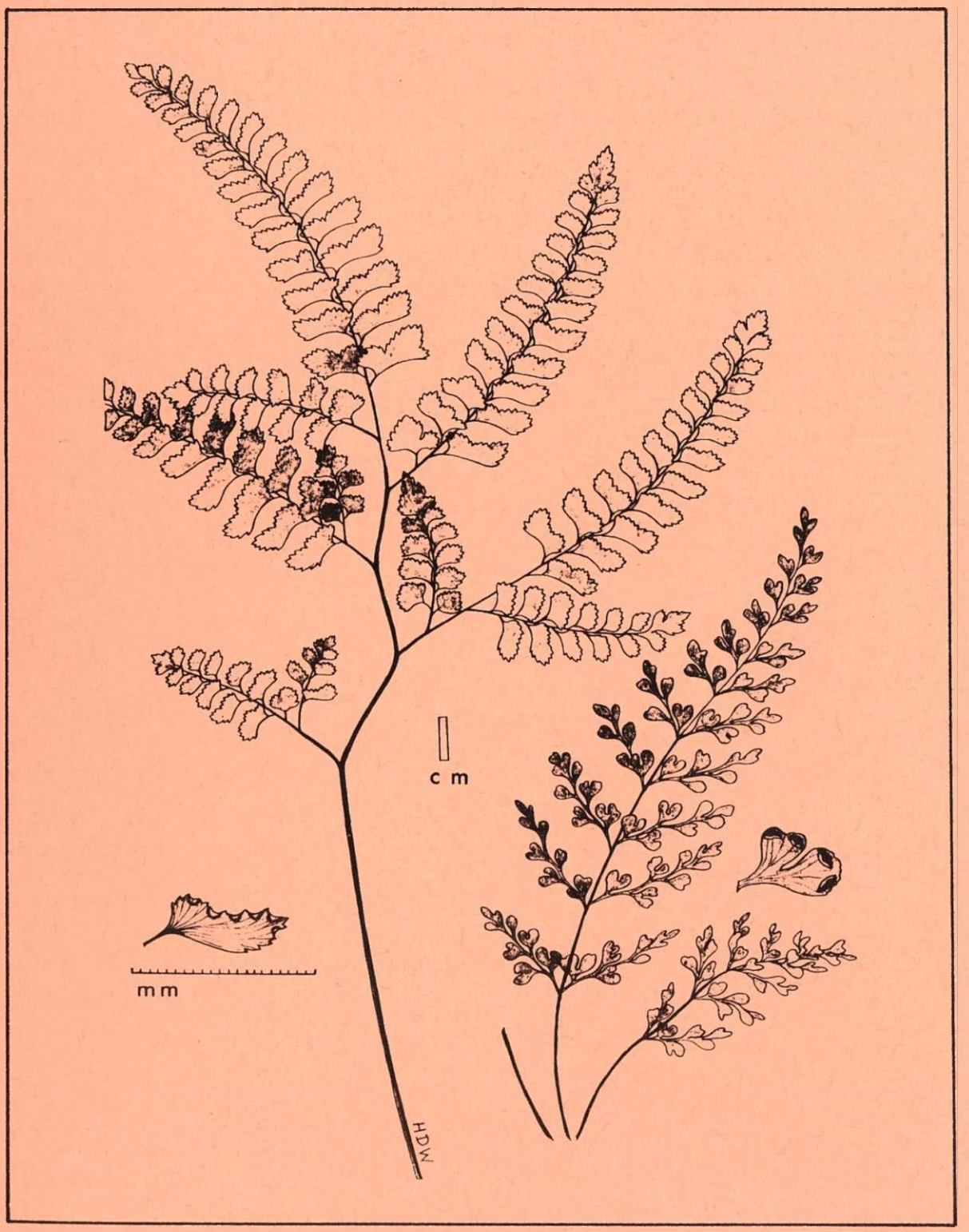
NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 6 DECEMBER 1986



SUBSCRIPTIONS

The 1987 subscription has been held at $10.00 for four issues of the Newsletter (March, June, September and December). An invoice is enclosed in this issue for existing subscribers. Please return your cheque, payable to the New Zealand Botanical Society, as soon as possible. A reduced subscription of $5.00 for the four issues is available to full-time students. Back issues of the Newsletter are available at $2.50 each - Number 1 (August 1985) to Number 5 (September 1986) inclusive.

New subscriptions are always welcome, and should be sent to the New Zealand Botanical Society, c/- Auckland Institute & Museum, Private Bag, Auckland 1, New Zealand.

INVITATION TO CONTRIBUTE

Contributions from all sources are 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 March 1987 issue (Number 7) is 20 February 1987. Please forward contributions to the Editor:

Anthony Wright
Auckland Institute & Museum
Private Bag
AUCKLAND 1

NEW ZEALAND BOTANICAL SOCIETY
NEWSLETTER
NUMBER 6 DECEMBER 1986

CONTENTS

News
- **People**
  - Vivienne Cassie-Cooper 2
- **Events**
  - Festival of Botany 3
- **Regional Bot Socs**
  - Auckland 4
  - Rotorua 5
  - Wellington 5
  - Canterbury 5
  - Otago 6
- **University departments**
  - Canterbury 7

Notes and reports
- **New plant records**
  - Hypolepis distans 7
  - Metrosideros parkinsonii 8
  - Lepidium oleraceum 8
- **Phenology**
  - Pseudopanax crassifolius 9
- **Comment**
  - Botanical publication in New Zealand 10

Announcements
- N Z Journal of Botany reduced subscription 11
- Ecological research on central North Island 12
- Offshore islands of northern New Zealand 12

Desiderata
- Register of permanent vegetation plots 12
- Fern spores 14

Theses in Botanical Science
- Department of Botany and Zoology, Massey University 15
- Department of Botany, Victoria University of Wellington 15
- Department of Botany, University of Otago 16

Letter to the Editor 16

Cover illustration: ***Adiantum cunninghamii*** **(Adiantaceae), and** ***Lindsaea trichomanoides*** **(Lindsaeaceae)**

Six species of the widespread genus *Adiantum* (maidenhair ferns) are native to New Zealand. *A. cunninghamii*, the most abundant and widespread species, is distinctive with its pale bluish green fronds. Most of the 200 or more species of *Lindsaea* are tropical, but three species occur in New Zealand. *L. trichomanoides* occurs on the two main islands of New Zealand and also on the North Island (Hugh Wilson).

NEWS

People

■ **An appreciation for Vivienne Cassie-Cooper on her retirement from DSIR**

Vivienne was appointed to the DSIR's Botany Division Substation at Mt Albert in 1975 to study freshwater algae and she formally retired on 29 September 1986. But all good botanists never retire and Vivienne will have a room at Mt Albert and will be able to continue aspects of her research including the algae of Lake Pupuke on Auckland's North Shore, thermophilic algae of New Zealand and illustrations and documentation of New Zealand freshwater algae (including diatoms). Perhaps these research activities will be conducted at a more leisurely pace than Vivienne has been accustomed to in the last few years.

Vivienne is an Auckland graduate and her secondary schooling was at Takapuna Grammar (Eric Godley, Geoff Baylis and DSIR's Chief Director Hamish Thompson attended the same school) on the North Shore. Perhaps it was inevitable that Vivienne should early develop a passion for algae. Incidentally, Vivienne's father K.J. Dellow was headmaster of Takapuna Grammar from 1935 to 1953 and a well-known Auckland educationalist. Vivienne was an excellent student at Auckland University College, being senior scholar in botany in 1947 and graduated M.A. with first class honours in botany. As a student at Auckland, I recall that the name Vivienne Dellow was frequently mentioned with regard to research on algae and algal ecology. At Auckland Vivienne came under the influence of Professor Valentine Chapman that indefatigable botanist who had a major interest in algae. She later completed her Ph.D. from Victoria University in 1955 and was a pioneer in that in the 1950s few ladies graduated Ph.D. and in fact even as late as the 1950s there were relatively few ladies working in science in New Zealand. After three years as a junior lecturer in botany at Victoria, Vivienne in 1957 commenced her association with DSIR when she was appointed to the New Zealand Oceanographic Institute to make the first study of New Zealand marine phytoplankton. She visited oceanographic institutes in U.S.A. with her husband the late Professor Morrison Cassie. Later, with a young family of 2 children, Vivienne undertook part-time work in the Botany Department at Auckland University and began work on the freshwater algae of the Rotorua lakes.

Vivienne has made important contributions to different aspects of New Zealand phycology and this work is recorded in some 40 papers. With the earlier contributions from Dr Elizabeth Flint, Vivienne is a pioneer in the study of our phytoplankton and freshwater algae and in the important applied field of water quality. With her appointment to Botany Division in 1975 Vivienne extended her work on freshwater algae with a dedication and vigour which is clearly shown in the publication of some 19 papers since 1975. During this period extensive overseas visits were made in the course of her research and Vivienne reported in detail on these visits in the Botany Division Newsletter: in 1980 to Canada, U.K. and Europe (BD Newsletter No.59: 9-14, 1980), 1982 to U.S.A. and Europe (Ibid. No.80: 13-16, 1982), and 1984 to Japan (Ibid. No.97: 11-12, 1984). Another notable report from Vivienne was her account of a field trip in Northland to acquire samples of algae from thermal areas (Ibid. No.94: 10-13, 1984).

Vivienne retains a student-like joy in her subject and wonderment at the beauty and symmetry of the microscopic organisms she has studied. To me, with her dedication to science and her willingness to make her knowledge available to all who seek it coupled with the full application of her knowledge to any practical water pollution problem, Vivienne epitomizes the DSIR scientist. Science is of course international in its breadth and I also reflect that Vivienne has been an excellent ambassador for New Zealand during her travels overseas and by her many international contacts.

The Seminar on Phycology and Water Quality (14-15 October 1986) at Lincoln to commemorate Vivienne's retirement was a notable event in New Zealand phycology. The number of participants, the range of basic and applied topics covered, and the range of organisations represented reflected Vivienne's standing in New Zealand phycology. At the close of the Seminar Dr Warwick Harris, Director of Botany Division emphasized the parlous state of Government-sponsored science in New Zealand resulting in the inability to replace Vivienne (see p. 16).

Science has never been easy, and many lady scientists have added challenges and difficulties to face. Vivienne has met and overcome these to make major contributions to basic and applied science in New Zealand. We wish Vivienne and her husband Dr Bob Cooper, erstwhile Botanist at the Auckland Museum and later schoolteacher at the Te Kao District High School in the Far North, a long and happy retirement.

Andy Thomson, Botany Division, DSIR, Private Bag, Christchurch

Events

■ A Festival of Botany

This is advanced notice of a series of meetings and occasions to mark the Jubilee of Botany Division, the opening of the Herbarium extension, the launching of Volume IV of the Flora of New Zealand (naturalised dicotyledons, ferns and gymnosperms), and the inaugural symposium of the New Zealand Botanical Society. The events will be held at Lincoln, Canterbury, in October, November or December 1988.

Proposed Programme

Monday p.m. Opening of the Botany Division, DSIR, Herbarium Extension
This significant extension, presently in the early stages of construction, will accommodate the development and applications of the Botany Division Herbarium well into the 21st Century.

Tuesday Symposium on the Naturalised Plants of New Zealand
This symposium will provide a launching of the Flora of New Zealand Volume IV on naturalised Dicotyledons, Ferns and Gymnosperms. Contributions are sought on taxonomic treatments of naturalised plants, biology of naturalised plants, processes of naturalisation, interactions between indigenous and naturalised plants and the economic significance of naturalised plants.

Wednesday am Workshop Sessions
Suggested topics:
1. Herbarium management and applications.
2. Using Floras.
3. The revision of Flora of New Zealand, Vol. I. (Indigenous Tracheophyta).

Wednesday pm Symposium on Origins and Relationships of the New Zealand flora
This is to be the inaugural conference of the New Zealand Botanical Society. Contributions are sought on the origins and relationships of the New Zealand flora both higher and lower plants, biosystematic relationships, ecophysiological adaptions, plant conservation, local endemism on off-shore islands, relationships of the New Zealand flora to that of the South Pacific and Australia.

Thursday Continuation of Symposium

Friday am Conclusion of Symposium on Origins and Relationships of the New Zealand Flora

Friday pm Field trip commences

Overseas participation in this Botanical Festival is being sought. To foster this an invitation has been extended to the Council of Heads of Australian Herbaria, at which New Zealand has observer status, to hold their meeting at Lincoln in association with the Festival.

Botanists are invited to offer contributions to the Symposia themes. In particular reviews are sought with a presentation time of 20 minutes with 10 minutes discussion. Comprehensive subject reviews of an hour's length will also be accommodated. Provision will be made for poster presentations on more specific items.

The Festival will include a varied social programme in the evenings, and allow for the inaugural AGM of the New Zealand Botanical Society.

For further information and offers of papers for the Symposium on the Naturalised Plants of New Zealand, Workshops and Field trips contact:

Dr Warwick Harris, Director, Botany Division, DSIR, Private Bag, Christchurch

For Symposium on Origins and Relationships of the New Zealand Flora contact:

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

Regional Bot Socs

■ Auckland Botanical Society

Visitors to Auckland are most welcome to join Society members on any of the following forthcoming events:

Yoania australis viewing, 3 January 1987
The Mid-North Branch of Forest and Bird have invited Bot Soc to join them in a search for Yoania at Maranui Farm. Meet at 1.30 pm in the large parking area just before the Hoteo River Bridge (travelling north) on State Highway 1 between Warkworth and Wellsford.

Christies Track, 21 February 1987
Fieldtrip to this part of the ARA Water Catchment area.

AGM and Speaker (to be advised) 4 March 1987.

Dunn's Bush, Puhoi, Fieldtrip 21 March 1987.

Planning for events to celebrate the Society's 50th Jubilee in 1987 is underway. The mid-1987 number of the Newsletter will be a special historical issue. Mr Jim Beever has agreed to write a history of the last 25 years. Contributions are sought in the form of anecdotes, impressions, recollections of trips, people, and places. Also old syllabi.

Enquiries and contributions to:

Sandra Jones, Secretary, Auckland Botanical Society, 14 Park Rd, Titirangi, Auckland 7 (telephone (09) 817-6102 evenings)

■ **Rotorua Botanical Society**

Rotorua Bot Soc's Newsletter No.7 (April 1986) reports that the Society is into its third year, and has a healthy and growing list of members. The second annual expedition was a resounding success in spite of inclement weather, and field trips are being well attended. Spurred on by reports of new finds in 'forgotten places', members are "exposing themselves to even greater degrees of deprivation and suffering" to find that elusive new record, to extend that distributional limit by a fraction of a degree to the north or south.

The Newsletter contains articles on field trips to Orakei-Korako, Egmont National Park, Motuoapa Bay and Swamp, Mayor Island and Oruatewehi, together with articles on Gahnia rigida, large-leaved forms on Mayor Island, new plant records for the Rotorua District, and Gratiola nana.

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

■ **Wellington Botanical Society**

Copies of issue No.42 of the Wellington Botanical Society Bulletin (September 1985) are still available at a cost of $7 + $1 p&p. There are articles of both regional and national interest (see p.5 of NZ Botanical Society Newsletter No.4 for full Contents). Send requests, together with payment, to:

Susan Timmins, 152 Barnard St, Wadestown, Wellington 6001

■ **Canterbury Botanical Society**

Summer camp will be held at Harihari, South Westland, from 9-16 January 1987. Numbers are limited.

The Norman Sutherland Bequest is assisting the publication of a "Field-guide to small-leaved shrubs of Canterbury and Westland". Tim Galloway of Wellington has shifted to Christchurch, and is contracted to draw all of the species as published in the list in Canterbury Botanical Society Journal 20. Voucher specimens of illustrated material will be placed in the Botany Division, DSIR, herbarium. To provide information on distribution, volunteers are to abstract details from herbarium folders at Botany Division.

For further information on Canterbury Bot Soc activities, please contact: Philippa Horn, Lincoln College (ph.252-811); David Norton, Canterbury University (ph.482-009); Nigel Taylor, Botany Division, DSIR, Lincoln (ph.252-511).

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

■ **Botanical Society of Otago**

At a public meeting held on 7 August 1986, a group of about 35 amateur and professional botanists enthusiastically gave support to the formation of the Botanical Society of Otago.

Informal at this stage, a small group has volunteered to organise and advertise activities, keep account of donations and produce a newsletter - which is currently circulated to 63 addresses.

Indoor meetings are usually held on the second Thursday of each month, and to date have included:

September 18: A Coprosma workshop organised by Michael Heads who prepared fresh and herbarium material and useful identification notes on 22 local Coprosma species. The workshop was followed by a wine and cheese social.

October 9: Dr Peter Johnson gave an excellent illustrated talk on "The Botanical Highlights of the Otago Peninsula".

November 13: Lloyd Esler organised a weed workshop with some 80 labelled fresh specimens and a comprehensive set of slides of local weeds. Also at this meeting Dr Peter Johnson outlined the recording scheme to be used for the Society's long term project - producing an annotated checklist of the flora of coastal Otago and eventually distribution maps on a tetrad basis. Peter also gave instructions on the preparation of voucher specimens for interesting records.

On November 23, Dr Peter Johnson led a full day trip to Hightop in the Silverpeaks, to look at the flora and plant communities, and try out the tetrad distribution recording scheme.

The August meeting decided to work towards a flora of the Dunedin coastal area, and a distribution map. The mapping unit is to be the tetrad (2km x 2km). It was suggested that an initial aim might be to cover at least one tetrad in each 10 km x 10 km grid square (say the south-west one, or a random one). The intention is to cover the area from Shag Point to Nugget Point, from the coast to about 25 km inland.

Activities planned include a field trip to Goodwood Scenic Reserve on December 20, led by Michael Heads. Meet in Union St, Dunedin, outside the back gate of the University Botany Department at 9.00 am. Transport by private car.

Enquiries to:

Dr J. Bastow Wilson, Botany Department, University of Otago, P.O. Box 56, Dunedin (ph. 771-640 ext 8895)

University Departments

■ **The Story of Canterbury University Herbarium**

It all started long before my arrival at the Botany Department, University of Canterbury, then on the town site.

Firstly, C.E. Foweraker collected forest tree specimens and then Professor W.R. Philipson headed the department after Botany separated from Biology.

Professor Philipson started the collections at Cass about 1951, and built up what became known as the Cass Herbarium. This included, in addition to the higher plants, lichens, Hepaticae, Musci and even freshwater algae collected by Dr E. Flint. The algal collection was enhanced considerably by the inclusion of the R.M. Laing Collection. Among the early collectors at Cass after Botany took over the field station were G. Brownlie, C. Burrows, D. Lloyd, L. Visch, D.M. Calder and B. Fineran.

When I arrived in the 1960's the Herbarium was growing fast. B. Fineran had been collecting extensively in the Snares, S.W. Stewart Islands and the Auckland Islands. Professor Philipson took part in an expedition to Fiordland early in 1953. A later expedition to Fiordland in 1967 included D. Lloyd, C. Burrows and J. Ward, all presently staff members, and M. Kalin and D. Given. The 1960's also saw major contributions by the above botanists and R. Wilson, of specimens from the North Island.

G. Brownlie also added much new material, particularly ferns and mosses. His trips to New Caledonia and Fiji resulted in extensive contributions of Pacific ferns. This is how I became involved in the collection of Musci as Dr Brownlie obligingly identified those I collected throughout the South Island. Other substantial collections include those by D. Lloyd (Cotula), C. Burrows (Arthurs Pass), J. Ward (Compositae, especially Raoulia), D. Given (Celmisia), P. Garnock-Jones (Parahebe), B. Fineran (alpine lichens), C. Meurk (Campbell Is.), and A. Dobson (introduced plants). Dr R. McNabb's fungi are a reminder of a sad loss to New Zealand botany.

Dr Brownlie arranged international recognition and we were given the designation of CANU. Dr Burrows spent many long hours sorting specimens after our move to Ilam and now the Herbarium here is well established with Dr J. Ward as keeper.

Mary C. Barker, Herbarium Technician, Department of Plant and Microbial Sciences, University of Canterbury, Private Bag, Christchurch 1

New Plant Records

■ Hypolepis distans

Hypolepis distans has a restricted distribution in the South Island occurring locally in the Marlborough Sounds, north-west Nelson, and northern Westland reaching as far south as Lake Mahinapua Scenic Reserve (CHR 228266, P.Wardle). An early record from Akaroa has not been relocated (Hugh Wilson pers.comm.). H. distans is also known from Stewart Island.

In January 1986, Hypolepis distans was found growing at an altitude of 45 m in unlogged forest in Lake Ianthe State Forest (NZMS1 S64 195185), 40 km to the south of Lake Mahinapua. Only one plant, scrambling over a fallen log, was seen. This site is in closed forest dominated by Dacrydium cupressinum, with Weinmannia racemosa and Quintinia acutifolia the main

broadleaved trees present. A voucher specimen has been deposited in the Botany Department, University of Canterbury, herbarium (CANU 31341). The specimen is of relatively small stature (values from Allan in brackets) with the lamina about 14 x 8 cm (15-40 x 7-20) and the lower primary pinnae about 4 x 1 cm (5-12 x 1-3). The pinnae are between 1 and 2 cm apart (up to 5 cm).

David Norton, School of Forestry, University of Canterbury, Private Bag, Christchurch 1

■ Metrosideros parkinsonii

During recent field work in Westland, Brian Molloy and I found Metrosideros parkinsonii growing in the Hokitika area. The previously known southern limit of this species was near Mt Davy in the southern Paparoa roange, some 50 km to the north. The new locality is in Kaniere State Forest near McKay Creek (NZMS1 S51 612533) in a small remnant stand of Dacrydium cupressinum (240 m a.s.l.). The site is on the crest of a spur with a canopy at 6-8 m of Metrosideros umbellata, Phyllocladus alpinus, Quintinia acutifolia, Weinmannia racemosa, Lepidothamnus intermedius, Pseudopanax crassifolius and Podocarpus hallii. Above this, scattered Dacrydium cupressinum are emergent to about 12-15 m. The subcanopy at between 2-3 m is dominated by Weinmannia racemosa, Lepidothamnus intermedius, Leptospermum scoparium, and Metrosideros parkinsonii.

Voucher specimens of Metrosideros parkinsonii from this site have been lodged at the Botany Division (Lincoln) and Botany Department (University of Canterbury) herbaria (CHR 421122, CANU 31283).

It is likely that this species could occur at other sites in the Hokitika area, and perhaps further to the south. However, extensive conversion of indigenous vegetation to plantation forest in Kaniere State Forest at least, may have resulted in the loss of sites. Potential sites for Metrosideros parkinsonii are likely to be spurs and ridges with relatively shallow soils. Lepidothamnus intermedius and Metrosideros umbellata are good indicators of potential M.parkinsonii sites.

The occurrence of species like Metrosideros parkinsonii in small remnant pockets of indigenous vegetation highlights the significance of even the smallest remnants in nature conservation. With the present reorganisation of environmental land administration in New Zealand it is to be hoped that commercially orientated organisations like the Forestry Corporation will recognise the importance of these remnants and ensure their future protection.

David Norton, School of Forestry, University of Canterbury, Private Bag, Christchurch 1

■ Lepidium oleraceum Forst.f. at Ngatutura Point, Kaawa River

Few mainland colonies of Lepidium oleraceum are now known to survive (D.R. Given, 1981, Rare and endangered plants of NZ, Reed) and the species is now reputedly local on even most of the offshore islands, surviving generally on coastal ledges and windswept beaches free from the pressure of browsing animals and trampling by stock. Reasons for the sudden decline of the Lepidium species in New Zealand are various, but prime targets for

blame are the Cabbage White Butterfly (Pieris rapae), coastal land development, browsing animals and possibly over collecting by botanists.

Another possibility was first raised (to my knowledge) by Graeme Platt of Albany, who commented about a fungal disease depleting some coastal colonies and cultivated material he knew about. This disease, introduced seemingly with the weedy Cardamine hirsuta and Capsella bursa-pastoris, covers Lepidium plants in large, white lesions, eventually destroying the leaves and seeds of the plant. I am not sure, but the fungus appears to be Ablugo ?bursa-pastoris and has been noted elsewhere by Tom Moss and Colin Ogle on material discovered at Titahi Bay and in cultivation nearby. The fungus is easily controlled by application of copper-containing fungicides (eg. Maneb and Copper Oxychloride), but if left will eventually kill the plant.

Knowing that Lepidium was virtually extinct along the mainland coasts it came as a surprise to discover three large plants and numerous seedlings near Shag Rock, Ngatutura Point, Kaawa River, whilst involved in a totally unrelated subject - that of collecting basalt samples for a fellow student's M.Sc.

Ngatutura Point consists of 1.5 km of Tertiary outcrops of calcareous sandstones, siltstones, limestones and basaltic intrusions. The summit of the coastline is roughly cleared but thickets of Cassinia, Leptospermum and lupin scrub still occur. In the small hollows the cotulas, C. dispersa ssp. rupestris and C. membranacea are locally common. The sheer, virtually inaccessible, southern tip of the point is covered in dense Phormium tenax and Cortaderia splendens, with rare Cassinia, Olearia furfuracea and other scrubby species. A small seepage between the main summits supports a small patch of Rorippa palustris and Gratiola sexdentata. The ledge containing the Lepidium was first noted because of another interesting plant - Hebe speciosa - growing nearby and still in flower (late August). Whilst trying to reach the Hebe, the Lepidium was located by the characteristic cress smell of the leaves in the undergrowth and later the spent previous season's inflorescence. Three plants (all nearly dead) and numerous seedlings were discovered in a remarkably small area, surrounded by low Phormium and Cassinia. A single piece from one of the plants was removed and later sent to CHR and several seedlings taken for cultivation.

The restriction of the Lepidium to this small ledge is not altogether surprising as feral goats (Capra hircus) have already destroyed many of the interesting herb associations amongst the more accessible slopes of the area and presumably other populations of Lepidium. Still the discovery of this endangered plant on a remote part of North Island west coast highlights the possibility that it may still occur elsewhere.

The plants were discovered in August 1985 and as yet I have been unable to return to see how the plants have fared over the summer.

Peter de Lange, 19 Cranwell Place, Hillcrest, Hamilton

Phenology

■ Pseudopanax crassifolius (Lancewood)

The genus has been described as dioecious by some, and either dioecious or monoecious by others (presumably depending on the individual species).

My observations carried out on two different trees suggest that it is possible that P. crassifolius has some flowers that may be male, while most of the flowers are perhaps bisexual, passing through a protandrous phase.

I have noted that four different umbels, when first picked, showed all characteristics of male flowers. I kept these umbels in water so as to watch developments. Within 24 hours the centres had swollen and gradually a style emerged. By 36 hours all the petals and stamens had fallen off (with the exception of one flower) and style and stigma appeared on each flower - having a distinct female form.

Both trees have since produced large quantities of fruit, presumably called berries. This would appear to indicate that the species is, in fact, bi-sexual, and goes through a protandrous phase.

Eric Turfrey, 20 Duigan Street, Wanganui

Comment

■ **Botanical publication in New Zealand**

New Zealand Journal of Botany forms the main avenue of publication for much of the botanical research undertaken in New Zealand. Over the last year the rate of publication of this journal has slowed appreciably and there are now indications that more drastic changes are in the pipeline. The first of these is already with us; the pronounced subscription increase for 1987 ($120,c.f. $50 in 1986). Other changes being mooted include restricting the length of articles and reducing the number of articles published in each issue. These changes are a result of the need for D.S.I.R., as with all Government organisations, to become partially self funding. Because of this, D.S.I.R. has to try and cut the costs associated with running non-profitmaking ventures like New Zealand Journal of Botany.

If these changes go ahead they will have a pronounced affect on those of us involved in botanical research. This will affect us both in terms of our ability to publish the results of our own research and in having access to the results of our colleagues work.

What then are the other options for publication? Journal of the Royal Society of New Zealand publishes botanical articles, but tends to favour articles with a multi-disciplinary approach. New Zealand Journal of Ecology publishes some botanical papers, but only appears once a year and is restricted to those papers with an ecological bias. The New Zealand Journals of Agricultural Research and Forestry Science are applied journals. New Zealand Journal of Science is now no longer with us. 'Local' journals like Mauri Ora, Tane, and Tuatara do not have the same international circulation or reputation as the 'national' journals. A number of New Zealand botanical papers are also published in so-called 'international' journals (e.g. New Phytologist, Journal of Ecology, Planta, Taxon, Evolution, Quaternary Research, Vegetatio), but it would seem unlikely that these could offer an opportunity for increased publication of New Zealand research for several reasons. Firstly, several of these journals have substantial page charges which many New Zealand researchers would find difficult to meet. Secondly, although having a reputation as 'international' journals, many are strongly biased towards publishing results of research from workers

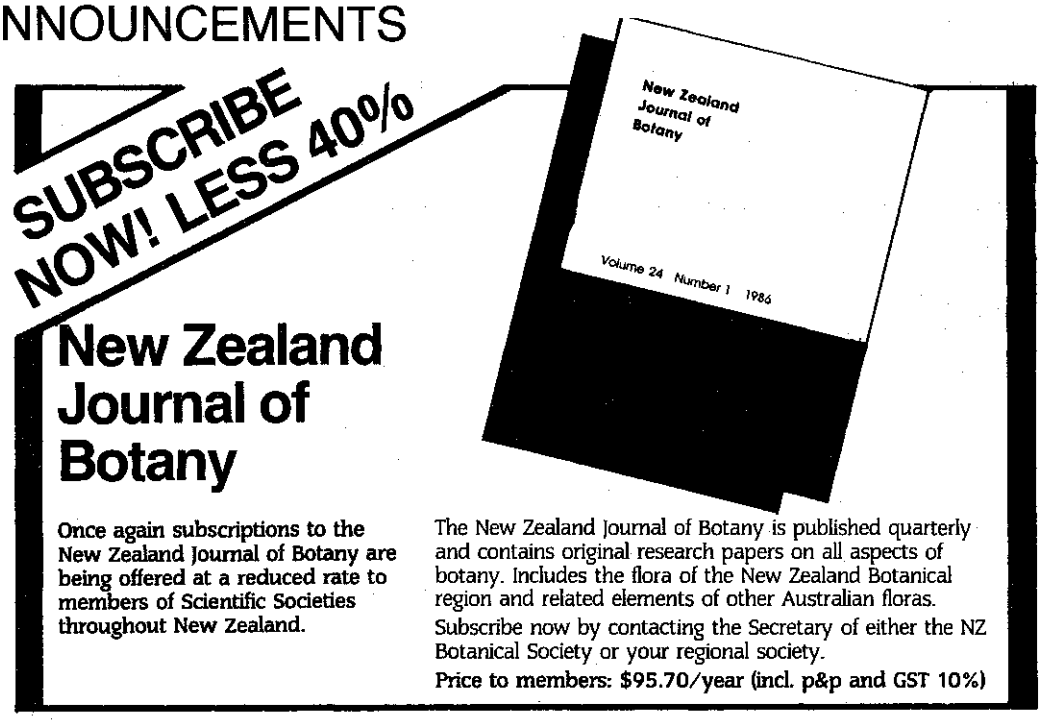
in their own country. Thirdly, these journals, although available in most research institute and university libraries, are not as well circulated within New Zealand as the 'national' journals. This last point is particularly true when looking across the range of disciplines covered by New Zealand Journal of Botany. A bryologist, for example, is quite likely to read an article on say palynology in New Zealand Journal of Botany, but is unlikely to read the same article in Quaternary Research.

What then are the options for the publication of botanical research in New Zealand? New Zealand Journal of Botany could try and find alternative ways to raise money, thus avoiding reducing its size. Advertising is unlikely to be an effective means, but page charges or charging for reprints may be an option. A possible alternative may be for the New Zealand Botanical Society to start producing its own journal, supported by members subscriptions (Journal of the New Zealand Botanical Society?). Or perhaps we should just publish less in journals and produce more local reports?

I believe that this is an important issue and one that needs to be given considerable thought by members of this Society. Our sister societies (e.g. New Zealand Geological Society) are certainly expressing their concern over their main avenues of publication. My purpose in writing this article is to try and generate some discussion on this topic and hopefully from this we will be able to come up with some useful ideas on the future of botanical publication in New Zealand.

David Norton, School of Forestry, University of Canterbury, Private Bag, Christchurch 1

ANNOUNCEMENTS



This offer closes Friday 13 February 1987. Please forward your cheque for $95.70 made out to the New Zealand Botanical Society to:

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

■ **Ecological research in the central North Island Volcanic Plateau region**

This Forest Research Institute publication compiled by Brendajane Veale and John Innes contains the Proceedings of a workshop held at Pureora on 20-23 November 1985 to honour the retirements of long-serving research scientists Tony Beveridge and John Nicholls. The workshop heard papers presented on the soils, climate, botany, insects, mammals, birds, and ecology of the central North Island volcanic plateau (excluding Tongariro National Park).

The Proceedings contain keynote addresses by John Nicholls and Tony Beveridge, as well as expanded summaries of ecological overviews and current research programmes from 23 authors familiar with the ecology of the region. Finally, personal perspectives on future research are presented from Prof. Peter McKelvey, Dr Peter Wardle, Willie Shaw, and Rob Guest.

This document contains colour maps and is illustrated by D.R. King. 71 p. ISBN 0-473-00365-1. Price $12.00 + GST = $13.20, p & p $3.00. Order from:

Forest Research Institute, Private Bag, Rotorua

■ **The Offshore Islands of northern New Zealand**

This volume of proceedings of a symposium of the same title held in Auckland, 10-13 May 1983, was recently published. It is a compendium of papers and abstracts presented at the symposium, and includes articles on large-leaved plants, Three Kings forest regeneration, mosses, lichens and a variety of other natural history topics.

Edited by A.E. Wright and R.E. Beever, the volume comprises 255 pages. ISSN 0110-1226. Copies are available for purchase at $15.00 (incl. GST) + $1 for p & p. Please send cheque or postal note to:

Information Services, Department of Lands & Survey, Head Office, Private Bag, Wellington

DESIDERATA

■ **Call for contributions to a register of permanent vegetation plots**

Most of you will have seen a version of the form reproduced here and its accompanying letter. It appeared in the N.Z. Ecological Society Newsletter earlier this year, and has been sent out to many organisations and individuals. So far we have about 100 plots reported to us. However we know there are more to come. We would like to commend this cause to you again and ask for at least an indication of any permanent plot data you know about or for which you retain the documentation. This will allow us to plan the Register and contact you for more details when required. Note that we interpret "permanent plots" in a broad sense - any description/depiction of a relocatable stand of vegetation, e.g. semi-quantitative quadrat or transect data, identifiable vegetation boundary descriptions, pre-1940 photographs with recognisable backgrounds, maps etc.

REGISTER OF PERMANENT VEGETATION PLOTS

1. LOCATION: 2. NO.:

3. SITE: Coast Flats Hills Mountains Mire 4. Alt.: m

5. VEGETATION: Forest Scrub Tall tuss. Short tuss. Turf-meadow Cushion
Kauri Podocarp Beech Hardwood Heath Myrt. Scroph.
Daisy Grass Sedge Rush Forb Exotic Mixed Bare Other

6. PURPOSE: Succession/Dynamics Erosion/Revegetation
Experimental management Exclosure/Animals Other

7. PARAMETERS: Photopan Stereopairs Maps Transect Quadrat
Growth Cover/Bare Turnover Species Other

8. YEAR COMMENCED: 9. SUBSEQUENT RECORDS:

10. VEGETATION TRENDS: Decrease Stable Increase Slow Fast

11. DESIRABLE RECORDING FREQUENCY:

12. INITIATOR: 13. FILE LOCATION:

14. REFERENCES:

15. COMMENTS: (expand on "Other" in items 5, 6 and 7 if required)

Photocopy additional requirements; ideally one sheet per plot

Arising from a perceived, growing interest and concern about documentation of Permanent Vegetation Plots in NZ, Botany Division, DSIR, has undertaken to compile a register of these records (which may take the form of quadrats, transects, photopans etc.). This should ensure that valuable information is conserved, that the foresight and efforts of ecologists is not wasted, and that the scientific community has access to a secure, quantitative pool of data that in time will become fundamental to research on succession/ dynamics of our vegetation. Such a register will reveal gaps in our permanent-record coverage of the NZ vegetation and also help prevent unnecessary duplication. It is hoped too, that it will provide the impetus, for those "sitting on" uncurated, permanent plot data, to "put their houses in order".

The register is currently conceived as a loose-leaf binder of data sheets (cf. Rare and Endangered Plants Register) which would be computerised and available to bona fide users at reasonable cost. The exercise is aimed specifically at gathering and compiling scattered, small sources of information which are not presently documented under secure, institutional arrangements. We would hope that those individuals with knowledge of small numbers of plots (e.g. from university student projects) will fill out the enclosed sheet(s) for each of their plots or groups of plots. Institutions, such as FRI, FS Conservancies, I&S, MAF, MOWD, Ecology Division, may already have some "house-keeping" facilities for their large banks of permanent plot data. An individual relisting of these plots is beyond the scope of this proposed register. However, we would hope to incorporate summaries of these larger data banks.

We seek your cooperation in returning the completed forms (please photocopy as many as you require) to the address below by March 1987. Alternatively we would be grateful for notification of your intention to contribute. We would undertake to have compilations available by the end of 1987, with periodic updates envisaged. Any comments and other sources of information would be welcome, e.g. old vegetation maps; photographs which show recognisable, pre-development vegetation features. We would welcome the names of any other likely sources of information who might not be known to us.

Address any contributions or queries to:

Colin Meurk, Botany Division, DSIR, Private Bag, Christchurch 1

■ Fern spores wanted

My name is Mark Large and I'm working on an atlas of New Zealand Fern spores, to replace Harris' 1955 "Spores of New Zealand Pteridophyta". In a previous newsletter I asked the help of members in collecting material. I should like to take this opportunity to thank all those who contributed and once again ask for continued assistance from anyone who might be able to supply me with fertile material, particularly from any of the following species:

Natives

Tmesipteris sigmatifolia
Lycopodium varium
Schizaea australis
S. fistulosa
Cheilanthes distans
Grammitis billardieri
Grammitis ciliata
G. givenii
G. pseudociliata
G. rawlingsii
G. rigida
Hymenophyllum cupressiforme

Hymenophyllum revolutum
H. flexuosum
H. rarum
H. rufescens
H. sanguinolentum
H. ferrugineum
H. armstrongii
H. minimum
Trichomanes colensoi
T. elongatum
T. endlicherianum
T. strictum
T. venosum
Cyathea kermadecensis
C. milnei
Hypolepis subantarctica
Asplenium scleroprium
A. pauperequitum
Lastreopsis velutina
L. "kermadecensis"
Nephrolepsis hirsutula
Arthropteris tenella
Blechnum durum
Doodia aspera
D. milnei
D. mollis

Adventives

Equisetum arvense
Osmunda regalis
Pteris cretica
Polypodium vulgare
Phyllitis scolopendrium
Athyrium filix-femina
Cyrtomium falcatum
Cystopteris fragilis
Dryopteris affinis
D. dilatata
D. filix-mas
Polystichium lentum
P. proliferum
P. setiferum

Material would be best fresh, kept damp in plastic bags. Thank you very much for your help.

Mark Large, Department of Botany, University of Auckland, Private Bag, Auckland 1

THESES IN BOTANICAL SCIENCE

■ **Department of Botany & Zoology, Massey University**

McGarvey, Hugh 1985: Recognition of pollen for hydration in Gladiolus. BSc (Hons).

Miller, Fiona 1985: A preparatory genetic investigation of the cloned small subunit gene of ribulose bisphosphate carboxylase oxygenase from Anacystis nidulans. BSc (Hons).

■ **Department of Botany, Victoria University of Wellington**

Chand, Bir M. 1985: Detection and transmission of Drechslera graminea in barley seed and its sensitivity to triadimenol and imazalil. BSc (Hons).

Davis, Anthea R. 1985: Bioassay of fungicides on barley seeds and in seedlings. BSc (Hons).

Dearden, Monica. 1985. The development of the pollen and embryo sac in Carpodetus serratus. BSc (Hons).

Dickson, Alan R. 1985. The floral morphology, embryology and palynology Ascarina lucida Hook. f. (Chloranthaceae). BSc (Hons).

Flux, Ian A. 1985: Divaricating shrubs of Mt Kaukau. BSc (Hons).

Freegard, Janis. 1985: A study of secondary succession at Crofton Downs, Wellington. BSc (Hons).

Glogau, Michelle L. 1985: The effects of light quantity and quality on growth of Gracilaria sp. nov. BSc (Hons).

Hopkirk, Stephen R. 1985: Aspects of members of the Stictaceae lichens. BSc (Hons).

Maxwell. Jane M. 1985: New Zealand epiphytic asteliads - a vegetative comparison. BSc (Hons).
Milicich, Lesley D. 1985: Frost levels and other temperature effects and cyanogenesis in Trifolium repens (white clover). BSc (Hons).
Nickless, Elizabeth M. 1985: Allelopathy in plants - Tissue culture and glasshouse experiments. BSc (Hons).
Sheridan, Mary H. 1985: Studies on sensitivity of Pyrenophora teres to Ergosterol biosynthesis inhibitors. BSc (Hons).
Turner, Adrian P. 1985: Giemsa banding of chromosomes reviewed and applied to hybrid rye. BSc (Hons).
Willis, Diane. 1985: Fungal succession on the dung of horses, sheep and geese at Ohariu Valley, Wellington. BSc (Hons).
McLea, William. 1985: A microscope key for identifying the plants used by the Maori in making some of their fibre artifacts. Dip. App. Sci.
Ridley, G.S. 1985: Aspects of the Pleosporales sensu lato in New Zealand. M.Sc.

■ **Department of Botany, University of Otago**

Curtis, M.E. 1985: The Effect of Cytokinins and Gibberellins on Starch Accumulation in Lemna minor. BSc (Hons).
Frazer, A.W.J. 1985: The Frost Resistance of Littoral and Sub-littoral Algae. BSc (Hons).
Lough, T.J. 1985: A study of the Amaranthus betacyanin bioassay and the cytokinin content of Ascophyllum nodosum (Phaeophyta). BSc (Hons).
Priest, J.K. 1985: An Investigation into the Effect of a Commercially Manufactured Liquid Seaweed Extract on the Growth of Barley (Hordeum vulgare L.var. triumph). BSc (Hons).
Quin, S.L. 1985: The Effect of Zinc Contamination on Four Different Species of Fungi.
Rapson, G.L. 1985: Vegetative strategy in Agrostis capillaris L. 390 pp. PhD
Sloane, M.C. 1985: The Possible Effect of Root Infecting Fungi on the Establishment and Growth of Lucerne in Tussock Grassland Soil. BSc (Hons).

LETTER TO THE EDITOR

Dear Editor,

Recently New Zealand phycologists held a two-day seminar at Botany Division to honour Dr Vivienne Cassie-Cooper who has retired. The occasion was a great success, not only as a tribute to Vivienne, but also as a clear indication of the need for discussion of common problems.

Vivienne's retirement leaves a gap which Botany Division cannot currently fill, not because suitable candidates are lacking, but because money is not available to finance the position. This situation arises from funding policies currently affecting Government Departments, and less directly, our universities. Of course it may be argued that a replacement could be found - it is merely a matter of priorities. But what activity can be dispensed with which is not playing a role in furthering the well-being of our country?

The maintenance of water quality, fresh-water and sea-water, is a matter of urgency for the health of our human and animal populations and involves

a knowledge of the micro-algae which occupied so much of Vivienne's time. It was clear from the discussions at the seminar that the most fundamental knowledge, that of knowing which organisms are involved and what they are, if often lacking, or at best, is only known in a general sense. Simple concise descriptions and clear illustrations to help those working in applied phycology seem to be urgently required, but these, as is always the case whether it be flowering or non-flowering plants one deals with, need a sound, authoritative taxonomic base on which to develop the more popular accounts.

The retirement of such an experienced researcher as Vivienne leaves a gap which is so serious as to demand comment. I hope that the remarks made during the closing session of the seminar lead to a strong statement of concern from those best qualified to speak - phycologists, and those working on water quality in New Zealand.

Neville Moar, 8 Maurice Street, Lincoln, Canterbury

ISSN 0112-6865