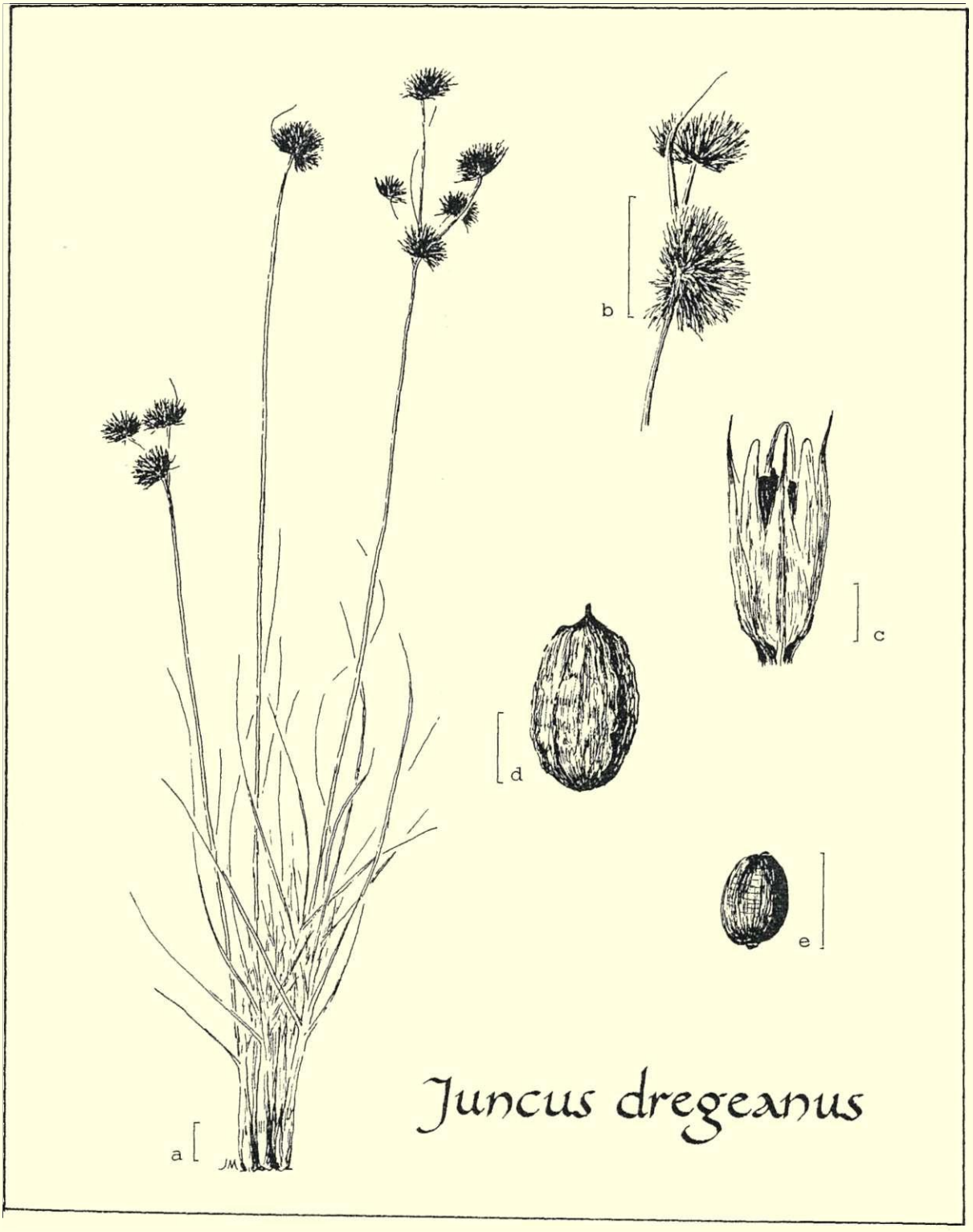
NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 11 MARCH 1988



The 1988 subscription for four issues of the Newsletter (March, June, September, December) is $10.00. A reduced subscription of $5.00 is available to full-time students. A bright green invoice for 1988 subs was enclosed in the last issue (December 1987) sent to existing subscribers. Half the invoices are still outstanding! If there is a bright green reminder notice inside this issue **please pay promptly.**

Back issues of the Newsletter are available at $2.50 each - Number 1 (August 1985 to Number 10 (December 1987). New subscriptions are always welcome, and should be sent to the Editor (address below).

The balance sheet for the year 1 January - 31 December 1987 presented here follows on from the previous statement of financial position which appeared in Newsletter Number 7 (March 1987).

INCOME		EXPENDITURE	
B/Fwd 01 i 1987	674.37	Printing No. 7	492.80
Subs	2560.00	Postage No. 7	85.40
Student subs	40.00	Printing No. 8	520.30
Donations + Back Issue Sales	407.09	Postage No. 8	82.80
Interest	69.91	Printing No. 9	633.47
Interest	13.20	Postage No. 9	55.20
Interest	24.58	Printing No. 10	916.30
Interest	136.57	Postage no. 10	83.10
NZJBot subs	861.30	NZJBot subs	861.30
	$4787.02		$3730.67

Excess Income over Expenditure Carried forward to 1988: $1056.35

Invitation to contribute

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

Deadline for next issue

The deadline for the June 1988 issue (Number 12) is 26 May 1988. Please forward contributions to:

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

NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 11 MARCH 1988

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Cover illustration: Juncus dregeanus, a South African leafy rush adventive to New Zealand. a: habit (scale 1 cm); b: inflorescence (1 cm); c: mature capsule enclosed in tepals (1 mm, note acuminate outer tepals and obtuse inner tepals, and tepals ± consistently greater than capsule, seldom ± equal as stated in Flora of NZ, vol.3); d: capsule containing mature seeds (1 mm); e: seed (0.5 mm). See article p.13. (Jack Mackinder).

NEWS

■ Hurricane in southern England

Prof. J.K. Heyes who is currently on leave in the United Kingdom sent this information for the attention of readers of the Newsletter. Kew Gardens alone lost over 500 mature trees during the storm.





Regional Bot Soc news

■ Auckland Botanical Society

At the Annual General Meeting held on 2 March 1988, Dr Ross Beever stood down after five years as President of the Society. His leadership and efforts on behalf of Bot Soc deserve our warmest thanks; the success of the 50th Jubilee celebrations last year was in no small part due to his superb organisation and attention to detail.

The new officers of the Society are:

President:	Anthony Wright
Vice Presidents:	Ross Beever
	Frank Newhook
	Barbara Segedin
Secretary:	Sandra Jones
Treasurer:	Viv Paterson
Committee:	Shirley Bollard, Ewen Cameron, Helen Cogle, Anne Grace, Jack Mackinder, Jack Rattenbury
Auditor:	Owen Long

Subscriptions were set at $10 for ordinary and overseas members; $6 for fulltime students and country members; and $15 for family membership.

Volume 43, no.1, of the Auckland Botanical Society Journal [a continuation of Vols. 1-42, ABS Newsletter] was published in February 1988. The contents included:

50th JUBILEE

LUCY CRANWELL LECTURE	
The small green orchid	E.D. Hatch
SYMPOSIUM LECTURES	
Gumland scrub	Ross Beever
Kauri: key to Auckland's past	John Ogden
Forest Remnants of Auckland	R.O. Gardner
Plants of the northern offshore islands	A.E. Wright
An historical view of the larger fungi	Barbara Segedin
Auckland's moss collectors	Jessica E. Beever
Conservation in the Auckland Region	E.K. Cameron
FROM THE DISPLAYS	
H.B. Dobbie 1852-1940 - fern enthusiast	J.D. McCraw
GENERAL	
Adventures with the two Lucys - part one	Katie Reynolds
Obituary - Ross Michie	Katie Mays
Mangaotuku Valley, Taranaki: notes towards the concept of "ecological district"	R.O. Gardner
A revised list of mosses for University Reserve, Kellys Road, Waitakere Ranges	Jessica E. Beever
Matua-kumara	R.O. Gardner

Sandra Jones, Secretary, 14 Park Rd, Titirangi, Auckland 7

■ Rotorua Botanical Society

Saturday 9 - Sunday 10 April: WHIRINAKI FOREST PARK
A two-day weekend in Whirinaki Forest Park, with day trips visiting Otupaka frost flat, Arahaki lagoon, and/or Tuwatawata Trig. Day visitors welcome. Accommodation has been booked at Whirinaki Recreation Camp (sleeps 30). Meet at Whirinaki Recreation Camp on Friday evening or 9.00 am Saturday morning in time for the day trip. Leader - Mark Smale (Rotorua 83022).

Saturday 30 April: WAIRAKAU SCENIC RESERVE
Virgin floristically-rich lowland podocarp-hardwood forest, 100-400 m asl with some small but dense stands of kauri, near southern limit of Coromandel Ecological Region. This will be a joint venture with Auckland Botanical Society. Local members meet Rotorua Civic Theatre at 8.30 am. Final rendezvous, corner Old Te Aroha Road and Wairakau Road, 10.00 am (8 km south-east of Te Aroha and 12 km north of Gordon). Leader- John Nicholls (Rotorua 59946).

Saturday 28 May: PUREORA MOUNTAIN
A 1165 m volcanic cone with vegetation sequence from sub-montane forest to sub-alpine scrub and shrub-mossfield. Also some interesting montane mires. Meet Rotorua Civic Theatre, 8.30 am or start of Link Track on Link Road, Pureora Forest 10.15 am. Leader - Stewart Wallace or Mark Smale (Rotorua 83022).

Sunday 19 June: WAIMANGU THERMAL AREA
Hot lakes, hot streams, and hot ground makes this an ideal winter trip. Vegetation of interest includes "thermal ferns" and areas showing natural succession after various geothermal eruptions. An easy walk but do not wear smooth-soled footwear. We hope to explore thermal vegetation just north of the main tourist area. Meet at Rotorua Civic Theatre 9 am or Waimungu Valley carpark 9.20 am. There may be a charge of $5.40 to enter the tourist area. Leader - Chris Ecroyd (Rotorua 479067).

The Society's Newsletter No.12 was published in December 1987. The contents include:

Gastrodia minor in the western Waikato	Peter de Lange
Vegetation of the Kaitake Range: update	Bruce Clarkson
Lodgepole pine (Pinus contorta) in Urewera National Park	Willie Shaw
Maungawhakamana Field Trip	Bruce Clarkson & Sarah Beadel
Review of Nomina Nova IV	Bruce Clarkson
Kaimai or Coromandel?	John Nicholls

Sarah Beadel, Secretary, Rotorua Botanical Society, Okere Rd, RD4, Rotorua

■ **Botanical Society of Otago**

Newsletter No.6 (1988, February) contained a variety of news about the society, and an article on "Forest Vegetation of the Lower Taieri Gorge" by Ralph B. Allen.

Forthcoming meetings include:
Thursday April 14: "Forest dieback in Europe" - a talk by Peter M.F. Smith, Botanist, Forester, Landscape Consultant, Drainlayer etc. of Waitata - at 7.30 pm in the Botanic Gardens Visitor Centre, Lovelock Avenue. (Forest Dieback is what used to be called Acid Rain, but Peter says it is now recognised to be a more complex problem).
Thursday May 19: "A trip to Tasmania" - slides with a commentary given by some of those who went on a botanical trip to Tasmania in January - at 7.30 pm, same place.

Dr J. Bastow Wilson, Botany Dept, Otago University, PO Box 56, Dunedin

University Department news

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

Ella Campbell has continued her studies on New Zealand liverworts. She has been able to identify 4 species of Fossombronia in New Zealand and establish names for them. F. australis Mitt., F. pusilla (L.) Dum., F. reticulata Steph. and F. wondraczekii (corola) Dum. The paper has been accepted for publication.

A new liverwort was found by David Havell in the plots of the Turf Research Institute, Palmerston North. It belongs to the Calobryales and has been named Steereomitrium minutum gen. et sp. n. in honour of Dr Steere of the New York Botanical Garden on the occasion of his 80th birthday.

A paper showing that the genus Monoclea consists of one species only has been written for the volume of The Bryologist being issued in honour of Margaret Fulford.

The very large endemic liverwort Schistochila appendiculata (Hook.) Dum. ex Trev. has been found to cause allergenic contact dermatitis. A chemical analysis by Professor Asakawa, T. Masuya and M. Tori resulted in the isolation of an unusual long chain alkyl phenol, whose side chain shows similarities to certain compounds from some higher plants which produce a strong allergenic reaction. Currently the chemistry of other NZ Schistochila species is being investigated at Tokushima Bunic University.

John Skipworth has interests in the establishment of indigenous forest vegetation in burnt over, retired or abandoned areas, and in enhancing the rate of the seral processes that are involved. Trials with tagasaste, manuka and gorse as nurse species are established. Work in similar vein although involving a longer time frame, is being done in an exposed coastal situation where Acacia melanoxylon, Pinus radiata, Eucalyptus botryoides, Acacia longifolia and Banksia integrifolia are being planted. With appropriate minimal manipulation can we encourage native forest species to follow?

David Penny, with Ian Henderson and Mila Hendy, Ingrid Reisma and Mike Steel (Mathmatics) working on methods for constructing evolutionary trees and determining the types of errors that can arise from either the data or the methods available.

Robin Fordham is working on the demography of Libocedrus on Mt. Hauhungatahi, Tongariro National Park, with John Ogden, Auckland University Botany Department.

Clive Cornford. Research is being done on the control of gene-expression during the development and maturation of wheat grains. Emphasis is on the control mechanisms which serve to suppress germinative events, such as the production of alpha-amylase, during this period of the seeds life. Considerable losses can be incurred when harvested wheat grains contain high levels of this enzyme since its presence make the flour unsuitable for bread making. The problem is generally considered to be a consequence of pre-harvest sprouting of the grain but is sometimes detected even in grains which exhibit no evidence of germinative growth and presumably reflects a malfunction during normal grain development. Both situations are under investigation using a range of physiological, biochemical and molecular biological techniques while immunoassays are being used for analysis of the hormone abscisic acid.

David Fountain, Jackie Holdsworth and **Heather Outred.** The succulent tissues forming the receptacle of Dacrycarpus dacrydioides have been the subject of experiments designed to test the possibility that such tissues (and similarly the true arillate and fruit tissues of other podocarp species) play a role in the physiology of seed development and germination. Results soon to be published show "kahikatea" seeds are shed in a moist condition and that the receptacle buffers water loss from them in a manner which both protects the seed against damage due to water stress as it matures, and following abscission of the seed-receptacle unit, prolongs seed viability in drying conditions. Dacrycarpus dacrydioides seeds are thus of the "recalcitrant" type (having a high water content and losing viability upon drying) and the receptacle may be an evolutionary product of selection

forces related to this property as much as to those pertaining to the development of an attractant which aids seed dispersal by birds.

David Fountain, Heather Outred, Rod Thomas and **Jackie Holdsworth** are studying the control of seed development in the legume - dwarf bean (Phaseolus vulgaris). Results regarding the differential water status of seeds, their component parts, and maternal pod tissues as well as nutritional relationships between embryo and pod reserves have been reported at meetings of the NZ Society of Plant Physiologists over the last few years. Research centres around control processes of embryo growth and development and presently experiments are concentrated on the manipulating of the precocious germination of developing seeds within the pod.

Heather Outred has been working on ultrastructure and physiology of the algae Cephaleuros and Phycopeltis epiphyllic on NZ native trees. Any information about other such algae would be much appreciated.

Charlie O'Kelly. It may come as a surprise to some NZ Botanical Society members to find that the words "alga", "fungus", and "protozoon" do not define natural groups of organisms, any more than does the word "tree"; that only the green algae have a demonstrably close evolutionary relationship to land plants (and no group of protozoa is demonstrably ancestral to animals); that diatoms, brown seaweeds and (some) water moulds, along with a few other more obscure groups, have been placed together to form a new Kingdom of organisms; that the classic "plantimal", Euglena, is neither a plant nor an animal but a relict of an ancient lineage, whose closest living relatives are the disease-causing trypanosomatid flagellates. Even the most basic concepts of the systematics and phylogeny of algae, fungi and protozoa are being rapidly and drastically revised. The relatively new field of "evolutionary protistology" encompasses topics such as these. The central theme of my research may be described as "evolutionary protistology in the New Zealand context": what new insights can be obtained from study of the protists biota of Aotearoa, which, expecially in marine environments, is diverse and has many unique elements? There are, at present, three overlapping components to my programme.
(1) Taxonomy and systematics of selected groups of protists present in New Zealand. At the moment, I am investigating groups of smaller marine algae that are poorly known, require culture studies or ultastructure or both for basic identification, and may be particularly significant in the broad context of protist phylogeny. Phylogenetic analyses linked to this work are being done in collaboration with David Penny. Work on individual groups involves collaborations with scientists from the United States, Australia and Europe.
(2) Laboratory cultivation of algae: isolation, maintenance and manipulation of strains from New Zealand and elsewhere. Culture techniques are used to investigate those aspects of structure, reproduction and life history of algae that are necessary for taxonomic and phylogenetic treatments. The possibility of establishing a reference collection for New Zealand algae (perhaps including strain banks for commercially-important forms) is being investigated. Work on two genera, the edible red seaweed Porphyra ("karengo") and the potential green algal plant pathogen Cephaleuros, is being done in collaboration with Heather Outred.
(3) The cytoskeleton as a phylogenetic marker in algae. Stable arrays of microtubules, especially in swimming cells, have proven to be valuable indicators of phylogenetic affinities among protists. I use three-dimensional reconstructions of cells from serial electron micrographs to study the structure and function of this cytoskeleton, including: its three-

dimensional array in cells; its function during vegetative growth and division; the conservation of species-specific patterns during cytoskeletal replication. Aspects of this research are being performed with collaborators in the United States and the Federal Republic of Germany, and members of Massey's Computer Science Department are at work on computerized imaging of the reconstructions.
I have been privileged to accept invitations to present aspects of my work at the Botanical Congress and three other overseas venues during 1987 and 1988, and am co-convening a symposium "Phylogeny of Phytoflagellates" at the upcoming International Phycological Congress in Melbourne.

Al Rowland. Gene mapping in Vicia faba and Trifolium repens chromosomes by in situ hybridization. Genomic variation studies in native New Zealand orchids, e.g. Corybas crypthanthus. The cytology of somaclonal variants in Paspalum sp. This work is in collaboration with Dr Ji-Mei Zhu, a cytogeneticist from the Shanghai Institute of Cell Biology, Academica Sinica, China.

Satya Pasumarty has begun a PhD study on the significance of flower development in seed production in white clover.

Ed Morgan is completing his MSc on "The architecture and radiation regime of a kiwifruit stand and will soon begin work on his PhD on alpha-amylase in wheat. Considerable losses can be incurred when harvested wheat grains contain high levels of alpha-amylase since the presence of this enzyme greatly reduces the usefulness of the flour for bread making. The problem of high alpha-amylase is generally considered to be due to pre-harvest sprouting of the grain, but unacceptable enzyme levels are sometimes detected even in morphologically sound grain, i.e. those which exhibit no evidence of germinative growth.
The precise mechanisms responsible for pre-harvest spoilage of wheat by alpha-amylase remains unknown. Despite the fact that the embryo itself may be the most important source of the enzyme during the early stages of germination, understanding of the regulatory factors involved lags well behind that of the well studied aleurone tissue. In particular, knowledge of the processes which govern germinability and capability of the embryo to synthesise alpha-amylase still eludes us, although plant hormones are often implicated.
The project will involve a comparative study of New Zealand wheats which are known to differ in their susceptibility to sprouting damage. Investigations will be made at the biochemical and molecular levels with a view to understanding the control mechanisms which usually serve to suppress germinative events, such as alpha-amylase synthesis, in wheat embryos during grain development and maturation. It is understood that the work will be done in collaboration with other workers at Massey (Dr I R Gordon), D.S.I.R. (Plant Physiology and Crop Research Divisions) and overseas (Professor M. Black, King's College, London), who have an interest in pre-harvest spoilage of wheat and wheat grain quality.

Jill Rapson. Resource partitioning in plants in response to environmental stresses. Costs of patterns of assimilate partitioning. Plastic and genetic variation within and between populations. Evolution of parallel strategies among different genotypes. Evolution of specifically adapted populations. Niche displacements caused by exotic invaders. Mechanisms of invasion. Changes in reproduction strategy with succession. Prediction of paths

of succession in response to various management regimes. Photosynthetic adaptation to low light and shade.

Department of Botany & Zoology, Massey University, Palmerston North

Other Bot Research Establishment news

■ **Botany Division Regional Station, DSIR, Havelock North**

This was newly established in April 1985 when I moved to Hawke's Bay from Christchurch. The office is on the DSIR Research Centre campus along with members of Ecology Division, Entomology Division, Soil Bureau and Division of Horticulture and Processing, set within the Havelock North Research Orchard.

Because Wairarapa, Hawke's Bay and Gisborne are pretty much biological deserts, every remnant of native vegetation in the landscape is valuable for conservation. The smattering of scenic reserves in the lowlands from Cape Turnagain to East Cape contains most of what is left, but there are unprotected areas worth struggling to retain. For wilderness, I must go to the main ranges or the dramatic coasts: in between is a landscape of grass and sheep, with scarcely a patch of bracken or a group of totara.

Ecology and ethnobotany contain vital aspects of each other, so when in late 1985 I was asked to co-ordinate the Commonwealth Science Council's Biological Diversity Project in New Zealand and the South Pacific, I accepted readily. The project has as its aims the documentation and conservation of traditional knowledge of native plant uses, and protection of the plants themselves. An enormous task, fraught with all sorts of cultural and political hazards, but containing joys and satisfactions hard to find in academic or conventional science.

Geoff Walls, Botany Division, DSIR, Private Bag, Havelock North

Herbarium Reports

■ **Department of Botany & Zoology Herbarium (MPN), Massey University**



Although few specimens have recently been added we hold 30 000 in our Herbarium where the emphasis is on native plants. Nearly half (14 300) of our total comprises mosses and liverworts which make up the prized collection of Mrs E A Hodgson bequeathed to us some years ago. A few of these are type specimens.

We are hoping to add further to our reference collection of books and research papers as finance permits. The major use of the herbarium last year was by supervised undergraduate students.

Elizabeth Grant, Technician-in-charge, Department of Botany & Zoology Herbarium, Massey University, Palmerston North

NOTES & REPORTS

Plant Records

■ **Plant lists from six small bush remnants near Levin**

Very little forest remains in the coastal area of the Manawatu and Horowhenua districts. There are two relatively large reserves on sand country north of Foxton (Round Bush Scenic Reserve and Himatangi Bush Scientific Reserve) and a fairly large coastal reserve just south of Levin (Papaitonga Scenic Reserve). Otherwise there exist in the area only tiny scattered fragments of forest, mostly on private land, some fenced by conscientious owners, others not. As many of these smaller bush remnants may not survive in the longer term it seems worthwhile recording plant lists that I compiled at six such sites.

The lists cover trees and twiggy shrubs (including cabbage tree but excluding non-woody monocots like flax and toetoe), climbers and ferns. I visited each site up to five times to be sure of recording as many species as possible. Identifications were my own except for a few difficult species which I referred to professional botanists. Unfortunately, preparing a herbarium of voucher specimens was beyond my resources at the time. Some ferns remained unidentified but the number of unidentified taxa is shown in the table so that the diversity of ferns is not under-estimated. The data on species numbers may be of interest to someone investigating how diversity may correlate with reserve area or distance from possible seed sources. Map references are to NZMS1.

The Remnants

KEREKERE ROAD BUSH (KRB) N152/848180
On Ridge Road near intersection with Kerekere Road. Area c. 1.7 ha. Visited February 1976. Sand-country soil. Dune hollow. Unfenced, grazed. Invaded by pasture and mature exotics.

WHIROKINO BRIDGE BUSH (WBB) N152/794152
On south bank of Manawatu River. Area c. 0.5 ha. Visited February 1976. Sand-country soil. Dune hollow. Unfenced, grazed. Invaded by pasture.

EASTON'S BUSH (EB) N152/889138
Near Springs Road. Area c. 1.0 ha. Visited November 1975. Alluvial soils. Fenced c. 1972. Invaded by Tradescantia. A remnant of the original vegetation of the Moutoa swamp.

MOUTOA BUSH (MB) N152/882134
Near Springs Road. Total area c. 3.0 ha (in three sections). Visited December 1975, February and March 1976. Alluvial soils. Fenced 1975. A remnant of the Moutoa swamp forest. Reserved by Department of Lands & Survey as part of the Moutoa Farm Settlement Scheme.

TE WHANGA BUSH (TWB) N152/796081
Near junction of State Highway 1 and Te Whanga and Kawiu Roads. Area

c. 4.0 ha. Peat. Visited April 1977, February 1982. Partly fenced. Thick swamp vegetation has in places prevented access by stock.

HOKIO SAND BUSH (HSB) N152/742020
Near Hokio Sand Road. Total area c. 2.0 ha (in three sections). Visited August 1977, January 1978, February 1982. Sand-country soil. Unfenced, grazed.

Plant lists

		R E M N A N T			
	MB	WBB	EB	HSB	TWB	KRB
Approximate area (ha)	3.0	0.5	1.0	2.0	4.0	1.7
TREES & SHRUBS						
Alectryon excelsus	#		#	#	#	#
Aristotelia serrata					#	
Beilschmiedia tawa	#	#	#	#	#	#
Carpodetus serratus		#			#	
Coprosma areolata	#	#		#	#	#
Coprosma grandifolia					#	
Coprosma propinqua	#	#		#	#	
Coprosma rigida		#				#
Coprosma robusta					#	
Coprosma rotundifolia	#					#
Coprosma tenuicaulis					#	
Cordyline australis	#	#	#	#	#	#
Coriaria arborea					#	
Corynocarpus laevigatus		#		#		#
Cyathodes fasciculata					#	
Dacrycarpus dacrydioides	#	#	#	#	#	#
Elaeocarpus dentatus				#	#	
Eugenia maire		#				
Fuchsia excorticata					#	
Geniostoma rupestre var. ligustrifolium					#	
Griselinia lucida	#		#			
Hebe stricta					#	
Hedycarya arborea	#			#		
Hoheria angustifolia	#		#			
Hoheria sexstylosa	#		#			
Knightia excelsa				#		
Kunzea ericoides				#		
Laurelia novae-zelandiae	#	#	#	#	#	#
Leptospermum scoparium					#	
Macropiper excelsum	#					
Melicope simplex				#	#	#
Melicytus ramiflorus	#	#	#	#	#	#
Myoporum laetum		#		#		#
Myrsine australis	#	#	#	#	#	#
Nestegis cunninghamii		#				
Nestegis lanceolata					#	
Olearia virgata					#	
Paratrophis microphylla	#		#	#	#	#
Pennantia corymbosa	#	#	#	#	#	
Pittosporum tenuifolium	#	#	#	#	#	
Plagianthus regius	#		#			
Podocarpus totara			#			
Prumnopitys ferrugineus					#	

	MB	WBB	EB	HSB	TWB	KRB
Prumnopitys taxifolius	#			#		
Pseudopanax arboreus					#	
Pseudopanax crassifolius	#	#		#	#	
Schefflera digitata	#				#	
Solanum sp.				#	#	
Sophora microphylla	#		#			
Weinmannia racemosa					#	
No. of spp.	23	17	16	22	33	14
CLIMBERS						
Calystegia sepium	#	#			#	
Clematis foetida				#		
Freycinetia baueriana subsp. banksii	#	#	#	#	#	#
Metrosideros colensoi			#			
Metrosideros diffusa	#	#	#	#	#	#
Metrosideros perforata	#	#	#	#	#	
Muehlenbeckia australis	#	#	#	#	#	#
Muehlenbeckia complexa		#			#	
Parsonsia heterophylla	#	#	#	#	#	#
Passiflora tetrandra	#		#	#	#	#
Ripogonum scandens	#	#	#	#	#	#
Rubus australis					#	
Rubus cissoides				#	#	
Rubus schmidelioides	#	#		#		
No. of spp.	9	9	8	10	11	6
FERNS						
Asplenium bulbiferum	#			#	#	#
Asplenium falcatum	#		#	#	#	
Asplenium flaccidum	#	#	#	#	#	#
Asplenium oblongifolium	#					#
Blechnum "capense"					#	
Blechnum discolor					#	
Blechnum filiforme	#	#		#		#
Blechnum fluviatile	#					
Blechnum minus					#	
Cyathea dealbata				#	#	
Cyathea medullaris	#					
Dicksonia squarrosa				#	#	
Histiopteris incisa					#	
Hypolepis tenuifolia						#
Lastreopsis glabella	#					
Pellaea rotundifolia	#			#		#
Phymatosorus diversifolius	#			#	#	
Phymatosorus scandens				#		
Pneumatopteris pennigera	#					
Polystichum richardii				#	#	#
Pteridium esculentum					#	
Pteris tremula	#					#
Pyrrosia serpens	#	#	#	#	#	#
Rumohra adiantiformis					#	
Unidentified spp.	0	2	2	1	1	0
No. of spp.	13	5	5	12	15	9
Total no. of plant spp.	45	31	29	44	59	29

Discussion

The combined plant list for the six small remnants is quite impressive. Te Whanga Bush in particular has good floral diversity, no doubt in part because dense swamp vegetation has partly excluded stock. Four species - Coriaria arborea, Hoheria angustifolia, H. sexstylosa, and Plagianthus regius - are not recorded from Round Bush Scenic Reserve, Himatangi Bush Scientific Reserve or Papaitonga Scenic Reserve according to the published lists of Esler & Greenwood (1968, Bull.Wgtn.Bot.Soc.35: 3-7) and Wassilieff et al. (1986, Dept.Lands & Surv.Biol.Surv.Reserves Ser.No.14). Referring to the area north of the Manawatu River, Esler (1978, DSIR Inf.Ser.No.127) said of Coriaria arborea that "There is little on the hills and probably none on the plains where it was once abundant. ..... In the lowlands it seems to have been grazed out of existence". Moutoa Bush and Easton's Bush (both reserved) seem to be especially important as coastal refugia for Hoheria angustifolia, H. sexstylosa and Plagianthus regius.

B.J. Gill, Auckland Institute & Museum, Private Bag, Auckland 1

■ An interesting coastal association in the Awaroa Valley, southern Kawhia

On the property of Mr Leo Meredith (Kaimango Farms Ltd.) are a series of calcareous outcrops of the Aotea Sandstone formation aligned east-west (N73/487018 c.1000 ft (300m) a.s.l.). In Easter 1985 I visited these bluffs and noted a unique association of coastal herbs growing on exposed sandstone ledges facing north. Further visits to the area have located the following species:

Disphyma australe subsp. australe
Leptocarpus similis
Linum monogynum
Lobelia anceps
Ranunculus acaulis
Samolus repens
Sarcocornia quinqueflora
Senecio lautus subsp. lautus
Selliera radicans
Tetragonia trigyna

Associated with these coastal herbs are species more typical of calcareous substrates in the region, notably Metrosideros colensoi, Clematis forsteri, Peperomia urvilleana and Rhabdothamnus solandri.

This small coastal assemblage is probably relictual. Whilst it is common in the region to see some normally coastal species on calcareous substrates, e.g. Scirpoides nodosa, the above association seems to be quite unique for the area.

This contrasts strongly with a series of adjacent limestone bluffs immediately to the south (N73/488011 c. 1100 ft (330 m) a.s.l.) which contain the normally alpine bristle grass Rytidosperma buchananii, Poa cita, Hebe rigidula (northern race), Asplenium lyallii, Grammitis patagonica and Euphrasia cuneata.

The higher limestone peaks in this area (Hauturukanekeneke, Ngawhakatara, Rock Peak, Otuatakahi and Unnamed N73/485956) all above 1300 ft support small relictual cooler climate floras of which the following seem notable:

Celmisia graclienta
Cordyline indivisa
Euphrasia cuneata
Hebe rigidula (northern race)

Helichrysum filicaule
Hymenophyllum minimum
Olearia virgata subsp. unnamed (smaller leaves than O. virgata s.s.)
Oreomyrrhis ramosa
Rytidopserma buchananii
Wahlenbergia gracilis agg. (small reddish leaves, nodding flowers).

All of these species show very restricted distribution patterns centred on these limestone outcrops. It is presently unknown whether the non-vascular flora also shows these trends although Pseudocyphellaria degelii is known from N73/488011 and 485956.

Other cooler climate species recently noted in the Awaroa Valley include Peraxilla tetrapetala, Hymenophyllum armstrongii, Myosotis forsteri and Grammitis magellanica subsp. nothofageti, growing in sites as low as 300 ft.

Exploration continues of these poorly botanised areas. Vouchers of most records are lodged in AK, WAIK, WELT & CHR.

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

■ Juncus dregeanus

For several years now the Auckland Botanical Society has been collecting voucher specimens of all the adventive plants of the Waitakere Ranges for the Auckland Museum herbarium, in order that an adventive vascular flora can be produced to complement the native flora (R.O. Gardner, 1982: Native Vascular Flora of the Waitakere Range Auckland. Bull.Ak.Bot.Soc. 13). Several hundred very fine specimens have now been incorporated into AK, many of them collected by Jack Mackinder. Over the past couple of years, a box of difficult odds and sods and accumulated and these were finally attacked earlier this year.

One specimen, a leafy member of the rush family, proved to be of particular interest. Using the key in volume 3 of the Flora, it came out to Juncus dregeanus, an adventive species which had only been collected once before in New Zealand in 1945. As the Flora states "the single collection was made from a vehicle park at a wartime U.S. army camp on the late Countess of Orford's property, Manurewa. This South African species should be searched for about Auckland". Dr Elizabeth Edgar kindly confirmed the identity of the recent collection.

Now herbaria like to have good collections of plants, particularly members of the NZ flora, so more material was needed. The Auckland Museum Botany Department set off on a fine summer's day for "The Great Juncus Hunt" up the Whatipu Stream, West Auckland, in an attempt to relocate the population and make further collections.

After walking past a few colonies we finally realised what it was we were walking past! Working from the herbarium specimen we had been looking for grassy clumps with silvery leaves, not unlike Spinifex on the beach. What we were seeing, however, were bright green tufts of leafy rush amongst the rocks of the stream-bed. Fortunately, the plant was abundant so that several duplicate specimens could be collected for distribution to other herbaria.

Juncus dregeanus is a distinctive rush with narrow leaves (see cover illustration). The culms and leaves are reddish at the base, yellow-green in their lower parts, becoming bright green. When the latest specimens (AK 178633,4) were collected on 3 February 1988, various stages of flowering were noted on the plants, from new reddish-green inflorescences to old brown heads that had been washed over by floodwaters.

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

Comment

■ **On taxonification**

It is with some trepidition that I flick through articles like the recent Connor & Edgar 'Name changes in the indigenous NZ Flora' (NZ Jour.Bot. 25). 'What's got a new name today, and will it change back again tomorrow'? (Shades of Cyathea/Alsophila etc, etc).

As a practical ecologist and teacher, I need to be able to put names to plants. As Curator of the Waikato University Herbarium, I also acknowledge the need to get the name right, to avoid the proliferation of homonyms, and to address international codes of nomenclature.

However, there must be a sensible approach to applying ICBN guidelines. There is no point in burdening ecologists with a name change if all it achieves is 'adherence to the principle of priority among homonyms'. Long established scientific names should be retained unless there is sound evidence that the status or affinities of a species are actually wrong, misleading or not clearly established. Thus (p.134) Syzygium makes much more sense than Eugenia because affinities with very similar tropical species are now acknowledged. However, changes (or retention of anomalies) without a biological basis have only nuisance value.

Thus, the novae-zelandiae, novae-zeelandiae, novo-zelandensis, novazelandica, novo-zelandia, novae-zelandicum, neo-zeylandicus, novaezelandiae, is actually perpetuated because of a narrow interpretation of ICBN Rec. 73D (Connor & Edgar, p.120), whilst incorrect latinisations are tidied up (pp 118-119). What would be the disadvantage of converting all spellings to novae-zelandiae (or novaezelandiae, as it is spelled on p.138!!)? What is wrong with standardising on a single spelling of the latinised form of Solander, instead of quoting ICBN Rec.73C.2 and declaring (p.119) that there are two correct spellings. At least it's less confusing than ten 'correct' spellings for a latinised NZ, I suppose.

I'm a little less concerned about the correction of the latinised misspellings on pp 118-119, mainly because I've probably been getting some of these 'wrong' for years by spelling them 'correctly'. These changes will seem trivial to some people, of course, and there will be a generation of tedious editing ahead of us before new editions of books catch up.

And I thought the use of proper nouns had been more or less outlawed by the ICBN, but I must (alas!) be wrong, because Metrosideros bartlettii is clearly a very recent concoction. I really don't see the point of this form of immortalisation. After all, in this country we already have to endure, in our plant binomials, one of the heaviest loads of immortalised taxonomists in the world. Linnaeus was a prolific and highly influential taxonomist, but he's only got one genus named after him (a very pretty

plant too - he must have named it himself), and two or three species (like a Lobelia - also pretty). The NZ flora is not only packed with taxonomists and collectors, many of them crop up on almost every page. I'll just take a double page at random from Connor & Edgar - pp.136-137 it happens to be - and on it we have generic and specific epithets derived from Banks, Smith, Baylis, Korthals (who was that?), Lindsay (probably worked for Korthals), Adams, Mueller, Edgerley, Gillies, Lesson (Herendethe?), Colenso, Macintyre, Raoul and Sinclair. Phrygil and Grisel I don't know - probably dug out of Greek mythology and Grimm's Fairy Tales on a Friday afternoon, when Eichl. and Forst. had used up all of the odd names in their address books.

I like, wherever possible, to be able to deduce from a specific epithet something about the plants morphology, or its distribution, or habitat. Thus, Ranunculus scrithalis (p.126) is a plant growing on screes (L. scritha), although Connor & Edgar consider it necessary to tell us it's latin root, but not who Bartlett is/was (sorry John!!). The point is that it is much more helpful to practising ecologists and teachers in plant names have some tangible, rather then purely abstract, meaning.

To take another example, novaezelandiae is only helpful to people who live outside New Zealand (and the ubiquitous australis only means something north of the equator) - they know they're not likely to bump into it. It's not helpful to us because it could be anywhere in NZ. Maybe it is widespread, of course (like Acaena novae-zelandiae), in which case it should have been given a more helpful name.

Brachyglottis stewartiae (p.119) on the other hand, is helpful, once you know that the specific comes from Stewart Island and not Robbie Stewart the 19th century bagpipe cleaner. All the more curious, then, that Connor & Edgar decide not to change it to stewartensis (because of ICBN Rec. 73D.1), thereby disguising the fact that it's not Robbie Stewart, whilst they do change the termination of Gingidia baxteri (because of ICBN Rec. 83C.1) when it doesn't matter (both old and new terminations are equally unhelpful).

Yet again, and without wishing to offend, the arguing over Podocarpus hallii/P. cunninghamii seems pretty pointless. Who thought of it first, and whether or not they really meant to think of it, or were thinking of something else at the time (or maybe Colenso wanted to name it after Hall but couldn't remember his name at 2 o'clock on Friday 26 February 1847) is really only of biographical interest. The fact is that they're both the same plant and it's been called 'Hall's totara' for an awful long time. I could think of nothing dafter than calling P. cunninghamii 'Hall's totara' (except, perhaps, trying to get all my students to call it 'Cunningham's totara'). If we're not trying to re-classify the thing for sound scientific reasons, then priority should be given to common usage, rather than to historical precedence.

Andwhy do some taxonomists assume supreme authority in revising a taxon before their peers have been given a chance to comment? See, for instance, Heads' (Botanical Society of Otago Newsletter, 5 (November 1987):4-11) conviction that people will want to use his revision of Hebe before he's published it properly. It's people like this who cause names like Alsophila to rattle around for years, confusing everybody. That a revision has been done 'in accordance with the International Code of Botanical Nomenclature' certainly gives no guarantee at all that it's 'right' or 'useful'. The

ICBN is only a series of guidelines, and I could satisfactorily classify a runcible spoon 'in accordance' with them, if I wanted to.

Surely the International Code of Botanical Nomenclature was never intended for interpretation and application by taxonomists? Wasn't it originally devised as something which could itself be endlessly modified - a sort of displacement activity to divert taxonomists from their real aim of confusing us good-guys with names that we can't remember (either because they keep changing, or else they don't mean anything), or we can't spell (because there are six options), or we can't use (because it will be superseded tomorrow)? Or have I got it wrong again? If we must have another sackful of changes in 2013 A.D. please let's have more helpful ones, like getting shot of all these Kirks and Hectors and Crosby-Smiths and Dorrien-Smiths and Vauvilliers, and Votschs, and Popplewells and Godefroys and .....

Keith Thompson, Department of Biological Sciences, University of Waikato, Private Bag, Hamilton

■ Italics or not?

Section 2.8 of the Style Book (New Zealand Government Printer, 3rd edition, 1981) states: "Scientific names of genera, species, subspecies, and varieties of animals and plants should normally be set in italics, but the abbreviations sp. and spp. (meaning "species" singular and plural respectively) are set in roman type. ....When scientific names appear in long lists they may be set in roman type."

What is the origin of this convention that scientific names should be written in italics? Is there any botanical-legal requirement for it? I cannot locate anything in the Leningrad code.

The convention has certainly been around for a long time. When I first started studying biology at school some fifty years ago it was drummed into me (with one stroke of the cane for each error) that scientific names should be italicised, or underlined when italics were not available, e.g. in handwritten essays or with roman case typewriters.

F.J. Taylor, Ainola, Goat Island Road, Leigh

■ Towards a more appropriate term for our divaricating shrubs and juvenile trees

The dictionary definition of divaricating is simply to branch at a wide angle. Since last century, mainly as a result of Cockayne's writings, New Zealand botanists have applied the term to a set of shrubs and juvenile trees which are variously considered to be adapted to browsing or stressful climates. Greenwood & Atkinson (1977, NZ Jl Ecology 24: p.21) list several criteria for recognising divaricating plants; e.g. that 10% of the branches should diverge to angles equalling or exceeding 90°; but their criteria do not admit species such as Muehlenbeckia complexa, which seems to belong to the same ecological group; nor do they exclude many plants that definitely have divaricating branches, but clearly do not fit into the New Zealand concept; e.g. the common ornamental Teucrium fruticans. The habit is often thought of as being characteristic of, and perhaps almost unique to this country, yet Stephan Halloy claims that it is equally developed in many parts of Argentina; and his experience in both countries makes him well

qualified to judge. However, as he legitimately includes bracken fern as a divaricating plant, one may wonder whether his concept is the same as ours.

Through comparing the morphology of the native plants generally accepted as "divaricating", together with other plants of similar morphology, but which do not quite fit with our conception, we conclude that divarication is a second-order character. It depends on an underlying syndrome, in which apical buds are reduced to almost rudimentary dimensions, resulting in:

1. slender twigs;
2. leaves that are small, but still mesomorphic;
3. where adult plants have these features, to small, simple inflorescences.

Despite the reduced buds, leaves and inflorescences, the internodes are relatively long (although dwarf shoots may carry fascicles of crowded leaves). This contrasts with ericoid and cupressoid plants, in which the apical buds are also minute, but their internodes are very short and their leaves xeromorphic or scale-like.

The New Zealand woody flora has several species-pairs in which one species has large buds and leaves that presumably represent the ancestral condition, and the other apparently derived species has the syndrome of reduced buds and leaves; e.g. Pennantia baylisiana vs. juvenile P. corymbosa, Pseudopanax simplex vs. P. anomalus. Among lianes, Muehlenbeckia complexa may be compared with M. australis; Parsonsia spp. exhibit the syndrome in juvenile shoots, and forms of P. capsularis retain it in the adult stage. Half-way states are seen, for example, in Rhadothamnus solandri, Alseuosmia banksii, and juveniles of Nothofagus solandri, Carpodetus serratus and Coprosma arborea. Evidently, the trend to reduce bud and leaf dimensions, while retaining long internodes, has been followed by far more species than have become divaricating, and discussion could well focus on the evolutionary pressures producing this trend.

Plants with the "reduction syndrome" are predisposed to adopt the divaricating habit, because the apical buds exert weak apical dominance and frequently abort. Divarication may involve further evolutionary change, although in most examples the same genotype can grow as laxly branching shrubs in shaded habitats, and as densely as divaricating shrubs in the open. Two thorny plants are of interest; Discaria toumatou has uniform, specialised spinesand has obviously evolved on a much broader evolutionary stage than New Zealand, as similar species grow in Patagonia and Australia. The spines of Hymenanthera alpina, on the other hand, result from abortion of minute apical buds and subsequent secondary thickening of ordinary shoots; the occurrence of closely similar plants in Australia notwithstanding, its connections seem to lie with slender divaricating and large-leaved hymenantheras in New Zealand.

It remains to devise a term for plants showing the "reduction syndrome"; the truly divaricating native plants are a sub-set of these. Comments and suggestions are welcome. The following possibilities have occurred to us:

Attenuate: emphasises the slender, relatively long internodes, but could refer to lianes and etiolated plants.

Tenuapical: emphasises the reduced apex but does not distinguish from cupressoid or ericoid plants.
Filiramulate (i.e. wiry twigs): we favour this, as giving the right impression without being too restricting.

Peter Wardle and Matthew McGlone, Botany Division, DSIR, Private Bag, Christchurch

PUBLICATIONS

JUST RELEASED

THE VEGETATIVE COVER OF NEW ZEALAND

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■ **Lichens of the Waitakere Range** - J.K. Bartlett

Auckland Botanical Society has recently published a list of the lichens collected from the Waitakere Range, the work of the late John Bartlett, and a companion volume for his Mosses of the Waitakere Range, Auckland. Bulletin No.17, 29 pages, lists some 370 lichens including more than 30 not listed in the Flora of New Zealand, Lichens and also contains the currently accepted name for many taxa for which name changes have occurred since 1985. The new names were provided by Dr David Galloway. Price $2.80. incl. p + p. Available from:

The Secretary, Mrs S. Jones, 14 Park Rd, Titirangi, Auckland 7

ANNOUNCEMENTS

■ **Pollen Aeroallergens in New Zealand**

A major study is underway on the relationship of airborne pollens to the incidence of allergy and asthma. The special floral characteristics of high density plantings of exotic species (pines, lupin, poplar and grasses are examples), and the largely unknown contribution of the indigenous flora may be a factor in the observation of the relatively high incidence of these health disorders in New Zealand. Daily sampling of airborne pollens at selected sites in the Manawatu is being carried out to establish seasonal trends. The results will be compared to earlier studies and related to meteorological and health statistics data. Anecdotal information on sensitivity to pollens is also being sought (see request this issue) as many complaints are of insufficient severity to come to the attention of members of the health services community. Allergens from hazardous pollens will be purified with a view to using them in diagnostic and treatment programmes.

David Fountain/Clive Cornford, Department of Botany & Zoology, Massey University, Palmerston North

■ **Botanical Tours**

Southern Heritage Tours have published their botanical tours programme for 1988/89. More extensive than ever before, this programme includes the established favourites such as the ALPINE WILDFLOWERS tours, and the successful additions last year of the WILD ORCHIDS and NORTHERN ALPINES trips. For a copy of the programme, write to:

Mark and Marina Hanger, Southern Heritage Tours Ltd, PO Box 6314, Dunedin

DESIDERATA

■ Libocedrus bidwillii

Amongst the multitude of trees lost at Kew during last year's hurricane was Libocedrus bidwillii. The Kew staff are keen to have wild seed from New Zealand to replace the tree. If you can collect fresh seed (preferably with a voucher herbarium specimen) please send it to Phil Garnock-Jones or directly to Mr J.L.S. Keesing, Living Collections Division, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB, England.

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

■ **The allergenicity of the native flora**

David Fountain and Clive Cornford are compiling anecdotal information on sensitivity of individuals to components of the present-day New Zealand flora, whether exotic or indigenous. We are particularly interested in reaction to pollens but will be grateful for any information readers may have. Of particular interest are experiences of allergic reaction to native species. Responses will be kept confidential. Please send any experience of "birch itch" or "Coprosma urticaria" to:

Dr D W Fountain and Dr C A Cornford, Botany & Zoology Department, Massey University, Palmerston North

■ **International Organisation of Plant Biosystematists (IOPB)**

The title of the IOPB-1989 Symposium (Kyoto, July 10-14, 1989) is "Biological Approaches and Evolutionary Trends in Plants." Subtitles include: "The Biology and Evolution of Weeds", "Molecular Approaches in Plant Biosystematics", "Population Biology and Life History Evolution", Session 1. "Reproductive Biology of Plants", Session 2. "Demography and Life History Evolution of Plants". To obtain a preliminary announcement of the Symposium, or to present a poster, write to the Chairman of the Symposium, Dr. Shoichi Kawano, Department of Biology, Faculty of Science, Kyoto University, Kyoto 606, Japan.

Matters concerning IOPB should be addressed to the President, Dr Krystyna Urbanska, Geobotanische Institut, E.T.H., Zurichbergstrasse 38, CH-8044, Zurich, Switzerland.

Membership in IOPB, for the period 1987-1989, is U.S. $20.00 payable to IOPB and sent to Dr. Liv Borgen, Secretary-Treasurer, IOPB, Botanical Garden and Museum, Trondheimsveien 23B, 0562 OSLO 5, Norway.

Dr Krystyna Urbanska, Geobotanishe Institut, E.T.H., Zurichbergstrasse 38, CH-8044, Zurich, Switzerland.

THESES IN BOTANICAL SCIENCE

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

O'Hagen, D, 1987: The potential of tree lucerne (Chamaecystisus palmensis, as a nurse tree for the rejuvenation of native forest. Dip. Sci.

Pasumarty, S.V, 1987: Role of photosynthates in flower development in white clover. MSc.

Kerr, D H, 1986: Protein and nitrogen metabolism in the pericarp of Phaseolus vulgaris L. cv. "Seminole." BSc. Hons.

Ritchie, M A, 1986: The distribution of growth in a maize leaf. MSc.

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

Carvalho, D.G. 1986: The uptake of imazalil in barley seedlings grown from treated seed. BSc. Hons.

Fuller, S.A. 1986: Successional patterns and forest dynamics; Taepiro Valley : Kapiti Island. Dip.App.Sci.

Hettige, G.E.G. 1987: Identification, documentation and control of biological contamination in middle distillate fuel. PhD.

Hotter, G.S. 1986: Tissue culture of mint and spearmint : organogenesis and synthesis of secondary products. BSc. Hons.

Hyland, F. 1987: Forest dynamics of miro (Prumnopitys ferruginea (D. Don) de Laubenfels) on Mt Maunganui, South West Tararuas. BSc. Hons.

King, G.A. 1985: The development of root and shoot polarity during early embryogeny of pea (Pisum sativum cv. 'Alaska'), PhD.

Kohler, M. 1987: Study on the putative hybrid Pennantia baylisiana x P. corymbosa (Icacinaceae) and the pollen of its parents. BSc. Hons.

Lange, M. 1987: Some histological and biochemical changes observed in cultured leaf explants of Solanum tuberosum cultured under shoot-inducing conditions. BSc. Hons.

Liu, X.W. 1987: Tissue, cell and callus culture of Pterocladia and Porphyra seaweeds. MSc.

McDonald, I. 1987: Observations on forest dynamics and regeneration of Fijian kauri (Agathis vitiensis) within old growth forest Viti Levu, Fiji. BSc. Hons.

Mason, S. 1986: The comparative effects of chlormequat (CCC) and mepiquat chloride (DPC) on the stem growth of tomato plants (Lycopersicon lycopersicum cv. 'Grosse Lisse'. BSc. Hons.

Nendick, D.K. 1986: Further studies on the sensitivity of Pyrenophora teres Drechsler to ergosterol biosynthesis inhabitors in the azole class. BSc. Hons.

Ormsby, M. 1987: Growth in tomato: a comparison between cultivars 'Russian Red' and 'Grosse Lisse'. BSc. Hons.

Reid, A.R. 1986: A comparative morphological study of some species of the genus Pseudopanax. BSc. Hons.

Rogers, G.M. 1987: Landscape history of Moawhanga ecological district. PhD.

Walker, N. 1987: Taxonomic studies on a novel form of Claytonia australasica from N.W. Nelson and comparison with other populations of the species. BSc. Hons.

Weaver, S.A. 1987: An introduction to the regeneration of Fijian kauri following logging. BSc. Hons.

Yeoman, R. 1986: Aspects of Ascosphaera species associated with New Zealand hives. BSc.Hons.

Zoete, T. 1986: Secondary Alectryon excelsus - Podocarpus totara forest on the Otaki Plain. BSc. Hons.

S T O P P R E S S

■ Appointment of new Director, Royal Botanic Gardens, Kew

Dr Gillean Tolmie Prance, B.A., M.A., D.Phil., has been appointed Director of the Royal Botanic Gardens, Kew, from 1 September 1988. He succeeds Professor E.A. Bell, C.B., B.Sc., Ph.D., F.R.S.C., F.L.S., who became Director in November 1981 and will be retiring in June.

Dr Prance took his Honours Degree in Botany at Keble College, Oxford in 1960 and his Doctorate, 'A taxonomic study of the Chrysobalanaceae' followed in 1965.

Dr Prance began his career with the New York Botanic Garden in 1963 as a Research Assistant. Among other positions held there, be has been B A Krukoff Curator of Amazonian Botany, Director then Vice President of Research, becoming Senior Vice-President in 1981. At this time he also set up and began to develop the Garden's Institute of Economic Botany which he heads as its first Director.
In addition to his duties in the New York Botanic Garden, Dr Prance is: Adjunct Professor, Lehman College, City University of New York; Visiting Professor of Tropical Studies, School of Forestry, Yale University; Professor of Botany, Instituto Nacional de Pequisos da Amazonia; Executive Director, The Organisation for Flora Neotropica.

Dr Prance has published seven books and monographs and edited a further six. In addition he has written 130 scientific papers and 45 of a general nature.

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