



Newsletter Number 101

March 2024

BSO MEETINGS AND FIELD TRIPS MARCH — JULY 2024

Location: Talks are now 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.

9th March, 9:00am: Hikaroroa/Mt Watkins. Lydia is leading a climb up Hikaroroa. This 616m mountain 11km inland from Waikouaiti has special ecological significance. Expect stunning plants, expansive views, and a steep climb. This trip will be an adventure, requiring a bit of grunt and surefooted-ness. Bring a lunch and plenty of water. Meet at the Botany Dept carpark 9am, returning late afternoon. Contact Lydia for further details 027 726 5556.

13th March, 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?

10th April, 5:20pm: An Introduction to the Natural History of Chatham Island Speaker: On Lee Lau. Chatham Island/Rēkohu/Wharekauri on the eastern edge of Zealandia is home to a high proportion of New Zealand's endemic flora and fauna. Join On Lee for a talk about encountering this flora and fauna in some special sites over the past few years while visiting the island to support freshwater fish research with Otago Uni. On Lee comes from a botany background in the Americas and has gained an appreciation for birds and bugs while working at Tūhura Otago Museum for the past 10 years. The talk will include a virtual visit to some of the island's rākau momori in kōpi groves, including the 2023 Winner for Rākau o te tau/Tree of the Year NZ Aotearoa.

13th April, 9:00am: Manuka Gorge Lichen and Bryophyte walk. A short trail of Sycamore trees exploding in a lichen and bryophyte community, with a scattered native understory will lead us to Mount Stuart Tunnel. The tunnel was built around 1875 and is 442 metres long. The cool damp air may require warm clothing. If we turn the torches off, we might be rewarded with a glow worm show. The entrance of the tunnel walls are coated in hornworts, liverworts, moss and ferns. Having a hand lens and head torch on this trip is highly recommended. This is a short walk (~1km return) on well- formed tracks. Contact Jo Sinclair josinclair6@gmail.com. Meet at the Botany Department carpark 9am. Returning to Dunedin by 2pm.

8th May, 5:20pm: BSO Annual General Meeting and Photographic Competition. The photographic competition is a popular and eagerly anticipated event for anyone interested in botanical photography. Enter your best photos and learn what makes a good photograph and how to improve your photographic skills from our panel of expert judges. Your photographs may be chosen for the BSO Calendar so this is your opportunity to have one month of fame. Start organising your entries now and don't wait until the last minute

18th-19th May: Slope Point and environs, Southland trip. Leaders: John Barkla / Gretchen Brownstein. On this trip to the far south we will visit both public and private reserves to see the diversity of plants and vegetation along the south coast, including coastal forests, coastal turfs, coastal cliffs, estuaries and sand dunes. The local QEII reps will lead us around some of the hidden gems of the area. We will be doing a series of short walks (between 5min to 1 hour at various sites) depending on site, so there will be interesting plants to see for all levels of fitness. Come prepared to be flexible, with good walking shoes, warm clothing, food, and water. Limited accommodation at Slope Point is available on the Saturday night. Travel 200km (one-way). Please contact Gretchen to book a place on the trip.

12th June, 5:20pm: Bryophytes. Speaker: Aimee Pritchard. Details tba.

15th June, 10am—12pm: Frasers Gully. A nice sheltered walk for a winter morning on a well-formed track through local native bush. Meet at the carpark end of Frasers Road (off Kaikorai Valley Rd) at 10am. We'll plan to make our way along Kaikorai Stream for an hour or so (perhaps 1km), and then turn back to reach the carpark by noon. The more adventurous among us may decide to do the full 4km loop up to Dalziel Rd and back; others might like to regroup at local Cableways Bar & Bistro for lunch or snacks. Bring good walking shoes, water and a snack, and clothing for the weather. Sunday will be an alternative day in case of bad weather. Contact Angela Brandt (brandta@landcareresearch.co.nz) | 021 121 5657

10th 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).

13th 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

Note: Please review the trip guidelines for participants, drivers and leaders on our website. bso.org.nz/trip-guidelines

Please note the new location for talks:

Venue is the Zoology Benham Building, 346 Great King Street, behind the Zoology car park by the old Captain Cook Hotel. This is where we used to meet pre-covid. Please use the main entrance of the Benham Building to enter and go to the Benham Seminar Room, Room 215, located on the second floor. Please be prompt as we have to hold the door open.

<p>Meeting details: Talks are usually on Wednesday evening starting at 5.30 pm unless otherwise advertised. Venue is the Zoology Benham Building, 346 Great King Street, behind the Zoology car park by the old Captain Cook Hotel. Please use the main entrance of the Benham Building to enter and go to the Benham Seminar Room, Room 215, located on the second floor.</p> <p>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.</p>	<p>Field trip details: Field trips leave from Botany car park 464 Great King Street unless otherwise advertised. Meet there to car pool. Please contact the trip leader before Friday for trips with special transport and by Wednesday for full weekend trips. A hand lens and field guides always 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</p>
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CONTENTS

BSO Meeting and Field Trip Schedule	2
Committee Notes	5
Chair	5
Secretary	5
Treasurer	5
Editor	5
News and correspondence	6
NZPCN annual conference 2024	6
John Child bryophyte and lichen workshop 2024	6
BSO registration grants for NZPCN conference and JCBLW 2024	6
BSO Audrey Eagle drawing competition 2024	6
BSO photographic competition 2024	7
Articles	8
John Child bryophyte and lichen workshop 2023	8
Workshop	8
The <i>Blechnum</i> banks of Paratu Stream	10
Bealey Chasm	11
Inspiring speeches and celebrations: Tom Moss Award speeches illuminate the workshop	13
Tim Range treats	14
Democratising mycological knowledge: the Facebook fungiscape	18
Trip and Talk Reports	20
Field trip to Burns Reserve, October	20
Way to enlivenment, a talk by Marley Ford, October	21
Modelling fungal population genetics, a talk by Lydia Turley, November	22
Field trip to Tautuku, November	23
Committee and BSO Contacts	26
BSO Membership Form	27

Cover photograph by Craig Stonyer. *Drosera spatulata*. See his article on page 14 for more details.

FROM THE COMMITTEE

Chairs notes

Gretchen Brownstein

Welcome to the autumn 2024 issue of our fabulous BSO newsletter! I can't believe summer is nearly over and I've only spent a couple nights sleeping in a tent! Maybe my to do list was a little ambitious this summer. I have done lots of ogling of plants, both at speed as a distraction while running the umpteenth km in the bush and at a snail's pace crawling over 4m of lake edge turfs (both highly enjoyable!). I've also really enjoyed checking out plants with fellow botanists. Whether it's looking at the plant in the field or a specimen in the office. A second or third pair of eyes is always helpful along with the additional brain power to sort out a name for that little green leaf.

On that note of the power of many botanists, I would like to really encourage everyone to come along to the talks and field trips. There is a wonderful buzzy energy when we all get together to chat all things plant related. So come along and bring any plant-curious friends too! We have got a special members night in July, a mid-winter get together to swap, share, and show: stories, plants, art, books, or anything botanical. There will be drinks and nibbles to help us celebrate (remember those from the pre-covid times?).

And one more plug for the Photo Competition!! Entries close in April, so get snapping!

Secretaries notes

Angela Brandt

Ngā mihi o te tau hou - happy new year! We have another year of great events ahead; please keep an eye on the website and email updates as there have been some changes to dates and locations of field trips coming up soon. If you haven't received an email from me recently, please get in touch at bso@otago.ac.nz to check we have your correct contact details on file.

There are other exciting botanical events happening around the country this year as well. Check out the ad later on in this newsletter about our offering of

registration grants to attend this year's New Zealand Plant Conservation Network conference and the John Child Bryophyte & Lichen Workshop, both happening in October.

Welcome to our new members, Justine Davis and Kelly Phillips! And a reminder that, if you haven't yet paid your subs for 2024, please be sure to do so by the end of March so you don't miss out on entering our annual Photo Competition and voting on your favourite entries for the Members' Choice award!

Treasurers notes

John Knight

Please note that subscriptions are now due.

Editors notes

Lydia Turley

Thanks, as always, to our wonderful contributors. The stars of this edition (for me) are the articles. I enjoyed the coordination of Stella, Jo, Kacey and Esté in describing their time at the Bryophyte and Lichen workshop. Craig Stonyer has a densely illustrated description of walking the Tin Range which makes me really want to visit. Jacqui Neil has written about hunting for edible mushrooms—something I also enjoy, and with good timing ahead of the upcoming mushroom season. Yum yum.

Please note the new location for talks—in the Zoology Benham Building, where we used to meet pre-covid. Thanks to Matt Larcombe for getting us in there, and to Manaaki Whenua Landcare Research for hosting us for the past few years. Hopefully this change will make hosting and attending talks easier. I hope to see lots of you there!

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 June 2024*. Earlier submissions are most welcome.

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.

NEWS AND CORRESPONDENCE

NZ Plant Conservation Network annual conference 2024

6th – 9th October, Whangārei

Early bird registration closes 31st March

For more info and to register, go to <https://www.nzpcn.org.nz/nzpcn/events/>

John Child Bryophyte & Lichen Workshop 2024

8th – 13th October, Manaia Camp at Whangārei Heads

For more info, contact Marley Ford at mfecobotany@gmail.com

JCBLW is happening in conjunction with NZPCN this year! There's a possibility for a bryophyte and lichen session at NZPCN on the 8th and to participate in NZPCN field trips on the 9th if you register for the conference. Contact Marley Ford to be added to

the circulars with more details on JCBLW.

BSO Registration Grants for the NZPCN conference 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 bsotago.ac.nz with "Registration Grant" in the subject heading. Applications close on 20th March 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 Monthly Talk to the BSO, or (c) Organise a BSO Field Trip.
3. Confirm that you are a current member of the Society.

Upcoming: BSO Audrey Eagle Botanical Drawing Competition 2024

This year we will hold the 2024 Botanical Society of Otago's Audrey Eagle Botanical Drawing Competition and Art Auction.

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.

The drawing must be your original work. A drawing from life is preferable and a copy of an existing botanical drawing is not acceptable. 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.

More details and entry forms will be available in the July newsletter and on the website closer to the date. **Entries due 1st September.**



Lichen Ramalina celastri, expressing discoid apothecia along the margins of the narrow branches. Illustrated using wind fallen specimens, collected from Ross Creek Reservoir, Dunedin, NZ. Artist: Sharon Jones 2021. Medium: watercolour.



Botanical Society of Otago Photographic Competition 2024

Every year the BSO runs a photo competition showcasing our members best botanical images from the prior year. The 2024 photo competition is now open! Entries are due **Monday, 15th of April**.

Categories: broad and creative interpretations are encouraged!

1. Plant Portrait
2. Plants in the Landscape
3. Patterns in Nature

Prizes: \$50 for the winner of each category

Entries will be judged on technical and artistic merit by a panel of three judges. A Members' Choice award will be voted on by members.

Photos will be displayed on the BSO website and winners will be announced at the AGM meeting in May.

See the BSO website for rules and entry forms.

ARTICLES

John Child Bryophyte and Lichen workshop 2023

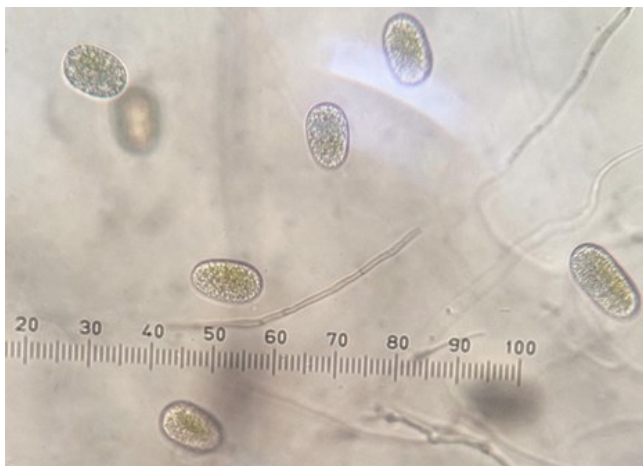
The BSO funded registration fees for four students to attend the 2023 John Child Bryophyte and Lichen workshop. They have compiled a series of reports on the event.

John Child Bryophyte & Lichen Workshop, 2023

Jo Sinclair

Team workshop spent four days of analysing forest banks, tree trunks, river edges and soil in the hunt of lichens and bryophytes in and around Arthur's Pass. The evening's entertainment involved talks from group members and marvelling over our daily findings under the microscope. People from all over the country with various backgrounds freely shared their knowledge and advice. Thank you to everyone that gave me their time and shared their wisdom. A massive thank you to BSO who funded my registration. It really was a delight!

Lately I've been noticing clumps of cyanobacteria between the rhizoids of some bryophytes and have found *Cladonia* sp. using Nostoc as a substrate. The original idea was to observe these interactions further at the workshop while looking at different photobionts in lichen...it did not go to plan. Mostly because I'm an enthusiastic novice that got caught up in shadowing botanists with years of experience, asking many questions that were raised in the field. Equally, I probably missed a lot of obvious signs and opportunities. The excitement was very real when I found a massive patch of 'cyanobacteria'



Microscopic image of the trickster algae (Photo: Jo Sinclair)

and moss growing within it. It quickly became apparent under the microscope that the slimy goodness was in fact green algae. So, rather than diving into nitrogen fixating cyanobacteria and their potential symbiotic relationship with bryophytes and lichen, I thought I would put that article on hold and share a few things I learnt.

Collecting: Before the workshop I would place my findings in one bag labelled with the date and location. It's such an obvious one, but popping individual specimens in their own paper envelop (or zip lock plastic bag for soil and aquatic plants), with the date, location, substrate, and coordinates makes cataloguing them a lot easier. You often collect a few different species in a small sample which is interesting to see what grows with who. I also take a photo before collecting. When people threw out a name for a species, I would type it as a caption on the photo and cross reference it later. A photographic digital library and personal herbarium has become an excellent resource.

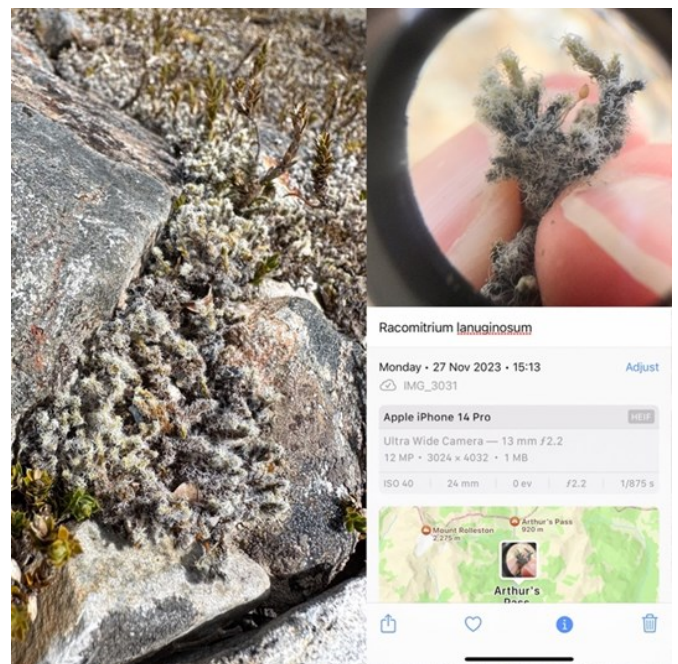
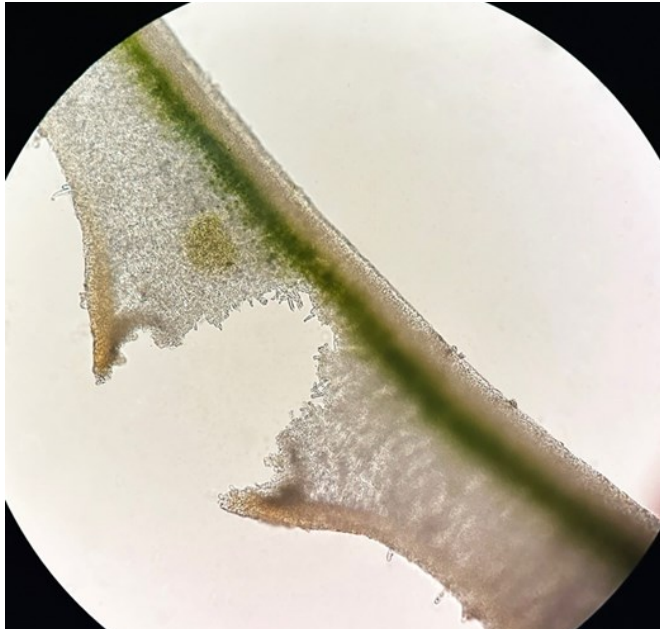


Photo reference of *Racomitrium lanuginosum* on rock substrate (Photo: Jo Sinclair)

Cross sections: Fiddly stuff. Many people have recommended using wet slides to cut finely or to insert the vegetation into wax or a carrot. Another awesome tip has been to use a place holder on top of a leaf and cut fragments along the edge. I made some progress at the workshop by keeping the

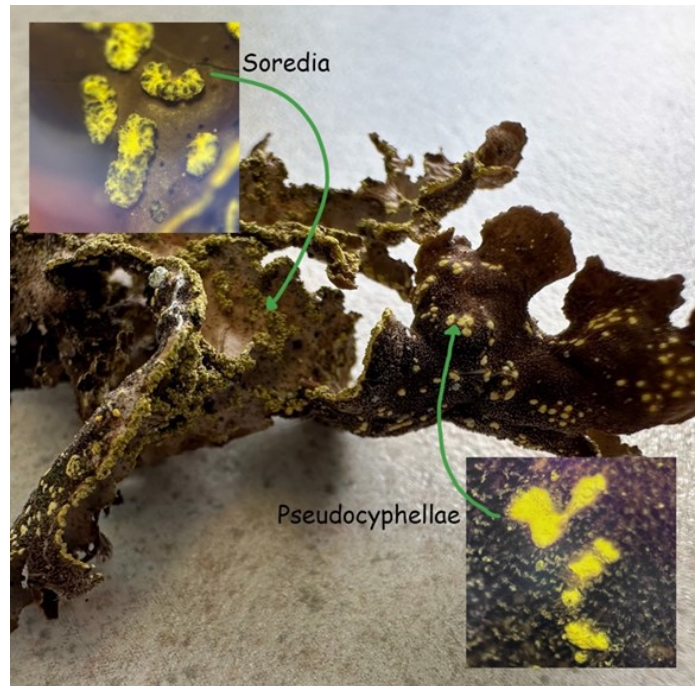
species dry and cutting it directly onto the slide under the dissecting microscope. Trial and error with various methods that people use has been really helpful. There might be loads of fragments on the slide, but one cross section within the massacre could hold the potential answers to identifying the species. Or you at least have some pieces that can be puzzled together. I still have a lot of practice to do though.



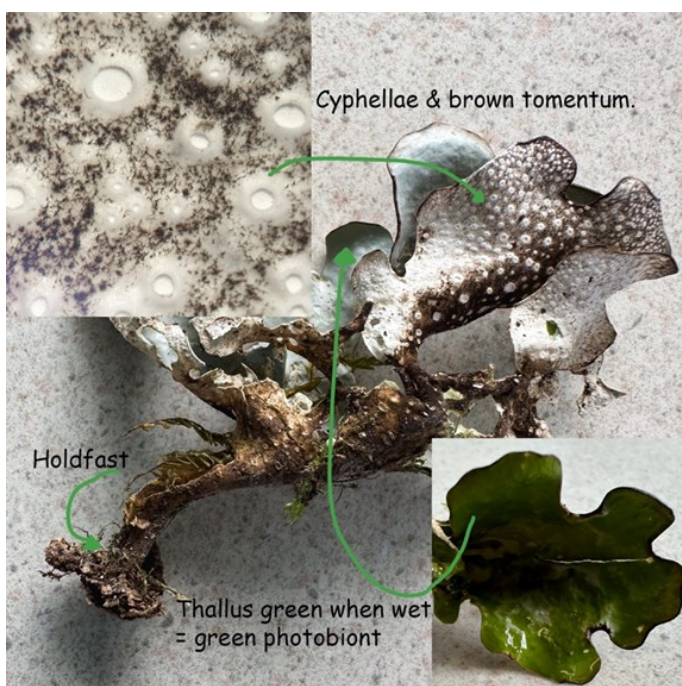
A face within an attempted cross section. *Sticta latifrons*. (Photo: Jo Sinclair)

Lichen: To find the one-time spotted *Pseudocyphellaria halei* was on the mind of many. So, I took the opportunity to ask about the genus morphological traits. Kacey broke them down in the

field and recommended comparing the genus with *Sticta* sp. to get a handle on the different and sometimes similar looking features. The terminology of lichen and their required chemistry feels a tad intimidating. I have been told many different lichen names and tried to get my head around a few. Taking the time to learn the structures of one genus like *Pseudocyphellaria* spp. and comparing it to *Sticta* spp. in the field rather than trying to learn a dozen names at once, is a tip that has been more rewarding for the brain.



Pseudocyphellaria crocata with *pseudocyphellae* (*pseudo* = false in Latin). The difference between *pseudocyphellae* and *cyphellae* in *Sticta* sp. becomes noticeable under a loupe or microscope. (Photo: Jo Sinclair)



A few key features that help identify the lichen as *Sticta latifrons* in the Flora of NZ lichens. (Photo: Jo Sinclair)

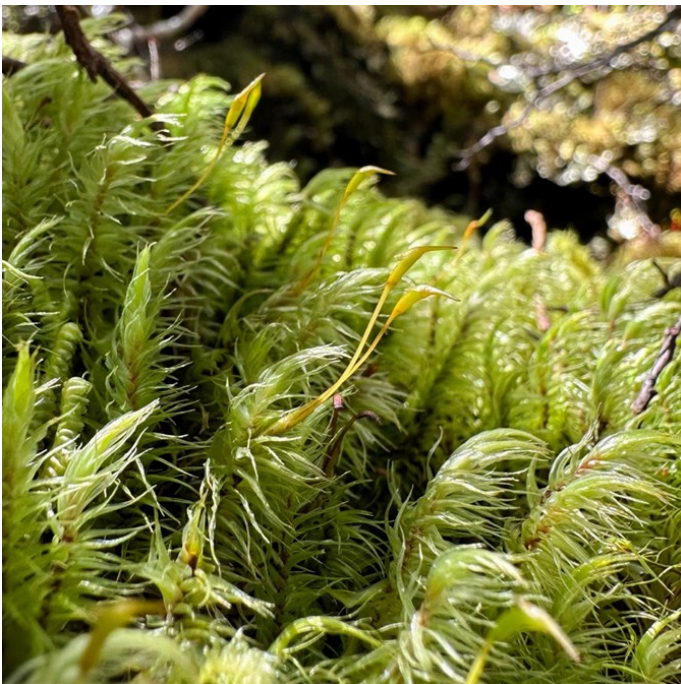
Hornworts: Kevin mentioned that hornworts are often the first to colonise a disturbed damp environment. Perhaps their spores can germinate quicker than most. Or the nitrogen fixing cyanobacteria within their cell cavities allows them to easily take root in disturbed soil. Once you get your eye in, you can easily spot them on a damp bank or near a fallen log close to a riverbed.

Mosses: I feel very fortunate to have spent some time with Maia who helped me with mosses. We analysed the specimens in the field, alongside dry riverbeds and forest banks. Finding aquatic bryophytes was an exciting first for me. We then analysed them at the lab where Maia encouraged me to go forwards and backwards with the key and keep practicing cross sections. Maia's idea of comparing different species within a genus at the



Megaceros sp. hornwort (Photo: Jo Sinclair)

lab and then trying to recognise their features in the field is advice that I intend to follow. The time with Maia was certainly a highlight.



Dicranoloma plurisetum with multiple sporophytes (Photo: Jo Sinclair)

It was a very rewarding few days of looking at the small stuff and spending 6 hours on walking tracks that DOC recommends an hour for. When you are with a group of people that are more focused on looking at the forest through a loupe, observing, cataloguing and appreciating the biodiversity within a log or mossy bank, you know you've found your people. Thanks Team!



Dicranoloma billardierei with red seta (Photo: Jo Sinclair)

The *Blechnum* banks of Paratu Stream

Stella Fish

Searching for bryophyte bliss is an occupation shared by at least 35 people throughout New Zealand. And while standards are high, everyone was utterly delighted by the *Blechnum* banks of Paratu Stream in Arthurs Pass. Where to begin? South-facing, hyper humid and surrounded by native forest, every inch had something to please anyone.

There were three main habitats of interest: the slippery rocks, banks and logs, the fronds of *Blechnum colensoi*, and the twigs and leaves of a *Pseudowintera colorata* hanging above the water. Once steady footing was attained exploration could begin.



Enthusiastic bryologists and lichenologists investigating the wall in question (Photo: Stella Fish)

The riverside rocks and bank were coated in a verdure of *Chiloscyphus*, *Heteroscyphus*, and small-leaved *Lepidozia*, and the dark green thalli of hornworts dotted stone and logs alike. The finely dissected, dendroid *Riccardia eriocaula* coated the decaying log and appeared like a forest in miniature. Multiple people, despite liverworts not being their priority, were taken by this exquisite species.



The dendroid *Riccardia eriocaula* (Photo: Stella Fish)

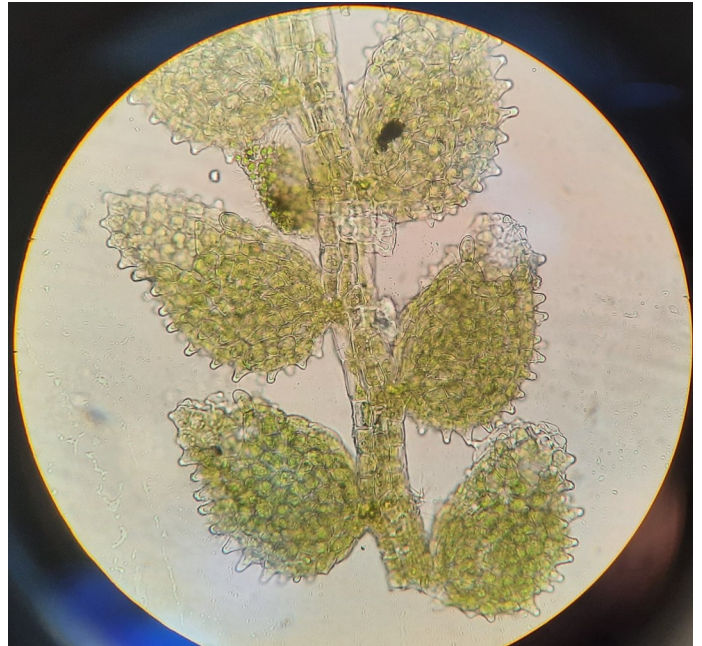
The twigs and leaves of *Pseudowintera colorata* were festooned with bryophytes and lichens. While a common phorophyte for non-vasculars, this plant had gone above and beyond. Possibly the best leaf ever seen came from this plant. It supported both the protonemal moss, *Ephemeropsis trentepohlioides* (Daltoniaceae) and the epiphytic and epiphyllic hornwort, *Dendroceros validus* (Dendrocerotaceae). The leaf was subsequently paraded round the field site and the Cass Field Station for all to admire.



The epiphyll smothered leaf with pale green *Cololejeunea pulchella*, reddish *Ephemeropsis trentepohlioides* and the dark green *Dendroceros validus* (Photo: Stella Fish)

But the *Blechnum* fronds held, in my biased opinion, the best find of the workshop. *Cololejeunea grossepapillosa* (Lejeuneaceae), collected by Cliff Meakin. This minute, native liverwort was only known from two sites, Maggie Creek and Mary Maruia Saddle, so this new locality is very important. There is still

much to learn about this 0.25 mm wide species, so keep an eye out for it in the field!



The papillose *Cololejeunea grossepapillosa* (Photo: Stella Fish)

The *Blechnum* banks of Paratu Stream possess many wonders and it was delightful to indulge in them with such wonderful, likeminded people. My sincere thanks to the Botanical Society of Otago for their grant which enabled me to experience this workshop.

Bealey Chasm

Kacey Hutchison

It was at least 2 hours in and the group had stayed surprisingly close together.... And unsurprisingly close to the start of the track. We were slowly meandering, dragging along (the sides of, and off the) track, climbing on rocks, crawling across logs, falling into the vegetation with faces right up close to these, looking at the lichens, liverworts, and mosses. There was chatter all around about what this and that were, what the key features were in identifications of the non-vasculars, and more.....

This was the official day 1, the very first trip of the long-awaited 2023 John Child Bryophyte and Lichen workshop. Six or so cars of keen botanists of varying levels and experience showed up at the beginning of the Bealey Chasm track, just north of Arthur's Pass Township. All bright-eyed and bushy-tailed, ready to enter the gorgeous teck of the chasm. We started off slowly as everyone gradually



Stereocaulon sp. (Photo: Kacey Hutchison)

started talking more and getting into the swing of things. I wandered, talking the ears off of anyone that would listen to me regarding lichen (of course), and also may have mentioned once or twice that I beat John Steel in chess (sorry John, that was a big moment for me). Lichen-wise there were plenty of exciting things to see. I'm a big fan of *Cladonia* sp. so that was a big one! Lots of *Stereocaulon* which is a groovy one to show various features of lichen morphology from the apothecia (the fruiting bodies) to the cephalodia (that store cyanobacteria in an otherwise algal lichen). And of course, the ever-exciting *Dibaeis* sp., which look like little mushrooms but I promise you, they are lichens! Oh! And there was SO much *Buonodophoron*, which is another exciting lichen that has mazedium instead of apothecia (I promise you, these are very cool!)

A challenge was set for the week from David Glen-ny to find *Pseudocyphellaria halei*, which has once



Buonodophoron sp., showing the mazedium on the underside of the thallus (the lichen body) (Photo: Kacey Hutchison)

been found up the Bealey track and has not been seen since. Unfortunately, it remains a mystery.... perhaps 2024 will be the year to find *Pseudocyphellaria halei*.

Eventually, the group drifted apart from one another and branched into various mini-groups, that mostly spoke about the bryophytes and lichens, although I did overhear some vascular plant talk (blasphemous.....). We traversed down stairs, up the slopes, off the track, over bridges, and heard rumours of a river which was a nice place to have lunch (can confirm, this was a very nice spot). The track was largely covered in the beginning, but eventually we escaped the forest out into a clearing much higher up. There were some gorgeous views, some groovy bryophytes, and some nice patches of *Cladia* and *Cladonia*! There were also a few patches of ants and I definitely did not get scared, that would be wild.....

Past this, there were some footbridges to make it across, some very neat lichens (I do think every lichen is very neat though, to be fair), and somewhere further along was the river. Truly a nice spot to stop, and maybe for a cheeky photoshoot, if that's what you're into. Walking back, we heard rumours of a bit of a gnarly detour that led us to a bog (I can't wait to be a bog body one day). There was a group above us wandering and botanising up there, and potentially sinking a little bit too, but you can never go wrong with some botanics around a bog. You can, however, go wrong with the sun in a clearing if you haven't reapplied sunscreen since the morning. I disappeared to the side and found some awesome *Cladonia* sp. With the biggest pixie cups I have ever seen and fell in love very quickly. I did not have to run away almost immediately after spotting it because I also found some big ants that had me squealing. I am not afraid of ants.

Eventually after a long and exciting trip, we made our way back to the vehicles, said goodbye to the lovely Bealey Chasm Track and stopped by at the Arthur's Pass Township for a cold drink and suddenly had all these botanists turned into bird people as we had a friendly little Kākā come and hang around with us (if I am wrong about the bird, just know that the bird was a cool wee dude and I am a lichen person with poor bird skills, alas).

It was a groovy day and a pretty rad way to start off



The biggest pixie cup I think I've seen on *Cladonia* sp.!!! Fingernail for scale! (Photo: Kacey Hutchison)

the 2023 John Child Bryophyte and Lichen workshop. A big thank you to the Botanical Society for making it possible for a few of us to go, and hope to see you there for the 2024 Bryophyte and lichen workshop!

Inspiring speeches and celebrations: Tom Moss Award speeches illuminate the workshop.

Esté Smal

The John Child Bryophyte and Lichen Workshop of 2023 featured interesting speeches at the Tom Moss Award ceremony. This annual event, honouring contributions to Bryophyte and Lichen studies, became a showcase of diverse insights and research.

Stella Fish, renowned for her knowledge of Lejeuneaceae species, enraptured the audience with a captivating presentation on her first booklet. Her speech unveiled the intricacies of these species, shedding light on their unique characters and ecological significance. Fish's expertise and dedication to exploring the depths of bryophytes left an indelible impression, setting a high standard for the evening's discussions.

Kacey Hutchison took the spotlight with an engaging presentation titled Lichen 101. Hutchison's

articulate elucidation of the basics of lichenology resonated with both seasoned researchers and newcomers to the field. Her ability to simplify complex concepts while maintaining scholarly depth made her speech a standout moment of the evening and was quite helpful in the field.

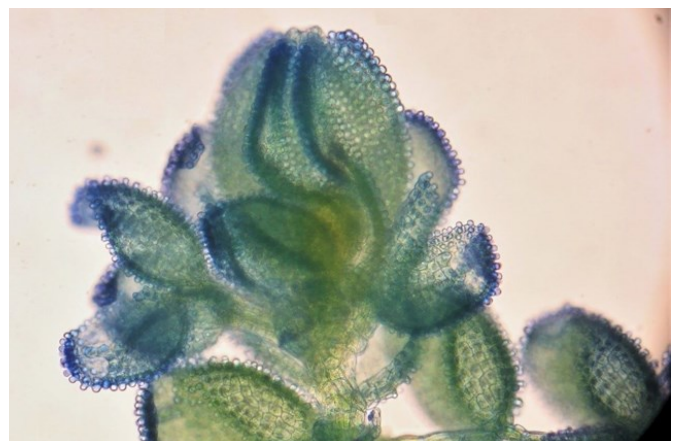


Inspiring lichenologist Kacey Hutchison

Tania Ng, with her pioneering research on water isotopes in plants, particularly mosses, presented her doctoral project. Ng's eloquent discussion on the implications of her findings showcased the intersection between ecology and hydrology. Her insights into the relationship between water isotopes and moss physiology opened new avenues for



Microscopic photo of Siphonolejeunea papillo taken by Stella Fish, featuring in her new booklet "Love letter to the Lejeuneaceae"

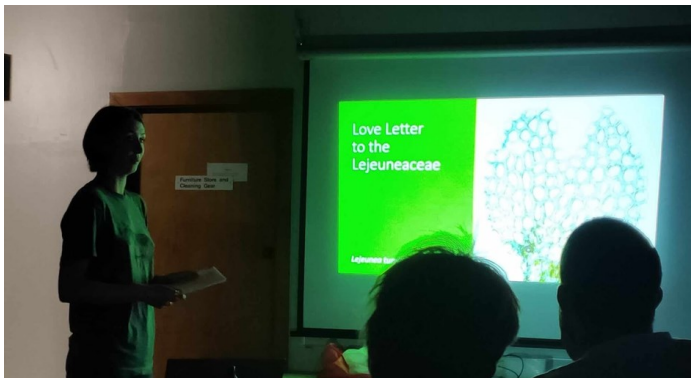


Another photo of S. hispida by Stella Fish, also featured in her new booklet.

understanding plant adaptation in various ecosystems. **Tin Range Treats**

Ryan deRegnier's speech on splachnum moss, *Tayloria callophylla*, and its intriguing growth on dung added a unique dimension to the evening. His exploration of this lesser-known aspect of Bryophytes not only sparked curiosity but also highlighted the importance of studying diverse habitats and their ecological interactions.

The pinnacle of the evening arrived as the Tom Moss Award was announced. Among the stellar presentations, Stella Fish emerged as the recipient of the esteemed honour and a prize of \$500. Her astonishing work and exceptional presentation rightfully earned her this recognition, reinforcing her status as a luminary in Bryophyte research.



Award winner, Stella Fish, showcasing her phenomenal new booklet.

The atmosphere was charged with intellectual enthusiasm as discussions extended beyond the formalities of the stage. Attendees engaged in spirited conversations, exchanging ideas, and contemplating the impact of the speeches on the field of Bryophyte and Lichen studies. In retrospect, the speeches delivered not only showcased the breadth and depth of research in this specialised field but also underscored the importance of sharing knowledge and fostering scientific discourse.

The Tom Moss Award speeches at this year's John Child Bryophyte and Lichen Workshop were a real treat, standing out as highlights of the event. Their quality and depth added immense value, leaving a lasting impression on attendees, and contributing significantly to the workshop's success. These speeches have set a high bar, raising expectations for the calibre of presentations at next year's event, inspiring anticipation for further insights and scholarly contributions.

Craig Stonyer

Kia Ora from Rakiura.

It's my pleasure to write to you from the deep South, my name is Craig Stonyer, I'm a photographer and live and work on Rakiura. One of my jobs allows me to get out and about in our beautiful backcountry on a regular basis, which in turn grants me access to some of our most stunning Flora and Fauna.

In the last year especially, I have carried my camera and lenses from sea to summit, walking hundreds of kilometres through dunes, swamps, ancient forest, tidal flats and over our highest mountain ranges.

My pack always seems to be the heaviest of the bunch with the extra gear I carry, but if you love something you put the extra effort in, and get the extra rewards.

Where I struggle the most is editing my photos from hundreds (lets be honest, thousands) down to a handful for an article like this.

After purchasing the excellent recently released identification guide on *Celmisia*, I was itching to get up the tops to photograph as many different ones as I could find while they were in flower. The photos I have selected are mostly between Table Hill and Mount Allen along the Tin Range, with the exception of *Ranunculus lyalii* taken up Mt Anglem. The timing was just right when I was up Hananui and I came



Ranunculus lyalii (Photo: Craig Stonyer)



Celmisia ? (Photo: Craig Stonyer)

across many plants sheltering around rock and boulder clusters sheltering from the elements.

My last two trips to Table Hill late last year and early this year were good timing as on an earlier trip late November I could see many species were preparing to flower but not there yet.

For those of you who have done any tramping on Rakiura you'll know what I mean when I say mud and boggy, swampy and slippery. This is how one starts the track from Rakeahua Hut after a 40 min water taxi ride from Golden Bay. From the hut it's 30 minutes to the Tin Range access track and another 10-15 minutes till you get into the forest. 45 minutes of sidestepping, jumping, dodging, slogging and precariously crossing bogs that threaten to swallow you up if you put a foot wrong (I've checked with my hill stick which nearly disappeared at 7 foot in some places, also ideal for pole vaulting certain areas).

The bonus to this type of marshy terrain is of course the myriad of plants it supports, From Sundews to Orchids, (pictured) reeds and mosses.

Once through the bog slog it's into the forest proper and one of my favourite parts, tall canopy with a lush undergrowth of fern Sp. *Blechnum*, *Asplenium* and Wheki-ponga, to name a few, it's especially pretty when there is low cloud that shrouds the forest in an eerie mist. After a couple of hours and being blessed to see kiwi or deer on most trips, the canopy begins to lower and the forest changes to a denser tangle, something you would not want to be



Caladenia catenata (Photo: Craig Stonyer)

lost in.

After many small breaks on the steep grunty bits as I follow the ridgeline up, the bush opens out into small creeks, tussock and flax flats, the *Celmisia* appear more readily, with more orchids and sundews (*Drosera spathulata*, *D. stenopetala* and *D. arcturi* pictured [below, next page, cover]) dotted along the track.



Drosera spathulata (Photo: Craig Stonyer)

After 3-4 hrs from Rakeahua hut, and some rugged track later you come out on top of the world (almost) in the sub alpine meadows at the start of the Tin Range, with Table Hill in your sights.

From now on it's serious botanising and many extra



Drosera stenopetala (Photo: Craig Stonyer)

kilometres can be added this way by the amount of zig zagging that gets done. *Bulbinella gibbsii*, bright yellow in singles or large clumps light up the dull reddish brown of what looks like an American prairie, except it's like walking over a wet sponge. My new favourite (because it was my first time seeing them in flower) the Yellow Snow Groundsel (*Senecio lyalii*) of which I only saw one (as Pictured) and the Snow Groundsel (*Senecio scorzonerooides*). Once I untied my tongue from trying to pronounce that, the views take your breath away. Provided you can actually see anything.



Senecio lyalii (Photo: Craig Stonyer)

Of the 5 or 6 trips I've done to Table Hill, of around a week each, I was lucky to get 5 or 6 days of real nice weather. The rest was claggy, rainy, snowy, haily and of course windy, causing all the aforementioned adjectives to arrive in a horizontal fashion making for some uncomfortable and hazardous photography adventures. Any photography in 80 knots is difficult and with any other ingredients it's just time to put the camera away and focus instead on getting to shelter and warmth. When the weather does play the game, you make the most of it, and in the summer months, walking for 10-12 hours is not uncommon for me exploring the tops.

After leaving the bush behind Table Hill is another



Bulbinella gibbsii (Photo: Craig Stonyer)



Senecio scorzonerooides (Photo: Craig Stonyer)

40 minutes away. After crossing the prairie like vista and climbing a preliminary hill for 30 minutes the granite dome of Table Hill looms close. Up on top rocks and hardy windblown plants cling to life in the harshest of climates, being continually beaten and shaped by the elements, bark stripped form stems of ground hugging bushes, lichen and vegetable sheep growing amongst the smooth surfaces clinging to cracks for sustenance.

From Table Hill (716m) 360 degree views on a good day encompass Mt Allen (750m), Doughboy Bay, Solander Island, Whenua Hou, the Ruggedy Ranges, over Freshwater Flats to Mt Anglem (Hananui, 980m), Mt Rakeahua, (680m), South West Arm, across to Bluff Hill and down to Toitoti Flats.



View towards Mt Allen at far end (Photo: Craig Stonyer)

From Table Hill, Mt Allen is around 4-5 hours away and my goal for the day, with some decent saddles to weave down and climb out of. The next summit is Blaikies Hill at 703m, all the tops at this altitude have some awesome granite formations and rocks covered in all sorts of lichen and plant life tucked in the nooks and crannies, with small tarns dotted along the way. These landscape features make for great foregrounds in photos.



Looking back to Table Hill (Photo: Craig Stonyer)

After Blaikies it's into another saddle with a pretty scrubby climb out of it, but once this is surpassed I'm back above 700m again and from here Mt Allen

is creeping up, thankfully its mostly flat going passing a couple more peaks around the 730m mark. After a late lunch break at one, it's the final push.

The views are getting more spectacular by the minute, looking down into the Doughboy Bay basin off a very steep drop, massive granite knobs appear, and by the time I set foot on Mt Allen, Pegasus comes into view, Gog and Maygog, Bald Cone and Smiths lookout. I spend some time foraging around for any as yet unphotographed flora and take time to savour the views. At this stage it's been a warm 20 knots westerly all day with a cold front supposed to come in in the early hours. So, with reluctance I turn back the way I have come and repeat the track in reverse. To get stuck out in the open in a cold southerly would not be fun I think, as already the clouds are changing and I'm keeping a careful eye on them.



View down to Doughboy Bay (Photo: Craig Stonyer)

By the time I get back to Table Hill around 9pm I'm pretty buggered, but it's gone completely still and quiet, the sun is in its final stages of heat production and lighting up the clouds in a beautiful warm hue. After some oohing and aarrhing and more photos I was done for the day and wandered back to camp smiling and tired. What a treat it had been.

Walking the Tin Range (or the part I have done at least) has been a real pleasure. I'm often up there alone and moving at my own pace (the photographer pace; stop start, stop start). It's a real chance to immerse yourself in some incredible landscape, revelling in its ancient form, wondering how it all came to be. The hardiness of these plants that continue to flourish year after year while being pummelled with everything nature can throw at them is nothing short of amazing.

Camera Gear – Nikon D750
Nikon F100, Film camera

Tamron 150- 600mm, Birding lens

Tamron 105mm, macro

Nikon 28mm, wide angle

Thanks for your time. Craig

If anyone wants to get hold of me I'd be happy to show them around local areas on Rakiura and offer tutoring on photography. Always keen to catch up with fellow enthusiasts in any case. Contact photo-creative62@gmail.com 0277465465.

Democratising Mycological Knowledge: The Facebook Fungiscape

Jacqui Neil — written for an assignment in BTNY365

It was a dull Autumn day during the great Porcini flush of 2022, when I logged on to the Mushroom Hunting New Zealand (MHNZ) Facebook page to scroll through people's foraging finds, something that I often do when my fungal forays fail to become a forage. I stop my scrolling when I see that someone has posted pictures of two ice cream containers full of *Clitocybe nebularis* – wondering why someone would collect such a large volume of an inedible, slightly toxic fungus for non-scientific purposes, I stop to read:

"Hi everyone. Yesterday I picked these mushrooms and ate them for dinner and breakfast. They were very yummy but now I can't stop vomiting and I have diarrhoea. I don't feel good. Do I need to go to hospital?"



Figure 1: *Boletus edulis*, Porcini, foraged in Dunedin. (Photo: Jacqui Neil)

The post had already garnered plenty of attention from the group's experts, administrators, and amateurs alike; responses ranged from helpful advice to impassioned ridiculing of the person, and everything in between. As a fungiphile, student botanist, and concerned member of MHNZ this highlighted for me the importance of mycological knowledge accessibility and awareness and motivated me to develop my knowledge for the purpose of helping others.

The example shared above is just one end of the spectrum – too frequently I see misinformation being touted by beginners, such as the mycophobic myth of toxic fungi being unsafe to even touch. The broader issue at hand is that despite the crucial role that fungi play in the lives of humans, most people have a disheartening lack of mycological knowledge – likely because the majority of the global population reside in urban areas lacking opportunity to see much of the fascinating world of fungi (Chozas *et al.* 2023). Despite this, recent years have seen a growing global interest in urban foraging, including for mushrooms and other edible fungi (Clouse 2022).

Social media is a powerful tool for sharing mycological knowledge with the masses. Although I prefer to post my fungal finds on iNaturalist; I am active across multiple fungi related Facebook groups, helping where I can with identification and advice.

There are currently over 50,000 members of MHNZ alone, with only 12 moderators/administrators to ensure that group rules are being followed and the correct knowledge is being spread. Between the 12 of them, and with the aid of some more knowledgeable members dubbed 'group experts', they are making fungi a much more accessible topic which is extremely beneficial to the field of mycology.

Botany and especially mycology are subjects too valuable to be as obscure as they are. The democratisation of fungal knowledge is important because it can lead to a better understanding of the role that fungi play in our ecosystems, as well as their potential uses in medicine, agriculture, and industry. By making mycological knowledge more accessible, a wider range of people may engage with the study and conservation of fungi and inspire a new generation of botanists and mycologists to improve our understanding of the fungi kingdom (Barron 2017). Interest in fungi is currently the greatest it has ever been, and it is the duty and privilege of mycologists

and fungiphiles to nurture this interest. I am in no way suggesting that we start sharing our beloved foraging spots, but I am asking that we be more forthcoming with our knowledge, and more accepting of those who are new to the field.

I am also not reducing fungi to just a food – mycology encompasses a wide range of topics including ecology, biotechnology, and medicine. However, foraging and the culinary use of fungi has historically been a significant factor in many people's interest and appreciation of the topic (Valverde *et al.* 2015). Food is a universal language that unites people from different backgrounds and cultures, and there is a rich and diverse culinary history associated with fungi all over the world. Mushrooms and other edible fungi are staples in the diets of many people (especially as plant-based diets grow in popularity); as well as having a long history in various indigenous cultures for both culinary and medicinal uses. As well as being an incredibly diverse (therefore exciting to look for and cook with) food group, fungi are an excellent source of nutrition and are relatively easy to find in a wide variety of places – footpaths, parks, and urban forest remnants to name a few. The current cost of living crisis provides huge motivation for people to be foraging or cultivating their own food, and as a poor student I am extremely thankful that I can go for a relaxing walk and also find my next meal – my favourite local finds are shown in photos here. Foraging, so long as proper identification is obtained prior to consumption, can only have a positive impact on both the broader population and the field of mycology. Even in the worst-case scenario, when people simply spend more time outdoors, the benefits of engaging with nature and learning about the importance of fungi in

our ecosystems cannot be overstated.

Let's all take to social media to share our knowledge, whatever it may be, whether it's on iNaturalist, Instagram, or Facebook; in a Fungi group like MHNZ, the Dunedin Locavores group, or maybe one of the many other Botany-adjacent groups making the field more accessible. If you choose to share your knowledge and experiences, you are directly encouraging people to engage with the field. The more the merrier when it comes to matters as important as Botany.



Figure 2: *Flammulina velutipes*, wild Enoki, growing next to a walking track in Dunedin. (Photo: Jacqui Neil)

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Figure 2: *Cyclocybe parasitica*, Tawaka, foraged in a Dunedin park. (Photo: Jacqui Neil)

REPORTS

Field trip to Burns Reserve, 14th October

Kacey Hutchison

On the morning of October 14th 2023, a solid group of botanical enthusiasts set out to Burns Park Reserve, accompanied by lichen-guy Marley Ford as a part of the lichen month adventures of the botanical society.

We made our way to the start of the gravel road and after a brief chat, were almost immediately separated. The chitter-chatter about botanical things (and I like to think it was plenty on lichens) was in the air. I got distracted by a log that had *Cladonia* sp. growing from it and looking very cute. Luckily for all of us tailing a bit behind, the group waited at the top of the gravel road before we all meandered together over a fence and into the forest.

In the early moments, there were plenty of questions about what this and that were and 'is this a lichen or a fungus?', particularly when looking at little orange dots on the trees that look like they could be a fungus, maybe? But looking around the branch, look like they could be the apothecia of one filamentous lichen, *Coenogonium implexum*, the only lichen on the species list for Burns Park Reserve.

Slowly, one by one (two-by-two?) the group once again drifted apart as they found various things.

Much of the reserve felt like we were off the beaten path, crawling up and down the slopes and clambering around the trees, looking further down than one might normally. There were plenty of lichens to be spotted, after all. The dots (pseudocyphellae) of *Pseudocyphellaria* sp. were discussed, particularly in contrast to the cyphellae of *Sticta* sp., just as the differences in rhizines on *Parmotrema* sp. and *Hypotrachyna* sp.



Hypotrachyna sp. (Photo: Cody Piper)

Eventually we got closer and closer to being a group again, meeting at a high point with trees to shield us from the sun (and keep us occupied with the non-vascular plants), places for the group of us to sit (or stand), Finn to take menacing photos of



The lunchtime view (Photo: Finn Dobbie)



The orchid (I hope) (Photo: Finn Dobbie)

fungi, and everyone to pause for lunch and exchange stories. There was a bit of a buzz from finding an orchid at some point along the track (I got a bit of FOMO from missing it), as well as chatter about cool lichens people had seen and ‘do you know what it could be?’ - it was also a good chance to pick the brain of our lichenology guest, Marley, on what groovy things he’d found and how he’d recognised it.

After absorbing the views, consuming some lunch, and having some botanical-related (and not-so botanically related) banter, it was time to meander back around. We continued to look at some groovy things, I tried to spy the orchid and not walk into another tree, and in the end we all successfully made it down with good vibes and few falls.

Thanks to everyone that came along on another rad lichen trip.



Mystery furry knob growing on a tree fern (Photo: Lydia Turley)

Way to Enlichenment, a talk by Marley Ford, 11th October

Stella Fish

There is nary an environment where some surface, be it rock, bark, glass, or even rubber tyres, is devoid of lichens. These diverse and widespread organisms were the topic of the 11th of October talk by Marley Ford, a lichenologist, mycologist, and appreciator of life from the far north. Not only did he give context for why New Zealand is such a global hotspot for lichen diversity, but he also touched upon other topics such as gumlands, conservation, biogeography, urban lichens, and some of his personal projects.



Squamulose Pannaria immixta left and foliose Pannaria aotearoana right (Photo: Marley Ford)

New Zealand boasts an impressive lichen flora; 10% of the entire world's species are found here and of that, 23% are found nowhere else. Even though our lichens are thick on the ground—and in other places—the work is nowhere close to being



Close-up of the rare squamulose lichen, Knightiella splachnirima (Photo: Marley Ford)



North Island species *Anzia entingiana* growing on bark
(Photo: Marley Ford)

done. There are numerous undescribed entities and 55% of the described taxa are data deficient. This is partly due to the lack of lichenologists in the country, with Marley remarking you could count them on both your hands. Such a rich research area leaves many opportunities for discoveries, whether range extensions, new species, or autecology.

With a recent book chapter on the urban lichens of Cornwall Park, Marley provided insights into these rapid colonisers. Each city, he said, has its own distinctive flora—which leads us to wonder what the flora of our town, or even neighbourhood might look like. Lichens as mentioned earlier are capable of growing on nearly every substrate with cities providing habitats like glass, plastic, rock walls, planted trees and footpaths. The book chapter was his lockdown project and he ended up with 101 lichen species, but he provided a caveat, he spent a lot of time looking. He is also writing a book with Dr. Allison Knight on urban lichens covering approximately 133 species, so keep your eyes out!

After concluding his talk, he was met with several enthusiastic questions. The audience's favourite was, "How to become a lichenologist?" In response, Marley mentioned the John Child Bryophyte and Lichen Workshop in November which he will be attending and encouraged enthusiasts to come along. Otherwise, it is about learning the names, using iNaturalist, and utilising Allison's guidebook. Thank you, Marley, for joining us and paving the path to enlichenment.

Modelling fungal population genetics, a talk by Lydia Turley, 8th November

Gretchen Brownstein

Lydia spoke to the BSO via zoom about what she's learned so far with her PhD thesis on modelling population genetics in fungi. Lydia started her talk to two universal truths. Firstly, when planning a talk about one's thesis for some far point in the future, one always thinks the data will be ready and will tell a clear story. And secondly, fungi are weird!

Fungi are weird and amazing and incredibly important for plants. 80% of plant species have mycorrhizal associations with fungi, which help the plant access water and nutrients. Understanding the fungi helps to understand the ecology of plants, which is why Lydia chose to study them.

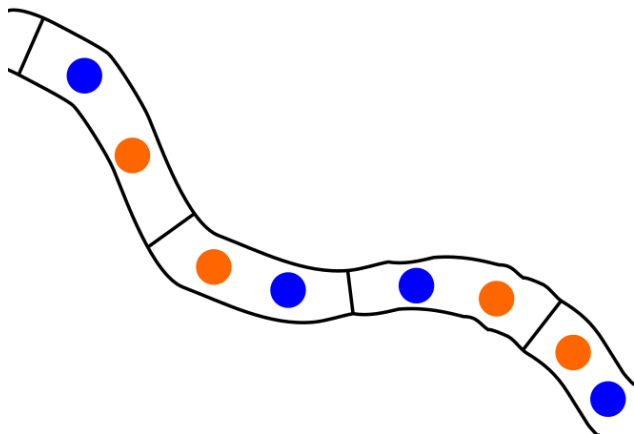
Lydia went on to give a little background to problem of fungi population modelling. Mycorrhizal fungi are in two groups: ectomycorrhiza and endomycorrhiza. The ectomycorrhiza are mostly basidiomycetes types, which are the mushroom-forming ones (fruiting bodies) we see in the forest. Hidden underground is the mycelium (the "stems" or "twigs" of the fungus if you like). Observing the individuals is very difficult as mushrooms are seasonal and not every mycelium produces one (and scientists are not even sure of the exact relationship between mushroom and mycelium). But it's still easier to study fungi based off the mushrooms than the mycelium as the mycelium are microscopic, nearly impossible to identify from phenotype and very dynamic. Studies to date have been based on mushroom observations and eDNA work. A little is known about ecology of various species but within species even less is known about population size, what the turnover is



Examples of basidiomycetes, the mushroom-forming ectomycorrhizal fungi (photos from Lydia's talk)

(recruitment and deaths), or what the matting patterns are.

In studying the population genetics of fungi, Lydia is seeking to understand the distribution and frequencies of different alleles within populations, and how the populations are evolving and interacting with other populations. She is applying the standard Wright-Fisher model. Except that with fungi many of the model assumptions may not be met. Lydia doesn't have good information about individuals, can't assume random mating, and because it turns out fungi have a persistent dikaryon state. Oofff!



The fungal dikaryon has two distinct nuclei in each cell, one from each parent (image: Lydia Turley)

Lydia is giving it a go though! She is using *Amanita muscaria* (fly agaric) as a model species. *A. muscaria* is a non-native basidiomycete which is mycorrhizal on pine. Currently it is invading native beech forests; there are records from Nelson Lakes and Manapouri. There are some interesting and fundamental questions Lydia is hoping to answer in her thesis. Is there a single strain which has made the shift to live on beech? Are the populations in native beech genetically distinct to those in pine plantations? Is it spreading and what interactions does it have with native fungi?

Lydia doesn't have to go far to study *A. muscaria*



Amanita muscaria—fly agaric (photo: Lydia Turley)

populations in their "normal" habitat as it's found in pine forests around Dunedin. Very handy! And there are a good number of collections and observations, along with some genetic data for the species from Aotearoa NZ. At this stage Lydia's preliminary population modelling data from the pine forests (the beech forests work is still to come) has suggested that dikaryon vs diploid states don't matter and dimon mating is probably not important for *A. muscaria*. In Lydia's very understated words: "There are some places where my fungal model leads to different conclusions than the standard model".

I found Lydia's talk fascinating and I think she proved that when working on a thesis there is always another interesting pile of data to poke, and fungi are wonderfully weird beasts. I'm looking forward to hearing about the Lydia's next chapter.

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Field trip to Tautuku, 11th November

Gretchen Brownstein

A small but keen group of five botanists met on a very sunny Saturday at the entrance to Forest and Bird Lenz Reserve, Catlins. After consulting with our guides and the map we made the plan: amble up the true left of the Fleming River for a couple kilometers and back along the true right. This route guaranteed bogs, fens, regenerating kamahi bush, old growth podocarps, and waist deep mud if we mis-stepped.

We set off through the open wet grassland / shrubland, past the historic logging tractor engine. Due to the proximity to the road and the high density of deer and pigs this area had a relatively high cover and number of exotic species. But there were *Coprosma propinqua* and *C. rigida* present, along with *Rubus schmidelioides* and *Clematis paniculata* and on the ground we found *Viola filicaulis*.

After successfully crossing over the Fleming River without getting wet feet (on a natural tree bridge), we entered regenerating lowland forest. Here the

canopy had kamahi (*Pterophylla racemosa*) with kotukutuku (*Fuchsia excorticata*) and wheki-ponga (*Dicksonia fibrosa*) in the understory. Many of the species were just coming into flower, including horopito (*Pseudowintera colorata*) which we found had a lovely peppery flavor (and I thought would make a nice addition to a salad).

We then took a small detour into Lenz Bog itself. This raised *Empodisma minus* bog is in good condition and a real treat to explore. While eating first lunch, we debated what appeared to be a mix of pygmy pine (*Lepidothamnus laxifolius*), yellow-silver pine (*Lepidothamnus intermedius*), and the hybrid! We also spotted the orchids *Aporostylis bifolia* and *Thelymitra cyanea* putting up their leaves.

After first lunch we headed back to the river track, which we followed for another kilometer or so past a couple examples of biggish miro (*Prumnopitys ferruginea*) and matai (*Prumnopitys taxifolia*). The understory contained an interesting mix of small leaved shrubs including *Melicope simplex*, *Raukaua anomalous*, and *Copromsa rubra* (and other coprosma species!). The rare mistletoe *Tupeia antarctica* was located and photographed, along with other



Admiring the epiphytes (Photo: Gretchen Brownstein)

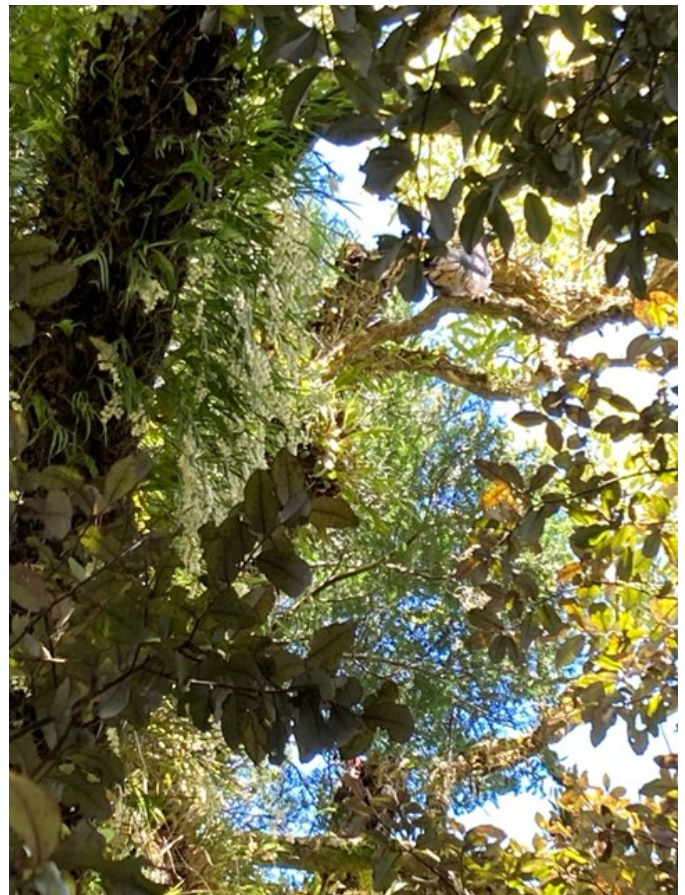


Crossing the Fleming River on Piggy Bridge (Photo: Gretchen Brownstein)

photogenic epiphytes (easter orchids and filmy ferns). And on the ground, we found both a *Pterostylis* and *Chiloglottis cornuta* flowering.

As we wandered along the river, we took the chance to explore nearly every side path through the dense shrubs into the sedge/shrub dominated fen. Risking wet feet, we found *Carex virgata*, *Olearia laxiflora* and *Juncus edgariae*. And in the small openings around the shrubs was a wet turf of *Montia fontana*, *Epilobium insulare* and *Lobelia angulata*.

Second lunch was eaten sitting on a log by the river with a couple of friendly kereru for company. And shortly after we spotted Piggy Bridge, our river crossing and turn around point. The return along the true right of the river was through a mix of manuka, *Coprosma* shrubland and broadleaf podocarp forest. A highlight was finding *Coprosma pedicellata*, at potentially just its third known site in the Catlins. Along the way back we explored more wet turf clearings within the shrubland. Just as we were starting to feel it was time for an afternoon tea, the trail popped out of the bush at the car park. So we headed to the forest and bird cottage for a cuppa.



Proof of a sunny day in the Catlins (Photo: Gretchen Brownstein)



The walk proved to be interesting with a rich flora reflecting the diversity of habitats. The work of F&B in undertaking pest animal control including deer and pig control is a daunting challenge in this area. Hopefully the results of these efforts will help the area to recover.

Caption competition!

Can you come up with an excellent caption for this photo (left), taken by Gretchen Brownstein on the Tautuku trip? Send your suggestions to the editor and the winner will be published in the next *Newsletter*.

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Please submit copy for next newsletter to Lydia Turley by 10th June 2024

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Celmisia (Photo: Craig Stonyer)



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☐ **Cash:** Lodge the correct amount with a completed form at a BSO meeting

☐ **Internet Banking:** Account No: 03 0905 0029158 00 (Westpac)

Code: 2024 sub

Reference: *your name*

If a new subscription or details have changed from last year, please send a completed form to the Treasurer at the address below or to bsso@otago.ac.nz

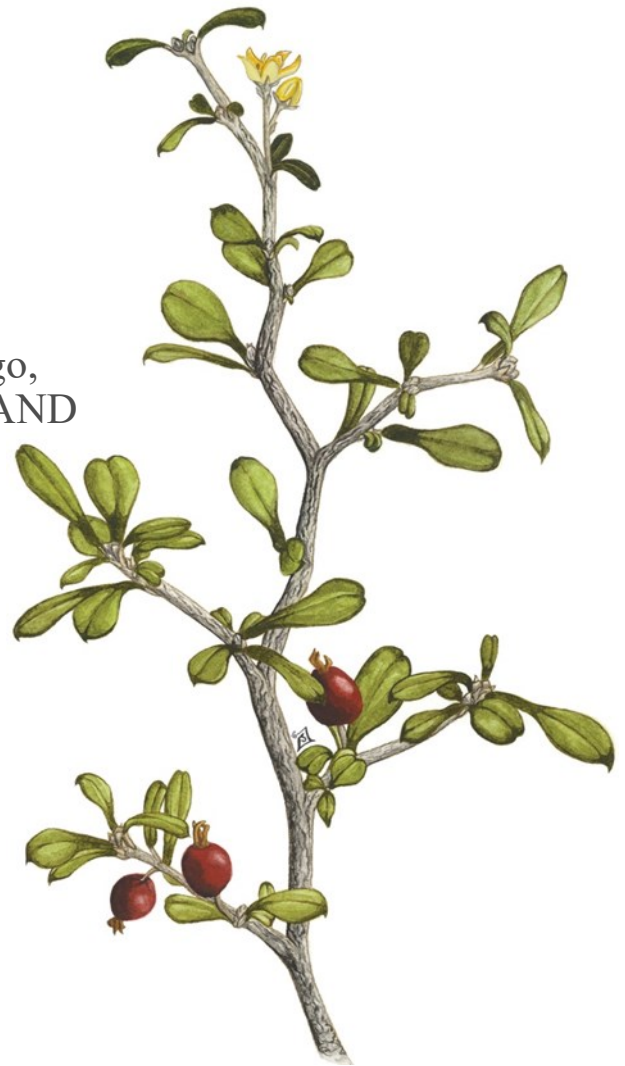
BSO Treasurer,
% Department of Botany
University of Otago
P O Box 56
Dunedin 9054
New Zealand

BOTANY DEPARTMENT
UNIVERSITY OF OTAGO



Botanical Society of Otago,
c/o Department of Botany, University of Otago,
PO Box 56, North Dunedin 9059, NEW ZEALAND

Right: Corokia cotoneaster branch (Artist: Sharon Jones)



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