



TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

No. 163

June 2017

Deadline for next issue:
Monday 17 July 2017

SUBMIT AN ARTICLE TO THE NEWSLETTER

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

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

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

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

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Wellington 6242,
NEW ZEALAND

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Pterostylis alobula.
Photo: Jeremy Rolfe.

Professor Peter J. de Lange FLS wins 2017 Loder Cup

Peter J. de Lange, a foundation member of the New Zealand Plant Conservation Network, received the Loder Cup on June 8 during the 2017 Green Ribbon Awards held at the Beehive, Parliament, Wellington. The award was presented by the Associate

Minister for Conservation, the Honourable Nicky Wagner. Dr de Lange, who is also a Professor at the School of Natural Sciences, University of Sassari, Sardegna, and a Fellow of the Linnean Society (London) was nominated by the New Zealand Botanical Society and New Zealand Plant Conservation Network. Currently working for the Department of Conservation as a Principal Scientist, de Lange has had a long and distinguished career spanning



Peter de Lange holds the Loder Cup while Dr Rick McGovern-Wilson holds the associated plaque.

over 30 years as a plant taxonomist, ethnobotanist, and conservationist. His citation noted his encyclopaedic knowledge of the New Zealand flora, interests in plant biosystematics, island floras, lichens, liverworts, mosses and fungi. The citation noted that de Lange was instrumental in developing the New Zealand Threat Classification System in use by the New Zealand Government for Threat Listing purposes since 2001, and had overseen six vascular plant threat listings (and two for Hornworts and Liverworts, and Lichens). In his acceptance speech, de Lange noted that he 'stood on the shoulders of giants'. He paid homage to his mentors, in particular the late Reginald Bell of Pirongia, the late Dr David Given, and those who are still with us, including Dr Brian Molloy, Audrey Eagle, Colin Ogle and Ewen Cameron, along with a raft of people and organisations who have helped shape his career and define his work. Peter stated that he had only ever tried to do the very best science he could, and that, in turn, he saw it as his role to serve the next generation of up and coming scientists to give back what had been so generously given to him.

The Loder Cup acknowledges outstanding achievements in flora conservation work. Gerald Loder donated the Loder Cup in 1926 to 'encourage and honour New Zealanders who work to investigate, promote, retain and cherish our indigenous flora'. Gerald Loder was captivated by our indigenous flora on his first visit to New Zealand in 1886. Over many years, Gerald collected a large selection of New Zealand and Southern Hemisphere flora to plant on his estate in Surrey, England. Gerald Loder became Lord Wakehurst in 1934. He was passionately involved with our "incomparable flora" until his death in 1936.

PLANT OF THE MONTH – *PTEROSTYLIS ALOBULA*



Pterostylis alobula. Photo: Jeremy Rolfe.

The plant of the month for June is *Pterostylis alobula*, one of many *Pterostylis*, or 'greenhood orchid', species endemic to New Zealand. *Pterostylis alobula* is a winter flowering species, so now is the time of year to see it in full flower. It is a widespread species, found between Banks Peninsula and Northland and can be seen under scrub and well-lit forest, especially successional forest, and is often seen forming large colonies on clay banks or in leaf litter and moss. Each plant forms a single rosette, with small fleshy heart shaped leaves, from which a single flower spike develops with one flower at the top. The leaves on the flowering stem (cauline leaves) are much narrower than the leaves in the basal rosette. The flower stems are generally around 10 cm tall. The flowers are bright green with white stripes and a dorsal sepal (hood) that is only slightly down-curved.

The species is most similar to *P. trullifolia* and *P. brumalis*. *Pterostylis alobula* is most easily distinguished from these

two species by its non-embossed rosette leaves and the lateral sepals not forming a 'jug spout' shape like they do in the other two species. It is often sympatric with these other species.

Pterostylis alobula is endemic to New Zealand, with a current threat ranking of 'Not Threatened', since it is common and widespread across most of the northern two thirds of the country. It is one of at least 120 species of *Pterostylis* found worldwide, with at least 30 of them found in New Zealand. The rest of the species are found in Australia, New Caledonia, New Guinea and Indonesia. The genus name *Pterostylis* means 'winged column' and the species epithet '*alobula*' means 'without lobes', probably referring to the flowers.

Head out and have a look in your local patch of bush and you may just find a patch of this cool little plant. It's possible to grow the species at home, but this requires the removal of the whole plant, so it should be left to grow in the wild. You can view the NZPCN website factsheet for *Pterostylis alobula* at: http://www.nzpcn.org.nz/flora_details.aspx?ID=1792

Wilding pine invasion in Taupo?

John Mason (jlmason.taupo@gmail.com)

I stood up to survey the scene located on the edge of a new subdivision near Mitre 10 Mega in Taupo. Who would have ever thought over 300 seedling wildings could be cut and pulled from 50 m²? Plants from 20 to >150 cm tall and all within Taupo City boundary! But then isn't that the case with wilding pines? No one ever suspects that the scenes that grace Twizel, the 'Town of Trees', are actually wilding *Pinus contorta* which is invading our national parks and farm land at alarming rates. Or consider the 8000 ha of Ferintosh Station near Lake Pukaki where for last 20 years Gilbert Seymour now in his mid 80s has been fighting a losing battle to overcome the wildings.

I came to Taupo 14 years ago to start a new business, but before that back in 1986 I was involved with pulling *P. contorta* from the tussocks of Tongariro National Park. Similarly, in 1998 while living with us in Ohakune, my son Andy cut forestry blocks of *P. contorta* at Karioi. I had forgotten about this and become like the rest of the population that does not even know we are being silently invaded; one like most who are blind and ignorant of the silent monster! Even my neighbour Nick, when complaining of the huge pine that was blocking his almost perfect landscape view of Ruapehu, Ngaruhoe and

Tongariro was ignorant of the monster that was helping to feed seeds on to Mt Tauhara every year at alarming rates. Ngati Tuwharetoa has begun a major wilding pine eradication project.

We had just bought the last section in an eight year old subdivision and wanting to build good relationships with the locals so I could move a Lockwood Show home on to site, I pulled on my experience as a horticulturist and climbed up to the grandmother of all pines sitting atop the Kiddle Drive cutting. The needles gave it away immediately but the cones were too big to be *P. contorta*. With seedlings growing nearby it had to be a wilding! Research showed it to be *Pinus pinaster* sourced from the Mediterranean; it came with a reputation of being invasive and highly destructive of water sources where the roots sucked the land dry preventing the growth of other plants including natives and grasses. That information nailed it. I contacted the Taupo District Council, which accepted it was a wilding and promised to have it down in June 2017. Hmmm, not much time to go!

At Christmas 2016, Taupo had a massive storm and some of the Council wildings toppled into the De Brett's Spa Resort. To close the pools and wait for the council was not an economic option so they hired contractors to remove the fallen invaders! With all this happening, my eyes opened! Just as when you purchase a new vehicle my eyes woke up and wildings popped! I mean they were everywhere: in natural earthquake guts and valleys; along the sides of the newly completed Taupo Bypass; around the entrance to the Taupo Native Nursery; and invading the Taupo Golf Course in Centennial Drive. In one spot just off the approach to the bypass from Reporoa, over 200 wildings were cut in 20 minutes! While teaching me patience when improving his manual driving skills, my grandson Sam recognised wildings in Bonshaw Park, now reaching around 120 cm. They should have been cut for Christmas trees!

There are 10 species are covered by the collective name of wilding pines. Introduced to high country areas of both North and South Islands in 1880 it was thought that they could be used to control the erosion believed to have been caused by deer, goats and rabbit invasions. By 1920, airborne winged seeds were leap frogging boundary fences and, within 15 years were consuming huge farming stations and high country national parks. Though cones are not produced until trees are eight years old, a 12 year old tree can produce over 15,000 seeds capable of being blown over 50 km in vigorous high country winds. In Karioi, pines were planted until it was realised that they were invading the snow level of the mountains. In the Kawekas, where sacks of seed were tipped out of planes by the Forest Service to control erosion, now nearly 15,000 ha of the 60,000ha park is infested. Not only that, but the New Zealand Army training landscape was polluted to such an extent they couldn't get tanks through and are having to resort to fixed wing aircraft spraying programmes! In the Rangitaiki area over 150,000 ha is invaded; in one area where *P. contorta* was used as a wind break until reluctantly cut down by Lochinver Station the subsequent growth of seedlings requires scrub cutting every three years to maintain control not to mention the seeds that have escaped into the park.

Until recently, control of wilding pines has been through scrub cutting, chainsaws, and drilling trees and filling holes with lethal doses. Helicopters have been used to fly five chainsaw operators and an overseer to cut out large wildings in the Kaimanawa Range. Once the trees were felled the team was collected to assail the next five trees. This process took 7 days to cut out 9000 ha. Today, using a new material (X-Basal), following GPS locations with a Hughes 300 with one man plus the pilot and with a Hughes 500 and spray equipment is able to take out 9000 ha in 4 days reducing both cost and time while increasing the coverage. X-Basal is applied to the tree base to twice the trunk thickness. If applied in spring the effect occurs is within a year. Winter application may take two years to death but these processes have not been applied to wildings in Taupo (yet).

I grab the dog lead and invite grandson Oscar to join me walking the dog through Spa Park in Taupo. It's the only place I know where you can swim in a hot Waikato River because one thermal springs enters there. Oscar grabs the slasher and we head off to the park. It was partially planted or seeded with wildings some years ago to control bank slippage into the Waikato River. Infested now with *P. pinaster*,

we walk down the track into the pines for about 100 m not knowing what we'll find today. It's hot and the recent storms have drenched the ground so that seedlings we hadn't seed previously are germinating—three specimens 2–15 cm high in 300 mm²! Another 100 m away, Oscar is dropping the small invasive wildings we left last time we were there together. Twelve year old Oscar questions me—“Popz will you help me do a school science project on wilding pines?” I have another convert!

But it's going to take more than that—Oscar will influence some of his generation and if his science project wins perhaps some of the blind and ignorant who like me knew and then forgot until a school pupil brings it to their attention. What will you do? What can you do? You could start by googling the subject, maybe buy a slasher and cut wilding pines out when you see them. Maybe you could make a trip to Wanaka with a few friends and spend a day or two helping the high country blokes cut a hectare and listen to their stories. That would make their day!



Oscar doing his bit removing a seedling pine.

New Zealand Indigenous Flora Seed Bank (NZIFSB) monthly report

Monica Swadel (M.Swadel@massey.ac.nz) and Craig McGill (C.R.McGill@massey.ac.nz)

Myrtle rust response—seed collection

The New Zealand Indigenous Flora Seed Bank is contributing to the response to the arrival of myrtle rust in New Zealand by processing and banking seed being collected by the Department of Conservation in co-ordination with the Ministry for Primary Industries. Collections of Myrtaceae are arriving from Department of Conservation offices across the North Island and upper South Island.

To help with this work the seed bank has taken on additional staff. Muhammad Faisal has joined the seed bank with the role of coordinator for the banking and processing of the Myrtaceae. Cris



Volunteer Paula de Goldi (left) and Muhammad Faisal carefully bagging seed samples.

Winkworth and Viv McGlynn will help with the processing and banking of the seed. We welcome Muhammad, Cris and Viv to the seed bank team. The seed bank volunteers have also been helping with the processing of the Myrtaceae collections.

The work of Muhammed, Cris, Viv and the volunteers has been made easier thanks to all the Department of Conservation seed collectors who have been collecting and sending seed into the seed bank with a minimum of vegetative matter and other debris.

NZPCN annual awards

It is the time of year again when the Network is seeking nominations for its prestigious annual awards which acknowledge outstanding contributions to native plant conservation. The award categories are for an individual, a school, a council, a community group, a plant nursery and a young plant conservationist (under 18 years as of June 30, 2017). Here is an opportunity to acknowledge someone/a group, within your networks and memberships who is/are doing a great job of protecting New Zealand native plants!

Anyone may make a nomination, including multiple nominations under different categories. Nominations close on Monday 25 September. Winners will be announced at the NZPCN conference in November. Please send nominations, preferably by email to Catherine Beard, email: cbeard@doc.govt.nz, or by snail mail: Attention: Catherine Beard, Department of Conservation, Private Bag 3072, Hamilton 3240. A pdf of the nomination form is attached (or it can be downloaded from the NZPCN website www.nzpcn.org.nz)

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):

New Zealand Plant Conservation Network Biennial Conference and John Child Bryophyte and Lichen workshop

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

Registration: will open soon.

Auckland Botanical Society

Meeting: Wednesday 5 July at 7.30 p.m. for a talk by Margaret Stanley on 'Urban trees: risks and opportunities'. **Venue:** Unitec Room 115-2017.

Contact: Maureen Young, email: youngmaureen@xtra.co.nz.

Field trip: Saturday 15 July for a bryophyte and lichen workshop at Unitec and Oakley Creek. **Leaders:** Dan Blanchon, Jessica Beever and John Braggins.

Contact: Maureen Young, email: youngmaureen@xtra.co.nz.

Auckland Botanical Garden

Workshops: Saturdays in June and July; Matariki workshops, see [Eventbrite page for details](#). Workshops include rongoa Maori (Maori medicinal plants), food preserving, traditional planting and more.

Kaipatiki Project

Field day: Saturday 1 July for a weeding day beside the Chelsea Pony Club off Eskdale Rd. **Start:** 10.00 a.m. **Bring:** a spade and good footwear; refreshments provided.

Register: by email to admin@kaipatiki.org.nz

Field Day: Saturday 29 July for a planting day beside the Chelsea Pony Club off Eskdale Rd. **Start:** 10.00 a.m. **Bring:** a spade and good footwear; refreshments provided.

Register: by email to admin@kaipatiki.org.nz

Waikato Botanical Society

Field trip: Saturday 15 July to Poland QEII Covenant, Limeworks Loop Road.

Leader: Dell Hood,
email: dhood@xtra.co.nz.

Rotorua Botanical Society

Field trip: Sunday 2 July to Waiotahi Scenic Reserve, Waiotahi Valley, Opotiki. **Meet:** the car park Rotorua at 8.00 a.m. or Waiotahi Hall at 9.30 a.m. **Grade:** medium.

Leader: Mike Butcher,
ph: 07 3157160 or 0274 555 610;
email: mikebutchernz@xtra.co.nz

Whanganui Museum Botanical Group

Meeting: Tuesday 4 July at 7.30 p.m. for a presentation by Sara Treadgold and Colin Ogle on myrtle rust and what is being done.

Venue: Davis Lecture Theatre.

Wellington Botanical Society

Field trip: Saturday 1 July to Manawa Karioi, Island Bay. **Meet:** at 9.30 a.m. at Manawa Karioi information board next to Tapu te Ranga Marae's car park

Co-leaders: Paul Blaschke
04 389 8545 or 027 2462848;
email: paul@blaschkerutherford.co.nz; and Sunita Singh,
04 387 9955 or 027 4052987.

Meeting: Monday 17 July at 7.30 p.m. for a talk by Stephen Hartley, VUW, titled 'Monitoring the eco-restoration of Wairio wetland, Lake Wairarapa: Tree growth and survival.'

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

Gene Drive: Engineering a Solution

Meeting: Thursday 27 July at 7.30 p.m. for a talk by Professor John Wright on gene drive as a way of making New Zealand predator free by 2050.

Venue: Carterton Events Centre.

Meeting: Friday 28 July at 7.30 p.m. for a talk by Professor John Wright on gene drive as a way of making New Zealand predator free by 2050.

Venue: Aro Valley Hall, 48 Aro St.
Contact: Julia Stace
(jbwstace@gmail.com).

Nelson Botanical Society

Field Trip: Sunday 16 July to the Ngatimoti QEII covenant. **Meet:** 9.00 a.m. at the Cathedral steps.

Contact: please contact Elaine,
ph: 021 256 9073;
email: elaine3jems@gmail.com
by Friday 14 July if intending to come.

Meeting: Monday 17 July at 7.30 p.m. Speaker and topic TBA:

Venue: Jaycee rooms, Founders Park.

Canterbury Botanical Society

Meeting: Monday 3 July at 7.30 p.m. for a talk by Lea de Nascimento, Landcare Research, about the Flora of the Canary Islands and her research. **Venue:** Upper Riccarton Library community meeting room, 71 Main South Road.

Contact: Alice Shanks,
ph: 03 337 1256,
email: alice@caverock.net.nz.

Field trip: Saturday 8 July Ashgrove Reserve, Cashmere, for 'Identifying trees by bark and bud'. **Meet:** at Ashgrove Reserve, corner of Ashgrove and Fernihurst Streets at 10.00 a.m. **Bring:** your lunch and thermos and wrap up warm.

Leaders: Sarah Wright and Alice Shanks; please contact Alice, email: alice@caverock.net.nz, ph: 027 366 1246 if you are planning to come so she can let you know if the trip is cancelled.

Otago Botanical Society

Meeting: Wednesday 12 July at 5.20 p.m. for a talk by Duncan Nicol titled 'Summer in Costa Rica'. **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 because we have to hold the door open.

Contact: Robyn Bridges,
ph: 03 472 7330.

Herbarium Workshop—a joint BSO/Botany Department initiative: Saturday 22 July, 9.00 a.m. to 1.00 p.m. As well as tours of the herbarium, there will be various short talks and time to prepare specimens for accession to the herbarium. **Meet:** at 9.00 am, Upstairs Lab, Department of Botany. **Registration:** the programme and registration forms will be posted on the BSO website from the 1 July; places are limited, please register by Friday 14 July.

Contact: Allison Knight,
ph: 03 487 8265 or 027 487 8265.



NEW ZEALAND PLANT CONSERVATION NETWORK

PLANT CONSERVATION AWARDS: 2017

The New Zealand Plant Conservation Network is now accepting nominations for the 2017 awards. The purpose of these awards is to acknowledge outstanding contributions to native plant conservation.

The award categories are:

Individual involved in plant conservation

Plant nursery involved in plant conservation

School plant conservation project

Community plant conservation project

Local authority protecting native plant life

Young Plant Conservationist of the Year (under 18 years on 30 June 2017)

More information about the awards and additional nomination forms are available on the Network website - www.nzpcn.org.nz. You can make multiple nominations under different categories. Anyone is eligible to make nominations, not just Network members. The awards will be presented at the **2017 NZ Plant Conservation Network Conference** in November. Winners will be informed in advance of the meeting. Nominations close on **Monday 25 September 2017**.

NOMINATION FORM

Category (please circle):

Individual

Plant

Nursery

School

Community

Local Authority

Young Plant Conservationist

NAME OF NOMINEE: _____

Contact details for person, school, nursery, community group or local authority:

Address: _____

Phone: _____ **Email:** _____

