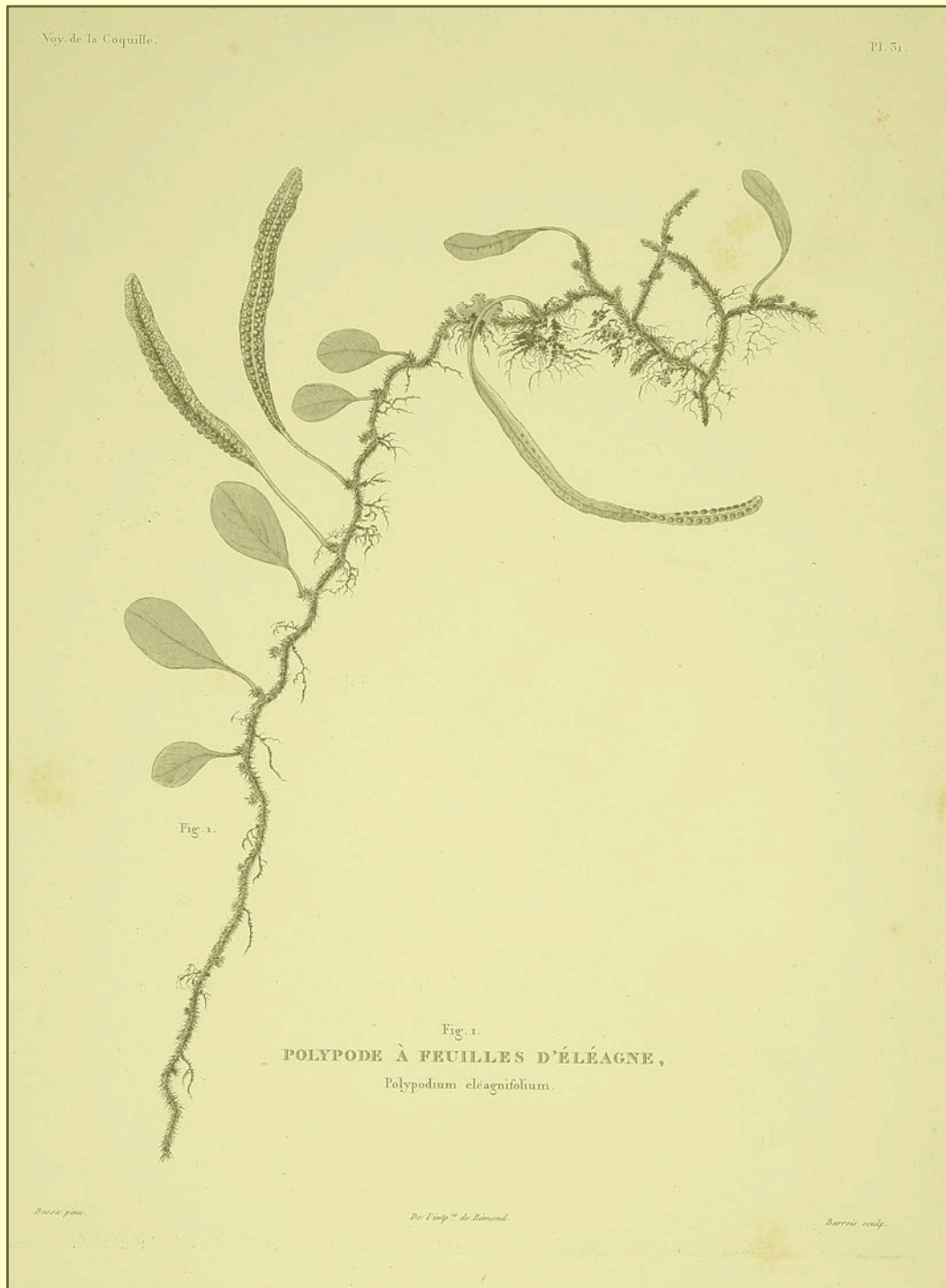


NEW ZEALAND BOTANICAL SOCIETY

# NEWSLETTER

NUMBER 129

September 2017



## New Zealand Botanical Society

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## Subscriptions

The 2017 ordinary and institutional subscriptions are \$25 (reduced to \$18 if paid by the due date on the subscription invoice). The 2017 student subscription, available to full-time students, is \$12 (reduced to \$9 if paid by the due date on the subscription invoice).

Back issues of the *Newsletter* are available at \$7.00 each. Since 1986 the Newsletter has appeared quarterly in March, June, September and December.

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 December 2017 issue is 25 November 2017.

Please post contributions to:  
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Send email contributions to [editor@nzbotanicalsociety.org.nz](mailto: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

The wonderful illustration of *Polypodium eleagnifolium* (sic) was drawn by one of France's foremost botanical artists of the 19th century, Pancrace Bessa, and engraved by Barrois. It was published with Bory's original description in Duperrey (1828). The specimen was collected in the Bay of Islands, New Zealand in 1824 by René P. Lesson on the French Navy vessel *Coquille*, which was under the command of Louis Duperrey with Dumont d'Urville second in command. See article on pg 8.

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### **New Zealand Botanical Society News**

#### ■ **Announcement of the Allan Mere Award for 2017**

The New Zealand Botanical Society Committee is pleased to announce that this year's award of the Allan Mere is to Paul Champion, Principal Scientist and Programme Leader (Aquatic Plants and Freshwater Biosecurity) at National Institute of Water and Atmospheric Research (NIWA). Paul was nominated by the Waikato Botanical Society, with supporting letters from 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 Champion has made an outstanding contribution to botany in New Zealand with an unusual breadth of knowledge in being both an expert in weeds and threatened plants, along with the full freshwater ecosystem spectrum. This makes him a fitting candidate for the award of the Allan Mere for 2017, which I will present at an upcoming Waikato Botanical Society meeting.

Anthony Wright, President, New Zealand Botanical Society

### **Regional Botanical Society News**

#### ■ **Auckland Botanical Society**

##### June Meeting

A large number of books were on sale for a song at our annual book auction. Being busily involved in the arrival of myrtle rust meant that Peter de Lange substituted his John Sawyer Memorial Lecture for the intended talk on the biota of Kapiti Island. Peter first listed the botanists from Kirk onwards who have influenced his botanical career, then gave his thoughts on where we are at with plant conservation in New Zealand.

##### June Field Trip

An extremely busy Okura Bush Track on the North Shore was the scene of this month's walk. The species list from our last visit, nearly ten years ago, was updated with many additions. The patches of gumland scrub were of particular interest, with the pteridomaniacs pleased to see good populations of *Schizaea bifida* and *Hymenophyllum flexuosum* (frilly knickers).

##### July Meeting

Dr Margaret Stanley has an interest in trying to improve outcomes for native biodiversity in urban ecosystems. With urban intensification the order of the day in Auckland it is an appropriate time to discuss the opportunities and barriers to implementing increased biodiversity in the city.

##### July Workshop

Unitec's Department of Environmental and Animal Sciences laboratory was the base for this workshop attended by 25 enthusiasts with a team of five expert tutors and assistants. The tutors gave introductory talks covering vegetative and reproductive features and habitats of mosses, liverworts and lichens. Then followed microscopic examinations of a range of species. The event finished with a walk along Oakley Creek where many lichens, mosses and liverworts were present on old rock walls, damp banks and tree trunks.

##### August Meeting

With the last minute cancellation by our speaker (a sick child) we had a cosy “in-house” evening. It started with a special general meeting to propose the election of Alison Wesley as an Honorary Life Member, and Enid and Paul Asquith as Veteran Members. Unfortunately, due to Enid’s unexpected death, her nomination had to be made posthumously. Mike Wilcox followed with the “Plant of the month” where he expounded the virtues of rimu, and proposed that it should be our national tree. He finished by distributing a couple of bottles of rimu beer. Ewen Cameron stepped in with a talk on his recent visit to the Society Islands. Although his photographs showed what looked like idyllic scenes, he was rather disappointed with the huge numbers of naturalised plants growing on Tahiti and surrounding islands.

#### August Field Trip

A change of leader and a forecast of heavy, thundery showers, got this walk off to a less than auspicious start. However, with a knowledgeable substitute leader and the rain holding off until 1pm, all went well for the 18 who attended. A winter walk designed to keep us off muddy bush tracks took the party on a dendrology excursion in Parnell, visiting Dove Meyer Robinson Park and Alberon Reserve. Some interesting exotic trees grow in one of Auckland’s oldest suburbs.

#### **FUTURE EVENTS**

- 6 September Lucy Cranwell Lecture. Dr. Paul Champion
- 16 September Waikowhai Park
- 4 October “Kauri, drought & climate”. Cate MacInnes-Ng
- 28 October Bioblitz, Whatipu
- 1 November “Botanical travels in Central Europe”. Bec Stanley
- 18 November Motutapu Island
- 2 December Christmas outing. Eskdale Reserve, Lauderdale Rd. Birkdale

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#### ■ **Rotorua Botanical Society**

##### August Field Trip - TECT Park remnants

We started out on a cold overcast morning along the ice encrusted former track of the Ngawaro Rd. We began our cross-section of the typical secondary forest of mamaku with prominent trees such as kamahi, tawari, tanekaha, toatoa, lancewood and five-finger and swathes of *Blechnum novae-zelandiae* hanging from the bank. Along the track edge were various grasses, especially browntop and *Miscanthus nepalensis* and the odd foxglove or ragwort. We soon spotted *Lycopodium scariosum* and the similar *L. volubile* and began our sharing of knowledge of ferns and fern allies.

Our eyes were suddenly taken by a straight line of white lichen with gaps and piles of lichen coincident with wobbles under a loose old fence. Water containing zinc from running down the wires had apparently dripped to create the line. The first culvert revealed the typically deeply incised small mamaku streams and provided our first vista of unlogged forest in the deep gorge of the Upokotio Stream nestled within the recently replanted pine forest of the TECT Park. Here there were tall rimu over a broken tawa forest clothed in epiphytes such as kiekie and cascades of supplejack.

The track dropped away steeply providing views into the canopy of the toru, rewarewa and rimu where *Astelia solandri* or flowering *Metrosideros fulgens* were evident. The track edge contained swathes of *Lycopodium deuterodensum* and the odd *Lindsaea linearis*. The upper bank though provided a treasure trove including *Genoplesium nudum* on a roadside cliff, apparently in flower but actually in fruit, the arching *Lycopodiella cernua*, stunted *Metrosideros fulgens* and *Quintinia serrata*. Further on we entered a tunnel of tawari and kamahi. Interesting plants here included abundant *Alseuosmia macrophylla* in bud, *Leptolepia novae-zelandiae* and *Hymenophyllum frankliniae*. The path itself was often a mass of the weedy *Carex demissa*.

After lunch near the pine forest edge we headed off, at a fast clip to warm up, along the gorge top between young plantation and native forest. A few new species here included *Melicytus lanceolatus*, seedling *Nestegis lanceolata* and lots of Himalayan honeysuckle. Twenty minutes later we re-emerged to descend across the gorge. The descent into the gorge brought us close to the mature

rimu and to recent windfalls, which provided a good opportunity to examine epiphytes. We discussed distinguishing *Hymenophyllum multifidum* with its erect "chimney pot" sori from *H. demissum*; noted masses of *Dendrobium cunninghamii* and *Earina mucronata*; the tiny *Bulbophyllum pygmaeum* and *Drymoanthus adversus*. Looking out into the canopy *Pittosporum cornifolium* was also spotted. Regaining the top of the gorge our backup car and threatening rain provided an incentive for half the party to depart. From there, the route again traversed the boundary between young plantation and native forest in a flat walk back to the other vehicle. Noteworthy new plants included *Brachyglottis kirkii*, *Myrsine salicina*, hinau and *Gleichenia dicarpa*.

## FUTURE EVENTS

September 9 *Myosotis pottsiana* sites – Galatea Foothills, Urewera  
October 8 Western Bays track - Waihaha Section  
November 3-5 East Cape Revisited  
December 3 Killarney (Tuahu Lakes)

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### ■ Nelson Botanical Society

#### April Fieldtrip: Kaipupu Point, Picton

We arrived early to get the Water Taxi to Kaipupu Point Mainland Island Wildlife Sanctuary at the head of Picton Harbour. The predator-proof fence was erected in 2008. The gorse and bracken cover that clothed the land after grazing ended has been replaced with a dense secondary scrub cover dominated by *Dodonaea viscosa*, *Pseudopanax arboreus* and *Melicactus ramiflorus*. *Kunzea ericoides* is present and there is a dense understory of *Brachyglottis repanda* and *Piper excelsum*. On the shadier side there are remnant hard beech and tawa. Some revegetation plantings have been undertaken at the southern end. We recorded over 120 native plants including the ferns: *Tmesipteris elongata*, *Lycopodium volubile*, *Paesia scaberula*, *Pellaea rotundifolia*, *Asplenium flabellifolium*, *Hymenophyllum demissum*, *H. bivalve*, *Trichomanes venosum*. *Passiflora tetrandra* was fruiting and *Metrosideros fulgens* was in flower. Most notable was *Echinopogon ovatus* as it is not often seen locally.



Hedgehog grass,  
*Echinopogon ovatus*. Photo:  
Don Pittham

#### May Fieldtrip Moutere Remnants, Upper Moutere

Fourteen members were welcomed, firstly, to Lancewood Villa, the home of Fiona del Bosco and Alastair Wilkinson, and later, to a neighbouring property owned by Susan Moore-Lavo and Tony Lavo. One hectare of Lancewood Villa land is QEII covenanted and in this area the presence of trees, such as *Dacrydium cupressinum*, *Fuscospora solandri* and *Podocarpus totara* emphasised the enduring nature of the bush. Additions to the list included *Coprosma areolata*, *C. dumosa*, *C. x cunninghamii*, *Cordyline australis*, *Leucopogon fasciculatus*, *Pittosporum eugenioides* and *Prumnopitys ferruginea* and *Carex flagellifera*, ferns included: *Lastreopsis glabella*, *L. microsora* and *Polystichum neozelandicum* subsp. *zerophyllum*. We also saw the remains of a *Lophozonia menziesii* blown down along with *Peraxilla colensoi*. We later headed across the paddocks and were shown areas of bush with mature *Dacrycarpus dacrydioides*, *Fuscospora solandri* and *Podocarpus totara*. Additions to this list were *Dicksonia fibrosa*, *Pseudowintera colorata*, *Pyrrosia eleagnifolia*, *Asplenium polyodon*, *A. hookerianum x bulbiferum*, *Senecio glomeratus* and *S. hispidulus*.

#### June Field Trip: Matai Caves

Our group set off from the Maitai Dam carpark and were soon captivated by an array of fungi in the riverside beech forest. We saw white, coral-like *Clavulina* sp., bright yellow spikes of *Clavaria* and tiny golden caps of *Cortinarius* sp. We also saw small-leaved *Nertera depressa* with scarlet berries, the

larger, hairy-leaved *N. villosa* nearby and flowering *Pterostylis alobula*. Progress was slow through the forest of *Fuscospora fusca* and *Lophozonia menziesii* with emergent mataī, miro, rimu and kahikatea and healthy numbers of seedlings. We were impressed by the number of *Elaeocarpus hookerianus* and five tree fern species were seen: *Dicksonia squarrosa*, *D. fibrosa*, *Cyathea smithii*, *C. medullaris* and *C. dealbata*. We found six *Asplenium* species including: *A. hookerianum* var. *hookerianum*, *A. hookerianum* var. *colensoi*, *A. lyallii* and *A. richardii*. On the Caves Track the forest was



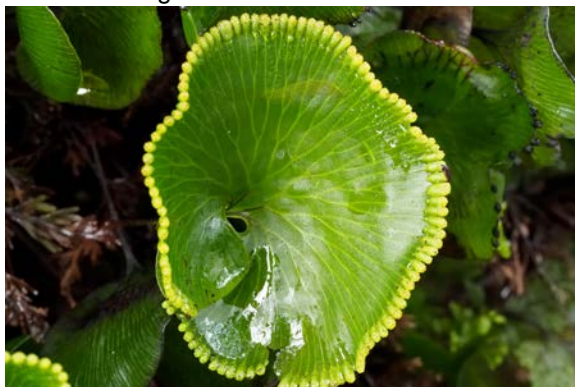
Rohutu, *Lophomyrtus obcordata*. Photo: Steve Palmer

dampener and with an array of filmy ferns: *Hymenophyllum scabrum*, *H. villosum*, *H. sanguinolentum*, *H. bivalve*, *H. demissum*, *H. pulcherrimum*, *H. revolutum* and *H. nephrophyllum*. *Tmesipteris elongata* was an addition to the list and three white climbing rata were present: *Metrosideros colensoi*, *M. diffusa* and *M. perforata*. As we climbed the canopy was mostly *Fuscospora truncata* with *Pennantia corymbosa*, *Streblus heterophyllus*, *Raukaua anomalus*, *Myrsine divaricata* *Neomyrtus pedunculata*, *Melicope simplex*, *Coprosma rhamnoides*, *C. propinqua*, *C. dumosa*, *C. microcarpa*, *C. pseudocuneata* and *C. rotundifolia* in the understory. We looked at *Lophomyrtus obcordata* and found hybrids of *L. obcordata* and *L. bullata*. We later made our way down the Maitai valley, pausing to note the death of the sole *Astelia grandis*.

#### June Talk: A Region Redesigned – South Marlborough, Flora Response to the Kaikoura Earthquake - Jan Clayton-Greene

Jan's talk gave us a vivid picture of the devastation of the natural environment caused by the Kaikoura earthquake. We saw the huge escarpment formed in the Clarence Valley, a newly formed 4-metre-deep lake, challenging new rapids, extensive wetlands from dammed streams, where countless boulders have crushed all before them like giant rollers and ravines filled with metres-high debris. Some of the vegetation was submerged under water or rock debris and stripped of foliage by slips. Previously safe refugia were made accessible to browsing goats and are now at risk of weed invasion.

Cyclone 'Cook' a few months later caused further landscape changes, flushing out stream beds and breaking down recently formed dams with torrents of water. Jan showed us slip faces, once covered in *Sophora microphylla* but now bare and prime sites for weed invasion, and cliff refugia for *Melicytus* aff. *crassifolius* 'Cliff' and *Pseudopanax crassifolius* now accessible to goats. There were photos of *Olearia paniculata*, *Melicytus ramiflorus* and *Pseudopanax arboreus* reduced to bare sticks but still alive and, hopefully, capable of regrowth. A population of the Nationally Endangered, South Marlborough endemic, *Carmichaelia stevensonii*, on the Gorge Saddle appeared unharmed, while over the George Saddle all vegetation was completely destroyed. *C. australis* and *C. glabrescens* were surviving but both were at risk from browsing. The upper Clarence *Gingidia* aff. *ensyii* 'Clarence'



Kidney fern, *Hymenophyllum nephrophyllum*. Photo: Steve Palmer

was unharmed, but a small rock-crevice population of *Asplenium subglandulosum* was obliterated by debris. The rescue of *Pachystegia minor* 'Ohau Pt' was an impressive account of plant conservation in a difficult situation. *Pachystegia minor* is an At Risk South Marlborough endemic with two leaf forms, the smaller leaf form being restricted to Ohau Pt, a bluff above the highway that was extensively damaged. An aerial survey found some 80 plants and an abseiling team was able to collect seed, which has produced over 200 seedlings. Hydro-

seeding on the cliff tops may be attempted, but other safe sites will need to be found as only about

a sixth of the original habitat remains. Priority work for the future is weed and goat control, together with surveying to find and protect safe refugia for the special vegetation of this vast conservation area.

#### July Field Trip: Schroder QE11 Covenant, Ngatimoti

Members visited the Schroder QE11 native bush covenant in Ngatimoti where we were met by Alvin and Priscilla Schroder. The 5.5 ha of mixed podocarp/broadleaf/beechn forest on granite geology was covenanted 30 years ago. We started up a ridge through an abundance of regenerating *Podocarpus totara* with occasional large *Dacrydium cupressinum* and *Prumnopitys taxifolia*. The understorey was open, with *Alectryon excelsus*, *Streblus heterophyllus*, *Elaeocarpus dentatus*, *Cyathea dealbata* and *Dicksonia squarrosa*. The ground cover was mostly dry litter with occasional ferns, including *Botrychium bifforme*. On the upper slopes were *Fuscospora fusca* and *F. solandri* with plentiful regeneration. We saw many *Cyathea medullaris* and dense patches of *Ripogonum scandens*, a large *Cordyline australis* and *C. banksii*. We went down a new track through where the composition of plant species changed to include: *Schefflera digitata*, *Carpodetus serratus*, *Lophomyrtus obcordata* and *Dicksonia fibrosa*. Very large mataī, rimu and *Dacrycarpus dacrydioides* were scattered and the ground was densely covered with ferns. Lianas and vines of *Metrosideros colensoi*, *Passiflora tetrandra*, and *Parsonsia heterophylla* were also abundant. Returning along another track, we were impressed by old, gnarly, mahoe and further areas of parsley fern.

#### July Talk: "A look at the Botany of Mt Burns" – Kay and Neil Jackson

Kay and Neil Jackson have visited Mt Burns, in the Hunter Mountains of Fiordland, several times, mostly in January and mid-February. Both accomplished photographers as well as enthusiastic botanists, their presentation highlighted some of the species we might see at Mt Burns and at other Fiordland locations. Kay and Neil's usual route up Mt Burns starts with a short climb through stunted beech forest, after which the track opens onto a ridge of tussock and tarns. They then make their way generally east, crossing one shallow valley then continuing up another. There is no track, nor any marker poles or cairns in this area, so good visibility is needed. From the saddle, they turn north and make their way across rockier ground, with a few short climbs, towards a basin below Mt Burns, where there are more tarns. Gertrude Valley and Gertrude Saddle, and the Treble Cone and Cardrona skifield roads were also botanically and photographically rich locations for Kay and Neil. Gertrude Valley is a gentle walk for the first hour or so; the climb to the saddle is rather more demanding but definitely rewarding. Kay and Neil included in their presentation many *Celmisia* and *Ranunculus* species.

#### **FUTURE EVENTS**

September 17 Field Trip: Wairoa Weeding  
September 18 Talk by Roger Gaskell on Plant projects in the Motueka District.  
October 15 Field Trip: Wainui Headwaters  
October 20-23 Camp: Blackball / Southern Paparoas  
November 19 Field trip: Clarke River Orchids  
December 5-20 Camp: Wanaka / Borland

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Wakatipu Botanical Group

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## NOTES AND REPORTS

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### ■ The correct spelling of the specific epithet of tōwai/tawhero (*Weinmannia*)

**Ewen K. Cameron,** Auckland Museum, Private Bag 92018, Auckland 1142,  
[ecameron@aucklandmuseum.com](mailto:ecameron@aucklandmuseum.com)

The spelling of the specific epithet of the New Zealand native tree tōwai/tawhero has varied over time as to whether it is a “y” or an “i”: *Weinmannia sylvicola* or *W. silvicola* (Cunoniaceae). Spellings in chronological sequence as they appeared in the New Zealand floras:

Solander [1770]: *Weinmannia sylvicola* MS

Cunningham (1839): *Weinmannia sylvicola* Sol. ex A.Cunn.

Hooker (1867): *Weinmannia silvicola* Banks & Sol.

Cheeseman (1906, 1925): *Weinmannia sylvicola* Sol. ex A.Cunn.

Allan (1961): *Weinmannia silvicola* Sol. ex A.Cunn

The most common spelling currently used in New Zealand is *Weinmannia silvicola* e.g. Landcare Research website (Ngā Tipu o Aotearoa - New Zealand Plants) and the New Zealand Plant Conservation website.

However, Allan Cunningham published the first legal combination as:

*Weinmannia sylvicola* Sol. ex A.Cunn., *Annals of Natural History* 2(11): 357, 1839 – the ex-citation because Cunningham acknowledged that the name came from Solander’s unpublished MS.

From ‘The Code Decoded’ (Turland 2013: 88): The golden rule of orthography is that “the original spelling of a name or epithet must be retained (Art. 60.1)”... “only correct spelling when the *Code* requires it.”

Comment from Shaun Pennycook (pers. comm.): these two authentic variants are the same word: “silva” is classical Latin, and “sylva” is mediaeval Latin (also Botanical Latin, according to Stearn (1973)). According to ICN Art 60.1, Ex. 1, the original published form of *Fagus sylvatica* L. must be retained and not to be altered to “*F. silvatica*” (McNeill et al. 2012: 127).

**So therefore the spelling should be: *Weinmannia sylvicola*.**

Shaun also added: maybe the erroneous “correction” to *silvicola* was made by a classical Latin scholar?

### **Acknowledgement**

Many thanks to Shaun Pennycook for his comments to my query.

### **References**

- Allan, H.H. 1961: Flora of New Zealand, vol. 1. Government Printer, Wellington. 1085p.  
Cheeseman, T.F. 1906: Manual of the New Zealand Flora. Government Printer, Wellington. 1199p.  
Cheeseman, T.F. 1925: Manual of the New Zealand Flora, 2<sup>nd</sup> ed. Government Printer, Wellington. 1163p.  
Hooker, J.D. 1864-67: Handbook of the New Zealand Flora: a systematic description of the native plants. Reeve & Co., London. 798p.  
McNeill, J. et al. 2012: International Code of Nomenclature for algae, fungi, and plants (Melbourne Code). Regnum Vegetabile No. 154. Koeltz Scientific Books, Königstein. 208p.  
Solander, D.C. [1770]: Primitiae Florae Novae Zelandiae. Unpublished.  
Stearn, W.T. 1973: Botanical Latin, 2<sup>nd</sup> ed. David & Charles, Newton Abbot. 566p.  
Turland, N. 2013: The Code decoded – a user’s guide to the International Code of Nomenclature for algae, fungi, and plants. Vegetabile Regnum, No. 155. Koeltz Scientific Books, Königstein. 169p.

### ■ **The correct spelling of the specific epithet of leather-leaf fern (*Pyrrosia eleagnifolia*)**

**Ewen K. Cameron**, Auckland Museum, Private Bag 92018, Auckland 1142, [ecameron@aucklandmuseum.com](mailto:ecameron@aucklandmuseum.com)

The spelling of the specific epithet of the endemic New Zealand leather-leaf fern has always been *Pyrrosia eleagnifolia* (Polypodiaceae). This agrees with the protologue by Jean Bory:

*Polypodium eleagnifolium* Bory in Dup. Voy. Bot. 1. 259 t. 31 f. 1. 1828.

≡ *Pyrrosia eleagnifolia* (Bory) Hovenkamp, *Blumea* 30: 208 (1984)

The heading Bory used (in Duperrey 1828: 259) for the description and the illustration (Fig. 1, see cover) of the new fern was: “POLYPODE A FEUILLES D’ÉLÉAGNE” [= Polypoda with leaves of *Eleagnus*] and in the description he mentions *Eleagnus latifolius* L. as: “...vertes au-dessus, et au-dessous blanchâtres, tomentenses, comme l’est une feuille de l’*Eleagnus latifolius* L.” [=...green above, and below whitish, tomentose, as is a leaf of the *Eleagnus latifolius* L.]. According to IPNI, *Eleagnus* Hill (1768) is an “orthographic variant” of *Eleagnus* (1753). It appears that Linnaeus never used this orthography for the species.

Therefore this seems to be an orthographic error (rather than a conscious decision to use Hill’s 1768 orthography) because:

- He used the French name of the plant: *Éléagne*
- He presented the plant it was named after as: *Eleagnus latifolius* L.

Bory’s error was perhaps provoked by the spelling of the French name. Therefore I think the spelling of the specific should be corrected to: ***Pyrrosia eleagnifolia*** – ICN Art. 60.1, correction of an orthographic error (McNeill et al. 2012).

### **Acknowledgements**

I’m extremely grateful to Shaun Pennycook for his expert comments to my query about the spelling of the epithet; and to Juliana Satchell-Deo and Zoe Richardson of the Auckland Museum library for providing the scanned image used on the cover.

## References

Duperrey, L.I. 1828: *Voyage Autour du Monde*, Bot. 1: 259, plate 31, fig. 1. [Held in the library of the Auckland Museum.]

IPNI: <http://www.ipni.org/> (accessed June 2017)

McNeill, J. et al. 2012: International Code of Nomenclature for algae, fungi, and plants (Melbourne Code). Regnum Vegetabile No. 154. Koeltz Scientific Books, Königstein. 208p.

### ■ New site of the Critically Endangered grass *Poa spania*.

Mike Thorsen, ERA Ecology NZ Ltd, mikethorsen@eraecology.co.nz

An earlier version of this article was published in the Botanical Society of Otago Newsletter.

*Poa spania* is a Critically Endangered small (3-10cm tall with flower heads to 22cm tall), delicate, grass that was first described in 1994 and is known solely from one limestone tower near the Awahokomo Stream in the Waitaki Valley of North Otago (Molloy et al. 1999, de Lange et al. 2013, pers. obs.). Here it is threatened through grazing and burrowing by rabbits and by competition with exotic plants that are swamping the highly fertile site (Molloy et al. 1999, Head and Buunk 2005, de Lange et al. 2010). The site is now subject to an intensive hand-weeding programme and rabbits are excluded by a fence (Joy Comrie and Nick Head pers. comms.). Its population size is largely unknown, and it has not been found on other limestone outcrops in North Otago or Canterbury, despite intensive survey of many of these sites by several botanists. The site where it occurs also hosts several other species that are thought to occur nowhere else. While some of the species that



The plant of *Poa spania* at Wai o Toura (blueish leaves in middle front of picture – use your imagination) partly enclosed by a wire mesh enclosure over the broom *Carmichaelia hollowayi* in the back left of picture.

occur only at this site are known to have been distributed more widely, others, such as *P. spania*, are thought to be single-site endemics (Molloy et al. 1999, Alice Shanks, Brian Molly & Nick Head pers. comms.). Such extreme narrow-range site endemism is unparalleled in New Zealand, and begs the question: is this single-site endemism an artefact of our knowledge of species distributions?



The morphologically similar *Poa lindsayi* in the Nevis Valley, Otago. *P. spania* is very similar in its in-situ appearance but does not form such a tight clump and the inflorescence is more open and delicate. The two can only be reliably distinguished by the larger anthers and pubescent outer surface of the ligule of *P. spania*, both of which require magnification to view.

Twelve years ago, when I started work as a botanist for the Department of Conservation (DOC) in Otago, the two other resident DOC botanists muttered something along the lines of “great, a new person – you can ‘do’ the grasses” (thank you Geoff Rogers and John Barkla!). Where I had previously worked (Northland, East Cape, Hawkes Bay and the Chatham Islands) there is not a large diversity of grasses, and therefore, like many botanists, I had only a basic familiarity with grasses and their identification. In contrast, the vegetation of much of Otago is dominated by grasses and tussock grasslands. So, probably foolishly, I took their direction to heart and since I didn’t really know much about grasses thought I’d better start to learn about them and so started collecting grasses for identification. These early collections were often rushed as I raced to learn the flora of an entirely new region.

One of these rushed collections was a small delicate grass that I collected on 10 November 2004 during a quick visit to a limestone outcrop at the now Wai o Toura Covenant at Gards Road in the Waitaki Valley. Originally I thought the specimen was *Poa acicularifolia*, an identification I soon realised was in error. I then re-identified it as either *Poa spania* or *Poa lindsayi* and sent the specimen (CHR 572431) to the Allan Herbarium in Lincoln where it was identified as *P. lindsayi* by Kerry Ford. An identification which I accepted. But as time passed I became more familiar with *P. lindsayi*, which is widespread, though usually sparsely distributed, throughout Otago. When adding these *P. lindsayi* specimens to my collection of pressed specimens, which includes duplicates or photocopies of specimens sent off for identification, a discrepancy in appearance became obvious between the Wai o Toura collection of *P. lindsayi* and my later collections of this species. On 2 September 2014, I requested Kerry to check her original identification against *Poa spania* and she agreed with this new identification on the basis of anther length and the lacerate and pubescent ligule of the Wai o Toura specimen (the extravaginal branching noted by Molloy et al. (1999) is not easily visible in the specimen).

Confirmation that *P. spania* occurs at Wai o Toura is evidence that the extreme narrow-range site endemism present at the Awahokomo site is most likely to be an artefact of our knowledge of the

distribution of plants, which is complicated by both the large changes in vegetation cover that are occurring in New Zealand and the difficulty with identifying grasses and consequently the shortage of people who are competent to identify grasses.

Realising that *P. spania* also occurred at Wai o Toura required us to confirm its current status there. My notes with the original specimen were brief: "occasional plant on limestone bluff" and the locality grid reference was for the general site only. On 26 November 2015 I returned to Wai o Toura accompanied by DOC's Graeme Loh (who was instrumental in achieving legal and physical protection for Wai o Toura and was then removing box thorn from the site – often by very forceful means) and several other people with the intention of rediscovering the location of *P. spania*. Guided by my recollections of the initial visit we searched for a small grey grass amongst many, many, other grasses, some of which are also small and grey! Discovery of a detached culm (flower stalk) gave us hope before discovering one small (30cm diameter) patch of the grass, half of which is growing within a mesh cage protecting a *Carmichaelia hollowayi* plant. No other plants were found at the site. Interestingly the plant at Wai o Toura appears to be rhizomatous, a character not seen in the Awahokomo plants. However, this feature cannot be confirmed without uprooting part of the plant, and since this species is so rare, that was not attempted. Parts of two mature inflorescences were collected from which I removed and sowed the ripe caryopsis (seeds) in November 2015. One seed germinated in April 2016, five months after sowing, and a further four seeds germinated in July 2016, eight months after sowing. All five young plants are very slow growing above ground, and at 2-5 months after germination were 2cm tall with 6 small bluish leaves on the largest five-month-old plant! Below ground is a different story – root development is extensive and the longest roots are now 12cm long. Presumably this is an adaption by the species to finding moisture deep in crevices in the limestone.

These plants were grown on and flowering (anther exsertion) was noted to begin in November for these first season plants. Flowering begins in July for adult plants in cultivation. Considerable seed was produced and harvested. One plant died for unknown reasons, but the other four have survived the Dunedin winter to date. These adult cultivated plants are around 10cm tall with culms about 30cm in length. These will continue to be grown on and we hope to return some of their progeny in the future, probably be broadcasting seed into likely places.

## References

de Lange, P; Heenan, P; Norton, D; Rolfe, J; Sawyer, J. 2010. Threatened plants of New Zealand. Canterbury University Press, Christchurch.

de Lange, P.J; Rolfe, J.R; Champion, P.D; Courtney, S.P; Heenan, P.B; Barkla, J.W; Cameron, E.K; Norton, D.A; Hitchmough, R.A. 2013. Conservation status of New Zealand indigenous vascular plants, 2012. New Zealand Threat Classification Series 3. Department of Conservation, Wellington.

Heads, N; Buunk, I. 2005. Threatened plants of Canterbury: a field guide. Department of Conservation, Christchurch.

Molly, B.P.J; Edgar, E; Heenan, P.B; de Lange, P.J. 1999. New species of *Poa* (Gramineae) and *Ischnocarpus* (Brassicaceae) from limestone, North Otago, South Island, New Zealand. New Zealand Journal of Botany 37: 41-50.

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## BIOGRAPHY / BIBLIOGRAPHY

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### ■ Biographical Sketch – Rachel Chisholm (1915-2017)

**Val Smith**, 80 Mill Road, New Plymouth 4310.

Born in Invercargill on 12 May 1915, Rachel was the second child of Mary Myrtle Kevern (née Baker) and George Mathias Kevern, a timber yard tally clerk, and sister of Mavis and Leslie. George bought a small bush farm on Gorge Road, and with the children's help, cleared part of it and milked cows. After taking a domestic course at Southland Technical College, Rachel became a proficient dressmaker and pianist, and played hockey for Southland. When she was 19 she met Mervyn Mackie



*Rachelia glaria*. Photo by Simon Walls

(Bill) Chisholm from a blacksmithing family. He, too, grew up in Southland, and after leaving school worked on his uncle's farm at Matura, where the Millard children (Bill's cousins) were Rachel's close friends. Rachel and Bill married at St Pauls' Church, Invercargill, in 1939. Bill's new work as a government deer culler and operations manager entailed five moves in the next three years. Then, in 1942, he was offered management of the vast rabbit-infested, denuded and virtually bankrupt Molesworth Station in Marlborough.

It could have been a lonely life for Rachel, with the nearest neighbours seven miles away and her husband often camping out (later there was twice-daily contact by radio telephone), but there was always plenty to do and she quietly got on with it: cutting firewood to heat the neglected cobb homestead, and for the first few years cooking for the staff, milking cows and making butter, keeping hens and tending beehives, developing a garden of frost-hardy plants. Their son Bruce was born in Blenheim in 1944 and daughter Ann in Motueka in 1950, but there was no washing machine at the homestead until 1958. There were correspondence lessons to supervise until Bruce went to relations in Christchurch when he was seven, and Ann went to Rangī Ruru Girls' School in Christchurch for her secondary education. (Tragically, Bruce was killed in a motorbike accident in 1966, when he was 22.) Rachel phoned weather data to Wellington every morning, sometimes listened to Aunt Daisy on the radio, and every week for 22 years she and her sister Mavis exchanged letters. There were books from the station library, her piano and many an evening singsong around it. Her greatest pleasure was hosting Molesworth's many visitors, especially DSIR botanists Lucy Moore and Margaret Bulfin (née Simpson) who during their extensive plant trials at Molesworth from 1944 to 1971 became very good friends of both Bill and Rachel Chisholm.

By the mid-seventies, when Bill could no longer get on a horse and was ready to retire, Molesworth had wintered up to 10,000 beef cattle and was making a profit. The new appointee in 1978 was his head stockman and son-in-law Don Reid, in partnership with Ann, who had returned to Molesworth after finishing secondary school and become her father's "right-hand girl". The Chisholms retired to Blenheim, and in 1979 each was honoured with a Queen's Service Award. While Rachel was able to continue many of her usual activities such as cooking and gardening, Bill had difficulty adapting to not being the "king-pin". After his death on Christmas Day 1999, aged 86, Rachel continued for over ten years on her own, moving into a Blenheim retirement village after a fall in 2010. She died in her 102nd year, on 23 April 2017.

Mount Chisholm and Rachel Range, backdrops to the Molesworth homestead, are named after them. A scree daisy, originally collected in 1949 from Mt Terako near the southern end of the Seaward Kaikoura Range and found again in 1980 on Mt Barefell in the Rachel Range, was named, "the genus after the mountain range where the holotype was collected and after Rachel Chisholm".

#### ***Rachelia glaria***

Originally collected by J K Forbes of Waiau, and once thought to be a hybrid between *Haastia sinclairii* and edelweiss, *Rachelia glaria* ('of scree') was described as recently as 1997. It is an endemic alpine scree daisy known from only a few localities in the northeast of the South Island. Long, slender, branched rhizomes beneath the argillite scree produce groups of unbranched or sparingly branched silver-grey, densely hairy shoots and tapered, slightly folded leaves. These emerge after the spring thaw, grow 1-3 cm in height above the scree and die down in autumn. The 4-6 small flower heads are clustered at the stem tips, each with 7-11 reddish florets, in the axils of the uppermost leaves.

## REFERENCES

- Broad, H 2013. *Molesworth: stories from New Zealand's largest high-country station*. Craig Potton.
- Brook-White, J S 2017. Interview with Rachel Chisholm, Oral History (abstract).  
(accessed online 12 June 2017).
- Brook-White, J S 2017. Interview with Ann Reid, Oral History (abstract).  
(accessed online 12 June 2017).
- Powell, S 2015. Blenheim centenarian takes birthday in her stride. Marlborough Express  
(accessed online 10 June 2017)
- Reid, A 2017. pers. comm.
- Ward, J M; Breitwieser, I; Lovis J D 1997. *Rachelia glaria* (Compositae), A new genus and species from the South Island of New Zealand. *New Zealand Journal of Botany* 35(2): 145-154.

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## PUBLICATIONS

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### ■ Publications Received

New Zealand Native Orchid Journal 144 May 2017 Have you seen these new species? *Pterostylis irwinii* from Erua, *Pterostylis banksii* and *Pt. banksii* 'south',

Canterbury Botanical Society Newsletter 2017:7 Upcoming meetings and trips, meeting report on how to grow mistletoes.

Canterbury Botanical Society Newsletter 2017:8 Upcoming meetings and trips, meeting report on Canary Island biogeography, trip reports on how to ID trees by bud and bark and Sri Taniwha farm, Rakaia Gorge.

### ■ Book review: Tōtara: A Natural and Cultural History

By Philip Simpson

Published by: Auckland University Press, Auckland, New Zealand, June 2017

Hardback, colour illustrations, 300 pages, 260 × 224 mm

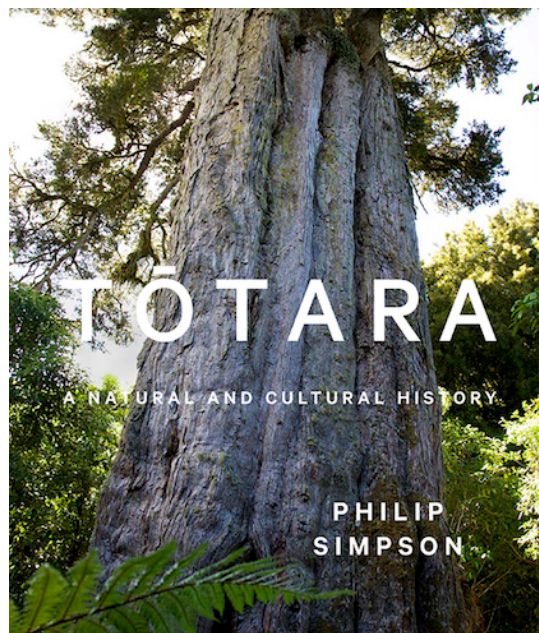
ISBN 978-1-86940-819-0

\$NZ75.00

### Reviewed by Murray Dawson

Author Philip Simpson is an eminent botanist and natural historian based in Takaka. He has previously authored remarkable in-depth 'tree monographs' on two iconic native plant genera: *Metrosideros* (*Pōhutukawa and rātā: New Zealand's iron-hearted trees*, 2005) and *Cordyline* (*Dancing leaves: the story of New Zealand's cabbage tree, tī kōuka*, 2000)<sup>1</sup>. Both are outstanding, and both received Montana Book awards.

These books, together with his latest offering on tōtara, provide richly illustrated and authoritative reads. They follow a rather unique holistic approach that cover many facets including botany, ecology, cultural values, folklore, economic uses, history, and conservation.



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<sup>1</sup> It's sobering to consider that *Metrosideros* may be under great peril through the recently arrived myrtle rust and that since the late 1980s cabbage trees have been afflicted by Sudden Decline Syndrome. Add to that kauri dieback which was formally identified in 2008, and let's hope that tōtara and other treasured New Zealand native trees won't become casualties of further pathogens.



In 2009, Philip Simpson received a Creative New Zealand Michael King Writers' Fellowship which provided a stipend for the dedicated research and resource gathering needed for his new work on tōtara. Numbered notes and references are included in the back of the book for each chapter, which reveals how thoroughly the book has been researched over its years of preparation.

This book primarily focuses on lowland tōtara, *Podocarpus totara*, the tallest growing podocarp in New Zealand with some of the oldest trees (1000 years plus, giants of the forest). Because of its remarkable durability, tōtara is perhaps best known for being highly prized by Māori for traditional carving and for tōtara fence posts used in the 'No. 8 wire' and earlier period by Pākehā farmers. However, as the book reveals, there is far more to the mighty tōtara.

**Fig. 1** Author Philip Simpson standing in front of a tōtara registered with the New Zealand Notable Trees Trust (NZNTT). Photo courtesy of Auckland University Press.

The first chapter ('Tōtara in the natural world') sets the scene and introduces us to the fascinating world of gymnosperms, conifers and podocarps – and their biogeography. We learn that there are four currently recognised species of native tōtara, *Podocarpus acutifolius* (needle-leaved tōtara), *P. laetus* (Hall's tōtara, which until recently was known as *Podocarpus hallii*), *P. nivalis* (mountain or snow tōtara), and *P. totara* – and all are discussed in the book. The last species, *Podocarpus totara*, has two varieties – var. *totara*, the lowland tōtara, which is the main subject, and the range restricted var. *waihoensis*, the South Westland tōtara, which the author considers to be a separate species that he dubs *Podocarpus* "waihoensis". In the future, DNA sequencing may be able to help resolve the status and possible hybrid origin of South Westland tōtara, but until then the varietal name *Podocarpus totara* var. *waihoensis* should be retained.

Chapter Two ('How tōtara grows') traces the life history of tōtara, from young seedlings to mature forest giants. Reproductive features including cones, pollen and fruit are well illustrated and explained. Also included in this chapter are some excellent photomicrographs showing sections of root nodules, leaves, bark and wood. I fear that the botanical discipline of anatomy and the associated techniques of sectioning are becoming a lost art, so it is great to see them shown here to good effect. In this chapter, we also learn of totarol, an antibacterial terpene responsible for protecting tōtara from decay.

As the title of Chapter Three ('Where tōtara lives and who lives with it') suggests, the ecological preferences of tōtara and other life associated with it is outlined, including epiphytic plants (such as astelias, ferns, mosses, lichen, and fungi), and animals (such as birds, bats, lizards and insects). We learn that the red, berry-like fruit of tōtara (called a podocarpium) provide a reliable food source for native birds including bellbird, kererū, kōkako, and tūī, and that introduced birds also feed upon them.





**Fig. 2** Farmland at Karamea. Tōtara trees pruned by wind and salt are characteristic of the New Zealand coast. Photo: Philip Simpson.



The following three chapters ('Te mauri o te tōtara: how Māori value tōtara', 'Ngā mahi o te tōtara: using tōtara wood', and 'Te kiri o Tāne: the bark of tōtara') provides a large central ethnobotanical section of the book that takes us on a journey spanning folklore, cultural and spiritual values, and physical uses that tōtara has to Māori. There is no doubt that tōtara has been, and still is, of great importance. For example, we are told (p. 109) that "Nearly all of the most treasured carvings in Aotearoa / New Zealand are made from tōtara", as were many waka (traditional canoes), implements, and buildings. Bark was also used for a wide variety of purposes. Author Philip Simpson has a rare talent for combining the scientific with the cultural (Māoritanga) – and indeed with artistic and historical perspectives. Few others do this well – only the late Dr Geoff Park comes to mind.

**Fig. 3** Old tōtara have many epiphytes, especially 'lilies' (*Astelia*), orchids and ferns, and sometimes shrubs such as *Pittosporum cornifolium*. Photo: Philip Simpson.

Chapter Seven ('Pākehā discover tōtara') shifts to the beginnings of European colonisation of New Zealand with the extensive deforestation and plundering of tōtara that followed. Philip Simpson writes at the beginning of this chapter, "For the first few decades of pākehā settlement, tōtara was the raw material for every kind of construction. A family could get off the boat with an axe and build a new life from the tree. Entire houses, early churches, grave markers, and even cobbles and kerbs were made of tōtara. On the farm all fences were tōtara..."



**Fig. 4** The once vast tōtara forest of the Volcanic Plateau is now reduced to a few remnants, of which Whirinaki is one of the best. Photo: Philip Simpson.

final chapter ('How tōtara is (and isn't) being protected') fittingly moves to a conservation theme. Changing perceptions and public protests on the continued logging of indigenous forest eventually resulted in the formation of the Department of Conservation, and a full transition to a forestry industry based on *Pinus radiata* plantations. This chapter also provides an interesting summary of various conservation initiatives and frameworks in New Zealand – including National Parks, reserves, and covenants. Tōtara in ecological restoration planting, in horticulture, and planting tōtara for timber are all covered here. This book concludes by acknowledging those who have been active champions of tōtara, and makes a plea for its ongoing conservation.

My coarse chapter-by-chapter overview only hints at the richness of this book. Beautifully crafted, lavishly illustrated, tōtara is another winner for Philip Simpson. I have no hesitation in recommending it highly.

Chapter Eight ('Tōtara creates a nation') continues from the early days of pākehā colonisation of New Zealand, as settlements grew into towns and towns grew into cities. Here, the wider uses of tōtara are explored, for constructing road, rail, and sea infrastructure, such as telegraph poles, railway sleepers, bridges, wharves, and boat building.

Chapter Nine ('Where have all the tōtara gone?') highlights the decline of tōtara through natural loss (such as floods, storms, and earthquakes), Polynesian settlement (with relatively limiting harvesting, but a period of extensive fires which cleared at least a third of the whole country), and major impacts from European settlement (with fires, land clearance, sawmilling for fencing, housing and public works, and also browsing damage by the introduced possum). Philip Simpson provides sobering estimates for the year 1904 of the 'superficial feet' (12 × 12 × 1 inch) milled (1532 million), number of trees harvested (about 511,000), and sawmills operating (414) at that time. When considering the collective harvest of millions of trees over several decades, the author concludes "It is no wonder that mature tōtara trees have almost completely gone".

With this scarred past largely behind us ("The Europeans – land hungry, resource reckless – were supported by a government with eyes on the British Empire rather than sustainability"), the

**This book was launched 13th June 2017 at Devonport Library in Auckland. Available from Auckland University Press.**

New Zealand Botanical Society members have been offered a 10% discount off the recommended retail price (RRP \$75.00) and free freight within New Zealand. To obtain this discount, (discounted price \$67.50) members can order from <http://www.pottonandburton.co.nz/store/totara> using a unique coupon code (BOT17) at the shopping cart. This offer expires on the 30<sup>th</sup> September 2017.