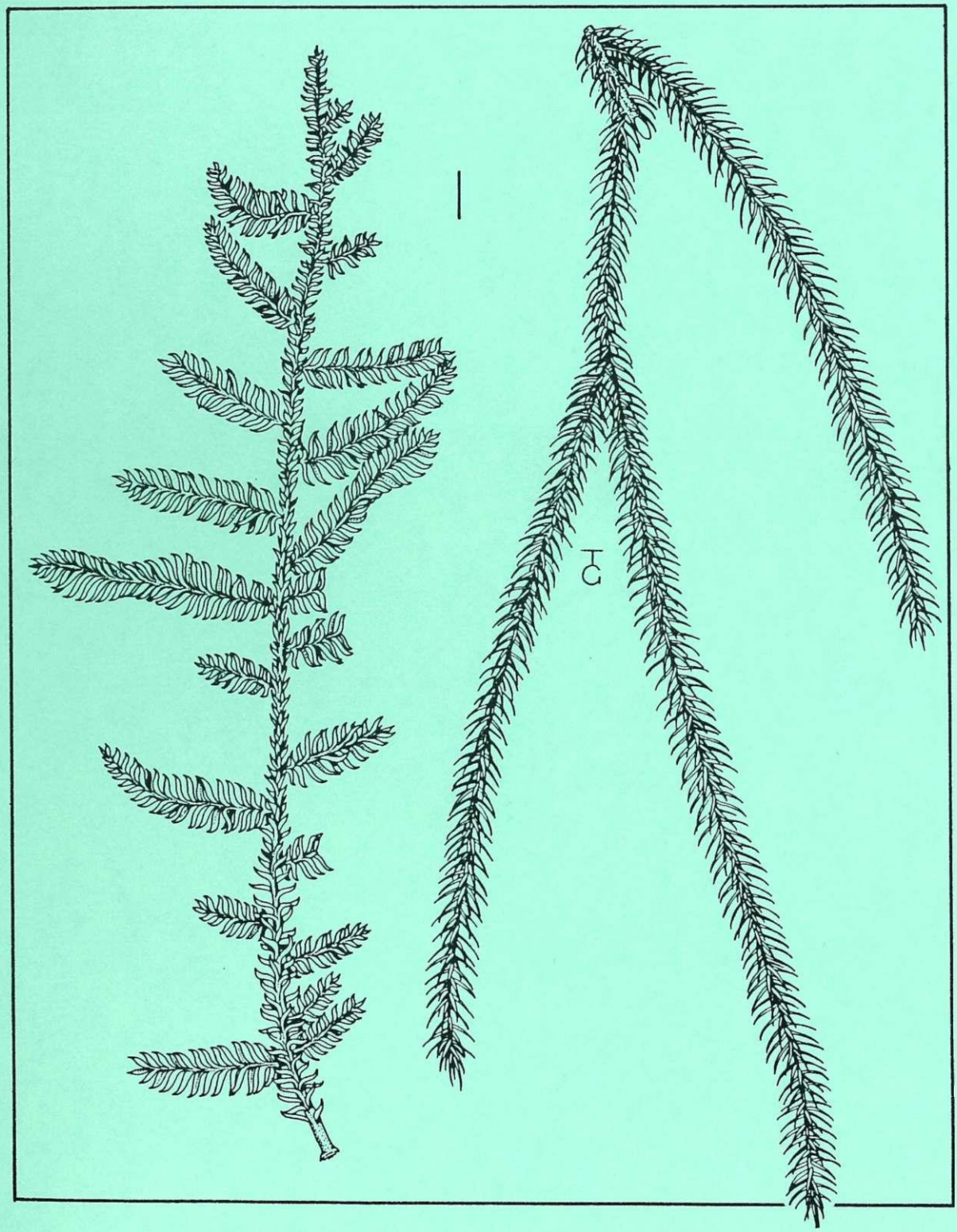
NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 16 JUNE 1989



NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 16 JUNE 1989

CONTENTS

News

New Zealand Botanical Society

From the Secretary 3

Regional Botanical Societies

Auckland 4

Waikato 5

Rotorua 5

Manawatu 6

Wanganui 6

Wellington 7

Canterbury 8

Otago 8

Notes and Reports

Current Research

Flooded kahikatea remnants in the Waikato 9

Plant Records

Myosotis petiolata var. pottsiana 10

Taxonomic Notes

Origin of the name Olearia 11

Fieldwork

Save the pingao and kakaho 12

Lupinus arboreus - friend or foe? 12

Pine barrens - or boons? 13

Publications

Vegetation of Stewart Island 15

Announcements

SYSTANZ 15

A plant collections scheme for New Zealand 15

Desiderata

Janice Lord 16

Forthcoming meetings/conferences

6th John Child Bryophyte Workshop 16

4th Int. Congress Systematic and Evolutionary Biology 17

Science and the Natural Heritage 17

Conference/meeting reviews

Flora Symposium Meeting, November 1988 17

Book Review

The Botanic Garden Wellington 19

Cover illustration

Dacrycarpus and Dacrydium (Podocarpaceae)

Junevile foliage of Dacrycarpus dacrydioides (kahikatea, left), and Dacrydium cupressinum (rimu, right) is here illustrated by Tim Galloway for the Canterbury Botanical Society's publication project on small-leaved shrubs of Canterbury and Westland. Work is currently proceeding on the text, with the second draft almost completed. Publication may occur later this year. (Hugh Wilson)

New Zealand Botanical Society

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). Since 1986 the Newsletter has appeared quarterly in March, June, September and December.

New subscriptions are always welcome and these, together with back issue orders, should be sent to the 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. Contributions need not be typed, though this helps especially for longer items. Legible hand-writing is acceptable.

Deadline for next issue

The deadline for the September 1989 issue (Number 17) is **30 August 1989**. Please forward contributions to:

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

New Zealand Botanical Society

■ From the Secretary

Incorporation

There have been some minor hiccups, mainly over our Rules, in having the Society incorporated. I am hopeful that all the problems have now been sorted out, and that we will hear favourably from the Registrar of Incorporated Societies in the near future.

1990 Officers and Committee

A reminder that according to our Rules, nominations for 1990's Officers and Committee members open 1 September 1989, and close on 20 November 1989. A formal call for nominations setting out full details will appear in the next issue of this Newsletter.

Affiliations with other societies and organisations

The Committee has asked that details of the costs and benefits of our possible affiliation with various other groups be placed before the membership for comment before any decisions are made. Details for three such organisations follow. (A fourth, the Royal Society of New Zealand, has failed to supply any information after three approaches over a period of four months).

ECO - Environment and Conservation Organisations of NZ (Inc.)

ECO is an alliance of nearly 100 national, regional and local organisations with an interest in the conservation of the environment. Among the tasks ECO undertakes to help member bodies achieve their objectives are:

1. A Conference and AGM in July or August.
2. Preparation of a Newsletter - normally 11 issues p.a., plus an occasional publication, "ECO News".
3. Publication of "Energywatch", an occasional newsletter on energy topics.
4. Maintaining a liaison with statutory and non-statutory bodies and government departments.
5. Preparation of submissions on behalf of the Executive Committee on:
   - Bills before Parliament
   - Reviews of legislation
   - Draft management plans
   - District Schemes
   - Environmental Impact Reports on industrial projects and mining proposals, etc. (Member bodies may endorse or disclaim these).

There are two types of membership:

Class A - nationwide organisations	Sub	$450 p.a.
Class B - local, regional, and small national organisations	Sub	$ 65 p.a.

Royal Forest and Bird Protection Society of NZ Inc.

Forest and Bird is New Zealand's largest conservation organisation. Formed in 1923, the Society now has over 53,000 members in 53 branches around the country. Forest and Bird's aims are to protect New Zealand's natural heritage including our native forests, lakes, mountains, tussocklands, coastlines, wetlands, and offshore islands and all the native wildlife found in these areas. Also to increase an appreciation of the natural environment and promote the conservation ethic.

There are many types of membership; Bot Soc would be classed as a Group Member, for which the sub is $37 p.a. This would enable members to visit or stay at

any of Forest and Bird's bush reserves and lodges, excepting the Mt Ruapehu Lodge which could only be used by NZ Bot Soc organised groups, and then not in the months of August or September when it is available to individual F & B members only. We would also receive a copy of Forest and Bird magazine, and Conservation News.

Maruia Society
Maruia Society, born in May 1988, is the product of a merger of the former Native Forests Action Council (NFAC) and the Environmental Defence Society (EDS). Although NFAC and EDS were only formed in the early 1970s, they have shown again and again the value of well-directed professional expertise for resolving environmental issues. By 1988, the task of protecting New Zealand's publicly owned native forests was all but complete. Broader and more complex issues are now emerging, and new challenges have to be faced. The restructuring of government agencies to create a new and aggressive breed of State corporations; the recent influx of multinational mining companies; the creation of a strongly market-oriented economy in New Zealand: all these changes mean that the environmental movement must become stronger and more professional in its approach. The merger of NFAC and EDS was a key development to this end. Prevention of further exploitation of Pacific tropical rainforests, and keeping mining out of our national parks and reserves are two current special projects. Membership is 4000 nationally, broken into 20 branches. NZ Bot Soc could become either a "Friend of Nature" (special supporting member) - sub $100 p.a., or an Ordinary Member - sub $25 p.a. As well as supporting a team of eight scientists and other professionals, this provides for publication of Bush Telegraph and branch newsletters.

The NZ Botanical Society Committee would be pleased to have comment from members on the merits or otherwise of our joining any of these groups.

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

Regional Bot Soc news

■ Auckland Botanical Society

Programme June - September 1989

Field trips:
Saturday 17 June Te Henga (Bethells), northern Waitakere Range - a stronghold for divaricating shrubs in the region. Leader: Dave Slaven
Saturday 15 July Mt Te Aroha ferns. Leader: John Smith-Dodsworth
Saturday 19 August Moturemu Island, Kaipara Harbour (limited numbers; members will be given priority). Leader: Anthony Wright
Saturday 16 September Tuahu lakelets (Kaimai Range) - joint Rotorua/Waikato/ Auckland Bot. Soc. field trip.

Evening meetings:
Wednesday 5 July Auckland Institute and Museum Herbarium - a look at recent developments including computerisation.
Wednesday 2 August Oases in the desert - waterhole vegetation in Australia. Speaker: Howard Esler
Wednesday 6 September Flora of the Outer Hebrides, Scotland. Speaker: Ewen Cameron

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

■ Waikato Botanical Society

Newsletter No. 5 published in March 1989 contains the following articles:

Notes on the Flora Festival	Cathy Jones
Whangamarino Wetland Trip	Robyn Irving
Waima-Waipoua-Mataraua Forests trip	Bev Woolley
Lowry Kauri Forest, Glen Murray, field trip	Peter de Lange

Newsletter No. 6, April 1989, includes reports on:

Adventive workshop and Hamilton Gully field trips	Murray Boase, Peter de Lange & Paul Champion
Herbarium evening	Paul Champion, Peter de Lange and Bob Cooper

At the AGM on 9 May 1989 the following were elected:

President:	Warwick Sivester
Secretary:	Murray Boase
Treasurer:	Cathy Jones
Editor:	Paul Champion
Committee:	Dieter Adam, Catherine Beard, Bob Cooper, Liz Humphrey, Helen Mackay, Grant Milligan, Vivian Robson, Bev Woolley.

Subscriptions are now due, and remain at $10.

The programme for the period June-August is:

Sunday 18 June - Field trip to McKenzie's Fernery
Contact person: Murray Boase (071) 67-798

Sunday 16 July - Hamilton Botanical Gardens
Contact person: Warwick Silvester (071) 558-236

Sunday 13 August - Hakarimata's Field trip
Contact person: Paul Champion (071) 68-249.

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

■ Rotorua Botanical Society

The Rotorua Botanical Society, in conjunction with the Forest Research Institute, is compiling an account of the botany of the Rotorua Lakes District. It is intended to publish this book in 1990.

We regret to note that one of the society's most eminent members, Arthur Wade, recently died at the age of 93. Arthur was a fellow of the Linnean Society and had retired to New Zealand to live with his daughter after a long and respected career in British botany. An obituary is in the latest newsletter.

One of our members, Bruce Burns, is currently enrolled in a PhD programme at University of Colorado, Boulder. His thesis is to be on a topic under the broad title "Forest Ecology of South America". He recently visited Nahuei, Huapi, and Lanin National Parks in Argentina and contributed an interesting article in our latest newsletter entitled "A New Zealander's Introduction to the Flora of North Patagonia".

Other papers in the April newsletter are:

Lake Rotoehu Field Trip	Grant Milligan & Chris Ecroyd
A visit to Pittosporum turneri in the Ripia Valley	Willie Shaw
Three notable Rotorua wetlands	Willie Shaw & Sarah Beadel
The vegetation and flora of Hardcastle and Rawhiti Lagoons	Clive Howard-Williams

A lowland mire complex, Inland Hawkes Bay Sarah Beadel

Forth coming field trips and events are:
Saturday 10 June - AGM and Pot Luck Dinner
Sunday 11 June - Waimangu Thermal Area: Chris Ecroyd (073 479067)
Thursday 13 July - Evening Address: Dr Bruce Clarkson Flora and Vegetaion of Hawaii
Saturday 19 August - Awakeri Scenic Reserve: Willie Shaw (073 24546)
Saturday 18 September - Tuahu Lakelets and Forest (This is a joint trip with Auckland and Waikato Botanical Societies): Sarah Beadel (073 24546)

for further information contact:

Sarah Beadel, Okere Rd, RD4, Rotorua (Phone 073 24546)

■ **Botanising in the Manawatu**

With the growth of interest in plant ecology and the New Zealand flora in Palmerston North, both in research and teaching, a vacuum has been noted in terms of a local botanical society. Despite the occurrence of a number of very keen folk in the area, botanists have had to rely on societies in other regions for specialist meetings and trips. Some local areas, and regions such as the volcanic plateau and the northern Wairarapa (for which Palmerston North is the obvious departure point) have not received the attention from active botanists which they deserve.

We hope therefore to establish a group who would be interested in making occasional 1-2 day excursions, and holding regular meetings or workshops. The approach would be cooperative, rather than under leadership, and mutual teaching would be encouraged. We hope to keep costs to the minimum, and will probably be asking for donations of about $4 to cover the first year of newsletters and postage.

We hope to hold an inaugural meeting in mid-July, probably at Department of Botany and Zoology, Massey University. If you are interested in finding out more about our plans, or would like to join up, please contact either of us:

Peter van Essen, Ph 69099 ext 4133, or 81793 (home), **Jill Rapson**, Ph 69099 ext 8038, or 89088 (home), Botany and Zoology Department, Massey University, Palmerston North

■ **Wanganui Museum Botanical Group**

Future plans:
Sunday 2 July: We visit Gordon's Bush and/or the Waikupa Scenic Reserve. Both are close to Wanganui City. Gordon's Bush has been monitored by our group for many years. It is a remnant of kahikatea/tawa/titoki bush which covered much of the flat land to the south-east of the city.
Tuesday 4 July: Our annual general meeting will be followed by a nature film.
Saturday 29 July: Carver's Bush, an area of bush on private land to the north-west of the city. We plan to examine an area not previously visited.
Tuesday 1 August: Colin Ogle will talk on "Mana Island". Colin has made a special study of the regeneration of this and other islands.

Past events:
The April 1st visit to the Paengaroa Scenic Reserve was well patronised and we were joined by Forest & Bird members from Taihape and Rangitikei. There are 27 species of divaricating shrubs in the Scenic Reserve and adjoining forest.

Some of the rare or very local ones are Melicytus angustifolius, Coprosma wallii, C. virescens, and C. obconica subsp. obconica

For further information ring Joan Liddell (064) 57-160 or

Alf King, 180 No. 2 Line, RD2, Wanganui (ph. 064 27-751)

■ **Wellington Botanical Society**

The Monday evening meetings are held in Room K301 on the third floor of the New Kirk Building, Victoria University of Wellington, at 7.30 p.m.

Monday 19 June: Some botanical aspects of the Wellington Botanic Garden with particular reference to the native forest remnant.
Winsome Shepherd, National Museum, in association with Walter Cook, Turnbull Library, Photographic section, will give an illustrated talk based on their recent book. For those who wish to read it beforehand the reference is: Shepherd W; Cook W: 1988 The Botanic Garden Wellington A New Zealand History 1840-1987. Wellington, Millwood Press.

Saturday 1 July: Wellington Botanic Garden.
Botanical aspects of the Wellington Botanic Garden with a particular study of the native forest remnant (reading resource as above). Meet at the main entrance to the Botanic Garden at 11.30 a.m. Bring lunch if the weather is suitable. Leaders: Winsome Shepherd and Walter Cook.

Monday 17 July: A Window into the Tasmanian Flora.
Kath Dickinson, now of Victoria University, will talk about the lowland forest and alpine flora of Tasmania.

Saturday 5 August: Kay Conservation Covenant, Pukerua Bay.
We will visit a 47 ha area of covenanted kohekohe forest which has "inordinately tall" rimu. On the agenda will be compiling a species list, producing vegetation descriptions and describing the condition of the vegetation for the Department of Conservation. Enjoying an easy day's botanising will also be on the programme. Meet at the Wellington Central Railway Station at 8.30 am for this "work" day. Bring lunch and a thermos. Field leader and contact: Susan Timmins, phone 730-363 (home), 713-234 (work).

Monday 21 August: AGM and Presidential Address.
Botanical readings led by the president. Please bring along an interesting item to share with your fellow Botsoccers.

Saturday 2 September: Pikarere Farm Covenant.
Much of this proposed covenant is contiguous with the Porirua Scenic Reserve (also known as Elsdon Bush). It is principally coastal communities for which we will produce descriptions and a species list for Department of Conservation. Meet at Porirua Shopping Centre, outside the Public Library at 9.00 am with lunch and a thermos. Field leader and contact: Barbara Mitcalfe, phone 757-149 (home), 850-559 ext 8858 (work).

Monday 18 September: A Remarkable Tale of Old Man Garvie and Old Woman Eyres.
A journey with Neill Simpson, DoC, Queenstown, around the west-central Otago mountains looking at this unique landscape and its plants and animals, several of which are endemic.

Wellington Botanical Society 50th Jubilee

Saturday 11 and Sunday 12 November 1989.
Organisers: Bev and Len Bruce, 116 Korokoro Road, Petone, phone 691-817.

The Jubilee programme includes a one day seminar at Victoria University of Wellington, a range of field trips at Kaitoke and the Jubilee dinner at the Staff Club, Victoria University. All members, present and past, are invited to attend. If you know of any ex-members who would like to attend the Jubilee, please ask them to contact the organisers so they can receive the detailed notice.

Photographs
If anyone has any early photographs of Bot Soc events that they would be prepared to have copied for display, could they please contact Isobel Morice, 40 Wadestown Road, Wellington 1.

Bulletin - call for papers
Copy is now required for a Jubilee edition of the Bulletin. Would those who intend to submit papers please forward them to the Editor, Colin Ogle, 4 Brassey Road, Wanganui, no later than 31 July 1989.

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

■ Canterbury Botanical Society

At the time of writing we are preparing for our Annual General Meeting and Dinner. Last year we held a very successful pot-luck dinner, so we are trying the idea again.

Programme planning for the rest of 1989 is well underway. Speakers for the next three months (July-September) are to be Bill Sykes, Anthony Wright and Philippa Horn. Winter "field trips" include a visit to the Christchurch Botanic Gardens and a Workshop on Lichens.

Looking forward to warmer weather and longer days, we are arranging to spend a weekend at Hanmer in December (usually a good time to see alpine plants). Summer camp in January will, we hope, be in Otago.

Monthly meetings are held on the first Friday of each month, and the field trip is usually the next day. Visitors are welcome at all our meetings, field trips and camps. Enquiries phone Philippa Horn (03) 252-811, or write to:

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

■ Botanical Society of Otago

The following meetings will be held at the Botanic Garden Centre, Lovelock Avenue, starting at 7.30 pm:

Tuesday 13 June: "Botanising and Bellamising". Dr Peter Johnson will talk about his past summer as botanical adviser and stills photographer for the forthcoming TVNZ series on New Zealand botany and conservation that will be fronted by Dr David Bellamy.

Wednesday 19 July: "Ecology of Fleshy Fruits in New Zealand Plants". Dr Bill Lee, of Botany Division, DSIR, will describe his recent research on interactions between fruits and their dispersers.

Tuesday 12 September: "New Crops for Otago and Southland". Dr Bruce Smallfield of MAFTech, Invernay, will describe the valuation of some new species of herbs and shrubs for horticulture in the southern South Island.

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

NOTES & REPORTS

Current Research

■ **Flooded kahikatea remnants in the Waikato**

The majority of the remaining kahikatea (Dacrycarpus dacrydioides) dominated forests of the Waikato region are small remnant stands situated on well drained farmland. These remnants show no apparent regeneration of kahikatea and where stock are excluded, seedlings and saplings of broadleaf species e.g. tawa (Beilschmiedia tawa), pukatea (Laurelia novae-zelandiae), and titoki (Alectryon excelsus) are often abundant. In time these species will replace kahikatea in the canopy.

However there are still a few stands of kahikatea which are regularly flooded and three of these were surveyed recently whilst researching my MSc thesis (Champion 1988). These are Kopuatai near Tahuna (Piako County), Awaroa Government Purpose Reserve, Lake Whangape (Raglan County) and Mangapu near Hangatiki (Waitomo District).

The Kopuatai stand is situated between the Waitoa River and the Kopuatai Peat Dome. Approximately 14 ha of kahikatea forest occurs on the mineralised fringe of the Peat Dome completely surrounded by grey willow (Salix cinerea). The forest is generally very open in nature with a pure kahikatea canopy above an almost permanently flooded forest floor. The root masses of the kahikatea trap silt and form mounds which rise above the normal water table of the swamp forest. Various shrubs are confined to these mounds including mahoe (Melicytus ramiflorus), M. micranthus, mapou (Myrsine australis), hangehange (Geniostoma rupestre), rohutu (Neomyrtus pedunculatus) and privet (Ligustrum sinense). In clearings between kahikateas, the two prevalent vegetation types are Coprosma shrub (C. tenuicaulis, C. propinqua, C. rigida) and sedge (Carex secta, C. scoparia, C. lessoniana, C. fascicularis and the grass, Phalaris arundinacea) communities, in addition to Salix dominated forest around the margins of the stand. As well as this wet kahikatea forest, there is a 1 ha stand situated on a levee which is rarely flooded. The canopy of this dry stand is very similar to the rest of the forest, however there is a dense subcanopy of pure mahoe. The forest floor is virtually bare in this dry stand.

The Awaroa reserve is a large (300 ha) block on the edge of Lake Whangape extending along both sides of the Awaroa River. This river is prone to flooding as it is choked with crack willow (Salix fragilis). The wettest kahikatea forest is very open consisting of mounds formed by kahikatea and cabbage tree (Cordyline australis) above an almost permanently flooded floor. Swamp maire (Syzygium maire), ramarama (Lophomyrtus bullata), kowhai (Sophora microphylla), Coprosma tenuicaulis, C. propinqua, C. rigida and hawthorn (Crataegus monogyna) are restricted to the mounds whereas crack willow is only found away from these. A moderately dense forest is found where flooding only occurs periodically. In addition to kahikatea, kowhai and more rarely pukatea, form the canopy. There is no mound formation typical of the wetter forests and it is postulated that

these mounds serve the function of moving the feeding roots of kahikatea above the normal water table. Other species colonise the mounds for the same reason. The understory of this kahikatea-kowhai forest is dominated by seedling and sapling kahikatea, kowhai, totara (Podocarpus totara), and shrubby Coprosma (C. rotundifolia, C. areolata, C. rigida and C. tenuicaulis). On levees adjacent to the river is a dense forest with a kahikatea dominant canopy, but also totara, kowhai, titoki, pukatea, matai (Prumnopitys taxifolia) and ribbonwood (Plagiathus regius) occur in this tier. There is a moderate understorey of Coprosma species and also Melicytus micranthus, turepo (Streblus heterophyllus) and Melicope simplex. Other vegetation types in the river valley include Carex secta, flax (Phormium tenax), Coprosma propinqua; manuka (Leptospermum scoparium) dominant swamps and matai, totara and kanuka (Kunzea ericoides) dominant forests.

The Mangapu forest once covered over 100 ha but recent clear-felling has substantially reduced this. It is situated in the Mangapu River Valley near State Highway 3. The forest is flooded less often than Awaroa or Kopuatai. The commonest forest type is kahikatea/swamp maire dominant with pokaka (Elaeocarpus hookerianus) and pukatea also in the canopy. There is a well developed subcanopy tier of swamp maire, tawa, pukatea, titoki and occasional grey willow. In drier areas no swamp maire was seen and trees of mangaeo (Litsea calicaris) and pigeonwood (Hedycarya arborea) were found. Syzygium appears to be restricted to the wettest forest types; its pneumatophore structures may enable it to survive waterlogging in a similar way to mangroves. In wet open patches in the remnant a sedge dominated community including Astelia grandis occurs. A much more open stand of sapling kahikatea is found closer to the river. This area has a dense shrub layer of Coprosma spp., Melicope simplex, Melicytus micranthus and Pseudopanax anomalus.

The Kopuatai stand is species poor compared to the other two remnants. This could be due to the smaller size of this forest and also its apparently younger age. "Stags head" kahikatea are commonly seen at both Awaroa and Mangapu but not Kopuatai reflecting the older age of the former two stands.

Regeneration of kahikatea is evident at all three sites, although this was restricted to the yound stand at Mangapu and absent at the dry Kopuatai and very wet Awaroa stands. At Kopuatai it appears that the kahikatea forest may be expanding into the willow margins, as many pole and sapling kahikatea can be seen in this area. The stand structure of kahikatea in each of these wet forests appears to be a wide range of sizes indicating that continued regeneration and recruitment of this tree has occurred throughout the life of these stands. This contrasts markedly with the apparently even-aged stands seen in drained kahikatea forests.

For species lists and further information on these wet forests and several dry remnants in the Waikato, refer to my MSc thesis held at Waikato University.

Paul D. Champion, Aquatic Plant Section, MAF Ruakura, Private Bag, Hamilton

Plant Records

■ **Myosotis petiolata var. pottsiana: an interesting casual weed of urban Hamilton**

In late 1986 I acquired a potted specimen of Myosotis petiolata var. pottsiana from Mark Dean of Oropi (Omahanui Native Plant Nurseries). I was told the plant behaved largely as an annual in cultivation so I was not surprised to see the plant die down over winter. The following spring seedlings turned up

many metres from the original planting, a pattern which continued over the years until by January 1989 plants were well established throughout the garden and also in the cracks of the asphalt of the nearby street and on the banks of the Mangaonua Gully below the property. This impressive spread from the initial planting remained unexplained until the discovery that the local cat population were responsible for the plant's spread.

The seeds of Myosotis petiolata var. pottsiana are small, 1.6 - 2 x 1 mm, broadly ovoid, and a deep, glossy black. An examination of the fur of several neighbourhood cats and the family pet soon revealed the small seeds lodged amongst the fur of the cats' underbellies and tails. It appears that where the plants had been initially planted was a favourite site for the local cat population to sun themselves in the late afternoon. Seed was transported from this site and deposited where the cats chose to rest, allowing the plant to spread around the garden and immediate neighbourhood.

Although not yet well established, the Myosotis appears to thrive amongst the more common weeds in both sunny and shaded sites e.g. Juncus bufonius, Cotula australis, Poa annua and may eventually become another addition to the growing number of colourful weeds of the Hamilton City gullies. In addition to these sites, seedlings of Mysotis petiolata var. pottsiana have turned up in a private garden at Wellington Street, from disturbed potting mix encasing a specimen of Cyclosorus interruptus received from Chris Ecroyd of NZFRI, Rotorua (Cathy Jones pers. comm. 1989). Elsewhere the species has also appeared on the edge of Te Kauri Scenic Reserve, Kawhia (Salter pers. comm. 1988), where plants distributed by the author have apparently spread from the original planting in the Te Kauri Lodge Caretakers Garden in a similar manner.

Vouchers from the Hamilton and Kawhia sites will be lodged in the University of Waikato Herbarium (WAIK).

Peter J. de Lange, 109a Mansel Ave, Hamilton

Taxonomic notes

■ Origin of the name Olearia

In the Flora Novae-Zelandiae (1852-55) Hooker gave the origin of Olearia as "from Olea, an olive-tree which some species resemble". And since then New Zealand botanists have repeated this pronouncement or given slight variations of it. Thus Professor Wall and Dr Allan wrote: "Olearia. Latin olearius, pertaining to oil, from olea, olive, on account of the resemblance of the leaves of some species to those of the olive" (The Botanical Names of the Flora of New Zealand, 1950). The latest variant is the claim by Bill and Nancy Malcolm that "the Olearia tree-daisies take their very name from their tomentum - Olea is the genus of the olive which has silvery tomentum on the underside of its leaves" (New Zealand Alpine Plants, in and out, c. 1988).

Much closer to the truth is A Gardener's Dictionary of Plant Names by A. W. Smith, revised and enlarged by William T. Stearn (1972) which states: "named in honour of Adam Ölschläger (1603-1671) whose name was latinized as Olearius, author of a flora of Halle". And The Flora of South Australia Vol. 3 (1986) states: "probably named after Adam Olearius, 1603-1671, German botanist". In The Catalogue of the Library of the British Museum (N. H.) (1910) an Adam Olearius is listed but with a different year of birth (1599-1671) and with no mention of a Flora of Halle.

If we now turn to what Konrad Moench actually wrote when he described the genus

Olearia in 1802, we find the following dedication: "In memoriam Joannis Gotbofredi Olearii, auctoris speciminis florae halensis sive designatio plantarum hortuli sui, quibus is instructus fuit 1666-1668. Halae saxonum 1668.12." (Suppl. Meth. 255).

Pritzel (1871) in his Thesaurus Literaturae Botanicae, states that Johann Gottfried Olearius was born at Halle on 25 September 1635, and died at Arnstadt on 23 May 1711. He was Superintendent in Arnstadt, and besides his Specimen Florae Hallensis wrote Hyacinth-Betrachtung (1665). And in Pritzel's index (p. 559) the reader is referred to Olearius from the name Oelschlaeger.

Thus the genus Olearia commemorates Johann Gottfried Oelschlaeger (1635-1711) who was called Olearius because - as any good German dictionary tells us - his surname means "oil-presser".

Eric Godley, Research Associate, Botany Division, DSIR, Private Bag, Christchurch

Field Work

■ Save the pingao and kakaho

Paneke Community Development & Training Organisation is conducting a NZ Conservation Corp. Project "Save the pingao (Desmoschoenus spiralis) and kakaho" (native Cortaderia species).

A team of seven people have already carried out a Phase I preliminary survey along the coastline bounded by the Manawatu and the Whangaehu rivers to identify distribution and conservation effects of these plants.

A detailed survey will be conducted starting in two weeks time and conjointly the team will initiate its propagation phase. To help us and in turn help you, we would be grateful to receive any information about these plants so that in depth work can be activated, recorded and observed to enhance their conservation for future generations. Your contributions would be sincerely appreciated. Please contact:

Ralph Flavell, (Ph. 67-463) or **Moe Turoa** (Ph. 75-182), or P.O. Box 7175, Palmerston North

■ Lupinus arboreus - friend or foe?

It sounds as though E. K. Cameron and A. E. Wright are biting the hand that literally feeds the native scrub of Northland's west coast sand dunes (N.Z.Bot.Soc.Newsl. 15, March 1989). Yearning for permanent dieback of lupin runs counter to the wisdom of Leonard Cockayne, one of New Zealand's greatest natural scientists. His prescriptions, which incorporate the key nitrogen-fixing role of lupins (Cockayne, L. 1911: Report of the dune-areas of New Zealand, their geology, botany, and reclamation. N.Z. Dept. Lands & Survey. Parliamentary Paper C 13.), have kept the sand dunes in their place during this century. It is arguable whether the native scrub would have developed without nitrogen input from the lupin.

In the early 1900s, sand encroachment from coastal dunes on to Northland farms was a serious problem. Had it been allowed to continue, Messrs Cameron and Wright might today be admiring the west coast native dune scrub at a location close to Whangarei.

Lupin dieback, combined with the "cut and run" approach to sand dune forestry

which will be encouraged by privatisation, poses a serious threat to all sand dune vegetation. Let us hope that Cockayne's influence is strong enough to protect both native and exotic plants from nitrogen starvation and inundation by sand drifts.

R. L. Gadgil, 19 Exeter Place, Rotorua

■ Pine barrens - or boons?

Recent casual surveys of two small conifer plantations near Coalgate, in Central Canterbury, suggest that the value of exotic forests as habitat for indigenous species has been much underrated.

The two plantations, administered by the Selwyn Plantation Board, are designated as Watson's and Centennial Plantations and are Nos 86 and 87 on the board's index of its holdings. Watson's plantation lies on the north-west side of the Hororata Road, backing on to the Hororata Downs. Centennial, opposite, also includes a recreation area in which a number of more or less ornamental species were planted, in park-like fashion, in the early 1940s and early 1960s. Backing on to the recreational area is a production forest of mainly Douglas fir, with some pines and macrocarpa, planted between 1940 and 1943. Most likely these will be felled during the next few years. Watson's, which occupies only about 10 ha, is being managed for production of large, high-value sawlogs and will be felled on the femmel coupe (ring) system, which will allow natural regeneration and sustained yield. Originally planted in 1883 in deciduous hardwoods (oak, ash and sycamore), with some Pinus radiata and other conifers, it was replanted in 1924-25 in Douglas fir. A few deciduous trees remain in the north-west quarter, and their seedlings, especially the ashes, are prominent in the plantation understorey. This understorey also contains a most interesting assortment of indigenous herbs, shrubs, lianes, and ferns, and some interesting naturalised plants, including the true Berberis vulgaris, which is not common in New Zealand, and Euonymus fortunei, which is known in New Zealand as a wild plant from only this and one other collection, made in Riccarton Bush.

In 1986, 1987 and January 1989, I did transects of a small area (about 200 metres square) of Watson's plantation, and noted the expected introduced woody weeds, gorse, broom, Himalayan honeysuckle, bittersweet, elderberry, and blackberry, plus more than 50 species of indigenous shrubs, ferns and monocots.

The ferns were particularly interesting: 22 indigenous species, several of which were not previously recorded in the Malvern Hills area, plus two introduced species of Dryopteris. A striking feature of this fern population is the number of Asplenium species noted: seven, plus hybrids. In some glades, the Aspleniums seemingly have created hybrid swarms. All the species grew in abundance, with the exception of A. lyallii, of which only a few plants were seen. The presence here of this fern was particularly interesting, in part because it was not on the district checklist, also because here it grows in acid leafmould - most inland populations of this fern grow on limestone.

Pellaea rotundifolia, the button fern, also absent from the checklist, is abundant in Watson's, growing in quite deep shade, and occurs sporadically in Centennial. Several large, healthy clumps of Phymatosorus diversifolius occur in Watson's. The ubiquitous Blechnum penna-marina, the little hard-fern, occurs in many places, even in deep shade, but B. minus is confined to the banks of a water-race which bisects Centennial and serves as one boundary of the surveyed area. Blechnum fluviatile, a plant of streamsides and wet shady banks in the Malvern Hills, grows here as a few isolated clumps on the race

edge, and can be seen on drier sites also, growing in deep pine litter which must get very dry in summer.

Three Hypolepis species and Histiopteris incisa are pioneering species in the small light wells created by tracking work. H. incisa is abundant in some clearings, with fronds growing more than two metres tall (in 1987). Two Polystichum are common in both plantations. P. richardii favours densely shaded places, while P. vestitum is abundant on the tracks and in the light wells, where it competes successfully with H. incisa. A number of hybrids between the two Polystichum spp. were noted.

Three factors probably combine to create this interesting and, to all appearances, fairly stable ecosystem: the relatively long rotation of the plantations, which has permitted the build-up of sufficient leaf-litter to sustain small understorey plants; the shelter from north-west winds provided by the volcanic spur of the Harper Hills adjoining the plantations; and the good light levels and equable temperatures underneath the Douglas fir canopy. There are few plants, other than small, suppressed tree seedlings, under the deciduous trees, where the shade is more dense and the ground drier in summer. In this situation, the ferns appear to have considerable ability to survive drought. In January 1989, after a year of almost continuous drought and the driest September-December period since 1903, the ferns were showing signs of stress, but none had died.

Location: Coalgate, Central Canterbury, at foot of Harper Hills on Selwyn River terrace. Checklist of indigenous species:

MONOCOTS
Arthropodium candidum
Libertia ixiodes
GRASSES AND SEDGES
Carex breviculmis
C. buchananii
C. comans
C. forsteri
C. virgata
MONOCOT TREE
Cordyline australis
DICOT SHRUBS
Coprosma sp. cf parviflora
C. propinqua
C. propinqua x robusta
(=C. x cunninghamii)
C. rhamnoides
C. rotundifolia
Melicytus crassifolius
Pittosporum tenuifolium
Solanum laciniatum
LIANES
Clematis forsteri
Muehlenbeckia australis
M. complexa
Parsonsia capsularis
P. heterophylla
Rubus cissoides
R. schmidelioides

FERNS
Asplenium flaccidum
A. flabellifolium
A. gracillimum
A. hookerianum
A. lyallii
A. richardii
A. terrestre
(plus hybrids of several spp.)
A. trichomanes
Blechnum fluviatile
B. minus
B. penna-marina
Dryopteris affinis
Dryopteris filix-mas
Histiopteris incisa
Hypolepis ambigua
H. millefolium
H. rufobarbata
Paesia scaberula
Pellaea rotundifolia
Phymatosorus diversifolius
Pyrrosia serpens
Polystichum richardii
P. richardii x vestitum
P. vestitum
Pteridium esculentum

ORCHIDS
Chiloglottis cornuta
Corybas triloba s.s.
C. triloba (evergreen, vigorous form)
Gastrodia cunninghamii

Thanks to Patrick Brownsey, David Given and Hugh Wilson for assistance with the identification of some ferns.

Derrick Rooney, P.O. Box 43, Hororata

PUBLICATIONS

■ Vegetation of Stewart Island, New Zealand



Across the diverse landscape of Stewart Island, natural plant communities have survived largely intact; although browsing mammals have caused widespread changes, other influences such as fire, milling, and farming have affected only small areas.

This supplement to the New Zealand Journal of Botany maps and examines the island's plant communities, listing component species and describing features of their habitat and ecology. The influence of environmental factors on vegetation patterns is also considered.

A list of vascular plants on Stewart Island and its outliers notes 585 indigenous species and 43 hybrids; another list records 240 naturalised species.

Mail order price: N.Z./Australia NZ$35.75
Outside N.Z./Australia US$35.75. From:

DSIR Publishing, P.O. Box 9741, Wellington, New Zealand. Tel. (04) 858-939

ANNOUNCEMENTS

■ SYSTANZ

Are you working with plants or animals in a taxonomic or systematic way? Join SYSTANZ [Systematics Association of New Zealand]. An association of people working in many fields of Biology who use similar methods and techniques. For further details, contact:

Dr J. E. Braggins, Botany Department, University of Auckland, Private Bag, Auckland 1

■ A Plant Collections Scheme for New Zealand

In New Zealand, there is an urgent need to co-ordinate our plant conservation efforts. While there are institutions and individuals working very effectively in this area, there is no co-ordinated strategy to ensure that duplication and poor coverage are avoided, with expertise and resources available where they are needed. A Plant Collections Scheme needs to be established to cover both public and private plant collections. National standards for the development and maintenance of collections would be developed along with a database of all collections and their contents. The reason for establishing plant collections

are:

1. To retain plants in cultivation regardless of their demand in the trade.
2. To make it possible for keen gardeners to obtain plants that are otherwise unavailable. This may involve the collection holder co-operating with a nursery to make plants available to gardeners.
3. For research use by horticulturists and botanists. For this to occur the collections must be well documented and comprehensive. Collections also assist in the correct naming of plants, especially cultivars.
4. To retain in cultivation, species that are rare and endangered in the wild.

At the Royal New Zealand Institute of Horticulture Conference in Tauranga, the establishment of a National Plant Collections Scheme was discussed. It was decided to pursue the idea and to organise a workshop later in the year which would look in detail at the establishment of such a scheme. The workshop will be organised to coincide with a visit to New Zealand of Tony Lowe, the General Secretary of the National Council for the Conservation of Plants and Gardens (NCCPG) in Britain. The NCCPG is an independent charity based at the RHS garden at Wisley and is involved with the conservation of species, hybrids and cultivars growing in British and Irish gardens. For more information on the workshop, please contact:

Mike Oates, Deputy-Chairman, RNZIH National Executive, P.O. Box 11-379, Wellington

DESIDERATA

■ **Janice Lord**

Would Janice Lord, who wrote to the NZ Native Orchid Group Editor ordering a copy of "Colenso on Orchids" after reading about it in the March issue of this Newsletter, please forward her address to:

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

FORTHCOMING MEETINGS/CONFERENCES

■ **6th John Child Bryophyte Workshop**

This year's Workshop is to be held at Te Kauri Park, the Hamilton Junior Naturalists Field Station, at Operau 60 km south-west of Hamilton, from dinner time on Thursday 26 October until after breakfast on Tuesday 31st October. Total cost (including full board, and transport to and from Hamilton if required) is expected to be about $80. Some funds are available for student subsidy. Accomodation is in bunk-rooms, and domestic chores will be rostered. The main vegatation type of the area is northern lowland forest, with the possibility of excursions to limestone areas.

All bryologists welcome - novice or expert. Local organisation is being undertaken by Allan Green of the University of Waikato, but registration and transport are being coordinated by John Braggins and Jessica Beever. Please write indicating definite or possible attendance as soon as possible to:

Dr John Braggins, Department of Botany, University of Auckland, Private Bag, Auckland 1

Fourth International Congress of Systematic & Evolutionary Biology

1-7 July 1990, University of Maryland, Washington DC; Theme - The unity of evolutionary biology.
The meeting hopes to overcome barriers between the disparate subfields of evolutionary history, and population and organismic biology. Congress symposia will focus on three major ideas:
1) Evolution in perspective: biodiversity, conservation, biotechnology, and global change.
2) Tempo and pattern of evolution: micro- and macroevolutionary processes.
3) Systematic and phylogenetic reconstruction.
To receive the second circular, write to:

Congress Secretary ICSEB-IV
Department of Microbiology
University of Maryland
College Park, Maryland 20742
UNITED STATES OF AMERICA

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

Science and the Natural Heritage - Tirohanga o te ao Turoa

How much do we really know about New Zealand's physical and biological environment? The Science and Natural Heritage Conference to be held at Massey University from 20-25 January 1990 provides a forum for interested scientists from all disciplines to present their findings, interpret their results in the context of national and international environmental issues, and identify future research needs and priorities in this time of reassessment and change. Please see the first circular enclosed with your Newsletter. Several New Zealand scientific societies will hold their regular meetings in association with the Conference, whilst others will sponsor interdisciplinary symposia, e.g.: Climatic change in the SW Pacific: the last 120,000 years;
Physiology of NZ native plants;
Genesis of NZ soils;
Paleontology: status in NZ;
along with many others. Additional ideas are most welcome, especially from the Botanical Society and its members. Please contact me at the address below.

The second circular in August will provide many more details about the Conference. To receive it, please be sure to send in the enclosed Notice of Intent.

Charley O'Kelly, Department of Botany and Zoology, Massey University, Palmerston North

CONFERENCE/MEETING REVIEWS

Notes from Flora Symposium Meeting "Direction for the Future", November 1988

No formal recommendations were passed by this informal meeting held during the Flora Festival at Lincoln, but the feelings of the group at the present stage in flora production (i.e. with the completion of the naturalised dicotyledon flora, and the grass flora expected in 1990 - also with the indigenous dicotyledon flora well out-of-date and first floras lacking for many groups

of lower plants) were as follows:

1. Continued production of quality floras of relevant size and style is imperative, but it is timely to make changes in both the style and the organisation of flora writing, particularly in view of current economic stringencies.
2. In the higher plants the principal need now is seen for "bite-sized" floras which cover specific small groups, and are complete (i.e. inclusion of both indigenous and naturalised species) and well-illustrated, preferably with a page of drawings and a page of text per species per opening. Groups immediately suitable for such a treatment include ferns, gymnosperms, orchids, grasses, sedges and rushes, and major dicotyledon groups such as Compositae. Some groups (e.g. Hebe within Scrophulariaceae) will need monographic treatment first. It was recognised however that the dicotyledon flora has to be sectioned first, rather than have the big groups picked out and all the rest left in a miscellany at the end.
3. There is also an urgent need for floras of lower plants including algae (macro- and micro-scopic), mosses, hepatics and fungi. Although there is a lichen flora, it is not illustrated, which reduces its value.
4. Convincing evidence was given that we are far from having reached definitive floras in the best-known groups, and in some we haven't even got "first" floras.
5. Apart from such bite-sized floras a need was also seen for other types of taxonomic output including monographs, fully illustrated floras, and excursion floras which give only passing reference to rare species, are copiously illustrated, and should replace conventional floras for field work.
6. Checklists of correct names of accepted taxa and their synonyms, possibly computerized and updated annually, were also seen as highly desirable. Other types of computerized output discussed were "idiot-proof" computerized keys and computerized floras with annual updates.
7. Future flora writing should be a cooperative effort of all institutions employing suitably qualified personnel (e.g. DSIR, universities, museums, and possibly overseas institutions) with a central control agency, probably DSIR. The way in which the Floras of Australia and North America are being organised is seen as a suitable model. A Funding/Editorial Committee headquartered in one institution sets the formats and arranges priorities.
8. Project-oriented consortia working towards specific targets such as, e.g. a NZ fern flora, are envisaged. Early stages in the preparation of future floras should include:
    (a) assembling data on basionyms of the group
    (b) taxonomic revision, as required
    (c) preparation and circulation of checklist of names of accepted taxa
    (d) drawing of distribution maps
    (e) obtaining chromosome numbers.

Personnel involved in each consortium would depend on the group concerned.
9. It was seen as desirable that a small group be set up, possibly as a subcommittee of the NZ Botanical Society, to prepare an overall plan for a "Flora of New Zealand Project", and then marshall support for funding and implementation. Competitive applications to STAC for funding for taxonomic research by DSIR, the museums, and universities was seen as destructive and undesirable. A joint approach for a plan supported by all parties would be much more effective.
10. Other organisations which might support a Flora of NZ project include MAF, the National Herbarium Network, NZ Botanical Society, Ecological Society, Systanz, and the Royal Society. Conservation organisations should also be supportive. Maori input right from the start is seen as essential.
11. It was my understanding at the conclusion of the meeting that the NZ

Botanical Society would proceed with publicising and marshalling support for such a course of action, via their Newsletter.

M B Forde, C/- Grasslands Division, DSIR, Private Bag, Palmerston North

BOOK REVIEW

■ **The Botanic Garden Wellington A New Zealand History 1840-1987**, by Winsome Shepherd and Walter Cook. Wellington, Millwood Press (291b Tinakori Rd, Thorndon). 396p. ISBN 0-908582-79-X. $79.95 + $5.50 p&p.

Once one has passed through credits to benefactors, a Mayor's message, quotes, a Preface, and a Dedication page, one finds that this handsome volume is really two books in one - each with a different author, a different style, a different layout - but with entirely complimentary stories.

In the first part, Winsome Shepherd describes the acquisition and establishment of the Colonial Botanic Garden over the period 1840-1890. This starts with the unravelling of the story of James Hector and his establishment of the Colonial Museum, Geological Survey, New Zealand Institute and Botanic Garden, and continues with the detailed documentation of site, plant cover, plant introductions and the myriad of administrators, politicians, scientists and laypeople who contributed to its development.

The book has been published to mark the Centenary of Management of the Wellington Botanic Garden by the Wellington City Council in 1991. So it is fitting that Part II by Walter Cook should focus on changes and development under the City Council from 1891-1987. From the first hesitant approaches to its new estate, through the continued planting of the Town Belt and the large increase in nursery facilities, to the appointment of Directors and the introduction of structured horticultural education, a further century of progress at the Botanic Garden is described.

The book is lavishly illustrated by maps, plans, historic documents and very fine photographs - both ancient and modern - which include a colour series by James Siers recording the 1987 aspect of the Garden and its place in the City of Wellington.

For a book which has been so meticulously and scientifically annotated and referenced it is regrettable that errors have survived proofing, e.g. the captions to figs. 54 and 56 mispell Cyathea, mamaku, and Entelea. However, as we are presented with a wealth of fascinating detail - from the opening lines which clear up the questions of Botanic vs Botanical, and Garden vs Gardens to the final summation - these lapses are easily overlooked. I heartily recommend this book to all those who take pleasure in park settings, in flowers, trees, rare plants and garden design, in the history and biography of New Zealand science, but perhaps most of all to those who have enjoyed the wonderful open spaces and treescapes of the Garden itself. (Anthony Wright)

Acknowledgement: This Newsletter was typed by Marcel Smits

ISSN 0112-6865