NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 130 December 2017

New Zealand Botanical Society

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New subscriptions are always welcome and these, together with back issue orders, should be sent to the Secretary/Treasurer (address above).

Subscriptions are due by 28 February each year for that calendar year. Existing subscribers are sent an invoice with the December *Newsletter* for the next years subscription which offers a reduction if this is paid by the due date. If you are in arrears with your subscription a reminder notice comes attached to each issue of the *Newsletter*.

Deadline for next issue

The deadline for the March 2018 issue is 25 February 2018.

Please post contributions to:
Lara Shepherd
Museum of New Zealand Te Papa Tongarewa
169 Tory St Wellington 6021

Send email contributions to editor@nzbotanicalsociety.org.nz. Files are preferably in MS Word, as an open text document (Open Office document with suffix ".odt") or saved as RTF or ASCII. Macintosh files can also be accepted. Graphics can be sent as TIF JPG, or BMP files; please do not embed images into documents. Alternatively photos or line drawings can be posted and will be returned if required. Drawings and photos make an article more readable so please include them if possible.

Cover Illustration

Coprosma waima by Eleanor Burton.

NEW ZEALAND BOTANICAL SOCIETY

N E W S L E T T E R

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CONTENTS

NEWS

New Zealand Botanical Society News

- **Committee for 2018**

Nominations for positions of President, Secretary/Treasurer and three committee members for the New Zealand Botanical Society closed on 20 November 2017.

The following nominations, equalling the number of positions available, were received and are declared elected: President Anthony Wright, Secretary/Treasurer Ewen Cameron, Committee members Bruce Clarkson, Colin Webb and Carol West.

We are pleased to announce that Lara Shepherd has agreed to continue as editor for 2018.

- **Presentation of the Allan Mere Award for 2017 to Paul D Champion**

On a warm summer's evening in Hamilton on Thursday 7 December, I had the pleasure of presenting the Allan Mere for 2017 to Paul Champion. There was a pleasing turnout to celebrate Paul's success, with some having come quite a distance (Auckland, Rotorua, Napier and Christchurch) and including most of Paul's family – London-based members excepted.

Paul and Anthony following the award ceremony.

Earlier in the afternoon, Paul and I together with one of his daughters Katherine visited his elderly Mum and Dad to show them the mere and awards Book of Record, and then his long-time friend and collaborator Ian Popay.

Here is my korero to the assembled throng at the Waikato Botanical Society meeting:

Tena koutou, tena koutou, tena koutou katoa
Nga mihi nui ki a koutou
Tihei mauriora!

I'm delighted to be here today to celebrate the achievements of Paul Champion and make the 2017 presentation of the Allan Mere.

To give a little background to the award, the Allan Mere was donated by Dr Lucy Moore in 1982 to commemorate the 100th anniversary of the birth of Harry Howard Barton Allan, first Director of Botany Division, DSIR, and author of Volume 1 of the *Flora of New Zealand*. The Allan Mere is awarded annually by the New Zealand Botanical Society from nominations made by Regional Botanical Societies or individual members to persons who have made outstanding contributions to botany in New Zealand. The Mere is housed at the Allan Herbarium at Landcare Research, Lincoln. More about that in a few minutes.

The NZBS Committee has voted to award the Allan Mere for 2017 to Paul Champion, and it is my pleasure to present this award to Paul today.

The nomination was made by the Waikato Botanical Society and supported by the Auckland, Rotorua, Wellington and Nelson Botanical Societies, the New Zealand Plant Conservation Network, the New Zealand Biosecurity Institute, the Department of Conservation, and the Northland, Auckland and Hawkes Bay Regional Councils.

Paul Champion is an outstanding botanist with over 30 years' experience in the field of plant ecology and has authored over 200 significant publications during this time. He has specialist expertise in biosecurity, plant ecology and conservation of endangered plant species, especially in freshwater and wetland habitats.

Paul began his career in New Zealand as curator of the Waikato University Herbarium (WAIK) in the 1980s. He was instrumental in resurrecting the Waikato Botanical Society and served five years as its President; he still runs popular field trips and gives talks.

In 1988, Paul joined the Ministry of Agriculture and Fisheries and quickly became one of New Zealand's foremost authorities on aquatic and wetland plants. He was awarded the Peter Ingram Award by the New Zealand Biosecurity Institute in 2007. He has also been recognised internationally, presenting the Council of Australasian Weed Societies address in 2010, receiving an International Contribution Award from the US Aquatic Plant Management Society in 2016, and being invited to present this year's plenary address to the International Conference on Aquatic Invasive Species on New Zealand and South Pacific Aquatic Biosecurity.

In addition to his weed research, policy and advisory work, Paul has led research projects determining the threats to various endangered plants including *Trithuria inconspicua, Sebaea ovata* and *Amphibromus fluitans*, and management techniques to conserve them.

A labour of love for Paul has been the co-authorship of the indispensable 'Common Weeds of New Zealand', now in its third edition, and 'Common Grasses, Sedges and Rushes of New Zealand'. Paul has produced a range of other plant identification guides and keys including a Saltmarsh Plant Field Identification Guide (2013), the web-based Macrophyte Identification Guides, Freshwater Pests of New Zealand (also web-based), taxonomic keys to wetland sedges and rushes, and most recently he authored the web-based 'New Zealand Rushes' (*Juncus*): a field identification guide.

Paul is passionate about training and has always been generous in sharing his botanical knowledge. He regularly runs workshops on plant identification and management for agencies, scientists, students and amateurs alike.

Before presenting the Mere, I need to let Paul know that one of Lucy Moore's rules was that the Mere be kept safe at the Allan Herbarium, and only 'let out' for the presentation ceremonies. So Paul, you should make the most of holding it today! I'm pleased to say that you do get to keep a fine calligraphed certificate marking the award, as well as a bound copy of your nominators' and seconders' letters leading to the award.

Now I'd like to read out the formal citation entered into the Allan Mere Record Book:
Paul D. Champion
Paul is an outstanding botanist with over 30 years' experience in plant ecology, biosecurity and conservation of endangered species, especially in freshwater and wetland habitats, and has authored over 200 publications. He is passionate about communicating and sharing his botanical knowledge, giving talks, running workshops and leading field trips with professionals and amateurs alike.

Congratulations Paul on your dedication to botany and the significant achievements you've made. I have much pleasure in presenting you with the Allan Mere.

Anthony Wright, President, New Zealand Botanical Society

Regional Botanical Society News

- **Auckland Botanical Society**

September Meeting – the Lucy Cranwell Lecture

Paul Champion, Freshwater Biosecurity & Principal Scientist, Freshwater Ecology at NIWA, was the Lucy Cranwell Lecturer for 2017. Although freshwater resources make news headlines these days, Paul concentrated on botanical matters, highlighting some nationally threatened plants, the threats affecting them, and some potential ways to conserve them. Research focuses on weed potential of introduced plants, management of aquatic weeds and control and restoration of habitats impacted by invasive weeds.

September Field Trip

Mike Wilcox continued Bot Soc's exploration of the coastal bush reserves of the inner northern Manukau coast. Waikowhai Park features kohekohe forest with lots of kowhai and abundant ferns. Tui were feasting on the nectar of the flowering kowhai trees.

October Meeting

Cate Macinnis-Ng from the School of Biological Sciences, Auckland University, is a plant ecophysiologist interested in interactions between plants and their environment. Her current research focus is exploring the impact of drought on kauri forest, but she is also interested in the broader impacts of climate change on plant water use and carbon uptake.

October Field Trip

The aim of this visit was to add to the botanical component of a Bioblitz that was being undertaken by the Friends of Whatipu. A front passing over the west coast made for a wet start, but the rain soon stopped, and we then only had to contend with the wet, muddy conditions underfoot. The pace before lunch was even slower than the usual botanical pace, but we were rewarded, while splashing through standing water, to find a few minute leaves and a flower, of *Ranunculus acaulis.* This was a surprising new find from this much-botanised area. At lunchtime a group photo was taken to celebrate the eightieth anniversary, to the day, of the founding of our society. After lunch we admired the vast area of saltmarsh, and the flowering plants of *Scandia rosifolia*.

November Meeting

Bec Stanley, botanist at the Regional Botanic Gardens, spoke of her recent visit to central/eastern Europe, where she attended several conferences and also holidayed in this lesser known corner of the continent. Botanical highlights included the threatened Stipa Steppe grasslands of Ukraine, green roofs of Berlin, alpine meadows in France, plants of the Carpathian Mountains in Poland and the forests of the "black triangle" in the Czech Republic. She put the case for abandoning our lawn mowers and rejoicing in less regimented grasslands.

Auckland Bot Soccers celebrating 80 years to the day since the founding of their Society.

November Field Trip

A group of 24 people explored the plant life in the urban wetland of the Waiatarua Reserve, Meadowbank. Yolanda Thorp of the Waiatarua Reserve Protection Society was on hand to tell us about the reserve's history and their aims and involvement. There was a large tally of plants recorded:

native and exotic, natural and planted. Monocots such as *Carex secta*, *Eleocharis sphacelata, Machaerina articulata*, *Schoenoplectus tabernaemontani* and *Typha orientalis* were prominent in the wetland. An unusual plant found near a ditch was *Hydrocotyle umbellata*, marsh pennywort. Perimeter plantings of kanuka, lemonwood and various eucalypts were explored, a highlight being an assemblage of ferns colonising the banks of a shaded stream. Amenity tree plantings featured various exotic trees – with particularly fine specimens of pecan (*Carya illinoisensis*), Turkey oak (*Quercus cerris*) and Canary Islands olive (*Picconia excelsa*) – and several impressive black maire (*Nestegis cunninghamii*). Poroporo (*Solanum laciniatum*) was originally planted but has now spread itself abundantly along the edges of the perimeter forest.

Forthcoming Activities

2 December 2017	Christmas outing. Eskdale Reserve, Lauderdale Rd. Birkdale
17 February 2018	Hunua Ranges
7 March	AGM. Lucy Cranwell Grant recipient
17 March	Port Waikato dunes

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- **Wellington Botanical Society**

May trip - Whakatikei River headwaters, Akatarawa Forest
Our destination was the 257 Track, which traverses the ridge along the southern and eastern side of the south branch of the Whakatikei River's headwaters. At an elevation of 500 metres, the ridge is broad and wide. Near the start of our walk, the vegetation was regenerating broadleaved scrub 2-3 m tall. Common species were *Gahnia setifollia, Coprosma robusta, C rhamnoides, C lucida, Beilschmiedia tawa, Coriaria arborea, Elaeocarpus dentatus, Hedycarya arborea, Melicytus ramiflorus,* and *Weinmannia racemosa.* Further down the road, the understorey was darker, and the tree canopy became taller with the same species present as at the start, plus *Pittosporum tenuifolium, Pseudopanax arboreus, P. crassifolius, Pseudowintera axillaris, P. colorata,* and *Schefflera digitata.* The understorey had several fern genera including *Hymenophyllum, Asplenium, Blechnum, Hypolepis, Lastreopsis* and *Microsorum*; also *Leptopteris hymenophylloides and Lindsaea trichomanoides.* Highlights of this foray were finding *Ascarina lucida* / hutu, *Tmesipteris tannensis,* and *Dawsonia superba.*

After lunch, we botanised back along the ridge towards spot height 561, with people ducking into the bush to the left and right of the road. The forest in this direction was taller, and the forest canopy height was natural, but missing the emergent trees. The more mature forest was reflected in the presence of mature *Podocarpus laetus, Prumnopitys ferruginea,* and *Weinmannia racemosa.* On the north side of the road, there were small wind-leads in the forest where the canopy has opened up, testimony to the ferocity of the winds in this area. The botanical highlights from the afternoon were *Metrosideros robusta, Neomyrtus pedunculata, Nestegis cunninghamii,* and *Raukaua edgerleyi*.

June trip - Silversky Track, Crofton Downs
The Silversky Track links the end of Silverstream Road with Downing Street, Chartwell, and the Transpower road that follows the power pylons up to the Skyline Walkway on the Outer Green Belt's Te Wharangi Ridge. The reserve of 3.7 hectares was gifted to Wellington City Council in 2012 by the developer of the Downing Street housing development. It was a short relatively walk through pleasant regenerating forest. We observed the huge effort that has gone into the recent plantings and the removal of buddleia and old man's beard. Much of the area is still covered by gorse, which will be over-topped as the native species develop. It was great to see a single, large tōtara in the reserave and several *Blechnum parrisiae*. We made several additions to the 2015 plant list including plantings of mataī, nīkau, tītoki, hīnau, kānuka and pukatea. We added several ferns, including, *Asplenuim gracillimum*, *Blechnum membranaceum*, and *B. novae-zelandiae*.

June trip – Te Mārua Bush workbee
Our aims were to do planting and releasing, and to check how the bush had coped during the summer. We worked in the newest planting area, north of the main bush, and close to SH2. We

applied slow-release fertiliser to six plants we put in to fill gaps, and herbicide to blackberry and woody weeds we cut off at ground level, and freed plantings of weedy vines. After tea break, we gathered near the entry gate to plant a 2m tall kahikatea as a memorial to Barbara Mitcalfe who was involved from the start of the Te Mārua Bush restoration project in 1989. GWRC, BotSoc and F&B have all worked on this project, so have witnessed the improving health of the original bush, and the growth in the bush-extension plantings which protect its edges. GWRC's weed-control programme has been most effective. Convolulus is still present but is less of a problem as trees gain height. English ivy and wild strawberry are creeping into the edges of the plantings, and sycamore and flowering cherry seedlings continue to arrive.

August trip – Ngā Manu Nature Reserve, Waikanae

Or group of 35 set out to botanise the forest loop track through the remnant of coastal swamp forest. After a brief stop to look at dwarf mistletoe / *Korthalsella salicornioides* which is being successfully cultivated, we set off around the loop track. Highlights included the swamp forest remnant with lots of swamp maire / *Syzygium maire* and pukatea / *Laurelia novae-zelandiae*. There were an interesting array of climbers including kiekie / *Freycinetia banksii*, swamp lawyer / *Rubus australis* and a huge NZ jasmine / *Parsonsia heterophylla.* We had a diversion to the top of the hill near the reserve's boundary to look at thick-leaved coprosma / *Coprosma crassifolia* growing in open scrub. Then on to the lookout track, with lots of small-flowered mistletoe / *Ileostylus micranthus* growing next to the track, and a nice mix of tupari maunga / *Gahnia xanthocarpa* and rautahi / *Carex geminata*.

September trip – Forest of Tāne, Tawa
Forest of Tāne is a welcome addition to WCC's Outer Green Belt, part of the open-space network, purchased early 2017. The Forest of Tāne block comprises 32 ha adjoining the Tawa side of Spicer Forest. It comprises about 40% coverage of neglected pine plantation, with extensive native regeneration in the understorey, and a small tawa/kohekohe remnant. We followed an early farm-access 4WD track meandering along the streamside, and then up a spur along the eastern edge of the block to the main ridgeline through a portion of Spicer Forest, to reach the Meridian road above Porirua's Spicer Landfill. We then retraced our steps. We made extensive additions to an initial preliminary list created by Chris Horne on the day of the official opening public walk earlier in the year. Highlights included adding three tree fern species and seeing seedlings of tree species able to become canopy species or even large emergent, e.g., tītotoki, rewarewa, hīnau, kohekohe, tawa.

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Wakatipu Botanical Group
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ANNOUNCEMENTS

- **2017 Loder Cup Awarded to Peter de Lange**

Congratulations to Peter de Lange for being awarded the 2017 Loder Cup for his contribution to investigate, promote, retain and cherish New Zealand's indigenous flora over the last 25 years. Peter was nominated for this award by the New Zealand Botanical Society and the Plant Conservation Network.

- **2017 Nancy Burbidge Medal Awarded to Patrick Brownsey**

Congratulations to Patrick Brownsey for being awarded the 2017 Nancy Burbidge Medal, the highest award of the Australasian Systematic Botany Society. This medal honours those who have made a longstanding and significant contribution to Australasian systematic botany. Pat is only the second New Zealander to have been awarded the medal (Phil Garnock-Jones received it in 2013).

- **University of Canterbury summer course: Practical Field Botany**

Practical Field Botany (BIOL305) is 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

This course will be of interest to amateur botanists, members of the workforce (e.g. Crown Research Institutes, Department of Conservation, Local and Regional Councils, Botanic Gardens, horticulturists and teachers) and biology students who need to acquire or upgrade taxonomic skills and are interested in field ecology, conservation, biodiversity and biosystematics. The course is targeted at participants with various entry levels: from students with limited plant knowledge to experienced career professionals.

Goals of the course: To enable participants to

- become familiar with the plants of the central Canterbury mountains,
- identify and name plants correctly and accurately using online and hard-copy identification keys,
- take and edit scientific-quality plant photos,
- maximise usefulness and minimise environmental impact when collecting specimens,
- prepare high quality voucher specimens of plants,

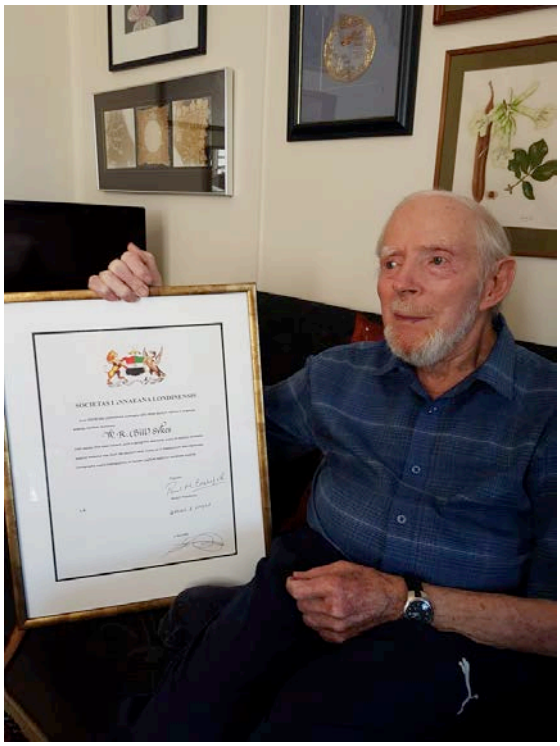
- use scientific names to access detailed information about New Zealand plants,
- understand the patterns of variation within populations,
- appreciate unique and unusual aspects of the New Zealand flora.

More information
Contact Matt Walters (matt.walters@canterbury.ac.nz; 03 369 5211) or Pieter Pelser (pieter.pelser@canterbury.ac.nz; 03 369 5228).

▪ Congratulations to W R (Bill) Sykes, FMLS

Anthony Wright, Canterbury Museum, Rolleston Avenue, Christchurch 8013

The Linnean Society of London has honoured Bill Sykes by electing him a Foreign Member, entitling him to the post nominal letters FMLS. The Linnean Society is the world's oldest active biological society.



Bill Sykes, FMLS, at home with his framed Diploma, Christchurch, 23 November 2017

It's been a year of milestones for Bill, with the Cook Islands launch of his magnum opus, *Flora of the Cook Islands*, in Rarotonga in August, and the celebrations of his 90th birthday centred around 13 October.

The story behind this latest honour is an intriguing one. Bill's long-time friend from student days at the Royal Horticultural Society Garden at Wisley, Ken Ralph (himself the senior by a couple of years), took the journey from his home in Canewdon, Essex, down to Burlington House on Piccadilly in London. Since 1854, Burlington House has been a meeting place for the arts and sciences, and home of the Linnean Society and several other academies, including the Royal Academy. Ken's purpose was to propose that Bill be elected a Fellow of the Linnean Society.

Given Bill's eminence, the Linnean Society's executive decided to progress Bill's election to the higher honour of 'Foreign Member', rather than as a 'standard' Fellow. There can be no more than 50 living Foreign Members.

The nominator was Dr Mark Watson from the Royal Botanic Garden Edinburgh. Over the past year or so, Bill Sykes has donated all his photographs and notebooks from his Nepalese expeditions (in 1952 and 1954) to the library of the RBG Edinburgh, who hold extensive Himalayan archives and coordinate the Flora of Nepal project.

Nominations for FMLS are considered once each year, at the Anniversary Meeting of the Society. Before this, the nomination must be read out at two evening meetings, followed by a third reading at the beginning of the Anniversary Meeting, followed by voting thereon.

Bill was elected Foreign Member on 24 May 2017, and has since received a framed Diploma in Latin over the Common Seal of the Society and signed by its President, Treasurer and Executive Secretary. Scanning the list of Foreign Members on the Society's website, I do not recognise any other New Zealanders' names. Do readers know of any other New Zealander who has previously been awarded this high honour?

Thank you to Botany Bill for agreeing to pose for a photograph with his Diploma, and to his wife, Peggy Kelly, for sharing some of the background to the award.

NOTES AND REPORTS

▪ Eric and his flowers

Text of a presentation given at E.J. Godley Commemoration, 29 November 2010.
Colin J Webb, Research Associate, Landcare Research, Lincoln

Introduction

This talk is entitled *Eric and his flowers* as a reference to Mea Allan's excellent book *Darwin and his flowers*. Eric was a great admirer of Darwin and, in many ways, very Darwin-like in his botanical work, not just in terms of his interest in the evolutionary biology and the biogeography of plants, but also in his pragmatic, evidence-based and thoughtful approach to research.

Throughout his life, Eric tested evolutionary hypotheses using manipulative experiments, and following tagged plants in the field and in cultivation.

As mentioned in one of Eric's own recent papers (Godley 2010), while he was still in the fifth form at Takapuna Grammar School he saw a reference to Darwin's work in his English literature text (not in his science text which only mentioned Darwin's experiments suggesting the advantages of cross-pollination). Eric then tracked down and bought a copy of *On the Origin of Species* (Darwin 1859), describing it as "a revelation to me". This copy was from the green hard-backed popular edition of Darwin's complete works.

When Eric began his PhD at Cambridge University in 1945, this was still at a time of the blossoming of genetic research following the rediscovery in 1900 of Gregor Mendel's work on inheritance. Genetics was the missing bit of the puzzle which explained how natural selection worked. It enabled mathematical modelling and experimental research on Darwin's theory of evolution by natural selection, revolutionising how life on earth was understood.

While at Cambridge, Eric bought the red, hard-backed Thinker's Library edition of Darwin's *Origin*, 1945 reprint, labelled on the verso page "Book Production War Economy Standard". This copy, which he gave to me decades later, has passages marked or underlined in Eric's hand, and its spine is frayed and falling off.

While being a devotee of Darwin, Eric also understood the risk assuming every variation seen in nature had an adaptive value — this was another thing that blossomed in the early part of nineteenth century and in the century before, following the publication of the *Origin*. In this regard, it is well worth rereading Eric's paper *Problems of the origins of species* (Godley 1959). Eric held the view that some character states 'just worked'. Here he was recognising the need for caution when drawing conclusions from observations (rather than doubting evolution through natural selection), and he was clear about the need to test evolutionary ideas through careful observation and experimentation.

Eric's approach to research

So how did Eric go about his research work once he was back in New Zealand, particularly given that he was in senior administrative positions for most of his working life? Early in his research career, Eric developed an approach to his research that balanced a focus on particular projects that formed the basis for a publication, with the steady accumulation of myriads of field and glasshouse observations on plant reproduction and development across a broad range of native genera. Many of these observations were too slight to merit a paper, but they were of use in review papers, as the basis for many articles in *The New Zealand Gardener*, and even in book reviews, where he was able to find a home for something that was worth recording.

Eric's observations of field plants often spanned many years or even many decades, with sites in Canterbury providing the best opportunities for this once he moved to the South Island.

The processes of flowering, pollination, seed formation and dispersal create and separately establish new genetic individuals. The genetic recombination that usually occurs during this process creates the variation among individuals on which natural selection acts. Eric had an enduring fascination with these stages of the plant life cycle, and often discussed the distinctive botanical features common in

New Zealand. He was always alert to any special reproductive attributes that characterise New Zealand plants, as well as noting features commonly found in other counties that are rare or absent in New Zealand.

So, what were some of Eric's contributions to our understanding of plant reproduction biology in New Zealand? The examples chosen below are outlined within the framework mentioned above — specific projects, review papers, and shorter articles containing new observations or insights.

Specific projects
These are examples of what one might call project work, where Eric found that a particular genus provided an opportunity to investigate a particularly interesting aspect of plant reproductive biology in some detail or presented a problem that needed to be solved.

One early such project was in *Fuchsia*. Observations that different plants of the common New Zealand tree fuchsia had flowers with different style lengths had led earlier botanists to describe these as short-, mid- and long-styled following Darwin's description of heterostylous species such as the purple loosestrife (Darwin 1877) which is naturalised in New Zealand. By careful measurement of the flowers of individual plants of the common native tree fuchsia, Eric showed that the species is in fact gynodioecious; in other words, with two types of plants as follows: female plants with female flowers only and setting fruit but not producing viable pollen; and hermaphrodite plants that are more variable in function but with all plants producing viable pollen and variation among individuals in the amount of fruit produced (Godley 1955a).

Eric documented sex ratios of the two sex forms for populations from Auckland to Bluff, showing that, as is usually the case with gynodioecism, the pollen-producing plants predominated. He also demonstrated that the hermaphrodite plants are self-fertile. This breeding system differs greatly from heterostyly, in which all plants produce both pollen and fruit.

Using *F. procumbens*, smaller and easier to grow, Eric was also able to investigate the genetic control of the sex forms (Godley 1963).

The work on *Fuchsia* increased our understanding of New Zealand plants but was important in a broader sense too. It was the beginning of a more systematic and evidence-based approach to describing and understanding plant breeding systems, contrasting with the rather vague descriptions found in taxonomic works at the time. Eric combined his observations on the flowers *Fuchsia* with research into the genetics of the species; perhaps more significantly, this allowed Eric to conclude that heterostyly does not occur in our indigenous flora at all (there were earlier reports also for our native *Oxalis*, but again not backed by good evidence).

Another project, with some links to the *Fuchsia* work, was that on sex ratios in wild populations of dioecious species (Godley 1964), which documented field ratios for 16 indigenous species (most from Eric's own observations but some recorded by others). As well as recording this new information for native species, Eric noted that all but one of the species he documented had a predominance of males, and he discussed the possible causes of this.

And a third area worth mentioning is Eric's investigation of self-incompatibility in the New Zealand flora. Eric demonstrated self-sterility in *Pentachondra pumila* (Godley 1966), and described late-acting self-sterility in *Pseudowintera colorata* (Godley and Smith 1981).

Eric did not let the fact that he was initially employed by the Crop Research Division of DSIR get in the way of his work on the reproductive biology of native plants, publishing two papers in *Nature* during this time — one on monoecy and incompatibility (Godley 1955b) and another on unisexual flowers in the Ericales (Godley 1957).

General observations on the New Zealand flora and reviews
I am now going to say a little about three of Eric's larger review papers. These brought together systematic observations (his own and others) on the flora, drew some more general conclusions, and provided some focus about things that needed further work.

The first of these (Godley 1975), on flora and vegetation, was in Kuschel's book *Biogeography and Ecology in New Zealand* (Godley 1975). As well as providing information on botanical exploration, the nature of the flora and vegetation, divaricating plants and leaf shapes, by far the most interesting section is on flowers and fruits. Here Eric began to explore the complex issue of flower colours in our native plants, providing a systematic analysis, and noting that white and green are the colours that predominate. He also noted the occurrence of brightly coloured flowers on outlying islands, summarised the occurrence of dioecism in the flora and talked about pollinators.

Here his analysis of dioecism is particularly instructive. Rather than simply note the high incidence of dioecism in the New Zealand flora and speculate about possible causes, he provided a breakdown for New Zealand genera with dioecism putting them into seven categories ranging from those where the species is in a family or genus where dioecism in a character state at that taxonomic level, through to the situation where dioecism in New Zealand is in an endemic genus and is rare elsewhere in the family. He also pointed out that for many of the species in the earlier categories, dioecism probable arose elsewhere and came with the plant to New Zealand, whereas in the later categories dioecism probably arose in New Zealand.

He expanded on these and other themes in another review paper *Flower biology in New Zealand* presented at the International Symposium on Reproduction in Flowering Plants held in Christchurch. The presentation and the published paper (Godley 1979) had a much more detailed analysis of flower colours and pollinators. Both present a complex picture, with Eric concluding in relation to the predominance of white flowers that "no one generalisation can explain the evolution of the white flowers in the New Zealand flora". He also pointed out that many pollinators will visit whatever flowers are available to feed on nectar and pollen — in other words there does not seem to be a very tight relationship between flower type and pollinator — and that many of the native New Zealand flowers that are described as white are not entirely so having coloured makings of various patterns.

That paper also provide a more detailed breakdown of species with separate sexes, and a summary of the species so far shown to be self-incompatible along with notes on those shown to be self-compatible.

Eric published another paper with further detailed work on flower colour (Godley 1982), this time for native gentians on Campbell and Antipodes Islands. In particular, Eric made a more detailed study of two species and documented the proportions of plants with white or coloured flowers, with the range of petal colour patterns presented in a set of drawings in the paper. These gentians contrast with those on the mainland where species are largely white-flowered, although, as Eric pointed out, some colour is found in several mainland species but not to the extent found on the southern islands. Brightly-coloured flowers are found in several genera in the Subantarctic Islands, and Eric discussed possible explanations for this, dismissing some hypotheses suggested by others, but recognising that there was still insufficient evidence to reach a conclusion as to what the correct explanation is.

Finally, in this section, I want to mention a third significant paper of Eric's, *Paths to maturity* (Godley 1985), which he presented at his retirement symposium at the Ellesmere Country Club in Lincoln. This paper pulled together his observations on the morphology and development of seedlings and juvenile forms. Again, there is a parallel with Darwin's interests and approaches, and in particular with Darwin's careful observations of climbing plants grown in his glasshouse (Darwin 1865). Eric germinated plants from seed and had them grown in the glasshouses at Lincoln where he could observe their development and have it recorded by the photographers. Eric's view was that a more systematic examination of the seedlings of all of our native species would be a worthwhile study.

Shorter articles

As mentioned earlier, Eric was a great collector of facts about plants both from the literature and from his own field and glasshouse observations. My own experience was that when I found something I though merited further investigation that was related to flowers, breeding systems, pollination or dispersal, and discussed this with Eric, the response inevitably was "I have some notes on that in a file, which I will sort out and let you have" or, "I have some plants I tagged on the Port Hills, and I have been meaning to revisit them".

Eric liked to find "homes" for as many as possible of his interesting facts and original observations. When I was doing reviews for the Christchurch Press, Eric's advice was to use each such opportunity

to get across an original thought or pursue an idea — in other words to make use of the chance to do more than just review the book. So, in his review of Audrey Eagle's original *Trees and Shrubs of New Zealand* (Godley 1983), he noted "although the flowers of many of our trees and shrubs may be small, they usually have a pattern of colours, even if wind-pollinated" continuing his own interest in this area. Eric also used this review to include some detail about differing views on the taxonomy of the woody Senecioneae, and in particular his view that there had been a misinterpretation of David Drury's work in this area.

But it was Eric's a botanist's notebook series in *The New Zealand Gardener* that afforded him the best opportunities of this sort. Here, in relation to flowers and pollination you can find, for example, articles on: native species that flower in winter; the flowers of male and female plants of five-finger; the rarity of bird visitors to the flowers of the kaka-beak; the scent of mangrove flowers; and the pollination of native orchids.

Fruits, seeds and dispersal

Of course, flowers, if they get lucky, eventually turn into fruits with seeds, so Eric was naturally also interested in fruits, particularly in fruit structure and dispersal. Here I just want to mention one significant project of Eric's related to kowhai.

When in south Chile, Eric wondered about what appeared to be a very close relationship between the Chilean and the common New Zealand kowhai, then known just as *Sophora microphylla*. Pragmatic as ever, he grew and compared the plants, concluding that the Chilean plants were clearly only races of the New Zealand species. To see whether transoceanic dispersal was possible, he tested the viability of seeds stored in jars of seawater, and found that a percentage of seeds were buoyant and were still able to be germinated after 18 months. Bill Sykes added to the picture by gathering kowhai seeds from beach drift in the Kermadec Islands where kowhai is otherwise absent; when germinated, the plants were found to match northern North Island forms of our kowhai. The resulting paper was published in *Nature* (Sykes and Godley 1968).

Eric also published papers on: the fruit of *Pittosporum pimeleoides*; the fruit of *Vitex lucens*; the fruit in *Ackama*, *Caldcluvia*, and *Weinmannia* (a comparison with South American species); and seed-set in native legumes. And his articles in the series a botanist's notebook included: Legume and follicle; Puriri seeds; Birds, seeds, and fruits; The kowhai and its pod; A glance at capsules; and Fruiting in *Tecomanthe*.

Eric profoundly influenced several generations of New Zealand botanists through his personal leadership and his fostering of the discipline of botany. His research changed our thinking about New Zealand plants in many ways.

I think there is also much to learn from the way Eric went about his research — careful observation, field and glasshouse experiments, some published as tightly focussed papers, but others, when the evidence allowed, pulled together into much more general papers that tested ideas, teased out complex issues, and provided a way forward. In line with this, I think there are still a lot of ideas within Eric's papers that could form the basis for further research.

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▪ The name of the Wollemi pine

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Part I

We all know about the discovery in 1994 of the Australian "pinosaur tree" *Wollemia nobilis* (Araucariaceae). The legitimate excitement that followed though seems to have obscured something odd about its scientific name.

That is, the epithet *nobilis* could be thought of as indicating a handsome appearance, and also, might be a gesture towards the tree's stately relatives (*Abies nobilis*, *Picea nobilis*, etc.). But the original description (Jones et al. 1995) only mentions an honouring of the tree's discoverer, Parks ranger and explorer of the Blue Mountains Mr David Noble (1965–).

It seemed to me that *nobilis*, an adjective, properly means "well-formed, great", and that related forms, such as *noblei*, would be preferable philologically and more in keeping with the traditional way of making personal epithets (Footnote 1).

The question, then, is whether *Wollemia nobilis* might be an improperly formed name, in need of correction. I made a slow start here, partly because my copy of the International Code of Nomenclature was the 1994 version and partly because the on-line version of the current, Melbourne Code (McNeill et al. 2012) does not have the index to scientific names that the printed version usefully contains. But eventually, a search of "*Wollemia*" in this current Code brought the matter into the light, in the Articles and Recommendations of the Rules' Section 60 on orthography.

The crucial statement here is Recommendation 60.7 Note 2: "The provisions of Art. 60.7, 60.12 and Rec. 60C deal with the latinization of names through their modification. Latinization is not the same as translation of a name (e.g. Tabernaemontanus, Latin for Bergzabern; Nobilis, Latin for Noble). Epithets derived from such Latin translations fall under Rec. 60C.2 and are not subject to standardization under Art. 60.7 or 60.12 [the need for correct terminations —the familiar *-ae*, *-ii*, etc.". And in case anyone was still in doubt, Example 19, which follows 60.7 Note 2, specifically states that the epithet in *Wollemia nobilis* must not be changed to a more orthographically correct one, "such as *noblei*".

I went back to the Vienna Code of 2006 and saw that its orthography section approved of *W. nobilis* too, although the term "translation" is not used; rather, the epithet is said to be "indirectly derived" from the personal name.

The concept of "translation/indirect derivation" as a special kind of latinization does not occur in the older Codes, nor in Nicolson's (1974) historical overview. Its first appearance seems to be in the

proposals towards refining the Vienna Code that were set out by van Rijckevorsel (2004). This author used a third phrase, "implicit latinization", and gave the *Wollemia* name as an example. He says that although coining such epithets is not recommended, they are to be accepted, and *nobilis* is not to be altered to *noblei*. The reason given is a technical one (as in, he got off on a technicality): that is, since *nobilis* is a latinization that differs from *noblei* in more than just its termination (respectively *-ilis* and *-i*) it does not fall under the correction requirements and recommendations of Art. 60.7 and 60.12.

Learning all this, I felt rather dismayed [Footnote 2]. An experienced Australian taxonomist consoled with the comment: "looks like some fancy footwork after the event". Indeed, van Rijckevorsel (2004: 586) himself ends by saying that "including such a recent example in the Code may have the effect of encouraging authors to coin more such epithets".

So the name *W. nobilis* is a legal one, but certainly runs counter to past usage, with the Code stating: Rec. *60C.3* New epithets based on personal names that have a well-established latinized form should maintain the traditional use of that latinized form, and Rec. *60C.4* In forming new epithets based on personal names the customary spelling of the personal name should not be modified.

Part II

The concept of "translation" as one kind of latinization of personal names, and why the standard *-ae*, *-ii,* etc. terminations cannot not always be applied, can be explained as follows.

The 60.7 Note 2's "translation" process (Noble to *nobilis*) is what linguists call a "calque", where the meaning of the original name or its parts is preserved in the passage from one language to the second (in our case, Latin). Examples from botany might be Goodhouse to Benincasa, Connor to Lycophilus, Gardner to Hortulanus, van Rijckevorsel to Opulentirana. These examples are substantives (nouns) and take regularly formed (as required by Art. 60.12 and Rec. 60C.1) first (female) or second (male) declension genitives. But if the original name is an adjective, such as Noble can be considered to be, these terminations are not always available (in correct Latin, that is) — and with our name we are forced to use the third declension genitive *nobilis*.

Conceivably the freedom to make calqued personal epithets has some advantages: epithets might be shorter or more memorable than strictly traditionally formed ones — they could even be coined using acronyms, puns and rhyming slang. In fact, it seems to me that anything at all (suggestions from children, or robots ?) could be said to commemorate a particular person; all one is required to do, according to the current requirements of the Code, is give such "indirect translations" the appropriate genitive ending (Rec. 60.C2, although this errs in talking only about "substantival" genitives, when clearly adjectives can be used too).

Part III

I had the idea, after compiling the IPNI entries for "*noblei*" etc. , to look more widely for that word. An internet search showed that it has traditionally been used quite a few times in the zoological literature. But more to the point, it also comes up in one of Google's scanned books, whose subject is none other than, yes, the Wollemi pine.

The book (Woodford 2000) is a blow by blow account of the early days of the discovery and conservation-politics of the tree, and has some crucial matter concerning the epithet. The two people associated with the plant from the its early days of discovery wanted to recognize David Noble by using the name "*Wollemia noblei*". But Sydney Botanic Garden's botanist Ken Hill and others pulled rank, arguing that *noblei* would inevitably be bastardized to "nobbly" [sic], and thus *nobilis* was substituted.

Hard to believe, perhaps, that any Australian would ever be so insensitive [Footnote 3]. Even harder to think, though, that anyone, after seeing the tree, could ever regard it as not being nobbly. *W. nobilis* is extraordinary but is neither stately nor aristocratic. It is a hulking, skulking, unshaven (thanks to basal resprouts) bushranger of a tree and, just to get right in your face, has a trunk most horribly and conspicuously pustulate ... iconic, yes, but of a hardcase nuggetty nobbliness surely worth memorializing in a nickname if not in well-formed Latin.

Part IV

In Part II above we see that the condoning of non-traditional personal epithets has meant that the distinction between a purely adjectival epithet and a personal epithet has become blurred. This has occurred recently too in New Zealand: obscure geographical epithets have not been tagged with the traditional *-ensis* ending, thus appearing as adjectives of unknown meaning, or as substantives in apposition (long-forgotten vernacular names, perhaps — what on earth is a *temata*, a *taraiwhiti*, a *horomaka* ?).

Some will say "but the Rules allow it" — the "so me and my lawyer mates are right" argument (but the retrospective nature of the Code allows correction to be made at some future time). Others will say that the need to respect tradition is becoming superfluous, since we can look up in an instant the protologue of a name and learn its meaning. But I think: the more regularity and consistency the better (computers like this too), in order to swiftly and surely place, deal with, interpret, understand or otherwise interact with the names of the past, and assist workers of the future similarly with the names we are making. Long live the alphabet, Latin in schools, common courtesy (rather than obscurity) and regular terminations. And, just to redress the tone of this article somewhat, *W. nobilis* too of course.

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Footnotes

1. Commemorative epithets meaning "of Noble" are uncommon in botany. An International Plant Names Index (IPNI) search discovers only one substantival epithet in the genitive, the masculine *noblei*, while the adjectival epithet *nobleana* has been used three times; see further below. The adjectival *nobilis* has been used hundreds of times . I have not examined them all but strongly suspect that none honours a male or female person named Noble, or a person of noble rank.
Two examples from the IPNI search:
1. *Macaranga noblei* Elmer is stated (*Leafl. Philip. Bot.* **2**: 679. 1910)as being "Dedicated to 1st Lieut. W. H. Noble with whom I had the pleasure of registering in the brass-tube on the highest peak of Apo on October 4 1909."
2. *Spiraea nobleana* Hook. f. is named (*Bot. Mag.* **86** *sub*. t. 5169) for "Mr Chas. Noble [who] in the summer of 1859 sent us numerous fine species of three Spiraeas" .
2. The feelings engendered by familiar words mangled in cute idiosyncratic ways may be some kind of universal constant; far beyond our galaxy (*fide* TV's "Futurama") they were felt by Emperor Lrrr of Planet Omicron Persei 8 on meeting the word "wuv"[love] on a candy bar from Earth:
Lrrr: This concept of ''wuv'' confuses and infuriates us!
3. Did the assonance between *nobilis* and "knobless" not occur to anyone involved in that decision ?

- **Phytophthora dieback on totara – sightings wanted**

Verity Forbes, Technical Advisor - Biosecurity Threats (National) *Kai-mātanga Matua, Koiora Mōrearea*, Department of Conservation.

The totara tree in the photo below is suffering from a Phytophthora causing its dieback. The weather has been perfect for Phytophthora this year and Scion are seeing the Phytophthora 'totara' in new bioregions. Scion are seeking more samples to put through their diagnostic service (which is part of MPI's High Risk Site Surveillance programme) to try to isolate the Phytophthora causing this dieback.

If you see symptoms of dieback like this on totara, please take a photo and send the samples to Scion, following the below instructions:

SCION'S COLLECTION INSTRUCTIONS

1. Ideally cut one or more lengths of stem, ca. 200 mm long, with diseased foliage attached.
2. If possible include material with healthy foliage for comparison, do not collect decayed material.

3. Try to include sufficient plant material in so that the host identity can be verified.
4. Package sample carefully to ensure that it arrives in the laboratory in the best possible condition. If material is fresh and will be in transit for only a short time use plastic bags. If material is likely to deteriorate in plastic then substitute with a paper bag or equivalent.

Photos and information Please provide the following: your contact details, host species, location and date sampled

Post samples to:	Or courier to:
Forest Health Reference Laboratory Scion Private Bag 3020 Rotorua Mail Centre Rotorua 3046	Forest Health Reference Laboratory Scion 49 Sala Street Rotorua 3010

The contact for Scion is Beccy Ganley (Rebecca.Ganley@scionresearch.com).

- **Obituary – Lawrence James Metcalf QSO, AHRIH (18 August 1928 – 18 August 2017)**

Murray Dawson, Landcare Research

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 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 who 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 also 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 subantarctic 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 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 parks management. Many of those inspired by Lawrie went on to hold senior positions in horticulture and parks 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 running 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.

Memberships

Lawrie Metcalf was a member of the Canterbury Botanical Society, joining in 1955, and was their 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 both oral and 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 on 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

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

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 include:

- 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.

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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).

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

BIOGRAPHY / BIBLIOGRAPHY

- **Biographical Sketch – Bruce Gordon Hamlin (1929-1976)**

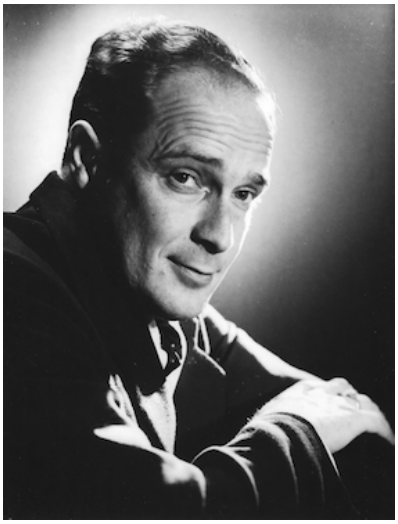
Val Smith, 80 Mill Road, New Plymouth 4310.

Carex hamlinii by Jeremy Rolfe

Bruce Hamlin was born on 15 November 1929 in Miramar, Wellington, the sixth and youngest child of Laurence Charles Hamlin and his Australian wife Dorothy, née Paul. His father had worked on his parents' farm at Johnsonville before serving at Gallipoli and the Somme during the First World War. Invalided home after severe shrapnel injuries, and suffering ongoing physical and emotional problems, he was employed for a while at Wellington Tramways. His wife died when Bruce was just two years old. A series of housekeepers, a second marriage (to Grace Harris) and the birth of four more children ensued, and the family managed to stay together. Bruce attended Miramar South School, and went on to Wellington Technical College where his English language skills and acting talent came to the fore. At the age of 16 he joined the botany division of the Department of Scientific and Industrial Research and worked as an assistant to the well-known authority on grasses and allied plants, Victor Zotov. While attending classes at Victoria University College during the early 1950s, Bruce was especially noted for his tramping club activities and masterly drama club performances.

In 1954 he joined the staff of the Dominion Museum as a junior scientist in the botany department. Becoming interested in printing and publishing, he took over editorship of its scientific journal *Records*

of the Dominion Museum for about ten years, and took the bold step of changing its format. In the late 1950s and early 1960s he had a weekly quarter-hour *Nature Question Time* on the 2YA children's session, and in 1962–63 he often appeared on TV's *Junior Magazine* with Kate and Peter Harcourt, to talk about natural history items, coins and other curiosities. By the late 1960s he was the museum's curator of botany, and during the Cook Bicentenary Exhibition in 1969–70 he was an invaluable font of knowledge on all aspects of the *Endeavour* voyage. In the fifties and sixties his botanical work focussed on the taxonomy of the New Zealand sedges, and he also wrote and illustrated the small books *Native Trees* (1962) and *Native Ferns* (1963). In the seventies he switched his attention to the liverworts, or hepatics, as they were sometimes called. Also interested in the botanical history of New Zealand, he documented the fieldwork of early botanists such as Petrie, Kirk and Cockayne. His manuscript of the journeys of missionary William Colenso was almost ready for publication at the time of his death. Later taken up and expanded by Ian St George, it was published as *Colenso's Collections* by the New Zealand Native Orchid Group in 2009. Hamlin's fieldwork included trips to the Chatham Islands, Stewart Island and Australia, and in 1963 he represented the museum at the golden jubilee of Kirstenbosch, the national botanical gardens of South Africa.



Bruce Hamlin, provided by Mae Carson

He loved music, and was interested in the construction and usage of the English language and the meaning of Latin and Greek scientific names. Fascinated also by coins, tokens and medals, he was made a fellow of the Royal Numismatic Society of New Zealand in 1967 for his work during the museum's exhibition marking the changeover to decimal currency. A stalwart member of the Art Galleries and Museums Association of New Zealand, he was elected a fellow of the association in 1968 and was president at the time of his sudden death in Karori on 22 March 1976, aged 46. In 2015, when it was recommended that around 70 *Uncinia* species (commonly known as "hook grass"*)* be included within the large cosmopolitan genus *Carex,* a new name was required for *Uncinia astonii,* which had been described by Hamlin in 1959. It was renamed *Carex hamlinii,* "to recognise Bruce G Hamlin (1929–1976) and his important contribution to the flora of New Zealand".

Carex hamlinii

Carex is a vast, almost worldwide genus of around 2000 species of grassy plants, commonly known as sedges. *Carex hamlinii* (syn. *Uncinia* astonii) is a fine-leaved, dark green, densely growing hook grass with a slender habit. A New Zealand endemic, it is usually associated with the understory of beech forest 300–1200 m above sea level in the southern Ruahine and Tararua Ranges in the North Island, and Nelson, Westland, Otago and Fiordland in the South Island.

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Yaldwyn, J 1976. Obituary: Bruce Gordon Hamlin 1929–1976, *AGMANZ News* 7:52-53 (accessed online 12 June 2017).

PUBLICATIONS

- **Publications Received**

Auckland Botanical Society Journal 72(1) June 2017 - trip reports for Waikumete Cemetary, Mt Tamahunga, Otata Island, North Head, Manukau Harbour, *Myosotis pansa* subsp. *pansa*, barbed wire grass, walking stick cabbage, African olives, Captains Bush flora, Butler Point gardens.

Botanical Society of Otago Newsletter 82 October 2017 – upcoming meetings and trips, student field grant report, fairy 'barf' lichen, crevice garden, Taieri Gorge fungi,

Canterbury Botanical Society Newsletter September 2017 - upcoming trips and meetings, meeting report on *Senecio glaucophyllus*, trip report for Rene Orchiston Harakeke collection

Canterbury Botanical Society Newsletter October 2017 - upcoming trips and meetings, meeting report on the origins of New Zealand's plants, trip report for Rakaia Gorge.

Canterbury Botanical Society Newsletter November 2017 - upcoming trips and meetings, meeting report on an alternative history of New Zealand vegetation.

Canterbury Botanical Society Newsletter December 2017 - upcoming trips and meetings, meeting report on why *Hebe* (*Veronica*) *armstrongii* is so rare, trip report for Castle Hill Basin.

New Zealand Orchid Journal 46 November 2017 – *Thelymitra* x*dentata*, Wallburga Zeller and *Corybas walliae*, NZ orchids 2017 editor's list, *Caladenia* 'green stem'.

Waikato Botanical Society Newsletter 41 November 2017 – trip report for Whareorino, Waingaro Reserve, Hamilton Gardens, QE2 reserve Karamu, Lake Mangakaware, Mokaihaha and Waitete Bay.

Wellington Botanical Society Newsletter May 2017 – upcoming trips and meetings, submissions made, obituaries, trip reports for North-west Nelson, Barry Hadfield Nīkau reserve, South Coast seaweeds and Mt Kaukau.

Wellington Botanical Society Newsletter September 2017 – upcoming trips and meetings, submissions made, trip reports for Akatarawa forest, Silversky Track, Te Mārua Bush workbee, Ngā Manu Nature Reserve and Forest of Tāne.