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ASPAB

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the Australasian society for phycology and
aquatic botany



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Cover image: *Dinophysis caudata*, marine dinoflagellate (200x magnification), courtesy - Niki Travell

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The President's Letter

Dear Phycologists and Aquatic Botanists

Greetings!

I hope this letter finds you in good health and high spirits. I am extremely honoured to address you and extend my heartfelt gratitude for your unwavering commitment to our mission especially - Advocacy and Public Outreach.

We are delighted to share that our scientific society has recently gained significant recognition and acclaim over social media platforms such as LinkedIn and Facebook. Additionally, prestigious scientific organizations and industries have acknowledged our contributions in the field of marine science, solidifying our impact. I have received invitations from renowned conference organizers, including Aquafarm and Marine BioConnect23, to deliver talks highlighting ongoing research activities and ASPAB in general. This recognition serves as a testament to the dedication and hard work of our members. I extend a special thanks to our media management team for their efforts in promoting our society's achievements.

However, we are not without challenges. While we are gaining on social media platforms, it is important to acknowledge our lack of contribution to the newsletter. We understand that we are all busy with research projects, HDR supervision, project management, reports writing, and other responsibilities. However, even a small and collective contribution to the ASPAB newsletter is crucial. It allows us to share knowledge, establish thought leadership, promote our mission, increase visibility, and strengthen our community. Let's prioritize this important endeavour to further enhance our society's impact and engage members effectively. Together, we can overcome the challenges and make a meaningful contribution to the newsletter.

Looking ahead, we will have our ASPAB conference in Sydney this year at University of Technology Sydney (UST) on 23-24th November 2023. I invite you all to mark your calendars and actively participate in this enriching event.

Don't forget to renew your membership! As valued members, your continued support is vital to our society's success. Spread the word and invite colleagues and peers to join us in advancing our mission. Together, we can make a greater impact and foster a vibrant scientific community. Congratulations to our members for their achievements in securing research grants and publishing ground-breaking papers and scientific books! I'm particularly excited to mention the publication of the "Field Guide of Seahorses of SEA," a collaborative effort co-authored by our esteemed ASPAB member, Dr. Alecia Bellgrove. These accomplishments demonstrate our commitment to pushing the boundaries of scientific knowledge. Let's continue our pursuit of excellence and make further contributions to our field.

I have unwavering confidence in our ability to overcome challenges and make significant contributions to our ASPAB society. Together, we'll advance understanding, promote collaboration, and impact society.

I'm here to serve you, so please share your feedback and ideas. Contact me at manoj.kumar@uts.edu.au for any questions. Let's embark on this new chapter with determination and passion for scientific excellence.

Sincerely,

Manoj Kumar (Ph.D. Marine Biotechnology)

Research Fellow (Former ARC-DECRA and JSPS Fellow)

Seaweed Tech Lead

President – Australasian Society for Phycology and Aquatic Botany (ASPAB)

Algal Biotechnology and Bioprocessing Research Group| Climate Change Cluster (C3)

Faculty of Science| University of Technology Sydney, Australia

Tel: +61 02 9514-7275| Email: manoj.kumar@uts.edu.au

Letter from the editors

Dear Members,

Let's take a breath and celebrate what we have achieved together, so far in this year! UTas lead group of international psychologists succeeded in setting up the stage for a new psychological era. International seaweed symposium held in Hobart was a huge success! Congratulations to the International Seaweed Association and team Australasia!

Our PhD students are completing or near completion of their amazing journey. Let's take a moment to cherish their struggle, dedication and sacrifices over last few years in contributing to our discipline. Thank you!

Our ECRs, have proven their skills in navigating a never preceded challenging times to "get things done" with colours and moved on to help organizations achieve their research targets. Congratulations!

Our senior lecturers, associate professors and professors have shined their wisdom to guide an entire cohort of researchers towards a progressive path, avoiding pitfalls and/or repeating the past. I am sure they are happy as we are in celebrating ASPAB members' achievements.

That's not all. There is one more reason to celebrate. We welcome Niki on board as our new co-editor! Welcome Niki!

Regards,

Thiru

ASPAB Committee 2023



AUSTRALASIAN SOCIETY FOR PHYCOLOGY AND AQUATIC BOTANY



The president

Dr Manoj Kumar
Climate Change Cluster, Faculty of Science
University of Technology Sydney (UTS)

I'm a marine biologist and a research fellow at University of Technology Sydney (UTS). I am leading seaweed research group at UTS with primary interest in seaweeds aquaculture, ecophysiology, micropropagation, and algal biorefinery prospects. I first attended ASPAB meeting in 2010 as a PhD student and have been associated with ASPAB as a general member, newsletter editor and Vice president over the last couple of years. I am excited to be a president for ASPAB and looking forward to work with new ASPAB committee to promote ASPAB's vision, mission and overall direction.



Vice -president

Dr John Huisman
Curator
Western Australian Herbarium

I'm an algal (seaweed) taxonomist and currently the curator of the Western Australian Herbarium. My primary interest is in the red algae, but I dabble in most groups. I first joined ASPAB in 1980 (gulp!) and was president from 1994-97.



Secretary

Prof. 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.

Committee...



Treasurer & Membership Secretary (AUS Chapter) & Social Media Co-Ordinator.

Niki Travell

Phytoplankton taxonomist – Perth, Western Australia.

I am a Phytoplankton taxonomist with a special interest in dinoflagellates and HAB species. I work as an independent consultant, having previously worked for both United Kingdom and Western Australian government; contributing to long term water quality monitoring, HAB and Shellfish Biotoxin monitoring programmes.

I joined the ASPAB Committee earlier this year and look forward to being part of the society.



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.



Website Manager and NZ Membership Secretary

Dr Daniel Pritchard

Senior Research Fellow

University of Otago

I am with the University of Otago as a senior research fellow, with a climate-change focused coastal research group (Coastal People Southern Skies). I am a seaweed ecophysiologicalist (and I guess hydrodynamic modeller) by training, though in recent years I have also been working more widely in coastal fisheries and environmental monitoring.

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.



Student Representative (AUS)

Flora Lam Kim
PhD Candidate
Deakin University



General member (AUS)

Francis D'Souza
Senior Environmental Officer
Department of Water and Environmental Regulation, WA

Committee...



General member (AUS) & Social Media Manager

Danielle Halliday
Phytoplankton Ecology Unit, Aquatic Science Branch,
Department of Water and Environmental Regulation, Western
Australia (DWER).

I'm a microalgal taxonomist in the Phytoplankton Ecology Unit (PEU) at the Department of Water and Environmental Regulation (DWER). Where I analyse microalgal samples from Western Australian estuarine monitoring programs and ad hoc bloom samples. I'm relatively new to working with microalgae, where I have been working in the PEU for approximately 3 years. Before this, I focussed my career on aquatic invertebrate taxonomy. 2022 was my first ASPAB conference, where I enjoyed the broad knowledge-base and supportive, collegial approach.



Newsletter co - editor (AUS)

Thiruchenduran Somasundaram
Ph.D. Candidate
[NuSea.Lab](https://www.nusea.la)
Deakin Queenscliff Marine Science Centre
Deakin University

I am a Ph.D candidate at the Nutrition and Sea food laboratory of Deakin Queenscliff Marine Science Centre. I am working under the scope of the applications of bio processing technologies in algal postharvest handling for enhancing their nutritive value aiming to increase their cultural (agri, aqua and micro) utilization.



Newsletter co-editor (NZ)

Joseph Kanyi Kihika
PhD Candidate
School of Biological Sciences
University of Victoria Wellington

I am a third year PhD candidate with the School of Biological Sciences, Uni of Victoria Wellington and Cawthron institute, New Zealand. My research focus is on Cryopreservation of marine microalgae; assessment of their molecular integrity. I am really excited to be the ASPAB co-editor representing New Zealand.

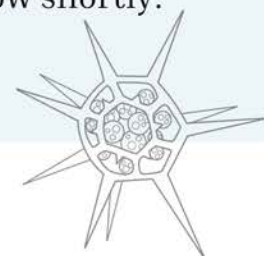


The ASPAB Committee is pleased to announce the venue for the 37th ASPAB Conference;

Dr Chau Chak Wing Building, UTS Sydney

Thank you ASPAB President Dr. Manoj Kumar, for securing this wonderful location!

More information on registration process and abstracts will follow shortly.



37th ASPAB Conference

Australasian Society for Phycology and Aquatic Botany

23 - 24 November 2023,

SYDNEY



The Australasian Society for
Phycology and Aquatic Botany



<https://www.aspab.org/>

Membership Renewals

Please remember to renew your membership with ASPAB,

Please visit:

<https://www.aspab.org/join/>



New Zealand Membership Renewal

Please email to Daniel Pritchard
daniel.pritchard@otago.ac.nz



Australia Membership Renewal

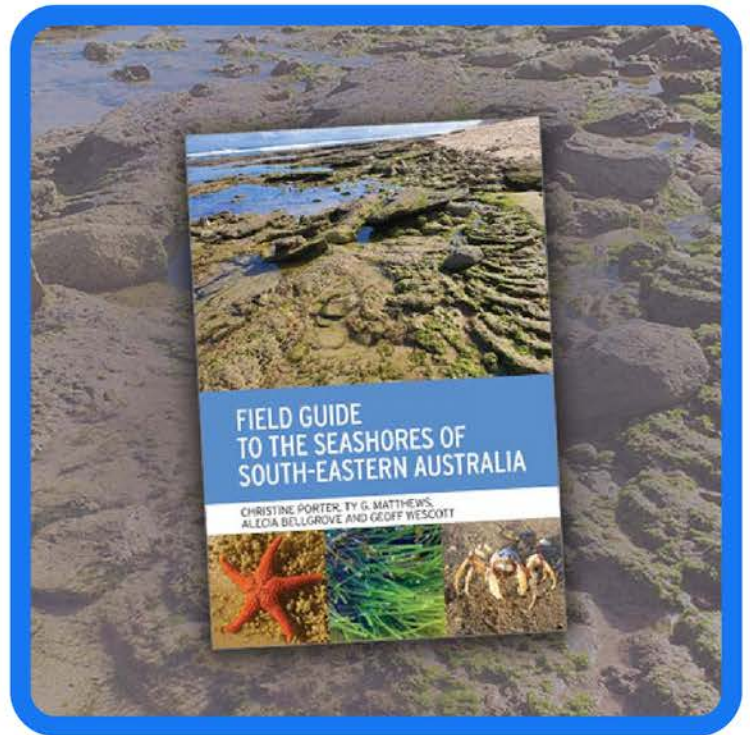
Please email to Niki Travell
niki.travell@outlook.com



Publications

A new field guide listing common plants and animals found along South-Eastern Australian shorelines has been published by CSIRO.

Congratulations to long term ASPAB member Dr. Alecia Bellgrove, and co-authors on your recent publication!



You can pick up a copy at your local book store or order online;
CSIRO Publications

<https://www.publish.csiro.au/book/8030/>



How species respond to their environment?

How species respond to their environment can also vary between populations within a single species. There may be a genetic basis for this (selection on isolated/semi-isolated populations), or it could be due to a large amount of phenotypic plasticity inherent in the species.



We studied this in the red alga *Catenella nipae* from New Zealand. We were fortunate to have a visiting algal ecophysiologicalist, Rachel Carmona (photo 1), University of Malaga Spain, her expertise is algal physiological responses. She enjoyed seeing Northland, a warmer part of New Zealand! *Catenella nipae* is a mostly estuarine algae (saltmarshes or mangroves).

We collected populations from northern New Zealand, where they grow in abundance on mangroves (photo 2). It is really abundant and large amounts can be collected easily. We also collected from populations in the southern North Island (in saltmarshes). After a brief acclimation to the lab, we tested their photosynthetic efficiencies and growth rates in various temperature conditions in the lab. While the results are not done yet, we hope that we can see that selection has led to variation between populations that is inherited and suggests that they will all respond differently to ocean warming (i.e. climate changes). Joe Zuccarello

Publication alert

Wen X., Zuccarello G.C., Shim E., Kim SY & Kim G.H. 2023. A new species of the red alga *Erythrotrichia* (Erythropeltales, Rhodophyta) from Korea: *Erythrotrichia johnawestii* sp. nov. and observations in culture. *Botanica Marina* (Add a little bit of body text).

West J.A., Zuccarello G.C., Verbruggen H. Powling J., Miller J. & Loiseaux-de Goër S. 2023. *Amoenthamnion planktonicum*, (Heterothamniae, Ceramiaceae, Rhodophyta) an annual drift event along sandy beaches of southern Australia and its affinities. *Notulae Algarum* No.271.

Zuccarello G.C., West J.A., & Loiseaux-de Goër S. 2023. *Bostrychia australiana* from Australia, a new species segregated from *B. kelanensis* Grunow ex Post (Rhodomelaceae, Rhodophyta). *Notulae Algarum* No. 268.

Dumilag R.V., Crisostomo B.A., Aguinaldo Z-Z.A., Hinaloc L.A.R, Liao L.M., Roa-Quiaoit H.A., Galon-Dangan F., Zuccarello G.C., Guillemin M-L., Brodie J., Cottier-Cook E.J. & Roleda M.Y. 2023. The diversity of euclidean seaweed cultivars in the Philippines. *Reviews of Fisheries Science and Aquaculture* 31: 47-65.

Zuccarello G.C., Wen X. & Kim G.H. 2022. Splitting blades: why genera need to be more carefully defined; the case for *Pyropia* (Bangiales, Rhodophyta). *Algae* 37: 205-211.

Zuccarello G.C. & D'Archino R. 2022. Genetic diversity of sympatric *Schizymenia dubyi* and *S. apoda* (Schizymeniaceae, Rhodophyta) in Wellington Harbour, New Zealand. *Phycologia* 61: 549-557.

New Opportunities

MASTERS, PHD, POST-DOC, EMPLOYMENT

Two PhD scholarships available for projects on functional resilience in coastal soft-sediments!

The loss of biodiversity across ecosystem domains globally is concerning since species diversity underpins functional, healthy, and resilient ecosystems. Species can be present in an ecosystem but due to low density, low size or behaviour change they do not contribute to functioning across their environmental niche. This “functional plasticity” complicates accurate future projection of functional changes. Changes in functional plasticity can occur across relatively small environmental gradients, and the implications of even small shifts in an organism's behaviour are significant for ecosystem function and resilience. Thus, understanding the functional operating spaces of key species and communities of organisms (i.e., not just their presence and absence) is critical to accurate future environmental scenario development.

We are interested in candidates who have an interest in topics including but not limited to: 1. Characterising the behavioural ranges of functionally important species (or traits) across key environmental gradients; 2. Identifying the optimal ranges for benthic community performance; 3. Linking behavioural ranges of species and communities to shifts in multifunctionality and resilience; and 4. Integrating behavioural and functional data to identify future shifts and environmental scenarios for coastal soft-sediments. Scholarship applications will remain open until filled.

The students will join a productive research group led by Prof Simon Thrush with access to world-class laboratory and field equipment, as well as well-established connections with researchers throughout New Zealand and internationally, allowing the PhD candidate to be exposed to multiple opportunities. The PhD scholarship will fully cover the student's stipend and fees. The candidate can choose to be based at either the university's Auckland city campus or at the Leigh Marine Laboratory (approx. one hour north of Auckland).

*Candidates must meet the entry requirements for the doctoral program at the University of Auckland (<https://www.auckland.ac.nz/en/study/study-options/find-a-study-option/doctor-of-philosophy-phd.html>). To submit an expression of interest for the position, potential candidates need to send a CV, a copy of their academic transcript and a brief (max 1 page) statement of research interests, including how they align with the proposed research area, to Jaime Rowntree: jaime.rowntree@auckland.ac.nz. Potential candidates may also email Prof Simon Thrush (simon.thrush@auckland.ac.nz) to discuss their ideas for the project prior to submitting their documents....**Deadline.... 31 Dec 2023***

New Opportunities

MASTERS, PHD, POST-DOC, EMPLOYMENT

Masters research project - putting ecology into blue economies and business accountability

We are looking for an aspiring Masters student to undertake a research project (90-120 point) on advancing the use of ecological knowledge to inform the future Aotearoa-based sustainable finance frameworks supporting sustainable finance investment on marine ecosystems. The project will in the first instance be based on the Hauraki Gulf.

The role of business and investment in supporting blue economies and ecological sustainability is growing in importance. This trend recognises the importance of reversing biodiversity loss, redirecting financial flows away from environmentally harmful activities towards nature-positive outcomes and mitigating and managing nature-related risks. Frameworks such as Taskforce on Nature-related Financial Disclosures (TNFD: <https://framework.tnfd.global/introducing-the-tnfd-framework/>) are under development to help businesses understand how they depend upon and impact nature as well as, what are the risks and opportunities from their business operations and investment portfolios. Such frameworks are designed to show the current state of how they interact with nature. But currently, they are only lightly informed by ecological knowledge, are missing local social-ecological context and are not focused on blue economy initiatives.

*This project will build on ecological knowledge and publicly available frameworks, and adapt them to marine coastal ecosystems and trial application for the Hauraki Gulf. This project would suit a student who has sound knowledge of marine ecology and sustainability, is interested in studying nature-people relationships, and sustainable finance mechanisms, and/or is interested in career opportunities in consultancies, corporates or financial institutions. The project will be based in the Institute of Marine Science, being supervised by Prof Simon Thrush and Associate Professor Nick Lewis (School of Environment). There is also the potential for mentorship from Dr Eva Siwicka (Assistant Manager, Sustainable Value Team, KPMG). Some assistance with fees is possible. We will keep this position open until we find the right candidate, but this position is available to allow the research to **start in Semester 2 2023**.*

Please send an expression of interest and CV to Jaime Rowntree jaime.rowntree@auckland.ac.nz