

PHYCOLOGICAL NEWSLETTER

MESSAGE FROM THE PRESIDENT



Dear friends and colleagues,

I hope you all had a great summer and that your psychological endeavors were inspired and productive. I saw many of you at the PSA Annual meeting in Providence, Rhode Island, which was a huge success! Besides all the wonderful presentations, I particularly enjoyed the Early Career Breakfast, spearheaded by our Past President Deb Robertson and our IDEA committee, where post-docs, grads, and undergrads could chat with each other and more senior PSA folks about science and maximizing our time together. What a wonderful way to build community and kick off the annual meeting! I hope this new tradition continues into the future. Our 2024 annual meeting will be in Seattle, Washington when we will gather with the International Society for Protistologists (ISOP), and judging by the huge success of our last joint meeting in Vancouver, BC, this next joint meeting in Seattle promises to be fantastic - save the date

and details to come VERY SOON!

I continue to work closely with the PSA Executive Committee to renew our publishing contract with Wiley. There has been considerable back and forth with the publisher, but I'm pleased to say that we are approaching the finish line. The entire PSA leadership – and particularly Kirsten Müller, the Managing Editor of *Journal of Phycology* – are firmly committed to protecting the integrity and high-quality of our journal, ensuring steady income to the society, and working to make the journal accessible to both readers and authors, as the publishing world changes around us. I would encourage you to read the letter penned by Kirsten in this Newsletter to learn more about changes to our beloved journal, including a move to online-only starting in 2025.

Finally, in the last few months, I have been reviewing all of the PSA standing committees, meeting with all of our committee chairs, and thinking carefully about how our society operates. There have been many insights and recommendations that I'm eager to share with the executive committee later this year. But one recent initiative that I'd like to highlight is my successful solicitation of PSA members (via Google form) who want to serve the society and fill committee vacancies. Dozens of you responded to the call! This move paves the way for motivated members from diverse backgrounds to get involved in PSA activities and perhaps prepare them for future leadership roles. My hope is that this small action will breathe new life into our committees and strengthen our amazing psychological community.

Best wishes on the year ahead,
Patrick T. Martone, President

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Follow PSA on
X (aka Twitter)!
[@PSAAlgae](https://twitter.com/PSAAlgae)

Thoughts from the President-Elect: I am eight months into my term as PSA President-Elect and after an initial quiet month or so, things rapidly gathered pace. A major part of my role this year has been part of the group renegotiating the Journal of Phycology contract with Wiley.

Things are moving fast in the scientific publishing world and with the move towards open access, there is no doubt that science, learned societies, institutions and others are entering a period of change that will completely transform publishing. Whilst open access creates equity (in theory), there are a number of risks associated with these changes. Regions of the world that do not have Transformational Agreements (TAs; at least not yet) are at a disadvantage, with the risk that the whole system is not equitable. I think we will only know what this disruptive change looks like retrospectively at an unknown time in the future. In the meantime, I consider that PSA is more important than ever for phycology, not least providing an environment for early career people and working to enhance diversity.

Meanwhile, it was wonderful to attend the first post-covid PSA meeting in person in Providence, RI. It is amazing what we are able to achieve working remotely, but there is nothing like the synergy of meeting with colleagues, catching up with old friends, and forming new friendships. We do have to consider the environmental costs of travel but there are strategic ways forward to potentially mitigate the impact, including considering meetings we have in the future.

It looks like the next few months of this phase of my PSA term will continue to be busy, not least getting my head around all the committees and the intricacies of the handbook. Fortunately, there is plenty of help and wisdom from the current President, Patrick Martone, the former President, Deborah Robertson, and many others.

Whilst I have been writing this, I have been thinking back to when I had my first experience of Society committee work on the British Phycological Society Council. I was recruited ('tapped on the shoulder') because I had just started a permanent post. I do not think 'no' was an acceptable answer. However, it was a fascinating insight into how Societies run and the potential of what could be achieved in supporting phycology and phycologists. I know that some of you are keen to get more involved. You do not have to wait to be invited, just come forward and see where you can get involved. We need volunteers across all committees. It is a great way to help with developing your career, to learn a wide range of transferable skills. It can be challenging but ultimately inspiring and important.

Juliet Brodie
11 August 2023

PSA NAMES 2022 NORMA J. LANG FELLOW: ROKSANA MAJEWSKA



Congratulations to Dr. Roksana Majewska (Faculty of Biosciences and Aquaculture, Nord University, Norway and Unit for Environmental Sciences and Management, North-West University, South Africa) who was awarded the 2023 Norma J. Lang Early Career Fellowship. Dr. Majewska will receive up to \$10,000 to support her research project entitled “Epizoic diatoms as health indicators of sea turtles and their habitat”. Dr. Majewska will also receive \$1000 every year of her three-year term as a Lang Fellow to attend the annual PSA meeting.



Dr. Norma J. Lang was a former PSA president and an internationally recognized phycologist who made many contributions to algal research and education over her illustrious career. To learn more about the Norma J. Lang Early Career Fellowship, visit the [Fellowship page here](#).

PSA now accepts donations through Paypal.
Please consider a donation to support PSA students and their research!
<http://www.psaalgae.org/endowment-donations>

THE NORMA J. LANG EARLY CAREER FELLOWSHIP

Norma J. Lang Early Career Fellowship

In 2024, PSA will select its 8th Lang Fellow. Named in honor of the late Norma J. Lang, this fellowship will grant a one-time payment of \$10,000 USD to one early career researcher, who will be a Norma J. Lang Fellow for three years. Applications will be accepted from Postdoctoral Fellows, Pre-Tenure Faculty, and others (those not in traditional academic positions) who are members of the society and are within 10 years of completing their Ph.D. Applications from international members are welcome, but all application materials must be in English. Individuals must be employed by a university or other non-commercial entity and be doing research on algae. The purpose of this award is to provide "seed" money for projects, with the ultimate goal of increasing the likelihood of federal or other grant funding for the recipient. It is expected that the Fellow's home institution will cover any indirect costs as an institutional match.

For more information please see the [Lang Fellow page](#) on the PSA website.

Deadline: April 15, 2024

The Lang Fellowship and PSA's many other student and postdoc awards are sustained by charitable contributions to the Phycological Society of America Endowment. Contributions can be made via [PayPal](#).

News from the PSA Board of Trustees

Funds Manager Steve Murray reports that the Endowment is very healthy. Although its market value declined somewhat during 2022 due to effects of inflation on bonds and increases in the benchmark interest rates by the Federal Reserve, it has rebounded in 2023 and as of June was again over \$3-million. More important to PSA than the market value, however, is the earned income from the Endowment since this is what we are able to spend to support student awards and other Endowment-funded activities. The earned income from the Endowment actually increased in 2022 even though the market value declined and that increase in earnings has continued into 2023. Consequently, we have and expect to continue to have more than enough income to support EC-approved Endowment expenditures.

The PSA Auction in Providence was a great success, raising just under \$5,000 for the Endowment. We are very grateful to everyone who contributed items for the auction and who participated in it at the meeting.

In 2016, then BOT Chair initiated a PSA "Legacy Society" to acknowledge those of us who have chosen to include PSA in our estate plans. This has been informal ever sense and many members, particularly recently-joined members, are likely unaware of it. BOT member Michelle Wood has been working diligently on BOT plans to make this more formal and better publicized within PSA. The BOT and EC agreed to move forward with these plans, and decided that a better term for the program would be "Legacy Fellows". Expect to see a roll out of Legacy Fellows and an easy to use web page to let us know if you are or plan to become a Legacy Fellow later this year.

Chuck Amsler
Chair of the BOT

Hilda Canter-Lund 2023

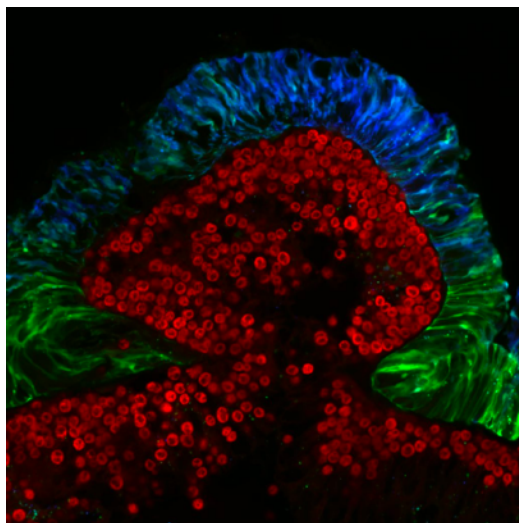
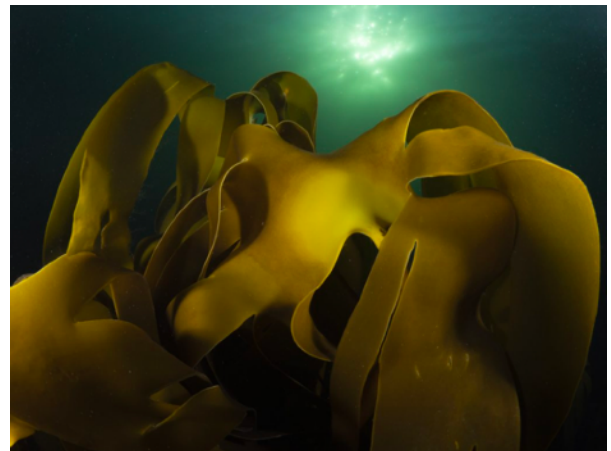
adapted from an announcement by Martyn Kelly from the [British Phycological Society](#)

This award was established by the British Phycological Society in recognition of Hilda Canter-Lund, whose stunning photographs will be known to many members. Her photomicrographs of freshwater algae combined high technical and aesthetic qualities whilst still capturing the quintessence of the organisms she was studying. The winner of the 2023 award was **Shannon Moran** in the *Macro category* for her image *Golden Kelp in Evening Light* and **Giulia Marchioro** in the *Micro category* for her image *Zooxanthellae and the fluorescent chamber*. Highly commended images were submitted in the *Macro category* by Samantha Clements for *San Clemente Island Giant Kelp* and Alex Thomson for *Painted ceiling* and in the *Micro category* by Ana Knezevic for *Red Beauty*, Callum Whyte for *Armoured buddies*, and Pichaya Lertvilai for *Macrocytic pyrifer*.

Golden Kelp (*Laminaria ochroleuca*), aptly named due to its rich gold colour. This image was captured just a few meters below the surface in Falmouth, Cornwall. Photographed in the early evening light using an Olympus EM1ii in a Nauticam underwater housing, with a Lumix 8mm Fisheye lens and two Inon strobes providing fill-in flash, illuminating the kelp in the foreground.

Shannon Moran is an award-winning underwater photographer based in Cornwall, UK. After graduating from Marine and Natural History Photography in 2020, she has continued to photograph the incredible marine life found in our oceans.

Twitter @Shannon_Photo, Instagram @ShannonMoranPhoto



Zooxanthellae is the informal term for golden-brown algae (dinoflagellates) living in symbiosis with corals. Corals produce a variety of green fluorescent protein (GFP)-like compounds to protect the zooxanthellae from harmful radiation in shallow-water environments, thus preserving their relationship. The image was taken using confocal microscopy (Zeiss LSM 780 at 64x) that allows for capturing natural fluorescence from both host proteins (in green/blue in the coral epidermis) and the chlorophyll (in red) present in the zooxanthellae.

Coral species: *Echinopora lamellosa* from Haus des Meeres: Aqua Terra Zoo, Vienna, Austria.

Giulia Marchioro is a Ph.D. candidate at the Vienna Doctoral School of Ecology and Evolution and the Natural History Museum Vienna, in Austria, funded by FCT, Portugal. Her collaborative project with the Adameyko lab at the Medical University of Vienna and the Haus des Meeres focuses on the investigation of the distribution patterns and

expression profiles of fluorescent proteins (FPs) in mesophotic corals and how FPs can modulate light use by the coral's photoautotrophic endosymbionts (zooxanthellae). Giulia has always been fascinated by marine life and diving, but it was during an internship at HIMB (USA) in 2015, she became passionate about coral reefs and in exploring and understanding the wonders of this environment.

Update from Membership Director

Happy Fall, Phycophiles!

I have a very brief update on the current PSA membership: to date, we have 568 active members. We have added 89 new members in 2023 and we continue to support our colleagues and students from developing countries (please let us know if you would like to sponsor a student membership for someone!). Membership dues and *Journal of Phycology* subscription fees will remain the same for 2024.

Renewing your membership and journal subscription:

October is an important month for PSA membership – you should have received your first renewal notice from Wiley, along with the Membership Director's letter (penned by yours truly), outlining the details of membership benefits and other relevant information. Now is a great time to renew for 2024! Follow the link in the Wiley renewal notice to renew your subscription, or find it [here](#).

If you are a student member, you may not need to renew this year – your membership is valid for three years. Similarly, lifetime members do not need to take any action. A quick way to check your membership status is by logging into our member directory on [Wild Apricot](#). Please note that I update the WA database based on monthly notices from Wiley – so WA may not immediately reflect your correct membership status if you have just recently renewed.

Benefits of PSA membership: tell a friend!

- PSA members receive the *Journal of Phycology* six times a year, including electronically and on mobile devices. **Please note that the *Journal* is planned to transition to online-only in 2025.** If you are not sure how to access the *Journal* electronically, please let me know and I will help.
- PSA members can search and obtain full-text electronic papers from all issues of the *Journal of Phycology* (back to Volume 1, 1965).
- Student, postdoctoral, and early-career faculty members are eligible for a variety of grants – the full list can be found [here](#).
- Members receive a pdf copy of the *Phycological Newsletter* (also downloadable [here](#)).
- Members pay lower registration fees at our annual meetings.
- And, of course, the best part of your membership is being in great company of other algae enthusiasts!

Please note that page fees for the *Journal of Phycology* will cease altogether in 2024, except for open-access articles, which are subject to separate charges.

Thank you for continuing to support our community, and please email me (membership@psaalgae.org) if you need any help related to your membership!

Karolina Fučíková
Membership Director

Update from *Journal of Phycology*

Wiley Contract Negotiations

As many of you are aware, we are coming to the end of our contract with Wiley. The Executive Committee for PSA sent a team to Oxford to discuss a potential contract in April. This included me, Deb Robertson (Past President), Steve Murray (Fund Endowment Manager), and Juliet Brodie (VP). Following that, a revised proposal was shared with Patrick Martone (President) and the executive committee and Wiley is now drafting the contract for signing. Some key elements for the journal include:

1. Going online only as of January 1, 2025
2. Moving to continuous publication (papers fill each issue until the end of the second month); this is a big positive in terms of publishing papers quickly.
3. Removing page charges for non-members as of January 1, 2024
4. Removing colour page charges as of January 1, 2025
5. Remaining a hybrid journal, meaning that authors may pay for open access if they choose (if no transitional agreements exist between Wiley and their country or institution(s)—please see my email to membership regarding TAs below my signature); if authors choose not to pay for open access (or have no TA), then they DO NOT need to pay to publish, but their article will remain behind a paywall as it currently stands now.

Open Access and the Journal of Phycology

The landscape for scientific publishing is changing quite rapidly and more countries and institutions are establishing transformational agreements for publishing open access. This includes Wiley, the publisher of our *Journal of Phycology*. I also sent out an email regarding open access to our membership in early July, but I would like to share this information again here.

If you would like to know if you can publish open access in our Journal, please check out the following link where you can add in your information and get an email about open access privileges that may be available at your institution:

<https://m.info.wiley.com/webApp/openaccess?campaign=dartwol%7C5398761111>

The following two link includes these agreements by country:

<https://authorservices.wiley.com/author-resources/Journal-Authors/open-access/affiliation-policies-payments/institutional-funder-payments.html>

<https://authorservices.wiley.com/author-resources/Journal-Authors/open-access/affiliation-policies-payments/index.html>

It is important to note that each agreement has specific eligibility criteria to have your manuscript as open access (e.g., corresponding author must be from that institution/agency) and I recommend reading these over.

New Paper Types

Last year we introduced a new paper type, *Methods*, to include publication of databases and methods that would be of use to the broader community.

Coming soon is another new paper type, *Genome Resource*, for our community to publish genomes or transcriptomes that may be languishing on shelves:

Genome Resource

Short data descriptor papers on genomes and/or transcriptomes of algae and cyanobacteria of interest to the broader phycological community. 2-5 journal pages

- Brief introduction including relevance
- Methods
 - Include sequencing and bioinformatic methods
 - Collection information regarding the organism(s) (e.g. field collections, culture collections, herbaria)
 - Deposit information for the genome(s)
- Three figures
 - Circular genome diagrams should be included in the supplementary data
- Brief combined results and discussion

Please keep an eye open on the Wiley *Journal of Phycology* page for instructions to authors as we will be updating this soon: <https://onlinelibrary.wiley.com/page/journal/15298817/homepage/forauthors.html>

This fall, Wiley will also be migrating from ScholarOne to Research Exchange (Rex), a new platform for submissions. It is easier to use for submitting authors and you will be able to see all your submissions to Wiley journals in one place.

A big thank you to everyone who works to make our Journal a success, Megan Sherritt (Assistant Editor), the Editorial Board, the Associate Editors and the Co-Editorial Team!

Lastly, the editorial team looks forward to seeing your papers as they are submitted to the *Journal of Phycology*. Remember that we, as members, can increase the impact factor of our journal with our submissions - this in turn benefits our society and the profile of phycological research in the broader scientific community.

Kirsten Müller
Managing Editor



PSA Providence, RI 2023

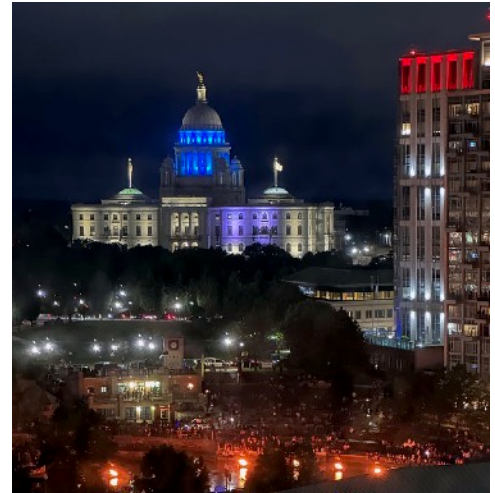
After many years waiting to attend PSA in Providence, we met from 25-29 June 2023 at The Graduate Providence Hotel. The meeting was a success and it was great to catch up with old friends and make new ones in person. All photos by Stacy Krueger-Hadfield, Communications Director.



Wallpaper - though not algae still enchanting!



Providence by daylight



WaterFire Providence



Early Career Breakfast



Presidential Symposium by Fabien Burki



Poster session



Contributed session



Auction item



Full house for auction



Auctioneer Chuck Amsler



Auctioneers and assistants: (from left to right) Sarah Shanker-Connelly, Anna Crowell, Chuck Amsler, Chuck Delwiche, Maggie Amsler (front), Heather Spalding (behind), Brinkley Thornton, Sarah Thornton, Hannah Oswald



Time for the banquet and catching up with colleagues over dinner and awards.



President Patrick Martone awards outgoing student rep Soren Schipper her plaque.



President Patrick Martone awards outgoing program director Schonna Manning her plaque.



President Patrick Martone awards Past President Deb Robertson her plaque.



2023 Bold Awardee Maisie Roy-Musor

I am incredibly honored and thankful to have received the 2023 Harold C. Bold Award. I started my academic work at the University of Maine studying Chemistry, primarily materials, and accidentally fell in love with algae when I realized something: They were much better chemists than I was! I wanted to understand how they used chemistry to interact with their environment, so I came to the University of British Columbia to study seaweeds because I was enamored by such a seemingly simple but largely untouched question that was posed to me: how do kelp adhere themselves to the ocean floor?

Jumping into the field of biology and phycology has been terrifying and challenging but so incredibly rewarding. It has allowed me to place my chemistry background into diverse ecological and evolutionary

contexts and helped me become a better communicator in order to work in such interdisciplinary ways. To come back home to New England, share what I've learned about kelp adhesives from the last few years, and finally interact with the PSA in person has been a treat. Any time that people are excited to hear about chemistry is a treat to me, but I've been beyond thankful by the reception of my work. I feel like I've been welcomed in open arms to the community and know that I have many more years to come with PSA.



Bold Session presenters: Brinkley Thornton, Ian Rolfe, Angela Korabik, Lauren Lees, Davis Fray, Maisie Roy-Musor, Shelby Penn, and President Patrick Martone.

2023 Lewin Awardee Ray Radick

This annual PSA meeting was the largest conference that I have ever attended, as well as my first conference outside of a small regional group. I really enjoyed the opportunity to make connections and share my research with folks from all over. My research focuses on marine invertebrates living in an invasive-like red alga in the Northwestern Hawaiian Islands. As it spans both the algal and invertebrate worlds, I was a little nervous about the reception of my poster at the conference. However, everyone I spoke with was very welcoming. I presented my poster on the first day of the actual conference, and several people that I had spoken to earlier that day or at the workshops braved the crowded room to speak with me about my poster. I really appreciated everyone's insight and received some excellent feedback from folks of many different phycological disciplines. I was fortunate to receive the Lewin award, which is the first award that I have received for my graduate research. This honor, as well as the privilege of meeting so many fantastic phycologists, cemented this conference as a very memorable experience. I look forward to attending the next annual PSA meeting!



2023 Undergraduate Poster Awardees Risa Ogushi and A.G. Camara



Matt Ashworth with Undergrad poster awardees Risa and A.G.

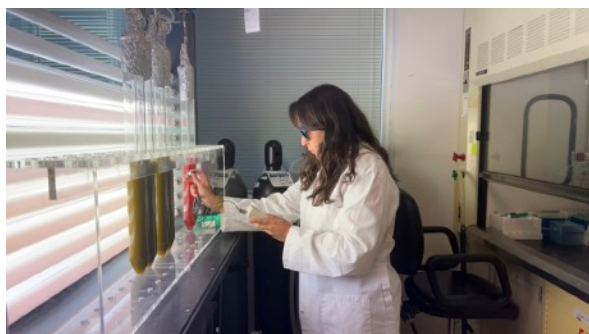
A.G. Camara: This year's PSA meeting was my first chance to attend a scientific conference and I couldn't have imagined a better introduction to the phycological community. As an undergraduate researcher, I found everyone present to be supportive and welcoming. For the past three years I have had the opportunity to be involved in research within Dr. Kodner's lab at Western Washington University and examined snow algae cysts found in a sediment core as my senior thesis project. Through looking at these snow algae cells we have been able to catch a glimpse of past algae populations and gain a better understanding of how changing climate may effect snow algae life cycles. At this year's PSA meeting I was able to present a poster on this research project titled Characterization of *Chlainomonas* sp. in Sediment Core Samples from Bagley Lake in Correlation with Sediment Composition and Glacial History. I am honored to have been a winner of the undergraduate poster competition and am grateful to Dr. Kodner and all the co-authors of this poster for their

help and guidance. This experience has been foundational in that I am now inspired to continue working within the field of phycology while pursuing a graduate degree.



Hoshaw Awardees with President Patrick Martone (far right)

Hoshaw Awardees wrote some short snippets about their awards. We will be publishing them on the [PSA Website](#) and in forthcoming editions of the Newsletter so if you received a Hoshaw award it's not too late to send us how the Hoshaw Award advanced your career!

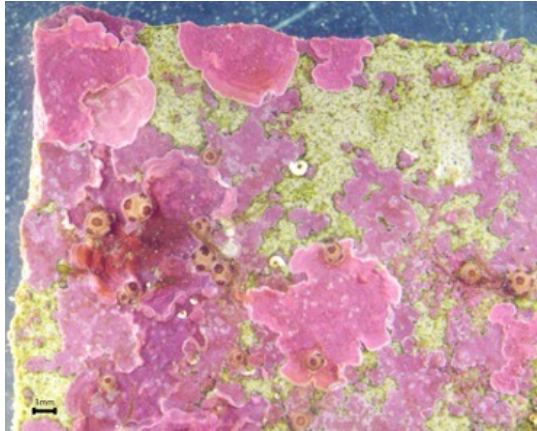


Kyarii (Kia) Ramarui: I am a PhD candidate at the University of Maryland Center for Environmental Science (UMCES). I conduct my research at the Institute of Marine and Environmental Technology (IMET) in Baltimore, Maryland, which is one of several units across Maryland that make up UMCES. My research focuses on the green microalga, *Haematococcus pluvialis*, which is a biotechnologically relevant species due to its ability to produce large amounts of the potent antioxidant, astaxanthin. Specifically, I use molecular biology, biochemistry, and bioinformatics techniques to understand the dynamic metabolism of *H. pluvialis* under different growth conditions that result in increasing biomass or production of astaxanthin.

I was awarded a Hoshaw Travel award from the Phycological Society of America which enabled me to attend the annual meeting this past June in Providence, Rhode Island. This was the first time I had ever attended a PSA meeting, as well as the first time I gave a talk at any professional meeting. I was happy to see the large number of students in attendance, including undergraduate and graduate students, and I was even more pleasantly surprised that many of the talks and posters were presented by students. I was particularly impressed by the Bold Award session talks, and I was inspired to apply to give a Bold Award talk at next year's annual meeting. Since my talk was in the afternoon on Thursday, I had a few days to see other talks and get a sense of the breadth of this field. My research is very focused on only one species in a context greatly removed from its natural environment, so it was very interesting to hear talks about other species of algae regarding their evolution, ecology, and how they fit in to the topic of climate change. Ultimately, by the time the day came for my session, I was very excited to give my talk, and I was grateful for the questions I was asked during the Q&A, as well as during the break between sessions.

I felt a great sense of community at the PSA meeting that was also very welcoming to newcomers. I came by myself to the meeting, but I always found someone to talk to during breaks or at the awards banquet. The student social

was definitely a highlight for me, and I was very grateful for how much care and effort was put into creating a welcoming environment that brought students together to connect and have fun. Overall, I was very honored and grateful to receive a Hoshaw award that enabled me to not only achieve this milestone in my academic career, but also build more connections within the phycology community. I look forward to attending more PSA meetings in the future.



CCA and young coral growing on a concrete settlement tile.

Soren Schipper: This year at the PSA 2023 conference, I presented on an experiment that investigated the impact of light quality and quantity on tropical crustose coralline algal communities growing on artificial substrate in a coral aquaculture facility on the Great Barrier Reef. Unlike in the field, it is easy to manipulate light in aquaculture. At the Australian Institute of Marine Science, Townsville, my team conditioned settlement tiles in a common garden flow-through tank. Then we separated the tiles between crossed treatments of blue-light dominated, green-light dominated, and full-spectrum light at 4 different intensities for 12 combinations total. After letting the CCA grow for a couple of months, I analysed 96 tiles, 8 randomly selected from each of the 12 treatments, under a dissecting scope. For each tile, I made an eyeball-count list of every phenotypically unique taxon I observed growing on or underneath the tile, and recorded what was growing under 20 random points using a mini-dissecting scope size –quadrat. DNA was taken from representative crusts for DNA sequencing. Phenotypically speaking, there was a “night and day” difference between low light and high light treatments, which turned out to be statistically significant. ANOSIM results from the morpho-based IDs indicated that both light quality and quantity significantly

impacted community composition, however, the effect size of intensity was twice that of spectrum. Lithophyllum and Porolithon spp. dominated high light tiles, and a thin unidentified dark purple crust with swirls and Mesophyllum sp. dominated low light tiles. DNA sequencing results indicated that the thin dark purple unidentified crust was the same species as the cream coloured Lithophyllum dominating the high-light tiles, and that the dominant Lithophyllum could look very different depending on the light conditions under which it was growing. While perhaps slightly disappointing for phycologists who always want to discover and name new species, this is a promising result for our colleagues who are attempting to grow healthy juvenile corals in aquaculture to outplant onto degraded reef. Many coral larvae require CCA in order to attach to substrate and metamorphose, but CCA can be aggressive and overgrow the larval recruits, killing them. These findings indicate that it is possible to control CCA growth with light, so that we can culture the optimal CCA phenotype that will not overgrow the coral, aiding in coral reef restoration efforts.



Past presidents with VP Juliet Brodie (far left) and President Patrick Martone (far right) at the PSA Banquet.



Craig Schneider shows off the famous NEAS algal press sale list after the conclusion of PSA 2023.

PSA Business Meeting Minutes

June 29, 2023

In-Person, PSA, Providence, Rhode Island

Prepared by Dr. Heather Spalding, PSA Secretary

Proposed Schedule:

- (1) Approval of minutes of last year's business meeting
- (2) Board of Trustees (Chuck Amsler)
- (3) Fund Manager (Steve Murray)
- (4) Treasurer's Report (Julie Koester) - Requires a vote
- (5) Editor's Report (Kirsten Müller)
- (6) Update on Wiley Contract Renewal (Patrick Martone)
- (7) IDEA Committee Report (Robin Kodner) - include update on EVOLVED?
- (8) Membership Report (Karolina Fucikova)
- (9) Student Report (Soren Schipper)
- (10) Program Director Report (Schonna Manning) - update on Seattle 2024 and beyond

Attendance: > 40 individuals, Quorum met

START: 11:49 am

1. Patrick Martone – Welcome
 - a. Motion to approve the Minutes – Approved Unanimously
2. Chuck Amsler – BOT
 - a. Auction total: \$4,780 (almost \$5000) – will go towards the Hoshaw Travel Awards
 - b. Algaebase Committee – discussion of committee members and plans for how to sustain/make viable in the long-term
 - c. Legacy Fellows – way to let PSA know that bequests are forthcoming and the person can be recognized by PSA, voting to make a permanent part of PSA, contributions acknowledged by Michelle Wood
3. Steve Murray – Endowment Fund
 - a. Endowment now totals \$3,007,340 as of March 31, 2023 (increase from 2022)
 - b. Annual endowment earnings projected at \$100,414 (rate of 3.3%)
 - c. Review of endowment expenditures with current overage (see report)
 - d. Surplus projected for end of 2024

- e. Review of Treasury Review market value (see report)
 - f. Table of PSA Endowment Accounts: Earned Income for 2022 and Approved Expenditures for 2023
4. Julie Koester – Interim PSA Treasurer
- a. Presentation of Treasurer’s Report
 - b. Overview of PSA Treasury from 2012 – 2022
 - i. Journal profit is used to support the editorial office and the PSA society
 - ii. Annual meetings are supplemented by the Journal profit
 - c. 2022 Treasury Income review
 - i. Treasury Income is currently \$255,550.58
 - ii. Annual meeting profit from JASM: \$28,252
 - iii. Review of AlgaeBase Contributions:
 - d. 2022 Treasury Expenses
 - i. Total expenses were \$175,130.31
 - e. 2023 Current Status Total Income: \$266,418.20 and Total Expense: \$290,458.76, which is a -\$25,040.56 net income (due to a budgeting error, will be resolved in the future)
 - i. Meeting registration costs may need to increase due to increase in costs
 - f. Review of Treasury amounts
 - g. Review of 2024 Draft budget, includes a projected \$950 net
 - i. Discussion of the \$2000 amount allocated for awards and grants and the \$8000 for the Journal Co-Editor travel
 - h. MOTION to approve the Treasury Reports – Motion passes unanimously
5. Kirsten Müller – Managing Editor
- a. Manuscripts submitted to the Journal dropped from 2020 (283) to 2021 (197) and 2022 (197). Now at 112 papers (about 20 papers ahead of last year)
 - b. Days of submission in early view has decreased to 192 days on average.
 - c. Days from submission to print have also decreased to 251 days on average.
 - d. Rejection rate has ranged from 48-65% from 2019 to 2022; currently at 39% for 2023
 - e. Review of impact factors for journal in Phycology; JPhyc is 2.9
 - i. Many other phycology journals have also decreased, but impact factor calculations have changed which may decrease the rates
 - ii. Encourages everyone to submit papers – the revenue benefits PSA
 - f. Review of Activities with the Journal
 - i. Updating the Wiley Journal Web Page
 - ii. Updating instructions to authors
 - iii. New methods papers, streamlining processes to move papers more quickly, Genome Announcements, Special issues, other changes Patrick will discuss
 - iv. Perspective Pieces – Melinda Coleman
 - 1. Algae in the Anthropocene (blue carbon, microbiomes, etc.)
 - 2. Algae as model organisms
6. Patrick Martone – updates on publishing contract with Wiley
- a. Movement to online-only and open access in publications
 - b. J. Phyc. considering how best to move forward, but priorities are to print high quality papers, impact factor, and access

- c. In 2023, PSA sent negotiating team to Oxford to discuss Wiley contract renewal, and now in final negotiations for a 3 year contract
 - d. Plan is to use the next 3 years to continue evaluating and strategizing
 - e. Jan of 2024 - will start no page charges for print, even for non-members
 - f. Jan of 2025 – moving to online only, but pay to print will be available
 - g. Remain hybrid
 - h. Transitional agreements are increasingly, which means many members may be able to publish open access without having to pay open access fees
 - i. Projections of these changes will have little impact on revenue because revenue from institutional subscriptions have declined while open access revenue has increased
 - j. PSA EC Ad Hoc committee being established to communicate with CASS, consider other publishing options, review transitional agreements
 - k. DISCUSSION
 - i. Juliet Brody – open access seems to be an easy system if your institution has a transitional agreement; can request this information from Wiley; if you do not have a transitional agreement, then consider authorship and communicating author on the paper
 - ii. Steve Murray- financially, transitional agreements are paid by institutions and this ultimately contributes to the revenue stream to the Journal
 - iii. Peter Siver – many members may not have institutional support or transitional agreements
 - 1. Patrick – next 3 years will be hybrid, so no change during that time.
 - 2. Juliet Brody – trying to find a way to make this process more just and fair, but pay walls are difficult
 - iv. Paul Gabrielson – can Wiley make a list of institutional/transitional agreements
 - 1. Kirsten – this information is on the Wiley webpage, and an email will be sent to inform the PSA membership, this information is often not made available by the institutions
 - v. Patrick Martone – time to print will drop significantly (Kirsten – 60-80 days), call to publish high impact factors is important and publishing open access increases impact
 - vi. Question from the audience: Is someone going to have to pay to read, such as non-members or people from institutions without transitional agreements
 - 1. Kirsten – PSA members get access to read the papers for free, speak to Karolina regarding access issues; Open Access is available to everyone to read for free
 - 2. Juliet – Can write directly to the authors to request papers
7. Robin Kodner – IDEA Committee
- a. Project Biodiversify (Izzy Abbott profile)
 - b. NSF Proposal with CASS called BIO-LEAPS EVOLVED was funded, starts in 2 weeks
 - c. IDEA Symposium online for PSA improvements
 - d. Plans for 2024

- i. Improvements to the website and social media presence, and new programming supported by EVOLVED
8. Karolina Fucikova – Membership Director
 - a. 556 members currently active, 57 new members added this year
 - b. Overall, membership has fluctuated, but has decreased since 2021
 - c. Review of breakdown by membership category
 - d. Strong encouragement for students to join PSA for \$40
 - e. Review of Wild Apricot – can look up members in the Directory, can check to see if membership is active, Wild Apricot is NOT connected to the Wiley subscription service
9. Soren Schipper – Student Representative
 - a. Goals are to make PSA more welcoming and promote student growth in membership and participation
 - i. Solution is to generate more student events, organized a committee
 - ii. Acknowledgement of students on the student committee
 - iii. Student events
 1. Pizza party from a local vendor
 2. Craft table
 3. Student lunch with members from a diversity of careers with food from the local market; acknowledged the members who participated
10. Stacy Krueger-Hadfield – Communication Director
 - a. Wants to get the students more engaged, highlight students given awards as well as other members; opportunity to expand writing skills
 - b. Will be asking for Twitter content, and encourages participation from the membership
11. Schonna Manning – Program Director
 - a. Acknowledgement to Chris Lane and Bryan Wysor for local support
 - b. Review of meeting events and acknowledgement of support from organizers
 - c. Review of the schedule, speakers
 - d. 7 Bold Awards, 40 posters (recognition of undergraduate posters with Abbott head), 56 contributed talks
 - e. RedBubble will be used to purchase conference swag
 - f. 2024 – Joint meeting in Seattle with ISOP and ISEP
12. Patrick Martone
 - a. Distribution and acknowledgement of Hoshaw Travel Awards (21 awards)
 - b. PSA election is delayed, but ballot arriving soon
 - c. Contact Patrick to get involved
13. MOTION to adjourn at 1:09 PM



Reflections from the PSA IDEA Lunch Symposium

Dear PSA Members,

It was a pleasure to see many of you and introduce our IDEA committee at the 2023 annual PSA meeting. Our committee aims to improve equity, diversity, and inclusivity within PSA. You may be asking yourself; now, what exactly does that mean? Well, we figured a great place to start was at the conference itself!

This year's conference was wonderful. Among many other things, it provided childcare for individuals with younger children, meals and snacks throughout the entire week to relieve some financial burdens of food costs when traveling. The IDEA lunch symposium acted as a safe place for its members, which included actively and openly discussing barriers to inclusion. There were also many thoughts and suggestions provided by PSA members during the symposium. We share some highlights of the IDEA brainstorming below:

Short-Term Future Conference Suggestions:

Some ideas for future conferences that were shared by PSA conference attendees included the addition of pronouns and pronunciations to name tags and affinity group mixers to foster connections between individuals who may share similar backgrounds, such as LGBTQ, first-generation, and underrepresented in science groups. Other ideas include hosting a pre-meeting for early and first-time career attendees; PSA's early career breakfast was a huge success at this year's meeting, and we hope to continue this in future meetings. Lastly, expanding the IDEA committee's logo to include other themes as well as PRIDE (e.g., Black Lives Matter, different languages, Trans rights, human rights).

Long-Term IDEAs:

There were many additional topics discussed that we plan to introduce in a future perspective piece in the Journal of Phycology. These topics include recommendations for future conference planning, workshops that PSA members should consider sponsoring, communications initiatives, initiatives that may require grants/funding support to implement, recommendations for PSA leadership, and recommendations for the Journal of Phycology as well as the newsletter.



Hybrid PSA IDEA Lunch Symposium on 27 June 2023

Thank you for your continued support and feedback, and we look forward to working with you all on our society's commitment to inclusion, diversity, equity, and access!

*Sincerely,
PSA IDEA Committee*

Provasoli Award

The Provasoli Award is given every year to recognize the best manuscript in the *Journal of Phycology*. It honors Luigi Provasoli, the first editor. The award was given to:

J. Phycol. **58**, 36–54 (2022)
© 2021 Phycological Society of America
DOI: 10.1111/jpy.13223

BLOWIN' IN THE WIND: DISPERSAL, STRUCTURE, AND METACOMMUNITY DYNAMICS OF AEOLIAN DIATOMS IN THE MCMURDO SOUND REGION, ANTARCTICA¹

Nicolas O. Schulte, Alia L. Khan, Emma W. Smith, Angela Zoumplis, Drishti Paul, Andrew E. Allen, Byron J. Adams, Diane M. McKnight.

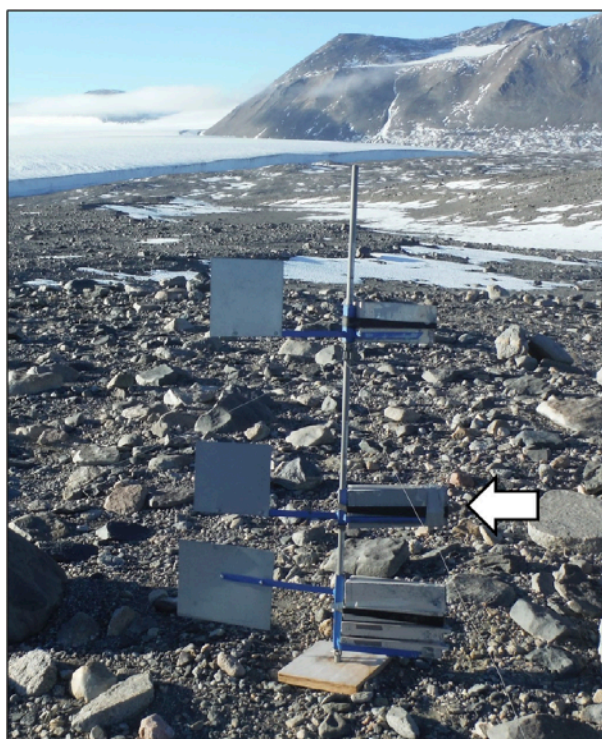


FIG. 1. Big Spring Number Eight isokinetic passive wind sampler from Explorer's Cove, Lake Fryxell basin, Taylor Valley. Arrow indicates height from which aeolian samples were analyzed. The view is to the north, with Commonwealth Glacier in the background. From [Schulte et al. \(2022\)](#)

Upcoming PSA Awards

Grants-In-Aid of Research

Grants-in-Aid of Research awards are made by the Psychological Society of America in support of graduate and postdoctoral research in any area of psychology. Grants are intended to enable the awardee to accomplish work not otherwise possible.

Eligibility: Applicants must be a graduate student or postdoctoral researcher with an active research programs in any area of psychology. The applicant must be a member of PSA. Deadline is November 1, annually.

For award information and evaluation and selection see the [PSA Website](#).

Application Procedure: To be eligible for consideration, submit one (1) application via the [Jotform Portal](#) along with two letters of recommendation, submitted separately, which must be received on or before November 1st. If you encounter issues with the Jotform application portal, applications will be accepted as text saved as a PDF that follows the format and space guidelines specified herein. The curriculum vitae must include papers presented at meetings, publications, and grants and fellowships received. In addition, the applicant must request two letters of recommendation: one should be from their major professor/mentor and the other should be from someone who can comment on the applicant's research and experience (for example, another member of the thesis committee). These letters must be submitted directly from the letter writers to ensure confidentiality. Letters of Recommendation should be submitted as pdf documents, and saved in a file named "Lastname_Firstname.pdf". This portal will send a reminder to your recommenders requesting the letters on your behalf upon final submission but you must confirm their agreement to submit such a letter before submitting your application to ensure the letters are received by the deadline. Confirmation your application is complete with two letters of recommendation will be provided to you via email from the Grants Committee chair.

This portal has a save function, allowing you to make edits over time without officially submitting the final version. Once saved, you will receive a link via email to be able to revisit your application at a later time. Please only submit your application once, as multiple submissions will trigger multiple requests from your recommenders to submit letters on your behalf.

Successfully Funded Students and Postdoctoral Researchers: Awardees will be required to complete the [PSA Awardee Report](#) within one year of the award announcement.

Applications and questions should be directed to the current Committee Chair, Rachael Wade, rmw104@humboldt.edu.

Past GIAR recipients are encouraged to send snippets to the PSA Communications Committee where we will add them to the newsletter as well as the PSA website highlighting their research!



Madelina Marquez: I am a second-year PhD student in the [McCoy](#) lab at the University of North Carolina at Chapel Hill. This year, I was fortunate enough to receive the GIAR award. This award helped to alleviate the financial costs of travelling to and from the Institute of Marine Sciences in Morehead City, with my two laboratory technicians, to collect microbial mat samples over the course of this spring and summer. We were able to use the biology van to travel Morehead City, stay in the dorms at the Institute of Marine Science, and access boats/boat captains to travel to and from various sample sites in intertidal marsh/beach areas at the coast!

Brinkley Thornton: Receiving the PSA Grant-in-Aid of Research (GIAR) award has allowed me to conduct aspects of my research that are critical towards completing my Master's research. My research addresses the rapid spread of marine macroalga *Avrainvillea lacerata*, which acts invasively around the Hawaiian archipelago. We are trying to further understand how it spreads by characterizing the alga's reproductive system through the use of molecular tools, such as microsatellites. The PSA GIAR has provided enough funding to cover the costs of conducting PCRs and fragment analysis. By receiving this funding, I was able to gain critical experience in conducting molecular work that will aid me in my future research endeavors.



CROASDALE FELLOWSHIP

The [Hannah T. Croasdale Fellowships](#) are designed to encourage graduate students to broaden their phycological training by defraying the costs of attending phycology courses at biological field stations. The purpose of the award is to broaden phycological training and not necessarily to further research goals. Proposals to study at field stations associated with universities other than the student's own are especially encouraged. Fellowship support to attend courses unaffiliated with an academic field station should be requested from the Grants-in-Aid of Research Program. In 1987, the Phycological Society of America established the Hannah T. Croasdale Endowment Fund. Income generated by the fund's endowment supports the Croasdale Fellowship program. This program is designed to encourage graduate students to broaden their phycological training by attending phycology courses at biological field stations. To that end, financial assistance is provided.

Eligibility: Applicants must be members of PSA. They must be currently enrolled in a graduate program or formally admitted at the time of the submission of the application.

Awards: Fellowship awards are made in the amount of up to \$2,250 and are intended to defray costs incurred in taking the course: tuition, travel, room and board. Awards are made directly to the student or payable to the institution offering the course in amounts up to \$2,250 each. In recent years, success rates for the Croasdale have been ~50%, but vary year to year. The purpose of the award is to broaden phycological training, not necessarily to further research goals. Fellowship support for attending technique courses may be requested from the Grants-in Aid Research Program.

Evaluation and Selection: Selection of recipients will be based on the overall fit of the proposed course to the applicant's future career and research objectives, and the potential of the applicant to benefit from attendance. These qualities will be judged from information provided in the completed application, transcripts, and a letter of recommendation from the applicant's major professor. Applications will be evaluated by the members of the PSA Grants and Fellowships Committee, and will be notified of the committee's decision as soon as it is available.

Application Procedure: The completed application form should be sent by email to the Committee Chair by 5 February (first Monday in February annually). All applicants must use the fillable application form. A copy of her/his transcript (unofficial copies are acceptable) must be submitted. All application materials (except the letter of recommendation) must be compiled into a single pdf for submission, named with the applicant's Lastname_Firstname.pdf. The student must request a short letter of recommendation from his/her major advisor. Please have your advisor submit only one (1) copy of this letter to the Committee Chair. The deadline also applies to the letter of recommendation.

Past Croasdale recipients are encouraged to send snippets to the PSA Communications Committee where we will add them to the newsletter as well as the PSA website highlighting their experiences!

Joy Jackson: With the funding awarded by the PSA Croasdale Fellowship, I was able to cover the majority of the cost of tuition for the Ecology and Systematics of Diatoms course at the Iowa Lakeside Laboratory. This course was taught by Dr. Mark Edlund (Senior Scientist Science at the Museum of Minnesota) and Dr. Sylvia Lee (Biologist at the U.S. Environmental Protection Agency). The course was composed of field trips and activities as well as daily lectures on diatom systematics and taxonomy. The course was composed of field trips to various ecosystems surrounding the Iowa Lakeside Lab, as well as a trip to the Ashfall Fossil Beds in Nebraska. This course celebrated its 60th year since the first informal diatom workshop by Dr. E.F. Stoermer in 1963. In honor of this, Dr. Sarah Spaulding (Ecologist at the US Geological Survey and the creator of "Diatoms.org"), Dr. David Burge (Assistant Scientist at the St. Croix Watershed Research Station), Dr. Matt Julius (Professor at St. Cloud State University) visited the class at Iowa Lakeside Lab. Additionally, Dr. Jeffery Stone (Professor of Environmental Geosciences Indiana State University) visited virtually to give a lecture to the class on the use of Scanning Electron Microscopy. Overall, this course allowed me to refine and improve my diatom identification and counting skills. Additionally, I was afforded the opportunity to collect modern phytoplankton samples from West Lake Okoboji to compare to sediment core samples, which I am using for my dissertation study. For the final project of this course students created a species page for "Diatoms.org". The species page I created was on the diatom *Brachysira confusa* and has been reviewed and uploaded to "Diatoms.org".



Harshina Brijlall: The sun beamed down on me as I waded through the sphagnum-heath-black spruce bog. With each step, I listened to the trickling of water and smelled the earthy, rich odour of the Beckley Bog while observing the biodiversity found in this acidic freshwater system. As I searched for algal growths to take back to the lab, I fell in love with observing the thriving ecosystem filled with cranberry bushes, sundews, pitcher plants, salamanders, and orchids. Later in the laboratory at Calder Lake Centre, I prepared a wet mount slide. I cracked open the "Freshwater Algae of North America," and I patiently got lost in identifying *Cosmarium* sp., *Mougeotia* sp., *Gloeocystis* sp., *Eremosphaera* sp., and *Microthamnion* sp. in the samples collected.

From May 22 to June 2, I had the opportunity to attend the "Freshwater Algae Identification Intensive Summer Workshop at the Louis Calder Centre" with generous aid from the Phycological Society of America's Hannah T. Croasdale Fellowship. The two-week identification intensive exposed me to various freshwater algal-rich habitats, microscopy, and taxonomic identification that have forever changed me as a graduate student and a prospective phycologist.

Dr. John Wehr and Ph.D. candidate Michael Kausch led ten of us workshop attendees in both the field and lab as we explored magnificent lakes, charming streams, and picturesque ponds for algae and then later in the lab, dived into the microscopic world of these photosynthetic wonders.

During the two weeks, we learned various planktonic and benthic algae sampling techniques while identifying as many species as possible within our samples. Some days I combed the same three pages in the taxonomic key repeatedly as I fiddled with the fine focus on the microscope, attempting to problem-solve through challenging genera. However, my endless curiosity forced me to persevere, and there was nothing more rewarding than the crescendo of that "aha" moment of taxonomic identification.

Around the lab, our classroom observed different forms, colonies, and perspectives of the same algae genera; we asked, "Is this filamentous," "This looks odd; I think it's a chain of desmids," while always at some point in the late afternoon when exhaustion set in someone would exclaim, "Oh no I have a diatom" (diatoms being our most vocabulary intense but intricately beautiful group of algae). It was wonderful to meet other professionals and students who were just as curious, confused, and excited about algae as I was. I am grateful for the professional connections and friends I met during the workshop.

Our adventures in the field were also very insightful. The mesotrophic Calder Lake (NY) and clear

rocky streams found in Macedonia Brook (CT) contained diverse algal communities of green, red, and brown algae. The oligotrophic soft water lakes and streams of Harriman State Park (NY) had a large diversity of beautiful desmids, diatoms, and charophytes. I also learned about suburban lake management for harmful algal blooms, which Steve DiLonardo, an Aquatic Ecosystems Consultant, led. Sampling at The Lake in Central Park (NYC) was also a highlight. The water of The Lake was painted green, flooded with what looked like grass clippings, swimming turtles, and families picnicking and fishing while warning signs of toxic algal presence were displayed around the lake.

My thesis project, under the supervision of Dr. Kirsten Müller at the University of Waterloo, intends to characterize freshwater cyanobacterial communities in oligotrophic lakes and examine cyanotoxin potential markers via genomic and bioinformatic analysis. Within government and industry, microscopy is used as quick means to identify harmful algae, and therefore microscopy and morphological identification of algae is a needed skill set as a prospective phycologist.

As I settled back into graduate student life after the workshop, I found myself wanting to sample every freshwater source I witnessed, becoming this "algae sampling monster." However, most importantly, I am excited to use the tools, resources, and skills I gained from attending the "Freshwater Algae Identification Intensive Summer Workshop at the Louis Calder Centre" this summer for my research project and future professional endeavours.

A big thank you to the Phycological Society of America for awarding me the Hannah T. Croasdale Fellowship, as it covered my registration and travelling expenses. I would also like to thank Dr. John Wehr, Michael Kausch, and Steve DiLonardo for their assistance and for leading the several learning opportunities during the two-week intensive.

OTHER ALGAL AWARDS & NEWS

2023-2025 AlgaePrize Competition



The U.S. Department of Energy (DOE) [Bioenergy Technologies Office](#) (BETO), in partnership with the [Algae Foundation](#) and the [National Renewable Energy Laboratory](#), is announcing the launch of the 2023-2025 [AlgaePrize Competition](#), which challenges students to become the next generation of bioeconomy professionals by expanding novel solutions supporting gigaton-scale algae commercialization. AlgaePrize competition teams can include high schoolers, undergraduate or graduate students advancing algal commercial enhancement, ecological services, education, training, and workforce development.

Over the next two years, student competitors will:

- Gain experience with innovative algal commercialization technologies;
- Develop real-world solutions for the production of biofuels, foods, feeds, ecological services, and

industrial compounds (e.g., biopolymers);

- Develop collaborative and leadership skills by working on multidisciplinary student teams;
- Engage and network with industry professionals, national lab researchers, and academics to forge relationships and connections that aid students' transition to the algal-based bioeconomy via employment or entrepreneurial endeavors upon graduation;
- Compete to earn prize money, a trophy, and national recognition.

Competition Categories: Student teams should focus their projects on one of the following three competition categories, which are applicable to both microalgae and macroalgae:

1. Production
 - Cultivar Enhancement
 - Aquaculture Engineering
 - Husbandry and Productivity
2. Downstream Processing
 - Harvesting, Dewatering and Preprocessing
 - Development of Biorefinery Applications
3. Novel Products, Analytical Tools, or Ecosystem Services
 - New Product Development
 - Remote Sensing and Modeling
 - Ecosystem Services

Important Dates

- September 29, 2023: Student team registrations open and teams can begin work
- November 1, 2023: Registration closes 12:00 pm ET. Student team registrations due with abstract and team photo
- December 13, 2023: Research synopses due
- January 15, 2024: Finalist teams selected
- March 10, 2025: Finalist teams research project reports due
- April 11-13, 2025: AlgaePrize student competition weekend, team presentations and champions announced.

This is the second iteration of the AlgaePrize competition, which was launched in January 2022 with 307 individual competitors from 64 student teams. The 2023 – 2025 AlgaePrize is now part of DOE's [American-Made Challenges](#), a series of unique prize competitions designed to incentivize and reenergize American innovation in the energy marketplace. For additional information, please visit the [AlgaePrize website](#). Questions can be emailed to AlgaePrize@ee.doe.gov.



Former PSA Membership Director (1994-2000) and President Thierry Chopin (2004) awarded the 2023 Lifetime Achievement Award of the Aquaculture Association of Canada (AAC) at the Aquaculture Conference in Victoria, B.C. You can read more about Dr. Chopin’s award in the an article he wrote for aquaculturenorthamerica.com

Thierry Chopin with Joanne Burry (left), conference manager, and Jennifer Wiper, president of the Aquaculture Association of Canada. Photo: Kathy Chopin

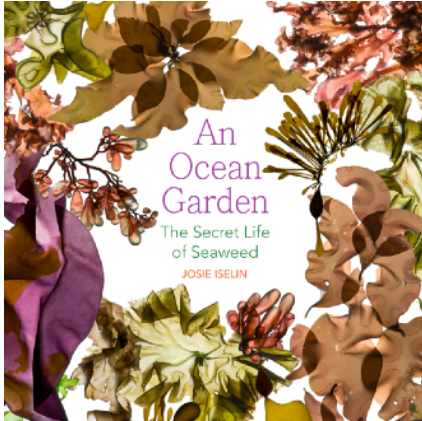
Ursula Goodenough (Prof. Emerita, Washington University) was [inducted into the National Academy of Sciences](#). Dr. Goodnenough served as an Associate Editor of the *Journal of Phycology* from 1997-1999. The Chlamydomonas Sourcebook, of which she is one of the editors was recently [published](#).



[View on ScienceDirect >](#)

The Chlamydomonas Sourcebook
 Volume 1: Introduction to Chlamydomonas and Its Laboratory Use
 3rd Edition - February 15, 2023
 ★★★★★ [Write a review](#)
 Editor: Ursula Goodenough
 eBook ISBN: 9780128224588
 Hardcover ISBN: 9780128224571

BOOK TITLES

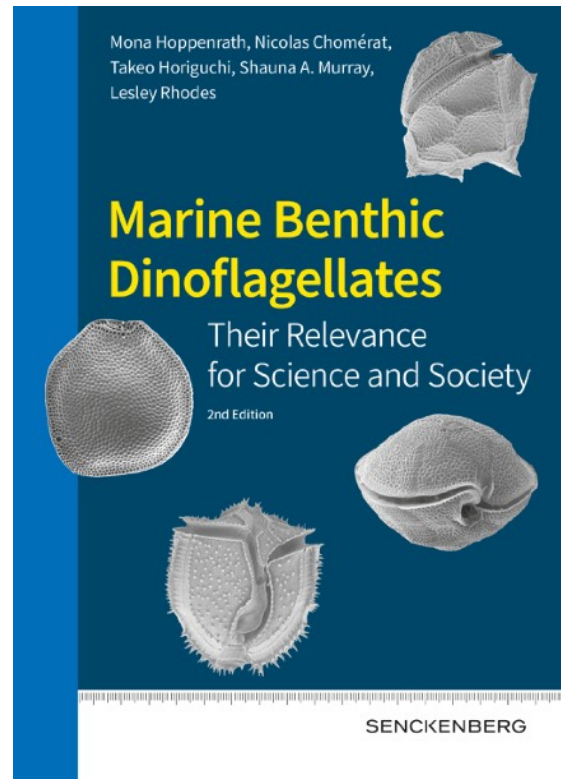


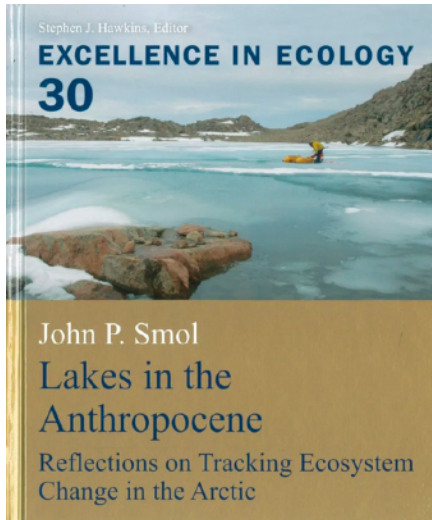
In [An Ocean Garden: The Secret Life of Seaweed](#) artist and beachcomber Josie Iselin uncovers the unexpected beauty of seaweed. Produced on a flatbed scanner, Iselin's vibrant portraits of ocean flora reveal the exquisite color and extraordinary forms of more than two hundred specimens gathered from tidal pools along the California and Maine coasts. Her engaging text blends personal observation with scientific fact. With a new foreword and updated nomenclature, *An Ocean Garden* is a poetic and compelling tribute to the natural world and the wonder it evokes.

In [Marine Benthic Dinoflagellates](#), Hoppenrath et al. describe these important primary producers, symbionts and, at the same time, heterotrophic consumers and parasites. The species composition in benthic habitats is quite distinct from planktonic habitats. Our understanding of benthic dinoflagellate biodiversity, biogeography, toxicology and ecology has improved but is still rudimentary. Benthic harmful algal blooms have attracted increasing interest because of the impact of ciguatera poisoning, the most important food-borne disease of non-bacterial origin worldwide, which is caused by benthic dinoflagellate species. Ciguatera poisoning appears to have increased worldwide in recent years.

This publication is an updated summary of the taxonomy of currently described taxa and includes morphological and molecular genetic information for species identification. It contains the most comprehensive review of benthic dinoflagellate toxins published so far. The book also describes methods of study, discusses phylogenetics and evolution, and highlights their scientific relevance as well as the health and economic impacts of benthic dinoflagellates for society. This book is a fundamental contribution to improving the monitoring of benthic dinoflagellates worldwide: 242 species in 63 genera are presented, illustrated with more than 240 color images, about 250 electron micrographs, and more than 330 drawings.

Order information: Schweizerbart/Borntraeger Science Publishers, Johannesstr. 3A, D-70176, Stuttgart, Germany or online [here](#).





International Ecology Institute
Otto Kinne, Founder

In a book that is part memoir and part textbook, John Smol reflects on his 35+ years of aquatic research in the Arctic in [Lakes in the Anthropocene: Reflections on tracking ecosystem change in the Arctic](#). Working primarily on the limnology and environmental histories of lakes and ponds, he emphasizes the need for using appropriate spatial and temporal scales to understand the effects of natural and anthropogenic stressors. An overriding theme is the critical role that accelerated climate change plays as a “threat multiplier”. The book pays homage to some of the pioneers of Arctic limnology using archival photographs before summarizing a diverse array of paleoenvironmental studies that he and his colleagues have led. Highlighted research includes collaborations with Indigenous knowledge holders and archeologists, tracking past ocean flooding events, the repercussions of permafrost thaw, the effects of pollutants from both local and distant sources, as well as tracking long-term changes in salmon and bird populations. Smol emphasizes the importance of using diverse sources of information, the role that personal relationships can play in successful collaborative programs, and issues linked to environmental justice for Northern peoples. Orders can be placed from the Distributor (Natural History Bookstore, NHBS) [here](#).

IN MEMORIUM

Remembering Max Hommersand 1930-2022



Max collecting at Shag Point, South Island, New Zealand, 2004 (DW Freshwater)

Max Hoyt Hommersand will be remembered as one of leading figures in phycology, in the mid- to late 20th Century and into the early 21st Century. His area of specialization was red algal vegetative and reproductive anatomy using hematoxylin nuclear staining to reveal patterns of evolution of red algae. But his intellect and influence were much greater than what became his primary research focus. Indeed, following the awarding of his Ph.D. in 1958 on the morphology and classification of selected red algae in the Order Ceramiales (Rhodophyta), Max completed a two-year post-doctoral study on algal physiology at Harvard University. Moreover, his early graduate students at the University of North Carolina, Chapel Hill (1964-1973) obtained their degrees working on various aspects of algal physiology, and one worked on phytoflagellate taxonomy and another on *Ulva* taxonomy and

ecology. Beginning in the early to mid-1970's, Max's focus shifted back to red algal morphology and

systematics, with his last physiology paper published in 1974. The outlier during this transition was a seminal paper on plastid genome size (Hedberg et al. 1981). It was also during this time that Max began publishing his hypotheses on marine algal biogeography linked to plate tectonics (Hommersand 1972, 1986, 1990) that continue to be tested using phylogenetic analyses of DNA sequenced specimens as well as morpho-anatomical developmental patterns.

Max is one of the few phycologists of his generation to make the transition to using DNA sequence analyses. He did this to augment and test his hypotheses of red algal evolution and systematics, primarily through his students, Suzanne Fredericq and Wilson Freshwater, and his last Ph.D. student, Jeffery Hughey. Max was fearless in adopting new methodologies and technologies to test his hypotheses, from applying plate tectonics to his theories of marine algal biogeography based primarily on morpho-anatomical developmental patterns, to embracing radical changes to red algal systematics based on Curt Pueschel's pit plug ultrastructural studies, to DNA sequencing.

Max grew up in San Diego, and at age 11 began collecting algae. One of those specimens is in NCU and can be viewed at Macroalgae.org along with numerous other specimens collected and identified by Max from 1943-1945. The following paragraph is from the March 1, 1945 Bulletin of the Natural History Museum of San Diego.

"It is always a source of satisfaction to us when youngsters, whose first interest in natural history has been aroused by one or another of the museum's activities, make really serious progress in science. In past years there have been many such. The latest examples are a couple of 15 year old high school boys, David Fork and Max Hommersand, who have developed a praiseworthy aptitude in the rather unusual field, that of marine botany. It started on a nature walk in February, 1944 for the study of "Common Seaweeds of La Jolla" led by Lieut. E. Y. Dawson of the Scripps Institute of Oceanography. Since then, much of their spare time has been spent beachcombing and "bothering" Lieut. Dawson, despite the difficulty of reaching the Scripps Institution from their homes in San Diego. That their efforts have been fruitful is seen in the latest issue of the Bulletin of the Southern California Academy of Sciences, where Lieut. Dawson describes a new species of marine alga, *Binghamiella Forkii*, stating that the type was collected at La Jolla by David Fork and deposited in the Herbarium of the University of California. In the same article he gives Max Hommersand credit for discovering several unusual plants in beach drift. Thus, at an early age, these boys, as a result of their perseverance, have won lasting recognition in the annals of science."

The museum is taking a bit more credit here, as Max already had been collecting (in burlap bags) and pressing specimens. Thus, it is no surprise that the late Dr. Paul C. Silva met Max in 1946 at the Allan Hancock Foundation eating a sandwich and reading Fritsch's *Structure and Reproduction of the Algae*. I believe that Max recommended reading Fritsch to all his graduate students doing morphology and anatomy--volumes I and II. Yale Dawson was a huge influence on Max, teaching him to be a keen observer of algae, both in the field and in the lab. Max marveled at Dawson's ability to collect across a rocky intertidal and find all of the species, observe and draw them in the lab, and go home at night to write descriptions that enabled one to visualize the alga. Max's own prodigious collecting resulted in the NCU algal herbarium having over 35,000 specimens, nearly all collected by him and his students.

Max, as noted in some of the recollections below, was very thrifty with his money. But he did not scrimp when it came to attending meetings and collecting marine algae worldwide! He was an inveterate meeting attendee both locally (NEAS, SEPC) and globally (IPC, ISS) and used those opportunities to converse with colleagues and to collect. Many of the recollections below occurred when Max would meet with colleagues around meetings. During semester and summer breaks and on sabbatical leaves, he traveled to collect primarily in warm and cold temperate regions of the world where families like Gigartinales, Rhodomelaceae and Delesseriaceae are well represented. He made extensive collections in the Northeast and Southeast Pacific (Alaska, USA to Baja California, Mexico, Peru and Chile), Northwest and Southwest Pacific (Japan,

Russia, Australia, New Zealand), Northeast and Northwest Atlantic (Nova Scotia, Canada to Florida USA, Ireland, England, France, Portugal, Morocco), Southwest Atlantic (Falkland Islands), and Namibia and South Africa. Thus, NCU has one of the finest collections of warm and cold temperate marine macroalgae worldwide.

Max is commemorated by three genera: *Hommersandia* G.I.Hansen & S.C.Lindstrom, *Hommersandiella* Alongi, Cormaci & G.Furnari, and *Hommersandiophycus* Showe M.Lin & Huisman and by the following species: *Centroceras hommersandii* Won, T.O.Cho & Fredericq, *Dichotomaria hommersandii* S.-L.Liu & Showe M.Lin, *Gelidium hommersandii* A.J.K.Millar & Freshwater, *Gracilariopsis hommersandii* Gurgel, Fredericq & J.N.Norris, *Izziella hommersandii* Showe M.Lin, S.-Y.Yang & Huisman, *Nesoia hommersandii* Rodríguez-Prieto, Showe M.Lin, Afonso-Carrillo, De Clerck & Huisman, *Nitophyllum hommersandii* Showe M.Lin & Fredericq, and *Pavlova hommersandii* P.H.Campbell.



Max and Fran, Chapel Hill 1960 (© Fredericq)

We would be remiss not to also write about Fran Hommersand, Max's wife, who pre-deceased him in May 2020. Fran was smart, gracious, a marvelous cook and hostess to all who visited the Hommersands' and supported Max in every way so that he could pursue the work that he loved. Fran, having earned a master's degree in Botany from the University of California, Berkeley, sacrificed her own budding career in botany when she married Max. Frequently, she traveled with Max to meetings and was with him on all of his sabbaticals, helping to collect and curate seaweeds on site and at the university. Max and Fran worked as a team curating the specimens, with Max identifying the seaweeds and Fran making beautiful pressings as well as typing and gluing labels. At UNC, Max and Fran are commemorated by the Max and Fran Hommersand Distinguished Lecture in Biology and by the Max and Fran Hommersand Algae Herbarium (NCU-Algae). Max and Fran are survived by their son Eric.

We are grateful to have been mentored by Max and to have been supported by Fran. We miss them both.

Paul W. Gabrielson

D. Wilson Freshwater

For additional information about Max's career and his full list of publications see [here](#). We thank Geoff Leister for compiling Max's publications.

We are very grateful to all who provided the following recollections of Max.

An immensely energetic, genial, and forward-thinking scientist. Was proud to give the inaugural Max and Fran Hommersand Distinguished Lecture in Biology at UNC in 2013 on the topic of Disentangling the convoluted history of algal genomes. The event was a lot of fun. Thanks Max for your many contributions to phycology.

Debashish Bhattacharya
Rutgers University

I was a graduate student at Duke University 1970-1977. I needed to take a course on algae, but the semester I had planned to take it, Rick Searles at Duke was on sabbatical. I therefore signed up to take the course at UNC with Malcolm Brown and Max Hommersand. Max was struggling with new technology--I believe it was called an opaque projector, echoing the more common transparency projectors. It was essentially a camera, oriented vertically and hooked up to a projector, but in the pre-LED, pre-CCD days, it involved a very strong, very hot lamp. I recall Max, in his typically disheveled way, putting book after book, red algal tomes, turning page after page, struggling as they curled and browned under the intense heat. He muttered that maybe it wasn't such a great technology after all. I also recall going on a field trip to the coast, Max driving one

van, Malcolm the other. Max was talking and gesticulating the whole way, shooting through red lights, leaving Malcolm behind repeatedly. Somehow, we all survived and no one got lost. He also instructed us on collecting seaweeds, telling with dismay the story of a Japanese colleague who would bring huge masses of algae to him to help identify. "You must have collected every alga on the rocks," he reported saying to the colleague with horror and intended rebuke. "I did!" replied the colleague proudly. Not the way to collect, said Max.

*Mary Bisson, Professor emerita
University at Buffalo*



**Max 'paradise' reviewing collections, Roscoff, 2005
(C Rodrigue-Prieto)**

I knew Max from the time I was a graduate student and enjoyed seeing and talking with him and Fran at many phycological meetings. Our closest interaction was over what he knew about the distribution of *Fucus vesiculosus* on the North Carolina coast from the time he arrived at UNC. I witnessed its decline from an abundant population I first saw in 1963, and ultimately its local extinction at Beaufort, NC (see December 2021 issue of *J. Phycol.*). Max helped me locate some older herbarium materials that were very useful, including from the SW edge of Topsail Beach. I had already covered most of Topsail, but Max told me the SW corner had better circulation than the areas I had checked, so *Fucus* might still be there despite the biogeographic shifts due to climate change. Unfortunately, it had disappeared, but I was very grateful for his advice. We also enjoyed talking about how Dr. C. K. Tseng met him and David Fork, I think on the beach near Scripps when they were in high school, and shared his excitement and knowledge of the algae with them. C. K. returned to China from his postdoctoral position soon after that meeting, but it was a fond and vivid memory for Max.

*Susan H. Brawley, Professor Emerita
University of Maine*

I got to know Max Hommersand when I was studying for my PhD and was able to spend three weeks in his lab at Chapel Hill. I had arrived not really sure of how to proceed with this part of my project, and I left totally inspired, knowing exactly what to do. My time with Max transformed my scientific thinking. Max was generous with his time and with his intellect, and, memorably, he made excellent cocktails at five o'clock in the afternoon. Fran was also a wonderful host.

During this visit, Max took me, Fran and Suzanne Fredericq to the coast. It was quite a drive, and on the way, Max spotted a roadside tradesman on the other side of the carriage selling turnips. Shortly after a swift U turn and purchase, Max was joyously crunching his way through a turnip, beautifully cut into wedges by Fran. When we first got to the sea I think my face must have fallen because the tide was tiny and the only seaweeds were on a brick and a broken piece of glass. I had come from Ireland where the tides were large and the shores laden with seaweeds, but with Max's enthusiasm I quickly adjusted my thinking and we did find interesting species as the time went on. Accommodation had been booked but when we arrived there was only one room available for us all, not much in the way of blankets and it was cold. I think we must have slept in everything we possessed. We all survived. My abiding memory of that trip is a picture of Fran and myself all dressed for winter with Max in shirt and shorts!

The last time I met Max and the last time I heard him speak was at the PSA in Monterey in 2017 when he gave the following talk: "Morphology and molecular systematics of the *Dasyptileae*, a new tribe in the *Callithamniaceae* (Ceramiales) containing *Dasyptilon* and *Plumariopsis*". As always, his arguments and evidence were clear and convincing. The chair was very strict on timing and did not allow Max any questions

but fortunately a speaker was missing and in that time I was able to take the mike and start a discussion with him. I was so glad that he was able to have this time to talk a little more about his work. It was with great sadness I learnt of Max's death but also with feelings of immense gratitude for what I had gained from his insight into the red seaweeds. His contribution to phycology is a wonderful legacy.

Juliet Brodie

Natural History Museum (London)

I mostly knew Max during the Seaweed Symposium (1971) in Japan where I had a couple of interesting meals with him - good discussions with a fine fellow. Mike Neushul, my major PhD mentor, was present at a few get-togethers and related a story about Max giving a talk at (I think) a PSA meeting. Max had a cold, started sniffing in the middle of his talk, pulled a partial roll of toilet paper out of his pocket, and blew his nose -- then went on with his talk. Max did seem a bit of a slob but after talking with him and engaging with his intellect -- who cares?

Mike Foster

Moss Landing Marine Lab, retired

Max H. Hommersand, the most singular and brilliant phycologist ever

It all started with nematodes. For my undergraduate thesis in zoology at the University of Ghent I studied particular marine nematodes found growing along with *Ulva*. After graduation I had the opportunity to go on vacation in Washington D.C and contacted Dr. James Norris, the marine botanist curator at the Museum of Natural History, Smithsonian Institution, to ask if I could examine some *Ulva* specimens in the US National Herbarium to better "understand" the worms. He welcomed me warmly and talked with great enthusiasm about the seaweeds in the collections, about the Smithsonian administering marine research stations in Belize, Panama and Florida, and about the fact that the Museum conducted many algal-collecting expeditions worldwide. Intrigued by all these exotic places coupled with the wonderful variety of macroalgae already seen under the microscope, I decided right then that I was not going back to Belgium after my vacation but that somehow I was going to find a way to stay in D.C. and the Smithsonian and study marine algae. Jim was very enthusiastic about that prospect because he saw that I had become so interested in trying to identify many different species, be them from Belize or the Galapagos Islands.

A few weeks after my arrival in D.C., Jim's assistant, Bob Sims, invited me and the lab to drive up with them to attend the Northeast Algal Symposium in Woods Hole, Massachusetts, in the Spring of 1981. I listened to a lot of interesting talks but the one that completely blew me away was the one given by Max Hommersand on the reproductive morphology and systematics of Nitophylloideae, a group of Delesseriaceae. I didn't understand any of the jargon or most of what he said but I thought his approach to unravel the relatedness and differences among these red algae was extraordinary and so creative. After his talk I told him so and he was amused and intrigued that I felt that way. He immediately invited me on the spot to come visit him and Fran at his house and lab in Chapel Hill, North Carolina, to show me the clearing and staining techniques he had developed with his graduate student Roy Coomans on red algae. I was hooked and mentioned to him that his dynamic approach rooted in the comparative morphology of red algae was what I wanted to study. I have never looked at a nematode since.

After my MSc degree at George Mason University in northern Virginia where I studied the systematics of several species of Gracilariaceae from Belize through the Smithsonian with Jim Norris, I started my Ph.D. under the mentorship of Max Hommersand in 1984, focusing on the generic concepts in the Gracilariaceae worldwide based principally on comparative reproductive morphology as viewed with light microscopy. Max was always so curious and eager to learn about new data and insights. He had a generosity for sharing any knowledge and advice that knew no bounds. I never heard him utter a platitude or noticed a whiff of pretension. I felt so privileged to be in the company of such a uniquely brilliant person. To use a term probably worn thin nowadays, for me there was a form of genius in this man. No-one else understood the interplay between physiology, developmental morphology, historical biogeography, and a dynamic approach to algal biology and

evolution as Max did, be it relating to macro- or microalgae. Max was a living encyclopedia of exceptional erudition. He was larger than life, with an intellectual curiosity and appetites larger than life.

In 1988 I returned to the Smithsonian for a 2-year postdoc to continue studying the systematics of Gracilariaceae and other red algae. We kept in close contact and in 1990-93 I returned to Chapel Hill to be the postdoc on Max's NSF grant on the systematics of Gigartinaceae. At that time Max had a new graduate student, Wilson Freshwater, who revolutionized new concepts in molecular systematics of the Gelidiaceae and other red algae by perfecting *rbcL* sequencing techniques. Max gave me *carte blanche* to adapt Wilson's sequencing techniques to the Gigartinaceae and Wilson was very patient and generous in showing me his lab techniques and analyses. Here again, I felt like I was in the best place in the world to understand the systematics and biogeography of red algae in a new and original light.

Max and Wilson and I collaborated over the years on various red algal projects and continued to do so until recently. When I became a faculty member at the University of Louisiana at Lafayette, Max was the outside adviser of my Ph.D. students, such as Showe-Mei Lin, and Wilson the outside advisor of Ronald Kittle and Ariful Islam.

When I think about Max - and I think about him a lot - it was his youthful enthusiasm that was larger than life for anything algal- and evolution-related. He seemed the happiest when he was in the field collecting algae, be it in the Falkland Islands or the Bay of Fundy. He continues to remain so alive in our thoughts through his unique influence on his students and colleagues and via his multiple articles. I think of him as a friendly Ouroboros, continuously expressing the unity and relatedness of all things by perpetually changing our concepts via his cycles of creative insight. He always approached his research seriously, in a spirit of constant questioning and renewal. This is one of the reasons his revolutionary insights keep touching us so deeply and remain so contemporary.

Suzanne Fredericq
University of Louisiana at Lafayette



**Will Schmidt, Max, Fran, Suzanne Fredericq and Paul Gabrielson,
PSA 2012, Charleston, South Carolina (DW Freshwater)**

Max was a different individual to each person so trying to encapsulate who he was as a whole is impossible. I knew Max for 40 years, as a mentor, teacher, and collaborator. In thinking about this, a few things from my experiences with him have kept coming to mind. Some of these stories may be touched upon in other's remembrances and any inaccuracies are the faults of my memory.

I first met Max when I was an undergraduate student doing 'ecophysiology' research with Donald 'Fritz' Kapraun. Max, Jim Norris, and Suzanne Fredericq came down to the coast and Fritz and I took them out to collect at the Masonboro Inlet Jetty. I was intrigued by this phycologist that was well known for ontogenetic studies of red algae walking through the intertidal in canvas sneakers, a 1950's style bathing suit and an old white button-up dress shirt. On a second occasion Max, Suzanne and Roy Coomans came down for collecting. Max insisted that I take he and Roy to the outer part of the jetty at the south end of Wrightsville Beach and let them off on the rocks to collect fertile specimens of *Aglaothamnion halliae* (These specimens ended up being the basis of Max's studies of postfertilization development in this species [Hommersand 1997]). I do not know how we managed to not get dashed into the rocks, but I do remember reversing through the waves with Roy hanging on to Max as he scrambled over the bow of the boat during the pick-up.

Max was a driven, focused, and consummate collector, and this started from a very early age. Once going through the UNC-Chapel Hill herbarium (NCU) as a student, I was surprised at coming across a Max collection of *G. crinale* dated 'Nov. 18, 1944' when he would have been a young teenager (the first Hommersand specimen in NCU is dated 1941 when he was 11). Max grew up in San Diego and participated in nature programs sponsored by the Scripps Institution with a boyhood friend, David Fork. He told me that one day while riding a city bus they saw an Asian man get on with a wet bag of seaweed. They had heard that a Chinese researcher was at Scripps studying agar producing seaweed as part of the war effort (Scripps was heavily involved in military research during World War II, <https://scripps.ucsd.edu/about/history>), so they went up and started asking about his collection. This researcher was C.K. Tseng, and he offered for them to accompany him to the lab and go through it. It was that day when Max first met his early mentor, E. Yale Dawson, who made an immediate impression by entering through a window rather than the lab door.

Max collected all along the US west coast when young and during his university studies. One story he relayed to me was hitch-hiking up to the Friday Harbor Lab where he didn't register but camped in the woods around the lab and sat in on the marine algae class until they told him to just stay in one of the hutches or tents for the students there. After Friday Harbor, he made his way down to an algal physiology class (led by Lawrence R. Blinks?) at Hopkins Marine Station. He ended up tying the legs of a pair of long pants to create a saddle bag of sorts for his overflow of specimens. It must have been memorable for those who picked him up.

Max's many collecting trips covered much of the globe and continued throughout his career. I had the opportunity to accompany him on an epic, one-month collecting trip to New Zealand in 2004 when he sought to recollect all the species that he and Fran had collected there during a one-year sabbatical in 1974, but this time preserving them in both formalin-seawater for morphological study and silica gel desiccant for DNA work. It was an intense experience of making it to destinations for the tides, finding a place to sort the collections



**Larence Liao, Fritz Kapraun, Fran and Max
ISS 1998, Cebu, Philippines (DW Freshwater)**

afterwards, and then working them up until late at night, or on multiple occasions, early morning. Max ran circles around me, despite his being 74 at the time, and with help from Wendy Nelson, Judy Blume, Murray Parson, and many helpful New Zealanders met on the way, we very nearly accomplished Max's goal.

Max's collections were curated with Fran's help into wet and pressed specimens, and later also as silica dried collections. These collections were a resource for Max's students as well as other phycologists, many who came to Chapel Hill to study them. Many phycologists also came to visit Max in Chapel Hill to exchange ideas with and learn from him. Fritz Kapraun told me how helpful Max was when he first came to North Carolina in the early 1970s and that he made many trips to discuss possible research projects over drinks and Fran's wonderful dinners, which invariably led to overnight stays. As a student these visits, and dinners, were wonderful opportunities to meet and learn from a variety of phycologists, and during my time these included Suzanne Fredericq when she was a post-doc, and Maria Eliana Ramirez and Jan Rueness who both spent significant time working with Max in Chapel Hill. Returning to work in North Carolina after my post-doc, I was often the recipient of Max and Fran's generous hospitality, when, like Fritz, I would come to Chapel Hill to discuss research and work on studies with Max.

Max's vision worsened considerably during his final years. The last opportunity I had to work with him was part of a multi-national collaboration lead by Maria Emilia Croce (Tonicelli et al. 2021). As the study progressed, so did Max's eye problems, from only being able to read enlarged text, to finally unable to read. It was then that his outstanding intellect was so well demonstrated, as he would edit text verbally as it was read to him. It wasn't only editing however, but also questioning what was shown in the images and then explaining how it was applicable to the study and should be worded in the text. Although it was a difficult process, the experience of working with him in this way still amazes me.

I have been the thankful recipient of Max's continual help, both as a student and working phycologist, and will be forever grateful for the opportunity to have known and learned from such an exceptional man.

D. Wilson Freshwater

Center for Marine Science, UNC-Wilmington

I was a third year graduate student when Max asked me to pick up an algae book from Rick Searles at Duke University, who was on my Ph.D. committee. I returned with the book, and Max fished out, from under some papers on his desk, a pressed specimen of a red blade that he had been sent from Italy. He paged to the book's plates, said, "that's it", holding the pressed specimen next to the plate that was a spitting image of specimen. I made the mistake of asking Max when he had last seen that plate. "Oh", he said, "I remember looking at this when I was in graduate school at Berkeley". I left Max's office thinking I could never be a phycologist.

Paul W. Gabrielson

UNC-Chapel Hill

Max loved a bargain. I stayed in North Carolina with him and Fran on our way to the NEAS meetings at Wood's Hole. He scoured the newspaper small-ads (remember those?) for a hire car to take us from Boston to the meetings and found a tiny Japanese one - to his delight - for \$16 per day. We duly arrived in the car-hire place and the guy there apologised profusely that he did not have the car Max had booked but would give us another one. He drove us to a huge lot with only a single car in it, a Lincoln Continental, a massive (to me) sedan that felt like little more than a king-sized bed on wheels and drove like one.

As we waited in this ridiculous car at a traffic



Mike Guiry and Max (w Guiry)



**Max with the booze
NEAS, Wood's Hole (M Guiry)**

signal in Wood's Hole later that day, a bum staggering along the sidewalk looked at the two of us in our silly sedan and summarily spat at the windscreen. Max sighed resignedly and said, "That reminds me, we should stop and get booze for the meeting." And here he is on that memorable day.

*Mike Guiry
University of Galway, retired*

Max was obsessed with seaweed, learning about new systematic developments and tracking the small steps on an hour by hour, day by day, and year by year basis that led to the complex taxonomic solutions. He had a consistent and efficient work routine. Max arrived early and turned on his computer. While it was booting he walked into the lab to make instant coffee that he prepared over a Bunsen burner. Waiting for the water to boil he inquired about what I was looking at on the microscope. He did this as if he was keeping a running log of that day's observations in his head and then cataloging them in his phenomenal memory over the five plus years I was his student. Max would then grab his coffee and go answer emails, which he addressed in great detail on an hourly basis. When he returned for his second cup, and many

thereafter throughout the day, he asked if there were any new developments or something for him to see on the microscope. Max's expectations were high for himself and his students. He kept working after his retirement because he wanted answers to the thousands of taxonomic hypotheses he had amassed since he was a teenager. He thus wanted to see me working in the lab when he arrived and later in the evening when he departed for home. He often returned after dinner to work on papers and check-into the lab to see if I was examining anything on the microscope. Max wanted to know at all times if there were any new details, whether they were small or large, and was always excited to learn new information and pose new questions to challenge me.

My fondest memories of working with Max were in the field. We travelled together with his wife Fran to the Gulf of California to collect marine algae twice. He didn't use maps, but instead navigated by memory to remote collection localities he visited with Yale Dawson on trips in the 1940s and 1950s, and Makoto Yoshizaki in 1972. In Mexico, Max

preferred to sleep outside in a sleeping bag on these trips and to lay down next to the rear tire of the suburban, not in a tent. He always had a running list in his head of the species at each site that we were going to collect and silica gel for DNA analysis as well as pickle in formaldehyde for future morpho-anatomical examination.



**Max and Fran, PSA 2017 Monterey,
California (J Hughey)**

Max tended to state in his papers that he preserved his specimens in a 5% formalin and seawater solution, which he mixed in the field. He however did not use a beaker or graduated cylinder, he calculated the 5% by smell.

*Jeffery Hughey
Hartnell College*

In about 1979 or 80, There was an International Seaweed Symposium in Newfoundland. One of the cool things about being in phycology, as opposed to most other sciences back then, was that we had just enough women to hold a dance. So we did! (... at the curling rink!)

I danced with a number of colleagues that night, but Max was the most memorable. We were swirling and spinning around and it was hot --so we were quite sweaty. On one particularly vigorous romp, our hands slipped and we both flew backward and landed on the floor! Everyone turned to look, afraid we had gotten hurt. But no, we popped right back up and kept dancing --barely missed a beat.

Max was an excellent phycologist, and a pretty fair dancer too....

*Lynn Hodgson
University of Hawai'i, West Oahu, retired*

This happened at PSA ~2000. I had caught Ester Serrão and Susan Brawley in the hall after their talk on the evolution of the Fucaceae, trying to convince them that the distribution of the family was Tethyan, not Arctic. I was not making any progress, when Max walked up and asked what we were talking about. I said, the evolution of the Fucaceae. He immediately said, "Oh, that's Tethyan," and walked off. Ester Serrao still doesn't talk to me, but I still chuckle when I think of this episode. It was so Max.

*Sandra Lindstrom
University of British Columbia*

I first met Max Hommersand at the First International Phycological Congress in St John's, Newfoundland (1981), where he was a real larger than life figure. I was a young PhD student from England studying in Ireland, and I was so impressed to hear that he and his group had driven all the way from North Carolina. I really wanted to travel back with them in "the truck" but sense prevailed (reluctantly) and I flew home.

In the early 1990s we worked very closely together on the Ceramiales volume of the Seaweeds of the British Isles. In those days, we exchanged faxes as well as emails, usually daily. Max decided he would come and work with me in Belfast for a few months. The flat above ours was available for rental, so Max and Fran moved in. They were outstandingly hospitable, as always, serving their trademark killer margaritas. Fran continued to make delicious specialities from North Carolina, sourcing all the food in Belfast. They really liked being in Ireland, and I'm sure as Americans they felt very welcome. Max and Fran drove all around the Irish coast, collecting seaweeds. One day Max was very disappointed not to be able to take the seaweeds he wanted because a sign said, "Removal of beach material prohibited". This was a real cultural difference: in Ireland, that means don't take the sand and gravel away by mechanical digger, whereas I found out later at La Jolla you weren't even allowed to remove a beach-cast seaweed!

*Christine Maggs
Queen's University Belfast*

I only met Max for a few days, here in Lisbon, Portugal, when he and his wife came for vacation (her) and collecting algae... I may have gotten a spot in his hall of fame because he was having trouble with his rented car, a manual shift small Fiat, to enter the reverse drive you had to press first and then slide the stick forward. I must say it took me a couple of minutes until figuring it out and saving his bacon since he was paying lofty

street parking fees and we moved the car into a close and much cheaper parking structure. Knowing him well I guess you realize the importance of this little contribution to his savings...

*Ricardo Melo
University of Lisbon*



Max, Fran, Showe-Mei Lin (left front) and Lawrence Liao (far right) with Philippines students, post-symposium collecting trip, ISS 1998, Philippines (DW Freshwater)

I first met Max Hommersand in 1974 when my wife and I stayed with Fran and Max in their house in Auckland. As I remember it, Max was on a 1-year sabbatical to New Zealand to do the Ceramiaceae for the NZ Flora (!). It was for me an unforgettable stay. Max turned out to be able to sit in a chair and discuss details of algal ultrastructure to an extent I had encountered in very

few other persons and never before in a person working on a subject as distant as seaweed taxonomy. Max' knowledge of the ultrastructure of the algae in general was phenomenal, his brain must have been able to store terabytes of information.

It was therefore not surprising that when Jeremy Pickett-Heaps had started his famous work on cell division in green algae in the 1960s, which marks the beginning of modern studies on the evolution of land plants from green algae, Pickett-Heaps & Marchant in the initial paper from 1972 (*Cytobios* 6: p. 256) stated that they were 'greatly indebted to Dr. Hommersand for his regrettably short visit to our laboratory; the resultant discussions persuaded us to write this paper'. Max obviously understood and was able to interpret the significance of the exceptional new findings.

I have always considered Max Hommersand to be one of the most knowledgeable and bright phycologists I have had the experience of meeting. It was often an experience to hear his opinion on some new findings, even when the subject was far from seaweed (red algal) taxonomy.

Max' talks at conferences were characteristic. He soon became so immersed in communicating the subject of his talk to the audience, gesticulating and moving around, that he did not notice when his shirt had turned open and his trousers were in danger of falling to the floor.

Max had a life-long fascination of algae. I read that when awarded the PSA Award of Excellence in 2005, the anonymous author describing the event on the internet cited Paul Silva who encountered Max as a young student 'reading Fritsch (*Structure and Reproduction of the Algae*) while eating sandwiches. Young readers may not be aware that Fritsch was for a generation of phycologists the 2-volume 1800-page bible on algae.

I am grateful for having had the opportunity to meet Max Hommersand. It will be hard to find anyone in the phycological community with anything resembling his knowledge of the algae.

*Øjvind Moestrup
University of Copenhagen, retired*

My recollections of Max are his generosity, his delight in testing ideas, how he seemed oblivious to the passage of time if he was deeply engrossed on the microscope, his kindness in replying to my enquiries - many of which must have seemed very naïve - and the importance of Fran in his life and the extraordinary role she

played in enabling his dedication to phycology. I remember his generosity when I visited North Carolina - not only with respect to phycology and spending time discussing some key projects- but also taking me to have genuine barbecue - his enjoyment of food and wine - his hospitality.

Max Hommersand made a major contribution to NZ phycology. In the 1970s Max was invited by Professor VJ Chapman to complete a treatment of the Ceramiales for the NZ flora. He visited and collected on a number of occasions, from an extended stay in the mid 1970s, an through to his last visit in 2004. Max was a great colleague for Nancy Adams - they recognised and respected each other's knowledge, Nancy greatly appreciated the breadth of Max's experience, and they enjoyed discussing concepts and testing ideas together. They had a detailed and extensive correspondence, and when Max visited NZ he spent time with Nancy in the herbarium in Wellington as well as visiting her home.

I first met Max when I was an undergraduate student and he was visiting Auckland University. After completing my PhD and returning to NZ, I began working with Nancy, who was working on her treatment of NZ seaweeds. At that time getting access to literature and to information about type specimens was much more difficult than now, and Max was very helpful in providing resources that were difficult to obtain. Throughout the folders in the herbarium in Wellington are photos of critically important specimens housed in international herbaria that Max sent to Nancy. Max became a really important advisor to me - his intellectual capacity, his enthusiasm and dedication to phycology, and his generosity in sharing his knowledge were exceptional.

I had the good fortune to spend time in the field with Max on two occasions - in Namibia prior to a workshop hosted by John Bolton in South Africa, and also in Rakiura /Stewart Island in 2004 when he visited with Wilson Freshwater on his last visit to NZ.

Wendy Nelson
Auckland Museum

I had the privilege of meeting Max quite a few times and to exchange many letters, reprints and e-mails with him. He was the Rhodomelaceae man and an encyclopedia about this group and rules of botanical nomenclature. I do not remember knowing a phycologist nicer and more helpful than him.

Eurico C. Oliveira
University of São Paulo, Brazil, retired

Max was a wonderful colleague at UNC, welcoming me when I joined the faculty 40+ years ago as an aspiring phycologist and aquatic ecologist. Right from the start of our relationship, he was bubbling with enthusiasm about getting me to appreciate macroalgae as a key component of the freshwater to marine continuum, and pointed me in numerous fruitful directions for future study. Even though I have gravitated towards microalgae, I maintained a strong interest and appreciation for the biogeochemical and ecological



Nancy Adams, Wendy Nelson and Max, Wellington, NZ 2004
(DW Freshwater)

roles that macroalgae play in the continuum, fostered by Max's infectious enthusiasm and knowledge base. I will miss Max, but won't forget the input he has had on my career.

Hans Paerl
University of North Carolina

When I was a masters student in Mark Hay's lab at University of North Carolina, I was fortunate to go on 2 of Max Hommersand's amazing field trips collecting algae in 1984 and 1985. One south to the Florida Keys and the other north to Nova Scotia and the coast of Maine. We either slept upright in the car (a Motor pool van or Suburban) as we drove, or we crashed on the floor at the residence of someone Max knew. There was a cooler in the back for food, which was mostly peanut butter and jelly. By then, Max had a list of stops where he expected to find certain taxa and we would pull over frequently and collect. Sometimes these collecting spots would have become someone's new home, but we would traipse over it nonetheless!

I learned so much about the shores on the east coast and about algae from these intensive trips. Max was tireless in pursuit of showing us algal diversity as well as finding something unique. These are the type of trips that are disappearing in college curricula, and I will always be grateful for Max's dedication.

Cathy Pfister
University of Chicago

About 20 years ago, I received an email from Max requesting some samples of red algae from the Mediterranean. At that time, he was already an authority in phycology, and I was surprised that he knew of my existence. I replied immediately, and after some time and many letters exchanged, I embarked on a collaboration with him. Initially, the collaboration was not straightforward because Max was a great teacher but also very demanding. He told me that it was essential to stain the nuclei and provided me with the protocol and a plethora of explanations on how to do it. However, the method didn't work, probably due to the buffered formaldehyde I used to fix the samples. I spent a month trying various modifications to the protocol until one day I finally achieved a successful staining. I remember walking out into the hallway of the faculty to explain it to anyone who would listen. Afterwards, I sent those first photos to Max, happier than if I had reached the



**Conxi Rodríguez-Prieto, Bruno de Reviers,
Eric Coppejans, Max, Roscoff 2005 (C Rodríguez-Prieto)**

summit of Everest, and I thanked him endlessly for not losing patience with me. Yet, Max possessed an infinite patience and continued to encourage me until I succeeded. In fact, throughout the time I worked with him, Max was an exceptional mentor. He guided me through the fascinating world of red algae reproduction, addressing all my questions with details, examples, references... It was like having the algology version of ChatGPT at my disposal; we communicated daily, sometimes multiple times a day. I believe he never took vacations because we corresponded even during Christmas or summer. He was always there. And it was fantastic because he knew so much about

so many things! I can't express how much I miss those interactions. Not to mention how grateful I am to have had him in my life.

After several years of working together, we also became friends. On a personal level, I got to know him better after the Oviedo congress, when Fran and he came to spend a week at my house. I discovered that he enjoyed good food and drink, relished nature, was calm and kind, possessed a great sense of humor, and was an astute observer. His accent posed a challenge for me, as I believe it would for any Spanish speaker, but nonetheless, we had great times discussing red algae post-fertilization processes. I was impressed to see that his passion for phycology remained intact despite his advanced age. When he had to stop working due to vision problems, he faced a difficult phase. I recall his frustration at not being able to clearly perceive images and analyze structures. Later, he also had to cope with the loss of Fran, who was his main support in life. Endings, it seems, are not happy for anyone. However, in my case, and surely in that of many others, remains the memory of a wise, infinitely generous, tireless, and amusing individual; a friend, but above all, a master among masters, undoubtedly one of the brightest algologists to have ever existed.

Conxi Rodríguez Prieto
Universitat de Girona

My earliest memories of Max go back to conferences attended as a graduate student in the mid to late 80's, notably NEAS and the 13th International Seaweed Symposium in Vancouver, BC. Max not only had an enviable knowledge of all things red algal, but the graciousness to share that knowledge freely. He was equally eager to discuss other ideas no matter how bizarre. He would reflect and then start with 'Well you know, there was a study by...'. As a graduate student it was unfortunate to be dismissed by some senior colleagues, but that was never Max's way. Just thinking of those conversations brings a warmth to my heart and reminds me of the importance of gifting time and knowledge. Not only to advance a student's science, but to let them know that they are welcomed and valued in our community. This was Max's way and he certainly impacted my early career in the most positive of ways.

As is true of everyone, Max also had his quirks. In particular, he tended to lack a sense of time, especially when presenting at conferences. I had the honor of organizing the 50th anniversary of NEAS with Louise Lewis, which had us returning to Woods Hole for the first time in decades. Max submitted an abstract and being a bit of an institution at NEAS in the early days – the first time I met him was at the 25th anniversary in 1986, my first conference presentation – he had to be included in the schedule. I rather strategically scheduled him to speak last before the morning coffee break. Max did not disappoint and engaged the audience well into the break. His finest moment was when he turned his back to those in attendance and held up a sheet of letter-size paper over his shoulder for all to 'read' while stating 'this just arrived this morning and as you can see it shows...'. You had to love Max despite his bumps and that moment is engraved into the memories of many who knew Max as an encyclopedic fountain of wisdom, and a wonderfully caring and mentoring person. He was unequivocally a dear friend and valued colleague and the warmth of those memories will stay with me always. He will be deeply missed.

Gary W. Saunders
University of New Brunswick

When I was putting together my Ph.D. plans with Rick Searles early in my years at Duke University, he suggested that UNC's Prof. Max Hommersand would be an excellent outside evaluator for my project and defense. I said to myself, "Are you kidding, by reputation he is one of the most brilliant systematists in the field?" It was a scary idea for a new graduate student who already knew of his reputation, a reputation I would later see why it was so well deserved. My first visit was to meet Max down the road in Chapel Hill, and he instantly showed me how invaluable a source he would be as a committee member with his encyclopedic mind for every algal systematic and biogeographic paper he had ever read. I went to his cluttered office in Coker Hall and he glanced at a 3 foot stack of reprints on his floor next to his desk after I asked if he had a copy of a particular paper I couldn't find at Duke. He took about a foot of papers off the stack in that pile, one of many

piles of reprints and paperwork on his office floor, and it now exposed the very paper I had inquired about. All he said was, "There it is" and "you may copy it down the hall." I was blown away! All



**Collecting Mataikona, New Zealand, 2004
(DW Freshwater)**

during my graduate years, and in fact ever since, Max was a tremendous source for me, but honestly, at the time I still dreaded the questions he would ask at my dissertation defense. When I told him the date that Rick and I had selected, Max said he'd be collecting off in some exotic place at that time, likely in South Africa, but I cannot remember exactly where now. As I left his office, I breathed a huge sigh of relief!

We as a community have lost an invaluable colleague.

*Craig Schneider
Trinity College, retired*

I first saw Max in the summer of 1960 in the Berkeley algal herbarium. He was bent over papers spread out on a table. I asked Paul Silva who he was. Paul

said that it was Max Hommersand, there to get his thesis ready for publication. Max was at the time a post doc at Harvard. I didn't disturb him, went about my business and returned to my office. The next day he was gone. Five years later, I took the job at Duke and, soon after my arrival, Max and Fran invited me and my wife, Georgie, to dinner. Max had finished his post doc at Harvard, and had been invited to join the botany faculty at the University of North Carolina in Chapel Hill. That was the first of many dinners at the Hommersands, for Max and Fran were great hosts. Whenever there was any excuse for a celebration, a visiting phycologist, or a student completing a PhD, there would be a celebratory dinner at the Hommersands. Soon after meeting Max from the first time in Chapel Hill, he and I were invited to collaborate on writing a review paper on the red algae. So during my first semester at Duke we spent a number of evenings in his home or mine, putting that paper together. I must admit, I was somewhat in awe of Max. As we work together, I was amazed at the breadth and depth of his knowledge of not only the red algae, but of all things phycological. That admiration continued, undiminished through the years. I was very lucky to have such a brilliant mind only 10 or 12 miles away.

*Rick Searles
Duke University, retired*

Max was an exceptional scholar, even amongst the best university scholars. He was far more than just a Phycologist, and seemingly understood the most complex details in the fields of biochemistry, cell and molecular biology, in microorganism to higher plants and animals. We always looked up to him as a mentor, and it seems strange that Max isn't around somewhere on the planet. He always knew 100x more than he published. Many times I would say "why don't you publish that Max", and he would answer something along the line of, "if I published everything I've studied, you'd be standing on top of a tall pile of useless s*** that few people would have read". I stayed with him in New Zealand for a week in late September 1974 on my way to Oz, and learned more about algae in that week than I did from my PhD supervisor in 4 years.

He was a giant among Phycologists, and to me GREAT company, always.

*Rick Wetherbee
University of Melbourne, retired*

Max and I were both PhD students under Dr. George F. Papenfuss, but Max had left with his PhD before my arrival there at the Univ. of Calif., Berkeley. I often ran into Max at meetings and have many memories. What I now want to relate is how Max's former PhD student Don Ott of the Univ. of Akron invited me to join him, Max and Fran Hommersand and about half a dozen of Don's advanced students to spend two weeks at the Gerace Research Centre, San Salvador Island, in March of 2006. Columbus' first spot to come ashore in the New World was a site on the western side of the island. It was a perfect time for me to get away from a cold Michigan and snorkel in tropical waters. We all sure enjoyed the Bahamian rum. A memory that I still have is how Max and Fran worked as a team, Fran holding up a seaweed and asking Max "Shall I press this one?" Max **always** answered "YES! And put some of it also in silica gel and/or formalin solution." Fran was such a good sport, and it was great to see how dedicated they both were to collecting algae.

Michael Wynne
University of Michigan



Max and Fran collecting, Zamboanga, Philippines 1998 (DW Freshwater)

While as a Master student studying *Gracilaria* parasites I knew of Max's red algal reproductive work, I never thought I would meet him. At my first PSA meeting (mid-1980s), I was asked by my supervisor to show him some pictures of post-fertilization stages of my alga. Well, I can tell you they were pretty crappy, certainly compared to the detailed work Max produced. He looked at them sympathetically and gave me insights on what he saw and how to do it better. The thing I remember is a 'nobody' Masters student arrives with some pretty shoddy data but he took time (more than 10 minutes!) to thoughtfully and kindly discuss research. I still remember this. Max was a kind and generous person, and a model for all supervisors.

Joe Zuccarello
Victoria University of Wellington



Shag Point, South Island, New Zealand, 2004 (DW Freshwater)

Andrzej Witkowski 1947-2023



It is with a great sadness that we have to announce that our Friend and Colleague, Professor Andrzej Witkowski passed away on 17 September 2023. We are saying goodbye to a prominent scientist, an authority in palaeoceanology, a valued teacher and mentor.

Andrzej began working at the University in Szczecin in 1996 and received full professorship in Earth Sciences in 2001. During his long career he served the academic community as a holder of a number of important posts, including Vice-Rectorship for Science and International Collaboration (2005-2008 and 2008-2012) and membership in the University of Szczecin's Council (beginning in 2021). Andrzej's scientific track record features hundreds of publications, monographs, and articles. He participated in numerous scientific expeditions, including to the east coast of South Africa, to Namibia, and the Galapagos. His vast knowledge and

warm personality earned him extreme respect and popularity among his students, doctoral students, and collaborators. In 2021, Andrzej received an ordinary membership of the Polish Academy of Sciences (PAS); he was also a member of two PAS committees: Marine Sciences and Geological Sciences. He was also active at the Scientific Council of the PAS' Institute of Oceanology. Andrzej was extremely active internationally, the network of his International collaborations spanning numerous countries on most continents. He spearheaded numerous international research programmes and projects, organized successful international conferences, and served as President of the International Diatom Society. He will be remembered as a noble and friendly person, respected and valued by the scientific and academic community. He is survived by his wife Małgorzata, his daughter Agnieszka and his son Jakub. (Adapted from a Diatom-L post)

Hans Porse 1943-2023

The International Seaweed Association announces with great sorrow that Hans Porse passed away on July 14th 2023. In the 1970's, Hans helped starting the seaweed cultivation for the carrageenan industry in Indonesia, where he found suitable areas and with his own hands inserted seaweed into lines. Later, he smuggled (in his socks) seaweeds from Indonesia to the airplane going to Zanzibar, in order to initiate the cultivation and industry there too. In many years he was the head of Copenhagen Pectin (now CP Kelco) as director, president and chairman of regional and international carrageenan purchase, setting up factories and sales and marketing. We have had the honor of Hans' great engagement, knowledge and always innovative ideas within seaweed and business world. Hans became honorary member of the International Seaweed Association in February 2023.

In Loving Memory



Hans Esben Porse

★ 5. oktober 1942 † 14. juli 2023



Julieta (Julie) Oliveira (nee Celestino) 1935-2023

Julie passed away in her adopted city of Vancouver, British Columbia, on January 17, 2023. She had arrived there nearly 60 years earlier, in 1963, from the Philippines, where she was born November 16, 1935.

Julie was best known to the phycological community as the go-to person for the phycological collection in the University of British Columbia herbarium (now part of the Beaty Biodiversity Museum, UBC). She identified, pressed and databased tens of thousands of specimens collected by Bob Scagel, his students and associates from numerous expeditions to Alaska and from areas of British Columbia,

Washington, and Oregon. At the same time, she befriended many of these people over the years. Faculty members, graduate students, post-docs and international researchers also sought her expertise on the local flora.

Julie married Luis Oliveira in 1978, and the couple enjoyed many happy years together until Luis' death January 24, 2022.

Although her name did not appear on many publications, she contributed to most of the phycological studies at UBC from her arrival until her retirement in 2000. Publications in which she was included as a co-author:

Scagel, R. F., & J. L. Celestino. 1970. First record of the brown alga *Dictyoneuropsis reticulata* (Saunders) Smith from British Columbia. *Syesis* 3: 187.

Foreman, R. E., S. C. Lindstrom, & J. L. Celestino. 1973. New records of marine algae in British Columbia. *Syesis* 6: 267-268.

Markham, J. W., & J. L. Celestino. 1976. Intertidal marine plants of Clatsop County, Oregon. *Syesis* 9: 253-266.

Hansen, G. I., D.J. Garbary, J. C. Oliveira, & R. F. Scagel. 1981. New records and range extensions of marine algae from Alaska. *Syesis* 14: 115-123.

Scagel, R. F., P. W. Gabrielson, D. J. Garbary, L. Golden, M. W. Hawkes, S. C. Lindstrom, J. C. Oliveira, & T. B. Widdowson. 1989. *A synopsis of the benthic marine algae of British Columbia, southeast Alaska, Washington and Oregon*. University of British Columbia, Vancouver, Phycological Contribution No. 3, 532 pp.

Eponymy: *Leptophytum julieae* Athanasiadis & W.H.Adey

Julie, we miss you very much.

Sandra Lindstrom

Curator, Phycological Collection, UBC

Department of Botany, University of British Columbia, Vancouver, BC, Canada V6T 1Z4



The Phycological Society of America has instituted a Legacy Society to help individuals make a lasting impact on the Society by including it in their estate planning. If you are interested in arranging a bequest to the PSA Legacy Society, please contact our treasurer, Julie Koester.

JOBS

UAB COLLEGE OF ARTS AND SCIENCES

The University of Alabama at Birmingham

Explore the phytoplankton social network at UAB: We are looking to recruit a PhD student to participate in a newly-funded project that seeks to understand how marine microalgae and cyanobacteria communicate and collaborate with the heterotrophic bacteria they share their environments with. Specifically, we are interested in how these interactions involve extracellular membrane vesicles — small lipid bubbles excreted by most microbes that contain active enzymes and other compounds. We think these vesicles operate as a kind of packaging system for exchanges between marine microbes and can be targeted to associate with specific partners even in complex communities. The mechanisms behind vesicle formation, packaging, and targeting are almost completely unknown, however, and there are ample opportunities for students in our lab to develop novel research directions within this framework.

The student we recruit will have opportunities to learn a wide variety of important bench skills, including genetic engineering, proteomics, and experimental evolution genomics. They will also have access to a unique resource — the strains from our Long Term Phytoplankton Evolution Experiment, as well as the large ‘omics datasets associated with them. Opportunities for field work at sea will also be available but not a requirement. This position will provide RA support for 2 semesters each year for four years.

Candidates should have significant research experience and excellent recommendation letters from their research supervisors. Please send a letter of interest and your CV to Dr. Jeff Morris at evolve@uab.edu. We look forward to hearing from you!



The [Krueger-Hadfield Lab](#) is moving to the [Virginia Institute of Marine Science](#) and we are recruiting one MS and one PhD student for Fall 2024. The lab focuses on algae as model systems to resolve one of the great paradoxes in biology – the evolution of sex – in which we integrate approaches from population genetics, physiology, and population and community ecology in marine, freshwater, and alpine micro- and macroalgae. The central thread of our research has direct implications for understanding the evolution of biodiversity, transcending taxonomic designations.

The MS student will develop protocols for snow and ice algal population genetics. The majority of eukaryotes are unicellular and alternate between sexual and asexual reproduction (i.e., partial clonality). Yet, our understanding of their evolution is limited due to inherent challenges of studying these taxa using tools and predictions that were developed in multicellular (and often obligately sexual) taxa. These tools are often not tractable in microbial eukaryotes where generation times are short, population sizes can be large, and extracting DNA from unique individuals is difficult. This project continues work that was funded by the [National Science Foundation](#) and the student will have opportunities to collaborate with colleagues in the US and in Europe working on snow and ice algae. The MS student will be supported on a research assistantship for up to 8 semesters.

The PhD student will be involved with research funded by an NSF CAREER award ([DEB-2141971](#)). Marine macroalgae are emerging commodities in the blue bioeconomy. Yet, we lack basic biological knowledge that is often readily available for other organisms of ecological or economic importance. This is compounded by a lack of understanding of macroalgal ecology in soft sediment habitats as compared to rocky shores – an acute issue in the Chesapeake where the last macroalgal species list was published more than 40 years ago. These gaps restrict the responsible development and management of algal resources for ecosystem productivity, climate mitigation, and aquaculture, but also exacerbate our ability to forecast the consequences of climate change in important primary producers in this region. Possible projects include population genetic analyses focused on the reproductive system, phenotypic investigations of haploid and diploid phases of the red algal life cycle, and community science engagement along the Eastern Shore of Virginia. The PhD student will be supported by a research assistantship for at least 12 semesters.

Students will be encouraged to develop projects that complement the existing research foci of the lab.

Find out more information about VIMS at <https://www.vims.edu/education/graduate/admissions/index.php>.

Interested applicants need to contact Dr. Krueger-Hadfield at sakh@vims.edu with the following information by **1 December 2023** to be considered for these positions:

1. CV
2. GPA from undergraduate and graduate studies as appropriate
3. Relevant coursework from undergraduate and graduate studies as appropriate
4. Short statement about research interests and how they complement existing expertise in the lab



**Submit your contributions to the next
Phycological Newsletter by January 15, 2024**

We also welcome your announcements regarding field courses, workshops, meetings, job opportunities, graduate student positions, and other algal information throughout the year to add to the PSA webpage:

Please forward this information to

Stacy Krueger-Hadfield

communications@psaalgae.org or

sakh@vims.edu