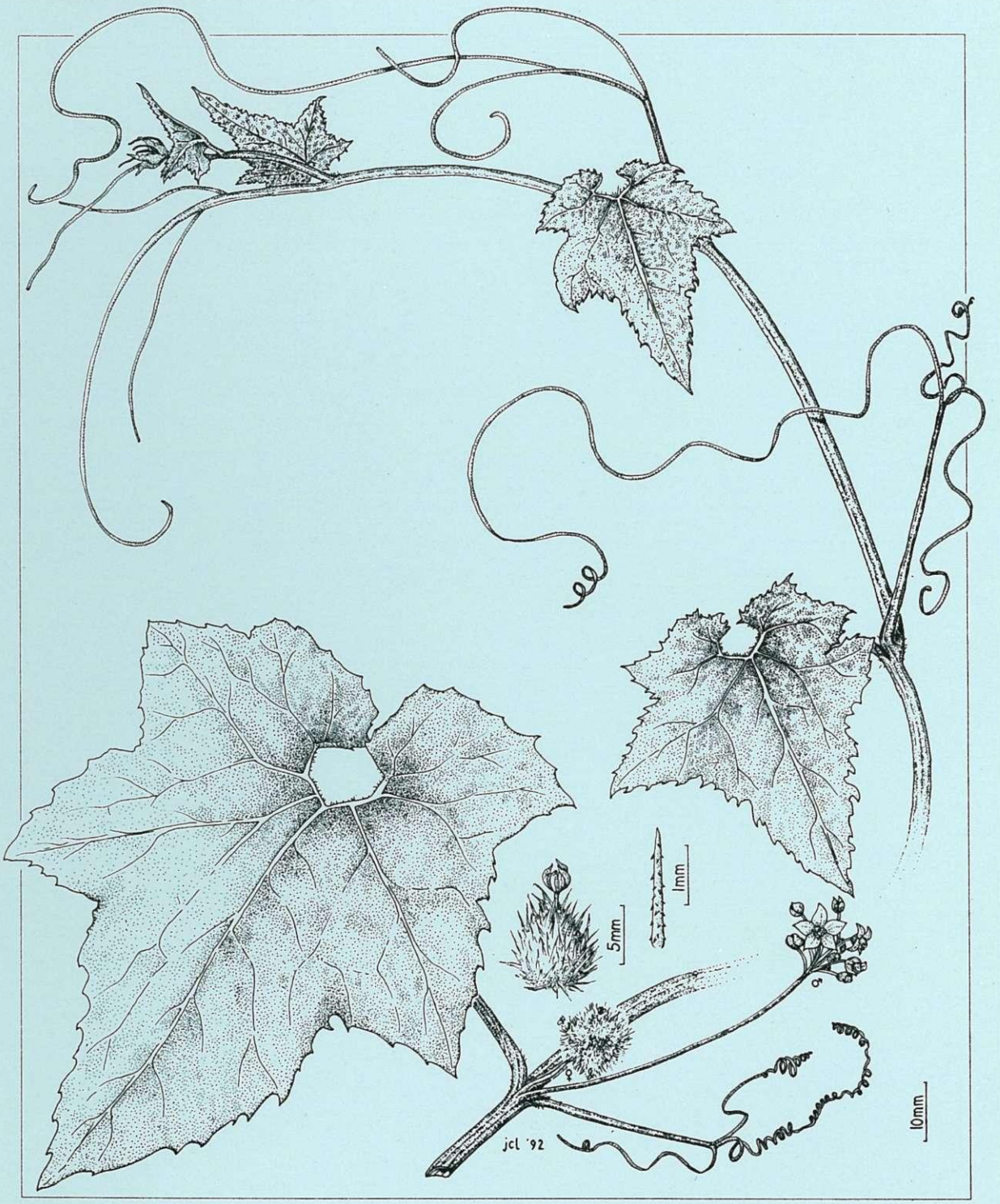
NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 28 JUNE 1992



New Zealand Botanical Society

President: Dr Eric Godley
Secretary/Treasurer: Anthony Wright

Committee: Sarah Beadel, Ewen Cameron, Colin Webb, Carol West
Address: New Zealand Botanical Society
C/- Auckland Institute & Museum
Private Bag 92018
AUCKLAND

Subscriptions

The 1992 ordinary and institutional subs are $14 (reduced to $10 if paid by the due date on the subscription invoice). The 1992 student sub, available to full-time students, is $7 (reduced to $5 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 28 (June 1992). Since 1986 the *Newsletter* has appeared quarterly in March, June, September and December.

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

Subscriptions are due by 28 February of each year for that calendar year. Existing subscribers are sent an invoice with the December *Newsletter* for the next year's 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 1992 issue (Number 29) is 28 August 1992.

Please forward contributions to: Ewen Cameron, Editor
NZ Botanical Society Newsletter
C/- Auckland Institute & Museum
Private Bag 92018
AUCKLAND

Cover illustration

Mawhai (*Sicyos australis*) in the Cucurbitaceae. Drawn by **Joanna Liddiard** from a fresh vegetative specimen from Mangere, Auckland; flowering material from Cuvier Island herbarium specimen (AK 153760) and the close-up of the spine from West Island, Three Kings Islands herbarium specimen (AK 162592). Joanna is completing a BA Hons Graphic Design at Middlesex Polytechnic, England, specialising in scientific illustration. The four year course teaches medical, botanical and zoological illustration and Joanna recently completed a 12 week period in New Zealand gaining work experience - six weeks at the Auckland Museum and six weeks at DSIR Plant Protection (Mt Albert). See mawhai article on page 11 (Editor).

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CONTENTS

Regional Bot Soc News

■ Auckland Botanical Society

Programme June-September
Field Trips:
20 June am - Reid property at Brookby, near Clevedon, native bush remnants
pm - ARC Botanic Gardens, natural forest area (Ewen Cameron)
18 July - Blackler's Bush, Port Albert, near Warkworth (Maureen Young)
15 August - Upper Nihotupu Track, Waitakere water catchment (Sandra Jones)
19-20 September - Private bush near Pureora

Evening Meetings:
1 July - Annual pot luck dinner
5 August - "Some insights into growth and ecology of kauri" - Warwick Silvester
2 September - LUCY CRANWELL LECTURE - "Australia's fossil floras and living Gondwanan Forest remnant: 400m years of evolution of the Australian flora" - Mary E. White, author of "The Greening of Gondwana"

AGM 4 March 1992
The following offices and Committee were elected:
President: Anthony Wright
Vice-Presidents: Ross Beever, Ewen Cameron, Anne Grace
Secretary: Sandra Jones
Treasurer: Vivienne Paterson
Committee: Catherine Beard, Shirley Bollard, Helen Cogle, Jack Rattenbury, Sandra van der Mast, Maureen Young
Auditor: Malcolm Simpson

The 1992 subscription was set at:
$18 - ordinary membership
$26 - family/couple membership
$9 - full time student membership

Journal/Bulletins
Jack Mackinder has been appointed editor of the Society's biannual Journal for the eleventh year in succession. Two occasional Bulletins will be published this year - a key for Poole and Adams' *Trees and Shrubs of New Zealand*, and just published:
ABS Bulletin No. 21 "Adventive flora of the Waitakere Range" by Jack Mackinder, listing 447 species. Cost $2 plus 80c for p&p.
Honorary Life Membership
At a special General Meeting held in May, Dr Barbara Segedin was elected to an Honorary Life Membership of the Society. Speaking to the Committee's nomination, Jack Rattenbury spoke briefly on Barbara's contribution to the Society (she first served as a committee member in 1944) and to botany in general.

Sandra Jones, Secretary, ABS, 14 Park Road, Titirangi, Auckland 7 (phone 0-9-817 6102)

■ Nelson Botanical Society

The highlight of the last quarter was the 3rd AGM. The evening started with a very successful pot luck dinner attended by 18 people. Many people brought along albums of photos and it was quite a session of reminiscences.

The formal meeting began with a brief summary of the year's highlights. The elections saw Jocelyn Tilley stand down and Edith Shaw replace her as Secretary. Membership continues to increase slowly with about 45 members currently. In the following discussions several useful ideas were put forward for future trips. Marlene Jackson with assistance from Lillian Turner undertook to start a trip album from the various photos taken. After the meeting closed, video of trips from throughout the last year were shown and Dick Roberts showed a set of slides on flower types.

The February field trip to the Rainbow Skifield was a special one for our older members. The first stop by the vehicles was a small tarn just above the Shirt Front. Here we saw an abundance of *Isoetes alpina* on the shore and careful looking showed many plants not too far off shore. The stream leading into the tarn proved a fruitful hunting ground. Of particular interest was a mass of the mossy daisy, *Abrotanella caespitosa* in full flower. From there we walked up over stony ground to the top of the northern ski tow and to a saddle with the National Park. The saddle area contained a good variety of the vegetable sheep - numerous large *Haastia pulvinaris*, *Raoulia bryoides* and *R. mammillaris* var. *rubra* showing its reddish flowers. In the fine shingle areas there was the aptly named, huge flowered *R. grandiflora* and in really stony areas the well camouflaged *Haastia sinclarii*. After lunch at this spot the party divided with half the 20 returning and the rest descended a valley parallel to the skifield. The valley contained several large waterfalls lined with a rich variety of plants still in flower. The most spectacular was the large, soft-leaved, yellow flowered *Dolichoglottis lyallii*. The final steep descent through beech forest brought us out on the road to meet the others who had a fruitful day "mossing" at the first tarn and while waiting for us.

The March field trip to Moa Park proved truly fascinating. The first part of the track followed the edge of the farmland, with deep green pasture and a scattered woodland of silver beech, gradually climbing to a good lookout point. From the lookout the track wandered through groves of the grass tree (*Dracophyllum traversii*), cedar (*Libocedrus bidwillii*), kamahi (*Weinmannia racemosa*) and even quintinia (*Quintinia serrata*). There was even the odd late flowering rata (*Metrosideros umbellata*). The highlight of this part of the walk was an owl who sat just 1 m above our heads by the track and watched everyone go by. After lunch we ventured down the clearing through red tussock (*Chionochloa rubra*) in places over our heads and containing patches of wetland and hidden streams. Many of the plants were familiar alpines such as *Celmisia incana*, *Carpha alpina*, *Oreobolus pectinatus* and *Kelleria laxa*. Most sought the *Herpolirion novae-zelandiae* but only saw the abundant *Oreostylidium subulatum*. Shrubs present around the edges of the clearing included *Olearia lacunosa*, *Coprosma* "paludosa", alpine toatoa (*Phyllocladus alpinus*) and much manuka (*Leptospermum scoparium*).

The May trip was to Harwoods Hole, or rather the lookout above it. Most of the route in is through rather open silver beech forest with many small openings containing bogs or even small ponds. Close to the Hole the vegetation changes, contains more red beech and has a greater species diversity. The really interesting vegetation begins as you climb out of the valley to the spectacular lookout over the Takaka Valley. Here there is an odd mixture of alpine and lowland species. Plants like *Coprosma pseudocuneata* are found alongside hangehange (*Geniostoma rupestre*). Cedar, lantern berry (*Luzuriaga parviflora*) and the tiny *Libertia pulchella* vie for space with wineberry and red beech. Of particular interest were the calcicoles - *Pseudopanax macintyrei*, *Brachyglottis monroi*, and the two spleenworts *Asplenium lyallii* and *A. trichomanes*. Amongst the seven coprosmas recorded *C. colensoi* with its two different leaf forms caused the most puzzlement. A truly interesting place.
Coming Field Trips:
June - Motueka gardens
July - Takaka (Hanson Winter)
August - Moutere covenants
September - Delaware Bay

Graeme Jane, 136 Cleveland Terrace, Nelson

■ Rotorua Botanical Society

In the April Newsletter (No. 25), contents include articles on:
Carrie Gibbons Scenic Reserve by Lin Gibbons.
Another inland site for *Carex pumila* by Colin Ogle.
Effects of an unseasonable heavy frost on garden grown native plants by Bruce Clarkson.
The distribution of beech (*Nothofagus*) species in the East Taupo Zone after the 1850 BP volcanic eruptions by Bruce Clarkson and John Nicholls.
Plant additions and comments on two Rotorua species lists by Ewen Cameron.
Streblus smithii by Bruce Clarkson.

Sarah Beadel, Secretary, Rotorua Botanical Society, Okere Road, RD 4, Rotorua

■ Wanganui Museum Botanical Group

Some past activities
Friday 3rd January to the Stratford Plateau, Mt Taranaki. We walked to the moss slopes above the ski lodge where we renewed our acquaintance with the many low-growing herbs growing there. Some *Ranunculus nivicola* were still in flower but as we reached the retreating snow line there were many more in flower or about to flower. It was interesting to note the burst of growth of many plants as the snow retreated, notably *Polystichum cystostegia*. It was surprising to find *Hymenophyllum multifidum* that had recently been covered with snow.

Our March trip was to a recently opened patch of bush on Mr Tricker's property at Bulls. There were many divaricating shrubs, and a surprising find was *Teucridium parvifolium*, a long way from other known localities. There was also a great many plants of *Pellaea* sp. (unnamed; cf. *P. falcata/P. rotundifolia*) found elsewhere in our area.

Some future meetings:
July 7th - AGM and members' programme
August 4th - Mrs Maggie Bayfield, "Protection of indigenous vegetation on private land".

Chairman Ian Bell; Secretary Joan Liddell, Phone 0-6-345 7160. Meetings in the Museum classroom on first Tuesday in the month, starting at 7.30pm (winter) or 8.00pm (summer).

Alf King, 180 No. 2 Line, RD 2, Wanganui

■ Wellington Botanical Society

Programme June - September
Field Trips:
18-19 July - Manawa Karioi - Taputeranga Marae: work bee and noho marae (Barbara Mitcalfe).
1 August - Somes Island (Jan Allen)
5 September - Pencarrow Lakes (Mike Orchard & Michele Frank)

Evening Meetings:
15 June - Taxonomic studies of New Zealand's everlasting daisies - Dr Ilse Breitwieser
20 July - Twine on the vine - Tales of a botanical excursion to the Three Kings Islands - Tony Silbery
17 August - AGM
21 September - Seeing double? New Zealanders in the Southern Andean Beech Forests - George Gibbs

Carol West, 9 Mamari Street, Rongotai, Wellington 3

Congratulations

■ Dr Lucy Cranwell honoured

In April, 84-year-old Dr Lucy Cranwell (Mrs Watson Smith) was awarded an Honorary Doctorate of Science by the University of Auckland, where she enrolled in 1925. It is 63 years since Lucy and her classmate Lucy Moore ("the two Lucys") won the Duffus Lubecki Scholarship at Auckland University and set off on their grand adventure to investigate the vegetation of Mt Moehau.

Lucy is internationally known for her pioneer work in palynology. She was Botanist at the Auckland Museum and for four years wrote and sketched for the Auckland Star, and led "botany trots" for children. Lucy, who has lived in the United States for 48 years, did not personally receive her doctorate as she is nursing her sick husband.

Sunday Star, 12 April 1992

■ Professor David Lloyd honoured

In March, Professor David Lloyd at the Department of Plant & Microbial Sciences, University of Canterbury, was elected a Fellow of the Royal Society (FRS). Prof Lloyd's election brings the total of living New

Zealanders with an FRS to seven. It appears the only previous New Zealand botanists to be awarded such an honour are Leonard Cockayne and the Rev. J. E. Holloway.

Editor

■ Horticultural honours to NZ Bot Soc Members

Bill Sykes of Christchurch and Bob Berry of Gisborne were each awarded Associate of Honour of the Royal New Zealand Institute of Horticulture (RNZIH). Peter Heenan of Christchurch was made a Fellow of the RNZIH.

Royal New Zealand Institute Newsletter, No. 1/2 April 1992

Obituary

■ Arthur Cronquist

We are sad to report the death of Arthur Cronquist on 22 March 1992. He died of a stroke while working in the Brigham Young University herbarium in Provo, Utah. He was 73. He was co-author of most of our major regional North American floras, a student of Asteraceae and other families, architect of *An Integrated System of Classification of Flowering Plants*, a nomenclaturalist, a phytogeographer, an incorrigible punster, and a mentor to many. A memorial service will be held 5 May 1992 at The New York Botanical Garden, which has established the Arthur Cronquist Fund for research in Asteraceae and floristics of western U.S.A. in his memory.

Herbarium Pacificum News, Volume 12, Numbers 3 and 4 (1992)

Other News

■ *Dactylanthus* pollination

Chris Ecroyd has videoed short-tailed bats pollinating New Zealand's only fully parasitic native flowering plant, *Dactylanthus taylorii*. Two rarities of nature coming together. Chris began work on *Dactylanthus* in 1985, his recent studies have been funded by the Department of Conservation. His research has shown that possums eat the flowers and rats also cause damage. (Kiore completely destroy the flowers, ship rats apparently pollinate the female flowers and damage the male flowers - Editor, C E Ecroyd pers. comm.) It has never been reported anywhere in the world before that bats pollinate a flower on the ground.

NZ Herald, 4 May 1992

■ Horopito for biological control

Drs Pip Gerard and Nigel Perry of the special plants research unit, MAF, Otago have isolated extracts from horopito (*Pseudowintera colorata*) which can be used to kill or to control the webbing moth and the Australian carpet beetle. These two insects are among five pests which can do huge damage to the nation's wool if it is not treated. The two chemicals in the horopito to which the insects react to have been isolated and identified. Dr Gerard has been researching ancient uses of several herbs. "The plant kingdom has been around for millions of years and has developed a range of methods of protecting itself. There is a whole stack of natural insect repellents among the plants."

NZ Herald, 30 March 1992

■ New Marine Reserves

Kapiti Island, No. 4 opened

New Zealand's fourth marine reserve, covering two areas around Kapiti Island, just north of Wellington, was officially opened yesterday. The Kapiti Marine Reserve comprises a triangular piece of 17.5 sq km stretching from Kapiti Island to the mainland and a 3.4 sq km area at the northern end of the island's western side. Both areas are marked by beacons and poles. A Conservation Department spokesman

said that although public support for the reserve was high, radar would eventually be installed on the northern end of the island to monitor boats in the area.

NZ Herald, 16 May 1992

Fiordland to be No. 5

A unique part of Fiordland's coastal waters will become New Zealand's fifth marine reserve, Conservation Minister Denis Marshall has announced. Mr Marshall approved an application by the Federation of Commercial Fishermen for a marine reserve. The Fiordland Marine Reserve will be established in two areas: a 7.35 sq km area in the north face of Milford Sound, and a 0.73 sq km area of Doubtful Sound, known as "The Gut". The reserve areas are unique. The Gut was habitat to several corals, which are at risk from divers and anchors.

Conservation Review 9 (April 1992)

NOTES AND REPORTS

Herbarium Reports

■ Botany Department Herbarium (AKU), School of Biological Sciences, University of Auckland, Annual Report

By the end of 1991 the herbarium held some 52894 accessioned specimens. 1991 accessions for the different categories of plant are as follows:

Categories	1991 accessions	Totals
vascular plants	634	23 199
algae*	-	c. 15 425
bryophytes	96	12 276
lichens	19	1 698
seeds	-	181
timber samples	-	115
TOTAL	749	52 894

* Number of sheets not specimens - possibly 20-30% are duplicates; estimated 12% have been accessioned.

AKU now also holds a complete slide collection of New Zealand pteridophyte spores as vouchers for a "Spore Atlas of New Zealand Ferns and Fern Allies", Large and Braggins 1992; Special supplement to the New Zealand Journal of Botany, 167 pp.

The backlog of unprocessed specimens is still large. As in 1990, most of the mounting and filing of specimens was carried out by the regular voluntary assistance of Vic May and Wendy Patterson. Ewen Cameron has been on long term leave since October 1991.

1991	Exchanges	out	7 sheets to 1 institution
	Loans	in	93 sheets from 6 institutions
		out	306 sheets to 7 institutions
	Gifts	in	96 packets from 1 institution
Total outstanding loans		in	456 sheets from 3 institutions
	at April 1992	out	2271 sheets to 12 institutions

Mark Large, Acting Herbarium Curator, Department of Botany, School of Biological Sciences, University of Auckland, Private Bag 92019, Auckland

■ **Herbarium of the National Museum of New Zealand (WELT) Annual Report for the period** 1 July 1990 to 30 June 1991

Background

Once again the work of the herbarium has been greatly influenced over the past year by the administrative changes associated with the transition of the National Museum to the new Museum of New Zealand. The amalgamation of the National Museum and National Art Gallery into one institution has been completed and there is increasing autonomy from the Department of Internal Affairs. Unfortunately, however, the establishment of the Museum of New Zealand, with a new Act of Parliament which was to have taken place on 1 July 1991 has been deferred for a year. Government has also postponed construction work on the new building until at least 1993, and an opening is not expected until 1998 at the earliest, although planning work is still continuing.

Curatorial Review

A restructuring of the departments in the National Museum has been taking place over the last 18 months in order to align the existing institution as closely as possible with the proposed new Museum. Following a review of the service departments last year, the curatorial departments in Natural History, Cultural Heritage and Art Gallery are being restructured this year. Although the review is not yet finalised, it is clear that, in Natural History, the existing structure of six discipline-based departments (including Botany), will be replaced by a function-based model. There will be three managers under the Director responsible for Interpretation, Curation (acquisition, research and information), and Collection Management. It appears as if this will separate curators from their collections, at least to some extent.

In Botany, for example, the existing curators will now be responsible to one Manager for acquisition, research and information, whilst existing technicians will be responsible to a different Manager for day to day running of the herbarium. In a small organisation such as ours, with only four staff in Botany, it remains to be seen how effective this will be. The new structure, with staff reassigned to new positions, will be in place by 1 November 1991 and will be reviewed after six months operation.

Staff

Staff in Botany have remained unchanged over the last year. Patrick Brownsey has been Manager of the whole Natural History Division as well as remaining Curator of Botany, but in practice managerial responsibilities have absorbed virtually all his time. He is likely to become Manager of the curatorial group in the new structure.

Other staff include Wendy Nelson (marine botanist), Fiona Pitt (senior technician) and Jeff Fox (trainee technician). Two active Research Associates, Nancy Adams and Winsome Shepherd, also work regularly in the herbarium.

Collection management and information services

Just over 2,600 new acquisitions were added to the collections this year, comprising mostly marine algae (*c*. 850), mosses (*c*. 800) and lichens (*c*. 400). Total holdings amount to about 228,000 sheets.

Databasing of the collection has concentrated solely on editing and checking the 14,000 entries in the Sainsbury moss herbarium. The Lottery Board has provided $30,000 for further work which will be undertaken in the forthcoming year. However, this may be influenced to some extent by a policy directive from the Museum of New Zealand to introduce an institution-wide computerised information system. New staff are being recruited to establish this system within the next year, and then to database the entire Museum collection within a further two years.

Forty-two new loans totally 1600 sheets were sent out during the year. Ninety-six loans, comprising 6872 sheets, are outstanding at present.

Two hundred and ten individuals visited the herbarium to use its resources during the year. A further 260 requests for information and *c*. 400 requests for identifications were answered. About 125 hours of consultancy work were carried out.

Seventy-six hours of class contact time were spent on a wide range of educational activities from research lectures to tours by school groups.

Improvements to the herbarium facilities have included:
- a purpose-designed laboratory to house two algal-growth chambers
- a new storage area for the lichen collection
- polyurethane sealing of the shelving

- reboxing and relabelling of 25% of the main herbarium, and documentation of type specimens.

Research projects

P. J. Brownsey

Fern families Dennstaedtiaceae and Aspleniaceae for *Flora of Australia*.
Atlas distributions of New Zealand pteridophytes.
Taxonomic studies on *Ophioglossum* and *Tmesipteris* in New Zealand.

W. A. Nelson

Synonymic list of marine macroalgae in New Zealand.
Regional seaweed flora of Marlborough Sounds.
Revision of *Porphyra* in New Zealand.

J. Fox

Annotated checklist of Robert Brown collections held at WELT.

N. M. Adams (Research Associate)

Handbook of New Zealand seaweeds.

R. W. Shepherd (Research Associate)

Introduction of *Pinus radiata* to New Zealand.

R. Lewington and B. Polly (Research Associates)

Mosses and lichens of Wellington region.

Publications

Adams, N.M. 1990. The botanical collections of John Buchanan F.L.S. Pp. 231-234, in **History of Systematic Botany in Australasia**, P.S. Short (Ed.). Australian Systematic Botany Society, Melbourne.

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Bird, C.J., Nelson, W.A., Rice, E.L., Ryan K.G., Villemur, R. 1990. A critical comparison of **Gracilaria chilensis** and **G. sordida** (Rhodophyta, Gracilariales). **Journal of Applied Phycology 2**: 237-282.

Brownsey, P.J. and Lovis, J.D. 1990. **Pellaea calidirupium** - a new fern species from New Zealand. **New Zealand Journal of Botany 28**: 197-205.

Dickison, M. 1992. Book Review. The Herbarium Handbook edited by Leonard Forman and Diane Bridson. **New Zealand Journal of Botany 29**: 97-98.

Markham, K.R., Franke, A., Given, D.R. and Brownsey, P.J. 1990. Historical Antarctic ozonelevel trends from herbarium specimen flavonoids. **Bulletin de Liaison du Group Polyphenols 15**: 230-235.

Schiel, D.R. and Nelson, W.A. 1990. The harvesting of macroalgae in New Zealand. **Hydrobiologia 204/205**: 25-33.

Shepherd, W. and Cook, W. 1990. Ohariu Valley a vanishing colonial landscape. **The Onslow Historian 19**: 3-15.

Shepherd, W. 1990. Early importations of **Pinus radiata** to New Zealand and distribution in Canterbury to 1885: implications for the genetic makeup of **Pinus radiata** stocks. Part II. **Horticulture in New Zealand 2**: 28-35.

Patrick Brownsey, Curator of Botany, National Art Gallery & Museum, PO Box 467, Wellington

Plant Records

■ Plant Records from Paparoa National Park (Punakaiki Ecological District)

As part of a research programme on the flora and vegetation of Paparoa National Park and adjacent areas of conservation land (Nikau Scenic Reserve, Seal Island, foreshore areas), we have been cataloguing all vascular plant species present. Although there are some earlier records (notably from W. Townson and G. Kelly) the flora of Paparoa National Park is surprisingly poorly known (certainly based on published records). We prepared an initial checklist as part of an account of the vegetation of the park in July 1989, and have made a number of additions since then. We are now at a stage where we felt it would be useful to list some of the more interesting plant records from the park.

The total vascular flora of Paparoa National Park and adjacent conservation lands presently comprises 529 indigenous species and 141 naturalised species. Botanical exploration of the park is still ongoing and it is likely that the total number of plant records will increase to perhaps 600 indigenous vascular species and perhaps 300 naturalised vascular species. Vouchers for all species are being deposited in the University of Canterbury herbarium.

Records of particular interest include:

Arthropteris tenella (CANU 32510): This species has been recorded once from Punakaiki village where it is probably naturalised. It is present on a tree fern fence and adjacent trees, but was not seen in forest next to the property. The southern limit of this species is in the Westport area.

Asplenium sp. (affinities with *A. bulbiferum*: CANU 35757): This *Asplenium* which is new to New Zealand has been found growing on limestone rocks near Punakaiki village and in the Pororari Valley. It has also been discovered on limestone from Cape Foulwind, near Karamea and in the Kawhia area of North Island. This taxon is distinguished from *A. bulbiferum* by its small size, rounded pinnule tips, presence of a creeping rhizome, and an absence of bulbils. Patrick Brownsey is presently working on its status and taxonomy.

Carmichaelia arenaria (CANU 35467): This very localised species is known from only two sites, Seal Island and Dolomite Point, where it grows as a low shrub amongst flax. It is possible that these flaxlands have been induced by fire since human settlement, as adjacent islands support a closed shrubland dominated by *Coprosma repens*. *Carmichaelia arenaria* is clearly closely related to *C. arborea* and its recognition as a separate species is debatable; it may be a coastal form of *C. arborea*.

Coprosma linariifolia (CANU 35649): This species is predominantly an eastern South Island plant, but scattered records extend its distribution westwards across North West Nelson. There is only one previous record south of the Buller River, from Fletcher Creek, so the Paparoa National Park records represent its southern limit on the west coast. In Paparoa National Park it appears to be confined to limestone cliffs, and has been recorded in Bullock Creek and the upper Pororari Gorge.

Corokia cotoneaster (CANU 35168): The only west coast record of this species is from two plants growing in the coastal part of Nikau Scenic Reserve.

Cyathea dealbata: An uncommon tree fern on the west coast, with scattered records as far south as Waggon Creek, at the northern end of Paparoa National Park. A record from Maher Swamp to the south of the park awaits verification.

Euphorbia glauca (CANU 35608): There are good populations of this threatened coastal herb on Seal Island and at Dolomite Point. It is also present at Kaipakati Point adjacent to Seal Island, and at 17-Mile Bluff to the south of the park. The populations in the park appear healthy and are not in any obvious immediate danger.

Festuca sp. (affinities with *F. matthewsii*: CANU 35755): This undescribed taxon has been collected from alpine sites in North West Nelson, and was recorded from one site near Mt Ramsey in Paparoa National Park.

Hebe gracillima (CANU 35410): Plants referrable to *H. gracillima* are present in the park, as also are plants of less certain taxonomic affinity. The relationship of these plants to those present in south Westland is uncertain. Phil Garnock-Jones is looking at this species complex.

Lepidium flexicaule (CANU 35635): This low-growing species is present at Dolomite Point, with perhaps 20-30 plants in total. The majority of plants are located in one small area growing in coastal *Isolepis cernua* turf. Although not on the current threatened plant list, this species appears to be very uncommon nationally and should be listed. Examination of herbarium records shows that it has not been collected from many of its previous sites in recent years, and it may now be confined to the north-west of the South Island.

Lepidium sp. (CHR 470203): This undescribed endemic west coast species of *Lepidium* reaches its northern limit in Paparoa National Park, where it is present on Seal Island (one plant) and Perpendicular Point (*c.* 20 plants). It is common on Open Bay Islands near Haast and is also present at Knights Point. It is distinguished from *L. flexicaule* by its upright habit and 4 stamens, and from *L. oleraceum*, *L. obtusatum* and *L. banksii* by having pinnatifid leaves, and in the size and shape of the silicle. In habit it resembles *L. oleraceum*. One of us (DN) with Phil Garnock-Jones (DSIR) is presently working on its taxonomy. This taxon may warrant listing on the national threatened plant list.

Poa sp. (affinities with *P. cita*: CANU 35445): This taxon is common on coastal rocks and in turf communities along the west coast of South Island. It appears distinct from *Poa cita*, having short wide leaves and compact spikelets on reduced culms. Elizabeth Edgar in her review of *Poa* (*NZJ Botany* 24, 1986) notes that "Plants from the Wellington Coast and from coastal Nelson and northern Marlborough also have wide abaxially ridged leaves and smooth culms but the panicle is rather contracted and bears

numerous spikelets". These are likely to be the same as west coast plants and together probably warrants separate taxonomic recognition.

Ranunculus insignis and *R. verticillatus* (CANU 35546): Records of both these species from the alpine part of Paparoa National Park provide major westward range extensions for these buttercups. However, both species are very uncommon, probably as a result of grazing by goats.

Senecio lautus var. *lautus* (CANU 35622): This species is uncommon along the Paparoa coastline, and has been recorded at only two sites in the park. It may reach its southern limit on the west coast in this area.

Senecio sterquilinus (CANU 35623): This is an interesting species that appears to be common along the Paparoa coastline, but is otherwise largely confined to Cook Strait islands, although the type locality is an island in Hawke Bay. *S. sterquilinus* was recorded in Paparoa National Park from Seal Island, Perpendicular Point and Dolomite Point, and is also present at 17-Mile Bluff and Point Elizabeth to the south and Cape Foulwind to the north.

As well as these species, a number of others are close to, or reach their southern limits in Paparoa National Park and include *Asplenium oblongifolium*, *Brachyglottis hectorii*, *Celmisia dallii*, *Collospermum hastatum*, *Coprosma repens*, *Dodonaea viscosa*, *Dracophyllum townsonii*, *Epacris pauciflora*, *Metrosideros colensoi*, *Microlaena thomsonii* (disjunct distribution), *Myoporum laetum*, *Peperomia urvilleana*, *Pittosporum cornifolium* and *Raoulia rubra*. *Celmisia angustifolia* appears to reach its northern limit in the park.

Several introduced plants have the potential to invade native vegetation in this area, although they are mainly confined to road-side sites and around Punakaiki village at present. These include *Clematis vitalba*, *Cotoneaster glaucophylla*, *Erica lusitanica*, *Hedychium gardnerianum*, *Passiflora mollissima*, *Selaginella kraussiana*, *Senecio mikanioides* and *Tradescantia fluminensis*.

David A. Norton, Conservation Research Group, School of Forestry, University of Canterbury, and **Janice M. Lord**, Department of Plant & Microbial Sciences, University of Canterbury

■ *Dracophyllum traversii* **at Rotokahu Scenic Reserve, Waimarino District**

On 31 March 1992 I accompanied Helen and Steve McGill from the Department of Conservation's Taumarunui Field Centre on an inspection of the south-east corner of Rotokahu Scenic Reserve. This 509 ha reserve is located 18 km west of the township of National Park, and has, as a focal point, the small Lake Hawkes.

The McGills had previously visited this location and remarked on the occurrence of several "strange *Dracophyllum* type trees". Our intention on this visit was to clarify the identification of these trees. On reaching the point Puketawhero (680 m), high above the Maungaroa Stream, a tributary of the Manganui-o-te-ao River, we soon located a 7-8 metre tall mountain neinei (*Dracophyllum traversii*) about 20 metres below the ridge top (NZMS 260 S19 994241). One smaller tree (2m) grew nearby. Both had long, erect, dark brown seed heads.

The forest here is dominated by silver beech with occasional black beech and *Quintinia serrata*. The beech species are restricted to ridge crests, below which kamahi, tawa, rimu and *Quintinia* predominate. While the understorey is sparse under the beech, there is a dense ground cover of kidney fern and umbrella fern.

Most authors, including those as recent as Allan (1961) and Bartlett (1980) have regarded the North Island *Dracophyllum pyramidale*, as distinct from the South Island *D. traversii*. More recently, the two species have been regarded as a single taxon, under the earlier name, *D. traversii* (McGlone 1985; Eagle 1986; Druce et al. 1987). Until now the known North Island distribution of *D. traversii* has been between latitudes 35° 10' and 38° 25', the tree occurring in Herekino Forest (two trees reported by Bartlett 1980), Kaihu and Houto Forests (P. Bellingham, unpublished lists, Department of Conservation, Whangarei), Little Barrier Island, Coromandel and Kaimai Ranges, Mt. Pirongia, Herangi and Rangitoto Ranges, and Raukumara and Huiarau Ranges.

Its occurrence in Rotokahu Scenic Reserve, at latitude 39° 10', is another intriguing facet to an already botanically special area. Apart from being an outlier of silver beech, the reserve also contains red, black and hard beech.

Acknowledgements
Thanks to Colin Ogle and Tony Druce for assistance with this note.

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J. W. Barkla, Department of Conservation, Private Bag 3016, Wanganui

■ Decline of mawhai (*Sicyos australis*)

Mawhai (*Sicyos australis* - it used to be known in New Zealand as *S. angulata*) is a trailing or climbing, apparently annual herb. It is New Zealand's only native member of the Cucurbitaceae. Its present day distribution is mainly restricted to northern New Zealand's islands and possibly eastern Australia (coastal temperate areas). *Sicyos* is Greek for cucumber.

As the June *Newsletter* cover illustrates, mawhai is monoecious and possesses coiled tendrils which are 2-3 times branched. The angled stems are up to several metres long. The dry fruit is covered in barbed spines, making the plant most unpleasant to bump into when fruiting. I once had to throw away a shirt because the mawhai spines persistently worked into my skin. Sykes (1977) states that ... "in New Zealand (compared to the Kermadecs) *S. australis* does not have such strongly barbed fruits." Looking at herbarium specimens I find the fruit size, spine length and barbing varies but the largest spines (5mm) can be found on Kermadec, Three Kings, Little Barrier and Castle Island material and all can be quite densely barbed. Barbs appear to be lost with age.

Mawhai has weedy tendencies and Hooker (1857), quoting Macgillivray, suspected it might have been introduced to Raoul Island, on the Kermadecs, as it was growing in cultivated areas. This view is not supported by W. R. Sykes (pers. comm.) because of its presence on uninhabited and rarely visited islets near Raoul. It can be very aggressive in the garden, requiring its removal (A. E. Esler pers. comm.).

Herbarium specimens post-1950 show that mawhai has been collected from most of the main northern New Zealand islands including: Kermadec Is (1980, CHR, Raoul & 1989, CHR, Macauley) (year of most recent collection and herbarium where lodged), Three Kings Is (1989, AK), Motuopao (1990, AK), Cavallis Is (1979, AK), Poor Knights Is (1984, AK), Mokohinau Is (1979, AK), Hen & Chicken Is (1977, AK), Little Barrier (1984, AK), Rakitu (1981, AK), Cuvier (1980, AK), Mercury Is (1983, AKU) Castle (1983, AK), Alderman Is (1972, AK), Shoe (1973, AK), Mayor (now extinct?) (1955, AK), Rurima Rocks (Bay of Plenty) (1990, NZFRI), Motukakarikitahi (near Coromandel) (1970, AK) and also a Waiheke Island sighting in 1979 (P. de Lange pers. comm.). Several of these records represent the most recent trip by botanists to the island(s). Mainland records over a similar period are extremely rare: Spirits Bay (1986, CHR), Mangere (Auckland) (1992, AK), Whatipu (West Auckland) (1991, unvouchered) (Katie Mays pers. comm.), Amodeo Bay (western Coromandel) (1971, AKU), 3 km south of Hot Water Beach (1990, AK & WAIK).

Looking at pre-1950 records, the range and frequency of mawhai markedly increases: Banks & Solander (1769-70) collected it in the Bay of Islands (Motuarohia), Firth of Thames (Waihou River), Mercury Bay, Tolaga Bay, Anaura Bay (near Gisborne) and Queen Charlotte Sound (Totaranui) (Hatch 1981). Allan (1961) doubts the South Island record but I feel it is possible as it fits the southern extinction trend for the species. Other pre-1950 mainland collections include Spirits Bay (1916, AK), 1 km south of North Cape (1944, CHR), Great Omaha (north-east of Warkworth) (1860's?, WELT), Mt Smart (Auckland) (1866, WELT), Thames (1881 & 1884, AK & WELT), Coromandel Harbour (1884, AK) Kennedy Bay (east Coromandel Peninsula) (1917 AK & CHR), Hawkes Bay (there are two undated *A. Hamilton* specimens, 1884-1911?, WELT). There are also historical mawhai specimens from the inner Hauraki Gulf: Motuihe (1860's?, AK), Noises (1883 and pre-1934, AK), Goat Rock off Tiritiri Matangi (Wooded I?) (pre 1923, AK).

Mawhai has become extinct at the southern end of its historical distribution and its present day southern limit appears to be Rurima Rocks. Except for the inner Hauraki Gulf Islands and Mayor I the northern

offshore islands populations appear to be maintaining themselves. Since 1944 mawhai has only been collected at four mainland sites! The Mangere site at Auckland is rather surprising because this 1991 discovery is the first mawhai record on the Auckland Isthmus since 1866 (see Cameron 1991). It is possibly a recent introduction. The Whatipu record is the first for western New Zealand but requires confirmation.

Mawhai has not only declined in New Zealand but it was once present in Norfolk (type locality) and Lord Howe Islands where it has probably become extinct (Sykes 1987). Telford (1982) mentions that the Australian and New Zealand entities may be taxonomically distinct, and that the New Zealand plants have larger flowers and fruit. Therefore, a taxon that was previously considered widespread outside New Zealand (Cheeseman 1925, Allan 1961) is now possibly confined to mainly remote New Zealand islands. With its weedy tendencies, barbed fruit for dispersal and preference for partially open sites it is puzzling that mawhai has a shrinking distribution. Clearly all indications are that this plant should be included on the national threatened species list.

Acknowledgements

I thank Colin Ogle for stimulating this article, Joanna Liddiard for the accompanying illustration, herbarium keepers of AKU, CHR, NZFRI, WAIK and WELT for mawhai records, the collectors of all cited specimens, and Bill Sykes, Alan Esler, Peter de Lange, Katie Mays and Anthony Wright for their comments.

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E. K. Cameron, Auckland Institute and Museum, Private Bag 92018, Auckland.

Trip Report

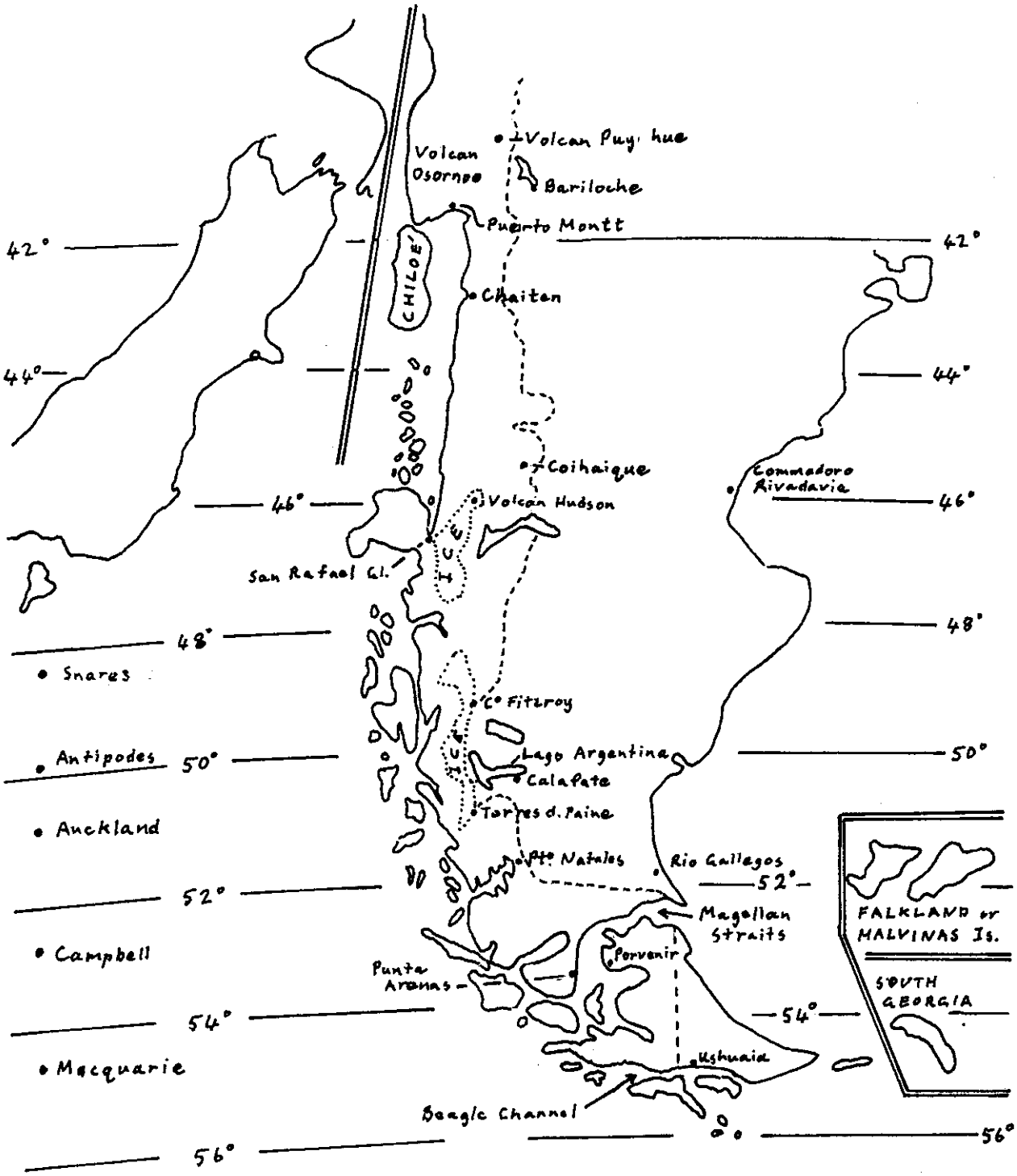
■ Ecological Forum Excursion to Southern Patagonia and Tierra del Fuego (1)

The Trans-Tasman Ecological Forum is an informal grouping of Australasian biologists, set-up to explore relationships among the fragments of the ancient Gondwana continent. Very successful field trips in Tasmania (1988) and the South Island (1989), and a more limited excursion to New Caledonia (1991) encouraged notions of a more ambitious objective: Patagonia. The notions became a plan in 1991, with Kath Dickinson and Alan Mark making the arrangements. Due to Kath's illness, it eventually fell to Alan to lead the expedition, which left New Zealand on 1 January 1992, and returned on 19 February. The 15 participants included plant ecologists, an entomologist, a palaeobotanist, a pedologist and "support staff".

Several New Zealand botanists, notably Eric Godley, Ross McQueen and Lindsay Poole, have visited Chile and Argentina, and recorded their impressions in the ecological literature. My excuse for putting pen to paper is that the excursion led me to recognise several ecological questions that are shared by New Zealand and Patagonia, that have hitherto only been touched on and that recommend themselves for further study. Before discussing these, I will outline our itinerary.

January

1	Depart Auckland 11 pm, arrive Buenos Aires 6 pm the same day.
2-3	Fly to Bariloche, on Lago Nahuel Huapi, followed by a day trip to Cerro Catedral for an introduction to alpine vegetation (described by Ward & Dimitri, *N.Z. Joural of Botany* 4, 1965).
4-6	By lake ferry to Nahuel Huapi National Park, the wettest part of Argentina. Impressive rainforest of evergreen and deciduous beeches, podocarps, and magnificent groves of *Fitroya*; also ascent to snow line on the slopes of Cerro Tronador (3554 m).
7	By lake ferry and buses to Puerto Montt, Chile.



Map 1. Southern New Zealand (left), southern South America (right) and degrees of latitude.

8-12 "Free" days, during which people pursued their own interests in this diverse district; *Araucaria* stands; climbing, zonation and succession on Volcan Osorno (2660 m); the biologically and culturally distinctive island of Chiloe; *Lepidoptera* in Puyehue National Park.

3-19 By air to Chaiten, and crossing the Andes by bus to Coihaique, which lies in the rain shadow. Fiords, lakes, passes and glaciers; *Laurelia* and beech forests, cushion bogs, alpine vegetation.

20-22 Trips from Coihaique, to see (1) the effects of the 1991 eruption of Volcan Hudson on landscape and vegetation and (2) the San Rafael Glacier, which calves into sea water, and has given rise to a classic successional sequence on moraines.

23-24 Back into Argentina, and a journey by road and air over the vast expanses of Patagonian steppe and semi-desert, via the coastal towns of Commodoro Rivadavia and Rio Gallegos, to the southern resort town of Calafate on Lago Argentina.

25-30 Mostly in Los Glaciares National Park, on the downwind margin of the South Patagonian ice cap. Sequences from dry steppe, through deciduous beech forest to the flanks of the renowned granite spires of Cerro Fitzroy and Cerro Torre. Also the huge Perito Moreno Glacier which periodically dams the Rico arm of Lago Argentina; plenty of rheas, guanacos and condors.

31 Calafate to Puerto Natales in Chile.

February

1-6 Torres del Paine National Park; vegetation sequences similar to those of Los Glaciares.

7-10 Punta Arenas - Magellan Strait - Porvenir (Chilean Tierra de Fuego) - Rio Grande (Argentina) Ushuaia on the Beagle Channel.

11-16 Northern coast of Beagle Channel, including Lapataia National Park. Deciduous and evergreen beech forests, alpine cushion-fields, sphagnum and cushion bogs; summer snow squalls.

17 & 19 (18 was cancelled) Fly Ushuaia - Rio Gallegos - Auckland.

The Forests

Chile between the latitudes of 40° and 45°S (see Map 1) seems climatically similar to New Zealand at the same latitudes. This is reflected in evergreen forests dominated by three species of *Nothofagus*, and by *Laurelia* at low altitudes. Botanical affinities are demonstrated by many shared genera (*Blechnum*, *Coriaria*, *Weinmannia*, *Fuchsia*, *Griselinia*, *Pseudopanax*, *Aristotelia*, etc.) as well as *Drimys* and *Caldecluvia* which are related to *Pseudowintera* and *Ackama* respectively. Shared species include *Blechnum penna-marina*, *Sophora microphylla*, and *Hebe salicifolia*. Thriving cabbage trees and *Phormium tenax* in cultural landscapes reinforce the similarities.

In closer view, the resemblances between the south-central Chilean forests and ours seem less strong. There are only two podocarps (*Podocarpus nubigena* and *Saxegothea conspicua*), which are usually subcanopy to beeches. *Fitroya cupressoides*, however, is a noble cypress that could be likened to an outsized *Libocedrus*. There are unfamiliar broadleaved trees, two belonging to endemic genera (*Aetoxicon*, *Embothrium*) and two belonging to genera shared with Australia (*Lomatia*, *Eucryphia*). Ferns are not prominent, and only a singe tree fern (*Lophosoria quadripinnata*) is claimed, which we never saw with a trunk.

Chusquea bamboos proliferate in the undergrowth, some reaching a height of 8 m. These have a profound role in the life history of the forests. Other understory shrubs belong to endemic genera (e.g. *Philesia* and the spiny *Desfontainea*) or have north temperate affinities (e.g. *Berberis*, *Ribes*).

The evergreen forests ascend the westerns slopes of the Andes but soon cut out in the rain shadow to the east, except where oceanic influences spill through low passes as in Nahuel Huapi National Park. Subalpine forests, and those of the drier, more continental regions are formed by the deciduous, small-leaved *Nothofagus pumilio* (we were a little too far south to see stands of the large-leaved deciduous beeches). *N. antarctica* is a smaller deciduous tree, often stunted to a mere bushy shrub. It replaces *N. pumilio* in frosty and swampy hollows, and at the eastern limits of the forest against the steppe. *Austrocedrus chilensis* (formerly in *Libocedrus*) is important in some dry forests.

Los Glaciares and Torres del Paine National Parks in southern Patagonia are in the rain shadow of the ice cap, and subject to fierce föhn winds. Generally the only trees are *Nothofagus pumilio* and *N. antarctica*, but pockets of the evergreen *N. betuloides* grow on the shores of large lakes. Understoreys are mostly low, sparse, and floristically poor, with *Blechnum penna-marina* and *Empetrum rubrum* (representing the heaths of the northern hemisphere) being among the commonest species.

Slopes bordering the Beagle Channel are tempered by the sea. Although *N. pumilio* predominates, considerable stands of *N. betuloides* extend from sea level to 350 m. Where maritime influences are

strongest, as towards the eastern and western ends of the Channel, evergreen beech forest has a well-developed subcanopy, mostly of *Drimys winteri*.

As far as I know, there is no Andean equivalent of the "Westland beech gap", where trees other than beech dominate from the coast to the upper forest limit. However, along Useless Bay in the north-west of Tierra del Fuego, there were low forests (now mostly cleared) of *Maytenus magellanicus*, *Drimys winteri* and *Embothrium coccineum*. These may reflect a local absence of *Nothofagus*. (To be continued)

Peter Wardle, DSIR Land Resources, Private Bag, Christchurch

BIOGRAPHY/BIBLIOGRAPHY

■ Bigraphical Notes (6) Peter Goyen (1845 - 1927)

Peter Goyen was born at St Austell, Cornwall, at emigrated to Victoria with his parents at the age of 15. After attending the Melbourne Training College he progressed from assistant master to headmaster at various schools in Victoria; and in Victoria he married Emilie Smith. Then, at the age of c. 33 he was appointed Inspector of Schools for the Southland Education Board, newly split off from Otago, and came to Invercargill in 1878 (1, 2, 3).

At this time the Senior Inspector for the Otago Education Board was Donald Petrie (1846 - 1925), a graduate of the University of Aberdeen. He was a keen botanist, soon to publish his first paper, and inevitably Goyen and Petrie became friends. Indeed they may have known each other in Melbourne, where Petrie had taught at the Scotch College before coming to Otago in 1874 (Cockayne, Tr. 1926).

Goyen was soon involved in important public affairs. On 25 May 1880 he met with 7 others to affirm that "there be formed in this district a society devoted to the promotion of Science, Philosophy, Literature and Art", and that "the Society be named the Southland Institute" (Tr. 1881). He was later elected the first Secretary. And, on 8 December 1880, the Board of Governors of the Southland Boys' High School, anxious to have the new high school working although the building was not ready, resolved that Mr Goyen "be requested to open the school on Friday December 17 at Ramsay's Hall with such assistance as he can procure and continue it until the evening of Thursday December 23." There were 15 pupils (4).

It was not long either before Goyen made his mark in botany. Petrie had found a new sedge at the "Head of Lake Wakatipu, 1100 feet", and on 19 July 1881, at the monthly meeting of the Otago Institute, he described it as *Carex goyeni* "in honour of Mr P Goyen who has been for some time engaged in work calculated to throw considerable light on the alpine flora of the S W of Otago" (Tr. 1882). Goyen's explorations continued in December 1881 when he climbed Mt Rakeahua on Stewart Island, accompanied by a fellow member of the Southland Institute, W.S. Hamilton (*Gunnera hamiltonii*, *Tetrachondra hamiltonii*). They collected a new species, *Raoulia goyeni*, and were the first to collect *Acyphilla* from the island (Kirk, Tr. 1884, 1885). Their spaniard was originally included in *A. traillii*, but later called *A. cartilaginea* (Petrie, Tr. 1915).

In 1882 Goyen was appointed to the Inspectorial staff of the Otago Education Board (2) and moved to Dunedin where his friendship with Petrie continued. Petrie discovered and described *Cotula goyeni* from the Otago mountains (Tr. 1886) and described *Myosotis goyeni*, "first found several years ago by Mr P. Goyen F.L.S. at Arrowtown" (Tr. 1891). And, Petrie helped with the work on spiders which had become Goyen's main interest.

From 1887 to 1892 Goyen published 6 papers on spiders in the Transactions of the N Z Institute (Tr.). Among the new species in the first paper were *Migus distinctus*, a coastal spider "found at Ravensbourne near Dunedin by Mr Petrie and myself. I have traced it from Portobello nearly to Oamaru", and *Hexathele petriei* from the "interior of Otago", and "named in honour or D. Petrie Esq., M.A., F.L.S. by whom it was discovered, and to whom I am greatly indebted for a large number of interesting spiders and much assistance in botanical work". The later papers are particularly interesting for their description of marine spiders (apparently unknown elsewhere at that time), for their comments on contemporary evolutionary topics such as mimicry and sexual selection, and for their fascinating accounts of the habits of these little creatures. Goyen was certainly a pioneer student of animal behaviour in New Zealand. He was elected F.L.S. in 1888.

In 1894 Goyen became Senior Inspector in the Otago Board (5) after Petrie had become Senior Inspector in Auckland. A veteran teacher, recalling the long weary journeys for the inspectors in those days wrote (3): "Whatever lions were in their path however, Mr Goyen and his frequent companion and good friend Mr Richardson never failed to arrive at the appointed school at the hour of 9 a.m. At that time the inspectors examined every child in the school, thus doing a good deal of the work now left in the hands of headmasters. Leaving the country school between 4 p.m. and 5 p.m. Mr Goyen would say to the teacher "Come down to the hotel at 10.30 or so and your report will be ready." At the hour mentioned the inspector would be found, either finishing up the day's work, or looking over the schedules of the schools to be visited on the morrow."

These regular absences from Dunedin probably explain why Goyen never took office in the Otago Institute, although he became a life member. But he still made time for such publications as "A report to the Otago Education Board on State Education in three Australian States and New Zealand" (Coulls, Cullen & Co., Dunedin 1902) (6), as well as "The Principles of English Composition", Higher Arithmetic and Mensuration", and "Companion to Higher Arithmetic", all published by Macmillan & Co., London, and widely used in the English-speaking world (2, 3).

Goyen retired in 1910 as Senior Inspector Emeritus. Just before this he had acted as the expert member of a Royal Commission to inquire into the Tasmanian education system. In his retirement "he interested himself in the activities of the Navy League, the Athenaeum, and other public bodies. His books however were his chief joy for he never ceased to be a student, reading not for recreation alone but to increase his knowledge, and to keep in touch with the worlds of literature and science" (3).

He died on 10 July 1927 at his home in Highgate, and was buried in the Northern Cemetery, Dunedin (1). I am very grateful to Mr A.C. Harris of the Otago Museum for help with this note.

(1) Registrar-General; (2) Cyclopedia of N.Z., Otago and Southland, 1905; (3) Otago Witness, 12 July 1927; (4) Southland Boys' High School, Old Boys' Register, 1958; (5) The Otago Education Board 1856 - 1956, J McK. Miller; (6) N.Z. National Bibliography 2: 1969.

Eric Godley, Research Associate, DSIR Land Resources, Private Bag, Christchurch

FORTHCOMING MEETINGS/CONFERENCES

■ Population Viability Analysis Workshop for Plants and Other Groups

Prior to the Ecological Society Conference in August, a Population and Habitat Viability Analysis Workshop is being held for New Zealand Penguins (August 18-21), in Christchurch. Dr Ulysses S. Seal, who is running this, is able to stay over for the 22nd and 23rd August, which is immediately prior to the Society's Conference, in order to run a one or two day workshop and discussion on PVA principles, including running computer simulations.

It is suggested that the emphasis be on plants, and possibly invertebrates. PVA has been widely used for assessing survival prospects, recovery planning and management of birds and mammals. It is intended to use the results of overseas exercises such as *Lespedeza leptostachya*, a prairie bush clover, along with analysis one or more New Zealand plant species.

It is important to assess interest now so that planning can proceed. If you are at all interested in participating in such a workshop, can you contact either Paul Garland, Orana Park, PO Box 5120, Papanui, Christchurch (phone 0-3-359 4330) or David Given (see below), preferably before the end of June. We need to know: numbers interested; preference for one or two days, and which; and your specific areas of interest.

David Given, 101 Jeffreys Road, Christchurch 5 (phone 0-3-351 6069)

■ Second Australasian Native Orchid Conference and Show

The Native Orchid Society of Toowoomba Inc. is to host this conference and show. It will take place from Friday 17 September to Sunday 19 September 1993. The following tentative lecture topics are proposed:
(a) Native orchids of New Zealand
(b) Asian immigrants into the orchid flora of Australasia

(c) In-vitro germination of terrestrial orchids
(d) Orchids of North Queensland
(e) Hybridisation of Australasian terrestrial orchids
(f) Hybridisation within the genus *Dendrobium* and *Sarcochilus*
(g) Success stories on conservation projects undertaken in Australasia.
For further information contact:

Hon. Secretary, NOSTI, PO Box 2141, Toowoomba, Queensland 4350, Australia

■ NZ Ecological Society Annual Conference

24-27 August at Christchurch. For further information:

NZ Ecological Society Inc., PO Box 25-178, Christchurch

FORTHCOMING TRIPS/TOURS

■ Borneo Botanical Trip

A travel experience for active people into Sarawak, visiting Mt Mulu National Park. A very rich area botanically including *Nepenthes*, *Rhododendron*, orchids etc. Use public transport, comfortable but inexpensive accommodation, and eat at markets and local restaurants. Next trip is in August. Contact:

Active Travel, 7 Strathmore Crescent, Dunedin

■ Australian Natural History Tours

A wide range of mainly camping safaries for small groups including the Kimberley Coast, Esperance Islands, wildflowers, orchid tours etc. Contact:

Coate's Wildlife Tours, 49 Sheppard Way, Marmion, Western Australia

THESES IN BOTANICAL SCIENCE

■ University of Auckland, Department of Botany

Byrch, C. 1990: Accumulation of heavy metals by marine macrophytes. MSc.
Dodd, S.L. 1991: Biological control of damping-off diseases. BSc.
Kay, S.J. 1991: Biological control of onion white rot. BSc.
Kelderman, M.R. 1991: The composition of the cell walls of monocotyledons. BSc.
Kenrick, P.M. 1991: Rehydration physiology of inter-tidal macroalgae. BSc.
Leifting, L. 1991: A study of cross-protection between naturally occurring and artificially produced strains of vanilla potyvirus. BSc.
Taylor, H. 1991: Biological control of *Armillaria* root rot of kiwifruit. BSc.
Watson, M. 1991: Control of fruit shape in kiwifruit. BSc.
Wheeler, D.R. 1990: Irradiation of kiwifruit. PhD.

■ University of Auckland, Department of Environmental Science

Byrch, C. 1990: As above (joint thesis).
Clayton, T. 1991: Impacts of use of walking tracks in Tongariro National Park. MSc in Environmental Science and Geography.
Forrest, B. 1991: Oyster farm impacts on the benthic environment: A study in Mahurangi Harbour. MSc in Environmental Science and Zoology.
Johnson, H. 1991: Biological criteria for assessing deterioration of the environment - a case study in Whangarei Harbour. MSc in Environmental Science and Zoology.
Martin, L. 1991: Cumulative environmental change: case study for Ross Island, Antarctica. MSc in Environmental Science and Geography.

Taylor, C. 1990: Assessment of the regeneration potential of a disturbed native forest subject to continual marsupial browse: some management options for Kawau Island. MSc in Environmental Science and Geography.
Trotter, S. 1990: Estuarine sedimentation and land cover history: the case of the Mahurangi. MSc in Environmental Science and Geography.

■ University of Auckland, Department of Geology

Newnham, R.G.M. 1991: Late Quarternary palynological investigations into the history of vegetation and climate in northern New Zealand. PhD.

■ University of Canterbury, School of Forestry

Undergraduate Theses
Broughton, M. 1988: Growth and survival of rimu seedlings in a selectively logged terrace rimu forest South Westland.
Candy, M.E. 1988: A two-part study investigating a new set of silver beech (*Nothofagus* menziesii) chronologies and six previously established chronologies in the South Island.
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■ **Victoria University of Wellington, School of Biologial Sciences**

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BOOK REVIEW

■ **The History of the Loder Cup 1926 - 1990,**
By Department of Conservation, Wellington (for the Loder Cup Committee). 1991. 67pp. ISBN 0-478-01273-X. $15.00 (incl. GST)

Gerald W E Loder, later to be elevated to the peerage as Lord Wakehurst, visited New Zealand in 1886, fell in love with our native plants, and for the next 50 years enriched his home, Wakehurst Place in north Sussex, with large numbers of these, especially our hardier trees and shrubs. Mr G W Wright of the Auckland District Council of the Institute of Horticulture visited Wakehurst Place in 1926, and remarked that he "saw more native New Zealand plants on Mr Loder's property than are found in any one place in New Zealand". This 520-acre estate, with its Elizabethan mansion, was bequeathed to the National Trust in 1963 and is now an annexe of Kew, about an hour's travel away.

As a result of a suggestion by Mr Wright, Gerald Loder offered a challenge cup, to be held yearly by the exhibitor of the best collection of native plants and flowers at certain shows in New Zealand. The first winner, at the Auckland Horticultural Society's 1929 Rose Show, was Duncan & Davies of New Plymouth, whose display of 500 native plants was subsequently purchased and planted in the Auckland Domain.

The conditions of this award were soon changed and now, as is well known, the Loder Cup is our country's major award for native plant conservation.

The booklet contains mostly brief biographies of the Cup winners. It has a pretty cover (drawing provided by the 1987 winner) and a photograph of each person (and of Lord Wakehurst, the Cup, and Wakehurst Place with what is hopefully a toetoe in mid-ground). It is rather light on matters of detail, such as birth and death dates, and family histories; this is acknowledged, the last page inviting anyone who wants to contribute to a Cup archive to contact the Secretary of the Loder Cup Committee, C/- the Royal N.Z. Institute of Horticulture, at Lincoln University.

Rhys Gardner, 5 Ward Terrace, Sandringham, Auckland 4

LETTERS TO THE EDITOR

3 June 1992

Dear Editor

In 1976 David Given wrote in the *New Zealand Journal of Botany 14* that approximately 14% of the New Zealand vascular flora was rare and endangered. In 1989 Wilson & Given noted that one out of ten New Zealand plants is under threat of extinction in the wild. At the Threatened Plant Symposium in 1991 (reported in *NZBS Newsletter 25*) it was recorded that the threatened plant species list for New Zealand numbered 368 species and varieties (approximately 16% of the vascular flora).

It was therefore a great surprise to read in a recent article on threatened species in New Zealand that "only five percent of all plants are threatened" (Davis et al. 1992). After reading this article written by two members of the Department of Conservation's threatened species unit and the Field Director of the Royal Forest and Bird Protection Society of New Zealand, I have serious misgivings about the ability and desire of DoC to safeguard our rare and endangered plants.

The Threatened Species Unit has devised a species priority ranking system (SPRS) in which the conservation status of endangered organisms is ranked according to a number of criteria and which

permits comparisons to be made across major taxonomic boundaries. In the authors' own words "the system could be used to compare New Zealand ferns with fish, or penguins with palms ..." But instead of concentrating on those organisms that have been accorded a placing in the SPRS much of the article reduces to a justification of why birds have received a greater portion of conservation funding in past years.

It would have been more instructive and internally consistent if the authors had pointed out:

1. Vascular plants make up the largest group of threatened organisms in the SPRS
2. Thirty six plants are in the highest category (A) of conservation threat; by contrast, only 14 bird taxa are placed in this category (DoC 1992)
3. Forty four plants rank in category B - threatened taxa requiring some recovery work in the short term; by comparison, 39 bird taxa are represented in this category.

Only those species that fit the IUCN definition of endangered, vulnerable and indeterminate were used in the SPRS. It is interesting to note that the list of 70 birds includes 30 taxa that were not listed in these categories in the publication "The Conservation Status of New Zealand Wildlife" (Bell 1986). Has the conservation status of all 30 of these birds deteriorated so drastically in these last six years, or have the advocates of bird conservation been so thorough that they can argue a case for species such as the NZ pigeon to be placed in the SPRS?

I do not think any botanist would like to argue that our threatened fauna should receive less attention or funding that it hitherto has, but surely it is time for New Zealand botanists to demand that the Department of Conservation addresses the serious imbalance of funding and staffing that is afforded to our native flora and plant ecosystems.

I have written a personal letter to the Minister of Conservation requesting a breakdown of the funding allocated to threatened species work. I would be pleased if the NZBS would also follow this issue up with the Minister and the appropriate Directors in the Department of Conservation.

Maggy Wassilieff, Environmental Consultant, 69 Tiber Street, Island Bay, Wellington

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This letter has been referred to the Director of Protected Species Policy (which includes the threatened Species Unit) of DOC for a response.

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