TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

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Deadline for next issue:
Monday 15 April 2014

SUBMIT AN ARTICLE TO THE NEWSLETTER

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

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

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

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

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NEW ZEALAND

PLANT OF THE MONTH, p. 2

Pleurosorus rutifolius.
Photo: John Barkla.

President's message

Hi, everyone.

Hopefully, you are managing to spend some time in the field, enjoying the current fine weather. I was lucky enough to enjoy a fleeting visit to Lake Waikaremoana, where turfs were exposed due to the lake level being relatively low. Species present included *Rorippa palustris*, *Pilularia novae-hollandiae* (see photograph), *Isoetes kirkii* (At Risk-Declining) (see photograph), *Triglochin striata*, *Limosella lineata*, *Lobelia perpusilla*, *Glossostigma elatinoides*, *Carex sinclairii*, *Hydrocotyle hydrophila*, *Gratiola sexdentata*, *Euchiton involucratus*, *Crassula sinclairii*, *Lilaeopsis novae-zelandiae*, *Potamogeton cheesemanii*, *Centella uniflora*, *Myriophyllum propinquum*, and *Ophioglossum coriaceum* (see photograph).

Figure 1: Turf habitat at Lake Waikaremoana.

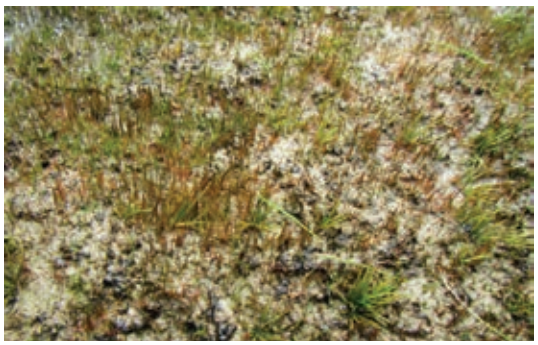

Figure 2: *Isoetes kirkii* and *Pilularia novae-hollandiae* are locally abundant in turfs on the margins of Lake Waikaremoana.

Figure 3: *Ophioglossum coriaceum* (bright green fronds) in lakeshore

PLANT OF THE MONTH – *PLEUROSORUS RUTIFOLIUS*

Pleurosorus rutifolius. Photo: John Barkla.

Plant of the Month for March is *Pleurosorus rutifolius* (blanket fern). This species occurs from sea level to 1400 m a.s.l. and is one of our unusual "hot rock" ferns, since it is found growing on exposed dry, sunny rock faces or crevices with little (if any) vascular plant cover.

It is easily recognised by its habitat, small tufted habit, and the almost velvety textured, brownish-green, 1–2-pinnate fronds copiously covered in reddish to red-brown hairs (hence its common name, blanket fern). Although relatively widespread, it is easily overlooked and the fronds can wither and turn brown over the summer.

It occurs in both the North and South Islands; in the North Island it is known from inland Hawke's Bay (an old record), the north-west Ruahine Ranges, near Cape Palliser, and possibly Cape Te Rawhiti. It is more widespread in the South Island, occurring in the east from Marlborough to Otago. It is also present in Australia.

Its current threat ranking is 'At Risk-Naturally Uncommon'. Threats include quarrying, weed invasion into its preferred rock habitats, and over-collecting by botanists.

The network factsheet for blanket fern can be found at:
http://www.nzpcn.org.nz/flora_details.aspx?ID=304

The editor has asked me to ask you, our members, to continue to contribute your observations to the newsletter. These need not be long but can be short notes highlighting items of interest, for example, interesting observations of plants in places you have visited recently.

The first South Island opportunity for seed collector training for the New Zealand Indigenous Flora Seed Bank (NZIFSB) will be in held in Christchurch 7–9 April. Details on the training and how to enrol can be found later in this newsletter.

The Committee, as always, has been busy on your behalf. We have established a protocol for addressing potentially sensitive plant conservation issues, with a sub-committee to represent the Committee and prepare submissions. Our first submission was to the Minister of Conservation, urging him to support the proposed Drylands Park in the Mackenzie Basin, with excerpts below:

> "The NZPCN is encouraged by your recent initiatives that recognise the importance of the Mackenzie Basin for New Zealand's indigenous biodiversity and natural heritage.
>
> Our main focus is the nationally threatened plants and plant communities that require conservation management for their continued survival. The Mackenzie Basin comprises a mosaic of naturally rare, threatened and severely under protected ecosystems that meet all four national priorities for protection. Collectively these ecosystems support approximately 24% of New Zealand's nationally threatened and at risk plant species (more than 65 species), as well as threatened endemic birds, reptiles and invertebrates.
>
> Our members have substantial concerns that, despite the increasing awareness of the importance of the Mackenzie for indigenous biodiversity, many of the opportunities to protect these values are being lost. This is largely the result of the extensive freeholding of the valley floors of former Crown land through tenure review (under the Crown Pastoral Lands Act) and the subsequent intensification of land use largely facilitated through large-scale irrigation. The loss of these values is exacerbated by a lack of adequate district plan provisions to protect significant indigenous vegetation and habitats for fauna. For example, the rapid changes that have

occurred south of Twizel over the last six years have seen the almost complete extirpation of significant indigenous biodiversity.

We are aware of your support for the proposal to establish a Drylands Park in the Mackenzie Basin, and we fully support this initiative. The Drylands Park initiative represents one of the last, if not the only opportunity remaining in New Zealand to protect intact sequences of distinctive glacial-derived rare, threatened and poorly protected ecosystems (moraines, outwash plains, kettle holes, braided rivers, dune lands), for which there are no equivalents elsewhere in New Zealand.

Moreover, such an initiative brings substantial other benefits pertaining to the protection iconic landscapes that adjoin major tourist routes, as well as facilitating the expansion of tourism that currently underpins the local economy. For example, there are substantial recreational opportunities that arise from creating a protected corridor that links Tekapo to the Aoraki National Park.

We also note that the Drylands Park concept is widely supported, including the local community, PCE, Mackenzie forum, high country farmers, the tourism industry, the Dark Sky Park, and local DOC staff. Protecting natural heritage and potential tourism and recreation values is well-aligned with the vision and strategy identified by the wide range of signatory parties to the Mackenzie Agreement.

Accordingly we urge you to use your influence to establish the Drylands Park and thereby protect the natural heritage values of the Mackenzie Basin. We are writing to ask that you actively promote the Dryland Park with your colleagues and through all the official channels at your disposal before it is too late to retain and protect the best of what remains of the Mackenzie's nationally unique ecosystems of plant and animal communities."

The Committee proposes to continue to make submissions on important plant conservation issues, as they arise.

Have a good month out there.

Sarah Beadel
President

Spectacular flowering on the St Marys Range—a Forest and Bird field trip to the Awakino skifield

Hugh Wood, retired horticulturist, formerly of Edinburgh Botanic Gardens (ph: 03 437 0349)

A group of botanists, alpine flower lovers, conservationists and photographers converged on the mountains west of Kurow for an exploratory weekend on the weekend of January 11–12 People travelled from throughout the South Island (Nelson, Christchurch, Ashburton, Alexandra and Dunedin), many coming for a first time visit. In view of a promising weather forecast, rain was predicted to arrive on Sunday afternoon.

Near the Lodge at 1110 m grow masses of giant speargrass (*Aciphylla scott-thomsonii*), a truly spectacular sight. The yellow flower spikes of this speargrass can reach 3 metres tall, the needle sharp leaves ample protection against all that venture too close. Less intimidating was the superb view across to the Kirkliston Range and the wide fertile Hakataramea Valley shrouded in patchy lingering cloud. Everyone took advantage of the fine morning by venturing higher, first to the skifield base huts at 1500 m. Prominent in the snow tussock landscape en route grew clumps of the white mountain daisy, *Celmisia densiflora,* and the shrub with square stems, *Hebe lycopodioides.* Green mats of the snow totara, *Podocarpus nivalis*, were equally conspicuous with female plants bearing red fruits.

Above 1500 m, the alpine landscape changes from tussock grasses to one of predominantly rock and scree, where plant life is highly adapted to a more rigorous climate. Cushion and low growing mat plants are the norm in the often windy, changeable conditions. Some people took the zig-zag track up to the saddle on the shoulder of Kohurau. There, in fine scree, grows the black scree button daisy (*Leptinella atrata* subsp. *atrata*) with black florets and leathery foliage. Close by, the silvery mats of *Raoulia youngii* displayed emerging white papery daisies. A short

Leptinella atrata, the black scree button daisy

walk from the saddle is an island of vegetation dominated by the sprawling shrub *Celmisia ramulosa* var. *tuberculata.* Equally conspicuous, were large clumps of *Celmisia durietzii* in full flower, while *Aciphylla montana* var. *gracilis,* small and dainty, displayed only a few orange-yellow flowers. *Gentianella bellidifolia* in advanced bud was commonplace and will provide floral exuberance in the weeks ahead. Many people expressed favourable comments on the delights of this place aided by the view across rolling hills to Mt St Bathans and the Maniototo Valley.

A more energetic group of people climbed towards the boulder fields and high screes near Fosters Ridge. The initial objective was a colony of *Ranunculus acraeus,* a scree buttercup described and named in 2006. Some 200–300 plants are to be found in these mountains and these late flowering clumps of golden yellow had the onlookers in awe of the spectacle before their eyes. Overhead, a clear blue sky and mild conditions were impetus enough for everyone to climb higher to the flat-topped fell field summit at 1900 m a.s.l. What a view!

Ranunculus acraeus, scree buttercup.

The panorama of distant peaks of the Southern Alps was majestic all across the western skyline. To the north, the central alps were dominated by the stately Mt Cook/Aoraki; Mt Ward and Mt Huxley near Lake Ohau further south; the distinctive shape of Mt Aspiring – the Matterhorn of the Southern Alps; and to the distant south rose the peaks of the Remarkables near Queenstown and the Darran Mts in Fiordland. Pride of place amongst the lichen encrusted rocks are the orange coloured hedgehog-like domes of *Aciphylla dobsonii.* Large specimens are nearly a metre in diameter and must be hundreds of years old. The creamy white drumstick flower heads are a food source being visited by large black speargrass weevils, *Lyperobius barbarae.* Here too, grow the dimpled green cushions of *Chionohebe thomsonii* that, in early December, are smothered in small white flowers.

After being re-energised by a leisurely lunch, everyone decreased altitude over large boulders to the screes to view notable flora that grows there. *Lobelia roughii, Myosotis traversii* var. *cantabrica, Stellaria aff. roughii, Haastia sinclairii* var. *fulvida* and *Raoulia petriensis* were soon found and recognised. A sharp-eyed individual (Hugh) spotted a small lone penwiper, *Notothlaspi rosulatum,* surely at the southern limit of its distribution and the first recorded sighting in these mountains. A memorable find indeed. Invertebrates are also commonly seen on the screes. Black butterflies flutter from flower to flower while smoky grey grasshoppers and large black spiders scurry away from approaching human footsteps.

High on the shoulder of Kohurau is an area of vegetation distinctive of high altitude cushion field. Through it, trickles a meandering stream fed by springs higher up the slope. The setting is idyllic, commanding 180° mountain vistas. In season, *Hebejeebie densifolia* carpets the ground with a patchwork effect of white flowers. *Ourisia glandulosa* and *Ranunculus multiscapus* enhance the general scene. Now, later in the season, *Celmisia sessiliflora, Craspedia lanata* and *Phyllachne colensoi* dominate the spectacle. As early evening approached, it was time for everyone to descend to the ski lodge, freshen up and enjoy the hospitality and fine fare provided.

Next morning, it was breezy but dry. Some people went back up the mountain while others descended to rock outcrops near the car park. In the sky, a resident pair of falcons and three fledged chicks attracted everyone's attention. Unmolested by these sky gods, the focus soon shifted to the plant life. *Celmisia lyallii* is plentiful here and, in shade, *Anisotome brevistylis, Cardamine bilobata* and filmy ferns, *Hymenophyllum* spp. were appreciated for their delicate beauty.

At noon, it was time to retrace steps back to the lodge. Lunch was taken, gear packed and farewells said. A general agreement to return was vowed. Right on cue at 1.00 p.m., the rain arrived, lowering a curtain of cloud on this mountain landscape. The memories formed, friendships gelled, and images in cameras were testament enough that it had been a worthwhile and enjoyable weekend.

Aciphylla dobsonii, Dobson's speargrass

Lyperobius weevil on giant speargrass

(Editor's note: This report of a joint trip by the Canterbury Botanical Society and the Oamaru Branch of the Royal Forest and Bird Society first appeared in the Canterbury Botanical Society newsletter. It is re-published here with permission.)

Seen but unseen—rediscovering *Simplicia laxa* in the southern North Island

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In 1880, Thomas Kirk (Kirk 1897) discovered a grass growing somewhere in the vicinity of the 'Dry River Station, Ruamahanga' (Eastern Wairarapa, North Island). This grass, with the benefit of better material collected by Donald Petrie from Waikouaiti, on the north-eastern Otago Coastline, and from Deep Stream in the Otago hinterland, Kirk eventually described as a new endemic genus, *Simplicia*, and the species he called "*laxa*" (Kirk 1897). The meaning of the epithet Kirk didn't explain but one assumes he chose it in allusion to the lax, sprawling, open growth habit typical of the species for he notes that the grass has 'weak' and 'flaccid' culms.

The genus and species remained pretty much an enigma until 63 years later when its status was first revisited by Zotov (1943) who added a further species to the genus, initially as a variety of *Simplicia laxa* (Zotov 1943), and then later as a species—*S. buchananii* (Zotov 1971)—based on a plant that had initially been described as *Poa* (*P. uniflora*) by Buchanan (Buchanan 1880). For his 1971 paper, Zotov had several 'modern' collections of *S. buchananii* to work from but for *S. laxa* he relied largely on live material that had been collected from Castle Rock in the Old Man Range in 1969, supplemented with observations made from the original Kirk and Petrie material.

It was not until 1990 that *Simplicia laxa* was seen again, this time by Brian Molloy who was searching for basicolous plants on the limestone outcrops near Ngapara, North Otago. Molloy found *Simplicia laxa* growing in a few small roadside limestone rock overhangs; that find, with support from the Department of Conservation prompted a study of *Simplicia laxa* by Peter Johnson (Johnson 1995), which helped summarise what was then known about the ecology of the species, its field recognition and conservation management. Amongst the many findings, it was understandably concluded that the species was tied to schist and limestone rock outcrops where it grew in overhangs and shady niches.

Because both species of *Simplicia* were evidently extremely uncommon, they were also among the first indigenous grasses to be listed as 'Rare and Endangered' (Given 1976). Since then, *S. laxa* has been listed under the various threat classification systems as 'Insufficiently Known', 'Endangered', 'Nationally Endangered' and, currently, as 'Nationally Critical' (Given 1981; Williams & Given 1981, Wilson & Given 1989; Given 1990; Cameron et al., 1993, 1995; de Lange et al., 1999, 2004, 2009,

2013). *Simplicia buchananii* has fared little better with listings ranging from 'Insufficiently Known', 'Local' and 'Range Restricted' to the current listing of 'Nationally Critical' (Given 1981, 1990; Cameron et al., 1993, 1995; de Lange et al., 1999, 2004, 2009, 2013).

At the time when Johnson did his field work, *Simplicia laxa* appeared to be extinct in the North Island, and seemingly was confined to a handful of sites in Otago. Then, in 2005, Colin Ogle made a remarkable discovery. A chance find of an enigmatic tuft of grass growing in a roadside forest remnant near Mangaweka, followed by some remarkable persistence in trying to work out its identity resulted in the recognition of *Simplicia laxa* at four sites around Mangaweka and Taihape (Ogle 2010). At the time of the finds, there was some debate as to which species Ogle's *Simplicia* belonged. In 2008, as part of a team trying to resolve that issue, one of us (PdL) collected material from these populations, which, together with South Island samples of *S. laxa* and *S. buchananii*, were subjected to phylogenetic investigations using AFLP DNA fingerprinting and nrDNA ITS data (Smissen et al., 2011). That study concluded that, for now at least, the Mangaweka and Taihape plants were better placed in *Simplicia laxa*.

Before Ogle's 2005 discovery, surveys for North Island populations of *Simplicia laxa* had been undertaken in Wairarapa, most notably by the late A.P. (Tony) Druce who had, understandably, searched much of the Dry River catchment (where Kirk stated he had got his original specimens). Based on the information then available about the habitat of *Simplicia laxa* in Otago, Druce targeted limestone gorges, overhangs and cave entrances. Others had tried too, all without success. Ogle's 2005 find suggested the reason for the failure; all these people had been looking in the wrong places.

Ogle (2010) was the first to suggest that *Simplicia laxa* was really a forest species, rather than, as had been believed, a plant of rock outcrops and overhangs (Given 1981; Johnson 1995). He felt that surveys of alluvial forest remnants dominated by matai (*Prumnopitys taxifolia*), kowhai (*Sophora* spp.) and titoki (*Alectryon excelsus* subsp. *excelsus*) might be more rewarding. Further, it was not just any remnant that would suffice, the best chances, it was felt, would be those that were subjected to sheep and/or cattle browsing, and sporting a ground cover containing such herbs and grasses as *Hydrocotyle elongata*, *Oxalis exilis*, *Poa imbecilla* and *P. matthewsii*. Ecological data summarised by Ogle (2010) also suggested that a survey of suitable forest habitat in Wairarapa might result in its rediscovery there. In 2014, that suggestion finally came to fruition when DOC commissioned a survey of Wairarapa sites for *Simplicia laxa*.

Fig. 1. Peter de Lange (left) and Toby McDonald (right) inspect the first *Simplicia laxa* site found near the Wainuioru River. Note the sparse understorey and light ground cover.

In late February 2014, we surveyed three forest remnants fitting the profile described by Ogle (2010) and in two of these remnants we found four populations of *Simplicia laxa* (Fig. 1). This little grass was finally rediscovered 134 years after Kirk last collected it! We don't doubt either that it had been seen in these areas by other botanists; all the areas were remnants that had been thoroughly investigated previously (including on occasion by at least one or more of our *Simplicia* survey party). We believe that *Simplicia* would have been seen there for sure but, due to its cryptic nature, it had been mistaken for a range of 'look-a-likes', including the superficially similar (when sterile) *Echinopogon*

ovatus and *Microlaena stipoides*, and (when fertile) *Poa imbecilla* and *P. matthewsii*. It was only with the benefit of Colin Ogle's 2005 discovery, his subsequent publication (Ogle 2010) and the participation by one of us (PdL) in the collection of plants from the Mangaweka–Taihape area for the phylogenetic study (Smissen et al. 2011) that we believe that our 2014 survey was successful.

Small populations of *Simplicia* were located in two general areas, both on private land, one bordering the Wainuioru River and another near the road between Masterton and Tinui. The grass occupied very specific microhabitats within the forest remnants investigated, growing in semi-shaded conditions in places with minimal understorey (Fig. 2). All populations seen thrived in locations that were subjected to light year-round cattle and sheep browsing; *Simplicia* was notably either scarce or absent from adjacent forest that had been fenced to exclude these animals where the subsequent growth of taller grasses, herbs, saplings, and general thickening up of the understorey and canopy, we believe, resulted in the decline and/or local extinction of *Simplicia*.

Fig. 2. Peter de Lange records the species associated with *Simplicia laxa*.

These findings present somewhat of a conservation management dilemma for, in the long-term, cattle and sheep will eventually open up the forest remnants to such an extent that the ground cover that *Simplicia* favours will be replaced with other, more aggressive, light demanding grasses and weeds. On the other hand, fencing to exclude farm stock will also result in the loss of *Simplicia*, probably more quickly than if the current browsing regimes employed by eastern Wairarapa farmers are left intact. For now, we have no alternative management answers to the *status quo*.

More significantly though, the rediscovery provides us with a further opportunity to revisit the taxonomic status of the North Island populations of *Simplicia laxa*. Johnson (1995) was the first to illustrate and discuss differences within South Island *S. laxa* populations, noting that these differences may warrant further investigation. Interestingly, Kirk (1897) had also noted that 'the Ruamahanga specimens are much weaker, and have narrower leaves than those from Otago, but there is no other difference', which is all the more remarkable considering he had only a handful of specimens from three locations (one North Island, two South Island). Whatever Kirk's musings, Johnson (1995) was correct, and Smissen et al. (2011) further demonstrated that there was a genetic structure to the variation observed by Johnson (1995) but they refrained from making taxonomic changes to reflect those findings because, morphologically, these differences needed further careful study. They also felt that such a study needed better DNA sampling of plants from the Ngapara area of North Otago and, ideally, ones from the Wairarapa (if they might be rediscovered). Now that *Simplicia laxa* has been rediscovered in eastern Wairarapa, we believe it worth revisiting the taxonomy of this species.

In the interim, the eastern Wairarapa plants are morphologically similar to those seen at Mangaweka and Taihape. In particular, they have the same, feeble growth habit noted by Kirk (1897), smaller, sparingly branched inflorescences, glabrate leaves and leaf-sheaths, and sparsely prickle-toothed lemma (Fig. 3A,B,C). Also, like the Mangaweka and Taihape plants, eastern Wairarapa *Simplicia* seem to only rarely produce adventitious roots on the branch nodes, something Honeycomb Cave and Otago plants often do. However, as Smissen et al. (2011) note, these differences are not as clear-

cut as implied here, for the type material of *S. laxa* from Waikouaiti, which seems to be a gathering of several individuals, comprises 'glabrate' and 'hairy' plants. This variation suggests that, in this area, possibly two races co-existed, or maybe that, during the mounting of Kirk's herbarium—which had been loose-leaf, with specimens stored unmounted in paper, and whose mounting happened many years after his death—North Island and South Island plants had been accidentally mixed. We just don't know and, sadly, so far no one has rediscovered *Simplicia* at Waikouaiti to help resolve the issue.

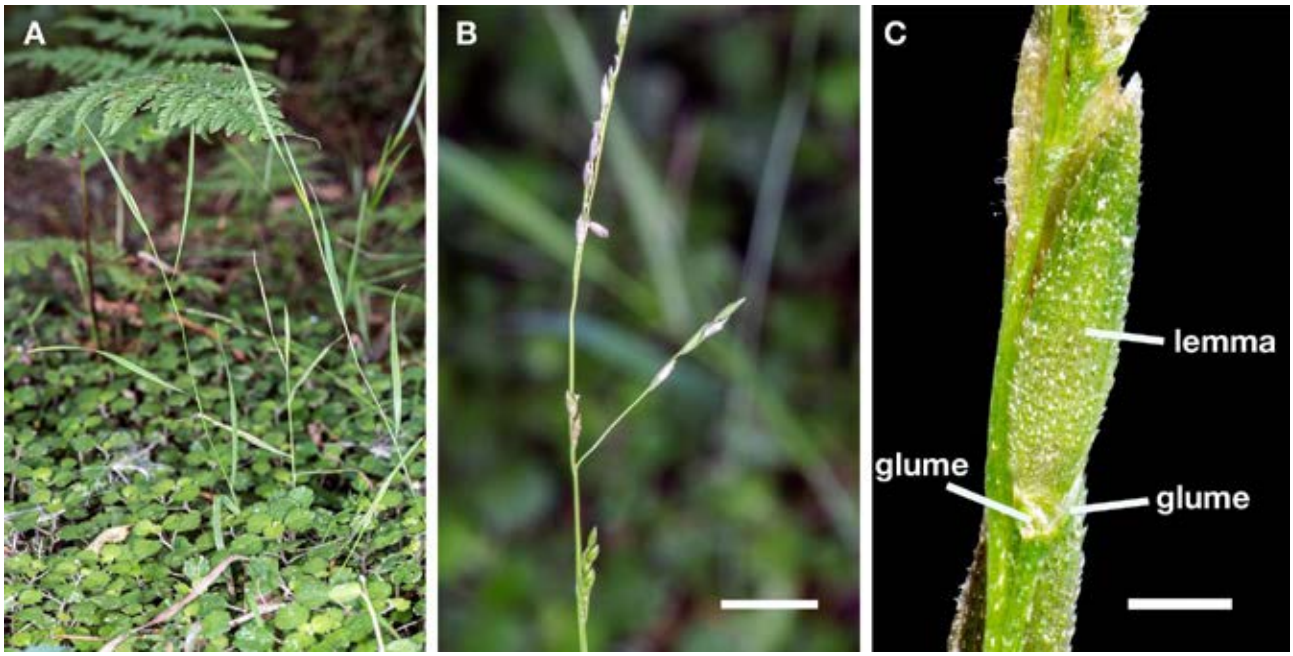

Fig. 3. (A) *Simplicia laxa* near the Wainuioru River, showing sparingly leafy, lax growth habit; (B) Inflorescence of *Simplicia laxa*—in North Island plants branching is often only evident at advanced fruit maturation, the inflorescence being otherwise almost hidden amongst the foliage (scale bar = 5 mm); (C) close-up of spikelets, showing the greatly reduced glumes and prominent lemma (scale bar = 0.5 mm).

In the interim, the eastern Wairarapa find is still cause for celebration; it allows further taxonomic investigation, it adds to our knowledge of the species, it confirms its remarkable persistence in a seriously fragmented, modified landscape, and it adds to our conservation understanding of this species. However, the find, made 134 years after Kirk last collected it, also highlights the incongruity of conservation perceptions and the value humans put on them. After all, we found a grass and, as grasses go, a fairly non-descript one at that! Our discovery, shared by local farmer Toby McDonald, in a quiet riverine setting was nicely understated (Fig. 1). "Well", said one of us, "perhaps we should celebrate with a beer this evening". We doubt the New Zealand media would see our achievement as noteworthy, nor the general populace. However, we do like to think that the ghosts of those who had looked before appreciated our efforts. To the select few of the botanical fraternity still with us, and who had also tried their luck in the Wairarapa, our find was enthusiastically acknowledged by heart-felt emails. Our find was also nicely summed up by local Department of Conservation staff who, when shown a specimen, were suitably underwhelmed "Aah, is that it?" they said.

Acknowledgements

The Wairarapa *Simplicia laxa* survey was funded by the Department of Conservation Data Deficient programme, project DD 4516. Our thanks go to Colin Ogle for his valuable insights and advice leading up to the survey, and to Colin and Robyn Ogle for assisting on the first day of survey at Waihora River, when, unfortunately, we did not find *Simplicia laxa*. We are grateful to Clive Paton, Toby McDonald and Simon Vallance for permission to survey forest remnants on their land. Toby accompanied us on the second day of survey when we first encountered *Simplicia laxa* near the Wainuioru River.

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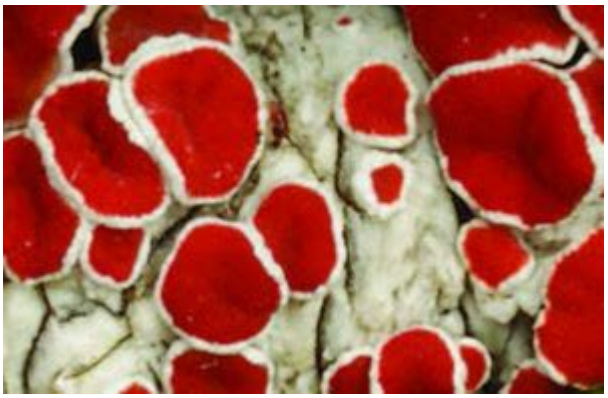
The fascinating world of lichens

Two lichen field guides are now available to download free on the NZPCN website thanks to the generosity of authors Allison Knight and Bill and Nancy Malcolm.

- **Lichens of New Zealand: An Introductory Illustrated Guide** (pdf 104MB). This was recently published by the Botanical Society of Otago and reviewed in the February issue of Trilepidea. Waterproof copies of this guide can be purchased for $20 from the Botanic Society of Otago: Treasurer, BSO, PO Box 6214, Dunedin North 9059. (bso@botany.otago.ac.nz)
- **New Zealand's Foliose Lichens: An Illustrated Key** by Nancy and Bill Malcolm and Allison Knight. This guide complements the recent publication by Allison. (pdf 20.5MB) This helpful booklet has been made freely available in electronic form by the authors and complements the other lichen guide above with diagrams, many colour photos and interesting information about New Zealand lichens.



Crustose alpine lichen *Haematomma alpina*.
Photo: Allison Knight

Discovering the stairway to *Blechnum fraseri* heaven

Nev Arbury, Fernglen Native Plant Gardens (may be contacted through ella.trafford@yahoo.com)

During the summer break I was invited by a fellow "fern nut" to tramp in the Tangihua Forest south west of Whangarei. I was assured that I would see *Blechnum fraseri* (miniature tree fern or maukurangi) growing in profusion. We followed the track uphill for a few hours through nikau, kiekie and ground ferns, all thriving under a canopy of massive *Beilschmiedia tarairi* (taraire). After a long hike, the expectation of locating the mass of *Blechnum fraseri* previously discovered by my friend was fading. Just as we contemplated the possibility of being on the wrong track and turning back, we came across "*Blechnum fraseri* heaven". On both sides of the track for over 100 m and 10 m wide, extended a mass of this unique miniature tree fern. Like kids in a lolly factory we explored this population and lost count in the thousands of specimens.

The question of why the population was so large at this part of the track did not have an obvious answer. One potential explanation is that the environment may be less hospitable since the dominant kauri, tanekaha and mahoe trees were not as healthy. Perhaps, unlike other ferns, this difficult-to-cultivate fern prefers an open site with filtered light and impoverished soil.

Blechnum fraseri interesting facts:

- naturally located in lowland forest from North Cape to Tauranga, King Country, and northwest Nelson to Westport;
- it has a slender 'trunk' that grows to 1.5 m with 25-60 cm fronds;
- it grows on the forest floor in dry bush areas;
- the first documented collection was in 1825 by Charles Fraser, then superintendent of Sydney Botanic Gardens
- specimens sent by William Colenso were successfully grown at Kew Gardens in the 19th century
- five of the six *Blechnum fraseri* planted in the Fernglen fernery last year are thriving.

Nev in *Blechnum fraseri* heaven.

(*Editor's note: This item first appeared in the Fernglen Native Plant Gardens summer newsletter. Re-published here with permission.)*

NZIFSB Christchurch Seed Collector Training

The first South Island opportunity for seed collector training for the New Zealand Indigenous Flora Seed Bank (NZIFSB) is coming up at the High School Old Boys Rugby Club Rooms, Christchurch. In order to collect seeds for the New Zealand Indigenous Flora Seed Bank, it is important that you follow the appropriate methods and protocols for collecting seed. Training is open to anyone who wishes to be involved in this project but will be capped at 25 people. The first day of training will be led by Ms Patricia Wood who has been at the Millennium Seed Bank (Kew) for eight years and works in the Conservation and Technology section as Curation Team Supervisor. The second day of training involves an expedition into the Port Hills and the third day to Porters Pass to collect seeds and herbarium specimens for the seed bank. Full details are below:

- **Monday 7 April (9.00 a.m. – 5.00 p.m.) – Wednesday 9 April 2014 (9.00 a.m. – 5.00.p.m.)**
- **High School Old Boys Rugby Club Rooms –** can be accessed off Riccarton Avenue. The room is located immediately over the western bridge entry to the Botanic Gardens.
- **Please bring your lunch,** or food can be purchased from the Botanic Gardens Café or surrounding cafes.
- **No charge**.

Please register your interest early to avoid disappointment! To register or for further information, please contact the Seed Bank Coordinator, Mrs Jessica Schnell ph: 06 356 9099 ext 83236 or email: J.L.Schnell@massey.ac.nz **by Friday 4 April 2014.**

UPCOMING EVENTS

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

Auckland Botanical Society

Meeting: Wednesday 2 April at 7.30 p.m. for a talk by Peter de Lange titled 'Flora of Sardinia'. **Venue:** Unitec School of Health Sciences, Gate 4, Building 115, Room 2005.	**Contact:** Mike Wilcox (mike.wilcox@xtra.co.nz).
Field trip: Saturday 12 April to Awhitu Peninsula to the Pollok wetland/salt marsh.	**Contact:** Ewen Cameron.

Rotorua Botanical Society

Field trip: Sunday 6 April to Mt Tawhaiu, Galatea Foothills, Te Urewera National Park. **Meet:** the car park Rotorua at 8:00 a.m. or the DOC office, SH 38 Murupara at 9:00 a.m. **Grade:** hard.	**Leader:** Gareth Boyt, ph: 07 366 5194 or 021 766486, email: gandchar@gmail.com
Field trip: Saturday 12 April to Okareka Mistletoe Restoration Project for Weed Control Work Day. **Meet:** corner Summit and Loop Roads (lake end) at 8:45 a.m. **Grade: m**edium-hard - activities suitable for all ages and abilities will be provided, which will include releasing our plantings and weed control elsewhere in the reserve.	**Leader:** Paul Cashmore, ph: 07 348 4421 (hm), 07 3497432 (wk), 0276 507 264 (cell), email: pcashmore@doc.govt.nz

Wanganui Museum

Field trip: Saturday 29 March to Bushy Park for weeding work day. **Meet:** at the Police Station at 9.30 a.m. **Leaders:** Jim Howard and Esther Williams. Bring lunch, drink, gardening gloves, plastic bag, and spade/trowel.	**Contact:** Colin Ogle, email: robcol.ogle@xtra.co.nz).

Meeting: Tuesday 1 April at 7.30 p.m. for a talk by Diane Harries about her Westland tramping trip and her 2013 art project at UCOL, based on Gordon Park. **Venue:** Museum's Davis lecture theatre.	**Contact:** Colin Ogle, email: robcol.ogle@xtra.co.nz.
Meeting: Tuesday 6 May at 7.30 p.m. for a talk by John Williamson on 'Life of a QEII National Trust Representative'. **Venue:** Museum's Davis lecture theatre.	**Contact:** Colin Ogle, email: robcol.ogle@xtra.co.nz.

Wellington Botanical Society

Field trip: Saturday 5 April: to Wi Tako Scenic Reserve. **Meet:** 9.00 a.m. on corner of Sunbrae Dr and Blue Mountains Rd, Silverstream (parking available on Sunbrae Dr).	**Leader:** Nick Saville, ph: 04 528 4728 or 022 677 8930; **deputy-leader:** Ant Hill, ph; 04 831 1133 or 021 0255 1924.
Meeting: Monday 14 April (note change of date) at 7.30 p.m. for a talk by Dr George Gibbs titled 'Can I eat that leaf? – an insect's approach to taxonomy'.	**Venue:** VUW Lecture Theatre M101, Murphy Building ground floor, west side of Kelburn Parade.

Aro Valley restoration project

Meeting: Friday 28 March and 4 April at 7.30 p.m. for a talk by Jean-Claude Stahl, Te Papa titled 'Pre-European vegetation in the Aro Valley: What did it look like and what can we realistically restore?'	**Venue:** Aro Valley Community Hall.

Nelson Botanical Society

Field trip: Friday 18 April to Monday 21 April for Easter camp at Mistletoe Bay, Marlborough Sounds.	**Leader:** Cathy Jones, ph: 03 546 9499

Canterbury Botanical Society

Meeting: Monday 7 April at 7.30 p.m. for a talk by Larry Burrows titled 'Broom as a nurse crop for natural succession: native woody establishment into exotic woody weeds at Ealing Springs'.	**Venue:** St Ninian's Church Hall, 9 Puriri St, Riccarton (note venue change).
Field trip: Saturday 12 April to Rockwood.	**Contact:** Jason Butt, email: jason@waioralandscapes.co.nz.

Botanical Society of Otago

Meeting: Wednesday 9 April at 5.50 p.m. for the AGM and Photographic Competition. Venue: Zoology Benham Building, 346 Great King Street, behind the Zoology car park by the Captain Cook Hotel. Use the main entrance of the Benham Building to get in and go to the Benham Seminar Room, Rm. 215, 2nd floor. Please be prompt as we have to hold the door open.	**Contact:** David Lyttle, ph: 03 454 5470.
Field trip: Saturday 12 April to Gard Road Reserve, Waitaki Valley. Meet: 8.00 a.m. at the Botany Department car park, 464 Great King Street.	**Contact:** John Barkla, ph: 03 476 3686.