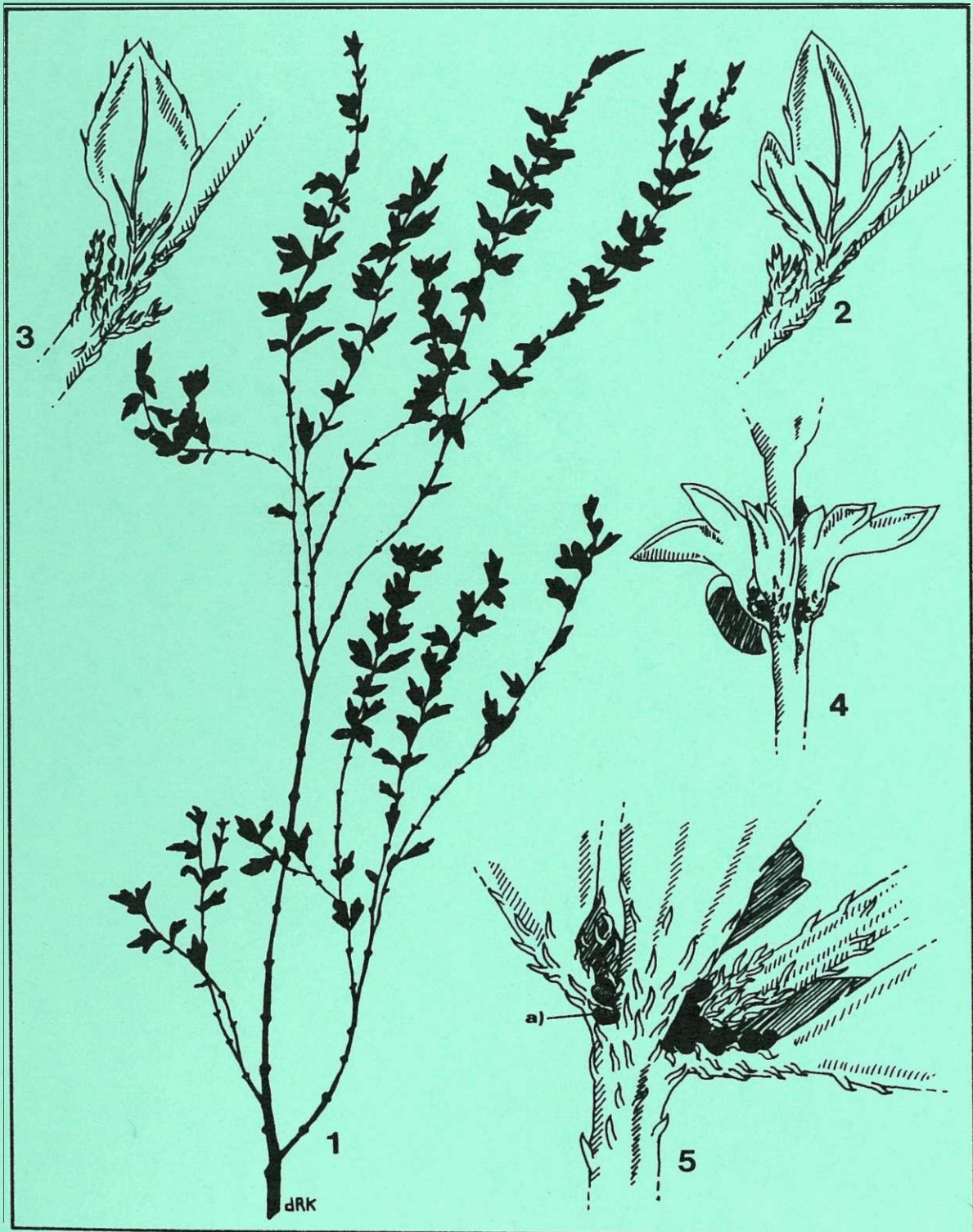


NEW ZEALAND BOTANICAL SOCIETY
NEWSLETTER

NUMBER 15

MARCH 1989



NEW ZEALAND BOTANICAL SOCIETY
NEWSLETTER
NUMBER 15 MARCH 1989

President : Dr Eric Godley
Secretary/Treasurer : Anthony Wright
Committee : Sarah Beadel, Alison Evans, Cathy Jones, Colin Webb, Carol West

Subscriptions

The 1989 ordinary and institutional subs are \$12. The 1989 student sub, available to full-time students, is \$6.

Back issues of the Newsletter are available at \$2.50 each - from Number 1 (August 1985) to Number 14 (December 1988).

New subscriptions are always welcome and these, with back issue orders, should be sent to the Editor (address below).

Invitation to contribute

Contributions from all sources are most welcome. A list of possible column headings can be found on p.2 of Number 1 of the Newsletter. Feel free to suggest new headings and provide content for them.

Deadline for next issue

The deadline for the June 1989 issue (Number 16) is 26 May 1989. Please forward contributions to:

Anthony Wright, Editor
NZ Botanical Society Newsletter
C/- Auckland Institute & Museum
Private Bag
AUCKLAND 1

Cover illustration

Unnamed plant from Te Urewera National Park (see article by Shaw, Beadel and Ecroyd on page 11). 1 branchlet (1.2 x natural size); 2 compound leaf (x20); 3 simple leaf (x20); 4 stipule detail (x20); 5 axillary structures (x40), a) = colleter (D R King)

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 NEWS

New Zealand Botanical Society

■ Balance sheet for the financial year 01 January - 31 December 1988

INCOME		EXPENDITURE	
B/fwd 01 i 1988	1056.35	Printing no. 11	781.00
1988 subs	3090.00	Postage no. 11	86.00
1988 student subs	55.00	Printing no. 12	726.00
1988 donations & back issue sales	490.00	Postage no. 12	110.00
1989 subs in advance	682.00	Printing no. 13	572.00
1989 student subs in advance	10.00	Postage no. 13	112.80
1989 donations in advance	122.50	Printing no. 14	847.00
Interest 29 ii 88 (chq)	3.33	Postage no. 14	122.80
Interest 31 iii 88 (inv)	126.06	Overdraft interest (chq)	2.86
Interest 31 viii 88 (chq)	0.05		
Interest 30 ix 88 (inv)	<u>170.83</u>		
	<u>\$5806.12</u>		<u>\$3360.46</u>

Excess income over expenditure carried forward to 1989 of \$2445.66 represented by \$0.62 chq account balance & \$2445.04 inv account balance.

A E Wright
Secretary/Treasurer

08 February 1989

■ Subs Drive

As you will have seen, providing you pay up on time, subs have been held to the same level as previous years. As a contribution to the budget allowing this is the assumption that we will recruit a significant number of new members/subscribers to the Newsletter. A pilot scheme with the members of the NZ Native Orchid Group produced good results, and we will try an approach to the memberships of the regional botanical societies. However, there must be people known to you who would like to subscribe to our Newsletter but who don't know about it. Please send names and addresses to the Editor who will mail them a complimentary copy.

Regional Bot Soc news

■ Auckland Botanical Society

At the AGM held 1 March the following Officers and Committee were elected for 1989:

President:	Anthony Wright
Vice-Presidents:	Ross Beever, Jack Rattenbury, Barbara Segedin
Secretary:	Sandra Jones
Treasurer:	Viv Paterson
Committee:	Shirley Bollard, Ewen Cameron, Helen Cogle, Rhys Gardner, Anne Grace, David Slaven

A revised set of Rules for the Society were adopted, and 1989 subscriptions were set at:

Family:	\$15.00
Ordinary:	\$10.00
Student:	\$5.00

Volume 44, number 1 of the Auckland Botanical Society Journal was published in January 1989. As well as a hand-coloured frontispiece of Watsonia bulb-illifera the Contents include:

Huia Ridge, Nugget, Huia Dam Tracks	Sandra Jones
Vegetation of the Whatipu Sands, north Manukau Heads	E.K. Cameron
Oaia Island - south Muriwai	E.K. Cameron & G.A. Taylor
Koromatua Bush, Pirongia Highway	P.J. de Lange
Rheophytes in New Zealand	R.O. Gardner
<u>Equisetum fluviatile</u> - a new adventive species in New Zealand	P.J. de Lange
Flora of Great Barrier Island: additions and corrections	R.O. Gardner
Behind the name	A.E. Esler

Sandra Jones, Secretary, 14 Park Rd, Titirangi, Auckland 7
(phone 817-6102 evenings)

■ Waikato Botanical Society

Our programme for April and May is as follows:

On Tuesday 18 April, Paul Champion will run an evening workshop on aspects of the herbarium, starting 7.30 pm at Waikato University.

Our Annual General Meeting starts at 6.00pm at the University on Tuesday 9 May. After the AGM there will be a potluck dinner at the University Common Room Club. There, Dr Bruce Clarkson will speak to us on the flora and vegetation of Hawaii.

A field trip to Waiterimu Rd, Ohinewai, with the Royal Forest and Bird Protection Society is planned for Sunday 14 May. We will aim to conduct a full botanical survey of 32 hectares of 'virgin' lowland forest on the property of John Russell Smith. This trip will be led by Bev Woolley (071 69340).

Murray Boase, Secretary, Waikato Botanical Society, c/- Biological Sciences Department, Waikato University, Private Bag, Hamilton

■ Rotorua Botanical Society

It has been great to see Bruce, Beverley, Fiona and Ellen Clarkson who recently returned from Hawaii. Bruce has spent 1988 with the University of Hawaii, undertaking research on two of the main islands in the Hawaiian group; Hawaii (Big Island) and Maui. He has been studying the dynamics of Metrosideros forest and succession on volcanic lava flows. Bruce taught a course in Vegetation Ecology whilst he was in Hawaii. Part of the course involved practical experience and data collected by the students during fieldwork is presented in "Letter from Hawaii Number 2" in Newsletter No.15 of the Rotorua Botanical Society. An interesting find was the discovery of evidence of a buried forest

whilst identifying soil profiles on Maui. Bruce will give an evening lecture on his research and travels in Hawaii on July 13 in Rotorua.

In November 1988 Rotorua Botanical Society visited the Whenuakura Clearing in Pureora Forest Park. This trip was a great success and the highlight was the discovery of over forty Pittosporum turneri either in flower or bearing seed capsules. This is the first time that Pittosporum turneri has been observed in flower in the wild for many years. Three articles on this trip were published in the December issue of the Society Newsletter (No.15):

Origin, History and Vegetation of Whenuakura Clearing	Stewart Wallace
<u>Pittosporum turnerii</u> at Whenuakura Clearing	C.E. Ecroyd
Botanical Foray to Whenuakura Clearing	Sarah M. Beadel

To continue the Pittosporum turneri saga a further plant in flower and bearing developing capsules was found on the December field trip to the head of the Ripia Valley, Kaimanawa Ecological District (refer to the article in Newsletter 15): Pittosporum turneri at head of the Ripia, J.L. Nicholls.)

Sarah Beadel, Secretary, Rotorua Botanical Society, RD4, Rotorua (phone 73 24546)

■ Wanganui Museum Botanical Group

In January members of the group walked along the valley of the Wairere Stream in the Tongariro National Park and reported that the trip was very successful.

During Wellington Anniversary Weekend the group joined the Wellington Bot.Soc. at the Moutohaka Lakes area and at the dunes to the north of the Wangaehu River mouth. In the latter area a small scattering of Sebaea ovata was found. This gentian had not been seen for about 20 years. It was again found in flower and seed later in February.

At the beginning of February we enjoyed a talk by Linda Kristensen on the role of Hebes as houseplants in Denmark.

On April 1st we plan to visit the Paengaroa Scenic Reserve near Taihape, which has the largest collection of small-leaved shrubs in the North Island. On the 4th Arthur Bates will talk on his recent visit to Russia. On 30th April we plan to visit the Jean d'Arcy Reserve, a very fine area of bush at a fair altitude.

For further information ring Joan Liddell at 57160 or Alf King at 27751.

Alf King, 180 No.2 Line, RD2, Wanganui

■ Wellington Botanical Society

Monday 17 April: Buffet dinner followed by members' slide evening. The buffet dinner will commence at 6.00 pm in Room K810 on the 8th floor of the Kirk Building. Please bring a plate. Tea and fruit juice will be provided. The normal monthly meeting will follow at 7.30 pm in Room K301 on the third floor. Members are invited to show slides, photographs, specimens, etc., and give short talks on their botanical activities during the summer.

Saturday 6 May: Karapoti Road (off the Akatarawa Road).

An easy walk on logging tracks. Meet at the Upper Hutt Railway Station at

9.00 am. Leader: Rodney Lewington, phone 753-145 (home), 729-119 (work).

Monday 15 May: Fighting extinctions in the land of the dodo.
Ian Atkinson, Botany Division, DSIR, Taita, will give an illustrated talk on a six week visit to Mauritius.

Wellington Botanical Society Jubilee Celebrations

The Society celebrates its 50th anniversary in 1989. A weekend event has been planned for the celebrations which will take place on Saturday 11 and Sunday 12 November 1989. The plan, at this stage, is to have a seminar from 9.00 - 3.30 on the Saturday followed by dinner from 6.00 - 9.30. On the Sunday a range of field trips in the Kaitoke area will be available. All members, present and past, are invited to attend. Two special publications are planned for the Jubilee Year: the history of the Society will be written up for the Bulletin; and "The Botany of Wellington" will be published in time for the celebrations.

Bulletin Number 44 was published in November 1988. The Contents include:

More advice from the past	Geoff Rogers
<u>Ophioglossum petiolatum</u> Hook. in a reserve near Kawhia	P.J. de Lange
Veld grass (<u>Ehrharta erecta</u>) has come to stay	Colin Ogle
The <u>Anogramma</u> - <u>Targionia</u> association	Tom Moss
Fern names and their origins	P.J. Brownsey
Parentless <u>Pittosporum turneri</u>	Geoff Rogers
Book reviews	Susan M Timmins, Ted Williams
Motu-O-Kura (Bare Island), Hawke's Bay: a little known island with a familiar profile	Geoff Walls
Recent publications	A.P. Druce

Carol West, Secretary, Wellington Botanical Society, c/- 40 Whaui St, Brooklyn, Wellington 2

■ Canterbury Botanical Society

The Society's Journal Number 22 was published at the end of 1988. The cover features a Hugh Wilson illustration of Ranunculus grahamii, with the interesting note that this species and Parahebe birleyi are the highest growing vascular plants in Aotearoa, being found up to nearly 3000m on the Malte Brun Range. Contents of the Journal include:

A conservation blueprint for Christchurch	Colin D Meurk & David A Norton
Cass camp, January 1988	Edith Shaw
The botany of Hinewai	Hugh Wilson
The effect of stock exclusion on short tussock grassland, Port Hills, Canterbury: A summary	Janice M Lord
Some sources for a history of New Zealand botany	A.D. Thomson
Creeping species of <u>Coprosma</u> in Canterbury	Ross Elder
Travers Swamp revisited	Colin D Meurk
Pink flowered alpines and yellow flowered <u>Melilotus</u>	Edith Shaw
Vegetation of the proposed QE2 National trust covenant, Iffley, Waikari, north Canterbury	D.A. Norton, J.M. Lord & C.D. Meurk

Plant records from the Cass and Coleridge Ecological Districts	David Glenny
<u>Chionochloa frigida</u> grasslands in Kosciusko National Park: Affinities to New Zealand alpine flora; a preliminary report.	Joan E Vickers
Tiromoana Bush, Mt Cass, north Canterbury	Bryony Macmillan
Pyramid Valley - a proposal for the restoration of the original swamp margin vegetation	David A Norton
The status of <u>Mazus pumilo</u> in Canterbury	Peter Mahan
Small leaved shrubs of Canterbury and Westland	Hugh Wilson
Distribution of species common to the alpine floras of New Zealand and Kosciusko National Park, New South Wales, Australia	Joan E Vickers

The Secretary, Canterbury Botanical Society, PO Box 8212, Christchurch

■ Botanical Society of Otago

Forthcoming events during autumn include:

Sunday 12 March: Bryophytes field trip to Morrison's Creek, Leith Valley, led by Ray Tangney. Meet outside the Union St gate to the University of Otago Botany Department, 1.30 pm.

Saturday 15 or 29 April: (please check the weekend community newspaper for the final date). Alison Bowles, a horticulturist at the Royal Botanic Gardens, Kew, will give an illustrated talk about Kew to a joint meeting with the R.N.Z.I.H. at the Botanic Garden Centre, Lovelock Avenue at 8.00 pm.

Monday 1 May: Hugh Wilson, freelance botanist, author, and Loder Cup holder will give an illustrated talk about the "Botany and Wildlife of Stewart Island" at the Botanic Garden Centre, Lovelock Avenue at 7.30 pm.

Alison Evans, Dunedin Botanic Gardens, PO Box 5045, Dunedin (phone (024) 741-987 work, (024) 737-038 home)

Herbarium Reports

■ Botany Department, University of Auckland (AKU)

At the end of 1988 the herbarium held:

Vascular plants	21354
Algae	15353*
Bryophytes	11750
Lichens	1606
Seeds	173
Wood samples	<u>115</u>
TOTAL	50301

*estimated as only 10% have been accessioned

Almost 1200 specimens were added to the herbarium during 1988; this was assisted by Gillian White who was financially supported by the Labour Department to work in the herbarium for 12 months. The majority of new accessions were higher plants from the northern half of the North Island. Major contributions from outside the department were 194 higher plant specimens from the East Cape Region collected by Shannel Courtney during the 1985 PNA survey and moss vouchers collected by Jessica Beaver during the November 1987 Nelson Lakes Bryophyte Foray.

Forty-eight duplicate specimens were sent out on exchange and 101 received; 149 gift specimens were sent out including type material of Riccardia selected by Elizabeth Brown; 18 loan specimens were received and 369 sent out.

E.K. Cameron, Herbarium Curator, Botany Department, University of Auckland, Private Bag, Auckland 1

■ Botany Division, DSIR, Lincoln (CHR) 1988

Extensions to the Herbarium

The extensions to the Herbarium were opened on 21 November, 1988. These have increased the storage capacity of the Herbarium by nearly three times. There is a special room for the plant drier and the Preparation Room is about three times larger, affording plenty of room for several people to be pressing, mounting and sorting specimens. Seven new staff rooms and a purpose-built computer and labelling room have eased the previous congestion. The old preparation room has been converted into a laboratory with a water and soil proof resin bench top to provide a preparation area for soil-encrusted plants or the wet collections of marine or freshwater algae.

Initially we were able to order 25 large cabinets, which have been used to move all the mosses and liverworts and half the lichens upstairs into the Cryptogam room. In August 1988 a further 15 red half cabinets were delivered and the process of shifting the Dicotyledons into a new classification based on Dahlgren, R. 1983 (Nordic J. Bot 3:119-149) was started. Although Head Office DSIR has promised \$6000 for herbarium cabinets each year until the new area is furnished, this will cater only for our annual increase in size so we will continue to look for other sources of finance for cabinets.

Two large signs in brass as well as the new Divisional logo or badge of a sprig of Podocarpus totara now distinguish the Herbarium building for the visiting public.

The Herbarium at Botany Division has about 492,900 specimens (as of June 1988) of all groups of plants except the fungi. During the 1985-7 period an average of 8484 specimens were deposited each year. While the taxonomic staff have been engaged in writing the volume of the Flora dealing with introduced dicotyledonous plants, there has been a special effort to include more of these plants into the annual accessions.

As a method of day to day insect control we have phased out heat treatment which often made the specimens very brittle and now use a 700 litre deep freezer to sterilise all incoming parcels of specimens and mounted specimens before filing.

Friends of the Herbarium

From August 1986 until 31 August 1988, six Friends of the Herbarium have given 3220 hours of voluntary service to the general curation in the Herbarium. They have been mounting, laying in, and sorting specimens, checking map references and recently have been using the CHIRP computer program to produce herbarium labels. Their assistance is invaluable and their presence a considerable boost to staff morale in these financially difficult times.

Herbarium QUICK CHECK

Representative specimens of each species, subspecies, variety or form recognised within the genus had been placed together in herbarium folders tagged with blue card and the words "Quick Check" and placed at the beginning of the genus for easy reference. The blue colour code was chosen to distinguish these folders from the red reserved for types and yellow for loans. It is believed that this system will help visitors in the absence of a special public reference collection.

Herbarium Electronic Data Processing (CHIRP)

This year the CHIRP User's Manual was extensively edited to enable any staff member to begin using CHIRP to place information on file and to produce herbarium labels. All early CHIRP records and those of the pilot scheme have been checked against the new CHIRP program and any errors corrected. There is now a database of 25,000 records on the Database Vax at Gracefield. All new accessions are being added to the database. The backlog of specimens (25,000 of which are already prepared by temporary workers) will only be processed as time and money permits.

Checklists of New Zealand plants

A series of checklists of New Zealand plant names as used in the Herbarium at CHR will be compiled.

Algae (Murray Parsons)

The algae have been curated over the last three years by Mary Wilson who has remounted and relabelled many of the older collections. Some duplicates have been put aside. All macro-algal specimens are now in folders of bank paper ("flimsies") to give added protection. The checklist of marine algae in New Zealand is proceeding.

Bryophytes and Lichens (Bryony Macmillan and Allan Fife)

The bryophyte collection is much improved with the incorporation of exchange material received from: Missouri Botanical Garden, University of Michigan, New York Botanical Garden, University of Helsinki, British Antarctic Survey, Dr C. Matteri, Buenos Aires, and National Botanic Gardens, Canberra, and the R. Spruce exsiccata Musci Amazonici et Andini (1849-60). New Zealand collections have been added from: Allan Fife (2429 collections), J.Beever, S.Holloy, D.Glenny and H.D.Wilson. The family of the late Dr G.Brownlie presented his bryophyte collection of 827 specimens from Canterbury and Nelson. The moss and hepatic collections of Dr J.Child (12,300 packets) have been incorporated.

Dr J.Engel of Field Museum, Chicago, has sent duplicates of New Zealand collections of hepatics. The hepatic specimens of Dr J.Child have been divided to provide a set for Dr Engel.

A start has been made with the amalgamation of the indigenous and foreign hepatics into the system proposed by Grolle, R: Nomina generica Hepaticarum Acta Bot. Fennica 121: 1-62, 1983, with guide cards colour-coded for geographical regions.

The lichen collection has received an impetus with the publication of D.J. Galloway's Flora of New Zealand - Lichens 1985, which provides an invaluable reference to synonymy and to type specimens. We are grateful to Drs D.J. Galloway, British Museum, J.A.Elix, Australian National University, L.Tibell, Institute of Systematic Botany, Uppsala, and H.Hertel, Botanische Staatssammlung, Munich, who sent duplicates from the groups on which they work. Royal Botanic Gardens, Sydney, sent 127 duplicates of early Australian and New Zealand collections.

The lichen collection of the late Peter Child (2,860 packets) has been presented to CHR.

M.J. Parsons, Herbarium Curator, Botany Division, DSIR, Private Bag, Christchurch

■ Botany Department, University of Otago (OTA)

OTA continues to be a repository for plant collections made by those associated with the Botany Department at Otago University as well as providing material for class study. Important recent collections have come from P.N.A. surveys

of the Umbrella, Nokomai and Eyre Mts. Ecological Districts (K. Dickinson, A.F. Mark and B. Rance), and those relating to taxonomic revisions in Thymelaeaceae and Scrophulariaceae (M. Heads). Other collectors include S. Halloy (alpine areas), R. Tangney (bryophytes) and A. Pillai, B. Gillanders and J. Keogh (marine algae).

The herbarium has also received a small number of loan requests. The recent appointment of a part-time curator for the herbarium is welcomed and work is beginning on a backlog of mounting, nomenclatural updating and general curatorial duties.

R. Tangney, Herbarium Curator, Department of Botany, University of Otago, PO Box 56, Dunedin

NOTES & REPORTS

Current Research

■ Invasion of Tongariro National Park by European heather

The domination of vast areas of Tongariro National Park by European heather (Calluna vulgaris) to the detriment of the native red tussock (Chionochloa rubra) has been causing concern for some time. The heather is without its natural enemies in New Zealand, and has become an aggressive invader. It flowers prolifically and precociously and forms large seed banks, especially at low altitudes.

I am just beginning work on the ecological relations between heather and red tussock. As part of this I would be most interested to hear from anyone who has slides or photos of the Park from 10 or more years ago, and taken from relocatable vantage points, which could be used to construct a photographic record of the heather invasion. Such material would be copied and returned, and used only with appropriate acknowledgement.

Jill Rapson, Department of Botany and Zoology, Massey University, Palmerston North

■ Olearia colensoi (leatherwood) scrub

As part of an MSc project I am studying some aspects of the ecology of Olearia colensoi (leatherwood) scrub in the southern Ruahine Range. I am particularly concentrating on the floral phenology, population age structure (dendro-chronology methods), and community interactions/successional status (especially with regard to Halocarpus biformis, Libocedrus bidwillii and Chionochloa rigida).

I would like to hear from anyone who has any interest or information on the distribution, ecology, taxonomy, and floral phenology of Olearia colensoi generally, and species commonly associated with it, and especially from anyone who may have past photographs of areas in the Ruahine Range that could be used as a means of comparison with present vegetation cover.

Peter van Essen, Department of Botany and Zoology, Massey University, Palmerston North (home phone (063) 81793)

Plant Records

■ A new plant record from Te Urewera National Park

General

In 1983 two of the authors (WBS and SMB), on a visit to the upper Tauranga River in central Te Urewera National Park, collected a specimen from a plant that we were unable to identify in the field. This specimen was stored in a collection box until 1985, before a serious attempt was made to name it. We were unable to identify the specimen so it was then sent to various New Zealand botanists. No identification was forthcoming, not even to family or generic level, although various suggestions, including Rubiaceae, were made. The specimen was then sent to the Royal Botanic Gardens at Sydney, and to Kew, with the same lack of results. This was surprising, as the specimen had stipules and other very distinctive vegetative features, although there was no reproductive material.

By this stage it was apparent that we may have found something of real interest, but identification was going to prove difficult without some reproductive material. The original site was revisited in March 1987, firstly to relocate the plant, and secondly to check for reproductive material. The original plant was relocated, still without reproductive material. We collected a small amount of fresh material to attempt to grow it from cuttings. Site details were also noted, and numerous photographs taken. The site was searched for other individuals, without success.

Description

The plant is a small, erect, perennial, hairy sub-shrub, 206 mm in height and 170 mm wide. There are three main stems and eight smaller stems originating from the base, woody near the base, and branching into many wiry leafy branchlets 0.3-0.5 mm in diameter. Branchlets are sparsely hairy with short, pale, curved, forward-pointing hairs. The decussate leaves are bright shiny green above and slightly paler below. Leaf laminae are 3-6 mm long, 2-4 mm wide, rhomboidal in outline, and with 3-9 acute lobes. Leaves are glabrous above but hairy below especially near base, and on margins and main veins. Leaf margins are thickened and often reddish, with leaves narrowed at base into hairy petioles 0.5-0.7 mm long. Interpetiolar stipules are leaf-like, 1-3 mm long, 1 mm wide, lanceolate to oblong, usually toothed or lobed. Dark reddish glands occur at tips of leaves and stipules, and minute oblong, reddish, colleters are present at the base of petioles and stipules. A toothed sheath c. 1 mm long occurs around the base of axillary shoots and enclosing axillary buds. An illustration (see cover) is provided.

Thin sections of the leaf, petiole and stem were examined by R. Patel, Botany Division, DSIR (pers.comm.) and the petiole and stem found to contain abundant huge solitary rhomboidal crystals. Such crystals are rare in the Rubiaceae.

Site details

The plant is growing on a steep, narrow landslide scar with a northerly aspect. Basal greywacke rock is exposed in a few places and the plant is growing at the base of one of these rock outcrops, in shallow soil. The site is 700 metres (2300 ft) a.s.l., and the main forest type in the locality is rimu (Dacrydium cupressinum)-rata (Metrosideros robusta) / tawa (Beilschmiedia tawa) forest, with hard beech (Nothofagus truncata) locally dominant on the adjacent ridge and on steep slopes in the immediate vicinity of the landslide scar.

The landslide scar is revegetating and there are several seedlings and small shrubs crowding the plant: Gautheria antipoda, rata, hard beech, Coprosma lucida, and Rytidosperma gracile. It is noteworthy that no adventive taxa

were recorded at the site. This is unusual for the Urewera, where adventives such as ragwort (Senecio jacobaea), catsear (Hypochaeris radicata), and Gnaphalium coarctatum are widespread and common on disturbed sites.

Other plants on the site include Gahnia pauciflora, kiokio (Blechnum 'black spot'; unnamed common sp., reduced lower pinnae), crown fern, (B. discolor), hangehange (Geniostoma ligustrifolium var. ligustrifolium), turutu (Dianella nigra), kanuka (Kunzea ericoides var. ericoides), wheki (Dicksonia squarrosa), kaikaiatua (Leucopogon fasciculatus), neinei (Dracophyllum latifolium), Schoenus tendo, Nertera depressa, rimu, Cordyline banksii, tawhaeowheo (Quintinia serrata), Lycopodium scariosum, L. volubile, kamahi (Weinmannia racemosa var. racemosa), Paesia scaberula, Gnaphalium gymnocephalum, and manuka (Leptospermum scoparium). Deer and possums are present in the area, and there is evidence that they have visited the site.

Further investigation

A further visit was made to the site in December 1987. The original attempt at vegetative propagation had not succeeded, and a small amount of cutting material was again collected. This has been successfully propagated, although growth is very slow. It will probably be many years before any plants flower. An attempt at propagation using tissue culture techniques may be made. On our next site visit we intend to enclose the plant in a chicken mesh cage to protect it from deer and possums. Any comments on the possible identity of the plant would be appreciated.

Acknowledgements

The initial collection was made during a botanical survey of Te Urewera National Park, funded by the Department of Lands and Survey. D.R. King kindly provided the illustrations. Cuttings have been propagated by Mark and Esme Dean of Omahanui Native Plant Nursery at Oropi. We are very grateful for their assistance, and keen interest in the project. Dave Bergin, John Herbert and Mark Smale of the Forest Research Institute, Rotorua provided useful comments on a draft of the article.

W.B. Shaw, Forest Research Institute, Private Bag, Rotorua; S.M. Beadel, Wildland Consultants, Okere Road, RD 4, Rotorua; C.E. Ecroyd, Forest Research Institute, Private Bag, Rotorua

■ Myriophyllum robustum at Whangamarino Wetland

In 1979 this aquatic herb was recorded by Orchard as being on "the east bank of Whangamarino River near Meremere", however repeated checking of this site and others failed to relocate Myriophyllum robustum in this area. In 1987 however Deans et al. recorded a small healthy population of the plant in an acidic pond (Pukeko Pond) during preliminary ecological assessment of the Meremere-Maramarua causeway, as well as a population in a privately owned duck pond.

In 1988 I was employed by DOC to carry out a contract with Electricorp for a full ecological study of the causeway vicinity. This study has increased the recent records for Myriophyllum robustum in the Whangamarino considerably, an encouraging sign for the species survival. The populations are generally found growing in 0.5-1.5 m of slightly acidic peaty water (pH varying between 5 and 7). The largest population yet found is growing in an old drain (dug in depression days) in a straight line through the peatland and flowing into Kopuku Stream. This drain is approximately 1.5 wide 1-2 m deep and 2 km long. In spring and summer much of the drain is covered with Myriophyllum robustum. Other species in and around the drain include Baumea rubiginosa, B. teretifolia,

B. huttonii, manuka, NZ flax, Gleichenia dicarpa, Myriophyllum propinquum, Juncus bulbosus, Eleocharis acuta and occasional overtopping Salix cinerea.

Other populations are usually in a peat pool habitat sometimes with Utricularia australis and surrounded by Empodisma minus, Schoenus brevifolius, Baumea spp. and occasional Eleocharis sphacelata.

A voucher specimen from each population has been lodged in the Waikato University Herbarium.

The future of these populations of Myriophyllum robustum appears to be reasonably safe, as most are on conservation land. Where they grow on private land (Flexman and Auckland Acclimatisation Society) the owners are aware of the species' significance.

Unfortunately the recent fire which burnt 2000 ha of Whangamarino peat bog singed parts of the drain population of Myriophyllum robustum. It appears however that plant parts beneath the water are still healthy so hopefully there will only be a temporary set back. The fire, although devastating in the short term, was a relatively cool burn. Plants are already shooting away well from surviving underground propagules (Baumea spp., Schoenus, Tetraria) and seedlings of manuka, Empodisma minus and sundews are copious. Monitoring quadrats and photo points have already been put in place in five different areas.

Robyn Irving, Tainui District, Department of Conservation, Hamilton

Taxonomic notes

■ Pennantia baylisiana (W.Oliver) Baylis

G.H. Cunningham named many fungi but not one carried the name of a colleague. He said that he hated the thought of having a friend reduced to synonymy. Most will agree with the sort of species concept adopted in the fourth volume of our flora which, where comparison can be made with the first volume, often has a welcome breadth. I remember how I siezed upon this book as a chance at last to sort out Cassinias and was disappointed. Volume four tells me I need not have tried.

So it is good to see Solanum baylisii sent down the drain with several other Russian fragments, but I have already given some reasons for keeping the Pennantias from Norfolk Island and from the Three Kings Islands apart (N.Z.J.Bot. 15:511-512) and the purpose of this note is to add two more. The specimens grown in Dunedin for comparison have now flowered several times and P. endlicheri is clearly of more slender habit, its leafy twigs only 4-5mm in diameter and its panicles all terminal. P. baylisiana has twigs about 1cm across and though panicles do occur terminally they are mostly cauliflorous, below the leaves.

The recurving of the rather large glossy leaves gives the Three Kings tree an appearance that is unique in our flora but Graeme Platt has drawn my attention to something very similar in photographs of Lord Howe Island. The Icacinaceae is not represented there so it cannot be a close relative.

Geoff Baylis, 367 High St, Dunedin

Field Work

■ Some observations during the drought in Canterbury, (January 1989)

Droughts are common in eastern Canterbury. During the five years of my botanical survey of Banks Peninsula there were several extended periods when significant numbers of wild plants wilted and some mature plants died. Each time it was hard to believe that the vegetation would not suffer long-term changes and that species would not be lost. When the rain patterns returned to "normal" (whatever that means in a place like Canterbury) the vegetation did recover and one soon forgot the depression and anxieties that the long dry spell engendered.

During the very dry spell of early 1985 I had almost resigned myself to the likelihood of drastic change in the vegetation I was studying. An American botanist studying here told me of the great dustbowl droughts of the 1930s in America. Many ecologists were convinced that a large proportion of the local species would be lost. Afterwards no evidence could be found that dryness had caused the extinction of even one. I kept telling myself, as I watched Hebe, and Asplenium, and Melicytus, and Macropiper shrivel and turn brown, that if they had not been through all this many times before, and survived, they would not be around shrivelling now. Nature is extraordinarily resilient, at least against anything she can throw at herself.

I must admit that with all this preparation and reassurance, the same old fears resurfaced during the current profound dry spell. Talk of the greenhouse effect and of marked changes in weather patterns had become very fashionable. Late in the spring Alastair Robertson, who was studying the only known significant population of Myosotis "austalis var. lytteltonensis" in a steep gully above Purau, phoned me to say that all the plants appeared to be dead. It felt spooky to learn that 1988 was shaping up to be the driest year in eastern Canterbury since records began in the 1860s. The nearest approach to it was in 1915.

By the time the year had ended only 305.5 mm had accumulated in my rain gauge in central Christchurch. The average annual rainfall to date is 643 mm. In 1986 948 mm had fallen, despite a dry autumn during April and May.

1988 was dry throughout. At the end of August a pattern of persistent westerlies set in, interrupted only by brief, dry southerly changes. September's rainfall at Salisbury Street totalled 7.5 mm, and evapotranspiration exceeded rainfall almost every day. October, with rapidly drying soils and continuing westerlies, totalled only 11.2 mm. The radio kept telling us of record rainfalls nearly everywhere else in New Zealand. We had a little more rain in November and December (the total for the two months was 40.6 mm and easterlies began to reassert themselves against what had seemed everlasting north-westerlies; southerlies, however, remained rare and dry). Temperatures were consistently above average. Pastures on the plains and Peninsula had early taken on the aspect of California in midsummer; farmers have not been exaggerating and the economic reverberations will soon enough hit the smug and stupid cities.

How has the vegetation fared? Most of the bush remnants on Banks Peninsula were looking decidedly bedraggled by mid-October. On the floor Asplenium not only wilted but turned brown. Saplings of Melicytus, Carpodetus, Myoporum and Coprosma, among others, shrivelled and appeared dead. Adult Melicytus ramiflorus, after a period in which the leaves hung, limp, then turned brown, more or less completely defoliated. So did Alectryon, Macropiper, Pittosporum

and Plagianthus. Even hardy Phymatosorus diversifolius shrivelled. It was hard to believe that long-term changes were avoidable, even if the rain did return, and the 'greenhouse' publicity made one doubt that it ever would. (Meanwhile, of course, all this made not one jot of difference to Canterbury lifestyles in which vast amounts of energy are consumed and vast amounts of greenhouse gases are contributed to the weary atmosphere!)

1989 began on a good note, when 16.5 mm of rain fell on central Christchurch, and probably a bit more than that on the Port Hills. On 7 January I biked up to Sugarloaf to see how things looked. On the floor Asplenium and Phymatosorus had resurrected every frond that had not actually gone crisp and disintegrated, and were busily unfurling new ones. The Melicytus was virtually leafless, and as mahoe is one of the chief canopy formers in the Sugarloaf Reserve the effect on this evergreen forest is pretty drastic. But the leafless twigs are far from dead; they are turgid, green inside, and lined not only with tiny leafy buds but also with flower buds, hopefully awaiting the return of a positive water balance. On the bluffs there is scattered mortality of Leucopogon fasciculatus, but Hebe strictissima, which looked beyond the point of no return a month earlier, now looks almost as if nothing has happened. Interestingly enough Pseudopanax arboreus looks fine, from seedlings to adults, in contrast to goat-infested areas of the Peninsula where Pseudopanax species are dying like flies.

Out in the tussocks Aciphylla subflabellata has had a good year - with innumerable seed-loaded females. Higher on the Peninsula Chionochloa rigida and Phormium cookianum are heavy with seed, and fruit are forming on the beeches.

As I write a soft rain is falling from the east - of course, it is the annual Canterbury Promotion Council's teddy-bears' picnic in Hagley Park.

Drought was the last thing I wanted for the first full year of the Hinewai reserve and revegetation project, now that the goats are virtually out of it. From late August until early November we had 70 consecutive days without significant rain and with desperately drying north-westerlies. This is on a vegetation which includes such moisture-demanding species as Cyathea smithii, Dicksonia squarrosa, Leptolepia novae-zelandiae, Blechnum colensoi, Cordyline indivisa, Schefflera digitata, etc. By the end of October I was oscillating between mild panic and depressed resignation, although by then the only signs of drought stress were on epiphytic Asplenium, and other ferns on almost soilless bluffs. Each time I dug a post-hole I was surprised to find that below the top 10 cm the soil was still abundantly moist. By November we were getting significant falls of rain about once a week, and 1989 started off with nearly 60 mm from the east. So against all odds Hinewai looks gloriously lush and green. The total for 1988 was just over 1000 mm, probably half the expected average; it is likely that Hinewai receives more than three times the rainfall of Christchurch and is indeed largely buffered against Canterbury's droughts, even this one.

The fact that the vegetation has been through all this probably time and time again doesn't mean that extreme years like 1988 don't cause long term "damage"; there is a small but interesting literature on drought ecology in New Zealand (e.g. Grant 1984: NZJBot.22: 15-27; Jane and Green 1986: NZJBot.24: 513-527; Bannister 1986: NZJBot.24: 387-392). Drought has been suggested as a causative factor in the decline of Libocedrus bidwillii on Banks Peninsula. We will be checking rather anxiously next spring the Myosotis site above Purau, the condition of Libocedrus and Cordyline indivisa, and populations of rare ferns

on Banks Peninsula. As I write, January, February and March 1989 lie ahead, months when hot, dry weather can certainly be expected in the eastern South Island.

Hugh Wilson, 160 Salisbury St, Christchurch

■ Lupinus arboreus - northern dieback as well

In answer to P A William's request for lupin observations (N.Z.Bot.Soc.Newsl.12, June 1988): during the recent Auckland Botanical Society Northland field trip (January 1988), dead tree lupins were seen along the coast, both on the coastal sands and further inland amongst rank pasture and marram from Kawerua to south of the Waipoua River mouth (an 8 km stretch). Five years ago, the trip across c.½ km of semi-stabilised dunes to the two dune-impounded lakes on this piece of coast was daunting on account of the 2 m high tree lupin covering the low native scrub of Cassinia retorta, Coprosma acerosa and Muehlenbeckia complexa. Now there are scattered broken down skeletons of tree lupin, which have the appearance of having been dead for some time (since last summer?). The only living lupins seen were a few recent seedlings, many of which had the appearance of being aphid-infested.

Lupin has also died on Auckland's west coast (Whatipu) where a February visit revealed most plants dead, though firmer in structure than their Waipoua counterparts. There were occasional healthy seedlings (±50 cm tall) and some adult plants leafless apart from a few unhealthy shoots. The Whatipu lupin has been dying since last winter. (T. Stein, pers. comm.). What a pity this dieback is not permanent!

E.K. Cameron, Botany Department, University of Auckland, Private Bag, Auckland 1, and A.E. Wright, Auckland Institute & Museum, Private Bag, Auckland 1

■ Pennantia baylisiana fruiting on Great Island, Three Kings

On 27 February 1989 the sole wild tree of Pennantia baylisiana (the world's rarest tree according to the Guinness Book of Records) was visited during a Department of Conservation expedition to Great Island. The presence of ripe fruit on the tree was a very pleasant surprise. Mature fruit had never previously been found on the wild tree, although some cultivated plants on the mainland have produced fertile seeds - albeit with some degree of human intervention.

The mature fruit occur sparingly amongst infructescences of numerous apparently unfertilised ovaries. They measure 9-10 x 4-4.5 mm, are ovoid in shape and have a fleshy seed covering c.1 mm thick. When immature they are very pale green, almost whitish; with approaching maturity a mauve speckle appears; while fully mature fruit are dark purple and somewhat shiny.

Further details of the find and the conservation status of the other members of the Three Kings endemic flora will be published in due course.

Anthony Wright, Auckland Institute & Museum, Private Bag, Auckland 1

PUBLICATIONS

■ The naturalisation of plants in urban Auckland



A collection of papers from the New Zealand Journal of Botany in which A. E. Esler tells the story of alien plants in Auckland. It seems that no other city in the world has as many naturalised species as Auckland. Plants which grow here can be found naturally on almost every degree of latitude from 43°S to 72°N. Free from the constraints of their homelands, many flourish in Auckland's mild, moist climate.

The first three papers in this collection record the progress of naturalised plants in urban Auckland. A catalogue of alien plants comprising a list of species present, their frequency of occurrence, and preferred habitats completes this section. Those establishing weed management programmes will find this catalogue particularly useful. The last three papers examine the nature of alien plants. They look at successful species and their attributes. Alien plants as weeds are also discussed.

Mail order price NZ\$35.75 within New Zealand and Australia; US\$35.75 outside New Zealand and Australia. Order from:

Publications Officer, DSIR Publishing, PO Box 9741, Wellington

■ Poisonous Plants Poster in full colour



Poisonous plants are both widespread and common. They are a frequent cause of concern particularly to parents of young children.

This poster produced by Botany Division, DSIR is the first for New Zealand. It shows the 34 species most often responsible for human poisoning in this country.

These plants include cultivated, naturalised, and native species. Their poisonous parts are listed with the correct scientific and common name of the species.

Prices for single copies are \$8.50 (laminated) or \$5.50 (unlaminated). For orders of 5 or more copies the price is \$5.50 each (laminated) or \$3.30 each (unlaminated). Please add \$1.35 p&p per order. Send orders together with payment to:

Information Officer, Botany Division, DSIR,
Private Bag, Christchurch

■ Colenso on orchids

The New Zealand Native Orchid Group is planning an historical series of reprints of some of the important papers on our orchids from the past. These will be in booklet form and will only be available by preordering. The first will be printed soon. It will contain reprinted papers by William Colenso, with a brief biography, and commentary. He is one of the very important figures in the history of our orchids, and every serious student of the subject should have ready access to his work.

Further numbers in the series will include "The orchid papers of E D Hatch" (2 volumes), "The NZ orchids - references and illustrations", "Cheeseman's orchids", and more are planned.

Don't miss the first of this important series. "Colenso on orchids", NZNOG Historical Series No. 1, can be ordered now. Only sufficient copies to meet orders received by 1 April 1989 will be printed. Price \$10.00. Send money with your name, address and order to:

Ian St George, Editor, 45 Cargill St, Dunedin

■ New Zealand Journal of Botany

The 1989 subscription rate for personal subscribers is \$96.25 (including postage and packaging, and GST). Volume 27 will include more detailed articles on the botany of various regions of New Zealand; insights into the ecological requirements of many of our native plants; checklists of fungi, introduced plants, etc.; and colour plates featuring Audrey Eagle's paintings. If you wish to order the Journal please send your cheque to:

Publications Officer, DSIR Publishing, PO Box 9741, Wellington

■ Preliminary list of plant generic names

A draft list of names of genera of Angiosperms, Gymnosperms and Ferns in current use has been produced by Kew Herbarium and this list is now available in CHR Herbarium. It is in two volumes, the first of which has all names in alphabetical order, indicating the family of each accepted name and the family plus accepted name for each synonym. Volume 2 has all accepted names arranged in families, with an alphabetical sequence of families and of genera within them, with synonyms listed under their accepted names.

It is intended that after input by other herbaria that Kew will amend this list and that it will then be published in Regnum Vegetabile for wider comment. Apparently a final proposal will then be taken to the next International Botanical Congress in Tokyo in 1993. I believe that this is an attempt to prevent the use of older, obscure generic names being discovered and forcing undesirable name changes.

It is however to be noted that this list is only the opinion of the Kew taxonomists and several genera described and currently recognised in New Zealand in recent years have not found their way into this list. It is hoped that Kew will respond to the comments and additions that the taxonomists of Botany Division have asked to be included. Further information on this draft list and its contents can be obtained from:

Murray Parsons, Botany Division, DSIR, Private Bag, Christchurch

■ Rare and endangered flora tour

One in every 10 New Zealand plant species is at risk. As a result of the impact of man and grazing mammals so many unique species are declining. Many are on the road to extinction. Yet some of the rarest are among New Zealand's most beautiful plants. Escorted by Dr David Given, New Zealand's leading authority on rare and endangered plants, this 11 day tour is a unique opportunity to visit the plants for which time may be running out. The tour runs from 1 - 11 October 1989.

The tour concentrates on the northern North Island, and in particular the Northland region where over 25% of NZ's rare and endangered species survive, and the geothermal regions of the volcanic plateau.

The aim of the tour is three fold:

1. to enable interested sympathetic naturalists to view as wide a diversity as possible of New Zealand's rare, endangered and threatened plant species in their natural habitats.
2. to heighten participants' awareness of the plight so many of our rare species face, and the options for conserving these species.
3. to ascertain the current status of a number of populations of the most at risk species in this country.

Interested readers should request further information from:

Mark Hanger, Director, Nature Quest New Zealand, PO Box 6314, Dunedin

DESIDERATA

■ Thismia rodwayi

A student at Waikato University is undertaking a project on Thismia rodwayi this year. She would be pleased to receive any information on locations, flowering dates and associations of this unusual plant that readers may have. Please send your observations to:

Cathy Jones, 15 Wellington Street, Hamilton

FORTHCOMING MEETINGS/CONFERENCES

■ Science and the New Zealand Natural Heritage

As part of New Zealand's sesquicentennial year a major interdisciplinary conference is planned for Massey University in late January, 1990. The objective is to review the current status of our knowledge of the nation's physical and biological heritage, and to examine the nation's requirements for both short and long term research.

It is expected that the conference will take the form of a number of general symposia and plenary sessions, including invited overseas speakers. Abstracts will be available and a publication will also be prepared.

Massey University hopes to simultaneously serve as a venue for a number of scientific societies, which will organise their own symposia and workshops in keeping with the theme of the conference. Plans are well advanced, and many scientific societies have indicated their support.

A full social and activity programme for families of participants is planned,

with a number of field trips to areas like Kapiti Island and Cape Kidnappers which are often difficult of access. Participants may wish to include the Manawatu and this conference in their holiday plans, or on their way to the Commonwealth Games.

The first circular should be distributed in early April, but if you have enquiries or suggestions, please don't hesitate to get in touch with:

Dr David Penny, Dr Charley O'Kelly or Dr Jill Rapson, Department of Botany and Zoology, Massey University, Palmerston North

■ Ecological restoration of New Zealand islands

A conference on the Management of New Zealand Islands is being organised by the New Zealand Department of Conservation. The conference will be held in Auckland in November 1989 and will run for about 5 days total and will include a one-day field trip to an island with an existing restoration programme. Topics covered will include eradication of pest species, island transfers, community restoration, archaeology, education and recreation.

New Zealand has about 700 islands within its borders. They represent unique resources. Some provide the only remaining examples of what prehuman ecosystems in New Zealand might have been like. Others provide the last refuges for a huge range of endangered species. The conference aims to present to the community the priceless heritage that these islands represent and the roles of the public, as well as the Department of Conservation, in their conservation into the 21st Century.

The conference will consist of papers presented by invited speakers with national and international reputations, workshops, and some contributed papers. It is intended that these will provide principles which will guide the Department of Conservation in its management of islands for which it is responsible.

Invited contributions and papers accepted for presentation will be published. For further information contact:

C. R. Veitch, Northern Region, Department of Conservation, Private Bag 8, Auckland; or **P. R. Dingwall**, Science and Research Directorate, Department of Conservation, PO Box 10 420, Wellington

■ International Plant Propagators Society

The IPPS Conference will be held in Dunedin from 12 - 15 October 1989. Papers will cover a range of topics related to plant propagation. Anyone interested in attending or requiring more information contact:

Brent McKenzie, 55 Mayfield Ave, Dunedin (phone (024) 743-515 at Dunedin Botanic Gardens, or (024) 67-686 at home)

■ 4th International Conference on Aerobiology, Stockholm 3 - 7 September 1990

Professor Siwert Nilsson has left a pile of first circulars for this conference with me for distribution. Anyone interested can write for one.

Phil Garnock-Jones, Botany Division, DSIR, Private Bag, Christchurch

CONFERENCE/MEETING REVIEWS

■ Sixth New Zealand Herbarium Curators' Meeting

This meeting, from 20 - 21 November 1988, attended by twelve curators, resolved to establish a New Zealand National Network of Herbaria to co-ordinate major projects concerning herbaria and their use. This Network would emphasise the national importance of the herbarium collections in New Zealand, for taxonomy, ecology and environmental management. The Network also recognises the important regional facilities and functions of the regional herbaria, especially the smaller ones.

Other items discussed included: electronic data processing of herbarium information, a central catalogue of type specimens of all groups of plants held in New Zealand herbaria and photographs of types of New Zealand plants held in overseas herbaria, a manual of herbarium techniques and the hand-writing project which records the autographs of botanists who have worked with the older herbarium collections.

Botany Division has been asked to consider providing a training course for herbarium technicians. The need for checklists of all plant groups and the progress on these was discussed. It was suggested that persons interested in writing keys to various plant groups might consider publishing these in the National Museum Miscellaneous Publications Series.

The minutes of the meeting will be circulated to all Curators of Herbaria.

M. J. Parsons, Botany Division, DSIR, Private Bag, Christchurch

■ Australasian Bryological Workshop - Hobart

This workshop based at the University of Tasmania from 3 - 10 December 1988 attracted some 10 New Zealanders, as well as participants from even further afield, from the United States and Argentina, to join a dozen Australians. Field trips to the Hartz Mountains, Mt Nelson, Mt Wellington, Mt Field, Collinsvale and to the Tasmanian Peninsula provided a wide variety of habitats, for both bryophytes and vermin. Warnings to take care of snakes, biting ants and leeches were well heeded by us visitors from this benign side of the Tasman - all were seen, but none sufficiently provoked to cause trouble. The similarity of the bryophyte flora to that of New Zealand was striking - and quite unlike that of the vascular plants. Bryological highlights for me included such foreigners as Macromitrium archeri, Ptychomnion mittenii, Tayloria gunnii, and the umbrella moss Hypnodendron vitiense, as well as New Zealanders rarely seen here, at least by northerners, Anomodon tasmanicus, Hypnodendron comosum var. sieberi, and Orthodontium lineare. New puzzles to ponder: why Breutelia affinis doesn't grow luxuriantly on roadside banks here, as it did at Mt Field National Park; how Fissidens taylorii comes to be growing in a soggy ooze in the middle of a subalpine stream; and can it really be the same Isopterygium limatum, which I find in North Auckland only in moist forests near the tops of the highest peaks, flourishing in dry sclerophyll forest on the outskirts of Hobart?

Splendidly organised by Paddy Dalton and Rod Seppelt, the workshop provided a wonderful chance to spend a week in the field and the lab, immersed in bryophytes with fellow bryophyte-lovers. The opportunity to have discussions with the authors of one of our most useful texts, *Mosses of Southern Australia*, was greatly appreciated. As a parting gesture from our NZ spokesman, Rodney

Lewington, it was decreed that the text should no longer be known as "Scott & Stone" amongst us, but henceforth as "Ilma & George". We look forward to another Australian-organised workshop in 1991.

Jessica Beaver, Research Associate, Botany Division, DSIR, Private Bag, Auckland

THESES IN BOTANICAL SCIENCE

■ University of Auckland, Department of Botany

- Brothers, P.M., 1988: The effect of position on bud burst and shoot development in Actinidia deliciosa (A. Chev.) MSc
- Brown, E.A., 1988: Studies in the New Zealand Aneuraceae. PhD
- Kent, H.L., 1988: Studies on a leaf spot and blight of pincushions (Leucospermum spp.) MSc
- McCarrison, A.M., 1988: A study of Phytophthora root rot disease in kiwifruit. MSc
- McNeilage, M.A., 1988: Cytogenetics, dioecism and quantitative variation in Actinidia. PhD
- Moss, J.M., 1988: A study of chromosome arrangement at meiosis in Briza humilis. MSc
- Nelson, G.L., 1988: A study of onion pink root rot. MSc
- Newman, P.K., 1988: Analysis of variation in Hebe diosmifolia (A. Cunn.) Ckn. et Allan (Scrophulariaceae). MSc
- Pavis, S.E., 1988: Factors limiting fruit production in Tamarillo Cyphomandra betacea (Cav.) Sendt. MSc
- Sorrell, B.K., 1988: Gas transport and storage processes in the lacunar system of Egeria densa Planch. PhD
- Stenersen, M.A., 1988: Induction and consequences of ploidy change in the Pepino (Solanum muricatum Ait.). MSc
- Sukias, J.P.S., 1988: Cytogenetics and somaclonal variation in garlic. MSc
- Townsend, J.S., 1988: An investigation of a leaf spot disease on Kohekohe (Dysoxylum spectabile (Forst. f.) Hook. f.). MSc
- Young, A.G., 1988: The Ecological significance of the "Edge Effect" in a Fragmented Forest Landscape. MSc
- Walker, M.D., 1988: A study of corolla senescence of Petunia axillaris "Mitchell". MSc

■ University of Canterbury, Department of Plant & Microbial Sciences

- Burritt, D.J., 1988: Large scale selection of asulam-resistant mutants from cell cultures of Nicotiana plumbaginifolia. MSc
- Delph, L.F., 1988: The evolution and maintenance of gender dimorphism in New Zealand Hebe (Scrophulariaceae). PhD
- Fellowes, A.P., 1988: A cDNA clone from the local isolate of PVY^N. MSc
- Gill, W.M., 1988: Aspects of Auricularia in New Zealand. MSc
- Gregor, J., 1988: A study of variation in isolates of Leptosphaeria maculans. MSc
- King, A.C., 1988: Study of the eyespot disease of cereals caused by Pseudocercospora spp. PhD
- Wilson, C., 1988: Intrinsic factors of the pathogenicity of Serratia entomophila toward the New Zealand grass grub (Costelytra zealandica (White)). MSc

■ Lincoln College, Plant Science Department

- Bishop, N., 1988: The influence of environment, season, plant growth stage and herbicide formulation on the activity of glyphosate applied to Lolium perenne. PhD
- Bungard, R.A.: Ecophysiology of plants from a fan succession near Franz Josef Glacier. BHortSc (Hons)
- Espie, P.R.: Edaphic ecology of Festuca novae-zealandiae, Lotus pedunculatus and Trifolium repens on Craigieburn high country yellow brown earth and related soils. PhD
- Gibbs, H.M.: Variation in alkaloid content of Russell lupins and L. arboreus. BHortSc (Hons)
- Gibson, R.: Introduced conifer spread in the South Island high country, New Zealand. MAppSc
- Keerio, H.K., 1988: Establishment of white clover seed crop under spring barley. PhD
- Martin, M.L.: The effect of amidochlor and mefluidide on the development of perennial ryegrass (Lolium perenne). MAppSc
- Samad, M.A., 1988: Inheritance of reproductive characters in selected lines of pea. PhD
- Wilkinson, K.J.: The effect of different levels of metribuzin and water application rate on the growth and yield of lentils (Lens culinaris Medik). BAgSc (Hons)

■ Massey University, Department of Botany & Zoology

- Morgan, E.R., 1988: The architecture and radiation regime of a kiwifruit stand. MSc in Plant Science

■ University of Otago, Department of Botany

- Galloway, D.J., 1987: The New Zealand Lichen Flora: Taxonomic, Chemical, Biogeographical and Historical Studies. DSc
- Heads, M.J., 1987: Biogeography and Taxonomy of some N. Z. plants. PhD
- Horrell, B., 1987: A study of the control of phase change in selected Heteroblastic species. MSc
- Nielsen, A.E.B., 1987: Cytology of Ranunculus ficaria in the Dunedin area, New Zealand. MSc
- Eason, J.R., 1987: The effect of zinc on growth, pigment content and photosynthetic and respiration rates of Macrocystis pyrifera (L.) C. Agardh. BSc Hons
- Fagan, B., 1987: The frost resistance of Blechnum penna-marina. BSc Hons
- Kelly, B.J., 1987: Aspects of the ecophysiology of Xiphophora chondrophylla (R. Brown) Harvey. BSc Hons
- King, W. McG., 1987: The water relations of a hemi parasitic mistletoe: Loranthus micranthus and some of its hosts at Purakanui, Eastern Otago, New Zealand. BSc Hons
- Roxburgh, S.H., 1987: Nitrate and ammonium uptake kinetics of the red seaweed Gracilaria secundata Harv. after various nutrient pre-treatments. BSc Hons
- Frazer, A.W.J., 1988: Growth and reproduction in Porphyra columbina Mont. (Rhodophyta, Bangiales). MSc
- Gillanders, B., 1988: Aspects of the physiological ecology of Xiphophora chondrophylla (R. Br.) Harvey. MSc
- Talbot, J.M., 1988: The relation between vegetation and environment in two snowbanks on the Rock and Pillar Range, Central Otago. MSc
- Calder, J., 1988: Woody species invasion and burning: preservation of the snow tussock grassland of the Flagstaff Scenic Reserve, Dunedin. BSc Hons
- Day, S., 1988: The isolated silver beech (Nothofagus menziesii) stand at Mt Cargill: continued monitoring of its structure and demography. BSc Hons

■ Victoria University of Wellington, School of Biological Sciences

- Horsfield, J.A., 1988: A physiological comparison of two separate form species of Drachslera teres, using two different barley cultivars as hosts. DipAppSci
- Richardson, H.J., 1988: Dynamics of a gorse (Ulex europaeus L.) dominated scrub community on the eastern Hutt hills, Lower Hutt. DipAppSci
- Rose, J., 1988: Myxomycetis, a photographic study of some common New Zealand species. BSc Hons
- Blaschke, P.M., 1988: Vegetation and landscape dynamics of inland Taranaki hill country. PhD
- Khan, M.R.I., 1988: Morphogenetic competence and somaclonal variation on Oca (Oxalis tuberosa M.). PhD
- Lindsay, G.C., 1988: Somaclonal variation among tissue culture regenerants of New Zealand-bred potato (Solanum tuberosum) cultivars. PhD

■ University of Waikato, Department of Biological Sciences

- Champion, P.D., 1988: The Ecology and Management of Kahikatea Dacrycarpus dacrydioides (A. Rich.) de Laubenfels in the Waikato, North Island, New Zealand. MSc
- van Rossem, J., 1988: Plant Growth on Composted Freezing Works Waste. MSc

LETTER TO THE EDITOR

Dear Editor,

I'm intrigued by the item on "Tree Spiking" in Newsletter No. 14. Is it for real?

The detailed description of just how the mischief is done aroused my suspicions - presumably if we had information about the practice we wouldn't need an explanation; if we didn't, it must raise interesting possibilities in the minds of those among us whose aim is "to encourage the conservation of the indigenous N. Z. flora and vegetation" (Rule 3(g)). A whole new fantasy world has certainly opened its doors to me! If however I had been in the former group and had personal knowledge of such practices, what is there here to encourage me to divulge my guilty secrets - not even an offer of confidentiality!

And then there's the question "Is it legal?" Is the researcher actually asking for readers' opinions about whether or not it's legal, or is s/he hoping that there's a lawyer or two versed in such matters among the readership?

I find it hard to take the item seriously. But perhaps it wasn't intended that I should. Is this perhaps an activist's attempt to stir up armchair conservationists? Or is someone just pulling my leg!

S. Jones

Acknowledgement: This Newsletter was typed by Mary Best and Marcel Smits

