



# TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

No. 167

November 2017

Deadline for next issue:  
Wednesday 15 November 2017

## 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](mailto:events@nzpcn.org.nz)

### Postal address:

c/- 160 Wilton Road  
Wilton  
Wellington 6012  
NEW ZEALAND

## PLANT OF THE MONTH, p. 2



*Pachycladon wallii*. Photo: Rowan Hindmarsh-Walls.

## Lawrence James Metcalf QSO, AHRIH, 18 August 1928 – 18 August 2017

Murray Dawson ([dawsonm@rnzih.org.nz](mailto:dawsonm@rnzih.org.nz))



Lawrie Metcalf in front of a beech tree near Mt Arthur, Nelson. Photo: Melanie Kinsey.

Lawrence ('Lawrie') Metcalf was one of New Zealand's most renowned horticulturists, and a distinguished author and conservationist. He had a special love of the native plants of New Zealand and, over the decades, wrote many books and gave numerous talks, demonstrations, and lectures, generously sharing his knowledge and experience. Not only was he known for his knowledge of the native flora, but Lawrie was also an expert of plants from around the world.

### Working career

Lawrie Metcalf was born in Christchurch in 1928. When Lawrie was still at primary school (in Form 2 as it was in those days), he was given six native tree seedlings by Lance McCaskill (1900–1985), a notable educator and conservationist. At that time, Dr McCaskill was a lecturer in agriculture and biology at Christchurch Teachers' Training College. Through his encouragement and enthusiasm to grow New Zealand native plants, Lawrie chose horticulture as his profession from this early age.

After leaving school, Lawrie first entered horticulture in 1945 working at Nairns' Nursery in Christchurch for nine months. In 1946, Lawrie transferred as a Horticultural Trainee with the Christchurch Domains Board. At that time, the Domains Board managed the Christchurch Botanic Gardens and Hagley Park.

In 1948, Lawrie left Christchurch for New Plymouth where he worked for one year with New Zealand's largest plant nursery, Duncan and Davies Ltd. Lawrie then left New Zealand for Australia and worked for a year at the Melbourne Botanic Gardens and

## PLANT OF THE MONTH – *PACHYCLADON WALLII*



*Pachycladon wallii*. Photo: Rowan Hindmarsh-Walls.

The plant of the month for October is *Pachycladon wallii*, one of 10 *Pachycladon* species endemic to New Zealand. The species is adapted to harsh habitats in the mid to high alpine zone. It is found on shaded overhanging bluffs and rock ledges, generally out of the reach of browsing animals. It has a restricted distribution, being found only in the higher alpine areas of southern Central Otago and the Eyre, Garvie, and Umbrella Mountains in northern Southland. The plants form bright, lush basal clumps, with taller unbranched flowering stems well overtopping the rest of the plant. The species is similar in appearance

to a very large *Cardamine*. The white flowers are quite large, and create a stunning contrast to the bright green foliage. The leaves are fleshy, virtually hairless, and deeply divided.

The species is similar to the other larger glabrous-leaved *Pachycladon* species, but differs in that it generally has unbranched flowering stems, and has leaves that are very deeply divided. As the species has a restricted distribution, it is sympatric with only two other species, *P. novae zelandiae* and *P. cheesemanii*, both generally having quite hairy leaves, as opposed to the glabrous leaves of *P. wallii*.

The species is endemic and is currently listed as At Risk—Naturally Uncommon because of its confined distribution, but is likely to be in decline because of browse pressure. It is highly palatable and is eagerly browsed by hares, chamois, goats and deer. The species apparent habitat preference of shaded unreachable bluffs is quite possibly an artefact of browse pressure. It is likely to have been present in shaded screes and more accessible locations before the introduction of exotic mammal browsers. Being a brassica, the species is probably easily cultivated, but should not be removed from the wild.

The genus *Pachycladon* is small and restricted to New Zealand (as far as I'm aware [R Hindmarsh-Walls]). The genus name *Pachycladon* is derived from Greek words meaning 'thick- branched' probably referring to the very thick basal stems of plants in this genus. The species is named after the late Arnold Wall, who was a famous New Zealand botanical writer and plant enthusiast.

You can view the NZPCN website factsheet for *Pachycladon wallii* at: [http://www.nzpcn.org.nz/flora\\_details.aspx?ID=615](http://www.nzpcn.org.nz/flora_details.aspx?ID=615)

another year at the Adelaide Botanic Gardens. From there, Lawrie moved to the UK where he found work at Ingwersen's Hardy Plant Nursery in Sussex; it specialised in alpine plants. He stayed there for about a year, after which he spent a short time working with trees and shrubs at Hillier Nurseries, one of the most famous nurseries in the UK. Lawrie then went on to be a gardener at Winkfield Place in Berkshire for two years. This was where the famous British educator, florist and author, Constance Spry, together with Rosemary Hume were running a Domestic Science School for girls.

Lawrie returned to New Zealand in 1955 to take up the position of Assistant Curator of the Christchurch Botanic Gardens. In 1968, through a restructure, the Assistant Curator position became Assistant Director Botanic Gardens, which he held until 1977. During these 22 years, Lawrie made significant

contributions to the development and management of the Christchurch Botanic Gardens. His vision, skills and determination focused on establishing the Gardens on a more scientific and educational footing for the benefit of all users – the general public, students, and botanical and horticultural professionals. Lawrie managed a staff of 39 and initiated a sweeping programme to improve the plant collections including their documentation and labelling.

Lawrie devoted a great deal of time to building up the New Zealand Plant Section of the Gardens, particularly through excursions to collect plants from various areas. He collected plant material from throughout New Zealand and spent much of his time collecting plants in the mountain regions of the South Island. In 1958 and 1960, he accompanied the Canterbury Museum expeditions to remote areas of Fiordland as the official botanist. Lawrie collected live and herbarium specimens, which added to the body of knowledge of the areas visited. In 1961, Lawrie spent a month in New Caledonia where he made extensive collections of plants to bring back to New Zealand for both horticultural and scientific purposes.

Lawrie developed and expanded the international seed exchange programme for the Christchurch Botanic Gardens. Exchanges were conducted with more than 300 botanic gardens throughout the world, exporting New Zealand native plant seeds and in return receiving seeds of interesting exotics for trialling and growing on in the Christchurch Botanic Gardens.

In 1977, Lawrie moved to Invercargill to take the position of Director of Parks and Recreation for the Invercargill City Council. Here he had a staff of more than 100 with a further 100 involved in various training schemes to help the unemployed.

Apart from his day-to-day supervision of general parks maintenance, Lawrie instigated large scale improvements to Queens Park. These included construction of a garden area for the cultivation of sub-Antarctic plants (in association with the Roaring Forties display in the adjoining Southland Museum) and using the Jessie Calder bequest to create a special garden area in Queens Park, featuring historic shrub roses, heaths, and dwarf and low-growing conifers.

Lawrie also oversaw intensive development of the 2,000 ha Sandy Point Domain to make it more appealing and accessible to the public. This involved the planning and construction of walking tracks, park interpretation, enhancement of native plants and other environmental and historic areas within the Domain.

Lawrie commenced the development of Donovan Park as a farm park, along with the construction of a new nursery for propagation and planting up the park. He also oversaw the creation of the Sutherland Rose Garden, one of the highlights of Anderson Park.

Throughout his career, Lawrie inspired young horticulturists and trainees to continue their studies and expand their knowledge of plants, horticulture and park management. Many of those inspired by Lawrie went on to hold senior positions in horticulture and park management throughout the country.

### **Home life**

Lawrie Metcalf was a patient and loving husband, father, and grandfather. He married his wife Lena in 1962, and they went on to have three children, Paul, Sarah, and Victoria. Grandchildren followed, providing a rich and extended home life. His love of the outdoors, and photographing and collecting plants, led to many family excursions together.

Since his official 'retirement' in 1992, Lawrie actively continued his writing and horticultural interests from his home in the Nelson area. At an age when most people have well and truly retired to a quieter life, Lawrie and Lena developed their Stringers Creek property ('Greenwood') in Nelson into a large rambling garden full of native and exotic plants, and ran a boutique mail order nursery specialising in ornamental grasses and groundcover plants.

In 2012, Lawrie and Lena moved into their new house in Lincoln, Canterbury, to be closer to family.

Unfortunately, soon after this new chapter in their lives, Lawrie's health declined and, in 2015, he went into care at Anthony Wilding Retirement Village in Halswell, Christchurch. He passed away peacefully on the day of his 89th birthday.



Lawrie and Lena Metcalf at their former 'Greenwood' property in Nelson. Photo: Melanie Kinsey.

### **Memberships**

Lawrie Metcalf was a member of the Canterbury Botanical Society, joining in 1955, and was President for three years. He was also a member of the International Dendrology Society and a Fellow of the New Zealand Institute of Parks and Recreation Administration.

Lawrie joined the Royal New Zealand Institute of Horticulture (RNZIH) in September 1957 and made numerous contributions, including serving on the National Executive. He was an examiner for oral, practical and written exams for many years. In 1960, he was actively involved in the revision of the National Diploma of Horticulture (NDH) prescriptions.

Lawrie was the RNZIH Convenor of the Nomenclature Committee, responsible for the registration of cultivars of New Zealand native plants, including *Coprosma*, *Hebe*, *Leptospermum*, *Phormium* and *Pittosporum*. He held this position of Registrar of New Zealand native genera for the International Cultivar Registration Authority (ICRA) for a remarkable 55 years, since the RNZIH was first accepted as an authority in 1958.

In recognition of his contributions to horticulture, he was made a Fellow of the RNZIH (FRIH) and became an Associate (AHRIH) in 1988.

### **Recognition and awards**

1957: The first recipient of the David Tannock Memorial Prize, awarded by the RNZIH to "the candidate gaining the highest marks in the Oral and Practical Stage III examination for the National Diploma in Horticulture".

1958: National Diploma of Horticulture (NDH) from the RNZIH.

1959: The RNZIH Cockayne Gold Medal for the most successful candidate to complete their NDH. This included his thesis on New Zealand alpine plants.

1975: Fellow of the New Zealand Institute of Park and Recreation Administration.

1978: The Loder Cup, presented to "encourage and honour New Zealanders who work to investigate, promote, retain and cherish our indigenous flora".

- 1988: Award of Associate of Honour (AHRIH) of the RNZIH, an honour restricted to those who have “rendered distinguished service to horticulture in New Zealand”.
- 1988: Ian Galloway Outstanding Achievement Award, which “Recognises outstanding contribution in the Parks, Amenity Horticulture and Open space”.
- 1991: Veitch Memorial Medal, to “persons of any nationality who have made an outstanding contribution to the advancement and improvement of the science and practice of horticulture”. Lawrie is one of only a few New Zealanders to have received this prestigious medal, the highest honour that the Royal Horticultural Society awards to people outside the UK.
- 1999: Honorary Fellow of the New Zealand Institute of Landscape Architects, to “A person distinguished by scientific, artistic, literary or other eminent attainment whose activities promote or have promoted the aims and objectives of the Institute”. Lawrie was one of only six Honorary Fellows of the NZILA.
- 2010: Appointed a Companion of the Queen’s Service Order (QSO) for services to horticulture and conservation.
- 2017: The Christchurch Botanic Gardens Herbarium was officially renamed the “Lawrie Metcalf Herbarium”.

### **Publications**

Lawrie Metcalf has done more than probably anyone else to encourage New Zealand gardeners to use our native plants. He began actively writing around 1960, and today is widely recognised as New Zealand’s most authoritative writer on the cultivation of our native plants with numerous publications to his credit. His publications include cultivation, propagation, photographic guides, and cultivar registers of native plants.

Lawrie’s best known and most enduring book is the iconic *The Cultivation of New Zealand Trees and Shrubs*, first published in 1972, and so successful that it has been republished and revised more than five times. This outstanding work was a real labour of love, and involved many evenings and weekends of Lawrie taking photographs in the field and making drawings from home, hand-writing the text and botanical descriptions, and Lena painstakingly typing and retyping the manuscript. What a remarkable and inspirational gift they both gave New Zealanders.

Lawrie’s books have achieved such popularity by successfully bridging the gap between horticulture and systematic botany and imparting botanical knowledge in a clear and comprehensible manner. This was realised right from Lawrie’s first book in 1972. In the foreword of *The Cultivation of New Zealand Trees and Shrubs*, Lance McCaskill referred to Lawrie’s book as being the first comprehensive work since Dr Leonard Cockayne’s *The Cultivation of New Zealand Plants*, which was originally published in 1923. McCaskill wrote: “But Cockayne’s book has long been out of print, and there has since developed a pressing need for up-to-date knowledge, for an illustrated book that would give us simple but accurate botanical descriptions of our native trees and shrubs, and that would help us choose suitable examples for specimen trees, for groups, for colour, for hedges, for dry places, for wet areas; a book to tell us how to propagate and cultivate them, and how to control pests and diseases. Surely this would appear an impossible task: but Mr Metcalf has achieved the apparently impossible.” This achievement is made all the more remarkable by the fact that Lawrie did not have a formal science background in botany or plant ecology.

To cover more than the trees and shrubs of this first work, books that followed comprehensively showcase native herbaceous plants, grasses, alpines, and groundcovers. Lawrie’s book on native grasses rode the wave of popularity for using them in landscaping, just as his trees and shrubs book heralded the rise in popularity for growing native New Zealand plants.

As part of his cultivar registration duties, Lawrie compiled the major International Register of hebe cultivars, published by the RNZIH in 2001. This 232-page register represents 15 years of painstaking research by Lawrie and is an invaluable and authoritative reference to more than 800 cultivars.

His most recent book, *New Zealand Native Ground Cover Plants*, was co-authored by Roy Edwards in 2014. Until recently, Roy was a long-standing lecturer in horticulture at Lincoln University (he retired in 2017), and their two-year Lincoln-based collaboration was a productive one, filling another gap in the horticultural literature of our native plants.

A selection of titles by Lawrie Metcalf includes:

1972–1991: *The Cultivation of New Zealand Trees and Shrubs*

1993: *The Cultivation of New Zealand Plants*

1995–2007: *The Propagation of New Zealand Native Plants*

1996: *Alpine Plants of New Zealand: Mobil New Zealand nature series*

1998–2008: *The Cultivation of New Zealand Native Grasses*

2000: *New Zealand Native Rock Garden and Alpine Plants*

2000: *New Zealand Trees and Shrubs*

2001: *International Register of Hebe Cultivars*

2002: *A Photographic Guide to Trees of New Zealand*

2003: *A Photographic Guide to Ferns of New Zealand*

2006–2009: *A Photographic Guide to Alpine Plants of New Zealand*

2006: *Hebes – a Guide to Species, Hybrids and Allied Genera*

2006: *Know Your New Zealand Trees*

2009: *Know Your New Zealand Native Plants*

2014: *New Zealand Native Ground Cover Plants: A Practical Guide for Gardeners and Landscapers*.

In addition to his books, over the years Lawrie contributed to many local and overseas horticultural and botanical publications. Lawrie's passionate plant knowledge will live on through these writings and the inspiration he has given to so many, including myself. It was an honour to know him.

## References

Anon. 1989: Citation for the Award of Associate of Honour AHRIH (NZ) 1988: Lawrence James Metcalf. *Annual Journal of the Royal New Zealand Institute of Horticulture*, 16: 43–44.

Kinsey, M. 2006: Lawrie Metcalf 'More than just Hebes'. *New Zealand Garden Journal* 9(2): 24–25. (Available at [www.rnzih.org.nz/RNZIH\\_Journal/Pages\\_24-25\\_from\\_2006\\_Vol9\\_No2.pdf](http://www.rnzih.org.nz/RNZIH_Journal/Pages_24-25_from_2006_Vol9_No2.pdf)).

*Posted to the New Zealand Institute of Landscape Architects website on 02/10/2017; published here with permission*

## David Given Threatened Plant Scholarship

Applications are now invited for the award of a David Given Threatened Plant Scholarship. The scholarship is open to New Zealand residents or citizens but the work could involve overseas researchers who collaborate with the New Zealand principal researcher. Threatened species and communities can be either nationally or regionally threatened and 'plant' in this case includes fungi. For more information and an application form please see the attachment at the end of this newsletter. Applications close on **Monday 6 November**; the name of the successful applicant will be announced at the NZPCN conference in Hokitika.

## Adored & Celebrated to Maligned & Hated

### During November 2017 Vote for your Favourite NZ Native Plant and Least Favourite Weed

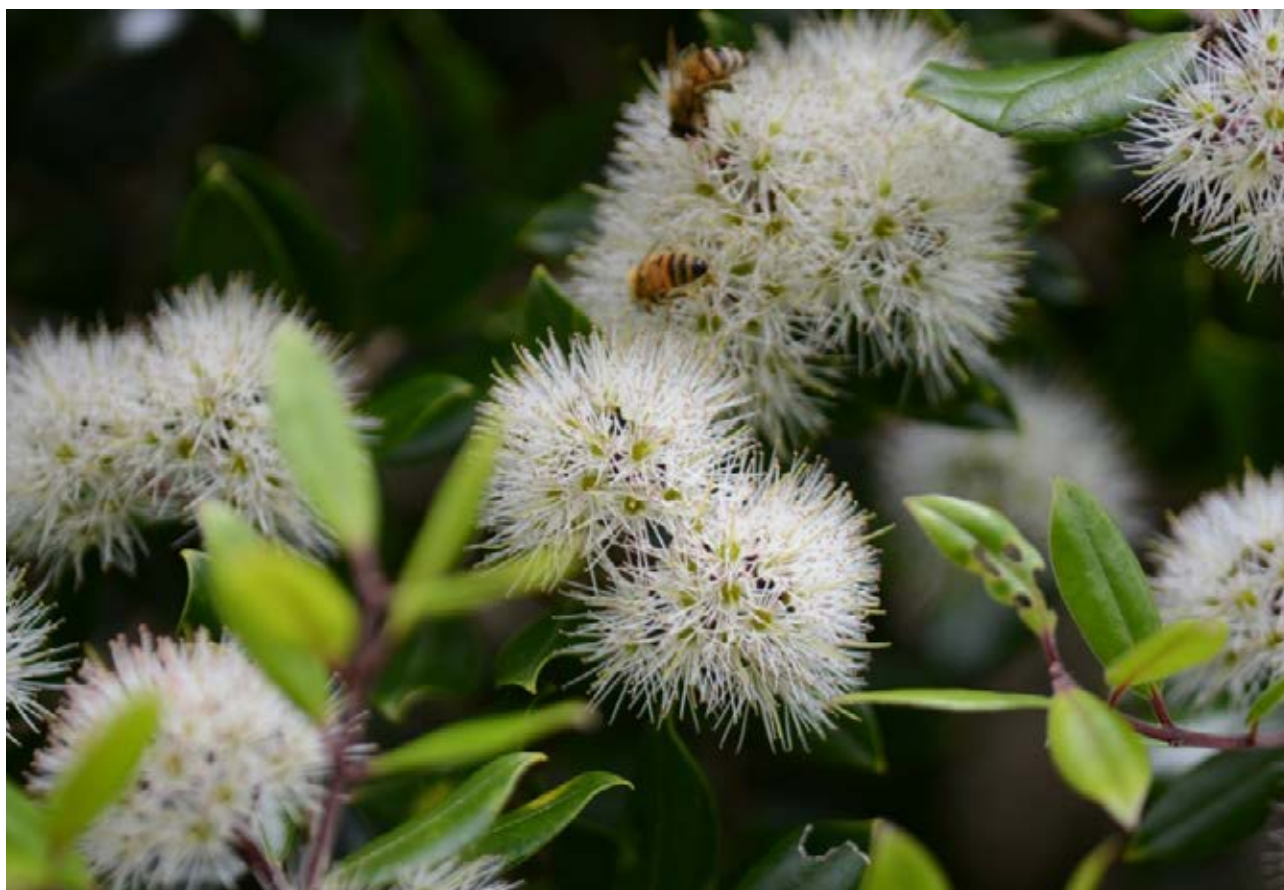
Matt Ward, NZPCN Council Member – [mattwardward@gmail.com](mailto:mattwardward@gmail.com)

Voting for New Zealand's Favourite Plant and Worst Weed will be on-going throughout November 2017, giving you ample time to make your selection, and then recruit as many people as you can wrangle to partake. The magical voting button will appear on the websites Home Page and each species fact sheet page, allowing you to choose how you wish to vote. When you press the button you will be prompted through easy steps to cast your vote(s). Please find the time to leave a comment relating to your choice as well; these they are often great entertainment to read and generally provide insightful passionate views in relation to peoples loves and hates of the species present in New Zealand.

In 2016, a mighty 34% of the vote was garnered by the desperately in trouble Bartlett's Rata, rata moehau, *Metrosideros bartlettii*, making it the clear winner of New Zealand's Favourite Plant for a second time. This rare and iconic rata species of the far north is very sparse and likely always has been. Since the 2014 poll win, when it was said to have only 25 known individuals left in the wild; down from 32 in the early 1990's, it has further reduced to only 12 in 2016, making its plight desperate. The gloomy story of this species really illustrates how much it needed our recognition, so we were jubilant it was recognised again as the 2016 Favourite Plant. This worthy winner generated comments such as:

*"The 'Doomsday Clock' is ticking. Rata Moehau is now down to 12 wild plants, with five effective genotypes (two in cultivation), and so already functionally extinct. It will be a long haul to bring it back from the brink. Raising its profile will help—this tree needs all the friends it can get."*

*"This is a beautiful tree and sadly one that could well be on the brink in the wild but it didn't have to be like this. I remember the forest at Unuwahao when there were around 30 trees but there are so few now due to the ravages of our furry friends."*



*Metrosideros bartlettii* in flower, in cultivation. Photo: Philip Smith.

Past Favourite Plant winners have included: The “At Risk—Naturally Uncommon” mega-herb giant emperor daisy, *Pleurophyllum speciosum*; a unique filmy fern, *Hymenophyllum malingii*; pohutukawa, *Metrosideros excelsa* (twice); Cook’s scurvy grass, *Lepidium oleraceum*; Chatham Island Christmas tree, *Brachyglottis huntii*; a willowherb, *Epilobium microphyllum*; pingao, *Ficinia spiralis*; Chatham Island forget-me-not, *Myosotidium hortensia*; giant wire rush, *Sporadanthus ferrugineus*; and kauri, *Agathis australis*. Will any of these winners succeed again?

In 2016, the winner of the Worst Weed tiara, a closely fought mêlée, was eventually won by the repeat reprobate Veldt grass, *Ehrharta erecta* attaining 21% of the vote. This added to the title it gained in the inaugural vote of 2014. This detested invasive grass, inspired comments both passing and comprehensive, such as:

“A curse bestowed to New Zealand in ‘bird seed’ imported without thought of bio-security in the 1960s. So at least now we have ‘bird seed’ enough to save our exotic birds for the generations to come. Sigh.”

“We need a biocontrol for this ‘green hell’ pronto!”

Other winners include: Wandering Jew, *Tradescantia fluminensis*; Douglas fir, *Pseudotsuga menziesii*; both of which are terrible plants for our native environment and ensure a lot of time spent attempting to control or eradicate them. It’s most likely these horrific species will again rate in the 2017 poll.

Polling commences soon, so make your choice of something worthy of recognition and damnation. Voting only takes five minutes so rope in all your colleagues, neighbours, relatives, and friends, you only need to have an email address to vote, it’s that simple. Our flora has little protection and needs more acknowledgement let’s do this, for all New Zealanders in 2017!!

One thing is guaranteed, a new Favourite Plant, and Worst Weed will be declared in December 2017.

### **Lucy Cranwell student grant for botanical research: Call for applications**

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: 5.00 pm Friday 15 December 2017

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: Helen Preston-Jones, Auckland Botanical Society, email: [helenprestonjones@gmail.com](mailto:helenprestonjones@gmail.com).



*Ehrharta erecta*—distinctive seed head.  
Photo: Jeremy Rolfe.

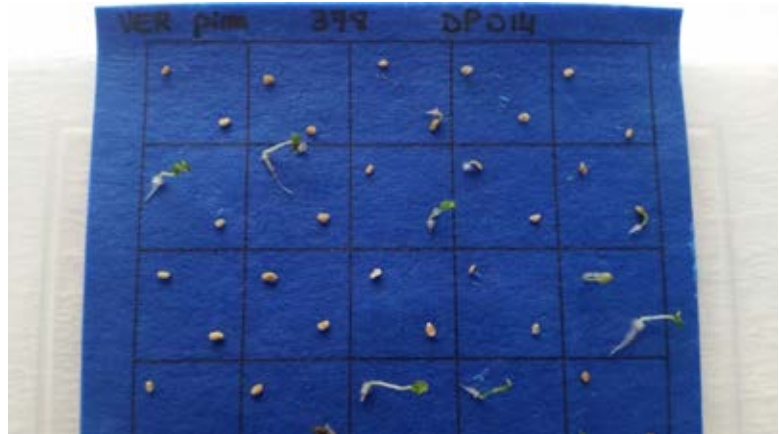


## New Zealand Indigenous Flora Seed Bank (NZIFSB)

Monica Swadel ([M.Swadel@massey.ac.nz](mailto:M.Swadel@massey.ac.nz)) and Craig McGill ([C.R.McGill@massey.ac.nz](mailto:C.R.McGill@massey.ac.nz))

### Germination of gorge dwelling *Veronica*

Late last August, the seed bank was grateful to have the help of a dedicated group of seed cleaning volunteers from Otaki who helped process several seed collections obtained from the Otago region earlier this year, collected by trained seed collector Dhana Pillai. One of these collections was *Veronica pimeleoides* subsp. *faucicola* (an 'At Risk' species). This species is a small shrub growing to a height of 70cm, with pale mauve flowers fading to white. It is endemic to the South Island where it is restricted to the Manuherikia, Clutha and Kawarau River valleys of Central Otago. The plant inhabits gorges, river valleys, rocky outcrops and cliff faces. A germination test of this seed collection following banking at  $-20^{\circ}\text{C}$  for one month has confirmed the seed is viable. The resulting seedlings will be offered for return to the population from which they were obtained. Seedlings of any collection germinated as part of the banking process are made available for return to the collection area.



Germination test of *Veronica pimeleoides* subsp. *faucicola* following one month banking at  $-20^{\circ}\text{C}$ .

### Staff changes at the NZIFSB

This month brings some staff changes at NZIFSB; the previous seed bank coordinator, Jessica Schnell, returns from maternity leave. Monica Swadel, who has been seed bank coordinator in Jessica's absence, would like to thank all seed bank volunteers, seed bank staff, DOC staff and seed collectors who have put in a tremendous effort over the last six months with the Myrtle Rust Response seed collections of Myrtaceae species. Over 200 seed collections have been banked during this period; this is a huge contribution to the strategic ex-situ conservation efforts for this important New Zealand plant family.

### Ecosourcing: misgivings and misconceptions

Wayne Bennett, Coordinator for Ecosourced Waikato (

The term eco-sourcing is widely used amongst those engaged in riparian planting, forest and urban restoration. However, there are indications that sometimes eco-sourcing is criticised because it is not well understood nor well implemented.

The recent Parliamentary Commissioner for the Environment report 'Taonga of an Island Nation' (PEC, 2017) emphasises the frustration communities and others experience with "policies and rules which seem unnecessarily restrictive". As well as this, on occasions, planting advice recommends species not native to the site despite recommending eco-sourcing. This suggests there is value in exploring why eco-sourcing is considered important and addressing some of the misconceptions about the practice.

Although the term "eco-sourcing" is not used, the earliest reference I have to recommending the practice of planting in natural areas, using local provenances is by Eric Godley in an article he wrote for Forest and Bird magazine in 1972 (Godley, 1972). In this article, he emphasised the confusion caused to those studying the natural range of a species or race. This confusion, he explained, can lead to misunderstanding the course of evolution and biogeography.

Translocation of native species without careful consideration of consequences can do more than

cause confusion. Wherever populations experience some degree of geographic isolation there is the potential for genetic variation between populations of the same species. Many times in the past, this variation has been considered significant enough to justify dividing a species into several new species. Godley (1972) uses the example of kowhai but readers will also be aware of other recent revisions and some will be aware of important taxonomic work yet to be done. If this genetic variability is due to geographic isolation then undermining the isolation by widespread indiscriminate planting is likely to compromise this diversity.

There is evidence of the advantage gained by this diversity leading to localized adaptations to local conditions, e.g., the correlation between altitude and frost resilience. Adaptation to conditions not required in a new environment are likely to lead not to lack of survival but to a lack of competitiveness that can be expected to become apparent only once a planting site is well established and there is significant competition between the individual plants or between their progeny. This is a long term effect but still important.

Inconvenience and the cost of eco-sourcing have been raised as arguments against the practice. However, the cost of native plants for ecological restoration has plummeted in real terms since eco-sourcing has been accepted as important. No doubt, this because of competition, economies of scale and mechanisation. I am not aware of circumstances where eco-sourced plants attract a premium price.

If native planting is to be enduring and effective, it will be based on nearby reference ecosystems having an extensive range of species that have a variety of strategies. These will include not only the colonising species, which may be planted first, but also canopy trees, shade tolerant understorey shrubs, ground herbs, sedges and ferns as well as climbers, scramblers and epiphytes. Not all of these can be established in the early stages of a project. Some may establish naturally but some will require propagating. Establishing a resilient, functioning, plant community takes time. So, some time planning and preparing well is a good investment worth the cost. Effort in eco-sourcing will be a very small part of this.

Suggestions have been made that improvements on nature may be achieved by extending the range of native species. I have heard suggestions that pohutukawa has improved the Wellington coast and kauri dieback can be arrested by introducing kauri to new sites outside its natural range. I would counter that unrestricted redistribution of native species may contribute to the spread of introduced diseases and eco-sourcing is a useful tool to minimise the spread of new infections.

Occasionally, the natural dispersal of native plants by the wind or birds is used as an argument against eco-sourcing, which is portrayed as more restrictive than natural dispersal. This is not the case; eco-sourcing aims to replicate natural dispersal. Eco-sourcing aims to establish on a new site the diversity of genes and species that might naturally establish there and avoid translocations that would not happen without human intervention.

I have been collecting seeds and propagating native plants for four decades. Until I learned to observe, I knew little about native plants, how they grew, what they tolerated and were vulnerable to and how they affected the environment in which they grew. The discipline of eco-sourcing encourages close observation of local conditions and plant assemblages in order to collect seeds at the right time and place. I suggest that fostering widespread eco-sourcing on local small-scale operations is the best way to protect our plants, our birds and our waterways.

## References

- Godley, E.J., 1972: Does planting achieve its purpose? *Forest and Bird* August 1972, (accessed in Godley E.J., 2006: *A Botanist's Notebook*, Manuka Press in cooperation with the Caxton Press, Lincoln. 235 pp.
- Parliamentary Commissioner for the Environment 2017: *Taonga of an island nation: Saving New Zealand's Birds*. Available at: <http://www.pce.parliament.nz/media/1695/taonga-of-an-island-nation-web-final-small.pdf>

## Vodafone announcement

As all affected members are probably aware, Vodafone has announced that it will discontinue its email service on 30 November 2017. This will affect any email address ending with the following:

- clear.net.nz
- es.co.nz
- ihug.co.nz
- paradise.net.nz
- pconnect.co.nz
- quik.co.nz
- vodafone.co.nz
- vodafone.net.nz
- wave.co.nz

Any member with any of the above endings to their email address is asked to amend their email address in our database as soon as they have signed up with a new provider. To make the amendment, each affected person will need to login to the Network website ([www.nzpcn.org.nz](http://www.nzpcn.org.nz)) and then click on 'My Profile' in the bar at the top, scroll down their profile to the email address and, after entering the new email address, scroll down to the bottom of the page and click on 'Update'. Then when email addresses are harvested to send out the monthly newsletter notification the correct email address will be picked up. Please do this NOW or you may not future newsletter notifications or other information.

## UPCOMING EVENTS

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

### New Zealand Plant Conservation Network Biennial Conference

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**C onference:** Tuesday 14 to Saturday 18 November. **Venue:** Regent Theatre, Hokitika. The conference will be followed by the John Child Bryophyte and Lichen workshop on Sunday 19 November to Tuesday 21 November.

**Registration:** is open at: [http://www.nzpcn.org.nz/conference\\_register.aspx](http://www.nzpcn.org.nz/conference_register.aspx)

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### Auckland Botanical Society

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**Meeting:** Wednesday 1 November for a talk by Bec Stanley titled 'Botanical travels in Central Europe'. **Venue:** Unitec Room 115-2017.

**Contact:** Maureen Young, email: [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz).

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**Field trip:** Saturday 18 November to Motutapu Island. **Leaders:** Shelley Heiss-Dunlop & Mike Wilcox.

**Contact:** Maureen Young, email: [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz).

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**Field trip:** to The Pureora Forest Park (PFP) camp, 26–29 November; is now full but you could contact Margi Keys in case of late cancellations. Cost: \$185.00 each; a deposit of \$50 will secure your place. **Further information:** <http://www.doc.govt.nz/Documents/about-doc/concessions-and-permits/conservation-revealed/pureora-forest-park-lowres.pdf> <http://www.timbertrailodge.co.nz/timber-trail-lodge/> <http://3xplore.nz.com/2017/07/19/timber-trail-lodge-luxury-in-nowhere/>

**Register:** by emailing Margi Keys ([margikeys93@gmail.com](mailto:margikeys93@gmail.com)).  
**Cancellations:** If you decide to withdraw on or after 15 November, there is a \$10 cancellation fee unless you can find someone else to go instead. If you withdraw before 15 November, the fee is \$5, unless you have a replacement in mind.

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## Waikato Botanical Society

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**Field trip:** Friday 20 – Monday 23 October for the Labour Weekend Trip to Waitete Bay.

**Leader:** Dell Hood, ph: 027 521 9260 or email: [dhoo@xtra.co.nz](mailto:dhoo@xtra.co.nz).

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**Field trip:** Sunday 12 November (note date) to a new QEII covenant south of Waihi. **Meet:** Landcare car park at 8.00 a.m. for carpooling or at either Paeroa or Waihi.

**Leader:** Dell Hood, ph: 07 855 0405, 027 521 9260; email: [dhoo@xtra.co.nz](mailto:dhoo@xtra.co.nz).

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## Rotorua Botanical Society

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**Field trip:** Friday 3 – Saturday 4 November (Sunday 5 November optional) for East Cape revisited #11. **TRIP FULL. Meet:** For those coming on Friday meet at Tim's bach on Friday night; for those coming on Saturday morning, check with Tim for time. **Cost:** \$10 donation for accommodation for those staying Saturday night.

**Leader:** Tim Senior, ph: 0800 884 881, ext 6010 or 07 315 7371 (hm); email: [tim.senior@boprc.govt.nz](mailto:tim.senior@boprc.govt.nz).

**TRIP FULL**

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## Whanganui Museum Botanical Group

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**Meeting:** Tuesday 7 November at 7.00 p.m. for a 'hands on' examination of the Plantaginaceae (plantain family), at least partly because, with the help of DNA analysis, some plants seemingly not at all like plantains have been brought together under the 'plantain umbrella'. **Venue:** Museum's Davis Lecture Theatre.

**Contact:** Colin Ogle, email: [robcol.ogle@xtra.co.nz](mailto:robcol.ogle@xtra.co.nz).

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**Field trip:** 26–29 November to Pureora Forest Park Luxury Camp.

**Information:** see under Auckland Botanical Society.

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## Wellington Botanical Society

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**Field trip:** Saturday 4 November to Moa Point. **Meet:** 10.00 a.m. in the Moa Point car park opposite the dog pound.

**Leader:** Leon Perrie, ph: 027 419 1378.

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**Field trip:** Saturday 11 November: to Te Marua Bush, Upper Hutt, for a working bee. **Meet:** at Te Marua Bush at 9.30 a.m. (250 m north of Te Marua Store and then left, off SH2 for 50 m, on Twin Lakes Rd, Kaitoke Reginal Park). **Bring:** weeding gear: gloves, kneeler, weed bag, and your favourite weeding tools, e.g., trowel, hand fork, grubber, loppers, pruning saw, jemmy.

**Co-Leaders:** Glennis Sheppard, ph: 04 526 7450, Sue Millar, ph: 04 526 7440.

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**Meeting:** Monday 20 November at 7.30 p.m. for a talk by Dr Jill Rapson titled 'Three decades of research snippets on the vegetation and ecology of Tongariro National Park'.

**Venue:** Victoria University Lecture Theatre M101, ground floor Murphy Building, west side of Kelburn Parade; enter building off Kelburn Parade about 20 m below pedestrian overbridge.

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## Nelson Botanical Society

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**Field Trip:** Sunday 19 November to the Clarke River Orchids. **Meet:** 8.00 a.m. at the Cathedral steps; please phone the leader by Friday 17 November if you intend to come.

**Leader:** Don Pittham, ph: 03 545 1985.

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## Canterbury Botanical Society

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**Meeting:** Monday 6 November at 7.30 for a talk by Dr Debra Wotton titled 'Why is *Hebe armstrongii* so rare?' **Venue:** Upper Riccarton Library community meeting room, 71 Main South Road.

**Contact:** Alice Shanks,  
ph: 03 337 1256;  
email: [alice@caverock.net.nz](mailto:alice@caverock.net.nz).

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**Field trip:** Saturday 11 November to Cass Basin (to visit a population of *H. armstrongii*) and to McCaskill Scientific Reserve to do some weeding.

**Leader:** Melissa Hutchison, email:  
[melissa.hutchison@wildlands.co.nz](mailto:melissa.hutchison@wildlands.co.nz).

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## University of Canterbury summer course: Practical Field Botany

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**Practical Field Botany (BIOL305):** an intensive, short summer course designed to meet the need for training in the collection, preparation, and identification of botanical specimens. Venue: University of Canterbury, Cass Mountain Research Area, Canterbury. **Dates:** 18–26 January 2018. **Enrolment:** essential.

**More information:** Matt Walters ([matt.walters@canterbury.ac.nz](mailto:matt.walters@canterbury.ac.nz); ph: 03 369 5211) or Pieter Pelsler ([pieter.pelsler@canterbury.ac.nz](mailto:pieter.pelsler@canterbury.ac.nz); ph: 03 369 5228).

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## Otago Botanical Society

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**Meeting:** Wednesday 8 November at 5.20 p.m. for a talk by Dr Warwick Harris titled 'Of Cabbage Trees and Things'. 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 and please be prompt as we have to hold the door open.

**Contact:** Robyn Bridges,  
ph: 03 472 7330.

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**Field trip:** Saturday 25 November to Purehuru Point (rain date Sunday 26 November). **Meet:** at 8.30 a.m. at the Botany Department car park.

**Contact:** Robyn Bridges,  
ph: 03 472 7330.

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# David Given Threatened Plant Scholarship

*To fund research into the biosystematics and conservation management, protection and recovery of New Zealand's threatened plants, fungi and their communities.*

## Objective

The scholarship will be granted for research that assists the protection and recovery of New Zealand's threatened plant species and their communities.

## Eligibility and conditions

Applicants must be New Zealand residents or citizens but the work could involve overseas researchers who collaborate with the principal researcher.

Threatened species and communities can be either nationally or regionally threatened.

Plant species include vascular and non-vascular plants. Fungi are also covered by this scholarship.

## Application

Please address the following areas in any written application for the scholarship.

**Issue:** Outline the issue to be investigated and why it is important to study this.

**Research methods:** Outline the approach you intend to take.

**Impact:** How will your research contribute to the better conservation of the threatened species or community?

**Uptake:** How will your research be used by your or other organisations?

**Researchers:** Outline the skills the researchers involved in the project have to ensure it can be successfully completed? Include current CVs of applicants.

**Funding:** Do you have other funding that is contributing to this project?

**Budget:** Outline the main items in your budget including equipment, laboratory and field expenses, and personnel.

**Risks:** Are there any factors that you consider could limit the success of your proposal? How will you mitigate these?

**Referees:** List 2 referees who can be consulted for their opinion on the proposed research

## Scholarship rules

1. One scholarship shall be awarded every 2 years and provide up to \$7000 towards the cost of the research project
2. The scholarship is to be awarded by a selection committee, which shall comprise
  - a. The President of the NZ Plant Conservation Network (NZPCN)
  - b. One other member of the NZPCN Council
  - c. An independent person appointed by the NZPCN Council
3. The selection committee may refrain from making an award if, in their opinion, there is no applicant of sufficient merit
4. There are no application forms for this scholarship. Written applications addressing each of the above subject areas should be sent to the New Zealand Plant Conservation Network, Box 16 102, Wellington ([info@nzpcn.co.nz](mailto:info@nzpcn.co.nz)) and marked "David Given Scholarship".
5. Referee forms (see below) should be sent to the two nominated referees for completion and posting or email to the Network.
6. Applications close Monday 6 November 2017

# David Given Threatened Plant Scholarship

## Referee form

The applicant must send this form electronically to each of two referees nominated in the scholarship application. These referees should be familiar with the applicant's recent work.

The referee is requested to complete (continue on a separate sheet if necessary), print and sign this form and send to: New Zealand Plant Conservation Network, PO Box 16-102, Wellington. E: [info@nzpcn.org.nz](mailto:info@nzpcn.org.nz)

**Applicant:** Family name:  First name:

**Referee:** Name:  Position/Title:

Address:

Phone:  E-mail:

1. How long have you known the applicant:  Years  Months

2. Describe briefly the extent of your knowledge of the applicant's work including publications/papers/other relevant research:

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3. Please rate the applicant's performance in the areas named below by placing a tick in the appropriate box using your knowledge of the applicant.

	No opportunity to observe	Below average	Average	Above average	Very good	Excellent
Knowledge of own discipline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to express ideas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Command of research techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Critical and/or analytical ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Initiative and motivation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perseverance in pursuing aims	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teaching or tutoring ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Please rate the applicant's aptitude for research (please circle) High Moderate/High Moderate Low

Please comment on reasons for gradings in Section 3, and other matters relevant to the applicant including academic integrity:

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Signature of referee:  Date:

**Reports relating to this scholarship application must reach the New Zealand Plant Conservation Network on or before Monday 6 November 2017.**