty from reluctant cuttings. They do not set much fruit as there is little good pollen. But its future in cultivation has been assured by Ross Beever and Geoff Davidson who planted all the seeds they could find and raised an individual which, while still morphologically female, sets abundant viable seed.

In 1946 the Department of Internal Affairs shot all the goats and forest regeneration has been vigorous. Seedlings of *Tecomathe* and *Pennantia* have yet to be found but the former will persist by layering and the latter will add to its several trunks by more shoots from ground level.

The great interest in Great Island now is in what natural regeneration will achieve undistorted by any planting and the risk this entails of introducing root pathogens. The enthusiasm of gardeners removes any absolute threat to its two truly unique plants.

Geoff Baylis, 367 High Street, Dunedin

## Research Report

### ■ New genera, reinstatements and combinations for New Zealand Orchidaceae (Tribe Diurideae)

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#### Introduction

Jones et al. (2002) have just published their new assessment of the arrangement of various orchids within Tribe Diurideae (Orchidaceae). Many of the proposed changes are primarily based on the use of the nrDNA ITS sequence region. However, the authors assure the reader that many of the decisions reached from the sequence data are also backed up by sound morphological and at times cytological data (B.P.J. Molloy pers. comm.). In as so far as this paper affects New Zealand orchid genera, and using the treatment of Moore (in Moore & Edgar 1970) as the baseline, I have prepared the following summary of their work. Other interpretations are possible.

#### Generic changes affecting *Corybas*

##### ***Corybas* Salisbury**

As redefined by Jones et al. (2002) *Corybas* now comprises some 12 species distributed in Australia, New Zealand, New Caledonia, Papua New Guinea and Indonesia. New Zealand has retained one endemic species.

***Corybas cheesemanii*** Hook.f. ex Kirk in T.N.Z.I. 3, (1871), 180.  
= *C. aconitiflorus* Salisbury *Parad. London.* (1805), t. 83.

#### New Genus

***Anzybas* D.L.Jones et M.A.Clem.** *The Orchadian* 13(10): 442, (2002).

New genus, endemic to Australia and New Zealand, comprising c. 6 spp. Name derives from **Australia/New Zealand** and ***Corybas***.

#### New Combinations

***Anzybas carsei*** (Cheeseman) D.L.Jones et M.A.Clem. *The Orchadian* 13(10): 443 (2002).

≡ *Corysanthes carsei* Cheeseman, T.P.N.Z.I. 44: 162, (1912)

≡ *Corybas carsei* (Cheeseman) Hatch. T.P.R.S.N.Z. 75: 367, (1945)

Notes: Whether this species is truly distinct from the Australian endemic *A. (Corybas) fordhamii* (Rupp) D.L.Jones et M.A.Clem. still remains unresolved (B.P.J. Molloy pers. comm.)

**Anzybas rotundifolius** (Hook.f.) D.L.Jones et M.A.Clem. *The Orchadian* 13(10): 443 (2002).

≡ *Nematoceras rotundifolia* Hook.f., *Fl. Nov.-zel.* 1: 251 (1853)

≡ *Corybas rotundifolia* (Hook.) Reichb.f. *Beitr. Syst. Pflk.* 67 (1871)

= *Corysanthes matthewsii* Cheeseman, *T.P.N.Z.I.* 31: 351 (1899)

= *Corybas matthewsii* (Cheeseman) Schltr., *Repert. Spec. Nov. Regni Veg. Beih.* 19: 23 (1923)

Notes: Moore (Moore & Edgar 1970) equated New Zealand plants of *A. rotundifolius* with the Australian endemic *A. (Corybas) unguiculatus*, and followed Hatch (*T.R.S.N.Z.* 75, 367 (1945)) in treating the type of this species (*Nematoceras rotundifolia*) as a synonym for *Singularybas (Corybas) oblongus*.

#### New Genus

**Molloybas** D.L.Jones et M.A.Clem. *The Orchadian* 13(10): 448, (2002).

New genus, monotypic and endemic to New Zealand. Named after Brian Peter John **Molloy** (1930 - ) and *Corybas*.

#### New Combination

**Molloybas cryptanthus** (Hatch) D.L.Jones et M.A.Clem. *The Orchadian* 13(10): 448, (2002).

≡ *Corybas cryptanthus* Hatch, *T.P.R.S.N.Z.* 83: 577 (1956)

#### Reinstated Genus

**Nematoceras** Hook.f. *Fl. Nov.-zel.* 1: 249 (1853).

Reinstated genus of c. 20 spp. endemic to the New Zealand Botanical Region (incl. Macquarie Island). Name derived from Greek **nema** - a thread, and **ceras**, a horn, in reference to the long lateral sepals and petals.

#### Reinstated Combinations

**Nematoceras macrantha** Hook.f. *Fl. Nov.-zel.* 1, 250, t. 57A, (1853).

≡ *Corysanthes macrantha* (Hook.f.) Hook.f. *Handbook. N.Z.Fl.*, 266, (1864)

≡ *Corybas macranthus* (Hook.f.) Reichb.f. *Beitr. Syst. Pflk.* 67, (1871).

**Nematoceras triloba** Hook.f. *Fl. Nov.-zel.* 1, 250, (1853).

≡ *Corysanthes triloba* (Hook.f.) Hook.f. *Handbook. N.Z.Fl.*, 265, (1864)

≡ *Corybas trilobus* (Hook.f.) Reichb.f. *Beitr. Syst. Pflk.* 67, (1871).

Notes: As presently circumscribed *N. triloba* is a species aggregate, whose taxonomic status is under revision by B.P.J. Molloy ( pers. comm.).

#### New Combinations

**Nematoceras acuminata** (M.A.Clem. et Hatch) Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002).

≡ *Corybas acuminatus* M.A.Clem. et Hatch. *N.Z.J.Bot.* 23: 491-494, f.2 (1985)

Notes: Moore (Moore & Edgar 1970) confused this species with *N. (Corybas) rivularis*. Later Clements & Hatch (*loc.cit.*), when comparing the type of *N. (Corybas) rivularis* (≡ *Acianthus rivularis* A.Cunn.) with the orchid referred to it by Moore in her Flora treatment, recognised that Moore's orchid was not *N. (Corybas) rivularis* but an undescribed species which they subsequently named *Corybas acuminatus*. Jones et al. (2002) then transferred this species to *Nematoceras*.

**Nematoceras dienema** (D.L.Jones) D.L.Jones, M.A.Clem., et Molloy, *The Orchadian* 13(10): 449, (2002).

≡ *Corybas dienemus* D.L.Jones, *Fl. Austral.* 50: 572, (1993)

Notes: Apparently endemic to Macquarie Island, where it had previously been confused with *N. (Corybas) macrantha*.

**Nematoceras hypogaea** (Colenso) Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002).

≡ *Corysanthes hypogaea* Colenso, T.P.N.Z.I. 16: 336-337 (1884)

Notes: Although she did not see the type (stating it was "not found") Moore (Moore & Edgar 1970) equated Colenso's species as a mixed collection of the leaves of *N. (Corybas) triloba* and flowers and fruits of *Molloybas cryptanthus*. The type material resides at K, and this diminutive but little known segregate of the *N. (Corybas) triloba* agg. is now known to be amply distinct. Although considered an inhabitant of beech (*Nothofagus*) forest, I have seen and collected it from under kanuka (*Kunzea* aff. *ericoides*) at Te Kauri Scenic Reserve, near Kawhia (AK!). Its subsequent recognition owes much to the fieldwork and devotion of Ian St George.

***Nematoceras iridescens*** (Irwin et Molloy) Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002).

≡ *Corybas iridescens* Irwin et Molloy, *N.Z.J.Bot.* 34: 1-5, f.1 (1996)

***Nematoceras longipetala*** (Hatch) Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002).

≡ *Corybas macranthus* var. *longipetalus* Hatch, T.P.R.S.N.Z. 76: 580, t.60(1) (1947)

Notes: Moore (Moore & Edgar 1970) included this species within her concept of *N. (Corybas) orbiculata*. Various workers, but especially Bruce Irwin, have shown that this species, as *Corybas* "Waiouru", is amply distinct from other orchids of the *N. (Corybas) rivularis* complex.

***Nematoceras orbiculata*** (Colenso) Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002).

≡ *Corysanthes orbiculata* Colenso, T.N.Z.I. 23: 389 (1891)

≡ *Corybas orbiculatus* (Colenso) Moore Fl. N.Z. 2. 118 (1970)

Notes: Although Moore (Moore & Edgar 1970) transferred *Corysanthes orbiculata* Colenso to *Corybas*, she confused it with the taxon now known as *N. (Corybas) rivularis*. *N. orbiculata* is an uncommon but amply distinct species found throughout New Zealand and the main Chatham Island. It has also been known as *Corybas* "short tepals".

***Nematoceras pandurata*** (Cheeseman) Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002).

≡ *Corysanthes rotundifolia* var. *pandurata* Cheeseman, *Man.N.Z.Fl.* 366, (1925)

Notes: Evidently a distinct species (B.P.J. Molloy pers. comm.) but one whose exact distribution and conservation status needs elucidating. Considered by Moore (Moore & Edgar 1970) to be a minor variant within *N. (Corybas) orbiculatus*.

***Nematoceras papa*** (Molloy et Irwin) Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002).

≡ *Corybas papa* Molloy et Irwin, *N.Z.J.Bot.* 34L: 5-7, f.1 (1996).

***Nematoceras papillosa*** (Colenso) Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002).

≡ *Corysanthes papillosa* Colenso, T.P.N.Z.I. 16: 337-338 (1864)

Notes: Moore (Moore & Edgar 1970) who stated "Type: Not Found" nevertheless equated Colenso's species with *N. (Corybas) macrantha*. This is evidently a distinct species (B.P.J. Molloy pers. comm.), though again one whose exact distribution and conservation status needs elucidating.

***Nematoceras rivularis*** (A.Cunn.) Hook.f. *Fl.Nov.-zel.* 1: 251 (1853).

≡ *Acianthus rivularis* A.Cunn., *Compan. Bot. Mag.* 2: 376 (1837)

≡ *Corysanthes rivularis* (A.Cunn.) Hook.f. *Handbk. N.Z.Fl.* 266 (1964)

≡ *Corybas rivularis* (A.Cunn.) Reichb.f. *Beitr. Syst. Pflk.* 67 (1871)

≡ *Nematoceras rivularis* (A.Cunn.) Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002)

Notes: A difficult species complex still under taxonomic investigation. Moore (Moore & Edgar 1970) confused Cunningham's species with that now known as *N. (Corybas) acuminata*. Although Clements & Hatch (*loc. cit.*) correct this they incorrectly equated Cunningham's type with Colenso's *N. (Corybas) orbiculata*. Although this error has now been cleared up, a full circumscription of *N. rivularis*, and the status of the variants currently associated with it still need clarification. More difficult to understand is the fact that Jones et al. (2002), in reinstating

*Nematoceras*, provided a new combination for this species, viz., *N. rivularis* (A.Cunn.) Molloy, D.L.Jones et M.A.Clem., treating the earlier combination of Hooker (1853) as "pro parte" - the implication being, I presume, that Hooker's combination included other elements within it. Without a fuller explanation than that offered by Jones et al. (2002), it is difficult to understand why Hooker's combination, based as it is on Cunningham's type, and a clear and direct reference to it, is in anyway invalid, illegitimate, ineffectively published, or indeed warrants listing in synonymy as "pro parte". Whether Hooker's circumscription of this species differed from Cunningham's is irrelevant. Cunningham's type is a uniform gathering involving one taxon (see Clements & Hatch *loc. cit.*), not several, thus under Article 47.1 of the ICBN (Greuter et al. 2000), Hooker's combination based as it must be on Cunningham's type should take precedence over that offered by Jones et al. (2002). This is the course of action I have adopted here.

#### New Genus

***Singularybas*** Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002).

A new genus of 2- 3 species (one described) endemic to New Zealand. Epithet based on the Latin *singularis* (solitary) and *Corybas*.

#### New Combination

***Singularybas oblongus*** (Hook.f.) Molloy, D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 449, (2002).

≡ *Nematoceras oblonga* Hook.f., *Fl. Nov.-zel.* 1: 250, t.57B (1853).

≡ *Corysanthes oblongua* (Hook.f.) Hook.f. i. 266, (1864)

#### Status of *Paracaleana* Blaxell

Based on ITS sequence data it is clear that *Caleana* and *Paracaleana* form a well-supported clade, with the two genera amply distinct from each other. Therefore Blaxell's genus *Paracaleana* (*Contr. N.S.W. Natl. Herb* 4: 281 (1972) has been reinstated, with the type *P. minor* (R.Br.) Blaxell also known as a vagrant species in New Zealand.

#### Reinstated Genus and Species Combination

***Paracaleana minor*** (R.Br.) Blaxell

≡ *Caleana minor* R.Br., *Prod.* 329 (1810)

#### Status of *Simpliglottis* D.L.Szlachekto

Szlachekto (2001) split *Chiloglottis* R.Br. *Prod.* 322 (1810) into two genera, recognising *Simpliglottis* as new, though admittedly with minimal explanation. Subsequently Jones et al. (2002) note that the morphological distinction between the genera is slight (e.g., in *Simpliglottis*, through possessing a larger flower, spreading to incurved petals, and tremulous labellum), and that, using ITS sequence data, the generic distinction is not upheld. On this basis they relegate *Simpliglottis* to subgeneric status within *Chiloglottis*. Affected New Zealand species are *Simpliglottis valida* and *S. cornuta*, which are now transferred back to *Chiloglottis* R.Br.

#### Reinstated Names

***Chiloglottis cornuta*** Hook.f. *Fl. Antarct.* 1, 69 (1844)

≡ *Simpliglottis cornuta* (Hook.f.) D.L.Szlachekto *Polish Bot. Jour.* 46: 13 (2001)

***Chiloglottis valida*** D.L.Jones *Austr. Orch. Research* 2: 43 (1991)

≡ *Simpliglottis valida* (D.L.Jones) D.L.Szlachekto *Polish Bot. Jour.* 46: 13 (2001)

#### Status of *Genoplesium* R.Br. and *Corunastylis* Fitzgerald.

Previously Jones & Clements (1989) in their revision of subtribe Prasophyllinae reinstated the genus *Genoplesium* R.Br. as distinct from *Prasophyllum* R.Br. Affected New Zealand species included those treated by Moore (Moore & Edgar 1970) as *Prasophyllum nudum* Hook.f. and *P. pumilum* Hook.f. At the time Jones & Clements (*loc.cit.*) did not use sequence data. Subsequent investigation of the type of *Genoplesium*, *G. baueri* R.Br. using ITS revealed its distinctiveness from the other species transferred to *Genoplesium*, and in turn these species remained amply distinct from *Prasophyllum*. Accordingly Fitzgerald's genus *Corunastylis* is now revived for these species.

## Reinstated Genus

***Corunastylis*** Fitzgerald, *Austral. Orch.* 2: t.1 (1888)

## New Combinations

***Corunastylis nuda*** (Hook.f.) D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 461, (2002).

≡ *Prasophyllum nudum* Hook.f. *Fl. Nov.-zel.* 1: 242 (1853)

≡ *Genoplesium nudum* (Hook.f.) D.L.Jones et M.A.Clem. *Lindleyana* 4: 144 (1989)

***Corunastylis pumila*** (Hook.f.) D.L.Jones et M.A.Clem., *The Orchadian* 13(10): 461, (2002).

≡ *Prasophyllum pumilum* Hook.f. *Fl. Nov.-zel.* 1: 242 (1853)

≡ *Genoplesium pumilum* (Hook.f.) D.L.Jones et M.A.Clem., *Lindleyana* 4: 144 (1989)

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### ■ Annotated summaries of letters to colleagues by Leonard Cockayne – 3

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#### Introduction

The aim of this series has been to provide an insight into the development of botany in NZ from the letters of Dr Leonard Cockayne (1855-1934) to a range of his colleagues in NZ and overseas. Some of the information contained in the letters cannot be obtained easily elsewhere. The letters also provide biographical knowledge about NZ's greatest pioneer botanist. The data is presented as in the first two parts of the annotated summaries (9,10).

#### Recipient

John Ernest Holloway (1881-1945) was one of our foremost pioneer botanists. He was born in Christchurch and studied for the ministry at St. John's Theological College, Auckland, and also studied at Auckland University College where he graduated MSc (1905) gaining First Class Honours with a thesis entitled "The comparative anatomy of six New Zealand species of *Lycopodium*" (8). His research was supervised by Professor A.P.W. Thomas (1857-1937). Holloway had a distinguished career in the Anglican Church before he was appointed Lecturer-in-Charge in the Department of Botany at the University of Otago in 1923 and is especially noted for his research on *Lycopodium* and for his contribution to teaching. Holloway was elected to a Fellowship of the Royal Society in 1937.

#### Annotated summary of letters

1. 8/5/1913 (Written on The Forestry Commission, 1913 letterhead, Wellington). C. was a member of this commission (13). C. provides H. with quotations from letters he has received from two leading botanists about H.'s article on *Lycopodium* (6): Karl von Goebel (1855-1932) and F.O. Bower (1855-1948). C. had sent both a copy of H.'s article (see 9, p.396, Letter 28 and p.401, Letter 5) and reports on "...how your *Lycopodium* paper is being received by the two men of all others best able to judge as to its merits or otherwise". C. quotes Goebel, "I was very glad to hear that the author of that interesting paper about *Lycopodium* is in your neighbourhood



[Oxford]. He is a lucky man to be able to find those prothalli - coveted by others like the treasures of the Incas - in such quantity. I hope he will give an exhaustive account of his discoveries. He probably knows Bruchmann's [H.Bruchmann, 1847-1920] papers. If not it will give one great pleasure to send those I can get hold of. As you point out it will be very interesting to combine the morphological and anatomical description by experiments on regenerating not only of the prothallus but also of the young plant. I found years ago that in *Lycopodium inundatum* detached leaves of seedlings can regenerate young plants, older ones not. Then the whole behaviour of the 'protocorm' is exceedingly interesting. I don't believe in the phylogenetic importance of the protocorm, but I have quoted your friend's paper in the second edition [5] of my tedious 'organography'. C. did not know a second edition of "...that wonderful book was contemplated" and he congratulates H. on his work being included. C. quotes Bower, "the *Lycopodium* paper of Mr Holloway is most interesting. We at home have been much annoyed at the way in which Prof. Thomas [A.P.W.Thomas] has pegged out claims on *Phylloglossum* etc. and never worked them out [see 9,p.401, Letter 5 and p.396, Letter 28]. If it had not been for that several matters would have been looked into by now which will probably pass into other hands than his or ours. Not that it really matters who does the work provided it be done. That pegging out claims and not proceeding stops the whole coach [?]. I wish Mr Holloway every success in his quest. He would do well to model his work on that of Bruchmann in 'Flora' [1] and he would be well rewarded". C. considers H. can attain high honours "...if you eventually turn out the masterpieces on *Lycopodium* that I and your well-wishers consider you can do and ought to do". C. apologises to H. for not acknowledging a letter received some time back, "...but on this commission [Forestry Commission, 13] we have been travelling as if on an aereoplane [sic] and there has been no leisure for writing". C. is working "night and day at pulling together a rough draft of our report...". C. concludes, "Give my kindest regards to Mrs Holloway and remember me to your dear little girls" (7pp.).

2. 16/8/1923 (Ngaio, Wellington). C. apologises for delay in replying to H.'s letters. "Almost needless to say I am delighted you have decided to go in for a career as a University teacher - your undoubted vocation. The position in Dunedin will be only a beginning. Enclosed is a rough draft of the letter I sent the Chancellor...". H. was appointed in 1923 as Lecturer-in-Charge in the Department of Botany at Otago. C. later suggested in 1927 that H. "...should apply for a vacant Chair at Sydney (£1100 a year and £400 a year pension after 20 years) but he does not intend to leave NZ, and in many aspects he is right. Allan [H.H. Allan, 1882-1957] also is in the same mind I am glad to say" [9,p.398, Letter 31]. "Of course if you need that ridiculous thing - a 'testimonial' - I will do my best; it would be almost the first I had ever wrote which came straight from my heart". C. has been examining H.'s Hymenophyllaceae paper (7) and C. would "...not dare to offer an opinion..." if the paper was on *Lycopodium*, etc. "But I may be pardoned a few critical remarks on ecological matters". C. considered the treatment could have been "cut down to about half the length. Nothing need have been left out. For example, the statement that *Hymenophyllum minimum* occurred inland as frequently or more so, than on the coast, need not have taken up more than 2 or 3 lines...and many other cases could be cited where brevity would have led to greater clarity and strength of expression". There is much "new" for C. and for himself - the length he complains of "hardly appears, for my interest in the whole matter is at the maximum". The relation of *Hymenophyllum sanguinolentum* to *H.villosum*. "...is quite new to me. I think however, it demands experimental cultures. Then the distribution of the spp. as epiphytes, terrestrial plants or the two combined, is another new discovery... Anyway I for one, can now study the distribution of the 'filmies' in an intelligent manner, which has not been in my power hitherto...In fact, your whole paper is an object-lesson in intensive ecological study - just the kind, in fact, that is the crying demand in that branch of botany the world over. That is, we must study the behaviour of distinct ecological groups. This is the great lesson of your careful piece of work in the field. And it was badly wanted". The vertical distribution of the species in the forest is considered by C. to be the most interesting part of the paper, "It was a matter on which nothing was known". C. comments, "Surely when you cite *Cyathea cunninghamii* as a common tree-fern in Westland you mean *Hemitelia smithii*". C. suggests that "a fair amount" of criticism could be levelled at account of Westland taxad forests and provides data. C. also queries points relating to *Hymenophyllum* species. C. comments, "You will have seen that my criticisms are quite harmless; possibly the most they do is to show that your paper like all other papers on any subject whatsoever is far from being the last word. To sum up, you have brought together a great deal of matter previously unknown and have given a lead in the intensive ecology of NZ plants; i.e., on the one hand, you have advanced knowledge and, on the other hand, you have clearly indicated - without once saying

so – how knowledge may be further advanced. How many workers will it take before knowledge is gained for each ecological group in NZ plants equal to that you have given by means of much close, laborious study in the virgin forests of Westland!”

C. has finished his little book on “The Cultivation of New Zealand Plants” (Whitcombe and Tombs, 2) and, with H.H. Allan, is at “Age and Area” for *Annals of Botany* (not published, see 9, p.405, Letter 7) and Engelmann wants C. to write a 2<sup>nd</sup> edition of “The Vegetation of New Zealand” (4). C. also mentions that a new edition of “New Zealand Plants and Their Story” is wanted (3) and his *Nothofagus* hybrid paper to the Linnean (not published). C. then comments, “There are seeds of nearly 1000 species of plants to sow, each in a pot to itself and my work for the Forestry and Agriculture Depts, - and I shall soon be 69!” (5pp.)

3. 10/2/1932 (Ngaio, Wellington). C. has received from H. congratulations (Honorary DSc from University of NZ, 1932). “The news of the award to me was quite unexpected. The honour is indeed of particular significance when it is remember [sic.] that it is the second Honorary Degree given by the University and that the first was made only last year, and to the great Rutherford. H.B.Kirk [1859-1948] – as is his wont – sent me three witty verses, in the first of which he declared that Cockayne could draw up his chair alongside of that of the great man; but I replied ‘Surely an humble footstool’s all I dare place near the Lord of Nelson’s august chair’”. Kirk’s verse also includes the following lines (10,p.423, Letter 1):

“Cockayne, of years not few  
and honours more,  
In Fame’s wide temple strides  
the spacious floor;  
Hybrids and vegetation raise  
their head,  
While chromosomes a mixed  
reception dread.”

C. also mentions his recent award of the Silver Veitch Memorial Medal (1931) with a gift of £25 for C.’s work in the advancement of horticulture – “a matter most gratifying to me, since, whatever my botanical merits or demerits, I have always considered myself a good gardener”.

“Lancaster [T.L. Lancaster, 1888-1945] was here the other day and told me of his being with you for a time at Paradise; oh that wondrous view across the Dart looking at those nobly-named peaks and virgin forests - at least so before the deer came. He is a fine chap”.

C. concludes, “How about raising young ferns from a well-marked hybrid? And how do your other cultures fare? Now all is dim. I can write no more. We both send our very best regards to your wife and yourself. Ever your most sincere friend, Leonard Cockayne” (4pp).

4. 1/5/1934 (Ngaio, Wellington, letter not written in C.’s hand and not by Mrs Margaret Martin, 1889-1988, 12, who acted as an amanuensis for C. in his later years when he was virtually blind. But letter signed by C.) C. thanks H. for congratulations on recent honour (probably Honorary Life Member, British Ecological Society in 1934, 11, p.49). “Now comes another honour still more recent – the Honorary Fellowship of the Botanical Society of Edinburgh [11,p.48] which is restricted to six British subjects and thirty foreigners. Evidently I take the place of the late D.H. Scott [1854-1934]; Rendle [A.B.Rendle, 1865-1938] is another of the six but the names of the remaining four have not yet reached me”. C. comments on the “great news” that H. has finished his “remarkable” work on the life-histories of our filmy ferns (apparently not published) – “...a difficult piece of work exceeding in that regard your former studies on the club mosses etc”. C. advises H., “Before bothering the editor of *Annals of Botany* with your student’s paper I would make quite sure that the august personages arranged for the publication of your filmy fern work which is miles and miles above that of your student”. C. comments, “...I think we spoon-feed our protégés too much, and, in this regard, I have been an extreme sinner. The way in which a thesis is done up for an examiner has but little bearing upon using the contents of that thesis for publication purposes. In short it should always be re-written and all extraneous matter left out”.

Cockayne died on Sunday 8 July 1934 and his wife Maude later in 1934 and this letter is one of

the last he wrote to friends and colleagues. In this letter he writes about Maude's health, "My dear wife must always be very ill but she does not suffer bodily pain, and is frequently her old self. Personally I feel the strain acutely for I am left hour by hour to my own resources and, unable to read, this is a most depressing state of affairs. Further I am now in my 80<sup>th</sup> year". (3pp.)

#### Source

The late Mr John S. Holloway (1944-1999) kindly sent copies of the four holograph letters from Cockayne to his grandfather the Rev. Dr J.E. Holloway on 8/1/1980. John knew of my interest in the Cockayne letters and I had sent Part 1 of the annotated summaries in November 1979. I am grateful to John's wife Professor Linda J. Holloway for permission to include the Holloway letters in the series.

#### Explanatory notes

It seems likely that these letters represent just a portion of the total correspondence between the two notable NZ botanists. However, the letters do provide some additional insights into NZ botanical history and biographical information about Cockayne.

Cockayne early recognised the potential of Holloway in botany and gave him much encouragement and support (Letters 1 and 2).

Especially notable is Cockayne's critical assessment of Holloway's 1923 work on ecological aspects of *Hymenophyllum* (Letter 2). I had not before seen an example of Cockayne's approach to an assessment of a colleague's botanical research prepared for publication: first he makes a comment on his own ability to assess the work, draws attention to an overall major criticism which does not depend on Cockayne's specific knowledge of the subject; he then notes errors in the aspects of the work of which he has knowledge, and finally provides an assessment of the praiseworthy features of the work. Cockayne's approach to this crucial aspect of botanical science is entirely appropriate.

In Letters 3 and 4 we learn a little more about the difficulties Cockayne had in his old age, including Mrs Maude Cockayne's illness and his deteriorating eyesight from about 1932.

The prophetic light-hearted comment in 1913 (Letter 1) about the aeroplane as a form of transport was made when air travel was in its infancy.

Letter 1 (see also 9, p.401, Letter 5 and p.396, Letter 28) provides further data on what Cockayne perceived as a problem in NZ botany – the attitude of Professor A.P.W. Thomas at Auckland University College to research on lycopods; Thomas supervised Holloway's MSc research at Auckland.

Cockayne obviously had a good rapport with Holloway and was aware of his botanical abilities and supported Holloway's application for the position at the University of Otago (Letter 2) a key early appointment in the history of botany in NZ.

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■ **Biographical Notes (46): George Valentine Biggar (1855-1931) and Dugald Louis Poppelwell 1863-1939)**

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This note tells of George Biggar, bushman, contractor, and farmer, of Croydon, near Gore, and of his friend Dugald Poppelwell, five times Mayor of Gore, solicitor, and Southland botanist. Biggar settled at Croydon in 1881, and Poppelwell at Gore in 1892; and from 1910 to 1917 Biggar assisted Poppelwell and their mutual friends in several botanical expeditions.

**G.V. Biggar**

George Biggar was born at Alloa, near Edinburgh on 11 November 1855 and the family came to New Zealand in 1861. They first lived in the Kaikorai Valley, Dunedin, where George attended the Wakari School (1,2). They then moved to Allday Bay, near Kakanui, south of Oamaru, where George's father was roadman. After leaving school George worked with his father, and then went to Matthew Holmes's sheep station 'Bolwalla' where "he showed great skill in handling horses" (2). On 30 May, 1879, at Port Chalmers he married Annie Harland (3) and in 1881 they bought a small farm at Croydon Bush (1,2).

While Biggar was breaking in his land he also worked as a wagoner for the Waimea Plains Agricultural Company and "spent several seasons in the Mataura Gorge splitting timber and packing fence posts out to the railhead". In 1885 he joined the gold rush to Griffel (Central Otago) and in 1886 the rush to Big Bay (South Westland) (1,2).

On 17 January 1896 Biggar left the Invercargill wharf on the S.S. *Invercargill* (Capt. Sundstrom) bound for the shanty town of Cromarty in Kisbee Bay, Preservation Inlet. Here he met Alexander McKay (geologist) and F.W. Linck (assistant geologist) of the Geological Survey, and for 3 months assisted them in their survey of the Preservation Inlet and Wilson River Goldfield. His account of the survey, dictated to his wife, has been published by Begg & Begg (2). In broad outline they explored eastward and inland from Cromarty to the head of Wilson River, then south down the gorges to the mouth of the Kiwi, and east along the south-east coast to near Big River. At one point they were trapped by the tide and Biggar scaled the cliff in two stages, hauling up his mates and his dog behind him. Back at Cromarty, McKay hired a cutter and they reconnoitred Preservation and Chalky Inlets.

Poppelwell has told us that Biggar not only worked for McKay but also for Buchanan and Haast, and that he collected birds for Buller (4,5). I can only report this. More fully documented are five expeditions in which Biggar assisted Poppelwell: Garvie Mts (1910, 1913-14); Upper Makarora and Haast Pass (1915-16); Martins Bay via the Hollyford Valley (1916-17); Bunker and Bench Is. off Halfmoon Bay, Stewart I. (1917). These are described below.

Biggar became the leader of the Croydon community. "Almost invariably he was the residents' choice of chairman for local meetings." He was the Acclimatisation Society's ranger and the caretaker of the Croydon Domain (1). When the Gore and Surrounding Districts Early Settlers Association was established on 29 August, 1924, he was on the Executive Committee (6); and his reminiscences can be seen in the second volume of the Association's Records (6).

On 23 June, 1931, George Biggar died in the Gore Public Hospital, and was buried in the Gore Cemetery 2 days later. (3) His wife had died 21 years earlier (1). On the day of George's funeral the *Mataura Ensign* carried a tribute by Poppelwell to his old friend of close on 40 years. "Nothing came amiss to him [it said] He was second to none in camp and bush lore, and always a wise and careful guide in the wild." And it emphasised his "public spiritedness and desire to impress all with the necessity of preserving our great heritage in the unique fauna and flora of the Dominion." (4,5)

More recently, Dickie (5) has published photographs of the Biggar home at Croydon, and a family group showing Annie and George with their five sons and four daughters; and she concludes her book with a felicitous and accomplished sonnet – *In Memoriam, George Biggar* – signed DLP, June 29, 1931.

### **D.L. Poppelwell**

Dugald Poppelwell was born in 1863 near Milton, Otago (9), presumably at his parents' farm 'Sunwick', which lay 2 miles from the town. After attending a Catholic school in Milton and the Christian Brothers School, Dunedin, he became a clerk in a Milton law office. After studying law at Otago University (1889-91) he was enrolled as a solicitor in 1892 and moved to Gore to start his own practice (7,8,9).

In 1894 Poppelwell married Nora Green of Gore and was already taking a leading part in community affairs, becoming a Borough Councillor in 1893 and Mayor in 1895. Beattie (10) tells us: "Gore has always been singularly fortunate in having a wonderful picnic ground in Croydon Bush. In 1893 that ardent botanist and nature lover, D.L. Poppelwell, agitated that a portion of the bush and hillside should be made a reserve for the citizens of Gore. The Commissioner of Crown Lands visited and inspected, and reserved 320 acres, and on 5 October, 1898, the Croydon Domain was invested in the Borough of Gore. In 1904 another 110 acres were added and the Borough eventually became the proud possessor of 1863 acres of native bush."

Poppelwell's interest in native plants during his first 15 years in Gore was mainly that of a conservationist and horticulturist. But then, in 1906 – *annus mirabilis* – there appeared both Cheeseman's *Manual of the New Zealand Flora* and its indispensable companion Laing and Blackwell's *Plants of New Zealand*. A much wider world of plants and people was opened up for Poppelwell and others like him; and in 4 years his horticulture grew into botany, a path also trodden by Cockayne a decade earlier.

At last (for example) and after 40 years, we had an up-to-date and easily available treatment of the native species of *Veronica* (lacking in Kirk's unfinished *Students' Flora* of 1899); and, on 11 December 1907, Poppelwell wrote about them in his first letter to Cheeseman. He sent specimens for comment of a possible natural hybrid in his garden and added: "My only excuse for bothering you about this matter is that I take a somewhat keen interest in native botany and knowing you as an authority take the liberty of writing to you on the subject."

In Poppelwell's second letter (16 January 1908) he tells Cheeseman that he has just returned from an overland trip to Milford Sound; and he describes his garden. "In all I have about 120 species of plants growing, of which about 100 belong to the arboreal or shrubby order." The garden would have been at his home 'Wharekoa', which lay at 10 William Street in Gore (9). The next letter (3 February 1908) answers Cheeseman's questions about Croydon Bush and the route to Milford Sound; and in the fourth (3 May 1909) Poppelwell asks about bog-pine and says that he is photographing native flowers and colouring them. They might "perhaps appear in the Christmas number of the Press next year."

Whether Cheeseman persuaded Poppelwell to take up botany seriously and explore the far southwest I do not know, but it is highly likely. In any case, on 3 October 1911, 4 years after his first tentative letter to Cheeseman, Poppelwell read his first paper (about Codfish Is) at the Otago Institute. He was then 48 years old, a late starter like Cockayne, but from then on he wasted no time. Each Christmas and Easter, if possible, he was in the field, as listed below, and his expeditions led to 17 papers (1 joint) from 1912 to 1920. His main companions in the field, other than Biggar, were James Speden (1870-1952) the Gore builder, and W.A. Thomson (1876-1950) the Dunedin dentist.

- 1910: Southern Eyre Mts (west of southern end Lake Wakatipu); where collected *Aciphylla spedeni* on Symmetry Peaks (brief mention *TNZI* 45, 1913).
- 1910 (Christmas): Garvie Mts (SE of southern end Lake Wakatipu); a 4-day exploration led by Poppelwell, accompanied by G. Biggar and J. Speden of Gore, and W.A. Thomson and O. Davies of Dunedin (*TNZI* 47, 1915).
- 1911 (Easter): Codfish Is. and the Rugged Is. (NW coast, Stewart Is.) with "a small party of Gore residents including Messrs. G.J. Anderson, P. & R. Fisher", the latter a photographer; left Halfmoon Bay early Monday 17 April, arrived Sealers Bay, Codfish Is. 10:30 a.m.; left 3:30 p.m. next day (*TNZI* 44, 1912).
- 1911-12 (Christmas): Stewart Is.; Ruggedy Mts "in company with a party of 4 others", 28 December-2 January; subsequently upper Freshwater River, "with Mr. R. Fisher and Mr. J. Bragg", 4-5 January (*TNZI* 45, 1913).

- 1912 (Easter): northern Eyre Mts with J. Speden; left Queenstown 8 a.m. 8 April by launch, and arrived Table Bay 9 a.m.; stayed up valley at hut belonging to Walter Peak Station and climbed Mt. Walter to 5600 ft; returned Queenstown next evening (*TNZI* 45, 1913).
- 1912 (2 July): spoke to Otago Institute about "New Zealand Wild Flowers". "After some remarks on the magnitude and distribution of the New Zealand flora the lecturer proceeded to show a very large number of exceptionally fine slides illustrating the more beautiful and interesting native plants and flowers, and concluded with a strong appeal to the audience to use their influence for the preservation and protection of the native flora." (*TNZI* 1913).
- 1912-13 (Christmas): Routeburn Valley and Lake Harris Saddle with Mrs Poppelwell; at Routeburn Hut, 27 December - 1 January (*TNZI* 46, 1914).
- 1913 (27 November): Herekopare Is. (off Halfmoon Bay, Stewart Is.); no companions mentioned (*TNZI* 47, 1915).
- 1913-14 (Christmas): Garvie Mts; a 10-day exploration by the same party as in 1910 but in a different sector (*TNZI* 47, 1915).
- 1915 (New Year): Stewart Is.; on 1 January, accompanied by his son, spent "some hours" on Pukeokaoka Is. (1 mile from Herekopare); and on 7 January "by the kindness of Mr Henry Hansen" visited the 4 principal Breaksea Is'. (off east coast) (*TNZI* 48, 1916).
- 1915 (7 December): read paper at Otago Institute: "Notes on a botanical visit to Bold Peak, Humboldt Mountains" [north end of Lake Wakatipu] (*TNZI* 48, 1916); apparently unpublished.
- 1915-16 (Christmas): Upper Makarora and Haast Pass with G. Biggar of Gore and O.V. Davies and C. Seelye of Dunedin; reached Pass 29 December and "camped by the headwaters of the Haast for 5 days with excursions in different directions" (*TNZI* 49, 1917).
- 1916 (Easter): Stewart Is. Long Is *syn.* Big South Cape Is; 9 hours on 21 April with W.A. Thomson of Dunedin (*TNZI* 49, 1917). At Bluff on the way back (26 April) Poppelwell was shown a partially albino mutton bird which he later described (*TNZI* 50: 1918).
- 1916-17 (Christmas): Martins Bay via the Hollyford Valley with G. Biggar and J.F. Grant (Croydon) R.L. Smail and H.M. Poppelwell (Gore) and W.A. Thomson (Dunedin). The party left Gore on 23 December "by covered-in caravan with two horses and leading two others for riding purposes," all under the control of "our captain Mr G. Biggar." Their trek lay via Mossburn, the Oreti River, Mararoa Valley, and Upper Mavora Lake, where the caravan was left. Then, on Christmas Day, on foot with pack horses to the Greenstone River hut; and from there on Boxing Day over the saddle to the head of the Hollyford. The three botanists stayed an extra day in the Hollyford and were rowed down Lake McKerrow, while the advance guard sailed down on a ketch, surprisingly found at the head of the lake. From Martins Bay four of the party returned via Milford Sound on the ketch, arriving at Gore after a fortnight's absence. Messrs. Biggar and Thomson brought the horses back, arriving 4 days later (11; and *TNZI* 50: 1918).
- 1917 (Easter): Stewart Is. Bunker and Bench Is. (off Halfmoon Bay) with G.V. Biggar and "by courtesy of Mr Henry Hansen, Halfmoon Bay"; Bunker (7 April) Bench (10 April) (*TNZI* 50, 1918).
- 1920: In this year Poppelwell published accounts of the vegetation and flora of the north-eastern Hokonui Hills (near Gore) and Ben Lomond (near Queenstown) the results of "many visits" (*TNZI* 52).
- 1922-23 (Christmas): Puysegur Point, Dusky Sound, Chalky Inlet, with W.A. Thomson; the party of 20 left Bluff 23 December, on the ketch *Waterlily* (Capt. Cross) and returned in the New Year (12).



From these expeditions Poppelwell distributed material. In AK, for example, there are 184 specimens of vascular plants collected 1910-22, some from the Cheeseman Herbarium and some from Cockayne (13).

Dugald Poppelwell's immense contribution to all aspects of life in Gore – community and cultural, sporting, social, and religious – are recorded in (7), (8), and (9). On two fronts he was nationally acclaimed: first as a botanist and also as President of the New Zealand Catholic Federation, 1914-19, for which he was awarded the Papal Cross in 1916. He died on 23 September 1939 at his home 'Wharekoa' and was buried in the Gore Cemetery (14).

### Eponymy

- 1914 *Poa poppelwellii*: "Habitat Stewart Is (probably Herekopere Is off Halfmoon Bay). The above description is founded on specimens grown in my garden from some live pieces kindly sent me by Mr H. Guthrie-Smith. It is named in honour of Mr D.L. Poppelwell, of Gore, whose botanical investigations in Southland and Stewart Is, are well known." D. Petrie *Trans. NZ Inst.* 46: 39
- 1915 *Celmisia poppelwellii*: "subalpine meadow on the Eyre Mountains, Central Otago : D.L. Poppelwell!" D. Petrie *TNZI* 47: 50.
- 1916 *Veronica biggarii* [sic] "South Is: Otago – on subalpine rocks Eyre Mountains, at 1200 m altitude; D.L. Poppelwell! Named in honour of Mr G. Biggar of Gore who has accompanied Mr Poppelwell on many botanical excursions and rendered material assistance." L. Cockayne *TNZI* 48: 199.
- 1916 *Veronica poppelwellii* "South Is: Otago – Mount Tennyson, Garvie Mountains; fairly plentiful. D.L. Poppelwell! The species is named in honour of my friend Mr D.L. Poppelwell who is doing so much to throw light on the flora near Lake Wakatipu and the arrangement of the vegetation." L. Cockayne *TNZI* 48: 200.
- 1917 *Pimelea poppelwellii*: "Hab. Garvie Mountains, Southland County, and Symmetry Peaks, Eyre Mountains, Lake County: D.L. Poppelwell! Mount Cleughearn, Fiord County: J. Crosby Smith!" D. Petrie *TNZI* 49: 54.

### Acknowledgments

I am very grateful to Ewen Cameron for showing me the Poppelwell letters at the Auckland War Memorial Museum, and to Peter Johnson for information about Croydon Bush. Andrew Thomson drew my attention to the *Records of the Gore and surrounding Districts Early Settlers Assoc.* and Ruth Lewis located the *Mataura Ensign*. Thanks also to Wendy Weller for her typing.

### References

(1) Anon. 1931: Obituary. Mr George Biggar. *ODT* 26 June: 7; (2) A.C. & N.C. Begg 1973: George Valentine Biggar and his diary of a trip to Preservation Inlet and the surrounding goldfields in 1896. Appendix D in *Port Preservation*. Whitcombe & Tombs; (3) Death certificate: G.V. Biggar; (4) D.L. Poppelwell 1931: George Biggar, Bushman. *Mataura Ensign*, 23 June, and reproduced in (5); (5) P. Dickie 1988: *A history of Croydon Bush: from the past to the present (1856-1988)*. Gore Publishing Co. Ltd; (6) Records of the *Gore and surrounding districts Early Settlers Association* 1 (1927) 2 (1935); (7) Anon. 1939: Obituary. Mr D.L. Poppelwell. *ODT* 25 Sept (with portr.); (8) Jean Smith 1998: Poppelwell, Dugald Louis (1863-1939) and Nora (1873-1941). *Southern People* 396-397 (with family portrait); (9) *Who's Who in NZ* Edn. 2; (10) H. Beattie 1962: *A history of Gore and surrounding districts 1862-1962*. Gore Publishing Co. Ltd; (11) D.L. Poppelwell 1911: Unique holiday trip. Gore to Martin's Bay. New Plants discovered. *Mataura Ensign*, 18 January; (12) W.A. Thomson 1923: Murihiku. A voyage to Dusky Sound. *Otago Witness*, 28 January; (13) Ewen Cameron *in litt.* 13 September 1991; (14) Death Certificate: D.L. Poppelwell.

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## UNIVERSITY THESES

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### ■ University of Canterbury botanical and ecological thesis students

#### Department of Plant and Microbial Sciences

Completed 2001-02

Burnett, Nicholas, A test of the intermediate disturbance hypothesis in phytoplankton microcosms (MSc)

- Greenep, Helen, Photosynthetic and stomatal responses of *Pinus radiata* trees grown at elevated carbon dioxide partial pressure (MSc)
- McCall, Andy, The population genetics of an important *Chionochloa* predator (Diptera: Cecidomyiidae: undescribed species) (MSc)
- McKenzie, Robert, Intergeneric hybridisation among the N.Z. Gnaphalieae (Compositae) (PhD)
- Novis, Philip, Ecology and taxonomy of alpine algae, Mt Philistine, Arthur's Pass National Park, NZ (PhD)

#### In progress 2002

- Abernethy, Angela, The role of light availability on terrestrial native orchids within exotic plantations (PhD)
- Chew, Yvonne, Honeydew: what determines the variable infestation rate of *Ultracoelostoma* (MSc)
- Glenny, David, Systematics of the New Zealand gentians (PhD)
- Gomez, Melanie, The comparative physiology of different leaf forms in heteroblastic plants (MSc)
- Harrow, Sally, Transmission routes of *Campylobacter* from the environment to humans: water, faeces and food routes (MSc)
- Houlston, Gary, Environmental and biotic influences on the maintenance of sex in *Hieracium pilosella* L. (PhD)
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- McKay, Meredith, The effects of species richness, functional group richness and community productivity on plant invasions: An experimental test (MSc)
- Monks, Adrian, Frequency-dependent host choice by phytophagous insects and the evolution of plant defence strategies (PhD)
- Schneiderheinze, Jenny, Photoinhibition under water stress in divaricate shrubs of NZ (PhD)
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- Sessions, Laura, Science communication in NZ mass media (PhD)
- Snyder, Alison, Carotenoid biosynthesis in the unusual parasitic angiosperm *Cuscuta reflexa* (MSc)
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- von Tippelskirch, Manfred, The reproductive biology of *Illeostylus micranthus*, (Loranthaceae), on Banks Peninsula: Conservation implications in a fragmented landscape (MSc)

#### **School of Forestry**

##### Completed 2001

- Earl, Richard, The effects of fragmented landscapes on bird communities in the Canterbury foothills (MSc)
- Hewson, Kate, The role of advanced growth in upland rainforest restoration, Pohnpei, Federated States of Micronesia (PhD)
- Jinadasa, Nishantha, Seed characteristics and resource requirements of broom, elder and mahoe in the context of a secondary succession

##### In progress 2002

- Armstrong, Kiri, Is *Nothofagus menziesii* an advance growth regenerator? An examination from Beaumont Bush, Southland (MForSc)
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- De Zwart, Eykolina, Habitat use and diet of possums in a forest-shrubland-grassland mosaic, Cass (MForSc)
- Grüner, Ingrid, Ecology and conservation of threatened *Carmichaelia* species (PhD)
- Hustedt, Sina, Ecology and conservation of the threatened shrub *Hebe armstrongii* (MForSc)
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**David Norton**, Associate Professor, School of Forestry, University of Canterbury, Private Bag 4800, Christchurch.

■ **University of Waikato, Department of Biological Sciences**

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**PhD**

- \*D. Bergin: Growth and management of planted and naturally regenerated stands of *Podocarpus totara*.
- J.M. Thwaites: Sapstain Fungi in Radiata Pine; Ecology and Proteomics.
- P. Galimberti: Comparison of methods for the identification of the floral sources of honeys.
- M. Anandasayanan: Isolation of a Polymerase III Encoded Gene of *Pinus radiata*.
- R. Wakeling: Fungal attack on treated timber.
- C. Beard: Limits to the distribution of mangrove (*Avicennia marina* subsp. *australasica*).
- B. R. Clarkson: Restiad peat bog development, with emphasis on nutrition and mineral use efficiency of dominant species.
- J. McQueen: Mechanisms and control of carbohydrate storage and remobilisation in the woody tissues of apple trees.
- A. Popay: Root ecology of fungal endophytes in grasses.
- D. Bridge: The impacts of pasture species as weeds on threatened native plant species of Taranaki coastal turf communities.
- A. Schirp: Impact of sapstain fungi on wood strength.

**MPhil**

- S. Duncan: Fungal systematics in Antarctica

**MSc**

- \*S. McCurdy: Lichen diversity and N cycling in kanuka forests at Turangi
- \*W. Tozer: Nitrogen isotope ratios in nitrogen limited plant communities.
- \*D. Bridge: An association at extremes. An investigation into an ectomycorrhizal association between *Kunzea ericoides* var. *microflora* and *Pisolithus tinctorius*.
- \*L. Hathaway: Phylogenetic relationships of the New Zealand *Pittosporum* inferred from ITS sequences of rDNA
- J. Stephens: The impact of invasive pasture weeds in the Waikato Region.
- D. Fraser: Biocontrol of *Phytophthora cinnamomi*; a study in sustainable agriculture research
- K. Watson: Ecology of sapstain fungi; from harvest to export customer.
- M. Bryant: Hollow Giants; Study of Kauri (*Agathis australis*) heart rot.
- W. Grinter: Variability of *Pinus radiata* sapwood to fungal colonisation.
- M. Melbourne: Looking for antimicrobial activity in plants used in traditional Maori medicine.
- K. Walbert: Photosynthesis and genetics of mangrove (*Avicennia marina* subsp. *australasica*).
- A. Fraser: Ecology and conservation of a threatened New Zealand endemic orchid (*Thelymitra matthewsii*).
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- R. Harfoot: Population genetics of Antarctic *Bryum* species.
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- M. Benes: The effects of dama wallaby and red deer on the native vegetation of the Okataina Scenic Reserve.
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- L. Robson: The effect of sapstain fungi on health and growth of seedlings as a result of *Hylastes ater* attack.

**Bruce Clarkson**, Associate Professor, Department of Biological Sciences, University of Waikato, Private Bag 3105, Hamilton

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## PUBLICATIONS

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### Journal Received

New Zealand Native Orchid Group Journal No. 83 – June 2002  
 Edited by Ian St George [ISSN 1170-4543]

One original paper is in this issue: Bruce Irwin – Some orchid puzzles. 1. *Caladenia* aff. *Chlorostyla*; 2. *Prasophyllum*; 3. *Thelymitra* "Whakapapa" (Master of disguise); 4. Hybridism in *Corybas*.

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## CORRIGENDUM

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My apologies for the incorrect price of the New Waikato publication "Botany of the Waikato". See p for the correct price and an order form. **Editor**

