

Newsletter Number 102

**July 2024** 

### BSO MEETINGS AND FIELD TRIPS JULY — NOVEMBER 2024

**Location:** Talks are held in the Benham Seminar Room 215 in the Zoology Benham Building, 346 Great King Street. This is where we used to meet pre-covid.

**10**<sup>th</sup> **July, 5:20 pm: Members night.** Come along to our mid-winter botanical gathering. If you like, bring a plant or a book to swap. Show off your latest photos or drawings. Or tell your best botanical find story. Drinks and nibbles provided (gold coin donation).

13<sup>th</sup> July, 9:00am: Ben Rudds Hut / Back side of Flagstaff. A day trip to explore the tracks around Ben Rudds Hut. This land is owned by OTMC and is now a QEII covenant. In the past few years, the club has been doing weed control and planting. Check out the OTMC website for interesting history of the site. This trip is along well maintained tracks but there will be mud and ~200m of elevation gain/loss. Good footwear required and dress for all weather types. Meet at Botany Department car park at 9am and return time 2pm. Contact Gretchen 021 065 8497

**3rd August, 9:00am: Aramoana Ecological Area.** Leader Bradley Curnow. Our first stop will be an area behind the Arboretum. Here we will work to make a plant list (both natives and weeds) and note native plants which should be there and where they should be planted to assist the Aramoana Conservation Trust and the ORC with the site-led management plan. We will then a walk along the boardwalk to admire the saltmarsh and dune slacks. Finally, a walk out on the mudflats to check on the health of the binding plants on the low dunes which form the outer barrier of the saltmarsh. Gum boots and warm clothes essential (and perhaps a snack). We won't be walking on any saltmarsh vegetation. Meet at the Botany Department at 9am for carpooling or the Aramoana Domain at 10am. Return time 3pm. Contact Bradley Curnow bradleycurnow@yahoo.com.au

10<sup>th</sup> August, 1pm - 3pm: Drawing afternoon at the Otago Museum. Bring your favourite drawing materials for an afternoon of art at Tūhura Otago Museum. You can wander around the museum collections for inspiration or find a seat with a view into the trees. Everyone welcome, come for a bit of fun and maybe you start, work on, or just think about an entry for the drawing competition. Meeting place - Atrium Level 1

**11**<sup>th</sup> **September, 6:00pm: From Geoff Baylis to the Power of lichens.** Speaker: Allison Knight. Location: Archway lecture theatre, University of Otago. Drinks and nibbles starting from 5:15 in the Botany tearoom.

Geoff Baylis was an eminent botanist who led and nurtured the Department of Botany for 33 years. He drew attention to several critically endangered plants on Manawatāwhi / Three Kings Islands, including the last surviving kaikomako manawatawhi / Pennantia baylisiana in the wild, brought back from the brink of extinction. In 2002 the Botanical Society of Otago held the first annual Geoff Baylis Lecture. Geoff described his pioneering advances on the function of arbuscular mycorrhizas, a symbiosis between a plant root and a soil fungus. Around this period Allison was spending time with leading field botanist Tony Druce, botanical artist Audrey Eagle and innovative micro-photographers Bill and Nancy Malcolm. She collected lichens for David Galloway's Flora of New Zealand Lichens and Ramalina for Jennifer Bannister's meticulous studies. Inspired by these notable botanists Allison set out to make knowledge of New Zealand's exceptional lichen diversity more accessible to a general public and produced an illustrated introductory guide. Lichens, like mycorrhizas, are a mutually beneficial symbiosis between a fungus and a photosynthesizing organism. We now know that the lichen symbiosis is a powerful ecosystem in miniature, made up of organisms from many different kingdoms. Over millennia lichens created soil from bare rocks and became widespread pioneers of life on land. Most are long-lived and all sequester carbon. Lichens are so resilient they can survive temperature extremes, nuclear blasts and outer space. Some make antibiotics with great potential. Many are sensitive indicators of pollution, and some respond rapidly to climate change.

This lecture will highlight the significant contribution that Geoff Baylis made to botany. Allison will discuss

lichen evolution, structure, identification and function and integrate current knowledge of the lichen ecosystem into understanding the critical role that lichens play in keeping the earth resilient.

About the speaker: Allison Knight is a lichenologist and Research Associate in the Department of Botany, University of Otago. Publications include Lichens of New Zealand: An Introductory Illustrated Guide, the lichen section in Alan Mark's Above the Treeline and collaborations with local and international experts, including her discoveries of 10 new species of lichen.

14<sup>th</sup> September, 9:00am: Field trip to Okia Reserve, Otago Peninsula. Okia Reserve is a large coastal reserve on the Otago Peninsula that is jointly owned by the DCC and Yellow-eyed Penguin Trust. It comprises an old dune system that is rapidly changing from its dominant bracken cover to woody coastal species. The hollows between the dunes hold a variety of wetlands that include turf, bogs and ponds. The Otago Regional Council regard the dune hollow vegetation to be the best example in the Otago Coast Ecological Region. Along with the Pyramids - a significant geological feature, and Victory Beach - the longest beach on the Peninsula, there's plenty to keep us occupied. We'll do a walk that encompasses all these features and have lunch along the way. Meet at Botany Department carpark at 9am or the Okia Reserve carpark at the end of Dick Road at 9.45 am. Leader to be confirmed; check the website for details.

Stin October, 8:00am: Field trip to Mahaka Katia Scientific Reserve (Pisa Flats). Mahaka Katia Scientific Reserve (Pisa Flats) is situated on an elevated terrace above Lake Dunstan just north of Cromwell. It is a unique example of Central Otago dryland habitat that has mostly been lost to agricultural development and residential subdivision. Pisa Flats is one of the few remaining places where populations of a number of rare, native, dryland endemic species can still be found. These include *Raoulia monroi, Lepidium solandri, Convolvulus verecundus, Myosotis uniflora* and *Craspedia argentea*. *Myosotis uniflora* is classified as At Risk – Naturally Uncommon and the yellow-flowered form is more or less confined to the Pisa Flats. We are timing our visit to hopefully coincide with its spring flowering. *Craspedia argentea* is known only from this location and is considered Threatened – Nationally Critical. If we have time, we will possibly visit the saline sites at Springvale Scientific Reserve or the Chapman Road Reserve both near Alexandra to look at Central Otago spring annuals, a suite of dryland species that includes *Myosotis brevis*, and the tiny buttercup relatives, *Ceratocephala pungens* and *Myosurus minimus*.

We will meet at the Botany Department carpark at 8.00 am and travel to Cromwell and then on to the Reserve. Bring lunch, warm clothing, rain gear and suitable footwear. Travel time from Dunedin to Cromwell is approximately 3 hrs. Contact David Lyttle | djl1yttle@gmail.com | 027 654 5470

9<sup>th</sup> October, 5:20pm: An Exploration of the Flora of Western Australia. The flora of Western Australia (WA) contains over 10,000 species of vascular plants and that, together with the huge area that the State encompasses, means that the visitor will only experience a tiny fraction of the floristic diversity that WA has to offer. In late August 2023 David Lyttle, together with his wife Belinda, embarked on a two-week camper van trip round the State. After collecting the camper van in Perth they drove north to Kalbarri National Park and then South to the Stirling Range stopping at various points on the way before returning to Perth. Although the spectacular great swathes of wildflowers for which WA is known were not in evidence due to an unfavourable season, they found plenty of botanical interest including a wealth of Banksias, Grevilleas, orchids and sundews. The talk will provide an introduction to the flora of WA as well as covering the journey, the landscapes, aspects of the photography and will be illustrated with a collection of wild flower images taken during the trip.

Artwork from the Botanical Art competition will be displayed at this meeting, and prizes awarded. There may also be an art auction, depending on interest.

13<sup>th</sup> November, 5:20pm: The Sequoioideae: What can extant lineages tell us about evolution? Speaker: Jess Paull. In ages bygone, gymnosperms were at the height of their diversity. In the modern age, many face extinction due to the looming threat of climate change. What can this group (and others) tell us about our past and our future?

23rd November, 9:00am-3:30pm: Quarantine Island exploration and picnic lunch. Join us for a day exploring Quarantine Island Kamau Taurua, a public Recreation Reserve and an Historic Area in Otago Harbour. Wander the trails to check out the regenerating forest and the interesting human history. Bring a pair of work gloves if you feel like doing some volunteer weeding. Tools are provided. To book a place contact Gretchen by Wednesday 20th Nov. as we need to book the boat in advance (boat cost will be covered by the BSO). Bring appropriate clothing, water and lunch.

6<sup>th</sup>-8<sup>th</sup> December: Catlins Weekend. This is an adventurous weekend trip up the Tautuku River in the Catlins. We will follow local experts along trapline routes through mixed old growth and regenerating podocarp forest to investigate some interesting nooks. There is potential for exciting plant sightings. This trip requires a high level of fitness; we will be covering up to 10km of very rough routes through dense forest. Bring tramping boots, wet weather gear, food, water, and first aid kit. Contact Gretchen Brownstein (brownsteing@landcareresearch.co.nz) to book a spot (drive time: 2hrs one way, ~300kms return trip). Leaving Friday evening, returning Sunday.



Mountain rays: Sunset in the Murchison Mountains. (Photo: Gretchen Brownstein)

nar Room, Room 215, located on the second floor.

Items of botanical interest for our buy, sell and share table are always appreciated. The talks usually finish around 6.30 pm. Keen discussion might continue till 7 pm.

Meeting details: Talks are usually on Wednesday even- Field trip details: Field trips leave from Botany car park ing starting at 5.30 pm unless otherwise advertised. 464 Great King Street unless otherwise advertised. Meet Venue is the Zoology Benham Building, 346 Great there to car pool. Please contact the trip leader before King Street, behind the Zoology car park by the old Cap- Friday for trips with special transport and by Wednesday tain Cook Hotel. Please use the main entrance of the for full weekend trips. A hand lens and field guides al-Benham Building to enter and go to the Benham Semi- ways add to the interest. It is the responsibility of each person to stay in contact with the group and to bring sufficient food, drink and outdoor gear to cope with changeable weather conditions. Bring appropriate personal medication, including anti-histamine for allergies. Note trip guidelines on the BSO web site: www.bso.org.nz

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Left: A rotting Nothofagus trunk landscape is populated by colourful bracket fungi interspersed with parmelioid and beard lichens (Usnea sp). Tuapeka West (Photo: Knight)

Cover photograph: Living in the alpine by Anne Schlesselmann. Dracophyllum menziesii poking through thick spring snow in front of Mt Xenicus, near the Routeburn. Peoples choice winner of the 2023 photograph competition.

### FROM THE COMMITTEE

### **Chairs notes**

### Gretchen Brownstein

ics spanning from fungal population genetics to wildflowers of Australia to weeds and lots in between. A massive thank you to our speakers for giving such informative and entertaining talks. Likewise, our nine trips ranged from the mountains to the sea, both near and a bit further away. We had interesting trips in Dunedin to Fern Tree Reserve and Burns Reserve (it was so good we went there twice!). We also ventured into the Catlins and to Central Otago to check out wetlands, drylands, and naturally uncommon ecosystems. Thank you to our trip leaders for their energy and expertise in leading excellent adventures. I hope that everyone has enjoyed the trip and talk programme this last year. If you would like to give a talk or are interested in leading a trip, please get in touch. The committee is always looking for new ideas.

Newsletter / Website - Our newsletter continues to be one of the BSO's flagship outputs. Many thanks to our editor Lydia Turley for continuing to produce a high quality and informative newsletter. And many thanks to all the contributors for the trip reports, articles, artwork, and photos. We have a new web editor: Esté Smal. She stepped up the end of 2023 when Stella Fish took a fabulous job opportunity outside Dunedin. Esté has done a great job filling some big shoes. Thank you to both Stella and Esté for their efforts on the website this past year.

Photo competition / Calendar – 2024 was the 18<sup>th</sup> annual photo competition, just a couple years away from 20, which is amazing! Thank you very much to Jo Sinclair for running this year's competition so ably. And thank you to our wonderful judges: Peter Johnson and Kelvin Lloyd, for their fairness, astute sense of style, and helpful feedback. The 2024 calendar was produced by the fine team of John Barkla and Jo and they did a wonderful job using photos from the 2023 competition.

Committee - As always, without the committee, none of the above would be possible. We are saying goodbye and thank you to Sharon Jones, as she has decided to step down from the committee. Sha-

ron has contributed cover art for the newsletter since 2018 and provided a lovely thoughtful voice of reason in our committee meetings. Many thanks to Trips/Talks - We held eight talks last year on top- our secretary Angela Brandt for keeping us organised. And to John Knight for stepping into the big job of treasurer's role. And as always, I really enjoy working with the whole committee: John Barkla, John Knight, David Lyttle, David Orlovich, Angela, Lydia, Sharon, Matt Larcombe, Jo, Allison Knight, Stella, and now Esté. Between us all, the Society keeps ticking along nicely.

> Membership - Our membership is continuing to grow - we currently have 79 subscribed members. And some very unscientific data suggests the average membership age might be going down as our membership grows. On a recent trip to Swampy, I was the oldest participant (and no, it has nothing to do with me getting older). It's been wonderful this past year meeting new (and catching up with the not so new) people on trips and at the talks. As always: keep submitting photos, writing articles, coming to talks and trips, and growing our botanical communi-

### Secretaries notes

### Angela Brandt

A very warm welcome to our two new committee members, Alex Wearing and Lydia Metcalfe! The committee is stoked to have you join us. And a belated welcome to Esté Smal, who has been serving on the committee since December but has now formally been elected. Thanks so much to Sharon Jones for her years of contributing to the committee and to Stella Fish for her excellent support in recent

Welcome also to new members, Skyler Morison and Ian Dench! And congratulations to our Photo Competition prize winners!

It's been a busy year already but there's plenty more to come. Please note that we've extended the deadline to apply for travel grants to the Native Plant Conservation Network conference and the John Child Bryophyte & Lichen Workshop. See the advertisement in this newsletter or check your email for past announcements from me. The two events are happening back-to-back in Northland, so it's a

great opportunity to spend a full week botanising with other enthusiasts from across the motu!

Publications available in the Botany department tearoom:

Pīpipi newsletter #59, May 2024

Wellington Botanical Society's April 2024 newsletter

### **Editors notes**

### Lydia Turley

Thanks again to all our lovely contributors. This edition records a busy season of field trips and talks. As usual, we have some excellent pictures from the BSO photographic competition. Now it's time to turn your creative juices to drawing for the competition ister, go to https://www.nzpcn.org.nz/nzpcn/events/ later this year. We have two categories and encourage everyone to participate. There's even a drawing John Child Bryophyte & Lichen Workshop afternoon planned at the museum—perfect opportunity to get some practice.

Editors guidelines: Suggestions and material for the newsletter are always welcome. We welcome stories, drawings, reviews, opinions, articles, photos, letters - or anything else you think might be of botanical interest. Remember to include photo captions and credits. Please keep formatting to a minimum. Send your feedback, comments or contributions to lydiamturley@gmail.com. Copy for the next newsletter is due on 10 October 2024. Earlier submissions are most welcome.

### Statement of Financial Position

### Botanical Society of Otago, c/o University of Otago, Botany Dept, P O Box 56, Dunedin North 9059 CC24010

For the year ended 31 March		2024	2023		
FINANCIAL INFORMATION					
Statement of receipts and payments					
Operating receipts (deposited into accounts)					
Donations, fundraising and grants	\$	-	\$	-	
Fees and other receipts from members	\$	2,311	\$	2,223	
Receipts from selling goods or providing services	\$ \$	1,904	\$	2,264	
Bank account interest and other investment income	\$	918	\$	411	
Other receipts	\$ \$	- E 422	\$	4 000	
Total receipts	ъ	5,133	\$	4,898	
Less operating payments (withdrawn from accounts)					
Fundraising costs	\$		\$	-	
Payments to employees and volunteers	\$ \$	-	\$	-	
Payments related to providing goods or services	\$	3,855	\$	3,860	
Grants and donations paid	\$ \$	1,156	\$	-	
Other payments	\$	-	\$	_	
Total payments	\$	5,011	\$	3,860	
Operating surplus/(deficit) for the year	\$	122	\$	1,038	
Plus opening total of all bank accounts and cash on hand	\$	27,452	\$	26,414	
Closing total of all bank account balances and cash on hand	\$	27,574	\$	27,452	
Subtotal for Audrey Eagle Publishing Fund	\$	14,293	\$	13,437	
KEY ACTIVITIES					
Meetings and public talks		9		10	
Field trips		9		9	
Newsletters published		3		3	
MEMBEROUSE					
MEMBERSHIP		70		50	
Total Paying Members		79		59	
Life Members		2 27		1 27	
Complimentary Newsletters		21		21	

**Disclaimer:** The views published in this newsletter reflect the views of the individual authors and are not necessarily the views of the Botanical Society of Otago.

### New members

A warm welcome to new members Skyler Morison and Ian Dench.

### NEWS AND CORRESPONDENCE

### NZ Plant Conservation Network annual conference 2024

6 – 9 October, Whangarei For more info and to reg-

### 2024

8 – 13 October, Manaia Camp at Whangārei Heads. For more info, contact Marley Ford at mfecobotany@gmail.com

### **BSO Registration Grants for the NZPCN con**ference and JCBLW

The Botanical Society of Otago is offering five travel grants of up to \$350 each to cover registration costs for the NZPCN conference or JCBLW. To apply for a grant, email bso@otago.ac.nz with "Registration Grant" in the subject heading. Applications close on 2 August 2024.

In your application:

- 1. State the ways you (and the BSO) will benefit from this grant.
- 2. Agree to build on your experience at the conference or workshop to: (a) Write an article for the BSO Newsletter. (b) Give a talk to the BSO at a monthly meeting, or (c) Organise a BSO Field Trip.
- 3. Confirm that you are a current member of the Society.

### BSO Audrey Eagle Botanical Drawing Competition 2024 & Art Auction

Submissions are now open for the Botanical Society of Otago's Audrey Eagle Botanical Drawing Competition and Art Auction. This year there are two categories; Botanical Illustration and Botanically Inspired Art. Participants of all skill levels are warmly encouraged to submit. Artists will have the opportunity to present their works for auction after the awards have been presented, with all profits going back to the artist. You must be a current BSO member to enter.

### **Judging criteria**

- Botanical accuracy.
- Proportional representation and scale.
- Layout.
- Accurate caption, e.g. botanical name of plant, where it came from, date drawn.
- Preference will be given to plants that have been rarely illustrated.
- Above all, artistic merit carries the highest rating.

In addition, entries for Botanical Illustration will be judged on:

- Clarity of lines.
- Detail, especially of important identification features.
- Botanical notes or comments of interest e.g. key to botani- Fig. 1. Lichen Ramalina celastri, expressing discoid cal details, history, distribution, uses, variations etc. (The NZPCN website could be helpful).

Botanically Inspired Art places more emphasis on artistic expression (and participation) than absolute accuracy.



apothecia along the margins of the narrow branches.

Fig. 2. (overleaf) Depicts the upper surface of a Hypogymnia turgidula lichen. Illustrated using wind fallen specimens, collected from Ross Creek Reservoir, Dunedin, NZ. Artist: Sharon Jones 2021. Medium: watercolour.

### **Conditions of entry**

Unframed entries must be submitted with an entry form, by 1st September 2024 to Botanical Society of Otago, c/o Department of Botany University of Otago P.O. Box 56 Dunedin, New Zealand, or handed in to the Department of Botany Office, 479 Great King Street, between 9-12 am or 2-4:30 pm on weekdays.

- The drawing must be your original work.
- There is a limit of 3 entries, with a minimum size A5, maximum A3.
- You should include a title and notes of botanical interest; these do not need to be written directly on the drawing and can be submitted alongside the drawing.
- Judges will be kept unaware of your identity while judging so don't sign the front! But please do put your name on the back(s) and number each entry.
- BSO may use copies, with due acknowledgement, in the Newsletter and website.
- Entries are open to current BSO members our subscription is very low!
- If there are insufficient entries the competition may be postponed.
- Entries will be displayed and prizes awarded during the meeting on Wednesday 9th October. You may put your entries up for auction at the meeting if you wish.
- There is no entry fee, so please include an addressed, pre-paid envelope or tube if you would like your drawings returned by post. Alternatively, you can collect them at the October Meeting.

### **ENTRY FORM**

# **Botanical Society of Otago**

Botamour oc	oloty of otago		
Audrey Eagle Botanio	cal Drawing Competition		
Name:			
Address:			
Email:		07	
Phone:			
Return:			
I would like my drawings back:	yes/no		
I have included prepaid and add	dressed packaging: <i>yes/no</i>		
Art Auction:			
I would like to make my drawing	g available for <b>auction</b> following the awa	rd ceremony: yes/no	
If you selected yes, please indic	cate your preferred reserve price for each	n drawing.	
Title of artwork: (limit 3):	Category (Botanical Illustration or Botanically Inspired Art):	Reserve price (if auctioned)	Botanical notes enclosed? (✓)
1.			
2.			
3.			
Membership/Declaration:			
This is all my own work and I a	m a current member of the Botanical So	ciety of Otago.	
Signature	Date		

### **ARTICLES**

### Indigenous vascular plants in Otago

Scott Jarvie, Otago Regional Council

The Otago Regional Council (ORC) recently released a conservation status for indigenous vascular plants in Otago. This conservation status was completed by a panel of plants experts, namely John Barkla, Brian Rance, Dr Geoff Rogers, Rich- Other qualifiers we applied in this process and ard Ewans, and Dr Mike Thorsen, with the panel convened by Dr Scott Jarvie from the ORC.

While much is known about indigenous vascular plants in Aotearoa New Zealand, we are often less aware of the local or regional diversity of taxa and their distributions. A standardised methodology de- Understanding where indigenous plant taxa are Threat Classification System at the population size and trends of indigenous vas- inform ecological restoration. cular plant taxa for Otago.

A total of 1242 indigenous vascular plant taxa that indigenous Aotearoa New Zealand, containing a high proportion status. of the national flora. Otago, therefore, has a major role to play in maintaining Aotearoa New Zealand's amazing and unique flora.

Although there is a reasonable understanding of 2024.pdf "nationally threatened" and "nationally at risk" plant taxa in Otago, the status of the population of many native plants in Otago was poorly known. This regional assessment remedies that situation. We identified 227 taxa are "regionally threatened", 275 are "regionally at risk", 614 are "regionally not threatened", 1 is "regionally non-resident native", and 115 are "regionally data deficient". A total of 10 taxa are identified as having become "regionally extirpated" (i.e., have become extinct in the region).

Our assessment identified 36 vascular plant taxa that are regional endemics, meaning they are only

found in Otago. Of these endemic taxa, 28 have heightened risks of extinction (nationally threatened or at risk category). A total of 312 taxa were identified as having national strongholds in Otago (where 20% of the population are found in a region). This includes 187 taxa with a heightened risk of extinction nationally.

shown in our report include: 1) Assessment Qualifiers like Data Poor; 2) Biological Qualifiers like Range Restricted and Biologically Sparse, and 3) Population State Qualifiers like One Location, Climate Impact and Extreme Fluctuations.

veloped for regional councils was followed for the found in Otago, and their threat status, can help to Otago assessment that leverages off the New Zea- protect and restore them. Such knowledge helps (https:// inform how to manage threats, such as from compenztcs.org.nz/) to evaluate the conservation status of tition from weeds, browsing by animal pests, deindigenous vascular plants in the region. This re- struction or modification of habitats, pathogens, and gional assessment provides a comprehensive look human-induced climate change. It can also help to

Given this is the first regional conservation status of plants vascular are listed in the NZ Threat Classification System acknowledge that some taxa and/or populations were identified as occurring naturally in Otago. A may have been missed. We encourage readers with further 14 taxa were identified that had not been as- additional information to contact the expert panel sessed nationally. This large flora confirms Otago members or the lead author of the report to help imas one of the botanically most diverse regions in prove future iterations of the regional conservation

> The report can be found at: https://www.orc.govt.nz/ media/17199/regional-conservation-status-ofindigenous-vascular-plant-species-in-otago-report-



[Next page] Figure 1: Banksia coccinea flowering in John Forrest National Park. (Photo: Bradley Curnow)

### REPORTS

### Western Australian Wildflowers, a talk by Bradley Curnow, 14th February

### Angela Brandt

Bradley took us on a lovely floristic tour of Western Australia (WA) - highlighting some great places to visit to see a variety of plants, geology, and even trains. He had focused his time around Perth and Bunbury, noting there are several different biogeographic regions to visit in this corner of Australia. It's a veritable 'botanical Christmas', in his words! He pointed out some fun facts, such as the golden wat- Figure 3: Swamp paperbark trees growing in the 'black waters' tle (Acacia pycnantha) being the WA state tree (though it isn't endemic to WA!) and the red and where he saw his favourite plant on the trip - the green kangaroo paw (Anigozenthos manglesii) being the state flower. He recommends the Kings Park Botanic Gardens in Perth as a first stop on a botanical tour of the region.

In John Forrest National Park, he saw several Fabaceae, as well as Banksia, Drosera, and other species flowering (Figure 1). He noted that Xanthorrhoea brunonis seemed to do well following fire. He saw the jarrah tree (Eucalyptus marginata), known for its hard timber. He traveled up to Newman in the Pilbara region and, in addition to visiting an iron ore mine, saw heaps more wildflowers. Bright yellow flowers of Senna glutinosa pruinosa stood out in the landscape (Figure 2), along with the seed pods of the cockroach bush (Senna notabilis).

Bradley also visited the Big Swamp Reserve in Bunbury, on the Swan Coastal Plain, where he saw swamp paperbark trees (Melaleuca rhaphiophylla; Figure 3) and an array of blooms distinct from the other regions. He then traveled through Southern Cross and Kalgoorlie, in the Coolgardie region,



Figure 2: Senna glutinosa pruinosa with a backdrop of Pilbara landscape. (Photo: Bradley Curnow)



of the Big Swamp Reserve. (Photo: Bradley Curnow)

lemon-flowered gum (Eucalyptus woodwardia; Figure 4). The Kepwari Walk in the Esperance region took him past freshwater lakes, which also formed a paperbark swamp wetland. The banksia were just beginning to flower, though it was July when he visited (Figure 5). Here he found his second favourite plant, the prickly Moses (Acacia pulchella).



Figure 4: Lemon-flowered gum was Bradley's favourite plant of the trip. (Photo: Bradley Curnow)

He visited the Chapman River on the Geraldton Sand Plain. After having a kangaroo sit with him for lunch, he got back to botanising, seeing coastal sword sedge (Lepidosperma gladiatum), Eucalyptus macroxarpa x pyriformis, Gastrolobium hamulosum, rigid wattle (Acacia cochlearis), orange wattle (Acacia saligna), and many other flowering shrubs.

In Cape Le Grande National Park, back in the Esperance region, he saw WA's only palm, the Zamia palm (Macrozamia fraseri; Figure 6). Amongst quite a variety of flowers he saw around the park, there



Figure 5: Banksia speciosa along the Kepwari Walk. It is endemic to the Esperance coast. (Photo: Bradley Curnow)

were also many varieties of donkey orchids. He highly recommends walking the trails here if you ever visit WA. It seemed that places which had been burned showed the best flower displays, but fires had become hotter with the introduced grasses so more of the native seedbank was likely to be killed in fires now than in the past.



Figure 6: Zamia palm in Cape Le Grande National Park. (Photo: Bradley Curnow)

coconut ice (Hypocalymma angustifolium), as well sent, and the spongy undergrowth contained Droas Fabaceae. Droseraceae. Asteraceae. Goodeniaceae. A very warm thank-you to Bradley for taking us through the highlights of your trip!

### Field trip to Swampy summit, 24th **February**

Finn Dobbie

On the 24th of February a group of botany enthusiasts (including Dax the Dog), left the Botany department in good weather and good spirits and arrived at Leith saddle with only good spirits. Walking up

the track there were the expected, but not unwanted, sights of Pseudowintera, Lophomyrtus, Rubus, Blechnum and Aspleniums among other botanical marvels.

At ground level there was also a hidden abundance of fungi. Helicoglea compresssa (commonly called the booger fungus, by me.....), puff shroom (Lycopodium sp.) and eyelash fungus

among many others.



(Scutellinia) Gymnopilus purperatus growing out of a long dead stump (Photo: Finn Dobbie)

As we progressed up the hill the biodiversity demographic changed significantly, giving way to large Dracophyllum trees and manuka, which had colonised the landscape after a fire.

Further up the hill NZ cedars (Libocedrus bidwillii) dominated, with Pseudodiphasium volubile snaking their way through, originally confusing this author as being confused, juvenile cedars. These cedars were eventually cowed by the winds, giving way to many shrubs (such as Hebe and Coprosma species) as well as a few defiant cabbage trees. By this point we were on top of the Hill, and the wetland below this hill beckoned us, a bush bash then ensued with multiple Coprosoma (mainly rubra and rugosa), Spaniards, flaxes and the odd cheeky lawyer vine, taking a toll upon the legs and face.

There was an obvious biodiversity shift once the Finally, in the Darling Range near Perth, Bradley wetland was reached, grasses (tussock/carex), with wrapped up his botanical adventure with sightings of the odd flax, were the largest growing plants pre-



Coral lichens blanketed certain parts of the bog so much, it looked like the aftermath of a shearing competition. (Photo: Finn Dobbie)

which at a glance looks like a regular mushroom but in the reserve. The valley includes some rare examis actually the fruiting body of a lichen, was found ples of remnant alluvial forest dominated by kowhai coral lichen (Pulchrocladia retipora).

Soon the weather became worse, and this was our signal to wrap things up and leave. The uphill climb



species to survive the strong wind. (Photo: Finn Dobbie)

was relatively unea few Rubus and Spaniard attacks. Upon reaching the top of the hill there were some Bumble bees who obviously feared the oncoming weather as well, as they were clinging to Erica plants, which could either considered a positive or negative end of the day depending on how highly you rank Erica as a weed.

### Field trip to Hikaroroa, 9<sup>th</sup> March

In March, a group of 16 (I'm guessing- I didn't write this down) participated in a field trip to Mount Hikaroroa (Mt. Watkin), a Dunedin City Council administered scenic reserve approximately an hour north of Dunedin, inland from Waikouaiti.

Hikaroroa is a volcanic peak with unique geology, with particularly notable basalt boulder fields which Alex Wearing flow down the upper slopes. The group of keen bot-

sera, Daphne, and Sphagnum. Lichenomaphallia, group to see the range of vegetation types present there too. There was also an unusual patch of wool (Sophora microphylla) and mixed broadleaved- poin the bog, which upon inspection turned out to be docarp forest with impressive emergent Podocarps, including matai (Prumnopitys taxifolia) and totara (Podocarpus totara). Upper slopes are generally vegetated with shrubs (Coprosma), stunted broadleaved species and harakeke.

> ventful aside from At the summit, a particular highlight was finding Gingidia grisea growing on rocky outcrops. Aciphylla glaucescens was noted on the walk up and Korthalsella, a very small mistletoe, was detected growing on mikimiki (small leaved Coprosma) on the descent.



Walking up Hikaroroa. (Photo: Lydia Metcalfe)

### An Introduction to the Natural History of Chatham Island, a talk by On Lee Lau, 10<sup>th</sup> April 2024

anists made the decision to walk to the summit and Ever since humans have been traveling, collecting explore this unique landscape. Initially the walk was information and telling stories, they have been straight forward, a grassy fence line at the property drawn to and fascinated by islands. On Lee Lau boundary. As the group gained elevation, the travel (Collections Manager, Natural Science, Tühura Otabecame increasingly steep and involved scrambling go Museum) gave a wide-ranging and wellup the volcanic boulder field (which is sparsely veg- illustrated talk on the natural history of Chatham/ etated with large patches of bush lawyer Rubus cis- Rēkohu Island. On Lee Lau has made several visits soides and Fuchsia perscandens). The views from to Chatham Island, working as a field assistant to the top were incredible on the day, enabling the (1), Department of Zoology, University of Otago

postgraduate students<sup>1</sup>, and (2), undergraduate stu- Several tree species have been introduced from dents on the University of Otago's field-based New Zealand. These include karaka/kopi (= Moriori course, Pacific Field Ecology (ECOL 314), which name) (Corynocarpus laevigatus), cabbage trees has a 12-day fieldtrip to Chatham Island.

Chatham Island is about 650 km east of New Zealand on the eastern edge of the mostly submerged continent of Zealandia. Its area is about 794 km<sup>2</sup>. Kopi was a significant introduction for Moriori, for landforms of Chatham Island comprise upland areas groves were created. Rakau momori/tree carvings been derived entirely from over-water dispersal. The cluded photographs of some kopi with epiphytes. Chatham Island flora has evolved in the absence of vertebrate herbivores.

Chatham Island was settled by Moriori about 1500. The first European contact was in 1791. Māori invasion in 1835 had a calamitous impact on Moriori. Suppression of Moriori culture led to the loss of much botanical and ecological knowledge. The Chatham Islands became part of the New Zealand Crown Colony in 1842. European settlement led to removal of much forest, the creation of pastoral landscapes, and reduction and loss of indigenous habitats and species. However, without significant environmental transformation Chatham Island is unlikely to have supported a substantial human population on a permanent basis. Most of the land on Chatham Island is privately owned. Most conservation reserves are small. The population in June 2023 was estimated at 730.

The Chatham Islands archipelago has about 877 taxa, of which about 50% are indigenous<sup>2</sup>. The Chatham Islands group has the highest level of plant and animal endemism in the New Zealand biogeographic region, and 30 per cent of New Zealand's threatened plant and animal species. There are 41 endemic, and 11 informal endemic species<sup>2</sup>.

There are only 14 native species of trees<sup>2</sup>. Nikau palm (Rhopalostylis sapida) at 10-15 metres, is the tallest tree. There are no indigenous conifers, and no southern beech. An interesting indigenous rarity is matagouri (Discaria toumatou). This is probably due to its past removal by people<sup>2</sup>.

(Cordyline spp.), kowhai (Sophora spp.), pohutukawa (Metrosideros excelsa) and northern rata (Metrosideros robusta)<sup>2</sup>.

The highest elevation is 299 metres. Chatham Is- whom kopi seeds were an important source of carland was uplifted about four million years ago. The bohydrates. It was actively farmed, and orchard-like in the south, north-west, and a small area in the (dendroglyphs) were made on larger kopi (which north-east. There is a lowland central area much of can grow to about 15 metres). Unfortunately, this which is swamps and the large Te Whanga lagoon. practice has died out, and many of the rakau There are many lakes, some of which are located momori are now difficult to discern. In the 1950s very close to the sea. Chatham Island has never there were more than 1,000 carved kopi, but by been connected to a large landmass. Its flora has 2021 the number had dwindled to 140. The talk in-

> On Lee Lau illustrated the natural history of Chatham Island by talking about and illustrating her visits to several places on the island.

> Point Munning (north-east coast) is distinguished by the presence of the oldest rocks (schist) on Chatham Island. It is a working farm with conservation covenants. Point Munning is home to a large population of New Zealand fur seals (Arctocephalus forsteri). A notable plant present is the Chatham Island lancewood (Pseudopanax chathamicus), which unlike its New Zealand relatives is non-heteroblastic.

> Manukau Station at Manukau Point (south-east coast) has undertaken restoration planting of tree daisy (Olearia) and flax (Phormium) to build-up the shoreline and to act as windbreak. Areas have been fenced off from cattle and grass mowed. The Chatham Island sea celery (Apium prostratum) and Chatham Islands scurvy grass (Lepidium rekohuense) have also been planted.

> The Awatotara Private Reserve (south-west coast) is on steep rugged slopes descending to the coast. It has been undergoing restoration since the 1980s with plantings of indigenous species and active pest management. Flax is abundant. There has been a lot of spontaneous regeneration at this site. A notable species present is the Chatham Island greenhood orchid (Pterostylis silvicultrix).

> The Tuku Nature Reserve (south-west coast) is a forest peat-covered tableland habitat dominated by tarahinau (Dracophyllum arboretum). Easter orchids

serve owes its existence to it being a breeding site and weka can sometimes be a problem. Fortunateof the very rare taiko/magenta petrel (Pterodroma ly, rabbits were not introduced to Chatham Island. magentae).

hibits canopy dieback. Kopi is sensitive to wind and pacts if the emu were allowed to spread. coastal kopi stands are vulnerable to severe storm events.

high fixed dune systems. Presumably, kopi groves to visit<sup>5</sup>. prior to the introduction of marram days were buffered by intact stands of coastal forest. To maintain kopi stand structure there is a need for a closed canopy and/or a buffer of other tree species.

The Department of Conservation's Nikau Conservation Area is a small area of lowland broadleaved forest on the north-western shore of Te Whanga Lagoon. It contains the largest remaining stand of nikau on Chatham Island. Nikau is emerging through bracken (Pteridium esculentum). Other species present include kopi, Chatham Island mahoe and the Chatham Island matipo (Myrsine chathamica). This area has a problem with invasive weeds.

The Hapupu/J.M. Barker Reserve is one of only three national historic reserves in New Zealand. It protects rakau momori (tree carvings) on kopi trees. One of the trees at this site was winner of the 2023 tree of the year<sup>3</sup>.

Buff weka (Gallirallus australis hectori) were introduced to Chatham Island in 1905. There has been a massive population increase and they are now a Lau, 10<sup>th</sup> April valued hunting and food resource (in marked contrast to New Zealand where weka is a fully protected George Bysouth species). In recent years, some Chatham Island weka have been reintroduced to protected sites on the South Island.

(Earina autumnalis) are common. The Tuku Re- are a major problem, possums can be a problem,

Chatham Island has a breeding and spreading feral The Department of Conservation's Henga Reserve population of about 300 emu (Dromarius novaeon the east coast has regenerating kopi, Chatham hollandiae) that likes gorse (Ulex europaeus) rich Island mahoe (Melicytus chathamicus) forest, and stands<sup>4</sup>. The Chatham Island flora evolved in the distinctive limestone outcrop and sand dune plant absence of large browsing ratites and it would be communities. The open edge of the kopi stand ex- interesting to speculate on the likely ecological im-

On Lee Lau's talk was a comprehensive account of the plants and landscapes of Chatham Island, and Some kopi groves occur on sand dunes where there of some of the conservation measures that are unis sand movement, but On Lee Lau said that kopi is derway. The content - and emphasis - on cultural better able to cope with moving sand than stand ex- engagement with the people of Chatham Island posure. Where kopi occurs in dune systems dune when undertaking fieldwork and facilitating conserheight limits canopy height. Chatham Island dune vation was impressive and praiseworthy. The talk systems are currently dominated by introduced mar- convincingly portrayed Chatham Island both as a ram grass (Ammophila arenaria) which produces place worth knowing and as a very desirable place

- 1: Research on (1), New Zealand smelt (Retropinna retropinna), and (2), food web dynamics in freshwater versus brackish lakes.
- 2: Peter de Lange, Rekohu Updated Notes About the Flora of the Chatham Islands, talk to the Wellington Botanical Society, 20 June 2022 [Notes taken from Zoom presentation].
- 3: www.tree-ofthreyear.co.nz/2022-trees/rakau-momori-
- 4: The information on the presence of emu comes from Peter de Lange's talk [See Note 2].
- 5: On Lee Lau provided some useful websites with information on the Chatham Islands.

chathamislands.co.nz/our-islands/environment chathams.co.nz

tvnz.co.nz/shows/chatham-islanders inaturalist.org/places/chatham-islands otagomuseum.nz/blog/profile/on-lee-lau [On Lee Lau's visits to Chatham Island]

### An Introduction to the Natural History of Chatham Island, a talk by On Lee

On a lovely autumn evening in the Zoology Benham building, we were treated to a talk on Chatham Island (Rēkohu) by On Lee Lau. The talk started with With respect to depredations on native plants, pigs a little bit of On Lee's background, with her love for

Botany discovered in Hawai'i with the Hawai'i sil- wood that skips the juvenile stage and goes straight versword (Argyroxiphium sandwicense), a striking to being an adult. and endangered plant with two geographically separated subspecies found only in a few places above 2100m in Hawai'i. After her brief introduction, On Lee tried to convince us that she was no authority on Chatham Island and had only (only!) been there 5 times. However, having heard her talk and taken plentiful notes, she certainly sounds like an expert to me.

We started hearing a bit on the history of Rekohu, an infant in the geological timescale having only emerged from the ocean around 2 million years ago via some large scale volcanic activity. Now Chaton foot, with plants and animal life abound! Some of sheep. the places she highlighted from her adventures were:

### Manukau Station (south east)

fishing, something we could learn from in Otago. This tidal haven provides plenty of entertainment for any budding tidal pool enthusiast. There are even 2 different shag colonies nearby, the Chatham Island Shag and Pitt Shag.

\* There is strong argument to list the Chatham flax as its own species as it differs greatly from its mainland neighbour.

### **Point Munning (north east)**

(Pseudopanax chathamicus), a species of lance- On Lee recommends the book Manu Moriori: Hu-

### Point Gap (south west)

Point Gap, so called because it is a point with a gap, includes the strange sight of a colony of plastic Chatham Albatross, placed there to encourage the vulnerable species to use a second location for nesting. Although the albatross decoys might not be successful (yet) we were reassured that the plant life is thriving along with the little blue penguins and sooty shearwater.

### Awatotara (south west)

ham Island is home to around 600 permanent Awatotara has been protected for restoration from (human) residents with the majority of the island be- the 1950's with lots of natural regrowth including ing privately owned. For an island of such a small plenty of Dracophyllum and Phormium in the very population the use of iNaturalist is certainly a popu- steep environment. This also happens to be where lar activity, with over 4000 observations on the On Lee saw her first parea or Chatham pigeon, an Chatham Island Group's project page. On Lee has amazingly chunky bird that is 25% larger than our now visited most of Chatham Island, travelling via kererū. Due to its size the parea lives most of its life gravel road, some rather sketchy 4WD tracks and browsing on the ground pretending it's a cow or a

### Tuku Reserve (south west)

This area is managed by DOC and is home to the majority of the population of taiko or magenta petrel, There is plenty of ongoing restoration work with the a critically endangered species thought to be extinct endemic Chatham Island akeake (Olearia traversii) for over 100 years! They are protected now with and harakeke (Phormium tenax\*) predominantly be-predator proof fencing and neoprene covers on their ing planted at Manukau Station with all the seed nest sights (very fancy) to stop other nesting birds sourcing done on the island. Around this area there stealing them. A stunningly green area of the island, is an intertidal haven due to the ban on commercial easter orchid (Earina autumnalis) can also be found.

### **Hapupu Reserve (north east)**

Home of the official 2023 Rākau o te tau NZ Tree of the Year!

In an area surrounded by beautiful freshwater lakes one of the main kopi/karaka (Corynocarpus laevigatus) groves can be found. This species was incredibly important to the Moriori way of life, with the fruit/ nut being a vital source of food (after processing the poisonous bits out). Many of the trees in the groves Point Munning is under a conservation covenant were carved, with over 1000 carved trees discovand has an amazing seal haul out which acts like a ered in the mid 1900's. Sadly, due to the trees ageseal water park, which sounds like one of the cutest ing and the effects of storms this number is down to things ever! Some more botanical weirdness can be approximately 140. There is an ongoing conservafound up here with the Chatham Island lancewood tion effort to protect this important part of NZ history.

man and Bird Carvings on Live Kopi Trees on the Our merry band began to splinter off into smaller Chatham Islands by Rhys Richards if you would like groups of exploration, with Jo and me eventually to learn more about these stunning dendroglyphs. finding ourselves hunched over a dead log. As we

As you can probably tell by this lengthy report I thoroughly enjoyed On Lee's talk which was packed full of information and lots of wonderful photos. Now that we've got a feel for the place, the only thing left to do is ask On Lee to take the BSO with her on her next trip.

# The Best Tree is a Dead Tree: Field Trip to Manuka Gorge Lichen and Bryophyte Walk, 13<sup>th</sup> April

Jessica Paull

On the morning of April 13<sup>th</sup>, our small group gathered in the Botany Department parking lot, ready to depart on our early morning drive to the Mt Stuart Tunnel track. The weather was cooperating, our members were coffee-d up, and it was looking to be a promising start. Attendees were as follows: Becky, Dhana, George, Ivan, Jess, and Jo.

The forest surrounding the Mt Stuart Tunnel Track was largely composed of the exotic deciduous sycamore, *Acer pseudoplatanus*. Autumn was in full swing here, with bare branches, golden leaf litter, and a quiet sense of reflection only the cusp of winter could provide. As we began the initial trek into the bush, it didn't take long to find something small and interesting to examine. As a group, we'd walk a few metres, stop to investigate something interesting, and then rinse and repeat.



A snapshot of a miniature ecosystem, teeming with life (Photo: Jessica Paull)

Our merry band began to splinter off into smaller groups of exploration, with Jo and me eventually finding ourselves hunched over a dead log. As we were once again enraptured by the endless forms of life that grow from death, it was in this moment that Jo and I agreed among ourselves, "the best tree is a dead tree."



Witch's Butter (Tremella sp.) on a rotting sycamore branch. (Photo: Jessica Paull)

Now wait a moment, I can hear the cries of outrage already. Of course, dead trees and rotten logs are best found in moderation, surrounded by many living trees. However, the beauty of a rotting log simply cannot be understated. A closer look will reveal a miniature ecosystem in a snapshot of space, all the more beautiful due to its inherent ephemerality. Different communities of fungi, bryophytes, lichens, bacteria, and small vascular plants can be seen battling for nutrients, space, or just for their own surviv-



The tunnel, where glow worms can be seen with a keen eye. (Photo: Jessica Paull)

al. This, after all, was the theme of the field trip: to Other Business appreciate smaller plants that exist all around us, but often go unnoticed due to their small size.

This 'dying' autumnal forest was, in fact, teeming with life. One just needed a keen eye and a hand lens to truly appreciate it. So, I encourage all readers: the next time you find yourself in nature and you feel despondent because 'nothing interesting' is This year, we received 57 photos, from 15 photograaround, take a closer look. Really look. An entire phers, across the 3 categories. Category winners world exists right beneath our noses, hidden from us are as follows: only due to our unwillingness to look closer.

### AGM and Photo Competition, 8th May

### Minutes of Botanical Society of Otago AGM, 8 May 2024

Chair: Gretchen Brownstein

Apologies: On Lee Lau, John Barkla Meeting called to order at 5:35 pm

### Reports

Minutes of the 2023 AGM and the Chair and Treasurer's reports were emailed to members in advance of the AGM, and digital copies were presented at the meeting. The minutes and Treasurer's reports The Dunedin contingent left early, peering at breaks hand than last year.

### **Election of Officers**

The following were nominated from the floor and elected unopposed.

Chair - Gretchen Brownstein Vice Chair - John Barkla Secretary - Angela Brandt Treasurer - John Knight Committee members: Lydia Turley **David Orlovich** Allison Knight

David Lyttle Matt Larcombe

Jo Sinclair Esté Smal

Lydia Metcalfe

Alex Wearing

Robyn Bridges thanked Gretchen for her ongoing great work as Chair.

The meeting adjourned at 5:41 pm.

### Photo competition results

Plant portrait: Flax Flower by Lydia Turley

Plants in the landscape: Mountain Rays by Gretchen Brownstein (page 4)

Patterns in Nature: *Claw* by Allison Knight (page 22)

People's choice: Living in the alpine by Anne

Schlesselmann (cover)

### Field trip to Slope Point, 18<sup>th</sup>-19<sup>th</sup> May

### Day 1—Edith's covenant

Lydia Turley

were accepted as read (Moved D. Lyttle, seconded in the rain and worrying about the rather cold fore-R. Bridges). Our membership stands at 79 paid cast. The weather gods were on our side and by the members and 2 Life members as of 17 April. Our time we reached Slope Point the rain had largely finances are doing well, with again more money in cleared, although it was still freezing. We gathered at the house of Edith (who was busy elsewhere), who is a big supporter of conservation and generously let us stay for the weekend. The fire was going and so we all sat down for a cuppa before heading out field tripping.



Fruits of supplejack (Ripogonum scandens). Brightly coloured fruits were the theme of the morning. (Photo: Lydia Turley)

The first excursion was a walk through the cove- place for filmy ferns - we saw 10 species of nanted bush on Edith's property. It was full of fruit. Hymenophyllum We saw a bank of Lobelia angulata with purple (Trichomanes) venosum. It was therefore a good fruits. There was Coprosma rhamnoides with dainty site to brush up on identifying these lovely filmy red fruits. Plenty of miro were fruiting, beautiful ferns. We also saw 8 Blechnum ferns and both fleshy fruits which looked like miniature mangoes. Prince of Wales (Leptopteris superba) and crepe Jesse and Ally were collecting miro fruit for propa- fern (L. hymenophylloides). Maybe on a future trip to gation and discussing their propagation techniques.

There was an arch which had fallen across the track with a perfect person-sized gap. This contained at least four climbers - Rubus australis, Metrosideros, supplejack and Muehlenbeckia. The supplejack had big bunches of round red berries. On the return journev we met a group who were collecting seed for Brian Rance's nursery next to a heavily fruiting seven-finger. They seem to have chosen a good time and place. Jesse offered advice on distinguishing seven-finger and five-finger. John and Gretchen spied two orchids; Dendrobium cunninghamii and Earina autumnalis (just at the end of flowering).

It was back to the house for lunch (how civilized!), then stop two was a ferny bush.

### Waipohatu short walk

### Brian Rance

The Waipohatu short walk is located along a wellmarked side road along the coastal section of the Southern Scenic Route (between the Slope Point turnoff and Haldane Estuary. The walk is a lesser known but well worthwhile short walk within the Waikawa Forest portion of the Catlins Forest Park. It is signed as a 20 min walk however we took a bit longer than 20 minutes to complete the walk, and indeed some of us did not get to the end before the lead group arrived back with us. The walk is through lowland, historically logged Catlins podocarp hardwood forest on the flat lower section of the Waipohatu Stream. The walk is between two sections of road. The walk meanders down to the Waipohatu Stream, crosses it and then follows the stream upstream on the true left bank. The forest is dominated by large kamahi trees and has a rich understory and ground cover, however the impact of deer is evident. The area has a relatively rich flora with almost 100 species (i.e. 97) having been recorded. A feature of the walk is the abundance of ferns with 36 species having been recorded. The cool, moist and humid forest makes the walk a great

along with area we may do the longer (2 hour) walk to the waterfall.



Hymenophyllum (Photo: Lydia Turley)

### Curio bay

### Gretchen Brownstein

The crew piled back into the cars for the short drive to Curio Bay. We first scrambled around the headland above the campground looking for interesting specimens. The first to catch our eye was a small patch of turf amongst exotic grasses at the edge of carpark. The turf included Apium prostratum, Colobanthus sp., Leptinella dioica, and Plantago triandra. But we were soon hanging over the cliff edge looking for Myosotis rakiura (only one was seen) and Anisotome Iyallii (many seen). A bit further away from the cliff edge was Senecio carnosula. And tucked down in the rock cracks was Gentiana saxosa in flower!

From the headland we made our way around to the petrified forest for a quick viewing of the scared dead forest. Then across the road into a piece of regenerating coastal bush. The bush looked healthier than Waipohatu as it has been fenced for a few years now. The number of palatable seedlings and saplings was fabulous, along with the relatively low number and abundance of weeds. About halfway around the loop track was pole rimu stand! As it was nearing dusk, we did a rather quick circuit of the bush (for botanists) as some of us wanted to see

Slope Point and others visit a pair of dune lakes dense turf on the top of the terrace, interspersed (with some big Carex secta) behind Edith's house. with shore gentian (Gentianella saxosa), sea prim-We jumped back in the cars to do one last bit of bot-rose (Samolus repens var. repens), shore stonecrop anising before sunset. Then with the light gone we (Crassula moschata) and occasional Carex fretalis were forced to go inside for a five-course potluck and C. flagellifera (the latter with very long trailing dinner with a wine match.

### Day 2—Black Point to Waipapa Stream, Southland Coast

### John Barkla

In contrast to the wild weather of the day before, Sunday on the Slope Point coast dawned clear and frosty. Our group of eleven drove to the end of the publicly maintained part of Slope Point Road and walked down through pasture to the rocky coast. An angry surf pounded the headlands, sending spray high into the air. We walked the clifftop for a time, fenced from the adjoining paddock, where shore hebe (Veronica elliptica) and native spinach (Tetragonia trigyna) had a presence, along with a previously unrecorded patch of the Nationally Vulnerable mikoikoi (Libertia peregrinans).

The cliffs relented and soon we were down to a small quartz sand beach, somewhat sheltered by A prominent rocky view point was a chance to warm filiforme).

West of the beach, an eroding herbaceous terrace, with channels and icy pools, had a variety of micro- Continuing westwards we encountered a broad rock habitats that were rich in herbs, sedges and rushes. platform, mostly devoid of plants we thought, until



A rocky platform with fringing coastal turf. (Photo: John Barkla)

culms). Much taller oioi (Apodasmia similis) formed discrete patches that dotted the terrace. The sides of muddy channels held a few surprises including the tiny Euphrasia repens and pygmy forget-me-not (Myosotis antarctica subsp. traillii), a little too late in the season for either to be flowering.



Gentianella saxosa in coastal turf. (Photo: John Barkla)

the partially encircling rocks of Black Point. More hands around a cup of tea. The identity of small stable sand at the upper edge of the beach provided Puccinellia plants was discussed, and Jesse handhabitat for several salt-tolerant herbaceous plants ed around an old bottle she had discovered which including sand buttercup (Ranunculus acaulis), Li- had much barely decipherable writing, embossed in laeopsis novae-zelandiae, remuremu (Goodenia the glass. Some investigated a series of wet depresradicans), and sea celery (Apium prostratum var. sions on a higher terrace, one of which had a pool and muddy margin with mudwort (Limosella australis) and large mats of Crassula sinclairii.

The small sedge Schoenus concinnus formed a we stumbled upon the petrified stumps of an ancient forest. Some trip participants recalled seeing whole petrified logs on a trip to the same area in 2021. Dried up stems of Kaeo sea tulip (Pyura pachydermatina), a solitary species of tunicate tossed far from the sea, were testament to the storms that batter this coast.

> To reach the top of the cliffs that overlook Waipapa Beach we cautiously filed over a narrow land bridge that spanned a deep sea-chasm that extended far inland. Arriving at the cliff top was a terrace dominated by blue shore tussocks (Poa astonii). We soon found a large handsome plant of Stewart Is-



A field of Poa astonii and Veronica elliptica. (Photo: John Barkla)

Myosotis rakiura nestled amongst Poa astonii. (Photo: John

Barkla)

land forget-me-not (Myosotis rakiura) amongst the gentian and occasional pincushion grass (Agrostis tussock, and then hundreds more. This was a par- muscosa) and Chaerophyllum "minute flower". From ticularly interesting area where protection from graz- here we picked up the sandy rough extension of ing had encouraged a vigorous belt of blue shore Slope Point Road and made our way back to the tussock that then merged into a field of coalescing vehicles through pasture, flaxland, and wetland, spherical mounds of shore hebe - one of few Catlins some of which had been recently fenced to keep coastal sites where this transition occurs. A small stock out. tussocky clearing within the shrubland provided a splendid lunch spot and respite from the cold south- Brian advises we added nine new plants to the list westerly.

happy to see an abundance of late-flowering shore pens.

for the area, bringing the total of indigenous plants to 63. These include 10 Nationally Threatened and A small hut overlooking Waipapa Stream and beach At Risk plants out of the 17 recorded for the wider marked our turnout point. Below the hut we area. It was also good to see several southern coast searched the wet hillside turf in vain for Ranunculus endemics including Carex fretalis, Pimelea prostrata recens and more pygmy forget-me not but were var. ventosa, Gentiana saxosa, and Euphrasia re-



The team on the natural bridge. (Photo: Chris Rance)

We thank landowners Dennis Farrelly and Bryce Garnock for generously allowing access, and local botanists Brian Rance and Jesse Bythell for captivating interpretation and discussion of coastal processes, ecosystems and. course, plants. We especially thank Edith Jones for making her warm spacious home available as a stunning base for our late autumn south coast adventures.

### **Botanical Society of Otago**

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### Committee 2024-2025

Chair: Gretchen Brownstein Vice Chair: John Barkla Secretary: Angela Brandt Treasurer: John Knight Newsletter Editor: Lydia Turley Website Editor: Esté Smal

Publications (Native plants of Dunedin): David Lyttle

Publications (Lichens): Allison Knight University Liaison: Matt Larcombe

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Please submit copy for next newsletter to Lydia Turley by 10<sup>th</sup> October 2024

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Claw: A toppled makomako, Aristotelia serrata claws on to life. Tuapeka West. (Photo: Allison Knight)



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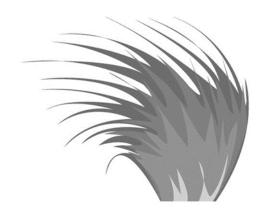
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Right: Corokia cotoneaster branch (Artist: Sharon Jones)



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