



TRILEPIDEA

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Deadline for next issue:
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SUBMIT AN ARTICLE TO THE NEWSLETTER

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

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

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

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NEW ZEALAND

Discovery of a third mainland population of *Abrodictyum caudatum*

✍ Marley Ford, Private Consultant (mfecobotany@gmail.com) and Joseph Knight (joseph-knightnz@gmail.com)

A third population of the Threatened-Nationally Critical fern *Abrodictyum caudatum* (Brack.) Ebihara & K. Iwats has been discovered near Mangawhai in Northland (de Lange et al., 2024) (Figure 1). Recently, a small new population of this species was found in Auckland (Ford, 2023) and with this latest find, together with the original population in Kerikeri, this brings the total mainland populations to three. Within the New Zealand region this species also occurs on the Kermadec Islands (Figure 2).



Figure 1. Typical plant of *Abrodictyum caudatum* epiphytic on wheki. © Joseph Knight.

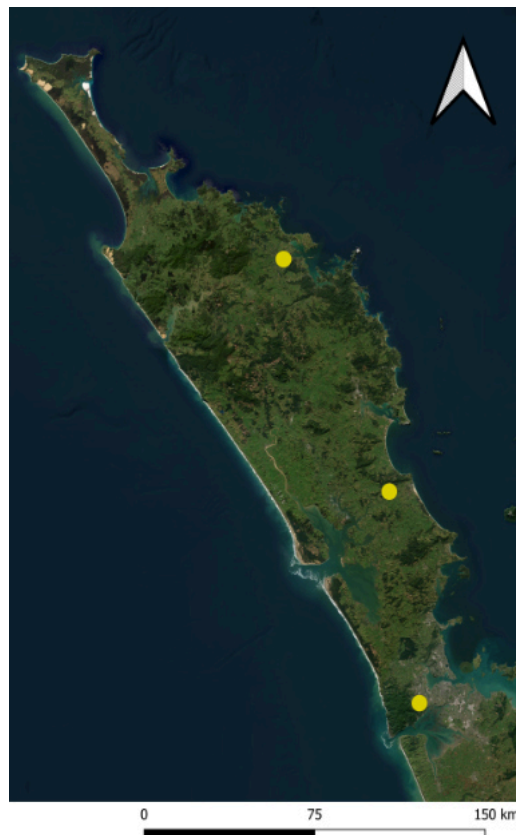


Figure 2. Map of the currently known mainland populations of *Abrodictyum caudatum* in New Zealand. Marley Ford.

This small fern was discovered by the second author while track cutting on the foothills of the southern Brynderwyn range near Mangawhai in Northland. This population was originally identified by Barbara Parris, who first found the Kerikeri population and the first mainland site (<https://inaturalist.nz/observations/250613858>). It was then realised that this plant was found previously (<https://inaturalist.nz/observations/241421605>). It can be distinguished from other similar filmy ferns by the campanulate rather than tubular indusia, that are flared at the mouth (Figure 3).

Following the latest discovery, a survey was undertaken to delineate the new population. We found the fern on eight

riparian trees over a 400 metre area. All phorophytes were wheki (*Dicksonia squarrosa*), except for one small plant found on ponga (*Alsophila tricolor*), a second host for this species on the New Zealand mainland (Figure 4). The trees were clustered in four populations, even though wheki were distributed along the stream. These were all two to three metres from the stream. The stream canopy was kānuka (*Kunzea robusta*) suggesting past disturbance, most likely from logging, and the understorey comprised of scattered wheki with ponga on higher slopes. *Abrodictyum caudatum* grew at various densities, up to one metre high on the fern caudices. The fern was associated with bryophytes, growing with *Hymenodon pilifer* and the lichen *Micarea*, as well as the filmy ferns *Hymenophyllum flabellatum*, *Hymenophyllum lyallii* and *Polyphlebium venosum*, the chain fern *Tmesipteris lanceolata* and the rata vine *Metrosideros perforata*. This population was found at a higher elevation (150 m) than that of Kerikeri (10–20 m) and Auckland (72 m).



Figure 3 (left). Close up of the underside of the campanulate indusia showing the widened mouth. 📷 Joseph Knight.
Figure 4 (right). Thick patch of *Abrodictyum caudatum* on wheki. 📷 Marley Ford.

This is the largest known population of *Abrodictyum caudatum* on the New Zealand mainland. It appears secure but because of the small area it covers is at risk from natural disasters, including fire. Even though the preferred host is widespread at this new site the species is localised and its association with bryophytes and proximity to stream suggest this could be because of humidity requirements. This species appears to be biologically sparse, but because of its low numbers and cryptic nature it could have been overlooked across its current range and potentially further south.

Acknowledgements

We would like to thank the neighbouring landowners for allowing us access through their property, Barbara Parris for first identifying this species at the new site and Maureen Young for accompanying us on the field work.

References

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When native plants go rogue

✍ Kate Orwin (orwink@landcareresearch.co.nz)

Taupata (*Coprosma repens*) is a native plant that is thought to naturally occur north of Marlborough. It is typically described by plant nurseries as a coastal plant that is tolerant of a wide range of conditions and is great for attracting birds due to the large numbers of orange berries it produces. This sounds appealing to a gardener, but those same traits are also hallmarks of many invasive species. Indeed, once you start looking for taupata, you'll find it in many places outside of gardens and well outside its natural range—on the rocks of Punakaiki, the gravel beach at Kaikoura, in the albatross colony in Otago, and as an adventitious plant in coastal restoration plantings in Canterbury. While the impact of taupata spread in these habitats is currently unclear, there is one place where the impacts are being strongly felt—on several of the Rakiura titi (muttonbird) islands.

The Rakiura titi islands are of high value from both a Māori and conservation perspective. The islands are intertwined with the cultural identity of Rakiura Māori, who have visited the islands yearly over centuries to harvest titi. Through the conservation efforts of Rakiura Māori, most of the islands are now predator-free, and are home to a wide range of birds including rare species such as tīeke (South Island saddleback) and kākāriki. Tree daisies (*Macrolearia angustifolia*, *M. colensoi* and *Brachyglottis rotundifolia*) are a common feature and are, in some cases, the dominant woody plant species. Unfortunately, taupata now occurs on several of the islands and is spreading between them. To say taupata thrives there is an understatement—on one island it has become the dominant plant species over a 50-year period, replacing nearly all of the tree daisy community and reducing plant diversity significantly. Impacts on forest birds are unknown, but Rakiura Māori report that seabird burrows under taupata are much more prone to collapsing.

Growing awareness of the detrimental impacts of taupata on the Rakiura titi islands means it is now considered an invasive weed and management plans are being developed by Rakiura Māori with help from Manaaki Whenua researchers. Managing invasive plants is difficult, expensive and time-consuming, but the strong connection of Rakiura Māori with these islands increases the chances of the successful preservation of the naturally occurring flora and fauna.



Left: Taupata invading beneath *Macrolearia angustifolia*. Right: Titi ready to depart 17 March 2024. 📷: Phil Lyver.

News from the UNITEC Herbarium

✍ Peter J. de Lange (pdelange@unitec.co.nz) and Campbell J. James (cjames@unitec.co.nz), School of Environmental & Animal Sciences, Unitec, Auckland, New Zealand

The Environment and Animal Sciences Biodiversity Pathway at Auckland's Mt Albert Unitec campus offers a Bachelor of Applied Science (B.A.Sci.) and as of 2023 a Master of Applied Science (M.A.Sci.). For these degrees, students undertaking environmental studies are taught a range of field skills (Fig. 1), ecology and notably taxonomy (Fig. 2,3). To aid with teaching field ecology and taxonomy, in 2001 the faculty started what was initially intended to be a 'small' teaching herbarium.



Figure 1. Field Technician Campbell James, Prof. Peter J. de Lange and student Clay Heath on Shag Rock, Te Whanga, Rēkohu / Wharekauri / Chatham Island engaged in a survey of the biota of the karst island ecosystems of the Chatham Islands group.



Figure 2. A trunk of houpara (*Pseudopanax lessonii*) with a new lichen genus for New Zealand, *Dictyomeridium* Aptroot, M.P. Nelsen & Lücking, and, in this case a new species in the process of being formally described.



Figure 3. A new species of *Cruentotrema* Rivas Plata, Papong, Lumbsch & Lücking (a new genus for New Zealand) discovered in forest at Te Paki in April 2024.

However, student and staff research interests have seen that herbarium grow rapidly. In 2012, the herbarium was registered with Index Herbariorum with the code 'UNITEC'. de Lange & Blanchon (2018) gave notice that UNITEC had accessioned its 10,000th specimen, a lichen, *Usnea inermis*. At the time it was decided to give five-yearly updates—so here one year over is the update of the herbarium's activities. The herbarium specimens are curated using Specify 7.

The herbarium moved location in 2019 (by one floor) into a purpose-built facility. In 2021 the herbarium shifted its databasing to Specify 7, and the collections were rehoused into plastic boxes (Fig. 4) with the vascular plants arranged following the APG classification system. In 2020 a large duplicate collection of New Zealand lichens was incorporated into the herbarium. In 2024 a focus has been to database the backlog of collections—notably lichens collected by A.J. Marshall (Fig. 5) and a duplicate set of Blechnaceae (mostly *Parablechnum*) to accompany research being carried out on this genus worldwide by staff at the Complutense University of Madrid.

UNITEC: Herbarium founded 2001.

Index Herbariorum: UNITEC (Registered 2012).

Postal Address: Professor Peter J. de Lange, Room 115-1040, School of Environmental and Animal Sciences, Unitec, Private Bag 92025, Victoria Street West, Auckland 1142, New Zealand

Physical Address: Unitec Campus, Building 115, 115-2032, Auckland, Mt Albert, Carrington Road, Gate 4



Figure 4. Portion of the Plantae collections refilled into plastic boxes.



Figure 5. Student volunteer Jay (Jie) Chen Huang accessioning lichens collected from Auckland Council Vegetation Plots by Research Fellow Andrew Marshall.

Staff: Professor Peter J. de Lange FLS (Curator) pdelange@unitec.ac.nz, Campbell James (Herbarium Technician:) cjames@unitec.ac.nz.

Research Fellow: Andrew Marshall.

Research Associates: Adjunct Associate Professor Dan Blanchon FLS, Adjunct Associate Professor Mark Large FLS, Dr Matthew A. M. Renner FLS.

Volunteers: Jie Cheng Huang, Louisa McGinty, Sharnar Salafai Brunt-McGlinchy, Tyson Price (Fig. 5, 6).

Access: By appointment only (email: pdelange@unitec.ac.nz)

Holdings: 13,600 specimens (accessioned) including—as Kingdoms—1 Amoebozoa, 35 Chromista, 7437 Fungi, 6107 Plantae. A further c. 4000 specimens await to be accessioned.

Types: UNITEC holds the primary types (Holotypes) of *Buellia insularicola*, *Lecanora kohu*, *Lithothelium kiritea*, *Megalaria crispisulcans* and *Ocellularia jacinda-arderniae*. Isotypes of *Leptospermum hoipolloi* f. *hoipolloi*, *L. hoipolloi* f. *procumbens*, *L. repo* and *L. tairawhitiense* are also held.

Exchanges: UNITEC exchanges with AK, B, F, HFN, MACB, OTA, SS, WELT.

Scope

The Flora and Lichenized Mycobiota of New Zealand. UNITEC has an emphasis on the northern part of New Zealand, particularly the lichens of the Kermadec Islands, Northland, Kaipara (Mataia), Waitakere Ranges, urban Auckland, Auckland Regional Parks, Hauraki Gulf Islands (notable collections from Rangitoto, Motukaikoura and Tiritirimatangi), Waikato and Chatham Islands.

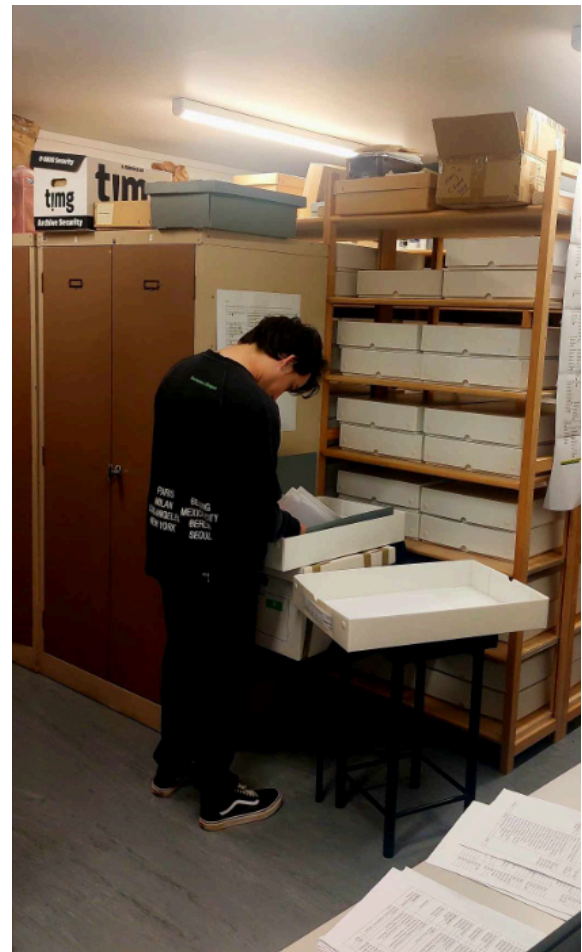


Figure 6. Student volunteer Tyson Price filing specimens into the herbarium vault.

Invasive plants are also well represented reflecting staff research interests and the courses taught by the faculty. The herbarium also holds DNA vouchers linked to the Applied Molecular Solutions Research Group (www.unitec.ac.nz/ams) and associated laboratory, and international lichen research consortia (PhyloRamalina, Lecanomics, Parsys). The earliest collections are those donated collections from 1965 (Judy Nicholson, mainly South Island), with other later donations from the 1980s and 1990s, before active collecting began in 2001.

Key collectors

Peter de Lange (c. 2300 (c. 1000 still to accessioned) algae, bryophytes, flowering plants, fungi and lichens); Dan Blanchon (c. 1600 lichenized mycobiota (c.600 still to accession), bryophytes, flowering plants, fungi and lichens); Andrew Marshall (lichens) (c.3000 – 2000 still to accession); Campbell James (lichens, flowering plants), Rafael Medina, Sonia Molino and Mario Mairal (Blechnaceae, especially *Parablechnum*), Luzie Schmid (flowering plants), Paul Bell-Butler (Bryophytes, Lichens), Carol Elliott (nee Lockett) (lichens); Carol West (c. 300 lichens); Christy Reynolds (lichens); Orhan Er (lichens, vascular plants); Marley Ford (lichens, flowering plants); Jacqueline Margetts (flowering plants); Sue Wake (flowering plants); Leslie Haines (flowering plants); Neil Davies (flowering plants); Rick Kooperberg (lichens); Glenys Hayward (lichens); Jennifer Bannister (lichens); Allison Knight (lichens); Nathan Solomon (flowering plants); Jan Weaver (flowering plants); Vicki Sergeant (fungi); Hayley Nessia (fungi, lichens); Tim Martin (lichens); Robert Lücking (lichens); Bibiana Moncado (lichens); Judy Nicholson (nee MacDuff) (flowering plants); Linden Moyle (ferns).

The herbarium also holds important collections from Catherine Beard (Maung'Re Island—bryophytes, lichens), John Braggins (bryophytes), David Galloway (lichens), David Houston (Maung'Re Island - bryophytes, lichens), Thomas Emmett (Maung'Re – bryophytes, lichens), Matt Renner (bryophytes), Matt von Konrat (bryophytes), Mark Large (spores of New Zealand Lycophytes and Pteridophytes, pollen samples).

Original artwork of the holotypes of *Nephelolejeunea carcharias* and *Siphonolejeunea raharahanehemiae* drawn by M.A.M. Renner is also held.

History

UNITEC was founded in 2001 by Carol Elliott (nee Lockett) and Dan Blanchon. It is a teaching and research herbarium, supporting the studies of an active lichen group, as well as ongoing investigations of invasive and native plants. Students learn herbarium specimen collection and preparation in three different courses in the Bachelor of Applied Science, and students volunteer in the herbarium to assist with accessioning and curation. The herbarium supports taxonomy education, particularly in lichenology, mycology, botany and biosecurity.

The herbarium focus on lichens was greatly encouraged by the late Dr David Galloway FLS, FRSNZ; he also contributed to its collections.

Research

Currently, the herbarium lichen collections reflect key research links with Otago University, Ngāti Whātua Ōrākei, Auckland Museum, Auckland Council, Department of Conservation, Wildland Consultants Ltd, the Berlin Botanical Gardens and Museum of Natural History, Germany; the Field Museum of Natural History, Chicago, USA; Herbarium Friscum, Friesland. 8471 CC Wolvega, Netherlands, and Universidad Complutense de Madrid, Spain.

Active research linked to the herbarium includes a revision of the New Zealand members of the lichen genera *Chrysothrix*, *Collempsidium* s.l., *Parmotrema*, *Pertusaria* (with Dr Jennifer Bannister), *Ramalina*, the New Zealand members of the Peltigeraceae —notably the *Pseudocyphellaria crocata* complex and *Sticta*, *Strigula* s.l., the *Cladia aggregata* complex, *Coenogonium luteum* complex and *Micarea* (Fig. 7). Crustose lichens are being actively researched, especially *Pyrenula* and allied genera.

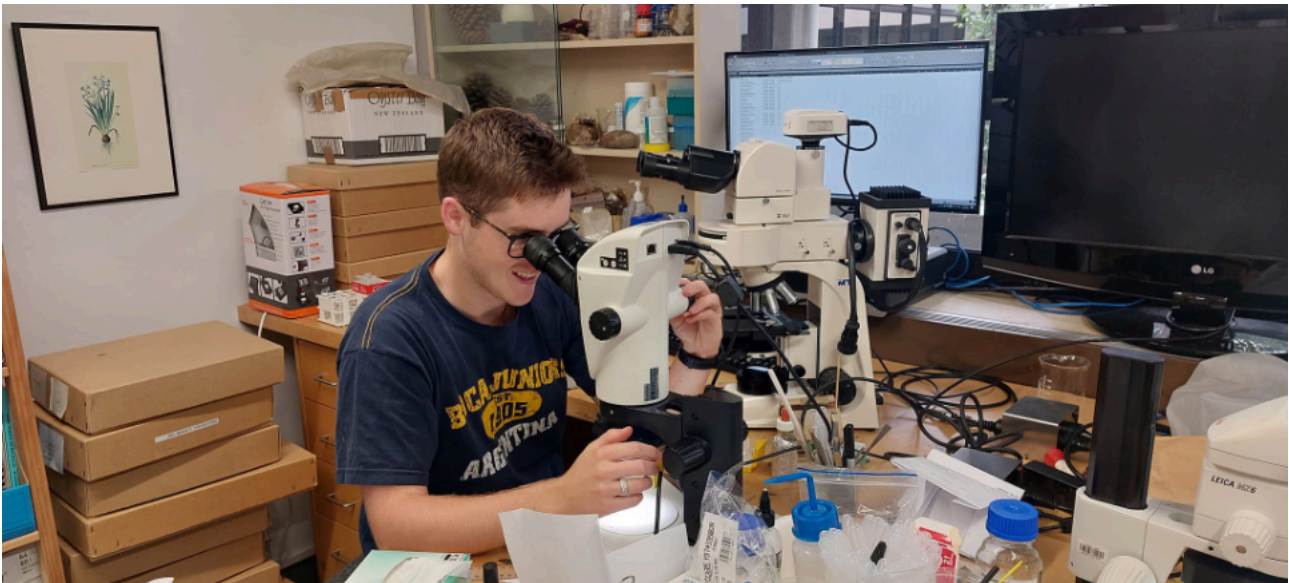


Figure 7. Campbell James working on UNITEC collections of *Micarea* Fr.

Within flowering plants there is ongoing research on Chatham Island endemic vascular plants, *Leptospermum*, *Muehlenbeckia*, *Pimelea eremitica* (with Te Roroa iwi), *Pittosporum* (with Dr Lindy Cayzer), *Ripogonum* (with Dr John Conran), *Salsola* (with Prof. Sergei Mosyakin) and *Taraxacum* (with Dr Karst Meijer). A dissertation student Amy Gwyne is researching *Rubus ellipticus* var. *orbicordatus*. The pathogens associated with *Asparagus scandens* and *Selaginella kraussiana* are also being examined with voucher specimens from these studies lodged in the herbarium. Voucher specimens are also held from past studies of the lichen diversity of New Zealand mangrove (*Avicennia marina* subsp. *australasica*) forests, and from specific phorophytes (*Metrosideros excelsa*, *Lophomyrtus*) and those found in Auckland Council permanent monitoring plots (both continuous forest and urban bush fragments). Lichen checklists for New Zealand, the Kermadec and Chatham Islands groups are also being prepared. Outside New Zealand, Herbarium staff are also engaged with the Field Museum in research on the Cook Islands bryophytes and lichens, and New Zealand *Frullania*. UNITEC currently does not have containment status.

Visitors

2019: Dr M. Hutchison (Lichens), 2020 Dr M.A.M. Renner (Lejeuneaceae), 2023: Dr(s) R. Medina, S. Molino, M. Mairal (Blechnaceae), Professor D.J. Mabberley (*Coprosma*), Dr M.A.M. Renner (*Porella*).

Associated Journals

Perspectives in Biodiversity (<https://www.unitec.ac.nz/epress/index.php/perspectives-in-biodiversity/>), Perspectives in Biosecurity (<https://www.unitec.ac.nz/epress/index.php/category/publications/epress-series/perspectives-in-biosecurity/>)

Recent Publications linked to UNITEC collections (Post 2018)

2019

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- de Lange, P.J.; Mosyakin, S.L. 2019: *Trithuria brevistyla* (Hydatellaceae) a new combination for the New Zealand endemic species from the South Island. *Ukrains'kyi botanichnyi Zhurnal* 76(2):95–100
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- de Lange, P.J.; Blanchon, D.J.; Doyle, E.J.; Marshall, A.J.; Killick, S.; Schönberger, I. 2019: First record of Himalayan wineberry (*Rubus ellipticus* var. *obcordatus* (Franché.) Focke.) Rosaceae in New Zealand. *Perspectives in Biosecurity* 4: 33–39.
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2020

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- Brownsey, P.; Shepherd, L.; de Lange, P.J.; Perrie, L. 2021: *Pyrrosia serpens* (G.Forst.) Ching a new record for the fern flora of the Kermadec Islands, New Zealand. *New Zealand Journal of Botany* 59: 229–243.
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- Lücking, R.; Moncado, B.; Widhelm, T.J.; Lumbsch, T.; de Lange P.J. 2021: The *Sticta filix* - *Sticta lacera* conundrum (lichenized Ascomycota: Peltigeraceae subfamily Lobarioideae): unresolved lineage sorting or developmental switch? *Botanical Journal of the Linnean Society* 199: 706–721.
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A revision of Aotearoa/New Zealand *Coenogonium* (Coenogoniaceae), Lichenized Mycobiota underway at UNITEC —a progress report.

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Coenogonium Ehrenb (Coenogoniaceae) is the sole representative of the family, containing c. 130 species worldwide (Rivas Platas et al., 2006; Singh Adhikari, 2024). The genus is characterised as crustose or filamentous thalline forming, biatorine taxa with yellow – orange – brown apothecia, 1-septate (rarely non-septate) ascospores, and the lack of secondary metabolites (Rivas Plata et al., 2006; Ferraro & Michlig, 2013).

Galloway (2007) accepted nine species for Aotearoa | New Zealand, *C. fallaciosum* (Müll.Arg.) Kalb & Lücking, *C. flavum* (Malcolm & Vězda) Malcolm, *C. fuscescens* (Vězda & Malcolm) Malcolm, *C. implexum* Nyl., *C. lutescens* (Vězda & Malcolm) Malcolm, *C. luteum* (Dicks.) Kalb & Lücking, *C. queenslandicum* (Kalb & Vězda) Lücking, *C. rubrifuscum* (Malcolm & Vězda) Malcolm, and *C. zonatum* (Müll.Arg.) Kalb & Lücking. In 2014, an additional species was described from Otago, *Coenogonium fruticosum* L.Ludw. (Ludwig, 2014), making a total of 10 taxa. The particularly variable species, *C. luteum*, known also from overseas, has been considered a species complex in Aotearoa/New Zealand since the publication of the flora (Galloway 1985; 2007), necessitating a need for a revision of the Aotearoa/New Zealand samples of that species, and further the genus as a whole. Hence, an investigation of collections of the genus at the Unitec (UNITEC) and Auckland Museum (AK) herbaria has been ongoing since December 2023 (based on numerous collections made of this species complex since 2010). Recent (November 2024) examination of material at the University of Otago (OTA) confirmed the presence of *C. pineti* (Schrad. ex Ach.) Lücking & Lumbsch (OTA 52956, OTA 52936)(Fig.1 & 2), an overseas species also found in Tasmania. In the current study we now have putative evidence for four distinct taxa in the *C. luteum* species complex, with more collections required to account for accurate descriptions of variability. What follows is an update on current thinking with brief descriptions of the *C. luteum* and the putative segregates, with a call for collections.



Figure 1 (left). *C. pineti*, example of inconspicuous thallus with light orange (with a pinkish hue) apothecia. OTA 62069.
Figure 2 (right). *C. pineti*, close up of apothecia. OTA 62069.

Coenogonium luteum (Fig.3) in its strict sense is present throughout Aotearoa/New Zealand, where it is common in urban areas and indigenous forest. It is distinguished from other *Coenogonium* here by a thin green/brown, varnish like-thallus spreading over the substrate; large well-developed, robust orange apothecia (1.0–2.5 mm), whose margins are undulose; while in cross-section, the hypothecium and hymenium are similar in size (50–80–90 μm tall compared with 60–80–90 μm tall); and small (8–)10 \times 2–3 μm , 1-septate ascospores. This species is commonly found growing on ponga (*Alsophila tricolor* (Colenso) R.M.Tryon), but has also been collected corticolous on other trees, and also growing on exposed weed mat in indigenous forest. This species in Aotearoa/New Zealand, is extremely

variable. Indeed, a taxon described from Wellington as *Baeomyces pertenuis* Stirt. originally and then shifted to *Coenogonium* as *C. pertenuis* (Stirt.) Kalb & Lücking (Rivas Plata et al., 2006), was then synonymised with *C. luteum* by Galloway (2007) who considered that the species was based on a damaged specimen. This species was primarily distinguished from *C. luteum* by the slightly larger ascospores, $12 \times 3 \mu\text{m}$, a character that Galloway (2007) thought insufficient to justify its continued recognition. Irrespective of this species' status it serves to highlight the difficulty in accounting for natural variation within *Coenogonium luteum*.



Figure 3. *C. luteum*, example of dark orange apothecia with undulating margins. AK 187405.

Coenogonium aff. *luteum* (Fig.4) is a putative segregation that is often associated with *C. luteum* s.str., from which it differs by the lighter coloured white-green, patchy, thin thallus; apothecia that are smaller than *C. luteum* (0.2–1.0 mm c.f. (1.0–2.5 mm)), light yellow-orange with a cream margin, often staying concave; hymenium often larger than the hypothecium 80–100 μm compared with 30–70 μm ; ascospores double the size of *C. luteum*, (12–)14–16 \times 3–4 μm . Initially this taxon was thought to be *C. australiense* Kantvilas & Lücking, described from Tasmania, although the larger size of the spores of *C. aff. luteum* suggest that it is distinct. There have been very few collections of this taxon, which is known thus far from four collections held in AK (AK 176004, AK 172281, AK 178103, AK 193280).



Figure 4. *C. aff. luteum*, showing lighter orange apothecia with entire margins. AK 178103.

Coenogonium "bryicolous" (Fig.5 & 6) is the most distinctive of all in the putative segregates in the complex. It has a thick thallus, which is green-grey

when fresh and grey when dried, with a ‘silt-like’ texture, reflecting the shape of the substratum on which it grows (bryophytes), fresh collections have a prominent white prothallus and orange apothecia, with cream margins when young; these often maturing to largely convex structures, lacking the cream margin; hymenium and hypothecium often similar in sizes 80–90 μm to 90–100 μm ; ascospores large, 12–16 \times 3–4 μm . This segregate is named after its phorophyte preferences, with all collections to date being exclusively found growing on bryophytes (*Porella* sp., *Radula* sp.).



Figure 5 (left). *C.* “bryicolous”, thallus with convex apothecia. AK 201104.
 Figure 6 (right). *C.* “bryicolous”, close-up of convex apothecia. AK 201104.

C. “*Hymenophyllum*” (Fig. 7) is known from only a few collections. It has a grey-green thallus that is granular to slightly verrucose; apothecia which when young have an in-rolled cream margin; otherwise concave with mature apothecia convex, dark orange and lacking a margin. The hymenium and hypothecium are shorter than other taxa, 50–60(–70) μm ; ascospores small, overlapping in size with *C. luteum*, 10 \times 2 μm . This putative segregate’s tag name is derived from the fact that all collections seen so far have been found growing on *Hymenophyllum demissum* (G. Forst.)Sw. and *H. nephrophyllum* Ebihara et K.Iwats.



Figure 7. *C.* “*Hymenophyllum*”, shown on *Hymenophyllum demissum*, with mature apothecia lacking margins. AK 247957.

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Threat assessments of indigenous vascular plants and mushroom fungi in Otago

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Working with species experts, the Otago Regional Council (ORC) has recently assessed the regional conservation status of two species groups in the Otago Region: indigenous vascular plants and mushroom fungi (selected species on non-lichenised agarics, boletes and russuloid fungi).

A Regional Threat Classification System methodology was recently developed to be complementary to the national New Zealand Threat Classification System and provides information relevant at the regional context. This includes by applying a population threshold to assess the threat status of candidate taxa adjusted to the amount of area under consideration in the region.

Using this methodology for a total of 1242 indigenous vascular plant species identified in Otago, 227 species were regionally assessed as being Threatened, 275 as At Risk, 614 as Not threatened, 1 as Non-resident Native, and 115 as Data Deficient. A total of 10 species were identified as having become extinct in the region.

For selected species of mushroom fungi from the national checklist, a total of 331 were identified in Otago. A general process for assessing the threat of extinction of fungal taxa is described in the report at the regional level. Nine fungal taxa were regionally assessed as Threatened, 203 as Not Threatened, and 119 as Data Deficient.

The ORC thanks the species experts on the panels for their contributions, especially John Barkla, Brian Rance, Geoff Rogers, Richard Ewans, Mike Thorsen and Jerry Cooper, and other experts who

also generously provided information and feedback. The ORC has completed regional conservation statuses for other taxonomic groups, which can be found here: <https://www.orc.govt.nz/environment/biodiversity/regional-threat-assessments/>

Other councils that have released regional conservation statuses for indigenous vascular plants are Auckland Council and Greater Wellington Regional Council. All of the mentioned regional conservation statuses can be found at the links in the references below:

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Scion Research/Manaaki Whenua-Landcare Research Survey

✍ Thomas Carlin, Invasion Ecologist, Scion Research (tom.carlin@scionresearch.com)

Scion and Manaaki Whenua-Landcare Research are conducting a survey to understand how perceptions of wilding conifers differ across regions of Aotearoa New Zealand, and between professions and stakeholders. We are also interested in understanding how these perceptions compare to how other biosecurity threats are perceived. ‘Wilding conifers’ is a term used to describe exotic coniferous trees that self-establish beyond their initial plantings.

This survey is open to anyone, although you will only be able to complete the survey once. Please complete the survey using [this link!](#)

Your participation is entirely voluntary and the survey will be anonymous.

This survey will take about 10 minutes to complete, and please forward the survey link to anyone who you think might be interested in completing it too. This survey will remain open until 20 December 2024. Please email wildingpine@gmail.com if you have any questions.

As an appreciation for your participation in the survey, you will have the option to enter a draw to win one of five \$100 Prezzy vouchers.

Survey Link

There are no minimum knowledge requirements, and we greatly appreciate any assistance in sharing our survey more widely.

Moths and Butterflies of New Zealand Trust

✍ Jacqui Knight MNZM (jacqui@nzbutterflies.org.nz)

We are currently working on a project to bring the red admiral butterfly back, especially in Auckland. We are therefore encouraging people to plant, where appropriate, native *Urtica* species.

<https://www.nzbutterflies.org.nz/project/red-admiral-project/>

We have been asked for seeds/plants of *Urtica sykesii*. Is there anyone who could help us obtain seeds? If you could please pass this enquiry on to anyone you think might be able to help, we would be very grateful.

UPCOMING EVENTS

If you have events or news that you would like publicised via this newsletter please email the Network (info@nzpcn.org.nz), prior to the published copy deadline, with details of meetings, field trips or other events taking place during the following month or later. The deadline for copy for the following month's *Trilepidea* is at the top of the front page of each issue.

If you intend to participate in one of the advertised botanical society meetings or field trips please check with the relevant society beforehand to confirm that the published details still stand.

Iwitahi Working Bee & Native Orchid Weekend

Friday, December 6th - Sunday, December 8th
At the Iwitahi Reserve off SH5 (Napier - Taupo)



Starts Friday after 4pm
Ends Sunday Lunchtime-ish



Includes Meals and 2 Nights Accommodation at Sika Lodge
(bunk room style)

Light /Moderate Track Maintenance, weeding etc.
Orchid Identification, photography and discussions on site

\$120 +/- PP
THE MORE THAT COME
THE CHEAPER IT GETS

We would expect to see *Calochilus*, *Chiloglottis*, *Gastrodia*,
Thelymitra and *Pterostylis* species in flower

If you are unable to attend for the full weekend but would like to join us at the reserve or prefer to organise your own accommodation please let me know so we can keep an eye out for you

To register your interest email me - tobymarris@hotmail.com



Auckland Botanical Society

Saturday 7 December: Christmas picnic potluck. **Venue:** Old homestead, Mataia, Glorit.

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

Summer Camp: 23-27 January 2025 Anniversary Weekend camp at Lonsdale Park Education Camp, Matauri Bay Road. **See website:** <https://sites.google.com/site/aucklandbotanicalsociety/> for further details.

Leaders: Yumiko Baba, Helen Preston Jones and Maureen Young.

Rotorua Botanical Society

Orchid Survey: Sunday 1 December for annual *Calochilus robertsonii* survey at Rotorua Racecourse. **Grade:** Easy. **Meet:** Rotorua Racecourse at 9.00am.

Leader: Paul Cashmore, email paulbcashmore@yahoo.co.nz, ph. 027 650 7264.

Wellington Botanical Society

Field Trip: Thursday 5 December and Saturday 7 December for rata walk around Lower Hutt. **Meet:** Carpark east side of Woburn Station at 6.00pm on Thursday and 9.30am on Saturday.

Leader: John Barnett, email johnbarnett@inspire.net.nz, ph. 021 063 1590.

Summer Camp: 18–26 January 2025 at St. Arnaud, Nelson Lakes.

Contact: botsocsummercamp@gmail.com.

Nelson Botanical Society

Field Trips/Meetings: Please refer to the website: <https://www.nelsonbotanicalsociety.org/trips-meetings>.

Canterbury Botanical Society

Field Trips/Meetings: Please refer to the website: <https://canterburybotanicalsociety.org.nz/canterbury-botanical-meetings-field-trips> for current details.

Botanical Society of Otago

Field Trip: Friday 6 December to Catlins for weekend.

Contact: Gretchen Brownstein, email brownsteing@landcareresearch.co.nz, ph. 021 065 8497.

Coastal Restoration Trust of New Zealand - Tahuna Ora

Nau mai, haere mai, welcome to the 2025 Coastal Restoration Trust Conference: Taihuanui – A Bountiful Coast.

Join us at Uawanui a Ruamatua Tolaga Bay 12–14 March 2025.

Registrations are now OPEN as is the full conference website.

Link to the registration form: <https://event-14912-0a51.lilregie.com/booking/attendees/new>

Link to the conference website: <https://www.coastalrestorationconference.org.nz/>

