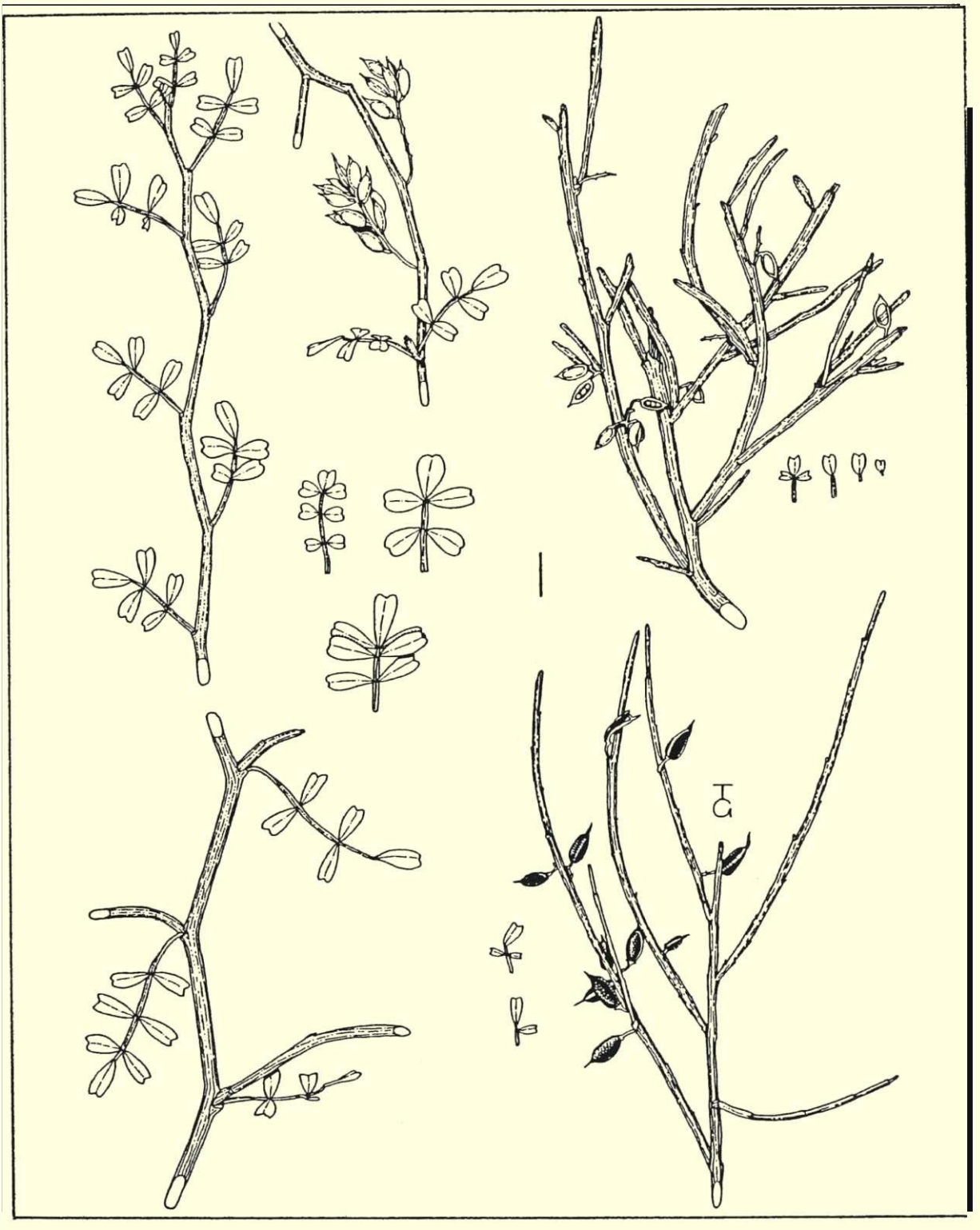
NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 12 JUNE 1988



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Cover illustration: Carmichaelia (Fabaceae)

Carmichaelia is New Zealand's largest genus of Fabaceae (Leguminosae), but is known elsewhere only from Lord Howe Island. The status of some of the more than 40 named species is under investigation. Illustrated are three entities of diverse habit. On the left is C. angustata, a shrub from the northern half of the South Island. At top right is C. appressa, which forms more or less prostrate patches on Kaitorete Spit, though more upright forms appear to link it with more widespread C. robusta. At bottom right is C. arborea with distinctive dark brown to black pods and an upright habit to 5 m tall.

The plate was drawn by Tim Galloway for the Canterbury Botanical Society's publication project on small-leaved shrubs of Canterbury and Westland (Hugh Wilson)

Subscriptions

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.

Back issues of the Newsletter are available at $2.50 each - from Number 1 (August 1985) to Number 11 (March 1988).

New subscriptions are always welcome and should be sent to the Editor (address below).

Invitation to contribute

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

Deadline for next issue

The deadline for the September 1988 issue (Number 13) is **26 August 1988.** Please forward contributions to:

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

NEWS

New Zealand Botanical Society

■ **Inaugural General Meeting**

Preliminary notice is hereby given that the Inaugural General Meeting of the New Zealand Botanical Society will be held during the Flora Festival (see Forthcoming Meetings column) to be held at the Canterbury Agriculture & Science Centre, Lincoln in November 1988. The date and time set down for the Inaugural General Meeting is Tuesday 22 November 1988 at 4 pm.

■ **Report of Steering Committee for Inaugural Meeting of New Zealand Botanical Society**

We have recently sought the opinions of a range of botanical organisations as to what form the New Zealand Botanical Society should take. The regional botanical societies have been particularly helpful in providing comment. At this stage we invite comment on the following from all interested individuals.

A) Proposed form and function of New Zealand Botanical Society (as seen by Steering Committee following consideration of all comments received).

Form

1. That the New Zealand Botanical Society become incorporated (especially so that one individual does not carry most of the responsibility for the society - as at present).
2. That the Society have a small committee which keeps in touch by phone.
3. That the first committee be elected at the November meeting (22 November 1988, Lincoln).
4. Thereafter election of the committee be at subsequent meetings or by postal voting via the Newsletter.
5. That the Newsletter Editor be a member of the Committee and that the Committee be responsible for appointing a new Editor if the position becomes vacant.
6. That the Society be primarily a professional society but in no way exclude any interested individual.
7. That the Society have no formal links with the regional botanical societies, but continue informal links especially through the Newsletter as at present.

Functions

1. To provide a regular Newsletter available to all.
2. To organise occasional, rather than regular, meetings as and when the opportunity presents itself - especially in conjunction with other meetings.
3. To provide an organisation through which local botanical societies can comment on issues affecting areas beyond their respective regions.

B) Other suggestions received included:

1. New Zealand Botanical Society as a complete amalgamation of the regional botanical societies with local society funds being transferred to the control of a central committee.

2. That no society be formed at all.
3. New Zealand Botanical Society should be merely a parent body for the regional societies.

Steering Committee: Colin Webb (Convenor), Hugh Wilson, David Lloyd, Philippa Horn.

Please send comments to:

Colin Webb, 11 Southey St, Christchurch 2

People

■ **Hugh Wilson wins the Loder Cup**



The Loder Cup is awarded annually by the Minister of Conservation to encourage the protection and cultivation of the native flora in New Zealand. Although set up half a century ago, the award remains appropriate today as awareness of the importance of conservation and the value of natural and unspoiled surroundings grows.

Hugh Wilson of Christchurch was the recipient of the 1987 Award of the Loder Cup. The brief citation recording the award states:

"Contributions to knowledge of our indigenous flora and vegetation, particularly from Mount Cook, Stewart Island and Banks Peninsula, promoting public interest in these plants through his published works, lectures, guided tours and comprehensive collections lodged in Botany Division herbarium at Lincoln. Identifying rare plants which are at risk of extinction and obtaining protection for these under Open Space Covenants. An able botanical artist. His lecture tours included North America and Canada. Lecturer for WEA and Horticultural Apprentices courses on botany and conservation."

Congratulations Hugh!

■ **E D Hatch, FLS**

Congratulations to Dan Hatch of Laingholm on his recent election as Fellow of the Linnaean Society of London in recognition of his contributions to New Zealand orchidology.

Regional Bot Soc news

■ **Auckland Botanical Society**

Bulletin No.16 , "A Dictionary of Maori Plant Names" by J. Beever, has sold out. A reprint or second edition is being considered.
Forthcoming events: 6 July, Evening Meeting: NZ orchids - Bob Goodger.
13 July, Field Trip to two South Auckland Reserves - Ngaheretuku and Olive Davis.
3 August, Evening Meeting: Gondwana - Dr Peter Ballance.
20 August, Field Trip to two of Auckland's volcanic cones and to Pah Farm, Hillsborough.
7 September, Evening Meeting: Chatham Islands - John Smith Dodsworth.

All welcome to these events; for further details contact the Secretary:

Sandra Jones, 14 Park Rd, Titirangi. Auckland 7 (phone 817-6102 home)

■ Waikato Botanical Society

The Waikato Botanical Society was initiated at an inaugural meeting on 3 May 1988 attended by 43 enthusiastic neophytes. Paid membership stands at 40 and the following officers were elected:

President	Warwick Silvester
Secretary	Murray Boase
Treasurer	Cathy Jones
Committee	Dieter Adam, Paul Champion, Andrea Donnison, Liz Humphries, Robyn Irving, Peter de Lange, Judy van Rossem, Bev Woolley.

The group sees a strong role in education and in conservation and two sub-committees have been formed to co-ordinate these activities. A significant part of the activities of the Society, at least during the first year, will be in workshops and field trips to inform the membership of the range of species and communities of the region.

The first field trip on 12 June is to Barrett Bush Scenic Reserve, a kahikatea remnant at Koromatua, 5km south west of Hamilton. A workshop on the flora of the remnant will be held at Waikato University in the morning followed by a field trip in the afternoon.

Further trips are planned to:
- Pukemokemoke Range (ferns)
- Wetlands
- Intertidal algae
- Saltmarsh
- Limestone
- Coastal vegetation gradient
- Tawa forest
- Kohekohe forest

The first evening meeting will be held on Tuesday 12 July. Three local botanists will speak on significant plant communities of the Waikato.

The subscription is $10 per year ($5 for students) payable to the Treasurer, c/- Department of Biological Sciences, University of Waikato, Private Bag, Hamilton.

Murray Boase, Secretary, Waikato Botanical Society, Department of Biological Sciences, University of Waikato, Private Bag, Hamilton.

■ News from Rotorua Botanical Society

The 1988 annual trip was to Mt Hikurangi, East Cape at Auckland Anniversary weekend. The alpine vegetation was interesting and the environment in general was spectacular. Several new records were found.

At the end of April, Rotorua and Auckland Botanical Societies had a combined field trip to Wairakau Scenic Reserve in the Kaimai Ranges. This was a resounding success with a record turnout of 42 enthusiasts. Much botanical 'gossip' was exchanged.

Our Annual General Meeting is on June 11. The guest speaker is Dr Geoff Rogers who will talk on the plants of the Moawhango district. He has recently completed a doctorate on the landscape history of the Moawhango Ecological

District, which lies between the Kaimanawa and Ruahine Ranges and contains a number of rare plants and plants with disjunct distributions.

Newsletter number 13 was published in April. Contents include:

Kennedy Bay Field Trip. John Smith Dodsworth
Three new adventive records for New Zealand. Sarah Beadel
Checklist of the adventive taxa of Mt Te Aroha. M R Boase and S M Beadel
Book Review: Vegetation of Egmont National Park, New Zealand. Mark Smale
Great Barrier (Aotea) Island - some notes from a brief visit. W B Shaw and S M Beadel

Forthcoming field trips are:
- Waimangu Thermal area - Sunday 19 June
  Contact: Chris Ecroyd (073)479067
- Waipahihi and Opepe Bush, Taupo
  Contact John Dryden, Taupo 82341
- Awakeri Scenic Reserve, Eastern Bay of Plenty
  Contact: Willie Shaw (073)24546
- Te Akatarere Peak, Maungatautari, Waikato
  Contact: Murray Boase (071)67798

These trips are open to all-comers.

Sarah Beadel, Secretary, Okere Rd, RD4, Rotorua (phone (073)24546)

■ Wanganui Museum Botanical Group

Our March expedition was to the Manhaone Walkway near Waikanae. The ferns there were particularly fine. In May we visited a patch of bush on private land which we regularly visit and it is a measure of our increasing knowledge that we had further additions to our plant list.

We have a full programme to September which includes expeditions, talks and our 20th birthday evening.

We have been fortunate in the help we have received from members of staff of Massey University. They have given stimulating talks at many of our monthly meetings.

One regular commitment which we have is a weeding and/or planting session in the Wanganui Museum garden. This collection of native plants which is on three sides of the Museum, was prepared and planted by the Tramping Club and is now maintained by our group with assistance from the Tramping Club.

A.E. King, Chairman, 180 No.2 Line, RD2, Wanganui

■ Wellington Botanical Society

All interested people are welcome to the following events. The Monday evening meetings are held in Room K 301 on the third floor of the New Kirk Building, Victoria University of Wellington, at 7.30 pm.

Monday 20 June - The botany of Bank's Peninsula by Hugh Wilson.

Saturday 2 July - South Wellington Coast between Sinclair Head and Karori Stream. Leader: Barry Sneddon (phone 769-383 home; 721-000 ext 8120 work).

Monday 18 July - Nelson's alpine plants inside and outside by Bill and Nancy Malcolm.

Saturday 6 August - Orongorongo Walk. Leader: Margaret Aitken (phone 662-731 home).

Monday 15 August - Annual General Meeting and Presidential Address - Mana Island: a conservation opportunity by Susan Timmins.

Saturday 3 September - Kaitoke to the Te Marua Lakes. Leader: Rodney Lewington (phone 735-145 home).

Monday 19 September - Why would a botanist be interested in the Taranaki farming backblocks? by Paul Blaschke.

Looking ahead to next summer, the following trips are planned: New Year (27 December - 6 January 1989) to Wairau Valley, Marlborough. Leader: Tony Druce. Note that private transport will be used and that bookings for vehicles on the rail ferry will need to be made 6 months in advance. To avoid possible disappointment, please let the transport organiser know by mid-June if you expect to come and the possibility of bringing your own vehicle. Passengers will be expected to share the costs and ferry fare of vehicles. Transport organiser: Rodney Lewington (4 Highbury Cres, Wellington 5, phone 753-145).

Anniversary Weekend (19-25 January 1989) - Lakes inland of Waitotara (north of Wanganui) and possibly one day at dunes near Whangehu River mouth. Leader: Colin Ogle (Department of Conservation, Wanganui).

Further information from:

Carol West, Secretary, 40 Whaui St, Brooklyn, Wellington 2

■ **Canterbury Botanical Society**

At the Annual General Meeting held Friday 10 June, the following were elected:

President	Neil O'Brien
Vice-Presidents	Ross Lake, Ian Tweedie
Secretary	Daphne Banks
Treasurer	Edith Shaw
Committee	Philippa Horn, Fiona Lilley, Valerie Lovis, Janice Mattar, Marion Winter

The meeting was followed by a very successful pot luck dinner, and a screening of the film Mount Kinabalu from the "Our World" series.

Mid-winter camp will be held at Cass from 8-9 July, with a specific aim of studying the genus Raoulia.

Evening meetings are held on the first Friday of the month, followed by a Saturday field trip the next day. All welcome. Enquiries to:

Daphne Banks, Secretary, PO Box 8212, Riccarton, Christchurch (or phone Philippa Horn 252-811 ext. 8124 days)

■ **Botanical Society of Otago**

Newsletter No.7 (1988, April) contained news of the Society, and an article "Coprosmas in East Otago" by M.J. Heads.

The next meeting listed in the Newsletter will be held on Tuesday July 5, when Mike Pole will speak on The Ecology of early Miocene plants of Central Otago, at 7.30 pm in the DSIR Building, Cumberland St.

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

NOTES & REPORTS

Plant Records

■ **New records from the General Waikato - Part 1**

Recent investigations of the wetland floras of the Whangamarino, Opuatia and Kopouatai Swamps have resulted in several new records for various threatened vascular plant species. Updates on species noted in previous Newsletters are given and new records from the western Waikato of regionally uncommon or nationally threatened species are given. Some extensions of known species distributions are also noted. Unless otherwise stated all records have been vouched in the University of Waikato Herbarium (WAIK); duplicates of most specimens may be found in one or more of the following herbaria: AK, NZFRI, WELT or CHR.

Ranunculus urvilleanus
Allan (1961) gives the distribution of this species from North Cape to latitude 35°30' and also includes Little Barrier. This species actually occurs much further south, being reported from the Waitakere Ranges (Gardner 1987, A.Bot.Soc.Newsl.42(1)), and recently (1984,86,88) collected from Little Omaha Kahikatea Forest, Warkworth; Opuatia Wetlands, Huntly; Kopuku Mine area, Whangamarino; and from Manu Bay, Raglan (Confirmed by P.Garnock-Jones). At both Little Omaha and Manu Bay it was common. Given et al. (1987 Botany Division Report) list this species as vulnerable; possibly it may just be undercollected. To support their concept of a threatened species are the relatively few recent collections at AK suggesting it may be threatened. Aside from the Waitakere Record based on an 1885 collection, the other four sites were discovered by accident. This suggests that it has a wider distribution and may be a local rather than threatened species. At all recent sites the species is present on the margins of swamps in ground subject to seasonal water fluctuations.

Mazus pumilio
A small patch of this plant was found on the margin of a raupo (Typha orientalis) swamp near Tutaerere Pa, Rakaunui Peninsula, Kawhia. Plants were scattered throughout a low turf composed of Leptinella dioca ssp. dioca, Lilaeopsis novae-zelandiae, Isolepis cernua and Ranunculus acaulis. The habitat is a wet flush where the substrate was sand over blue/grey clay. No specimens were collected. This is the first time this species has been noted in the Kawhia area.

Rorippa gigantea
Material collected from Tutaerere Point, Rakaunui Peninsula, Kawhia, of an unidentified weedy cress-like plant, was determined as Rorippa gigantea

following comparison with plants grown on from seed sent by Ewen Cameron. The plants at Tutaerere are usually browsed off before flowering but cuttings removed and grown in Hamilton developed into this species. This species now seems very restricted on the mainland of New Zealand (3 collections in 10 years, P.J. Garnock-Jones pers.comm. 1988), although it is locally common with Lepidium oleraceum and Parietaria debilis around bird nesting sites on offshore islands (A.E. Wright pers.comm. 1987). The Kawhia site suggests it may occur elsewhere in remote areas of the western Waikato.

Lycopodium serpentinum

In the South Auckland area this species is mainly confined to open sites within large oligotrophic wetlands. At Kopouatai Peat Dome, small healthy populations were initially reported by University of Waikato students from the Sporadanthus communities and open Schoenus/Empodisma sedge/wirerush land, but the extent of these is actually much greater. The species is widespread throughout the bog where in places it is the physiognomic dominant of turf communities. In these sites it is commonly noted with Utricularia lateriflora.

At Opuatia Wetlands, a smaller low moor bog, the species is probably now extinct, illustrating the sequence of succession from open peatland following fire to the relatively closed Schoenus carsei/Empodisma/Baumea association developed eight years after the fire. In 1982 it was locally common, but became progressively rarer so that by 1986 only three small patches could be found. These had succumbed in January 1988 to overshadowing by taller vegetation.

Oddly, a colony still persists at the Rukuhia Swamp. This is unusual since the bog is being drained and the associated change in nutrient status has permitted the growth of manuka (Leptospermum scoparium) and Baumea tereti-folia in the open sites which the species requires. Its presence at Rukuhia has been assisted in an unusual manner. The activities of Cannabis sativa growers under manuka results in the clearance of various competing species. This allows small areas of open ground to remain which the Lycopodium is able to colonise.

At Moanatuatua the species has been less lucky and it is now almost certainly extinct there. Bartlett (DSIR, Site Report) noted only scattered pieces in 1976. At the Whangamarino it is probably locally common. Although I have not looked for it there, I have seen photographs of the colony and read the site report of Ogle (DSIR Files).

Hypolepis millefolium

Several patches of this fern have been discovered on slip faces near the main summit of Mt Pirongia, Waipa County. These colonies seem of recent origin as these slips were examined thoroughly in December 1984 and January 1985. This is an extension of the distribution of this species northwards from the previous stated limit on Mt Pureora. It was also present on a roadside cutting near Kihikihi, where it was probably introduced from road work spoil from near Taupo where it is common.

Deparia tenuifolia

I see no justification for retaining this species within the New Zealand flora. Specimens collected from Mangapu Forest, Te Kuiti (WAIK, NZFRI, WELT, CHR) developed typical bipinnate Deparia petersenii ssp. congrua fronds within eight months of cultivation. The tripinnate form seems to be found in association with the normal bipinnate species, although it is never abundant (1-2 plants usually). It is typically found in the more shaded sites, often associated with plants of an intermediate nature. Although

I have been unable to induce bipinnate plants to develop fully tripinnate fronds, I have succeeded in producing intermediate fronds by growing bipinnate specimens in low light conditions. It seems probable that the tripinnate frond is also a response to low light levels as specimens planted in higher light levels develop gradually bipinnate fronds; although it may also be an "aberrant form" in the same sense as crested or lobed forms of Blechnum minus, B. fluviatile and Marattia salicina are. Collections have been made of these frond types, from numerous localities and lodged in WELT and WAIK. Fully tripinnate forms have been found twice in the Waikato, at Mangapu and at Te Awamutu (AK, WAIK, WELT, CHR). In both cases the plants were found amongst intermediates and normal bipinnate specimens.
Discussions with Mark Large (pers.comm. 1987) imply no obvious genetic difference between tripinnate and bipinnate forms. On the basis of this; the few extant records of the species, the unstable behaviour of tripinnate plants in cultivation and its association with intermediate and fully bipinnate specimens, there seems good grounds for rejecting the entity from our flora as a species.

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

Field Work

■ **Goats on Banks Peninsula**

Early in May I completed the fieldwork for my detailed botanical survey of Banks Peninsula. It has taken five fascinating years to visit and record all 1340 sites, placed at the intersections of the old 1000 yard grid across the whole of the volcanic Peninsula and its associated 26 km long barrier beach to the southwest known as Kaitorete Spit.

The very last 2 plots were above Holmes Bay. I recorded both to the cough and bleat of innumerable goats, and the dreary sight of ring-barked ribbonwood and kowhai. One of the fundamental tragedies now taking place on Banks Peninsula is that much of the botanical wealth still hanging on after decades of milling, burning, grazing, spraying, competition from waves of naturalised exotics, planted Pinus radiata, and conversion of diverse pastures to ryegrass and clover swards, is currently under a new and serious threat from widespread farmed and feral goats.

To many botanists the initial impression of Banks Peninsula is that of a landscape attractive enough, with its farmed hills and indented seascapes, but so stripped of native vegetation that little of value remains. I started my survey telling myself that I would not get too upset about a place like Banks Peninsula because most was already lost. The overwhelming story from my survey is exactly the opposite; despite everything, so very much remains. This is a place where an hour's walk can take you from nikau palm groves to snow tussock, Celmisia and Dracophyllum, or from almost arid shrublands of Sophora prostrata, Clematis afoliata, Carmichaelia and danthonia to rainforest and waterfalls with Cyathea, Dicksonia and filmy ferns. The remarkable pteridophyte flora alone numbers some 90 species and includes such diverse representatives as Pleurosorus and Leptopteris. Among the handful of locally endemic angiosperms are a magnificent Celmisia and two handsome Hebe species. It was impossible for me not to get upset about threats to this flora; too much is at stake.

Of course changes to the vegetation of Banks Peninsula have been long and drastic. Maori settlement appears to have stripped off about one third

of the original, virtually continuous, though varied, forest covers. European settlers destroyed almost all the rest within a few decades of arrival. Tussock grasses spread on to Maori-cleared land, but their further spread on to Pakeha-cleared land was largely pre-empted by the sowing of exotic pasture grasses. Native plants did not simply vanish. Cliffs and bluffs provided refugia from fire and grazing, and forest remnants survived in gullies and in a few valley heads, providing seed sources for vigorous regeneration of second-growth. Seral species such as kanuka thrived on the new conditions. Grazing by sheep has actually assisted the recolonisation of the land by such trees as kanuka, kowhai and the ribbonwoods by reducing competition in establishment phases from rank grass and fern. Some species were lost altogether - I am putting together a list of what appear to be genuine local extinctions such as Pittosporum obcordatum, Hymenophyllum malingii, Euphorbia glauca and Lepidium oleraceum - but the existing native flora of the Peninsula is still an impressive list.

The arrival of goats on the scene is yet another change, but a very serious one. Although goats have been kept in a minor way on the Peninsula for many years, the widespread farming and escape of these animals has taken place only within the last decade. Even "farmed", they can wreak havoc, botanically-speaking; they are often grazed on large, rough blocks where a diversity of native species has survived until now. They are "smorgasbord feeders", and although certainly having preferences they sample a wide range of species. Grasses are not high on their list; mahoe, fuchsia, broadleaf, Hebe and Pseudopanax are tops. They love gorse and broom, but this is part of the problem because farmers run them across their least-tamed blocks as weed-eaters, in just the places that botanical values are highest. They eat the bark of both young and more mature trees; on Banks Peninsula five-finger, mahoe, kowhai and ribbonwoods are among those species widely damaged and killed. Ordinary sheep-fencing is like no fencing at all to them, and steep bluffs that have been completely out of reach to sheep and cattle are an ordinary part of their feeding range. Hence plants such as the endemic Hebe lavaudiana are seriously endangered. Finally, although there are many farms on Banks Peninsula where the goat herds are properly confined, especially valuable Angora herds, there are just as many where goats have ignored boundaries and now range widely as feral herds. Wild goats are common, for example, in the Mount Sinclair - Mt Fitzgerald area, both in and around the priceless scenic reserves there. They have escaped within the last few years from a farm in Holmes Bay, and are spread now from this source into neighbouring Port Levy and Little River.

An area of immediate concern to me is the Otanerito - Stony Bay region in the south-east of Banks Peninsula, where I am looking after the new reserve and revegetation project at Hinewai. Goats were unknown here until a few years ago when animals, said to come from Arapawa Island, were brought down from Picton to Stony Bay. They escaped immediately. The hinterland of Stony Bay is much wilder and rougher than would be supposed by people whose acquaintance with Banks Peninsula is slight. Within a few years the goats had bred to a dispersed herd of several hundred, ranging across at least 20 square kilometres. This is the heartland of the curious distribution of Nothofagus on Banks Peninsula, and contains among its rich botanical legacy Cordyline indivisa, Celmisia mackaui, Libocedrus bidwillii, Hebe lavaudiana, H. strictissima, Cyathea medullaris, Rhopalostylis sapida, Griselinia lucida, puzzling forms of Tmesipteris, the southernmost limit of Anarthropteris lanceolata, the best Banks Peninsula populations of Olearia avicenniaefolia, the only known Peninsula site for Myrsine nummularia, and two species of Gingidia. Stony Bay Peak and Purple Peak, just across the

Hinewai boundary fences, are swarming with goats. Because their browsing is opening up dense broom stands and hedging the spread of gorse, the neighbouring farmers are not exactly averse to their presence. We have shot about 35 goats on Hinewai, and even captured some of the kids, but the invasion will be continuous until we have erected the goat-proof fence the entire length of the southern boundary, a project I am determined to see through. I am confident that eventually we shall see Hinewai goat-free. But what of the rest of the Peninsula?

There is little likelihood of restricting farmers running goats on their own land; the outcry in this farming community would be extremely loud! But there must be scope for preventing the straying of goats on to other people's land, and into scenic reserves. There will have to be, soon, united action to wipe out feral animals that no longer "belong" to anyone. You may rest assured that I am doing as much as I can to foster awareness of the current role of goats in the Banks Peninsula scene, and that there are many other Banks Peninsula people who are as appalled as I am at the current situation. The County Council themselves have come forth with expressions of concern.

In my worst moments I worry that I have documented the botany of Banks Peninsula only to record what we are now losing. The picture is not really quite as bleak as that - I hope.

But it seems bizarre that so much effort and money has been spent on ridding other areas of the goat menace over the last decade, and here on Banks Peninsula we have been busy liberating them into an area that was virtually free of them only a few years ago.

Hugh Wilson, 160 Salisbury St, Christchurch 1

■ **Death of Lupinus arboreus**

Periodic climatic events are known to be a major factor in determining vegetation patterns. This year has seen an addition to my mental list of such phenomena. Lupin has been dying throughout Golden Bay and Tasman Bay since March, and a correspondent recently noted the widespread death of lupins from Karamea to Westport, and up to "5 miles inland". It was the first time he had seen this in over 20 years on the Coast. Well as every field botanist in the South Island can tell you, February was extremely warm and wet. The most likely cause of lupin death is root rot caused by the fungus Phytophthora. Has this happened in other parts of New Zealand?

P.A. Williams, Botany Division, DSIR, Nelson

Comment

■ **"On Taxonification", a reply to Keith Thompson**

There seems to be open season on taxonomists at present with both lay people (e.g. Neville Peat in a recent review in the PSA Journal) and biologists (e.g. Keith Thompson in the last NZ Botanical Society Newsletter) criticising "name changes".

That these criticisms reflect common concerns of many people is acknowledged, and it is important for taxonomists to address them and for other biologists to represent taxonomy fairly.

It is clear to me that those who criticise taxonomists (often for doing their job effectively and honestly) sometimes do not fully understand the International Code of Botanical Nomenclature (ICBN) or the difference between taxonomy and nomenclature (Keith Thompson could not classify a runcible spoon in accordance with the ICBN as claimed, but he could probably name one!). This lack of understanding is probably on the increase today when taxonomy and nomenclature are given little or no place in most university core biology courses.

Keith Thompson's criticisms, and those of most other critics, stem from a proper desire for stability of plant nomenclature. This desire is shared by taxonomists and this is why the ICBN was written and agreed internationally. Further, this desire for stability is the governing motive behind the revisions of the code which are made every six years at the International Botanical Congress. (All delegates are entitled to take part, but of about 5 000 at Berlin, only about a hundred attended the nomenclature session). In fact the overriding principle of the ICBN is that names may not be changed. What changes is the usage of names, and biologists of all persuasions, not just taxonomists, are to blame for persistent misidentifications.

A plant name is applied with certainty to its type specimen only. Once legitimately published it cannot be changed, nor can it be superseded by a later name, however appropriate. However the application of names to plants other than type specimens is a matter of identification (the finding of identity) and this is inevitably a matter of opinion. What critics of the ICBN are often asking for is the right to retain familiar old misidentifications in place of properly typified names. This could be done, but only by abandoning or modifying the system of nomenclatural types. They are also asking for some limitation of the principle of priority. Both of these would replace the present rigidity of the ICBN with a large element of subjectivity; the resulting chaos might be no better than vernacular nomenclature. If someone were to devise a system which guaranteed more stability than the present one we taxonomists would rush to embrace it, and perhaps its proposer as well!

Keith Thompson's letter was light-hearted and entertaining, a welcome change in a field which is normally dead boring to all but its most ardent practitioners. I hope that the foregoing has responded in a general way to the theme of his letter, but I must comment on a few of his specific points.

As the contributor of the section on orthography in **Connor & Edgar** (1987), I adopted the conservative position of correcting misspellings but not altering inappropriate spellings, as indeed the ICBN requires users of names to do (Art. 73.1, 73.3, 73.10, 75, etc.). Several people have commented to me that the corrected spellings make sense of some that were always problems before (e.g. avicenniifolia, as Keith Thompson himself implies (p.14).

The ICBN has never outlawed the use of personal names in forming scientific epithets although many taxonomists have come to abhor the practice. Naming plants after oneself has always been considered bad form but never outlawed by the ICBN. Keith Thompson mentioned Linnaea and Lobelia linnaeoides. Well, Linnaeus' lapse of taste in naming a genus after himself is perhaps offset by the fact that our Lobelia linnaeoides is not named after that Swedish taxonomist, but refers to its resemblance to his beloved "min blomma". And if botanists are going to honour people with plant names then it does help if epithets agree with the gender of the person honoured, as in Gingidia

baxterae. In this way the contributions to New Zealand botany of many women may be noted.

The ICBN recommends, but doesn't enforce, the explanation of the derivation of specific epithets. When I named Ranunculus scrithalis in Connor and Edgar's paper I gave the derivation of the epithet; Keith Thompson is incorrect to criticise Connor and Edgar for not doing the same for Metrosideros bartlettii, because they didn't describe it. He must look back to the original publication where **John Dawson** sets it all out as recommended by the ICBN.

I fear that some New Zealand botanists have adopted a form of civil disobedience about nomenclature in an attempt to make a protest and bypass rules they find inconvenient. Northern Hemisphere botanists tell me this is a peculiarly New Zealand reaction, and it may reflect the fact that our flora is not yet well known and that much of the typification of names of New Zealand plants has not yet been done (Garnock-Jones 1983). Some New Zealand botanists prefer to use vernacular names in the belief that these will be more stable. However, vernacular names are identifications without definitions; they are passed on from one person to another without an agreed reference point. Unlike scientific names, they can be changed for commercial reasons or merely at whim. Who remembers "poor man's orange", "tree tomato", or "chinese gooseberry"? Nor do they tell us much about relationships: is "rimurimu" related to "rimu"? I would hope people writing about New Zealand plants would use whatever system of nomenclature is appropriate for their audience and the purpose they are trying to achieve. It's not that I expect all biologists to be competent in taxonomy and nomenclature, but they should know when to seek advice and where it can be obtained.

Connor, H.E.; Edgar, E.E. 1987: Name changes in the indigenous New Zealand Flora, 1960-1986 and Nomina Nova IV, 1983-1986. N.Z.Jl.Bot.25: 115-170.
Garnock-Jones, P.J. 1983: Gymnosperms and angiosperms. In Brownsey, P.J.; Baker, A.N. "The New Zealand biota - What do we know after 200 years?" Nat.Mus.N.Z.Misc.ser.No.7: 28-34.
Thompson, Keith 1988: On taxonification. N.Z.Bot.Soc.Newsl.11: 14-16.

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

■ Nomenclature, again

Trepidation would have been appropriate for Keith Thompson, before he displayed his utter confusion between classification (the work of taxonomy) and labelling (the work of nomenclature) in the last issue.

The business that bothers him is the procedure for deciding the name to be applied to a particular subjective concept, a taxon. But it hasn't clicked for him that taxa are artificial. He's still stuck in the mire of naive realism.

Taxa aren't "real" in time or space, they are abstractions concocted by taxonomists from their limited experience. The image is always different from the thing, and it is the image that we classify. All that we can perceive of what is out there is what our senses are capable of delivering to us. No two botanists perceive a taxon in quite the same way and systematic botany consists of the collation of the individual images of botanists into a more or less generally accepted artificial model for imagining the world.

This is what is called the "Natural System". Scientific method creates a definition of reality which is unavailable for verification by commonsense or the individual experience, even as it remains falsifiable. It grows as an abstract, consensual, evolving model of the plant kingdom, as experienced by the majority of botanists.

There are no right classifications - there are only more or less useful ones. The usefulness of classifications changes as botanists come to know more about the things they are classifying. The work of taxonomy is the continual redrawing of the boundaries of the cadastral map of natural variation as the topography becomes better known.

And the ownership of the claim? Well, that is where the name comes in.

The name is a label, nothing more. If we are going to understand each other when we talk about this map we are using, we have to be able to label the points of reference in an agreed way. And that's why we have a code of nomenclature. It is a legal strategem to help botanists to be sure they are talking about the same parts of the same map.

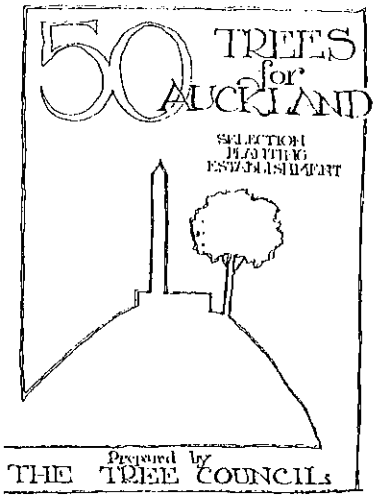
The Code is not "only a series of guidelines", it is an internationally agreed legal arbiter for settling titles to claims on the map. Plants are not "classified in accordance" with it, for the Code says nothing of the process of classification beyond setting out the permissible ranks of taxa. They are named in accordance with it, a very different thing. Although the Code can change the title of a claim, it cannot be used to change the boundaries. On the error of naive realism (i.e. fixed boundaries) Keith Thompson has based his idea that a fixed name can be determined. In fact, if the boundaries of taxa are fixed, it would be the death of taxonomy. And if the names were fixed within the fixed boundaries we would have no means to describe our awareness of changes in botanical topography.

The Code in recent editions has become so badly organised that even senior nomenclators often fail to understand it, so it's hardly surprising that understanding of the detailed provisions is such a rare commodity that few teachers know enough to explain the purpose of the Code to their students. But the distinction between taxonomy and nomenclature is a basic one, and all botanists ought to have at least sorted that out.

Phil Parkinson (Member, Committee for Nomenclature of the Algae, International Association for Plant Taxonomy), Alexander Turnbull Library, PO Box 12-349 Wellington

PUBLICATIONS

■ 50 Trees for Auckland



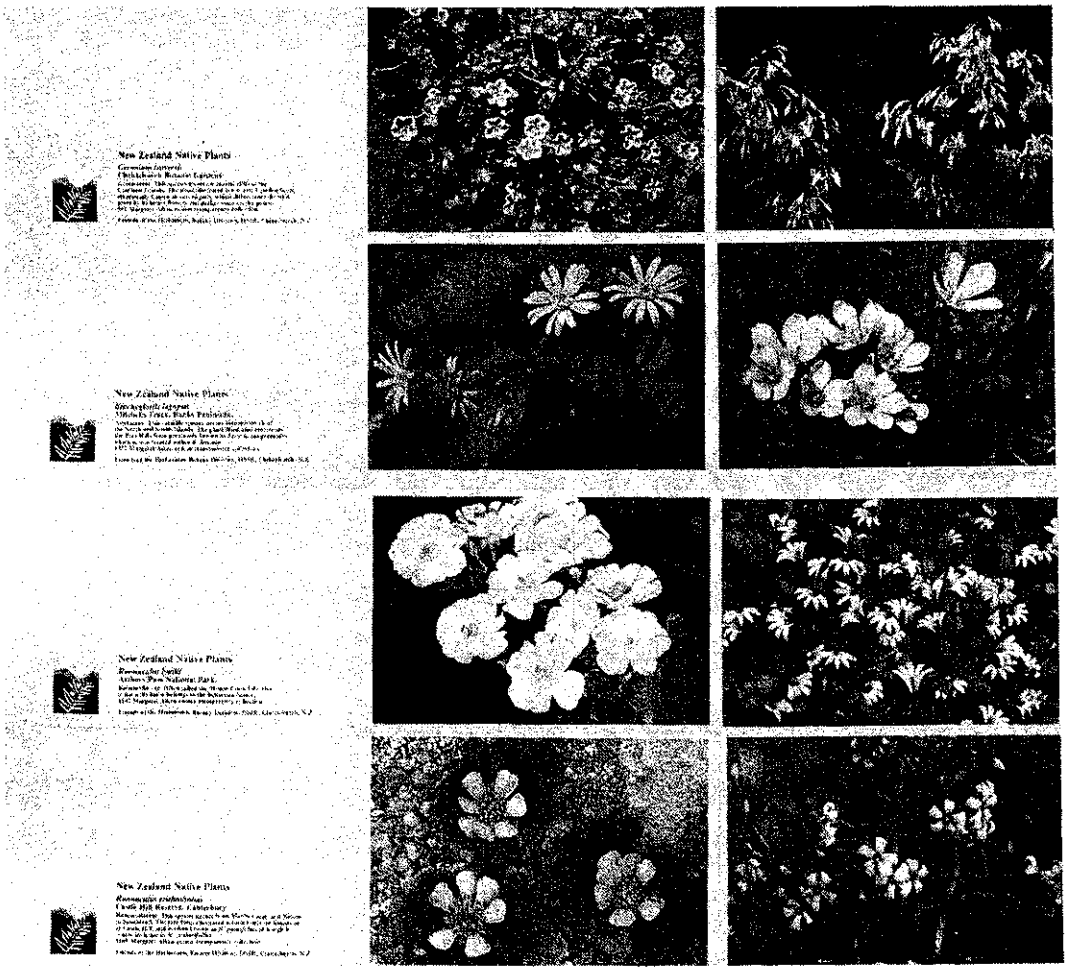
A small booklet called "50 Trees for Auckland" has been published by The Tree Council to encourage a major improvement in the region's treescape before Auckland's sesquicentennial and the Commonwealth Games in 1990.

Dealing with Selection, Planting and Establishment of trees, the booklet is intended to be a widely available guide for the home gardener wishing to plant a few appropriate, and preferably long-lived trees.

The price is $2.50 per copy or $2.00 per copy for ten or more. Please send your cheque to:

The Secretary, Tree Council (Auckland) Inc., c/- Planning Dept, Auckland Regional Authority, Private Bag, Auckland 1 (phone 794-420 ext.8305)

■ New Zealand Native Plants



New Zealand Native Plants is a set of 8 different full-colour cards without a message inside, Post Office Standard size with envelopes provided. The correct scientific names of the plants are given as well as the botanical family name and short notes on flower colour, habitat or distribution.

The wholesale price for a set of 8 cards is $6.00. The recommended retail price is $10.00. All prices include GST. Order forms available from:

Friends of the Herbarium, Botany Division, DSIR, Private Bag, Christchurch

■ **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** by Hugh D Wilson 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.

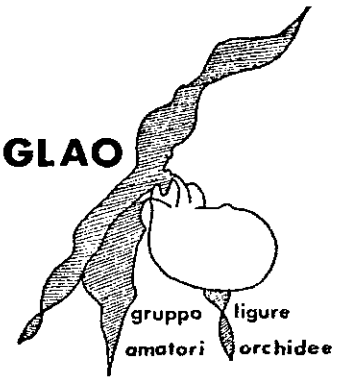
A list of vascular plants on Stewart Island and its outliers notes 585 indigenous species and 43 hybrids; another list records 240 naturalised species.

The mail order price is NZ$35.75 within New Zealand and Australia, and US$35.75 beyond. From:

DSIR Publishing, PO Box 9741, Wellington

DESIDERATA

■ **New Zealand alpine plants wanted**



Gruppo ligure amatori orchidee is a cultural, no-profit private association of orchid lovers who have created, with the support of both the Genoa University Botany Dept and Natural History Museum a Botanical Garden of Alpine and Apennine specimens. They now wish to add representatives of other countries' mountain floras. They have drawn up the following list of desiderata, with a view to exchanging seeds, information and cultivation directions with a New Zealand group or individual:

Clematis paniculata
Celmisia coriacea
Gentiana patula
Ranunculus insignis
Ranunculus lyallii
Ranunculus lappaceus
Myosotis australis
Prasophyllum colensoi
Gentiana corymbifera
Ranunculus buchananii
Helichrysum bellidioides
Celmisia lanceolata
Celmisia petiolata
Leucogenes leontopodium
Euphrasia cockayniana
Pygmea pulvinaris
Wahlenbergia trichogyna
Craspedia uniflora
Pimelea prostrata
Myosotidium hortensia
Wahlenbergia gracilis
Dendrobium cunninghamii

Geum uniflorum
Caladenia bifolia
Senecio lagopus
Celmisia spectabilis
Earina mucronata
Earina autumnalis
Corybas rivularis
Notospartium carmichaeliae

Anyone interested in cooperating with this group should write to:

Giorgio Sciaccaluga, President, GLAO, Via Monte Oliveto 8-12, 16155 Genoa, Italy

■ **Attention all New Zealand Botanical Beachcombers**

Please leave no beach bottle unexamined - it may have travelled around the world to reach our shores. Between 1977 and 1983 Dr Nigel Wace of the Australian National University threw 688 bottles overboard in the Drake Passage which separates South America and the Antarctic Peninsula. Each contained a message and six have been recovered so far.

The first was washed ashore at Rakaia Beach in the South Island three years after being consigned to the currents. The second arrived at Easter Island almost four years after the first bottle had been recovered. To date later launchings have yielded four more bottles and posed more questions than have been answered. Two of the bottles were recovered from west Tasmanian beaches, one from west Victoria and the most recent arrival came ashore at Hokitika. Why did one travel for four years (which isn't long enough a time to have gone around Antarctica twice) while the fastest took only two years and two months to reach its destination?

Further details of this project can be found in an article by Nigel Wace in vol.5 of Australian Geographic magazine (Jan.1987). If you should find one of these bottles, please contact the undersigned who is Dr Wace's local agent. Anyone returning one of Dr Wace's messages, together with details of where it was found will be given a year's subscription to Australian Geographic.

Dr Chris Kissling, Director of Planning, Canterbury United Council, 4th Floor Civic Offices, 163 Tuam St, Christchurch

FORTHCOMING MEETINGS/CONFERENCES

■ **Flora Festival**



Two major events dominate the 1988 calendar of Botany Division, the opening of the new herbarium wing and the publication of Flora of New Zealand Volume 4, dealing with naturalised Dicotyledons, Gymnosperms, and Pteridophytes.
To mark the opening of the herbarium wing and the launching of the new Flora the Division is planning a symposium at Lincoln in November 1988, at which progress in herbarium botany, floras, and aspects of the taxonomy and ecology of the plants treated in Vol. 4 will be reviewed.

The Symposium will provide an important opportunity to review and discuss past progress and current research, as well as to think ahead and plan for the future. It will attract botanists interested in taxonomy and ecology of weeds, agricultural and horticultural advisors, and land managers involved with weeds. The New Zealand herbarium curators will meet at Lincoln preceeding the Symposium.

An extensive living collection of naturalised plants, the Weed and Wildflower Show, will be on display during and after the symposium. Workshops on weed identification and on New Zealand's future requirements for Floras are planned.

A day has been set aside for the Systematics Association of New Zealand (SYSTANZ) to meet in conjunction with the Symposium, and the Inaugural General Meeting of the New Zealand Botanical Society will be held during the week.

For a copy of the first circular outlining the proposed programme write to:

Flora Festival, Dr P J Carnock-Jones, Botany Division, DSIR, Private Bag, Christchurch 1

■ **Systematics and Biogeography of the Austral Biota**

The ninth meeting of the Willi Hennig Society will take place in Canberra, Australia, August 24-27, 1990. The invited and contributed papers will be a mix of theory, methodology and practice with the special theme of the systematics and historical biogeography of the Austral Biota. Sessions planned include:

(1) Molecular biology and systematics (W.Wheeler, J.West).
(2) The use of phylogenetic information in ecological and evolutionary studies (D.Faith).
(3) Austral flora and fauna: systematics and evolution (M.Crisp, R.Raven).
(4) Austral biogeography (P.Ladiges, C.Humphries).
(5) Coevolution of plant and animal groups (R.T.O'Grady).
(6) Phylogenetic computing software (P.Weston).
(7) Poster session (P.Cranston).

Excursions to eastern New South Wales and Queensland are planned. For suggestions, questions and preliminary registration forms for the meeting, please write to:

Dr Ebbe S Nielsen, Division of Entomology, CSIRO, GPO Box 1700, Canberra ACT 2601, Australia

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