TRILEPIDEA

NEWSLETTER OF THE NEW ZEALAND PLANT CONSERVATION NETWORK

Please send news items or events to events@nzpcn.org.nz

Postal address: P.O. Box 16-102, Wellington, New Zealand

E-NEWSLETTER: NO 65. APRIL 2009 Deadline for next issue: Friday 15 May 2009

Message from the President

If there were to be a unifying theme for this month's newsletter, it would surely have to be 'wetland flora'. As it happens, I think that this is very timely given the plight of New Zealand wetlands and the associated plant species and plant communities. I am most grateful to Graeme Worner (Christ's College) for his very informative article about the salt marsh vegetation of Brooklands Lagoon or estuary (between the Waimakariri and Styx Rivers just north of Christchurch). He describes some very interesting results including the possibility of three distinct 'ecosystems'. We need more of these kinds of surveys of the distribution of wetland species. Equally interesting is the report from Martin Conway on a single species, the swamp maire (*Syzygium maire*). I wonder how many of you have seen an example of this plant. I have not, so, being curious, I looked it up on on the fact sheets, but because it is not listed as a threatened species, there was not much information other than a wide selection photos.

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PLANT OF THE MONTH – *Olearia semidentata*

Olearia semidentata. Photo: Peter de Lange.

Plant of the month for April is *Olearia semidentata* (makora, hanga-tare, swamp aster). This beautiful daisy is endemic to the Chatham Islands where it is found in peaty ground and bogs, usually associated with bamboo rush (*Sporadanthus traversii*) shrubland.

Dr Leonard Cockayne wrote of the 'brilliant purple ray florets being of extraordinary beauty'. The flowers appear over the summer months from November, fruiting follows in January and February. The colour of the ray florets is variable, often starting purple and fading to pink or white over time. The disc florets are dark purple. Leaves are dark green with white tomentum (a covering of short dense hairs) underneath and younger stems are often covered with the same.

Olearia semidentata can grow 2–3 m tall. It grows best in a well lit position, in a peaty soil that does not ever dry out over summer. It is not difficult to propagate, taking easily from semi-hardwood cuttings. Seed is best sown fresh and may take several weeks to germinate.

Land drainage, cattle and fire are threats to hanga-tare. The network factsheet for *O. semidentata* can be found at: : www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=619

Prompted by this observation, I went back to Graeme's article and checked the fact sheets for some of the species he mentions and found a similar lack of information for other non-threatened species. The Network's priority has been to complete fact sheets for the threatened species, so I hasten to say that this is no criticism of the people who have been responsible for providing the extensive information in them. The Council now has funding from TFBIS to complete the remaining fact sheets but it is a time consuming process.

The Plant of the Month fits with the 'wetland' theme, so out of curiosity I also looked it up in the fact sheets. How many of you do the same for each Plant of the Month? What a beautiful flower! It has such brilliant colours and is surely one of the many examples that proves that New Zealand's flora does not lack colour. How many of you have seen this species in the wild? I wonder how many times it has been recorded during botanical surveys.

Talking of surveys, I was delighted to read the report from Sue Jarvis about the recent 'Bioblitz' that took place near Lincoln (south of Christchurch). This event also fits with the 'wetland' theme because much of the 24 hours of recording took place alongside the local stream. I wonder, in passing, if any other such 'Bioblitz' events are being planned in other parts of New Zealand. By the way, where does the term 'Bioblitz' come from and where did the first one take place? Sue provides some brief reports from the huge amount of data. Disappointing but not surprising was the finding that of the 312 species of vascular plants, only 20 percent were native species, and largely at that level by recent planting. In terms of trees, I think that all councils should have a policy of planting only native species unless there is a compelling reason for not using native species. In my submissions to council community plans, I am going to make this recommendation. Why don't you do the same? Why wouldn't councils have a policy of planting only native plants?

Finally and talking of submissions. We need your submissions or nominations for the award of the Loder Cup. The Network is one of the organisations that is invited to nominate one person or one group of people. You will read below that the nominations close on Tuesday 26 May. If you have any suggestions about whom the Network could nominate, please let me know by 12 May at the very latest. I look forward very much to hearing from you.

Ian Spellerberg, Lincoln University

The salt marsh vegetation of Brooklands Lagoon

Graeme J. Worner, Christ's College (worners@xtra.co.nz)

In 2008, I completed a year on a NZ Science, Mathematics and Technology Teacher Fellowship, researching the distribution of salt marsh plants and vegetation at Brooklands Lagoon, under the guidance of Christchurch City Council botanist, Dr Trevor Partridge. Brooklands Lagoon is in fact tidal, and should be considered the 4.5-km long estuary of the Waimakariri and Styx rivers. The aim of the research was to determine the main salt marsh vegetation types, and suggest causes for their distribution. At the same time, another Teacher Fellow, Peter Cooper, a geography teacher at Christ's College, working with the University of Canterbury, collected data on the sediment composition of Brooklands Lagoon from 13 transect lines running across the mudflats, main channel and through the lower, mid and upper salt marsh zones. His data showed a clear pattern of sediment types ranging from the very coarse, sandy sediments at the northern Brooklands end, to the very fine clay-silt sediments of the southern Spencerville end.

Typical Brooklands sea rush- and sea primrose-dominated lower marsh. Photo: Graeme Worner.

Salt marsh ecosystems are not very species-rich, but are proportionately high in indigenous species. Most of the expected Canterbury salt marsh plant species were found at the site. Forty species were recorded in survey plots, of which 24 were indigenous. Seventeen of these species could be regarded as principally salt marsh species, with the other 23 species often associated with the upper salt marsh as slightly salt-tolerant weed or invasive species, or as common wetland species that are occupying ponded areas.

Analysis of the data from the vegetation survey (1400 plots, each 1 m^2) indicated 24 distinct vegetation types. The distribution of each appears related to preference for lower, middle, upper or marsh fringe zones, as well as distinct groupings of some vegetation types associated with fine sediments or coarse sediments. Some of the vegetation types are associated with older salt marsh areas (mostly between the Styx and Waimakiriri Rivers), others are typical of colonising vegetation. The two salt marsh species dominating the lower and mid marsh vegetation types are the sea rush (*Juncus kraussii* var. *australiensis*) and three-square sedge (*Schoenoplectus pungens*). The upper marsh is dominated by the only salt-tolerant indigenous shrub, marsh ribbonwood (*Plagianthus divaricatus*), and the jointed 'rush' or oioi (*Apodasmia similis*). The abundant presence of the exotic tall fescue (*Schedonorus arundinaceus*) signals the upper marsh fringe.

The greatest diversity is in the herbaceous, turf-forming plants. Two indigenous species, remuremu (*Selliera radicans*) and sea primrose (*Samolus repens*), and one exotic species, buck's horn plantain (*Plantago coronopus*) are abundant in several common vegetation types. When combined with the dwarf cushion sedge (*Schoenus concinnus*) and the succulent glasswort (*Sarcocornia quinqueflora*) these plants form large expanses of very attractive salt meadow/turf at the northern end.

Buck's horn plantain and tall fescue are the most well-established exotic salt marsh plants at Brooklands Lagoon. However, less common exotic species may threaten the indigenous vegetation. The incredibly invasive cord grass (*Spartina anglica*) was found in four reasonably substantial clumps, three near the Styx River mouth and a large patch midway along the eastern side of the estuary. Less of an immediate problem, but perhaps of concern in the future, is the possible spread of yellow lotus (*Lotus tenuis*). It has a spindly, climbing habit and, in the older northern areas, with some salt tolerance, it forms clumps in the upper marsh regions amongst the marsh ribbonwood. Of interest, and perhaps requiring monitoring, is the first appearance in Canterbury of the exotic grass, *Puccinellia fasciculata*. At present, it is confined to one small area on the upper marsh fringe.

Two 'threatened species', shore sedge (*Carex litorosa*) and native musk (*Mimulus repens*) were found at Brooklands Lagoon, frequently in association with each other. Shore sedge, recently classified as 'Declining', was mainly distributed along the raised levees on the edge of the main channels leading into the southern part of the estuary near Spencer Park. Other sites included sparse populations on the three-square-dominated 'pikelet-shaped islands' also in the southern end of the lagoon, and in larger clumps between individual sea rush, oioi and marsh ribbonwood near the middle of the spit. Native musk, classified as 'Uncommon', occupied the waterlogged margins of the finer sediments in the Spencerville region, and in amongst the neighbouring three-square and arrow grass (*Triglochin striatum*). Small patches were found slightly further north on the edge of the main channel near the pikelet islands and, with bachelor's button (*Cotula coronopifolia*), in the man-made ponds between the Styx-Waimakariri stopbanks.

Mimulus repens (native musk) with the larger, bright green leaves of *Leptinella dioica*. Photo: Graeme Worner.

Chenopodium glaucus (glaucous goosefoot). Photo: Graeme Worner.

Some salt marsh plants are uncommon here yet are abundant at other sites in Canterbury. Of particular interest was the small number of individual glaucous goosefoot (*Chenopodium glaucum*) plants, which were found on sandy areas in the most northern region surveyed on the spit. This species is known in Canterbury, but was not previously described from Brooklands Lagoon. In contrast, it was unusual to *not* find any *Lilaeopsis novae-zelandia*e and salt bristle sedge (*Isolepis cernua*). Both of these species were described as common in the Avon-Heathcote Estuary, and *Lilaeopsis novae-zelandiae* is a significant component of the lower marsh at Lake Ellesmere.

Surprisingly, the most salt tolerant plant species in New Zealand, sea blite (*Suaeda novae-zelandiae*), was found in only three plots, all at the Brooklands site, and was at its most abundant growing in a 6 m^2 clump amongst pine needles shaded under a stand of radiata pine, near some exotic iceplant (*Carpobrotus edulis*). This is in distinct contrast to the large areas of sea blite in the lower marsh zones along the banks of the lower Heathcote River.

Two patches of eel grass (*Zostera capricorni*) were found, one at Brooklands, and the other at the northern end of the spit. Eel grass is peculiar in being a flowering plant that occupies a marine habitat, normally completely dominated by marine algae.

Analysis of the data also indicated that the salt marsh vegetation at Brooklands Lagoon should be considered as three distinct ecosystems. Two of these ecosystems relate to sediment type and associated salinity ranges. The three-square-dominated vegetation types are characteristic of the finer, less saline sediments of the southern ecosystem. This contrasts with the sea rush-dominated, coarser sediments and more variable salinity of the northern ecosystem. The older marsh ribbonwood-dominated Styx-Waimakariri ecosystem appears to be a remnant of the pre-1940 period when the course of the Waimakariri River to its mouth was through the length of Brooklands Lagoon. This is the only part of the salt marsh system that has been relatively unaffected by the changing Waimakiriri River mouth and retains its salt water connection through tidal channels enhanced by the action of the Styx River flood gates. A fourth large area, of what used to be mature salt marsh vegetation, lost its salt water connection following construction of the 1930s stopbanks. Because of fresh water ponding, this ecosystem now has a mixture of mature ribbonwood and oioi vegetation, with significant areas of large tall fescue clumps, raupo, creeping bent grass, and couch grass.

Northern mid marsh mounds of *Sarcocornia quinqueflora* (glasswort). Photo: Graeme Worner.

Photographs of the salt marsh plants are available in "*The salt marsh plants of Brooklands Lagoon*". This publication was written as a resource for schools and interested members of the public; it is available to be downloaded free by contacting me, Graeme Worner, by e-mail (worners@xtra.co.nz).

Swamp Maire: a restoration project in Nelson

Martin Conway, Titoki Nursery, Brightwater (titoki98@xtra.co.nz)

Swamp maire, *Syzgium maire*, is a handsome tree that grows to a height of 16 m and is found in swamp and bog forests of the North Island and at a few sites in northern Marlborough. There are two known trees at Rarangi near Blenheim, a few scattered trees at the head of Queen Charlotte Sound, but the only remaining stronghold is at Croiselles, near Okiwi Bay on the road to French Pass.

Syzigium maire. Photo: Peter de Lange.

Although, today, there are no naturally occurring swamp maire trees in Nelson it once grew here. Proof of its earlier existence came about in an interesting way when an alert botanist noted an early colonial painting illustrating a swamp maire tree growing at Atawhai near Nelson.

A heavy set of seed in 2007 on the Croiselles trees created the opportunity to re-introduce the species to Nelson and to other parts of the Marlborough Sounds. Since then, over 150 seedlings have been raised by Titoki Nursery and planted out at selected sites around Cable bay, Mahau Sound and Waimea Estuary.

The balance of the plants, now large two year old specimens, and better able to withstand frost, will be planted out this coming spring at Delaware Bay. This is an excellent "coastal flat" site where the swamp maire will feel very much at home.

This project, to restore swamp maire to Nelson and Marlborough is part of the rare plants programme managed and funded by the Tasman Environmental Trust.

Lincoln BioBlitz

Sue Jarvis, Chair, Lincoln Envirotown Trust (Sue.jarvis@orcon.net.nz)

Hundreds if not thousands of people headed towards the Liffey Domain, Lincoln, on 3-4 April. A number of scientists including the famous TV "Bugman" (Ruud Kleinpaste) set the scene for Lincoln Primary children with talks at the school on Friday afternoon so, by after school when the event started at 3.15 p.m., half the school children and many of their parents were ready to follow Ruud along the stream to collect bugs. He was like the Pied Piper of Hamlin with a crowd of children following him with more joining as the ever-increasing group made its way along the stream bank. Over the 24 hours, the large team of scientists from Lincoln University and Landcare Research took groups of people to look for specific types of living things as well as staffing the microscopes to identify the samples that the public brought in. There were also many talks and displays, all on the theme of biodiversity as well as the launch of a new booklet "*Backyard biodiversity in Canterbury*" by Al Check and Mike Bowie.

Dr. Colin Meurk discusses plants with a group at the BioBlitz.

The BioBlitz at Lincoln's Liffey Stream, organised by The Lincoln Envirotown Trust, found an amazing 1553 different kinds of life, almost half of them species of bacteria. That's a lot of different organisms for a small stretch of stream side in a small rural town. The list includes many surprises, including a native flatworm that had not been recorded for over 100 years, a European fungus of acorns never before collected in New Zealand, a Banks Peninsula endemic spider usually found in forest, an unusual native earthworm that is still being identified and a native aquatic weed, *Myriophyllum* sp., which was competing against exotic introduced weeds in clear water.

Though most of the little creepy-crawlies like mites and spiders were native species, the plants and fungi they crawled on were mostly naturalised exotics. Though 20% of the plants were native, most of these have been recently planted. Of the wild, i.e. self-propagated, plant species found, only 9% were native. These numbers are a reflection of the massive transformation of the flora that has occurred on the Canterbury Plain in the past two centuries. It is promising that some natives have been recently planted in the area. There is great potential for improvement.

Most birds were also exotics, another reflection of how much the Canterbury Plain has changed. Only three of New Zealand's native land birds were found in the area: one singing bellbird, a grey warbler, and several fantails. There was a surprise sighting of a white heron. Similarly, none of the butterfly species unique to New Zealand was found. Only the European cabbage white butterfly and the North American monarch butterfly were present.

Scientists from Lincoln University and Landcare Research were on hand to identify specimens collected by members of the public.

While the 24-hour collecting marathon is over, biologists now have a stack of specimens to follow up on, with the work continuing. The final count of natives versus exotics continues. Though it is sad that the proportion of natives seems to be small, the efforts by the locals to increase the planting of natives and so increase the suitable habitat for native animals, is encouraging. Perhaps a future Bioblitz will show a big increase in native species.

Group	Species count	Percentage native
Annelid worms & molluscs	11	?
Bacteria	802 morphospecies	?
Birds	25	40%
Fungi	44	17%
Insects	201	77%
Lichens	32	?
Lizards and frogs	0	
Mammals	6	0%
Mites	25	83%
Nematodes	11	?
Plants	312	20%
Plant viruses	6	?
Protists/algae	47	?
Spiders	31	77%
Total	**1553**	

Marae-based training courses—update

Introduction to plant life in New Zealand is the first module completed by the Network as part of its marae-based plant training course. Over the past two years the Network has run several pilot courses and as a result we have refined the text and images to improve the resource. We are now publishing the module so if you would like to purchase a copy please send your order to the Network at PO Box 16-102, Wellington along with a cheque for $35 (Network members), or $45 (non-members). This course booklet is 70 pages long and includes chapters on:

- Plant names—which name do you use?
- Where plants grow and why
- Flower, spores, seed and fruit
- Leaves, stems, bark and roots
- Plant identification and collecting plant specimens for identification

The second booklet entitled *How to manage and monitor a covenant* is now being designed and will be published in due course. Information about the marae-based, plant, training course will be available in the near future from the Network website.

Greater risk to threatened and uncommon New Zealand plants

The results of a major new survey of native New Zealand plants show a big jump in the number of native plant species under threat.

A survey carried out by a panel of experts for the Department of Conservation shows six species of plant are now regarded as extinct and the number of threatened plant species has jumped almost 50 percent to 180 in the past five years.

The survey by NZPCN and New Zealand Botanical Society reveals the number of plants regarded "At Risk" has also risen from 499 to 651 during the same period.

Department of Conservation scientist Peter de Lange, one of New Zealand's foremost botanists, says part of the big jump can be put down to scientists finding more and more new species of threatened plants. But, he says, changing land use patterns, especially intensive farming and draining wetlands, particularly in the drier eastern parts of the South Island, are also playing a role in the decline in some plant species.

Peter de Lange says some well known plants—such as the garden favourite kaka beak, which is widely cultivated by nurseries—are at serious risk in the wild. One species of kaka beak, *Clianthus puniceus*, is down to just a single known wild plant and the national population of its close relative *Clianthus maximus* has plummeted from 2000 plants in the wild 10 years ago to just over 150 found in the East Cape region.

"Wily goats and hungry hares are now eating kaka beak almost as fast as DOC staff can plant it out," de Lange says. "For kaka beak, its future now rests on the dedication of a Te Araroa based DOC ranger, and local people, especially school children who have been planting the species along roadsides."

"In the past, New Zealanders were largely unaware of issues affecting plant conservation but pleading ignorance is no excuse now and for such iconic species as kaka beak, extinction in now inevitable unless immediate action is taken."

The survey also shows some significant successes in areas like the Chatham Islands where DOC staff, working with islanders, have successfully managed to bring four species back from the brink of extinction. "The biggest success story from those islands has been the rescue of the unique Chatham Island sow-thistle (*Embergeria grandifolia*), a massive distant relative of puha that is well known to many New Zealanders. This shows what can be done when communities and DOC work together," de Lange said.

New colour *Field Guide to the Native Orchids of New Zealand*

This A5 book of 82 pages is a handy size for taking in the field with your ×10 or ×20 lens for easy recognition of our native orchids. The book covers 114 species and 96, as yet, undescribed entities including descriptions, flowering times, environmental regions and habitats all with colour photos except for two rarities that include Bruce Irwin's incomparable drawings. Cost is $30 including postage and handling in New Zealand. Overseas buyers please contact the Secretary for a special price.

The first colour page and the first descriptive page can be inspected on the Group's website www.nativeorchids.co.nz. Enquiries and orders to the Treasurer, Judith Tyler, email: bandj.tyler@xtra.co.nz or 4 Byrd St, Levin. Please send cash or cheque to the Secretary and copies will be dispatched on receipt.

Loder Cup award

The time is approaching for the filing of nominations for the Loder Cup, New Zealand's premier award recognising the efforts of those involved in New Zealand plant conservation. The following information is adapted from the Department of Conservation website (www.doc.govt.nz/getting-involved/in-your-community/awards/loder-cup-award/)

The Loder Cup honours outstanding achievements in flora conservation work. Gerald Loder donated the Loder Cup in 1926 to "encourage and honour New Zealanders who work to investigate, promote, retain and cherish our indigenous flora". Gerald Loder was captivated by our indigenous flora on his first visit to New Zealand in 1886. Over many years, Gerald collected a large selection of New Zealand and Southern Hemisphere flora to plant on his estate in Surrey, England. In 1926, Gerald donated a cup to encourage and honour New Zealanders who investigate, promote, retain and cherish our indigenous flora. Gerald Loder became Lord Wakehurst in 1934. He was passionately involved with our "incomparable flora" until his death in 1936.

The Minister of Conservation awards the Loder Cup to a person or group of people who best represent the objectives of the Cup, to celebrate their outstanding conservation work in New Zealand. The Minister may award the Cup to any person or group of people proposed by one of the nominating organisations. Loder Cup nominations are valid for two years unless withdrawn by the nominating body. Unsuccessful nominations in any year will be reconsidered the following year.

Each of the following organisations may nominate one person or one group of people for the Loder Cup:

- Royal New Zealand Institute of Horticulture and any affiliated society
- Royal Society of New Zealand and any affiliated society
- Any university in New Zealand
- Nursery and Garden Industry Association
- New Zealand Recreation Association and any affiliated society
- New Zealand Plant Conservation Network
- Royal Forest and Bird Protection Society of New Zealand and any affiliated society
- New Zealand Conservation Authority and any Conservation Board
- New Zealand Botanical Society
- Any private person through one of the organisations listed above

To nominate a person or group of people you must:

- Request a nomination form by contacting: Brand and Campaign Advisor, Department of Conservation, PO Box 10-420, Wellington 6143, +64 4 471 0726.
- Complete the nomination form.
- Prepare and collate these documents to support your nomination:
  - a letter of recommendation
  - a cv for a nominated individual, or a detailed description of the work of a nominated group
  - extra materials, e.g., references, letters of support and articles.
- Send two copies of the nomination form and supporting documents to: Brand and Campaign Advisor, Department of Conservation, PO Box 10-420, Wellington 6143, before the closing date for nominations, 5.00 pm. 26 May 2009.

Please follow these guidelines for the letter of recommendation for your nomination:

- The nominating organisation must write the letter of recommendation.
- The letter of recommendation may be a maximum of two pages on A4 size paper.
- The letter of recommendation must include a statement about why the nominee's work qualifies for a Loder Cup nomination.
- The letter of recommendation should explain how the nominee's work meets Gerald Loder's objective to "encourage and honour New Zealanders who work to investigate, promote, retain and cherish New Zealand's indigenous flora".

UPCOMING EVENTS

If you have important events or news that you would like publicised via this newsletter please e-mail the Network (events@nzpcn.org.nz):

Auckland Botanical Society

Meeting: Wednesday 6 May at 7.30 p.m. a talk by Bec Stanley and Ewen Cameron titled "The flora of Rarotonga". **Venue:** Unitec School of Natural Sciences Gate 3, Building 023, Room 1018.	**Contact:** Maureen Young (e-mail: youngmaureen@xtra.co.nz).
Field trip: Saturday16 May to the Oakley Creek walkway.	**Contact:** Maureen Young (e-mail: youngmaureen@xtra.co.nz).

Waikato Botanical Society

Field trip: Saturday 2 May to Tarariki Stream and Bush Reserve, Paeroa. The area is a Hauraki District Council Reserve and is an important local water catchment. **Meet:** 8.30 a.m., Landcare Research car park, Gate 10 Silverdale Rd, Hillcrest or 9.30 a.m. at Paeroa (next to the big L&P bottle by the bridge).	**Contact:** Catherine Beard ph: 07 859 0999; e-mail: Catherine.Beard@ew.govt.nz
Meeting: Tuesday 26 May at 7.00 p.m. a talk by Bruce and Bev Clarkson titled "Vegetation in the western U.S.A." **Venue:** University of Waikato, Room S 1.01, S Block, Gate 8 Hillcrest Rd.	**Contact:** Liz Overdyck ph: 07 846 0965; e-mail: eg3@waikato.ac.nz

Rotorua Botanical Society

Field trip: Sunday 10 May to Waiohau Conservation Area (near Matahina) (combined trip with Forest and Bird Eastern BOP branch). **Meet:** The car park at 8:00 a.m. or outside 418 Macdonald Rd (sth off SH 30, east of Te Teko) at 9.00 a.m. **Grade:** Medium.	**Leaders:** Paul Cashmore, ph: 07 348 4421 (hm), 07 349 7432 (wk), e-mail: pcashmore@doc.govt.nz and Gareth Boyt (DOC Murupara).
Meeting: Tuesday 12 May at 7.30 p.m., the Rotorua Botanical Society Lecture "An illustrated talk on a seven day cruise in the Southern Fiords". See photos from a helicopter flight from West Arm, Manapouri to Long Sound then cruise Preservation Inlet, Dusky and Doubtful Sounds before driving over Wilmot Pass back to West Arm with photos of some vegetation and climatic extremes encountered on the way.	**Venue:** Rotorua Women's Club, Hinemaru St, near Princes Gate Hotel.

Wellington Botanical Society

Field trip: Saturday 25 April to Te Marua Bush for a working bee. Bring: Lunch and a drink, gloves, kneeler, weed bag, and your favourite weeding tools, e.g. trowel, hand fork, loppers, pruning saw, pinch bar. Meet: 9.30 a.m. at Te Marua Bush (250 m north of Te Marua Store and 50 m off SH2, along the road to Te Marua Lakes, Kaitoke Regional Park), or 9.00 a.m. at Upper Hutt Station car park. Transport: catch 8.05 a.m. train on Hutt line from Wellington Station. If you plan to use the train, please ring a leader to arrange pickup from Upper Hutt station.	**Co-Leaders:** Glennis Sheppard, ph: 04 26 7450; Sue Millar, ph: 04 526 7440.
Meeting: Monday 18 May at 7.30 p.m., a Members' Evening. Please share your botanical slides (maximum 20/person) and photographs taken on BotSoc trips, your paintings, drawings and your favourite botanical readings. Plant specimens would add to a memorable evening.	**Venue:** Victoria University, Wellington, Lecture Theatre 101, Murphy Building, Kelburn Parade.
Field trip: Saturday 2 May to Korokoro-Maungaraki Bush. Meet: 9.00 a.m. at pipeline in Akatea Rd, at start of track to Sugarloaf. **Transport:** 8.05 a.m. train on Hutt line from Wellington to Petone Station. Walk up Korokoro Rd to hairpin bend, up Galbraiths Gully path to Singers Rd, go up it to Maungaraki Rd, then turn right into Akatea Rd, 25 minutes pleasant walk.	**Leader:** Bev Abbott, ph: 04 475 8468, **Deputy:** Jill Goodwin, ph: 04 475 7248.

Nelson Botanical Society

Field trip: Sunday 17 May. Delaware Bay.	**Leader:** Sue Hallas, ph: 03 5450294.
Annual General Meeting: Monday May 18 at 7.00 p.m. followed by a talk by Ewen Cameron, Auckland Museum, on the plants of northern offshore islands. **Venue:** Founders Park.	**Contact:** Cathy Jones, ph: 03 546 9499, e-mail: cjones@doc.govt.nz.

Canterbury Botanical Society

Meeting: Friday 1 May at 7.30 p.m. a talk by Jerry Cooper titled "The kingdoms of fungi".	**Venue:** Room A5, University of Canterbury.
Field Trip: Saturday 2 May a Fungi Foray to Kowai Bush, Springfield. Jerry Cooper will lead us through Kowai Bush which is a beech forest QEII covenant belonging to Nigel Harris and his brother Stephen. Meet: at the Yaldhurst Hotel car park at 9.00 a.m. for car pooling.	**Information:** Bryony, ph: 03 351 2886.
Annual General Meeting: Canterbury Botanical Society annual meeting will be held on Saturday 6 June at 10.30 a.m. at St Ninian's Church Hall, 9 Puriri St, Riccarton. Election of officers and committee and presentation of the Bledisloe Awards will be followed by a talk by Trevor Partridge from the Christchurch City Council. Afterwards there will be a social time and a potluck lunch. A plate of finger food from those staying on to socialise.	

Botanical Society of Otago

Field Trip: Sunday 26 April to Lower Taieri Gorge. Meet: Botany car park at 9.00 a.m. returning mid afternoon.	**Contact:** John Barkla, phone: 03 476 3686.
Meeting: Wednesday 13 May at 12 noon, a talk by Rebecca Lodge titled "Variation in the leaves and fibre of Cordyline spp. ti and toi". This is a Department of Botany Seminar. Note special venue: At the Union Street Lecture Theatre (upstairs, corner of Union St (West) and Great King Streets).	**Contact:** Trish Fleming, ph: 03 479 7577.
Meeting: Wednesday 20 May at 12 noon, a talk by Assoc. Prof. Catriona Hurd, Dept of Botany, University of Otago, titled "Going with the flow: water motion and seaweed productivity". This is a Department of Botany Seminar. Note special venue: At the Union Street Lecture Theatre (upstairs, corner of Union St (West) and Great King Streets).	**Contact:** Trish Fleming, ph: 03 479 7577.
Meeting: Wednesday 20 May at 7.30 p.m. a talk by Dr Ragan Callaway, The University of Montana, titled "Positive interactions and interdependence in plant communities". Venue: the Zoology Benham Building, 346 Great King Street, behind the Zoology car park by the Captain Cook Hotel. Use the main entrance of the Benham Building to get in and go to the Benham Seminar Room, Rm. 215, 2nd floor. Please be prompt as we have to hold the door open.	**Contact:** David Orlovich, ph: 03 479 9060.
Field trip: Saturday 23 May, a two day Fungal Foray to the Catlins. Meet: 8.30 a.m. Botany car park. Accommodation on Saturday night will be at Nugget Point lighthouse keeper's house (numbers limited). Day trippers are welcome to join us on either day.	**Contact:** David Orlovich, ph: 03 479 9060. To reserve accommodation or find out more, please contact David by Wednesday 20 May.