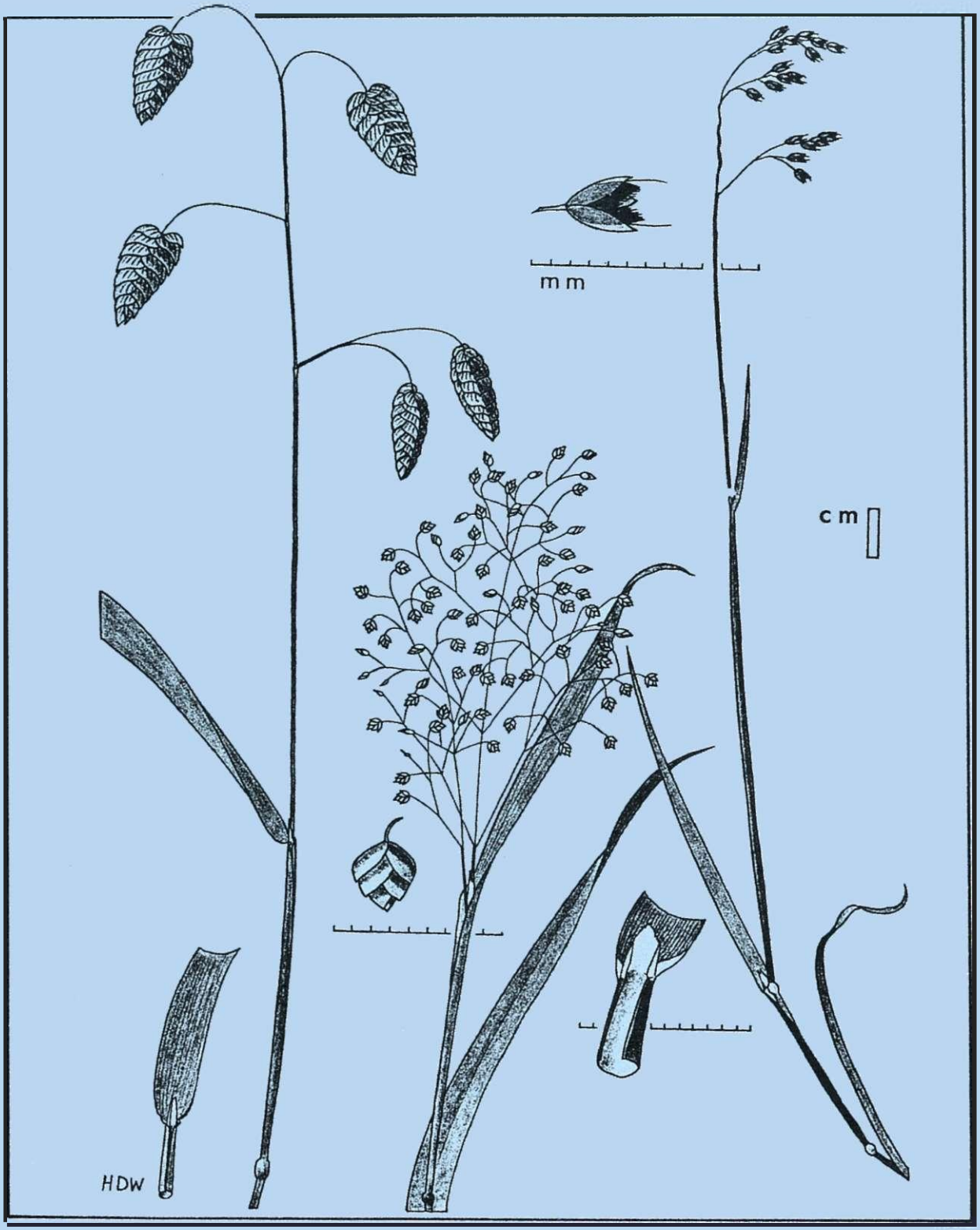
NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 7 MARCH 1987



SUBSCRIPTIONS

The 1987 subscription has been held at $10.00 for four issues of the Newsletter (March, June, September, December). An invoice for 1987 subs was enclosed in the December 1986 issue (Number 6) for existing subscribers. 130 existing subscribers have not yet paid their 1987 subs - if there is a blue reminder notice inside your copy **please pay promptly.** A reduced subscription of $5.00 is available to full-time students. Back issues of the Newsletter are available at $2.50 each - Number 1 (August 1985) to Number 6 (December 1986) inclusive.

New subscriptions are always welcome, and should be sent to the New Zealand Botanical Society, c/- Auckland Institute and Museum, Private Bag, Auckland, New Zealand.

FINANCES

Summary of Income and Expenditure for 10 March 1986 (last statement, Newsletter Number 3, p.2) to 31 December 1986.

INCOME		EXPENDITURE	
B.fwd. 10 iii 1986	1317.26	Printing No. 3	400.00
Subs	1150.00	Postage No. 3	60.08
Student subs	30.00	Printing No. 4	524.80
Donations	546.50	Postage No. 4	60.63
Interest	39.57	Printing No. 5	636.24
Interest	92.35	Postage No. 5	62.03
		Printing No. 6	662.20
		Postage No. 6	63.83
		Cheque unpaid	10.00
		Chequebook	1.50
		NZPO Registration fee	20.00
	3175.68		2501.31
Cfwd 31 xii 1986	674.37		

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. Feel free to suggest new headings and provide content for them.

DEADLINE FOR NEXT ISSUE

The deadline for the June 1987 issue (Number 8) is 22 May 1987. Although Anthony Wright will be overseas on leave then, arrangements have been made for the continued publication of the Newsletter. Please continue to forward contributions to:

The Editor
N.Z. Botanical Society Newsletter
Auckland Institute and Museum
Private Bag
AUCKLAND 1

NEW ZEALAND BOTANICAL SOCIETY
NEWSLETTER
NUMBER 7 MARCH 1987

CONTENTS

News
Visitors
Dr Mary White 2
Dr Bill Barker 2
Regional Bot Socs
Auckland 2
Rotorua 3
Wellington 4
Canterbury 5
Other Botanical Research Establishments
Friends of Dunedin Botanic Gardens 5
Notes and Reports
Current Research
Ecophysiology of Gracilaria sp. nov. 6
New Plant Record
Myriophyllum robustum 6
Lichen genus Roccellina 7
Phenology
Carduus 8
Announcements
Tane 8
NZ Native Orchid Group 9
RNZIH Annual Journal 9
Forthcoming Meeting
5th John Child Bryophyte Foray 9
Conference/meeting Reviews
Council of Heads of Australian Herbaria 10
ANZAAS 11
Book Review
Wildflowers of Central Otago 12

Cover illustration: ***Briza maxima*** (left), ***B. minor*** (centre), and ***Hierochloe novae-zelandiae*** (right) (Gramineae)

The two distinctive species of *Briza* (quaking grasses) shown here came from the Mediterranean region and in New Zealand have escaped from gardens where they are cultivated for their ornamental value. Both are now widely naturalised in New Zealand. *H. novae-zelandiae* is a common subalpine and alpine grass of South and Stewart Islands (Hugh Wilson).

NEWS

Visitors

■ **Dr Mary White**

Palaeobotany is not a well supported science in New Zealand. It was an exciting occasion then when Mary White, author of the recently published "The Greening of Gondwana", visited Christchurch whilst touring after attending the ANZAAS conference in Palmerston North. "The Greening of Gondwana" is a beautifully illustrated book which traces the evolution of the Australian flora during a period of more than 400 million years. Besides promoting her book, Mary was interested to meet botanists, palaeobotanists and geologists and to examine fossil collections in order to learn something of palaeobotanical work in New Zealand. Her enthusiasm for the subject was infectious and must have provided a fillip for those who work with plant fossils in this country. Mary has a long background in palaeobotany and as a young woman was encouraged by Alexander du Toit, the well known South African geologist of a generation ago, who despite current opinion was a convinced proponent of the theory of continental drift put forward by the German meteorologist, Alfred Wegener, about 70 years ago.

Neville Moar, 8 Maurice St, Lincoln

■ **Dr Bill Barker (Euphrasia)**

Bill Barker (Botanic Gardens, Adelaide) who has already revised the Australian species of Euphrasia hopes to visit New Zealand for a month or so during the summer period of either 1987-88 or 1988-89. He will be making observations on Euphrasia species in preparation for a revision of the New Zealand species. He would appreciate prior notice of interesting localities and plant characters, particularly of any odd or anomalous populations. If anyone knows of such populations or encounters them in the near future would they please inform Bill so he can endeavour to see the populations during his visit to New Zealand. He would appreciate herbarium specimens wherever possible. Anyone with information to offer should write directly to: Dr W R Barker, Botanic Gardens of Adelaide, North Terrace, Adelaide, South Australia 5000, Australia.

Professor David Lloyd, Department of Plant & Microbial Sciences, University of Canterbury, Private Bag, Christchurch

Regional Bot Socs

■ **Auckland Botanical Society**

Volume 42, no.1 of the Society's Newsletter was published in January 1987. The Contents are as follows:

The Surprising Botany of Banks Peninsula (The Lucy M Cranwell Lecture 1986) — H.D. Wilson

"New Zealand Alpine Plants" by A.E. Mark and Nancy M. Adams — Reviewed by R.O. Gardner

Notes on Pterostylis plumosa — E.D. Hatch

A Showy Lily (Lilium formosanum) on the move? — E.K. Cameron

The holes in the leaves of kawakawa (Macropiper excelsum) — R.E. Beever

Two new sites for Pomaderris polifolia — Maureen Young

Syzygium and related genera (Myrtaceae) in Auckland — R.O. Gardner

Purewa and its cemetery — R.O. Gardner

The Indigenous Flora of the Te Kauri Scenic Reserve Kawhia (Tainui Ecological District) — P.J. de Lange

Pukekararo Scenic Reserve — Maureen Young

Additional Records and Confirmations for Mt Kakepuku Historic Reserve, Te Awamutu — P.J. de Lange

"Native Vascular Flora of the Waitakere Range": Additions — R.O. Gardner

Morgans Reserve - ABS visit 19 July 1986 — G. Davidson

Matuku Reserve — A.E. Wright

Waitakere Adventive Project - part 3 — J. Mackinder

On the Maintenance of a Waitakere Stream — J. Mackinder

The Secretary, Auckland Botanical Society, 14 Park Rd, Titirangi, Auckland 7

■ **Rotorua Botanical Society**

Visitors are welcome to take part in the Society's forthcoming field trips:

Sunday 5 April Whangamarino Swamp Acid peat bog vegetation - manuka - Baumea shrub-sedgeland with marginal mineralised zones; a mineralised arm of the swamp with Myriophyllum robustum; and, if time, Polygonum-Ludwidgia herbfield and semi-mineralised zone with manuka-cabbage tree-flax scrub. An interesting area to compare with Kopuatai Peat Dome. Can be wet under-foot; recommend shorts and stout footwear. Meet at Rotorua Civic Theatre 7.30 am or Meremere Power Station at 10.00 am. Leader - Cathy Jones (Hamilton 68280).

Saturday 2 - Sunday 3 May Tawarau State Forest Virgin lowland forest, notable tanekaha and matai stands, unique scrub and karst vegetation.

Staying at Alpiger Hut, Apple tree Rd; 10 bunks only, some tents required plus cooking gear. Meet Rotorua Civic Theatre 4.30 pm Friday or Waitomo Village 7.00 pm or Alpiger Hut Friday evening for those wanting to set up tents in daylight. Leaders - Paula Broekhuizen (Waikite - 848) - Corry Regnier (Rotorua - 475456 work hours).

Saturday 23 May Te Hunga Ridge, Kaimai Forest Park From forest edge near Gordon (south of Te Aroha) to top of southern end of Coromandel Range, from lowland (kohekohe, puriri etc) to montane forest (silver beech, pink pine etc), via good track. Meet at Rotorua Civic Theatre at 8.30 am or Gordon Forest Park office at 10.00 am. Leader - Mark Smale (Rotorua 83022)

Sunday 28 June Ohinekoao Scenic Reserve, Herepuru Rd. (off State Highway 2, 10 km north of Matata). Coastal forest and an adjacent wetland if time permits. Meet at Rotorua Civic Theatre at 8.45 am or Matata Post Office at 10.00 am. Leader - Anne Graham (Tauranga 65593)

The Secretary, Rotorua Botanical Society, C/- Mourea Post Office, Rotorua

■ **Wellington Botanical Society**

Our programme for the next three months is as follows:

Monday Evening Meetings: These are held at Victoria University of Wellington in the new Kirk Building, room K303. Meetings begin at 7.30 pm.

March 16: Buffet Dinner followed by Members' Slide Evening. The buffet dinner will begin at 6.00 pm in room K810 on the 8th floor of the Kirk Building. Please bring a plate. The normal monthly meeting will follow at 7.30 pm.

April 27: Early New Zealand Botanical Art - an illustrated talk by Dr Bruce Sampson, Botany Department, VUW.

May 18: Plants and Vegetation of the South West of Western Australia. A "members' evening" introduced by an illustrated talk from Colin Ogle and Susan Timmins.

Field Trips:

Saturday 7 March: Kaitoke - Smiths Creek. Leader Bev Abbott (758-468)

Saturday 4 April: Eastern Walkway and Seaweeds at Island Bay. Contact Barry Sneddon (769-383)

Easter Weekend (Thursday 16 April - Tuesday 21 April): Haldon Hills, Sawcut Gorge (Waima River), Marfell Beach, Needles Point, and Taylor Pass, Marlborough. Names with a deposit of $25 for food should be with the transport organiser (Barbara Polly, 3/77 Wilson Street, Newtown) by 20 March. Leader in field: Tony Druce (work 673-119; home 287-853)

Saturday 2 May: Mount Climie and Environs. Leader: Susan Timmins (730-363)

For further information on the Wellington Botanical Society contact: Rodney Lewington, 4 Highbury Crescent, Wellington 5 (753-145 home)

Vicky Froude, Secretary, Wellington Botanical Society.

■ Canterbury Botanical Society

The Society meets the first Friday of every month in Lecture Room A6 of the University of Canterbury at 8.00 pm. A field trip is usually held the following Saturday. Visitors always welcome. The Society's programme for the coming month is:

March 6 - topic to be confirmed
7 - Field trip to Ryton Valley, Mt Olympus area.

April 3 - Peter Wardle - Peatlands of the Chathams and Campbell Islands.
4 - Field trip to Waipara Gorge, North Canterbury.

May 1 - David Kelly - Plant population dynamics: Why the plants you want are rare and those you don't are common.
2 - Field trip to the Selwyn Plantation, Central Canterbury.

June 5 - David Given - Conservation.
6 - A workshop will be held - topic to be confirmed.

July 3 - Brian Molloy - Corynocarping in Cape York and Melanesia
A dinner will be held after this meeting.
4 - Field trip to the Orchards of Lincoln College

For further information contact: Philippa Horn, Plant Science, Lincoln College, (252-811; David Norton, School of Forestry, University of Canterbury, (489-009); Nigel Taylor, Botany Division, DSIR Lincoln, (252-511).

The Secretary, Canterbury Botanical Society, P.O. Box 8212, Riccarton, Christchurch

■ Friends of the Dunedin Botanic Garden

The Society of Friends of the Dunedin Botanic Garden was incorporated in 1986, with two broad aims:
- to foster interest in the activities and programmes of the Dunedin Botanic Garden; and
- to promote the development of the Garden and to raise funds for approved purposes.

The Friends' Committee is aware that the Garden is already used as a resource by many other societies, and such groups as the Dunedin Horticultural Society have played a major part in its promotion. The Friends publish their own Newsletter.

New members are welcome, and membership fees for the year ending 31 July 1987 are:

Patron (5 years)	$200
Patron (Commercial)	$500
Family	$6
Ordinary	$5
Student	$3

David Neate, Secretary, Friends of the Dunedin Botanic Garden, P.O. Box 124, Dunedin

NOTES AND REPORTS

Current Research

■ **Ecophysiology of Gracilaria sp.nova**

In recent years there has been considerable worldwide interest in the red seaweed Gracilaria, initially for the production of agar but then as a food source for paua and fish in commercial aquaculture ventures.

Much of this attention has been focused on mariculture techniques and laboratory studies. Long term studies on natural populations of Gracilaria are uncommon even though the knowledge to be gained is vital to the planning of mariculture systems or havesting of natural stocks.

My current field study is an attempt to generate information which will aid in our understanding of naturally growing populations of Gracilaria and discover to what extent seasonal changes in the environment exert an effect on the populations. Which environmental variables are the most important in determining growth will be assessed from the results of complimentary laboratory experiments.

From the measurements of plant growth rates, biomass and regeneration from seasonally cleared areas, some indication of how much growth can be expected from maricultural plants at various times of the year can be obtained. If harvesting wild stocks were considered instead, measuring biomass and regeneration would indicate how much material could be harvested at different times of the year and how soon the area would be ready for reharvesting.

It is envisaged that once the environmental tolerance limits of the species are established, the natural distribution will be better understood, and furthermore that sites for the initiation of a mariculture can be chosen more effectively.

This project is being supervised by Dr Murray Brown. Funding has been provided by a DSIR contract through Dr John Christaller, Plant Physiology Division, Palmerston North.

Anita Pillai, PhD student, Department of Botany, University of Otago, Private Bag, Dunedin

New Plant Records

■ **Two new Myriophyllum robustum localities in the Whangamarino Wetlands, Te Kauwhata**

Whilst carrying out vegetation surveys for the Wildlife Department within the Maramarua arm of the Whangamarino Wetland and in the vicinity of Amokura Railway station, two large (and healthy) populations of Myriophyllum robustum Hook.f. were located.

The first population, which is the most extensive, was located by Cathy Jones (Wildlife Service, Hamilton) in the upper Maramarua arm of the wetland

on private property. This population, consisting of 40 - 50 "rafts" is growing in a recently restored wetland of mid-eutrophic to mesotrophic status. The wetland, restored for the purpose of duck hunting and for breeding Grey Teal, consists of deep peaty water overlying recent river alluvium with a vegetation dominated on the gleyed margins by willow (Salix cinerea), Elecoharis sphacelata, and Juncus spp.

Myriophyllum plants were noted in 80 cm of water on the margins of this vegetation, with emergent stems up to 80 cm from the water level (compare with the dimensions given in Allan's Flora and Orchard, A.E. 1979: Brunonia 2(2): 247-87). On the other side of the swamp numerous floating "rafts" of M. robustum were noted in very deep water (c.1.5-2 m), which is the greatest depth of water the author has ever seen the plant growing in. On this side of the swamp an active peat margin occurs dominated by manuka (Leptospermum scoparium - peat bog form), Baumea huttonii, B. rubiginosa and Tetraria capillaris. Plants were abundant throughout this margin.

Many of the plants observed were browsed and/or defoliated suggesting waterfowl and cattle find the plant palatable. This may explain the recent extinction of the Amokura population noted by Bartlett (1984: NZJBot 22:307-313) which is cattle grazed, although this arm of the wetland has become drier since the plant was located there. In cultivated plants from other colonies plants are often severely defoliated by caterpillars (species as yet unknown) and these too may be responsible for the defoliation of the plants observed.

Reservation of this site is likely, provided suitable monies can be found for adequate fencing. No Myriophyllum aquaticum is present in this site, although it is present nearby.

The second colony was discovered quite close to the Amokura Railway Station colony reported by Bartlett (loc.cit.) and Orchard (loc.cit.). However in direct contradiction to Bartlett's suggestion that plants may not favour the semi-mineralised peat, the specimens found were noted under gorse (Ulex europaeus) on semi-mineralised, roadside peat (and gravel). The majority of the plants however, were in deep water (c. 1.3 m) in a small lake amongst Eleocharis sphacelata with numerous marginal specimens growing amongst Sphagnum falcatum. Several hundred emergent stems were located, probably derived from many individual plants, but this could not be proven because of the close proximity of the specimens. The plants were unusual in that they were growing in an oligotrophic site; other recent North Island records are from mesotrophic - eutrophic wetlands.

Plants from both sites are in cultivation, along with material from three of the other four recently discovered sites in the North Island. Although possibly too early to be sure, it would seem that lakes and seasonally wet ground supporting rafts of Eleocharis sphacelata should be carefully searched for Myriophyllum robustum as this species is associated with four of the six recently located colonies.

P.J. de Lange, 19 Cranwell Place, Hillcrest, Hamilton

■ First record of the lichen genus Roccellina from New Zealand

A sterile specimen of a lichen found on maritime rocks at The Landing, Aorangi Island, Poor Knights Islands, Northland (AK 176519) has been identified as Roccellina cf. expectata Tehler 1983 (The genera Dirina and

Roccellina (Roccellaceae). Opera Bot.70:1-86).

This specimen cannot be definitely identified as R. expectata (known only from coastal cliffs on Curtis Island, Tasmania) without spore material, but it is most similar to this species because of (1) the thickness and texture of the cortex; (2) the white-rusty brown upper part of the medulla; (3) the small soralia; and (4) the presence of lecanoric acid.

This is the first New Zealand record of this lichen genus.

Ander Tehler, Thorsten Lumbsch, Bruce Hayward, c/- NZ Geological Survey, PO Box 30-368, Lower Hutt

Phenology

■ **Carduus species**

I have been working since 1984 on the population dynamics of winged (Carduus tenuiflorus) and slender winged (C. pycnocephalus) thistles. At study sites in the Manawatu and Hawkes Bay, germination was restricted to Autumn (broadly defined, ie mainly in March-May but a few as early as January or as late as September). Flowering and fruiting was confined entirely to November and December.

Imagine my surprise then, when I came upon many large old rosettes and a scattering of flowering plants of both winged and slender winged thistles while walking on the Port Hills near Christchurch in late April 1986. The 1985/86 summer was wet in Canterbury and I suspect that seed set in November-December 1985 must have germinated right away and led to those unseasonal flowering plants. Phil Garnock-Jones informs me that, of 23 flowering specimens in the Botany Division Herbarium of the two species from Canterbury 21 were collected in November and December, one in September and one in May. If anyone else has any records or information about unseasonal flowering in these species I would be glad to hear from them.

Dave Kelly, Plant and Microbial Sciences Department, University of Canterbury, Christchurch 1

ANNOUNCEMENTS

■ **Tane volume 31**

Volume 31 of Tane, the Journal of the Auckland University Field Club, was published recently. Readers may be interested in the wide variety of articles, including:

Pomaderris revisited, by L.B. Moore

Vascular flora of Rimariki and associated islands, Mimiwhangata, north-east NZ, by E.K. Cameron

Mosses of the Broken (Pig) Islands, northern NZ, by J.E. Beever, A.E. Wright, M.D. Whitehead, F. Barnes and R.P. (Mary) Scofield

Some tussock-shrubland plant association in Tongariro National Park, by D.R. Trenery

Mosses of Rimariki Island, northern NZ, by J.E. Beever

Study of dune plant communities at the Waipoua River, by S.J. Asplin and J. Fuller

Notes on the flora of Tiritiri Matangi Island, Hauraki Gulf, by E.K. Cameron and C.J. West

Prices for the volume are: Students $11, Others $12, Libraries and institutions $14.50. For further information or to order a copy phone Auckland 605-640 or write to:

The Secretary, Tane AUFC Journal, c/- Botany Department, University of Auckland, Private Bag, Auckland 1

■ **New Zealand Native Orchid Group**

If you are a wild orchid enthusiast and want to keep in touch with other interested amateurs and professionals, you will enjoy the NZNOG quarterly Newsletter. The Group's major activity in the next few years will be the distribution mapping of the New Zealand genera. Write, enclosing $5.00 subscription, to

Dr Ian St George, NZNOG Editor, 45 Cargill St, Dunedin

■ **Royal New Zealand Institute of Horticulture Annual Journal No 14**

The 1986/7 edition of the RNZIH Annual Journal is now available. The Journal is packed full of articles on horticulture, botany and the related sciences. Articles include:

Botanic Gardens and Conservation by Dr D Given

Actinorhizal plants for soil conservation in New Zealand - a review of potential and research by B.T. Bulloch

The cultivation of New Zealand's threatened plants by P.B. Heenan

Henry John Matthews - New Zealand's first forester by P.B. Gow

plus

Garden History Section - this includes the proceedings of the first RNZIH garden history seminar held in Dunedin, May 1986.

This is only a small sample of the Journal's content. To order your copy, send a cheque for eleven dollars (this includes GST and postage) to:

The Executive Officer, RNZIH, PO Box 12, Lincoln College, Canterbury

FORTHCOMING MEETING

■ **Fifth John Child Bryophyte Workshop**

This workshop will be held at Lake Rotoiti, Nelson Lakes National Park, from Thursday 12 November to Tuesday 17 November, 1987. It will concentrate on the identification of mosses and liverworts; beginners are welcome.

For further information, contact:

Gail Franko/Jean Espie, Cawthron Institute, P.O. Box 175, Nelson

CONFERENCE/MEETING REVIEWS

■ Council of the Heads of Australian Herbaria (CHAH) Meeting, Sydney, 1-2 October, 1986

For the past six years a representative from one of the main New Zealand herbaria (AK, CHR, WELT) has attended this meeting as an observer to exchange ideas on herbarium management and to maintain contacts with Australian plant taxonomists. Important items on the 1986 Agenda were:

1. A taxonomic training course organised by CHAH in June 1986 was very successful. Topics for further workshops might include: cladistics, nomenclature, inflorescences, and how to do a taxonomic revision.

2. An International Diploma in Herbarium Techniques course for 8 weeks is being organised by the Royal Botanic Gardens, Kew, England in their summer 1987.

3. Impact of biological control on native species. A Rubus rust introduced to control blackberry is now attacking the native Rubus gunnianus, a small prostrate species. Sufficient safeguards are in the Australian legislation if only the Heads of Herbaria were kept informed.

4. Loss and damage of Herbarium specimens in transit. A 1985-6 survey revealed that the use of double-walled cartons for most purposes and plywood or masonite (hardboard) for small parcels was necessary to prevent damage in the post. Deficiencies in loan packing or damage in transit should be reported back to the lending institution.

5. CHAH will produce a list of current taxonomic projects in Australia.

6. The Census of Australian plants - due in October 1986 - is to be updated by the herbaria before release.

7. Australian Plant Name Index - recording all names of higher plants (including synomyns) used in Australia - due end of 1987.

8. Type photographs should be treated as specimens and placed in institutional herbaria not private collections. The location of type photographs should be cited in monographic works and included in the Australian Plant Name Index.

9. Australian Botanical Liason Officer (ABLO), at Kew will answer queries for New Zealand botanists. Current ABLO is Gordon Guymer (BRI). Next appointments Judy West (CANB) 1987-88 and Karen Wilson (NSW) 1988-89. The ABLO term is from 1 September one year to 31 August the next.

10. CHAH would like NZ Herbaria (AK, CHR, WELT) to list current taxonomic projects in future reports.

11. Draft Indumentum Handbook in preparation by Dr Helen Hewson, Bureau of Flora and Fauna. An alternative tabular scheme prepared by Dr R. Johnson (BRI), found considerable favour at the meeting.

CHA was invited to hold their 1988 meeting in New Zealand, at Lincoln, in conjunction with the "Festival of Botany" being planned for November, 1988.

M.J. Parsons, CHR Herbarium, Botany Division DSIR, Private Bag, Christchurch 1

■ A botanical view of ANZAAS

The Australian and New Zealand Association for the Advancement of Science recently held its 56th conference at Massey University. Having enjoyed the Godley symposium (birth of the Bot Soc) because of the preponderance of botanists attending, the ANZAAS conference was exciting because of the low density of botanists. The whole conference was geared towards presenting a broad spectrum of sciences to an even broader selection of visitors. Thus the botanical presentations tended to be cosmic in their scope, and game speakers took on, with apparent cheerulness, the task of summarising recent developments and future directions in their field for the benefit of educated lay-people. For example, I learned a lot about hydroponically-grown tomatoes, tissue culture, kiwifruit flowering and canopy structure, root restriction, and what to do with empty mussel shells if you are a botanist. A brief encounter with fringe medicine left me suffering from the usual difficulty of large conferences: choosing between several interesting options being presented simultaneously.

A delightful presentation by Dr Mary White, an Australian palaeobotanist was on the "Greening of Gondwana", the subject of her recently published book (soon to be available in New Zealand). Artistically beautiful, as well as scientifically informative, photographs were a feature of both the lecture and the book.

Those who are members of the Ecological Society will have enjoyed attending or reading about Colin Meurk's innovative field trip, where the field became a classroom. At Massey, lateral thinking prevailed, and under the guidance of John Skipworth, ably assisted by Mike Greenwood, a biogeographical/ecological symposium went "bush". Instead of hearing speakers describe the nature and problems in maintenance of isolated remnants of Manawatu lowland forest, the participants were invited to see the bush at first hand, and to discuss them with those undertaking their care and maintenance. Most attending were disappointed that longer was not available for this "hands-on, all hands in" symposium; certainly Skip had enough planned to keep us occupied for the whole day!

A controversial note was struck by Guy Salmon in a talk on the future administration of New Zealand's natural areas. Guy was advocating making administrators answerable to the general public by handing control of National Parks to societies consisting of all those with an interest in the amenities. I was tempted to wonder if he was aware of the problems of getting decisions out of such societies, and of the size of the New Zealand Deerstalkers Association, which rather outnumbers membership in the New Zealand Botanical Society!

The highlight of the conference, botanically, and probably in most other senses, was the address by Dr David Bellamy on the topic of "Planting a future". Dr Bellamy described and illustrated, for the large and enthusiastic audience, some lessons culled from his many trips round the world. These were both in terms of the "Do nots", showing botanical tragedies,

such as the loss of tropical wet forest (at a rate of about 30 hectares per minute), and of the "Do's" showing such successes as the development of many new crops, sometimes from rare species, and the reclamation of alkaline and other problem soils. Dr Bellamy, who is well known for his vigour and talent as a public speaker, treated us to some classic one-liners: for example: "The whole of science has begun to leave the average person in the street behind, and it has left very many scientists behind too!" After his contribution, and the others of ANZAAS, this must now be less true.

G.L. Rapson, Department of Botany and Zoology, Massey University, Palmerston North

BOOK REVIEW

■ **Wildflowers of Central Otago**

This is a very personal, sometimes almost whimsical, account of some of Peter Johnson's experiences with the plants, people and landscapes of Central Otago. Loosely following the changing seasons, each page explores a different theme - and the titles of some of these themes give a good indication of the spirit in which the book is written -"Things that get in your socks" for the barley grasses, bromes and vulpias; "Old brooms for new" for the native Carmichaelias and adventive Cytisus; "Shocking pinks" for the campion and pinks page. As well, we are given seasonal, habitat-based and characteristic themes such as "New Year", "Damp places", and "Good smells".

The work is fully illustrated with colour photographs - generally to a good standard. Some of the portraits are stunning. Occasional difficult groups or details are explained by clear line drawings. I was tickled to be able to rediscover in these pages all the little plant treasures I first found on the roadsides, waste places, towns and wide open spaces of Central Otago.

Written as a series of short stories, each well-illustrated, it could have been difficult to retrieve information about individual plants. This has been overcome by the provision of two indices: one to common names, and the other a detailed table based on a botanical name index giving page numbers, common name, family, region of origin, and flowering period. Thus the book provides a wealth of information for the whole range of plant lovers.

Wildflowers of Central Otago, text and photography by Peter Johnson. 108p in full colour. John McIndoe, Dunedin. ISBN 0 86868 091 5. Paperback $32.95, Casebound $44.95. Reviewed by Anthony Wright

Acknowledgement: This newsletter was kindly typed by Mrs Mary Best

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