



TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

No. 182

January 2019

Deadline for next issue:
Friday 15 February 2019

SUBMIT AN ARTICLE TO THE NEWSLETTER

Contributions are welcome to the newsletter at any time. The closing date for articles for each issue is approximately the 15th of each month.

Articles may be edited and used in the newsletter and/or on the website news page.

The Network will publish almost any article about plants and plant conservation with a particular focus on the plant life of New Zealand and Oceania.

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

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NEW ZEALAND

PLANT OF THE MONTH, p. 2



Stylidium subulatum. Photo: Rowan Hindmarsh-Walls.

Remembering Dr Elizabeth Edgar FLS* (1929 – January 2019)

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On 1 January 2019 Dr Elizabeth Edgar FLS (Fig. 1–3) passed away in her 90th year in Christchurch. With her passing we lost one more of the eminent woman scientists who made their mark on New Zealand plants, quietly yet effectively in the Post World War II science world. Elizabeth worked with Dr Lucy Moore FRSNZ, and especially the late Dr Henry Connor FRSNZ, but also Victor Zotov, Arthur Healy, Ruth Mason, Dr Margot Forde (nee Ashwin), and overseas Dr(s) Barbara Briggs and Surrey Jacobs. Elizabeth was a remarkable person—with a background in the classics she was the ‘port of call’ when matters of Latin and Greek needed to be resolved, and one of the few truly skilled resident New Zealand nomenclaturists I ever met. She was also a very private person who kept a clear distinction between work and home life.

I will leave it to other people elsewhere to detail Elizabeth’s extraordinary professional career. What follows is my personalised tribute of Elizabeth.

I was 17 when I first met Elizabeth in 1983 when I slipped away from a National Science Fair Visit to the then DSIR Botany Division Herbarium (CHR) at Lincoln. I had wanted to meet Elizabeth with whom I had by then already started to correspond over matters botanical, and particularly about grasses.

Elizabeth was, at least on initial meeting, an extremely shy person, especially in large gatherings. However, once she got to know you, and especially when engaged in ‘one-on-one’ conversation, she was very witty, with a clever, dry sense of humour. So much so that sometimes it was hard to tell when she was being serious and when not. On my first meeting with her, already far too precocious for my own good, I bald-facedly asked her when the ‘Grass Flora’ was going to be finished, a question which Elizabeth answered with classic good grace, ‘sometime soon I hope’.

Elizabeth was a ‘finisher’—during her professional career she worked her way through



Fig. 1. Dr Elizabeth Edgar FLS at her microscope. Photo: Allan Herbarium, Landcare Research. Used with permission from Dr Ines Schönberger.

* Elizabeth resigned from the London based Linnean Society in 2000 noting that the subscription was now too much for her to pay in her retirement years.

PLANT OF THE MONTH – *STYLIDIUM SUBULATUM*

The plant of the month for January is the insignificant *Stylidium subulatum*, the only representative of the genus in New Zealand. The species is found from the central volcanic plateau southwards to Stewart Island. It can be found in permanently wet open peaty areas, in lowland to low alpine habitats.



Left: Flowering plants December 2018 on Mt Davy, Paparoa Range. Right: Individual plant December 2018 on Mt Davy, Paparoa Range. Photos: Rowan Hindmarsh-Walls.

The herb is very small and often overlooked unless flowering. It forms sparse patches of short rosettes, each rosette being less than 2cm in width. The leaves are needle-like with red margins, and the five-petaled white flowers are relatively large compared to the rest of the plant. The flowers possess glandular trichomes which are characteristic of the genus, and the seeds are borne in round capsules positioned in the centre of each rosette. It can often be found growing alongside species such as sundews and *Herpolirion*.

Stylidium subulatum is distinctive in Aotearoa, and has no close relatives in this country. When not in flower it could possibly be mistaken for a tiny sedge.

The species is endemic to New Zealand and has a conservation status of 'Not Threatened', as although sporadic, it is fairly common and widespread. The main threats to the species are likely wetland degradation, either due to land use change, or through exotic plant invasion of its habitat. Due to its tiny size the species is easily overrun by larger more competitive exotic wetland species, especially grasses, sedges and rushes.

The genus *Stylidium*, or trigger plants, is very large with around 300 species. All other species are found in Australia, making it the third largest genus in that country. Many of the Australian species are considered protocarnivorous, as glandular trichomes on the flowers can catch and digest small insects with protease enzymes, but it is unclear if the New Zealand species excretes the same enzyme. The name *Stylidium* is derived from the Greek—*stylos* (column or pillar), which refers to the distinctive reproductive structure that many of the Australian species possess. The species epithet *subulatum*, means awl shaped in Latin, referring to the leaf shape.

You can view the NZPCN website factsheets for *Stylidium subulatum* at: http://www.nzpcn.org.nz/flora_details.aspx?!D=1394

a raft of plant groups most New Zealand botanists, at least initially, would prefer to ‘put to one side’. Not for her the showy Ranunculaceae, Asteraceae or Apiaceae. No, Elizabeth was tasked with revising the less than charismatic Cyperaceae, Centrolepidaceae and Juncaceae. These families are quite a departure from her initial Masters of Science research which was into the growth habit and reproductive biology of the New Zealand members of what was then known as *Cotula* (now *Leptinella*) (Edgar 1958), or her PhD which dealt with mitotic tissue in *Lonicera nitida* (Edgar 1961).

Elizabeth tackled these ‘hard’ groups because that was what she was told to do. In this way she became the foundation behind three of the New Zealand Flora series, all about monocotyledonous plants, namely Moore & Edgar (1970), Healy & Edgar (1980) and finally Edgar & Connor (2000, 2010). The last Flora, was the long awaited ‘Grass Flora’ published some 17 years after I first asked about it, and, most pleasingly, with Elizabeth as senior author. Indeed, Henry Connor insisted that he would not have seen it otherwise.

I once asked Elizabeth if she had enjoyed working on these ‘less than charismatic’ plant families, to which she gave some thought and then replied ‘I rather enjoyed *Luzula*’. I suspect, from re-reading our correspondence, she also ‘rather enjoyed *Lachnagrostis* and *Trisetum*’—she did not like *Juncus* though—not much at all.

Giving considerable thought to a taxonomic problem was Elizabeth’s hallmark, just as it was for her never to impose on anyone else unless invited. I first became aware of this when working in CHR (now the ‘Allan Herbarium’, managed by Landcare Research, the herbarium and its staff of which *pro-parte* are now the successor to DSIR Botany Division), I noticed that Elizabeth was quietly working near me. It was only when I recognised her and gave a greeting that she came up to ask some questions about *Bromus*. When asked why she hadn’t just asked me straight away she said ‘Because you looked so busy’.

Over the 36 or so years in which I knew Elizabeth I was always surprised by the little admissions she would let drop. For example, on her retirement she cheerfully told me about her desire to get back to playing the French horn—she knew I had once played the same instrument but never let on that she did. I was surprised to hear that on retirement she volunteered for St John’s Ambulance though baulked at the idea of driving one. From time to time, in Christmas cards or letters, she would let in little vignettes of her private life, or her non-botanical thinking. For example, I well remember her pleasure on reading that I had visited the assumed site of Julius Caesar’s cremation, and her comments about the appropriateness of my finding *Bromus sterilis* growing around the Forum ruins in old Rome. Elizabeth enjoyed playing with names, and helped me with some epithets, *Hebe perbella* for example, as well as explaining the various nuances and tricks of Latinisation—a language that I, alas, never learned.

Elizabeth liked to hear about my growing family, and enjoyed receiving pictures and letters about my sons’ antics. It is much to my regret that as my sons got older, I sent fewer of these. Time and other work-related tasks got in the way.

I last saw Elizabeth at Henry Connor’s funeral, in August 2016. We had a brief conversation, too brief in hindsight. The gathering was rather large, and in some ways perhaps too boisterous for Elizabeth’s liking. I got called away. I never saw Elizabeth again.

As I write this, I recollect fondly her excitement on working out that the ‘key’ to *Lachnagrostis* was stamen length, her delight in telling me via correspondence (January 1990) that ‘you can work them



Fig. 2. Dr Elizabeth Edgar FLS at her 80th Birthday celebration. Photo: Allan Herbarium, Landcare Research. Used with permission from Dr Ines Schönberger.

all out on stamen length alone’ and my frank stupidity in pointing out that stamens were not very practical for the field botanist. I was right, she conceded, but perhaps I was wrong to have said so. To be fair Elizabeth was not a field person, she worked with herbarium material pretty much exclusively. It was a rare occasion indeed to get Elizabeth into the field. Nevertheless, over the years I contributed to Elizabeth’s understanding of New Zealand grasses by painting in the backgrounds that dead herbarium specimens could not—I offered her little details of their ecology, cytology, ethnobotany and added to her list of problems with additional specimens, and range extensions. All of this she accepted with good grace, and in a way that is now increasingly uncommon in New Zealand, acknowledgement of these little additions. Pride of place on my bookshelf is an autographed 2010 copy of the second edition of the New Zealand Grass Flora (Edgar & Connor 2010), sent to me by Elizabeth and Henry with a lengthy letter of gratitude for my help in both editions (de Lange 2017).

Earlier I had mentioned Elizabeth’s skills as a nomenclature expert. These skills came to the fore in her ‘Nomina’ series, which she started in 1971 (Edgar 1971) and ended in 1987 with Edgar & Connor (1987)—an immensely popular paper with, at the time of writing 469 citations (<https://www.tandfonline.com/doi/abs/10.1080/0028825X.1987.10409961> accessed January 10 2019). However, her nomenclatural expertise was for me anyway, best demonstrated by her painstaking research into the very complicated typification of *Rhopalostylis baueri* and *R. sapida*. All done by Elizabeth for a Masters of Science student (Fritha Stalker) at the request of Ewen Cameron (Curator of Botany, Auckland Museum Herbarium (AK)). When I came to write this all up for a paper about Norfolk Island (de Lange et al. 2005) I was presented with Elizabeth’s many pages of very detailed handwritten notes on this typification, all neatly ordered, and very, very, precise. When I asked Elizabeth if she would like to be co-author on this paper, she refused because she said, she had not been to Norfolk Island, and she was only helping out as best she could. This was classic Elizabeth. It is to my shame that I didn’t push the point—Elizabeth should have been an author. Still when I had discovered what became *Trisetum serpentinum* on the serpentinised zone at North Cape, Te Pahi, a very significant range extension of a hitherto assumed northern South Island serpentinite endemic I was delighted that Elizabeth accepted an offer of co-authorship. She had after all identified the species for me (I had thought it was *Trisetum* “mountain” (now *T. lasiorhachis*)), so I was pleased when I suggested co-authorship that she said she was delighted to ‘accept the offer’. Alas that our observation was only written in a newsletter (de Lange & Edgar 1998). The only other time we co-authored anything, I was very much the junior author in a paper describing two new limestone endemics from North Otago (Molloy et al. 1999).

In a funny way Elizabeth also introduced me to her main co-author Henry Connor. Henry, as I have noted elsewhere (de Lange 2016), had his traits and my first meetings with him in the late 1980s and early 90s had ‘not gone so well’. As such, for those grasses that I found and could not work out, I made sure to pass these to Elizabeth. On one occasion she passed on a stipoid grass I had found to Henry, thus setting off a strange, at times strained, but definitely fruitful working relationship with him.

Speaking of ‘traits’ I believe that Elizabeth’s best trait was to note her ‘taxonomic’ uncertainty. When working with herbarium material it is not always easy to pick up on subtle but potentially important differences that can be seen in the field. Elizabeth knew this, and although her final assessments might at times be viewed as ‘conservative’, where there was variation of potential taxonomic significance she at least said so. In some cases, these little notes provided the impetus for the field botanists to get better material of the problematic footnotes. These actions often resulted in Elizabeth and Henry Connor recognising new species. I also found that



Fig. 3. Dr Elizabeth Edgar FLS and Dr Henry Connor FRSNZ—authors of the New Zealand Grass Flora (Vol. V of the New Zealand Flora Series). Photo taken at Elizabeth’s 80th birthday celebration.

Elizabeth was only too happy to revise and update her previous treatments; the formal recognition of *Dichelachne lautumia* is a case in point, that species having initially been treated as a problem to be resolved under *Deyeuxia quadriseta* (Edgar 1995; Edgar & Connor 1999).

Elizabeth was a quiet, talented achiever. She did not like the ‘limelight’ and tended to avoid big gatherings. She liked to hear about people as much as plants, and had a cheerful disposition. In a flora that is perhaps over-populated with epithets honouring people, I think it is still a well-deserved tribute to Elizabeth’s skills that, in New Zealand she is honoured by three endemics, all monocotyledonous plants no less, a sedge—*Carex edgariae*, an iris—*Libertia edgariae*, and a rush—*Juncus edgariae*. Shame there isn’t a New Zealand *Luzula*.

‘*Kua hinga te Totara i te wao nui a Tane*’

Acknowledgements

I would like to thank Dr Rhys Gardner and Jeremy Rolfe for their thoughts on a draft of this article and Dr Ines Schönberger who provided the images of Elizabeth used here.

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A new *Cardamine* for the Central North Island

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During February 2012 one of us (PdL) participated in a botanical survey of alpine flush habitat on Mt Ruapehu. That survey organised by Nick Singers (then of the Taupo/Tongariro Conservancy, Department of Conservation) was aimed at determining the extent of alpine flush habitat on the mountain between Whakapapa and Turoa skifields within an altitudinal band between 1600 and 1900 metres above sea level.

It soon transpired that the alpine flushes of this part of Mt Ruapehu were a treasure trove of interesting plants. Many of them were new records for the Tongariro National Park, the Central Volcanic Plateau and even the North Island. Several discoveries were significant range extensions of plants either scarce in the alpine zone of, or hitherto unknown from, the North Island e.g., *Cardamine mutabilis*, *Carex berggrenii*, and *C. lachenalii* subsp. *parkeri* (see below). Although many of these finds have not yet been written up, they can all be found listed within the most recent compendium of the vascular plant flora of the Tongariro Ecological District (Wilcox & Singers 2018).

During the survey particular attention was given to *Cardamine* as this genus was then being actively revised by PBH. Of the specimens collected and sent to PBH most of them already fitted into species and tag names as then understood. However, one plant discovered in an alpine flush near Turoa appeared to be new.

This new *Cardamine*, though allied to *C. corymbosa*, differed from that species and other species in having distinctive sprawling, usually prostrate or decumbent racemose inflorescences, whose lateral branch axils produce vegetative leafy rosettes (Fig. 1A–E). From *C. corymbosa* these plants also differed by having thicker leaves with moderately hairy upper leaf surfaces. Despite these distinctions, what came to be known as *Cardamine* “Turoa” was not described by Heenan (2017).



Fig. 1. *Cardamine panatohea*. (A) Young flowering raceme sprawling through floating sud dominated by the thalloid liverwort *Marchantia berteroana*. (B) Mature flowering and fruiting raceme. Raceme axils sporting vegetative growth. (C) Late season vegetative growth produced within raceme axils. This growth will in time develop into small rosettes. (D) Late season racemes sporting well developed vegetative rosettes, some with roots, in the raceme axils. (E) Late season plants dying down for winter. Photos: (A, B, C) Jeremy R. Rolfe; (D,E) Peter J. de Lange.

The decision not to formally recognise *Cardamine* “Turoa” stemmed from a necessarily strict set of criteria that Heenan (2017) applied to members of the morphologically diverse and so very confusing *Cardamine corymbosa* complex. Those criteria required that potentially new segregates had to be found in two or more discrete populations and that the defining characteristics had to prove stable in cultivation.

At the time of the New Zealand *Cardamine* monograph’s publication, *C.* “Turoa” was known from just the one location in which it was discovered in 2012 (Fig. 2). So during April 2018 PdL was contracted to survey for further populations of *Cardamine* “Turoa” by the Department of Conservation. After four days of survey an additional population, comprising a mere handful of plants was located within the same catchment containing the original find.



Fig. 2. The type locality of *Cardamine panatohea* near Turoa, Mt Ruapehu. Photo: Peter J. de Lange.

That discovery prompted the taxonomy of *Cardamine* “Turoa” to be revisited. In November 2018 *Cardamine* “Turoa” was formally recognised at species rank as *C. panatohea* (Heenan & de Lange 2018).

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Cardamine panatohea was bequeathed its species name by Ngāti Rangi who hold mana whenua over the portion of Mt Ruapehu in which so far, the new species is only known. The name draws together ‘panapana’ Te Reo Māori for *Cardamine*, and ‘titohea’ a Te Reo term usually translated to mean ‘barren’. However, for Ngāti Rangi ‘titohea’ refers specifically to the land above the bush line on Ruapehu which to Whanganui tribes is considered a sacred area where special species grow. Thus the name ‘*panatohea*’ can be translated to mean the *Cardamine* that grows in the sacred land above the bush line’ (E. Pue pers. comm.), the name serving as a reminder to all nations that the alpine zone of the Central Volcanic Plateau is a special habitat with special plants and animals that should be cherished and respected by people.

The new *Cardamine* has an unusual habitat, plants growing in a water-saturated, floating bryophyte-dominated sud that has developed in pockets amongst masses of *Hierochloe redolens*. The sud vegetation is dominated by the moss *Breutelia pendula*, and liverworts *Marchantia berteroana* and *Riccardia furtiva* (Fig. 3, 4).



Fig. 3 (left). The type locality of *Cardamine panatohea* near Turoa, Mt Ruapehu showing extent of alpine flush habitat.

Fig. 4 (right). Macro-vegetation at the type locality of *Cardamine panatohea*. The main grass in this image is karetu (*Hierochloe redolens*). Photos: Peter J. de Lange.

Other sparse associates include *Viola cunninghamii*, *Leptinella* aff. *squalida*, *Montia fontana*, *Nertera ciliata* and *Ranunculus carsei*. The water-saturated floating sedge occupied by *Cardamine panatohea* is not only an unusual habitat for a New Zealand *Cardamine* (Heenan 2017, Heenan & de Lange 2018) but it is also a scarce one on Mt Ruapehu. Surveys of the alpine flushes of the Central Volcanic Plateau mountains undertaken between 2012 and 2018 have revealed that very few of these flushes have the same dominance of *Breutelia pendula*, *Marchantia berteroana* and *Riccardia furtiva* as the two sites in which *Cardamine panatohea* has been found. This may explain why *Cardamine panatohea* was not discovered before 2012 and also why it is such an uncommon plant.

As such, *Cardamine panatohea* is a threatened species. Prior to its formal recognition it had already been listed, using the name *Cardamine* (p) (CHR 640349; Turoa) as ‘Threatened – Nationally Critical’ qualified ‘DP’ [Data Poor] by the New Zealand Indigenous Vascular Plant Threat Assessment Panel (de Lange et al. 2018). That listing was made on the basis of the area of occupancy (<1 ha), estimated population size (30–40 plants) and the fact the *Cardamine* is threatened by animal browse and loss of habitat through trampling. Heenan & de Lange (2018) retained the same threat listing.

The recognition of *Cardamine panatohea* means there are 42 species of *Cardamine* in New Zealand (Heenan 2017; Heenan & de Lange 2018), quite a jump from the six accepted by Allan (1961). The new species is also, as far as we can tell, the only vascular plant endemic to the Central Volcanoes—this is so unusual we suspect that this perceived endemism is anomalous. The presence of *Cardamine panatohea* on the south-western flank of Mt Ruapehu may help explain this anomaly. During the alpine flush survey that led to its discovery, populations, and in some cases individual plants of the ferns, *Asplenium richardii* and *Polystichum cystostegium*; the sedges, *Carex acicularis*, *C. berggrenii*, *C. druceana*, *C. enysii*, *C. lachenalii* subsp. *parkeri*, *Isolepis caligenis*; grasses, *Poa lindsayi*, *Rytidosperma nudum*, *R. pulchrum*, and the herb *Cardamine mutabilis*, were also discovered. These are species that are not known from elsewhere in Tongariro National Park, and all are either scarce in the North Island, or only known from that island from Mt Ruapehu (being otherwise confined to the South Island). During the 2012 survey volcanologist Dr Harry Keyes (pers. comm.) noted that the area in which these plants were found was protected from the full impact of the Taupo Pumice Eruption of c.200 AD (Barker et al. 2014; Wilson 1993). Possibly then, these species, including the newly recognised *Cardamine panatohea*, are all ‘survivors’ of a formerly more diverse Central North Island alpine flora that was eliminated from the other high points by that eruption or earlier ones. We really don’t know. In the meantime, now that *Cardamine panatohea* has been described it will be interesting to see if it is discovered elsewhere in New Zealand.

Acknowledgements

We would like to thank Ngati Rangī, especially Elijah Pue and Che Wilson for facilitating the korero about *Cardamine* and for provision of the species epithet ‘*panatohea*’. We thank Harry Keyes for his thoughts on the Mt Ruapehu alpine flora in relation to the Taupo Pumice Eruption, and Nick Singers, Matt Renner, Jeremy Rolfe, Lois Allison-Cooper, and Amanda Haigh for assistance in the field and supporting the research that led to the formal recognition of *Cardamine panatohea*.

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TAXONOMY FOR PLANT CONSERVATION – RUIA MAI I RANGIĀTEA

24–28 November 2019, Wellington, New Zealand

The Australasian Systematic Botany Society and the New Zealand Plant Conservation Network are proud to announce our joint conference *Taxonomy for Plant Conservation – Ruia mai i Rangiātea* in November 2019.

Attending this conference is a must do for anyone who is passionate about science and conservation of native plants in New Zealand and Australia.

This conference will be held at Wellington's premier venue, the Museum of New Zealand Te Papa Tongarewa.

- Get up to date with our stimulating and comprehensive range of speaker presentations
- Explore Wellington's forests and rugged coastlines on our field trips
- Network with people involved in a wide variety of plant conservation work
- Discuss and learn about a range of issues at our workshops
- There will be opportunities to tour the Te Papa herbarium and Otari Native Botanic Gardens

Programme in brief

Sunday 24 November

- Workshops at various locations; welcome reception at Te Papa; after-hours access to new Taiao-Nature exhibition

Monday 25 November

- First day of presentations; public lecture in the evening

Tuesday 26 November

- Second day of talks; conference dinner in the evening on Te Marae at Te Papa

Wednesday 27 November

- Field trips at various locations

Thursday 28 November

- Final day of talks; conference closes; public lecture in the evening

A more detailed programme, calls for abstracts and registration fees will be available in early 2019.

About the Australasian Systematic Botany Society

Our 2019 conference will be in partnership with the Australasian Systematic Botany Society (ASBS). With over 300 members, the ASBS is an incorporated association of people with professional and amateur interests in Australasian systematic botany. The aim of the Society is to promote the study of plant systematics in Australasia.

Plant systematics includes taxonomy and nomenclature, and is the science that unravels the relationships and evolutionary history of the flora. It provides the framework for all comparative biology and is essential for the identification and conservation of threatened species, the management of native vegetation, and the detection of naturalised species.

Conference Sponsorship

Participating as a sponsor at the conference will lead you to a range of people involved in plant conservation, taxonomy and related fields and demonstrate your level of support and commitment to

native plant conservation. Our 2019 ASBS-NZPCN joint conference has several sponsorship packages available, providing sponsors with a choice of exposure related to financial commitment.

The 2019 ASBS-NZPCN joint conference can provide your organisation with:

- Exposure at a premier conference devoted to leaders in plant conservation work and scientific research.
- Time to network with industry colleagues and key decision makers.
- A cost effective way to reinforce your organisation's brand to a relevant audience.
- Access to a broad network of potential partners from the public and private sectors.
- Marketing opportunities including online visibility and associated conference material.

We therefore invite you to discuss with us options available to tailor-make a sponsorship package that best suits your organisation.

Conference contacts and information

- Key conference organisers: Rewi Elliot (NZPCN) and Heidi Meudt (ASBS).
- To contact the conference organisers, email: plants2019nz@gmail.com
- Updates: follow us on our Facebook page: [ASBS NZPCN Wellington 2019](https://www.facebook.com/ASBS-NZPCN-Wellington-2019)
- Conference website: https://systematics.ourplants.org/asbs_2019/

Lucy Cranwell Student Grant for Botanical Research

Call for Applications for 2019

Applications are invited for the Lucy Cranwell Grant of \$2,500 from the Auckland

Botanical Society to assist a student studying for the degree of PhD, MSc, BSc (Hons) or B. Appl. Sci. in any tertiary institution in New Zealand whose thesis project deals with some aspect of New Zealand's flora and vegetation. Priority will be given to projects relevant to the northern half of the North Island.

The research project to be supported will be chosen on the basis of appropriateness to the objects of the Society, namely to encourage the study of botany, and to stimulate public interest in the plant life of New Zealand and its preservation, conservation and cultivation.

The grant will be administered by the student's supervisor as a contribution to expenses associated with the project.

Closing date for applications: **5pm Friday 15 February 2019**

A copy of the Application Form and the Rules of the award may be downloaded from the Auckland Botanical Society website under: Lucy Cranwell Fund

<https://sites.google.com/site/aucklandbotanicalsociety/>

Contact for enquiries:

ABS Secretary

Email: aucklandbotanicalsociety@gmail.com

UPCOMING EVENTS

If you have events or news that you would like publicised via this newsletter please email the Network (events@nzpcn.org.nz).

Auckland Botanical Society

Field Trip: Saturday 16 February to Awaawaroa Bay, Eco Village, Waiheke Island. **Cost:** \$30.00 per person, with the ferry costs to be each participant's responsibility.

Leader: Rob Morton. **Bookings:** Through Mike Wilcox for transport arrangements, email: mike.wilcox@xtra.co.nz.

Rotorua Botanical Society

Field Trip: Sunday 11 February to Puaiti Scenic Reserve, Atiamuri. **Meet:** 8.00am at the Covention Centre carpark, Fenton St, Rotorua or corner of Te Kopia and Puaiti Roads at 8.45am. **Grade:** Medium.

Leader: Paul Cashmore, email: pcashmore@doc.govt.nz; ph: 07 349 7432 (wk); 027 650 7264 (mob).

Whanganui Museum Botanical Group

Field Trip: Sunday 17 February to Kittos' Bush, Tokomaru West Road, Brunswick. **Meet:** 8.30am at 16 Virginia Heights for car pooling. **Bring:** Sturdy footwear, drink, lunch, walking stick, hand lens and binoculars.

Leader: Colin Ogle, email: robcol.ogle@xtra.co.nz; ph: 06 347 8547.

Wellington Botanical Society

Field Trip: Saturday 9 February to look at coastal and estuarine vegetation at various locations. **Meet:** 9.00am at the end of Pascoe Avenue, Mana (off SH1/Mana Esplanade). **Bring:** Binoculars for birdwatching.

Leader: Frances Forsyth; ph: 021 072 5210.

Meeting: Monday 18 February at 7.30pm for a presentation by Professor Philip Hulme FRSNZ from Lincoln University titled 'Ornamental to Detrimental'.

Venue: Lecture Theatre M101, ground floor Murphy Building, west side of Kelburn Parade.

Field Trip: Saturday 2 March to Steenkamp property, Long Gully. **Meet:** 9.00am at Brooklyn Turbine carpark.

Leaders: Chris Horne; ph: 04 475 7025 or 027 474 9300; Jon Terry; ph: 04 971 1631 or 021 168 1176.

Canterbury Botanical Society

Meeting: Monday 4 February at 7.30pm for a talk by Dr David Glenny, Manaaki Whenua, titled 'The willow flora of New Zealand: A key to what has established and what is in trial stage'.

Venue: Upper Riccarton Library, 71 Main South Road.

Botanical Society of Otago

Meeting: Wednesday 13 February at 5.20pm for a presentation by Peter Johnson from Landcare Research titled 'Volcanoes: ancient to active, with or without fumes, steam, scoria, sparks, ash, lava ... what places for plants to live! **Venue:** Room 215, 2nd Floor, Zoology Benham Building, 346 Great King Street.

Contact: Gretchen Brownstein, email brownsteing@landcare.research.co.nz.

Field Trip: Saturday 16 February to Blackstone Hill Conservation Area. **Meet:** 8.00am at the Botany carpark.

Contact: David Lyttle, email: djl1yttle@gmail.com; ph: 03 454 5470.
