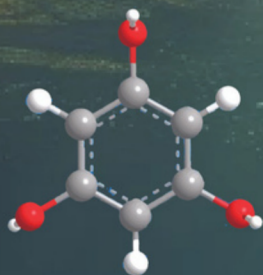
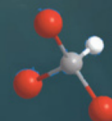


SUMMER 23/24

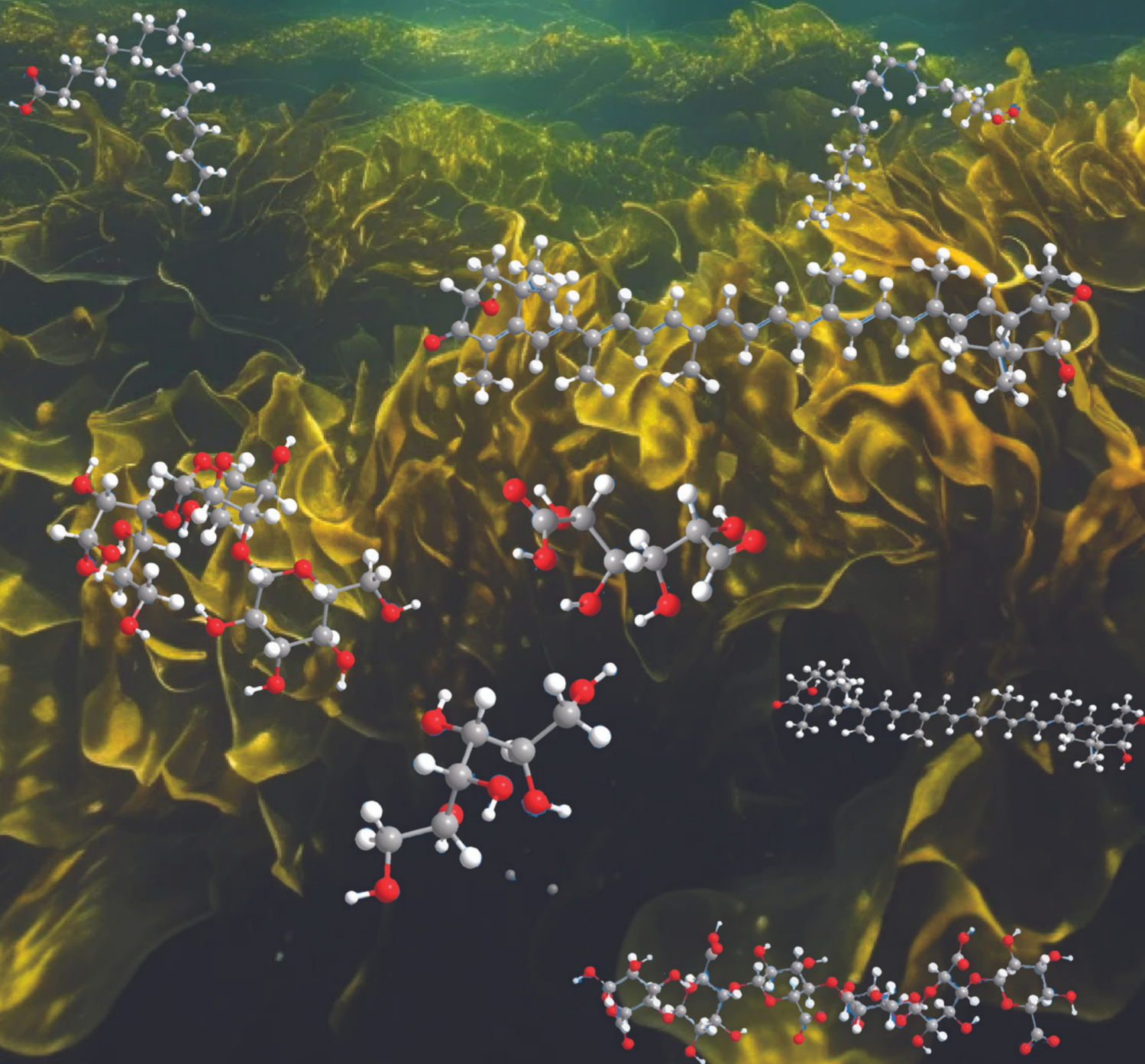


# ASPAB

*official newsletter*



## The Australasian Society for Phycology and Aquatic Botany



ISSN 1441-9076

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## Guest Editors

Niki Travel and Joseph Kihika

## Cover design

Thiru Somasundaram, PhD Candidate, Deakin University, Victoria, Australia

# Letter from the editors



Dear members,

I am thrilled to meet you all through this long awaited issue of the ASPAB summer newsletter 23/24 and the first newsletter of the year 2024, with warm wishes for the Gregorian and lunar (year of the dragon) new years. I am joined by Astyn Isaak in this issue as our new co-editor from New Zealand. I thank Joseph Kihika, our outgoing co-editor from New Zealand, and wish him good luck for his post PhD endeavours. As usual, our social media coordinator Niki Travel assisted us in this issue. Both, Joseph and Niki acted as guest editors.

This issue does not contain our usual “Member’s Profile” section, as we haven’t received any profiles for publication. Saying that, the fascinating profiles of our new committee members may inspire younger members to explore various careers and research paths. I recommend our members to read through their online profiles and connect with them. I also recommend to follow our LinkedIn page “<https://au.linkedin.com/company/aspab>” for regular vacancy updates, throughout the year, shared by ASPAB president, social media coordinator and committee members. You can find three new PhD opportunities in this issue, which you may share with your colleagues, friends and students.

Most significantly, Stacy Krueger-Hadfield from the Psychological Society of America (PSA) has shared their event details and abstract submission guidelines to be populated amongst ASPAB members.

I also congratulate the ASPAB member who have submitted their PhD thesis.

I will leave the remaining details to the newsletter. Signing off with a smile :)

*Thiru, S.*



# The President's report

Dr. Manoj Kumar  
CQ University



Dear Members,

I trust this letter finds you in good health and high spirits.

We are thrilled to announce our scientific society's recent recognition on social media platforms like LinkedIn and Facebook. This accomplishment reflects the dedication of our members, with special thanks to our media management team. This recognition is a valuable opportunity for us to share knowledge, establish thought leadership, promote our mission, increase visibility, and strengthen our community. Let's prioritize this essential endeavour to enhance our society's impact and engage members effectively. Together, we can overcome challenges and contribute meaningfully to our newsletter.

The triumph of our 37th ASPAB conference at the University of Technology Sydney (UTS) reflects the strength of our community. A special acknowledgment to our esteemed guest speakers and standout students, Eloise Bennett and Flora Lam Kim. Heartfelt thanks to Pranali Deore, Joe Zuccarello, Kathryn Wiltshire, and ATOs Paris Hanan and Natalie (UTS) for their invaluable contributions. Appreciation to all attendees and speakers for making this event successful. Anticipating more opportunities for learning and connections in the future. Special gratitude to James Wallman and Peter Ralph for their unwavering support in organizing ASPAB at UTS Business School. Thanks to everyone who supported this initiative, and a warm welcome to our new committee members. Your dedication is pivotal as we strive to achieve milestones together.

As valued members, your continued support is vital to our society's success. Spread the word and invite colleagues to join us in advancing our mission. Together, we can make a greater impact and foster a vibrant scientific community. I am confident in our ability to overcome challenges and make significant contributions to ASPAB society. Share your feedback and ideas we are here to serve you.

Contact me at [manoj.kumar@cqu.edu.au](mailto:manoj.kumar@cqu.edu.au) for any questions.

Best Regards,  
Manoj



**Dr. Manoj Kumar** (Ph.D. Marine Biotechnology)  
Senior Research Fellow  
Seaweed & Seagrass Lead  
President - [Australian Society for Phycology and Aquatic Botany \(ASPAB\)](#)  
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# The vice-president's report

Dr. Shauna Murray  
University of Technology Sydney (UTS)  
The Vice-President

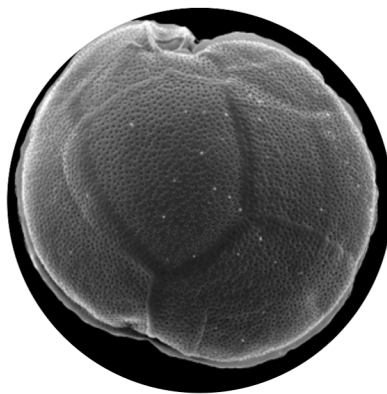


Welcome to all ASPAB members to our first newsletter for 2024!

A quick introduction from me, the newly elected VP. I have been an ASPAB member since 2002, when I attended a unique ASPAB conference literally on the beach on Heron Island as a student – so memorable that it still ranks as the best conference I've ever been to! The warm welcome from ASPAB members and the helpful research feedback from seasoned members has always been a feature of ASPAB that I value highly, and many of my own students have gone on to experience it. I research marine phytoplankton, particularly dinoflagellates, with a particular focus on harmful algal bloom forming species. My research is in evolution, ecology, toxins and impacts of HABs.

Over the years, I've organized 2 ASPAB conferences in Sydney, acted as Secretary and committee member, and I'm now honoured to be Vice President.

I very much enjoyed the latest ASPAB conference in Sydney organized by Dr Manoj Kumar in November. Once again, ASPAB fulfilled its reputation as a friendly conference for newcomers and experienced researchers, with some fruitful discussions and input into developing projects in their early stages. The round conference room style venue (in the famous Frank Gehry designed paper bag' building) encouraged open discussions in a relaxed atmosphere. We are very thankful to Manoj and his team as well as the wider ASPAB organizing committee for their hard work in setting this up.



# ASPAB Australian Treasurer's Report

1 July 2022 - 30 June 2023

Niki Travell



ASPAB Australian Chapter Funds continue to be held with Bendigo Bank; a Transaction (Statement) account, and a Term Deposit account. Outgoing expenses must be approved by 2x Authorised Signatories.

There are currently 3x Authorised Signatories: ASPAB President Manoj Kumar, Alecia Belgrove, and Niki Travell. Niki Travell is the newly appointed AUS Treasurer. Voted onto the ASPAB Committee at the Nov 2022 AGM.

	Transaction account:	Term Deposit account:	Combined Total
Opening Balance (1 July 2022):	\$8,417.39	\$63,939.63	<b>\$72,357.02</b>
Closing Balance (30 June 2023):	\$12,285.35	\$64,058.74	<b>\$76,344.09</b>
Incoming:	<b>\$4,073.76</b>	<b>\$224.41</b>	<b><u>\$4,298.17</u></b>
	Membership fee subscriptions (\$1,325.00) Perth 2022 conference surplus. (\$2,748.76)	Interest: (\$224.41) Interest rate was between 0.45% & 1.00%	
Outgoing/Expenses:	<b>-\$205.80</b>	<b>-\$105.30</b>	<b><u>-\$311.10</u></b>
	Science and Technology Australia membership (-\$205.80)	Resident withholding tax (-\$105.30)	
<b>Surplus/Deficit for 2022-2023 Financial Year (1 July – 30 June):</b>	<b>+\$3,867.96</b>	<b>+\$119.11</b>	<b>+\$3,987.07</b>

Niki Travell

ASPAB Australian Treasurer

19 November 2023



# The Treasurer's report



Dr. Judy Sutherland  
Treasurer - New Zealand

## **ASPAB NZ Treasurers Report 1 July 2022 - 30 June 2023**

During 2022-23, the New Zealand accounts (including the ASPAB PayPal account) showed a surplus for the year of \$706.50.

Our income consisted of membership fees, and some conference registrations which were paid into the New Zealand account to avoid expensive cross-Tasman bank transfers.

Expenses consisted of one Joanna Jones Travel Grant, a Student Prize awarded at the conference to a New Zealand member, and PayPal fees. The ASB account is free for a Not-for-Profit organization.

I have itemized income and expenditure on our PayPal account separately from the ASB account, for clarity. This facility allows people to pay by credit card, which is often easier for them, particularly where several fees are paid at once. All PayPal transactions are in NZD.

New Zealand funds are held in an ASB Society Cheque account, and two people are required to authorize any payment from the account. Funds are also received from time to time into our PayPal account and are transferred at irregular intervals (i.e. when the Treasurer thinks of it) to the ASB account.

The final balance in total in both ASPAB NZ accounts on 30 June 2023 was \$7041.64, most of which is held in the ASB Society Cheque account. These funds give us the capacity to support ASPAB student travel grants and future conferences.

**Judy Sutherland**  
**ASPAB NZ Treasurer**  
**7 November 2023**





# Seaweed Spotlight

## Your digest of recent algae news



### **Restoring giant underwater forests, one blade at a time**

<https://www.snexplores.org/article/restoring-giant-kelp-underwater-forests-ecosystem-climate>

### **SA hosts first hub in national seaweed hatchery network**

<https://www.seaweednews.au/post/sa-hosts-first-hub-in-national-seaweed-hatchery-network>

### **Identifying quality methane-reducing seaweed in Tasmanian waters**

<https://www.imas.utas.edu.au/news/news-items/identifying-quality-methane-reducing-seaweed-in-tasmanian-waters>

### **NZ project explores microalgae as potential future food**

<https://thefishsite.com/articles/nz-project-explores-microalgae-as-potential-future-food>

### **Green dreams: algae emerge as a game-changer in the race to net zero**

<https://www.csiro.au/en/news/all/articles/2023/october/algae-slashing-emissions>

### **TNC launches giant kelp restoration project in Tasmania**

<https://thefishsite.com/articles/tnc-launches-giant-kelp-restoration-project-in-tasmania>

### **The fast-growing invasive seaweed choking New Zealand's coastline**

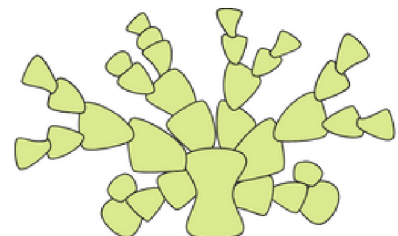
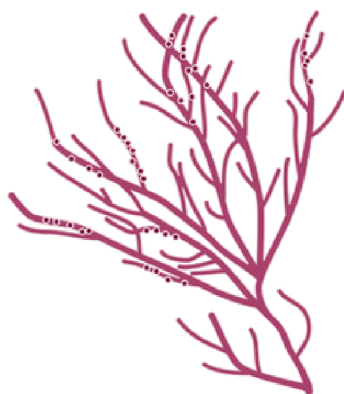
<https://www.theguardian.com/world/2023/nov/23/caulerpa-seaweed-new-zealand-invasive-threat>

### **Corals storm back after 'sea-weeding' project**

<https://www.jcu.edu.au/news/releases/2023/september/corals-storm-back-after-sea-weeding-project>

### **Seaweed researchers find bright future for underwater crop**

<https://www.abc.net.au/news/rural/2023-01-27/seaweed-research-uq-future-farming/101895072>





# ASPAB 2023 Conference: Student Awards

## Flora Lam Kim (First Prize)

Deakin University, Australia

### Identification and antioxidant activity of phlorotannins from Australian and French fucoids (*Phaeophyceae*, *Fucales*)

#### ABSTRACT

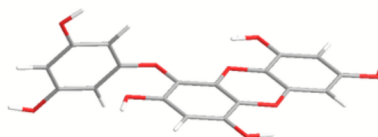
Phlorotannins are phenolic compounds in brown seaweeds with primary roles in ecological defence. Their multiple bioactivities, in particular their antioxidant properties, make them very interesting for food, cosmeceutical and pharmaceutical applications. However, phlorotannins are difficult to characterise due to their molecular size and complexity, and potential linkages with other molecules, such as terpenes, proteins and cell-wall polysaccharides. Phlorotannins from endemic Australian fucoids have rarely been described, despite recent studies highlighting high concentrations in some intertidal species.

We compared the phlorotannins from four Australian fucoids of commercial interest with those from five well-studied and/or commercialised French fucoids. We extracted and purified phlorotannins, and the extracts were analysed by 2D-NMR spectroscopy to identify the type of linkages and associated classes of phlorotannins. Tandem mass spectrometry with Electrospray Ionising (ESI) was performed to obtain the mass of the molecules and characterisation of the fragment ions (TOF-MS-MS-ES+). The antioxidant activity was assessed using the DPPH, FRAP and ORAC assays and a Sun Protection Factor (SPF) was also evaluated.

Different classes of phlorotannins were identified via 2D-NMR and mass spectrometry. Results showed the potential complexity and species specificity of the compounds, with significant difference in the polyphenolic composition between French and Australian species. In addition, high antioxidant activity was found in all species in comparison with positive controls, and especially for the Australian species *Cystophora torulosa*. This study advances our understanding of the structure and complexity of brown algal phlorotannins, which will aid in understanding their ecological significance and commercial potential.



Student winners **Flora Lam Kim** (left) and **Eloise Bennett** (right)



# ASPAB 2023 Conference: Student Awards

## Eloise Bennett (Second prize)

University of Tasmania, Australia

Short-term hyposalinity stress increases rates of dissolved organic carbon (DOC) release by the furoid *Sargassum fallax* (Phylum Ochrophyta)

### ABSTRACT

Dissolved organic carbon (DOC) released by macroalgae supports coastal ecology and contributes to the total oceanic DOC pool. Salinity fluctuates substantially in the marine environment due to natural and anthropogenic factors yet there is limited research on how salinity effects DOC release by ecologically important macroalgae. Short term fluctuations in salinity can affect rates of DOC release by changing the osmotic potential of macroalgal cells. Here we determined the effect of short-term salinity changes on rates of DOC release by the habitat-forming furoid, *Sargassum fallax* (Phylum Ochrophyta). Independent ramuli (~1-4 g) cut at the axes of mature individuals were incubated across a salinity gradient (4-46 ppt) for 24 h and seawater was sampled for DOC concentrations. Physiological assays (tissue water content, photosynthesis, respiration, tissue carbon and nitrogen content) were undertaken. DOC release ( $\mu\text{mol C} \cdot \text{g DW}^{-1} \cdot \text{h}^{-1}$ ) increased with decreasing salinity ( $F(2, 29) = 72.94$ , Adjusted  $R^2 = 0.8227$ ,  $P < 0.05$ ) whilst net photosynthesis ( $\mu\text{mol O}_2 \cdot \text{g} \cdot \text{h}^{-1}$ ) decreased ( $F(2, 29) = 28.23$ , Adjusted  $R^2 = 0.6372$ ,  $P < 0.05$ ). Tissue water content (%) decreased with increasing salinity (Adjusted  $R^2 = 0.5124$ ,  $P < 0.05$ ). These results demonstrate that hyposalinity stress alters the osmotic status of *S. fallax*, inhibiting photosynthesis and increasing DOC release. These findings have important implications for understanding how natural salinity conditions may alter the production of DOC by macroalgae and affect coastal carbon cycling.



# ASPAB 37



# ASPAB Committee 2024

## AUSTRALASIAN SOCIETY FOR PHYCOLOGY AND AQUATIC BOTANY



### **President**

Dr. Manoj Kumar

Senior Research Fellow

Seaweed & Seagrass Lead

Coastal Marine Ecosystems Research Centre | CQUniversity,  
Australia

Dr. Manoj Kumar, a Senior Research Fellow at the Coastal Marine Ecosystems Research Centre at CQUniversity, brings over 15 years of expertise in the fields of seaweed (macroalgae) aquaculture, ecophysiology, and molecular biology. His research pursuits revolve around a globally significant theme—evaluating the resilience of marine plants and algae, encompassing seaweeds, seagrasses, and microalgae, amidst the challenges posed by global climate change.



### **Vice –president**

Dr. Shauna Murray

University of Technology Sydney (UTS)

Prof Shauna Murray leads a team at UTS, investigating the ecology, evolution, and toxicity of marine microbial eukaryotes, particularly species of phytoplankton involved in harmful algal blooms. Shauna's research group has developed eDNA based detection tools and commercialised a tool to detect a harmful algal toxin, as well as discovering many new toxin-producing harmful algal species. She has held an ARC Future Fellowship and been awarded multiple grants in collaboration with the aquaculture and seafood industries and government. This research has been recognised nationally and internationally, including as 'high impact' by the ARC Engagement and Impact assessment, the NSW Research Impact showcase, and the Prescott Prize by the Phycological Society of America. She is program director for the UTS Bachelor of Marine Biology and Climate Change, chair of the NSW Shellfish Committee, an industry/government organisation, and editor in chief of the journal *Frontiers in Protistology*.

## Committee...



### **Secretary**

Dr. Cecilia Biancacci  
Cawthron Institute, Nelson NZ

Cecilia Biancacci is a Seaweed Aquaculture Scientist at Cawthron Institute in Nelson, New Zealand, working on sustainable aquaculture of seaweeds with valuable applications. She completed her Bachelor's in Biological Science and her Master's in Marine Bio-ecology in Italy, focusing on sea urchin aquaculture. She then moved to Scotland, where she completed a Ph.D. in Marine Science awarded from the University of Aberdeen and SAMS that focused on aquaculture of a commercially interesting red alga. After that, she worked in Australia for three years as a postdoc on a CRC-P project investigating the cultivation of Australian kelps in proximity to existing mussel and salmon farms. She is experienced in invertebrates, microalgae and macroalgae cultivation, particularly in phenology, biochemical composition, hatchery and field culture, processing, and novel techniques to scale-up production for a range of commercially important species including brown and red seaweeds.



### **Treasurer & Membership Secretary (AUS Chapter) & Social Media Manager**

Niki Travell  
Phytoplankton taxonomist Perth, Aus

Phytoplankton taxonomist with a long-term professional history working for the UK and Western Australian Government. Special interest in identification of dinoflagellates and HAB species and inspiring others to pursue a career in phytoplankton.



### **Treasurer (NZ Chapter)**

Dr. Judy Sutherland  
Regional Manager - Wellington  
National Institute of Water & Atmospheric Research Ltd (NIWA)

I'm a molecular biologist and regional manager at NIWA in Wellington. My field of interest is molecular systematics of NZ macroalgae. I've been NZ treasurer for a few years now, and am grateful Dan has taken over NZ memberships.

## Committee...



### **Treasurer (NZ Chapter) and NZ Membership Secretary**

Dr. Joe Zuccarello  
School of Biological Sciences, Victoria  
University of Wellington

I am interested in the evolution and diversity of seaweeds, mostly red algae. I have been an ASPAB member for over 14 years and was once president. I believe in promoting phycology, and feel this society is a welcoming and hospitable place for students and ECRs.



### **Website Manager**

Denisa Berbece  
Ph.D. Student  
School of Biological Sciences, Victoria  
University of Wellington

I am a PhD student at Te Herenga Waka, Victoria University of Wellington. My research primarily focuses on the physiological and geochemical responses of various coralline algal species on ocean warming and ocean acidification. Additionally, I am investigating the potential for some of these species to acclimate and acclimatize to future global change conditions, particularly over multiple generations of exposure. Though I am mostly based in Wellington, New Zealand, I've also conducted research in New Caledonia, with future work planned around CO<sub>2</sub> seeps in both Japan and Italy.



### **Student Representative (AUS)**

Flora Lam Kim, PhD candidate in marine  
biology at Deakin University

I am a PhD student at Deakin University, Warrnambool (VIC), and a member of the dynamic Deakin Seaweed research group. My research in Australia came from a productive collaboration with the University of Western Brittany (UBO), in France, from where I come from and where my passion for seaweeds started. I am investigating the chemical defense of seaweeds towards environmental stresses. My PhD is focused on brown macroalgae antioxidants, molecules that provide multiple health benefits that could be used in pharmaceutical, cosmeceutical and food products. This project aims to investigate the antioxidants from abundant Australian fucoids that are being investigated for commercial exploitation. This will be achieved by 1) comparing the levels of antioxidants, 2) identifying the valuable molecules, 3) assessing the drivers of the production of antioxidants in the seaweeds, and 4) analysing the sustainability of potential exploitation.

## Committee...



### **General member (AUS)**

Anusuya Willis  
Australian National Algae Culture Collection  
National Research Collections Australia  
CSIRO National Collections and Marine  
Infrastructure, Hobart, Tasmania

Anusuya is a modern phycologist, combining molecular biology and physiology of algae to understand their diversity. Her research encompasses phylogenetics, comparative genomics, physiology and ecology. To understand the links between functional genomics, physiology and ecology; environmental adaptation under changing conditions; and diversity within and between species.

Dr Willis obtained her PhD in 2009 jointly from the University of Melbourne and the Université de Paris XI, with Professor Rick Wetherbee and Professor Chris Bowler. This was followed by postdoc positions at Georgia Institute of Technology, USA, with Dr Nils Kroger, and at the Australian Rivers Institute, Griffith University, Australia, with Professor Michele Burford. In 2018, Dr Willis joined the Australian National Algae Culture Collection, CSIRO, as a research scientist.



### **General member (AUS)**

Andrew Brooking  
Food Technologist: Quality Assurance  
Manager

I am based in the Northern Rivers region of far north NSW. Currently working as a Quality Assurance Manager for a waffle cone company (so you never know, seaweed flavoured ice-cream cones could be the next big thing). I've been working in the food industry in Australia for over 15 years mainly in Quality Management & Product Development in the Bakery manufacturing environment. I did have a 3-year stint in the retail side of things with David Jones Food which broadened my scope vastly across most food product groups and also included management of restaurants, cafes and sushi bars.

I have a keen interest in local 'bush tucker' and strongly believe that the food industry should endeavour to do the right thing, by engaging with local indigenous groups far more, ensuring that those whose ancestors grew up with this food source, are able to tell their stories without being left out. Seaweed too, comes into this, as a type of tucker – only sourced from Sea Country rather than the bush. My aim, as a white fulla from another country, is to learn, ask questions, and be respectful of cultural as well as environmental impacts. I am also very keenly interested in restoration, ensuring that it is not all about harvesting from the oceans for humans, but also regenerating the underwater spaces as much as possible.

## Committee...



### Newsletter co-editor (AUS)

Thiruchenduran Somasundaram

Ph.D. Candidate

[NuSea.Lab](#)

Deakin Queenscliff Marine Science Centre

Deakin University

Thiru's PhD investigates the different biochemical aspects of value addition to marine macroalgae. Thiru's PhD project validates different processing methods for the elimination of antinutritional factors and the enhancement of nutritive value of *Phyllospora comosa* (crayweed) facilitating its anticipated mass industrial use in the future. The nutritive value enhancement is validated through the assessment of biochemical composition targeting molecules and molecular groups of nutritive importance. These process driven biochemical changes are profiled for anticipated future references informing method optimisation.



### Newsletter co-editor (NZ)

Ashtyn L Isaak

Ph.D. Student

School of Biological Sciences

University of Victoria Wellington

I am a marine ecologist working towards disentangling the effects of climate change stressors on photosynthesizing organisms in various ocean environments. Over the past decade I have worked in several regions around the globe as well as for multiple universities, the non-profit sector, private marine consulting, and alongside various US state and federal government agencies. I am currently a PhD student at Victoria University of Wellington in New Zealand. My current research focuses on the effects of varying climate stressors such as marine heatwaves and ocean acidification on macroalgae and coral.





## Two ASPAB PhD thesis submissions in January



Dear ASPAB members,

It has been an honor to serve as a student co-editor for the ASPAB newsletter for more than a year. It was an honour to represent other students from New Zealand and I would like to thank the ASPAB committee for their support. I have had the pleasure of working with Thiru as the other co-editor and Nicolla as the social media manager and I would like to express my sincere gratitude for all their contributions. Recently, I finally submitted my PhD thesis in January 2024 to Victoria University of Wellington titled “Developments in the Cryopreservation of Marine Dinoflagellates”. As I am excited for this incredible achievement, I would like to assure ASPAB that I am still a general member of the society and I look forward to supporting the society in future when I embark into more research activities. Lastly, I would like to wish the new editorial team all the best and I look forward to reading more ASPAB newsletters in future!

Joseph K. Kihika. (former newsletter co-editor)  
Joseph.kihika@cawthron.org.nz

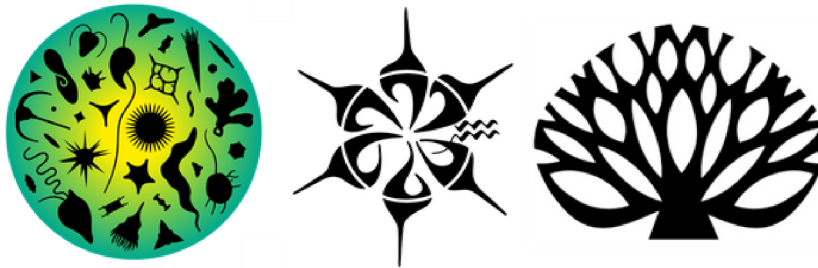


Thiru Somasundaram, a PhD candidate at [NuSea.Lab](#) (Deakin University) has successfully submitted his thesis on the 31st of January 2024 (just two days before his maximum completion date, phew!) at 11 : 05 AM (AEST), precisely. The day was bright and sunny in addition to the planetary alignments, which were all superstitiously favourable 🌞 🗓️ 🍀.

Thiru and his team at [NuSea.Lab](#) celebrated his submission with a success lunch at the Queenscliff Brewehouse, on the same day (they all deserve a salute 🥳). Thiru’s thesis titled “Nutritive value enhancement of *Phyllospora comosa* for enhanced nutritive values” consisted of six solid chapters, 385 pages and 87,827 words.

As this significant milestone now crossed, Thiru sincerely recalled the help he received and expressed his gratitude towards the ASPAB community 🙏.

**2024 JOINT MEETING  
AT THE UNIVERSITY OF WASHINGTON  
JULY 29<sup>TH</sup> – AUGUST 1<sup>ST</sup>**



Greetings Phyco-fanatics,

What's better than algae lovers gathering at PSA 2024? Inviting more of our protist friends!

It's official - the meeting in Seattle will be a joint meeting between PSA, ISOP, and ISEP! As in the past, this joint meeting will be an amazing opportunity to unite the scientific findings and brainstorm impactful research topics for our protist-inclusive societies.

The theme of PSA-ISOP-ISEP 2024 is "From Micro to Macro: Cultivating Resilience in Communities". The scientific meeting will be held in the Husky Union Building (HUB) on the University of Washington campus July 29<sup>th</sup> through August 1<sup>st</sup>, 2024, with pre- and post-meeting workshops and field trips.

The Call for Abstracts will open on February 12<sup>th</sup> and close May 3<sup>rd</sup>, 2024, at 11:59:59 PM EDT.

We look forward to presentations from Algal Ecology to Evolutionary Protistology. In the meantime, we will welcome several plenary speakers, including Drs. Michael Stekoll and Laura Eme. Dr. Stekoll is a renowned researcher on Macroalgal Agriculture and Ecology. Dr. Eme specializes in Evolutionary Protistology and is the recipient of the ISOP Hunter Prize. Various workshops and field trips will be held by experts and engage participants following the manner of inclusion, diversity, equity, and accessibility.

Situated in the Pacific Northwest on Puget Sound, Seattle is surrounded by mountains, forests, and water, replete with kelp forests and abundant biodiversity. It is also the home of Starbucks, Microsoft, Amazon, as well as the Space Needle, Seattle Aquarium, and the famous fish-tossing-fun of Pike's Market, among other attractions. The University of Washington campus is one of the oldest universities on the West Coast. Located in the city's University District, the main UW campus is replete with coffee shops, pubs, and restaurants with local and international fare.

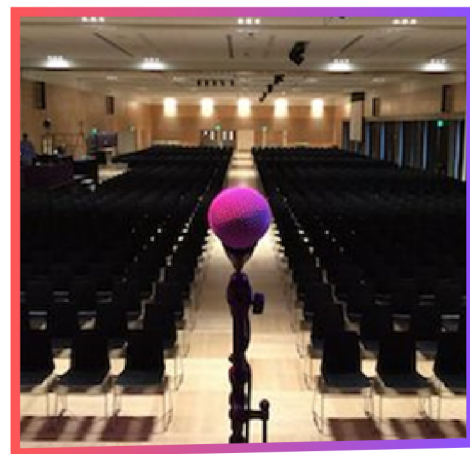
Please save the date, prepare your abstracts, visit the PSA website, and check your inbox for updates as the program is developed.

We look forward to seeing everyone there!

Best wishes,  
Wade Huang, Program Director



The ariel view of the  
University of Washington.  
<https://shorturl.at/bmBCI>



The Ballroom in Husky Union  
Building, the University of  
Washington, Seattle, WA.  
<https://rb.gy/7zclcr>

# The 9th Asian Pacific Phycological Forum

Hokkaido University, Sapporo, Japan  
April 14 - 18, 2024

Algae: Biodiversity, Evolution and SDGs

Welcome to APPF 2024, Hokkaido University, Sapporo, Japan

The 9th Asian Pacific Phycological Forum (APPF 2020) was scheduled to be held in Sapporo, Japan, but was postponed due to the Covid-19 pandemic. Now, the APPF will be held in April, 2024, in Sapporo, Japan as APPF 2024, not online or as a hybrid, but in person.

The APPF is a conference held by the Asian Pacific Phycological Association. The conference, held every three years, is an opportunity for researchers and engineers to gather and exchange ideas and acquire knowledge in a wide range of fields related to algae including basic biology and the applied sciences. To date, the Asia Pacific Phycological Forum has been held in eight countries: Australia (1996), Hong Kong (1999), Japan (2002), Thailand (2005), New Zealand (2008), Korea (2011), China (2014), and Malaysia (2017). The 9<sup>th</sup> APPF (2024) will be held at Hokkaido University in Sapporo, Japan. Hokkaido University has a long history dedicated to the study of algal biology. The theme of the APPF 2024 forum will be "Algae: Biodiversity, Evolution and Sustainable Development Goals (SDGs)". Sapporo is Japan's 5<sup>th</sup> largest city and is located on Japan's North Island, Hokkaido. The city is a popular tourist destination, due to its surrounding nature and pleasant climate. We warmly invite you to attend the APPF 2024 and look forward to your presentations.

Sincerely,

Dr. Kazuhiro Kogame  
Chair  
Local Organizing Committee  
9<sup>th</sup> Asian Pacific Phycological Forum  
(APPF 2024)

For inquiry, please contact Dr. Kazuhiro Kogame, the Chair of the local organizing committee

<kogame@sci.hokudai.ac.jp>



**The topics of presentations include, but are not limited to:**

- Algae as indicators of environmental change
- Algae troubles and prosperity: resource limitations and competition
- The composition and seasonal distribution of algae
  - Diurnal and tidal patterns
  - From taxonomy towards ecology
  - Environment - algae relationship
  - Practical application of algae

<https://41icpps.web.amu.edu.pl>



It is with great pleasure that we announce the 8<sup>th</sup> Congress of the International Society of Applied Phycology, which will take place from June 16 to 21, 2024, in Porto, Portugal.

The ISAP 2024 conference will have a special focus on “Algae 2030: Challenges and Opportunities”, offering an excellent forum for discussions and establishing new partnerships. Over the course of five days, attendees will have the opportunity to present their most recent work, engage in lively discussions and debates, and forge interdisciplinary consortia towards successful attraction of European and worldwide funding agencies. For students, this conference will provide an invaluable chance to exchange ideas, be inspired and create new networks that will be instrumental in their future.

The ISAP 2024 scientific program will be complemented by a diverse social and cultural program, including excursions to noteworthy locations across Portugal that highlight the numerous uses for both micro- and macroalgae. Register now, submit your abstract and stay tuned for more information at [https://is-ap2024.com/!](https://is-ap2024.com/)

We look forward to seeing you in Porto in 2024!

Best regards,

The Organising Committee



## Conference Program

Seagrassiculture EU

18 – 20 June 2024

Tórshavn, Faroe Islands

The theme of Seagrassiculture EU 2024, Bridging Continents, transcends borders and oceans to unite seaweed enthusiasts from diverse corners of the world. We'll delve deep into the global landscape of seaweed cultivation, harvesting, and innovation, learning from the unique experiences and perspectives of experts and enthusiasts from various countries and continents. Get ready to build connections, share insights, and uncover the potential of seaweed on a global scale. Seagrassiculture EU 2024 is where the world of seaweed meets, exchanges, and thrives.

Don't miss out on this limited edition of Seagrassiculture EU – where the future of seaweed unfolds in a setting like no other!

Secure your spot before it is too late!

### Contact information

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+31 85 401 73 97

Chamber of Commerce: 39051673



# Arctic Algae

The 2024 Arctic Algae conference and exhibition will be held in the Arion bank conference hall in the heart of Reykjavik, Iceland on September 4–5th.



Contact : [thor@arcticalgae.is](mailto:thor@arcticalgae.is)





# ISS 2025

## ISS25 Secretariat

c/o Venue West Conference Services Ltd.  
#449-1231 Pacific Boulevard  
Vancouver, BC V6Z OE2 Canada

Telephone: 1 (604) 681-5226  
Email: [secretariat@iss25.com](mailto:secretariat@iss25.com)

May 5, 2024	Call for abstracts open
October 8, 2024	Call for abstracts close
October 15, 2024	Early-bird registration opens
November 12, 2024	Abstract notifications go out
January 13, 2025	Early-bird registration deadline
April 25, 2025	Registration closes



# ALGÆUROPE 2024

10-12 • DECEMBER • ATHENS

**Contact information**

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# New Opportunities, 2024

Two PhD scholarships are available at the School of Earth and Environment, University of Canterbury, New Zealand

The Antarctic research team at the University of Canterbury (UC) is pleased to announce the availability of two PhD student scholarships funded through New Zealand's Marsden Fund. The overarching project, 'Grounding zone estuaries: How can ocean stratification, baroclinicity, and tides beneath 500 m of Antarctic ice influence global sea level rise?' builds on a new set of observational timeseries captured from beneath several hundred metres of ice at three sites within the Kamb Ice Stream Grounding Zone (GZ) of the Ross Ice Shelf. Combining the observational data with numerical modelling, the project will identify the dominant processes in an Antarctic GZ and quantify their effect on the initiation, variability, and fate of ocean-driven ice shelf melt.

## **PhD Project 1:** Grounding Zone Model – Estuarine dynamics focus

A high-resolution version of MITgcm will be used to investigate the estuarine flow of the Kamb Ice Stream GZ as revealed in the direct observations. The GZ is physically constrained by two horizontal boundaries (seafloor & ice shelf base) and fresh water input will be introduced either as basal melt or sub-glacial discharge.

Interaction between barotropic tidal flows and the shape of the GZ cavity (i.e. water column thickness) will be explored through sensitivity experiments using topographic datasets (Bedmachine2, Bedmap2, and the future Bedmap3) and direct observations of ice shelf vertical movement. Additionally, we will investigate the generation and pathways of sub-glacial discharge within the GZ.

## **PhD Project 2:** Observation Site LES model – Vertical heat transfer focus

This project will employ 'Oceananigans' – a cutting-edge ocean model using large-eddy simulation (LES) -- to investigate flow conditions required to break down the observed two-layer stratification, and associated melting feedbacks. The idealised model domain will simulate the full water column (0 ~10 m; horizontal scale of 10-100 m) at 5-50 cm resolution. The simulations will explore the potential for sub-glacial discharge to drive strong flow and enhanced basal melting, both within the GZ and at the cavity scale. The third objective will be to feed new understanding gained by this project into the larger-scale understanding of the GZ within other parts of the overarching project.

**Scholarship includes:** NZ\$35,000 stipend per annum

**Deadline for applications: 28 February 2024**

**For more information and how to apply visit:** <https://nz.indeed.com/viewjob?jk=305cea211c8f05a3>

# New Opportunities, 2024

University of Otago  
Dr. Nathan Kenny

We are looking for a PhD student with interests in animal development, climatic resilience, molecular genetics and/or genomics to work on an exciting project delving into the genetic and molecular origins of climate resilient phenotypes in the kuku (also known as the green-lipped mussel or kūtai, *Perna canaliculus*).

In New Zealand, bivalves such as the kuku are of key economic interest. The New Zealand aquaculture community has an innovative reputation, and has been an early adopter of cutting-edge methods for improving husbandry, including selective breeding programmes. These have identified pedigrees with resilience to thermal stress and ocean acidification. We will use a range of cutting-edge approaches to unpick the molecular origins of these traits.

Depending on student interest, this project could either focus on population and quantitative genetic approaches examining the loci underlying resilient traits, or embryology-centred questions confirming the genetic and phenotypic basis of these differences. The project will include opportunities to work closely with industry bodies and Māori stakeholders, as part of a developing and vibrant research programme.

For more information, contact For more information please contact Nathan Kenny (nathan.kenny@otago.ac.nz). To apply, please send a CV, a cover letter stating your skillset, background, and reason for interest in the position, and two academic referees to either of the addresses above. International applicants with a strong academic and research record are encouraged to apply.

**Scholarship Includes:** Rutherford Discovery Fellowship-funded project, including tuition and stipend

**Deadline for applications: 28 April 2024**

**For more information and how to apply visit:** <https://www.findaphd.com/phds/project/kuku-green-lipped-mussel-resilience-to-climate-change/?p167324>

## Cover story

The cover depicts the importance of marine vegetative environment in producing valuable compounds including fatty acids, phlorotannins, bromoforms, pigments and monosaccharides.

The background image was created using AI (PixlR) prompting a query to depict seaweeds in a shallow water environment with seeping sunlight from the water surface. The critical evaluation of the accuracy of the depicted seaweeds is warranted. However, the molecules were drawn using Chem3D version 22.

Signing off with a smile :)

Thiru