
PHYCOLOGICAL NEWSLETTER

MESSAGE FROM THE PRESIDENT

Welcome Phycologists!

I hope everyone is having a better 2021 than 2020. Our society has advanced on many fronts this year and is on track to continue into the future. To start off our 75th annual meeting was a great success with only a few technical difficulties. This was extraordinary as we went from 0% virtual pre-2020, to all virtual in 2020, to a full virtual meeting i.e., posters, auctions, a student social, and all the bells and whistles this year. What made this meeting so great? All of you and the many others that attended. We had nearly 900 registrants from North, Central and South America, the UK, Europe, the Middle East, Asia and Australia. We had over 135 presentations and 60 posters as well as workshops and symposia. Again, many thanks have to be given to our Program Director **Schonna Manning** and past Program Director **Amy Carlile** for all of their work.

Regarding our future meetings, we will be back in-person in 2022 with our second **Joint Aquatic Science Meeting (JASM) in Grand Rapids, MI, 16–20 May 2022**. Hey, that is my neck of the woods! Three years now and I still have not gotten to leave Michigan. Then in 2023 we will finally have our meeting in Providence, RI because of the work of our local host **Chris Lane**. Watch for more information about these and our other future meetings. Additionally, we are developing plans to have virtual components to provide greater access for both presenters and attendees.

As you read further in this newsletter you will learn about all of our many awardees this year. As I don't want to display kleptoplasty, I will just say thank you to the many committees that did an outstanding job evaluating all of the candidates for these awards. I encourage all of you to congratulate the committee's selections and consider joining one of the many committees PSA has.



PSA President Eric Linton

A publication of the PHYCOLOGICAL SOCIETY OF AMERICA

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Other fronts advanced upon: PSA continues to be involved with CASS (Consortium of Aquatic Sciences Societies). This has been a great way for our society to stay informed of and participate in larger issues having to do with scientific funding and natural resource management in the US and by extension to the world. So far, we have signed onto letters that have been sent onto the White House, EPA and other relevant agencies on matters such as WOTUS (Waters of the United States), support for the USGS Streamgauge Networks & Modernization, revising the Clean Water Act, and in support of climate change legislation. Moreover, PSA was a major contributor to the NSF LEAPS (Launching Early-Career Academic Pathways) for the project "LEAPS: A Diversity, Equity, and Inclusion Workshop at the Joint Aquatic Sciences Meeting". We can all look forward to participating and learning from this next year. Thanks to the PSA lead PI **Robin Kodner**, who is also the chair of our new IDEA committee.

Towards our future: First thanks to our Election Director **H. Dail Laughinghouse** for his work on the large election(s) we had this year and dealing with the difficulties of our traditional election software. While Dail got everything to work, we have decided that starting next year we will be running our elections through Wild Apricot. Yes, the same software that we use for registration and communication with our membership. In fact, all PSA members have a Wild Apricot account that we will be asking you to activate in the next few months. This will make our future elections easier to manage, as well as giving PSA a secure, members only, website where we can share non-public information about the society, such as our annual business reports. Therefore, please activate your account when you receive that email.

Election results: We had 142 members participate in the voting this year. The two ballot by-laws changes, the creation of the **IDEA (Inclusivity, Diversity, Equity and Access) committee** and the change of the election committee to an Election Director were both overwhelmingly approved by the membership (94.3% and 95.7%) respectively. If you would like to be a part of the new IDEA committee or any of our other committees listed on the PSA website, please send me an email (executive@psaalgae.org). The more of us that are involved the better and stronger our society will be.

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**Follow PSA on
Twitter!**
@PSAAlgae

Our new officers for 2022 will be: VP / President- Elect **Patrick Martone**, Secretary **Heather Spalding**, Treasurer **Michael Gretz**, Program Director **Schonna Manning**, Student Member **Soren (Huber) Schipper**, and International Vice President **Heroen Verbruggen**.

Additionally, our newly elected members of the Editorial Board are: **Dale Casamatta**, **D. Wilson Freshwater**, and **Holly Moeller**. Finally, our new Managing Editor **Kirsten Müller** and our new Co-Editors were approved by the membership. So, lets welcome Kirsten in her latest role for the PSA, as well as **Andrew Allen**, **Melinda Coleman**, **Sonya Dyhrman**, **Christopher Lane**, and **Thomas Mock**.

I look forward to seeing this new editorial office lead our Journal for the next five years, putting their own mark on it, while continuing the high quality of **Mike Graham** and his Co-Editors (**Debashish Battacharya**, **Arthur Grossman**, **Jonathan Zehr**) over the past 10 years.

In closing, I would like to thank all of the officers of the PSA for making this year run smoothly, despite all of the challenges of the virtual world. It has been my great pleasure to serve as your President this past year. To repeat the closing remarks of our previous President **Dale Casamatta** last year “I am looking forward to having an opportunity to talk with many of you at next year’s meeting” i.e., live and in-person.

Stay safe and see you all at JASM,
Eric Linton
PSA President 2021



MESSAGE FOR PSA MEMBERS AFFECTED BY HURRICANE IDA

Dear Colleagues,

Words do not adequately express how sorry we are for our members and friends in the South and Northeast US who have been impacted by Hurricane Ida. The disruptions caused by Ida only exacerbate the feelings of frustration and isolation that were rampant throughout the COVID pandemic. While dealing with personal and family struggles, as scientists we know that many aspects of our professional lives have also been disrupted, delayed, and even blown off course. For those who have been impacted, please let the PSA Executive Committee (EC) know of ways PSA members might help – whether finding space in labs, making equipment available, helping with sample processing, or making donations – we will work to help make connections. You may contact individual EC members (<https://www.psaalgae.org/committees>) or email suggestions to executive@psaalgae.org.

In the meantime, for those who can, please consider contributing to a trusted donation program. In addition to the **United Way** and **Red Cross**, there are several campaigns organized by members of the **Louisiana Universities Marine Consortium (LUMCON)** aimed to help those in a region that was particularly hard hit.

With regards,

**PSA President-elect Deborah Robertson
and the Members of the PSA Executive Committee**

PSA NAMES 2021 NORMA J. LANG FELLOW: DR. JOZEF NISSIMOV

Congratulations to **Dr. Jozef Nissimov** (University of Waterloo) who was awarded the 2021 Norma J. Lang Early Career Fellowship. Dr. Nissimov will receive \$10,000 to support his research project entitled “**Viruses of harmful algae: friend or foe**”. Dr. Nissimov will also receive \$1000 every year of his 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 following PSA webpage: <https://www.psaalgae.org/norma-j-lang-fellowships/>

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

The Origin of the PSA Logo

by Jeff Morris

Early in 2021, a PSA member sent me an email with an intriguing question: what is the origin of the famous PSA logo featuring six *Ceratium* dinoflagellates arranged in a hexagonal rosette (right)? I admitted that I did not know, but I suspected I knew someone who might. So I immediately sent an email to Dr. Mike Wynne, whose deep historical knowledge of phycology and phycologists has graced these pages many times. Mike didn't know either, but he sent an email to Bruce Parker, and the mystery was rapidly solved.



Dr. Elenor Cox at Harold Bold's Reunion Party, UT Austin 1986

[http://www.botany.utexas.edu/
Mbrownhome/bold/movies/](http://www.botany.utexas.edu/Mbrownhome/bold/movies/)

According to Bruce, the logo was created by Elenor R. Cox, a graduate student of Harold C Bold at the University of Texas in Austin during the 1960's (left). Bruce wrote that "Elenor was an unmarried lady teaching in public school when she came to Univ. Texas on a sabbatical and took Harold's Botany and also Algae courses. At the time (?early 1960s) Harold was Editor of the American Journal of Botany and often traveled (e.g., The Allen Press, Lawrence, KS), I was Harold's T.A. and most experienced graduate student so I was his substitute teacher. *Ceratium* was one of Elenor's favorite algae and a frequent visitor in Texas lakes and the Gulf. She realized P.S.A. needed a logo for Janet Stein's News Bulletin. She made the sketch, and it was adopted." Later on Dr. Cox joined the faculty of Texas A&M University for many years.

I decided to follow up on Bruce's recollections to see if I could pinpoint the date of adoption of the logo any more precisely, and I found the following snippet from the front page of the October 1977 edition (Volume 13, Number 3) of the *Phycological Newsletter*, edited by Carole Lembi of Purdue University:

THE SOCIETY NEEDS A LOGO!

As pointed out in the enclosed minutes of the P.S.A. business meeting at Santa Barbara, now that the Society has achieved tax-exempt, non-profit status, a logo for an official seal is in order. So, put your creative minds to work and send your designs to the Secretary, Elenor Cox, Department of Biology, Texas A&M University, College Station, Texas 77843 as soon as possible.

Apparently Dr. Cox was the PSA secretary at the time and was responsible for searching for a new logo. Unfortunately there is a gap in our scanned *Newsletter* back issues, so I couldn't confirm that she was actually the creator of the winning logo design. However, the next issue we have online, Volume 18 Number 1 from Spring 1982, features the logo quite prominently:



PHYCOLOGICAL NEWSLETTER

publication of the Phycological Society of America

EDITOR: LARRY LIDDLE
NATURAL SCIENCES
SOUTHAMPTON COLLEGE
SOUTHAMPTON, N. Y. 11968 / 516-283-4000

SPRING 1982

VOLUME 18

NUMBER 1

So we know that Elenor Cox was at least involved in the selection of the logo and probably also designed it. It also goes back to *at least* 1982, but probably as far back as 1977 and perhaps even back to the 60's. If anybody has more detailed information than that, please let me know!

A brief editorial note: One of the things that sets PSA apart from other professional societies is this treasure trove of tradition and history arising out of our meetings and our society publications. While my time in this role will end next year, I have considered it an honor to have been a part of this long line of scientists who have kept this *Newsletter* alive for almost 60 years and cemented together the community that has served all of us so well for so many decades. PSA will be voting for a new Communications Director in 2022: **If you are interested in running for the job, contact me at communications@psaalgae.org.**

Friday Harbor Labs Marine Botany 2021: Life and Learning Are Better by the Salish Sea

Eighteen students joined instructors Tom Mumford, Wilson Freshwater and TA Miranda Roethler for a 5-week living and learning experience during June and July at the University of Washington’s Friday Harbor Marine Lab. The lab is located within the San Juan Islands, an area of great marine algal diversity that has been and continues to be a mecca for students and researchers in all areas of marine botany. This summer’s class was no exception and included students of diverse backgrounds with interests in biodiversity, ecology, management, mariculture and physiology of marine algae.



The Class. Stay tuned- PSA will be hearing from many of these in the future.

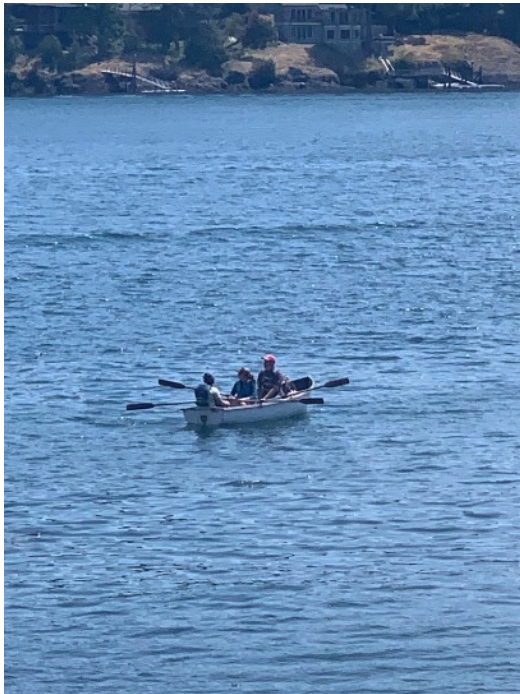
With FHL’s COVID protocols in place, we were able to carry out a safe and rigorous combination of in-person field trips, lectures, small-group research projects and a class



Dredging at Mosquito Pass, -11m MLLW so wonderful reds. Some things never change- see Kylin (1925)



So how many species of Fucus are there really on San Juan Island? (go look at the student reports on UW ResearchWorks archives for the answer)



A more carbon-neutral way to get to the Brown Island sites to repeat the 1963 subtidal surveys.



Costaria costata can get really big!



Sometimes the high intertidal is a the best place to view the Nereocystis beds (and the Strait of Juan de Fuca and the Olympic Mountains...) (and if you look really closely you can see Mt. Rainier (Tahoma) on the horizon on the left. 195 kilometers away

Barcode of Life Database (BOLD) project. The first week started immediately (time and tide waits for no one) with field trips to various habitats around San Juan Island, lectures and initial DNA extractions and PCRs of specimens for the class BOLD project. Week two continued with lectures, molecular- and wet-lab exercises, and initial planning of small-group research projects. It was highlighted by an excursion to Lopez Island for fieldwork at the most wave exposed point in the San Juan Islands. The students alternated working through their collections in the computer lab to analyze their generated sequence data and preparing their research project proposals during the third week, which also included a bountiful dredging trip to Mosquito Pass. After a comprehensive lecture and lab practical exam, the last two weeks were

spent conducting the small-group research projects, writing the project reports in manuscript format, and presenting oral presentations of this work. These projects covered a wide range of topics including, a comparison of the current and historical subtidal algal community of Brown's Island; effects of water temperature on *Ulva* growth; PCR-based identification of kelp gametophytes on coralline algae; effects of current flow on *Nereocystis* morphology and herbivory susceptibility; molecular systematics of *Ulva* and *Fucus* species, and the development of a plan for incorporating traditional knowledge and new scientific methods for seaweed monitoring by Alaskan Native American communities.

The class was enhanced by guest lectures from Ron Kittle, University of Louisiana Lafayette, Ross Whippo, University of Oregon, and Jayme Smith, Southern California Coastal Water Research Project, who we heartily thank, and also the great faculty and staff at the Friday Harbor Marine Lab without whom this experience would not have been possible. Student research project reports will be available through the University of Washington's ResearchWorks Archive (<https://digital.lib.washington.edu/researchworks/handle/1773/16337>), and the specimen and sequence data for the class BOLD project is publicly available at dx.doi.org/10.5883/DS-MASJI06.



If you're trying to figure out Nereocystis blade ruffles in different current regimes, sometimes you have to stretch them out on a calibrated driveway... (go look at the student reports on UW ResearchWorks archives for the answer)

Tom Mumford

University of Washington Friday Harbor Labs



FRIDAY HARBOR LABORATORIES

COLLEGE OF THE ENVIRONMENT
UNIVERSITY of WASHINGTON

2021 Hilda Canter-Lund Algal Photography Contest Winners

adapted from an announcement by Martyn Kelly

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 2021 award was Sophie Steinhagen for her image “Forestal”, and the second prize went to Gerd Guenther for his image of marine dinoflagellate *Pyrocystis fusiformis*.

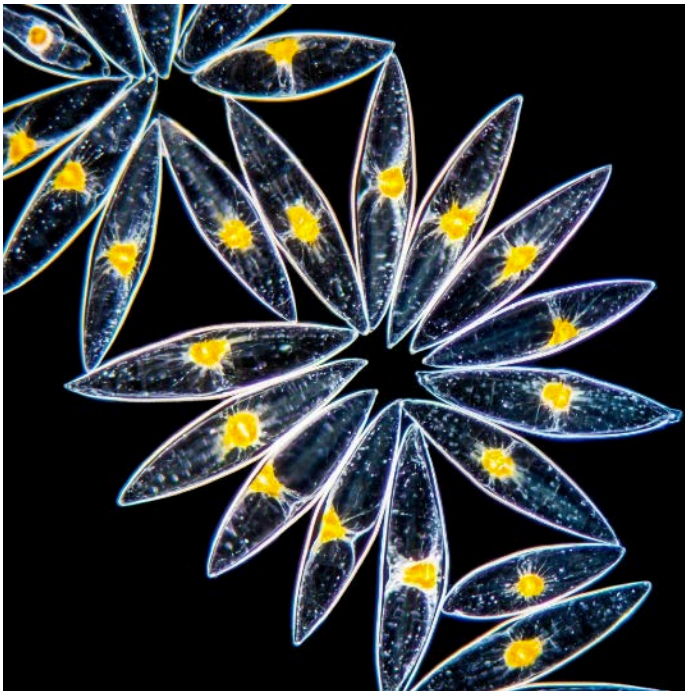
Sophie Steinhagen is a researcher at the Tjärnö Marine Laboratory of the University of Gothenburg (Sweden) dedicated to investigating the marine biodiversity of macrophytes and supporting a sustainable seaweed aquaculture in the Northern Hemisphere. During her PhD at the GEOMAR Helmholtz Centre for Ocean Research Kiel (Germany), Sophie investigated the taxonomy of different genera of marine green algae and the impact of environmental factors on their distribution and potential to form blooms. In addition to her work, she has a passion for communicating phycology to a broader audience by showing the beauty and importance of seaweeds and raising awareness for a sustainable seaweed industry.

Gerd Guenther has been working as a farmer and passionate photomicrographer in Düsseldorf, Germany for 34 years. His special interest lies in researching the biodiversity of aquatic and terrestrial habitats, with a particular interest in phycology. Algae play an essential role in the metabolic cycle of aquatic habitats and the soils that produce our food. For more than 10 years he has worked with the algae collection of the University of Cologne (now at the University of Duisburg-Essen), photographing the microalgae cultures. He is particularly grateful to Prof. Barbara Melkonian and Prof. Michael Melkonian, who made this collaboration possible and continue to support him to this day.





FIRST PRIZE: “FORESTAL”, Sophie Steinhagen — This image displays the stunning beauty of the typical Swedish flora above and below the surface. It gives a complementary picture of the oceanic forests dominated by *Fucus* spp. and the dense terrestrial Pine forests. Both ecosystems not only contribute important oxygen to the atmosphere, but also provide invaluable habitats for vertebrates, invertebrates and millions of microorganisms. The picture was taken at a shallow beach located in the Koster archipelago, Sweden in May 2021 using a GoPro HERO9. The water is about a meter deep.



SECOND PRIZE: Cultured cells of the marine alga *Pyrocystis fusiformis*, Gerd Guenther.

Pyrocystis is a non-motile marine dinoflagellate living in the tropical oceans. Just like a firefly, *Pyrocystis fusiformis* is bioluminescent, the cells emitting a blue light when disturbed. The cells often arrange themselves on the surface of the culture medium and form wonderful patterns. The culture was obtained from CCAC, Cologne and the micrograph was taken with a Leica DMLB microscope, using darkfield illumination and a 5x microscope objective, Magnification about 40x. A Canon EOS5D MK2 camera was used to take the image together with an electronic flash.

DIY "Seaweed Lava Lamps" !

MATERIALS

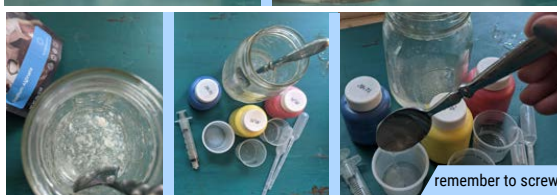
- Personal Protective Equipment (PPE)
 - glasses/goggles/gloves
- pure water
- calcium chloride (CaCl_2)
- sodium alginate
- Crayola Washable Project Paint (6 pack)
- 2 larger containers for each solution
 - measuring cup, tupperware, or bowls
- 2 spoons for each solution
- ~6 smaller containers for each color
 - medicine cups/ teacups/yogurt containers
- ~6 spoons/eyedroppers/pipettes/syringes for each color

these are not strictly necessary but encouraged for young scientists!

use caution (and/or PPE) when handling your dry, powdered CaCl_2



use different spoons or wash the spoon in between steps 1-2



remember to screw the cap back on the paint jar after step 2 !



For the full "lava lamp" effect, I recommend using a bubbler for your container or purchasing a product like [this](#)

PROCEDURE

1. Prepare your lava lamp
 - a. Pour 100 milliliters (mL) of pure water into a container, then add 1 tablespoon (Tbsp) of calcium chloride (CaCl_2). Stir and notice how quickly the CaCl_2 dissolved!
2. Prepare the contents of your lava lamp
 - a. Pour 100 mL of pure water into another container, then add 1 Tbsp of sodium alginate. Stir for about ~30 minutes for the sodium alginate to dissolve, or get a friend to help stir!
 - b. After ~30 minutes of stirring, transfer this colorless alginate solution into ~6 smaller containers, depending on how many colors you want in your lava lamp
 - c. Using a pipette, syringe, or spoon, collect a small amount of paint and combine with the alginate solution (~1 mL of paint for 15 mL of alginate solution)
3. Prepare to be amazed!
 - a. Drop some colored alginate solution into calcium solution



Transfer to a shakeable container, add a pinch of glitter, and enjoy your beautiful new Seaweed Lava Lamp!



What is calcium chloride?

- Calcium chloride (CaCl₂) is a salt in white granulated form.
- [Safety Data Sheet found here](#)
- Calcium (Ca) and chlorine (Cl) are elements, and CaCl₂ is a compound made through a chemical reaction.
- It is used in a variety of applications from laboratory settings to industrial settings to culinary settings.
- Can be found in stores like The Natural Living Center in Bangor or online through Modernist Pantry

What is pure water?

- Purified water (H₂O) in this context includes distilled, deionized (DI), and reverse-osmosis prepared water.
- It has a pH of 7 (neutral), and had its electrically conductive atoms and organic material filtered out. Scientists prefer pure H₂O to eliminate any error in an experiment.
- Distilled water comes in gallons at the grocery store, DI water is found in any lab, and contact solution also works in a pinch!

What is sodium alginate?

- Sodium alginate is the off-white powdered form of alginate. Alginate is a gelling agent found in kelp. Kelp is a seaweed/blade-forming brown algae.
- [Here is a video on how it's made!](#)
- Alginate has had a wide variety of uses over the last century. It acts as a stabilizer, thickener, hydration agent, and spherification agent. It's in foods, beverages, beauty products, pharmaceuticals, medicine, and more!
- [Purchased at Modernist Pantry.](#)



REFERENCES

- This activity was created by [Dr. Susan Brawley](#) and can be found on the Phycological Society of America's [website](#) under RESOURCES > EDUCATIONAL MATERIALS > Making Multicoloured Alginate Beads
- Thank you to Maine Coast Sea Vegetables for donating a box of [Kelp Krunch bars](#) to the activity kits of the 4-H participants!



Gels (on hand) collected with colander from the calcium chloride solutions.



the original "seaweed lava lamp" made during a lab in SMS 491: ALGAL AQUACULTURE taught by Dr. Brawley



Submitted by Lauren Trainor, Aquaculture Research Institute at the University of Maine, Orono

See the [PSA Educational Materials website](#) for a wide variety of other activities and resources for using algae in educational settings, including the winners of our 2020 [#TeachAlgae Contest!](#)



News from the PSA Board of Trustees

Hello PSA members,

I hope you were able to attend the virtual PSA 2021 meeting. Kudos to Schonna Manning and Amy Carlisle plus everyone involved in planning and executing the meeting. I was pleased that we were able to have a live Zoom event that included a silent auction. We raised over \$880 for the endowment from the auction. Thank you all who participated.

The Board of Trustees has continued to work on various projects related to finding the best uses for funds in the Endowment. More information has been added to the PSA website to make it easier to donate - <https://www.psaalgae.org/endowment-donations>.

Although the Endowment remains in good shape, we do need donations to continue to build the Endowment fund principles, particularly during a time when our annual earnings are in decline. Please consider making a contribution.

We will soon have a page devoted to the PSA Legacy Society on our webpage. Modeled after the Legacy Society of the Botanical Society of America, the PSA Legacy Society was initiated by Rick McCourt when he was a BOT member and is being developed now by Michelle Wood. An event for Legacy Members and those interested in the best ways to use retirement savings and estate plans to give to PSA is planned for the 2023 meeting in Rhode Island.

BOT members are continuing to work with Mike Guiry on developing a means to sustain AlgaeBase into the future. AlgaeBase is a wonderful phycological community resource that is financially supported by PSA and a number of other phycological societies. All phycologists owe a debt of gratitude to Mike Guiry who not only created AlgaeBase but also has continued to oversee and administer its contents even after his retirement. PSA's goal is to help ensure that AlgaeBase continues to be a phycological resource into the future. To achieve this goal, we will need to develop reliable funding streams and obtain expertise from members of the phycological community.

Lastly, the BOT recommended to the EC that \$2,500 in new funds be allocated to the Grants-in-Aid of Research for Post-doc awards to increase the total designated for Post-docs to \$7,500 per year. Funding for Graduate Student awards will continue to be \$10,000 each award cycle. As noted by Sophie McCoy, the chair of the awards committee, numerous meritorious proposals are being received from Post-docs, and our grant program is one of only a few targeted at researchers in this career stage.

I hope you all are staying well, and I am really looking forward to PSA2022 as part of JASM in Grand Rapids, MI (my hometown) May 16-20.



**Cheers,
Morgan Vis, Chair, BOT**

A Message from the PSA Membership Director

It's that time of year again (already?!) – publishing partner Wiley will soon be sending you a membership renewal for 2021. You will be pleased to note there is no increase in dues! Keep in mind that all yearly memberships expire at the stroke of midnight on 31 December so renew as soon as that Wiley email arrives to ensure you do not experience a disruption in receiving your print copy of *Journal of Psychology* and/or lose access to the digital version. Please do not hesitate to contact me if you have any questions or concerns with your renewal.

As a reminder, current student members receive a total of three years membership for the cost of one as long as you remain a student. You may not receive a renewal letter unless this is your third year. If you are still a student - no problem, renew for another three years at the same rate. Encourage your fellow psychological students to join and take advantage of this great deal and all the perks of membership. Secondary school teachers and their pupils now enjoy the same benefits as Students, including three years of membership for the price of one.

Have any psychological friends who are not (yet) members? Suggest they consider all these great benefits of membership:

- ❖ Members receive the *Journal of Psychology*, the premier journal of research on psychology (Impact Factor 3.0). The Journal is published six times a year. PSA members can sign-in and access the Journal of Psychology by logging in using their Wiley Online Library account username and password on the Journal homepage. This access log in information is sent to members after they have joined/renewed their PSA membership.
- ❖ Members of the Psychological Society of America are NOT charged page fees when they publish in the *Journal of Psychology* as communicating authors.
- ❖ Members of the Psychological Society of America can also access the *Journal of Psychology* through an iPad and iPhone app. Instructions on how to access the journal are available on the Society homepage.
- ❖ In addition, members are able to search current & back issues table of content, abstracts and full-text articles of the electronic version of the *Journal of Psychology*. The table of contents and abstracts are available free of charge

to all that are interested. The full-text articles are reserved as a benefit for society members only.

- ❖ Members receive a personal pdf copy of the Phycological Newsletter or it can be downloaded from our website. The Newsletter contains details of Society activities, news of colleagues, book reviews, information on summer field courses and graduate programs, and general articles of interest to phycologists.
- ❖ Student members pay a one-time, reduced dues rate good for three years.
- ❖ Student members of PSA are eligible for grants in support of research, travel to the Annual Meeting, and tuition for field courses.
- ❖ Post-doctoral members of PSA are eligible for grants-in-support of research.
- ❖ Post-doctoral and early career members are eligible for Norma J. Lang Early Career Fellowships.

And two more important membership privileges:

- ❖ Current PSA members elect the officers of the Society in annual elections.
- ❖ Current PSA members are eligible to hold office and serve on committees.

Perhaps you would rather surprise your phyco-friend with a phycological treat? You can gift a sponsored membership. Contact your friendly MD for assistance!

Thank you for your support of PSA.

All the best with your phycological endeavors,

Maggie Amsler



Shop at AmazonSmile
and Amazon will make
a donation to:
**Phycological Society Of
America Inc**

Get started

amazon smile

<http://smile.amazon.com>

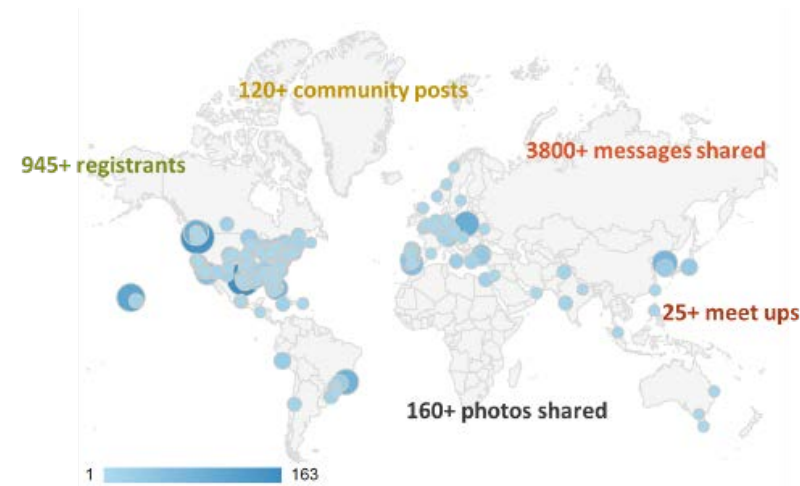
When you shop @AmazonSmile <<http://smile.amazon.com/ch/43-0898177>>, Amazon will make a donation of 0.5% of the purchase price to the Phycological Society Of America Inc. Support us every time you shop.

**Help spread the word by Liking
and sharing the link on our
Facebook page!**

THE PSA 2021 ANNUAL MEETING

Note from the Program Director

Thank you to everyone who participated and attended PSA2021 to make this year’s meeting a tremendous success! With more than 945 registrants, 140 talks, 60 posters, and 25 lightning talks, this was the largest annual meeting to date, albeit virtual. We were delighted to have representation from attendees all over the globe and it was wonderful to “see” everyone at the sessions. And, thank you for your patience as we navigated the waters of this virtual meeting. Using the Whova platform, there were more than 3800 messages sent, 120 community topics posted,



25 virtual meet ups, 173 article links shared, and 160 photos shared. Although, we would have liked to be in-person, we hope you enjoyed the meeting and we’ll find ways of keeping some virtual elements at future PSA meetings. Continue these conversations until we meet again!

Next year, PSA will meet with 9 other societies for the Joint Aquatic Sciences Meeting (JASM) to be held in Grand Rapids, Michigan from May 16-20, 2022. This meeting is expected to attract 3500-4000 attendees across the aquatic sciences, wherein we will take over downtown Grand Rapids, centering around the Amway Grand and the DeVos Convention Center. The program for JASM2022 is already under development, and I am proposing the following symposium topics to cover PSA



DeVos Center, Grand Rapids, MI

interests and elements that you would expect at our annual meetings:

- PSA Presidential Plenary and Symposium
- PSA Lang Lecture (Lang Fellow)
- PSA Bold Sessions (student members)
- Algal Evolution
- Algal Ecology
- Algal Cell and Molecular Biology
- Algal Genetics
- Harmful Algal Blooms
- Algae and Climate Change
- Applied Phycology – biofuels, bioproducts, and bioremediation

Please send me your suggestions for symposia, workshops, and integrative events that you would like to see for PSA and within the JASM2022 theme of “Rapid Changes – Collaborative Solutions”.

The call for proposals is due September 24, 2021 at 11:59 PM EDT.

Thanks again for a fantastic virtual meeting, and we look forward to seeing everyone in person next year!

Best wishes,
Schonna



The banner features a blue background with white and green accents. On the left is a circular logo for the Joint Aquatic Sciences Meeting 2022 in Grand Rapids, MI, showing a stylized map of Michigan and a green leaf. To the right, the text 'JASM 2022' is written in large white letters, with 'GRAND RAPIDS, MICHIGAN, MAY 14 - 20' below it. The main heading 'CALL FOR SESSION PROPOSALS' is in bold black text. Below this, a paragraph in black text invites proposals for symposia, pre-conference workshops/professional development courses, and integrated events. The conference theme 'Rapid Changes ~ Collaborative Solutions' is written in blue italicized text. A blue wavy line separates the text from the website address 'jasm2022.aquaticsocieties.org' at the bottom.

JOINT AQUATIC SCIENCES MEETING
2022
GRAND RAPIDS, MI

JASM 2022
GRAND RAPIDS, MICHIGAN, MAY 14 - 20

CALL FOR SESSION PROPOSALS

The JASM Program Committee invites proposals for **symposia**, **pre-conference workshops/professional development courses**, and **integrated events** which support the conference theme:

Rapid Changes ~ Collaborative Solutions

DEADLINE:
September 24

jasm2022.aquaticsocieties.org

THE 2021 PSA AWARDS OF EXCELLENCE

In 2021 PSA gave two Awards of Excellence to scientists whose sustained records of scholarship and service have left a major impact on the field of phycology: Jeff Johansen and Pete Siver.

Dr. Jeffrey R. Johansen, Professor of Biology at John Carroll University, has maintained a strong and well-funded research program resulting in over 160 publications. In the words of one referee, he has “maintained over many decades a tremendous energy and curiosity to learn about algae. Over that long haul, he has shared the results of his work professionally through a strong, well-funded research program, which has led him to the forefront of research on cyanobacterial taxonomy, systematics and ecology (and the positive international reputation that has brought to him). He has been a true leader in the realm of freshwater phycology. His passion for his work, and for his students, is evidenced in the success of his students, and for their passion and support of their mentor and friend. He has served a wide array of local, regional, national and international organizations in the promotion of Phycology as a discipline, including the PSA.”



Jeffrey R. Johansen
Professor of Biology,
John Carroll University
2021 AoE Recipient

Dr. Peter A. Siver, Becker Professor of Botany at Connecticut College, is a world expert on scaled chrysophytes and wrote the book (literally) on *Mallomonas*. He has nearly 160 publications with 65 student coauthors, has described 107 new algal genera and species, and has had another six named in his honor. Peter has taught phycology, limnology and environmental science to thousands of students, and earned numerous awards for teaching, research and service. A few examples include the PSA Gerald W. Prescott award for scholarly books for “Diatoms of North America: The Freshwater Flora of Waterbodies on the Atlantic Coastal Plain.” with Paul Hamilton in 2013, the Francis Shipley Collins Award for Service from NEAS (Northeast Algal Society) in 2017. Moreover, he received an OPUS Award (2011 – 2014) from NSF to archive his decades of research (samples, data and publications) on 350 east coast lakes in three international museums. This allows his work to be used by future researchers studying global warming, evolutionary stasis, phylogeny and biogeography. The referees for the PSA Award of Excellence marveled at his many accomplishments and gave credit to Peter’s “desire and capacity to work very hard, driven by pure passion; and the ability to collaborate seamlessly with multiple teams at the same time, delivering in a timely and thoughtful way to all projects embarked upon”.



Peter A. Siver
Becker Professor of
Botany, Connecticut
College
2021 AoE Recipient

PROVASOLI AWARD

The Provasoli Award is given every year to recognize the best manuscript published in the Journal of Phycology. It honors Luigi Provasoli, the Journal's first editor. The 2021 Provasoli Award was given to:

Ceridwen I. Fraser, Marcel Velásquez, Wendy A. Nelson, Erasmo C. Macaya, & Cameron H. Hay. 2020. The biogeographical importance of buoyancy in macroalgae: a case study of the southern bull-kelp genus *Durvillaea* (Phaeophyceae). Including descriptions of two new species. *J. Phycol.* 56: 23-36.



First Row Ceridwen Fraser, Marcel Velásquez, Wendy Nelson

Second Row: Erasmo Macaya, Cameron Hay

BOLD AND LEWIN AWARDS

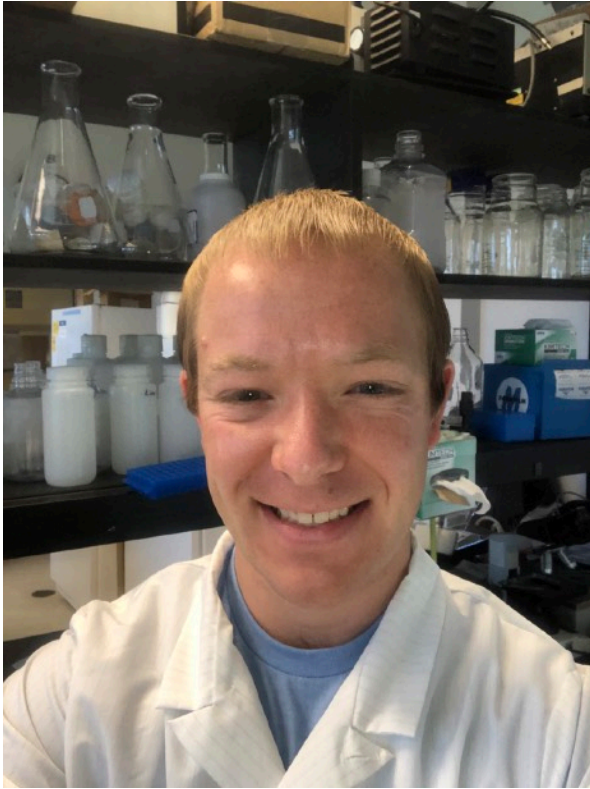
The online nature of the PSA annual meeting this year led to some changes and challenges in the format of the Bold and Lewin Award, but the quality of talks and posters was phenomenal. Participation for both awards was also at its highest level in my memory, both in terms of the number of students and the range of data types and scientific disciplines involved. It was a testament to the diversity of research questions that algae can be used to answer.

Over 20 students applied for the Lewin Poster Award this year, but in the end, **Pomona Osmers** emerged with the \$500 prize for the best poster presentation. Pomona's poster, "**Defining Optimum: Growth Conditions affect heat stress resistance in the Antarctic extremophile *Chlamydomonas* sp. UWO241**" impressed the judges with the clarity of her research narrative and the context around her question and results. Pomona is a first-year Master's degree student at the University of Ottawa, and we look forward to seeing the next steps of her work, advised by Dr. Marina Cvetkovska.



Pomona Osmers
2021 Lewin Award Winner

The Bold Award for the best student oral presentation featured 15 participants competing for the \$1000 prize and special article consideration in the *Journal of Phycology* for their work. As the Bold Award session was not held last year, the PSA Executive Committee was kind enough to allow for two prizes to be awarded this year, which went to **Timothy Bateman** and **Michaela Rogers**. The judges particularly appreciated the well-executed experimental design of Tim's presentation on "**Laboratory induced evolution of thermal tolerance differs in genotypes of the symbiotic dinoflagellate *Breviolum minutum***". Tim is finishing his Ph.D at the University of Delaware in the laboratory of Dr. Mark Warner. Michaela's presentation on "**An analytical approach to monitoring surface chemistry of small-scale *Skeletonema marinoi* algal blooms**" outlined her work which, according to her advisor Dr. Heather Allen "...represents a new wave of research on the link



**Timothy Bateman (left) and Michaela Rogers (right)
2021 Bold Award Winners**

between ocean biology and the atmosphere.” Michaela conducted this foundational work on algal analytical chemistry as part of her Ph.D at the Ohio State University.

I would like to thank all of the student presenters for their thought-provoking and entertaining presentations! I would also like to thank our judges (four for the Bold Award and four for the Lewin Award) for their time and effort judging all of these posters and presentations! I hope to see y’all—student and judges—at the JASM meeting next year!

**Matt Ashworth
University of Texas
Student Awards Committee Chair**

Upcoming PSA Awards & Grants

PSA Award of Excellence

The Phycological Society of America is soliciting nominations for one or more Awards of Excellence. Recipients of the 2022 Award of Excellence will be chosen on the basis of their sustained scholarly contributions in, and impact on, the field of phycology, through a distinguished record of scholarly activity. Nominations will be welcomed for all fields of research on algae and also should highlight the candidate's service to the PSA and/or other phycological societies. The Award is a career achievement award for a living phycologist. Membership in the PSA is not a requirement for nomination. See previous awardees at <http://www.psaalgae.org/award-of-excellence/>.

Nomination packages should include a single nominating letter from a PSA member highlighting the reasons for the nomination. The candidate should acknowledge his/her nomination and also provide a complete C.V. (including information relating to teaching and service). The committee requests 4 additional names (and e-mail

contact information) submitted to provide letters of support. The nominator is required to confirm that these individuals have agreed to write letters within two weeks of being contacted by the Committee. Nominations received for 2021 for nominees who were not selected in 2021 will automatically be reconsidered in 2022. Updates to nomination packages submitted in 2021 are not required but an updated C.V. can be substituted for the prior version if submitted by the nomination deadline. Nominations made prior to 2021 will not automatically be reconsidered but completely new nomination packages for such candidates will receive full consideration.

Nominations will be welcomed for all fields of research/teaching on algae and should highlight the candidate's service to PSA and/or other phycological societies. Inquires and/or electronic nomination materials should be directed to Rick Zechman, Humboldt State University. All nomination materials should be electronic files submitted by e-mail to rick.zechman@humboldt.edu.

In order to receive full consideration for the award that will be made at the 2022 annual meeting of the PSA, the complete nomination package must be received by January 31, 2022.

Checklist for nomination

1. Nomination letter from PSA member
2. Letter from nominee acknowledging the nomination
3. A current C.V. provided by the nominee
4. Names and contact information for 4 potential referees.

The committee will solicit letters directly, but the referees must have confirmed their willingness to provide a letter within two weeks of being contacted. If they fail to provide a letter, the Committee is under no obligation to search out new referees.

**Nomination package due:
January 31, 2022**

PSA Research Grants

The PSA Grant-in-Aid of Research program will be accepting applications due Nov. 1. This program supports graduate and postdoctoral research in any area of phycology. The Hannah T. Croasdale Fellowship deadline has been moved up to Feb. 1 to allow students to better plan for summer field courses. This program supports student attendance at phycology

courses held at field stations. If you are unsure if your proposed course meets eligibility, please email Sophie McCoy well ahead of the deadline at smccoy@fsu.edu. Some examples from the last few years include the Marine Botany course at Friday Harbor Labs, Ecology and Systematics of Diatoms or Ecology and Systematics of Algae held at Iowa Lakeside Lab, or similar.

Deadlines:
GIAR: November 1
Croasdale: Feb 1

The Gerald W. Prescott Award

Please consider nominating a book for The Gerald Prescott Award. The Prescott Award recognizes scholarly work in English in the form of a published book or monograph (including edited volumes and e-books) devoted to phycology. We are currently seeking nominations for books and monographs published between 2019 and 2021.

NOMINATION DEADLINE: APRIL 1, 2022

Please send nominations to to Craig Schneider (cschneid@trincoll.edu), Chair of the Prescott Award Committee.

In Memoriam

Trevor Alan Norton (1940-2021)

It is with great sadness that we record the passing of the eminent marine biologist and author Dr Trevor Norton (Sheffield, England, 1940– Isle of Man, 2021), formerly Professor of Marine Biology at the University of Liverpool and Director of the Port Erin Marine Laboratory, Isle of Man (1983–2005). He was Lecturer at the University of Glasgow, Scotland (1966–1976), later Senior Lecturer (1977–1981), and then Professor (1982). He was President of the British Phycological Society (1989–90) and of the International Phycological Society (1992–94), and Council Member of the Marine Biological Association of the United Kingdom.



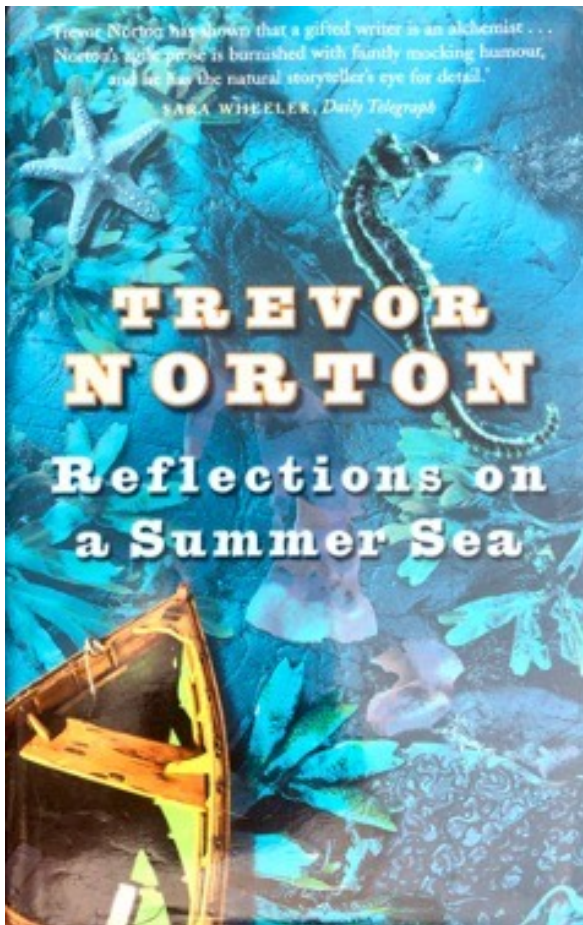
Trevor was born July 28, 1940 in Sheffield, the son of Alan and Agnes Norton. According to himself, Trevor's speciality at school was failing examinations, but he was captivated by a six-part BBC television series *Diving to Adventure* (1956) in which the couple Hans and Lotte Hass roamed the Red Sea, the Caribbean and the Aegean in their three-masted schooner *Xarifa* and from then onwards his goal was to become a marine biologist. To everyone's surprise, he started to excel at examinations. He obtained a B.Sc. at the University of Liverpool in 1963 and a Ph.D. at the same institution in 1966. The subject of his Ph.D. was the biology of the annual kelp *Saccorhiza polyschides* supervised by Dr Elsie "Bunny" Burrows (1913–1986)—whose patience he regularly and sorely tried—and involved sampling in the famous rapids (at full flow up to 3 m s⁻¹) at the remarkable marine nature reserve at Lough Hyne (Ine), Co. Cork, Ireland, tethered by a rope from the shore. (She was always "Dr Burrows", even to Trevor, and he was an exasperated "**Mr Norton!**" to her.) He continued to collaborate with others on the ecology of Lough Hyne for many years. In the 1960s, he organised regular summer/autumn field excursions for members of the British Phycological Society (BPS) to various phycologically poorly known parts of Britain and Ireland to record marine algae for the BPS's

“Mapping Scheme” (which he ran for many years), and for the series “Seaweeds of the British Isles” culminating in a survey of Co. Wexford in SE Ireland in 1970.

Capitalising on an innate ability to make a good story great, from the late 1990s he became the well-known author of popular works such as *Stars beneath the Sea: The Extraordinary Lives of the Pioneers of Diving* (Century London, 1999); *Reflections on a Summer Sea* (Century London, 2001); *Underwater to Get out of the Rain: A Love Affair with the Sea* (Century London, 2005). *Smoking Ears and Screaming Teeth* (Cornerstone London, 2011) is a celebration of early eccentrics who performed dangerous experiments on themselves including the great Victorian scientist J.B.S. “Jack” Haldane, FRS (1892–1964) who said that one should “never experiment on an animal if a man will do” and “never ask anyone to do anything you wouldn’t do yourself.” Trevor’s most recent book was *Imagination and a Pile of Junk: A Droll History of Inventors and Inventions* (Hodder & Stoughton London, 2014), an “entertaining history with a seductive mix of eureka moments, disasters and dirty tricks.”

Trevor listed his hobbies as “Writing, photography, conversation, movies, climbing trees.”; to which he should have added ballet! Ann Skea, writing on the Eclectica website, said that Norton's writing "... is often very funny and he describes some eccentric and funny

characters, but he also writes poetically and lovingly about science.” She added: “He is exceptionally good at making such seemingly dull things as sponges and seaweeds into objects of fascination.” Well, people do think seaweeds are dull and smelly!



Trevor’s summers at the Lough Hyne “giant rock pool” (a marine reserve since 1976 and one of Europe’s first) with such stars of the sea and academia as Jack Kitching and John Ebling were lovingly described in *Reflections on a Summer Sea* evocative of the early days of marine ecology when marine biologists actually spent less-than-comfortable summers getting wet, dirty and healthy:

“I have begun to write the story of Lough Ine. I want to tell of the stunning scenery and terrible history of the place, the myth and the magic, and to recapture all the fun and excitement we had in those summers when we waded and dived in the

lough. Perhaps I can convey the wonder I felt when I first came to Lough Ine in the 1960s, and maybe slip in a bit of marine biology too...

“This is the story of the menagerie of eccentric and talented ecologists who, as a hobby, established a privately owned field laboratory in south-west Ireland and took part in one of the most unlikely projects in the history of marine biology.”

And finally (from *Reflections on a Summer Sea*, with apologies to Robert Frost):

*Though memory's tide soon run to neap
The Lough remain, dark and deep,
And I have promises to keep,
To tell the tale for those who sleep.*

His wife, Win (née Price), to whom we extend our deepest condolences, provided the illustrations for this and others of his books. A list of Trevor's publications can be found on AlgaeBase.

Michael D. Guiry, Galway, Ireland.

(Image of Trevor Norton courtesy of Anna Webber, United Agents, London)



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](#).

**Jeremy David
Pickett-Heaps,
FAA, FRS
(1940-2021)**



It is our sad duty to record the death on April 11 2021 of Professor Jeremy David Pickett-Heaps, FAA, FRS, who held a Chair in Botany at the University of Melbourne from 1988 until 2002. He had battled Parkinson's disease for over 18 years, being very active, productive and in good spirits for many of those years, only succumbing to complications at the very end. Jeremy was 80 years old (born Bombay, India, on June 5 1940), and is survived by his wife, Julianne Pickett-Heaps, four children, five grandchildren and a multitude of friends and colleagues around the world.

Jeremy distinguished himself throughout his career with several important discoveries in the fields of plant cell biology and phycology, including the preprophase band of microtubules found in cells about to undergo mitosis. Jeremy pointed out the significance of this structure as a predictor of the site of division in higher plant cells. He also conceptualised the microtubule organising centre, thus founding a major field of cell biology research.

Over time, Jeremy became increasingly frustrated at trying to recreate dynamic cellular events solely from static images, and thus began his dramatic transformation into the realm of high resolution, video microscopy, revealing the complex and extraordinary life of microscopic organisms. Along with his wife, their video production company "Cytographics" produced a range of exceptional teaching and research videos that have thrilled and inspired generations of undergraduate and postgraduate students, as well as microscopists and naturalists the world over.

Jeremy received many accolades over his career, most notably being elected a Fellow of the Australian Academy in 1992 and a Fellow of the Royal Society in 1995. Following his retirement, he received Australia's "Centenary Medal" in 2003 and the "Award of Excellence" from the Phycological Society of America in 2008. Jeremy was truly an inspirational scientist and remarkable person, and will be greatly missed by his many friends, colleagues and former students. His unmatched enthusiasm and curiosity along with his wit and good humour will always be with us.

Further details of his career are at <http://www.cytographics.com/jer.html>

**Richard Wetherbee (richardw@unimelb.edu.au)
University of Melbourne.**

Ana I. Neto (1964-2021)

It is with great sadness that we announce the premature death of Dr. Ana I. Neto (Pico Island 11/09/1964 - Lisbon 01/05/2021, Portugal).

Ana dedicated her professional life to her students, demanding every day the best of them, being the force that many students needed to continue their studies and professional lives. She was admired by all those who had the privilege of learning and working with her.

Having concluded her Ph.D. in Marine Biology at the University of the Azores in 1997 Ana was currently leading the Island Aquatic Ecology Research Group of the IBBC Group of cE3c and coordinated the Herbarium AZB Ruy Telles Palhinha of the Department of Biology of the Azores University. She was an associated lecturer of Marine Biology at the University of the Azores, where she passionately taught undergraduate, Master and PhD students. Throughout her career, Ana was actively involved with the coordination of students and researchers, having enthusiastically supervised post-doctoral, doctoral, Master and undergraduate theses.

With a background on marine botany and coastal ecology and over 30 years' experience in research on islands' coastal ecosystems, Ana I Neto was a reference in Azorean marine macroalgae and in ecology of insular coastal habitats. She had extensive experience in coordinating, managing, and executing national and international projects and scientific events, and had consolidated collaborations with colleagues working on a range of topics in coastal ecology, evolution, biogeography, and conservation.

Her latest research was focused on the valorisation of biodiversity and marine resources and on the dynamics, patterns and processes of coastal communities and their responses to adverse factors such as environmental changes and overexploitation. Its development has resulted in the publication of eight guides in the field of marine biology, one manual and one guide of best practices, three book chapters and 160 papers in peer review journals on the fields of marine biology and ecology. She dedicated a great part of her life to the study of the Azorean marine macroalgae flora having published in the last months of her life a compilation of 7 papers on the marine macroalgae flora of the Archipelago of the Azores.



Additionally, A. I. Neto was a reviewer for several scientific journals, often integrating evaluation panels for international and national research projects and grants, was actively involved with the organization and promotion of scientific events.

Ana actively collaborated with the civil society through service provision, consultancy, awareness raising, and environmental education activities, having in the last years dedicated some time to the development of important scientific research projects linked to the private sector, namely, in the field of aquaculture.

Ana was a force of nature, a joyful company. She will be missed by many people for a very long time.

Further details of her career are at: <https://ce3c.ciencias.ulisboa.pt/member/anaisabelneto>

Rita F. Patarra
PhD in Biology | Seaweed Aquaculture

Dr. Maria Anna Faust (née Spillenberg) (1930-2021), a retired career civil servant and aquatic microbiologist with the Smithsonian Institution, passed away on April 24, 2021 at the age of 91 at the Riderwood Village retirement community in Montgomery County, MD from medical complications related to a stroke.

Dr. Faust was born on April 21, 1930 in Budapest, Hungary. She fled to Yugoslavia in 1957 after the Hungarian Revolution with her husband, Dr. Miklos Faust, and infant daughter, Judit. The family resided in a refugee camp for 20 months prior to emigrating to the United States. Dr. Faust earned a master degree in microbiology at Rutgers University and a doctoral degree in aquatic microbiology at the University of Maryland at College Park.

During the course of her 40-year federal career at the National Museum of Natural History within the Smithsonian Institution, Dr. Faust published over 120 research papers and was cited nearly 5,000 times for her advancement in the knowledge of tropical dinoflagellate species and the impacts of warming seas and aquatic food chains.

Dr. Faust is survived by her daughter, Judit Quasney and son-in-law Thomas Quasney of Silver Spring, MD; her grandchildren, Evan Quasney of Mercer Island, WA, Daniel Quasney of Washington, DC, and two great grandchildren.

May she rest in peace.

In memoriam for Beatrice Booth, a longtime member of the Phycological community, who passed away in June 2021. Trice will be fondly remembered both for the science she contributed and for her and her family's philanthropy.

Trice attended the Blake School in Minnesota and Miss Porter's School in Connecticut, where she was a noted alumna. She subsequently earned degrees from Radcliff College (1960) and Harvard University (1962). In 1967, she earned her Masters of Science in Oceanography from the University of Washington where she was that department's first female graduate student. She stayed on at UW and, over the course of a 30+ year career there, ascended to the role of principal oceanographer.

Trice studied the phytoplankton and zooplankton of arctic and subarctic waters, and published more than two dozen scientific papers. She and her fellow scientists discovered and described a new order and family of algae that she christened *Parmales*, because of their plate-like structure that looked like Roman shields. She was among the first to characterize these nanoplanktonic siliceous spheroids. She recognized that these tiny eucaryotic organisms contribute greatly to the biomass of photosynthetic organisms, foreshadowing the subsequent discovery of even smaller autotrophs. Although she spent most of her academic time in the lab, she collected her own deep-water samples during many expeditions on research vessels, including a month-long excursion in northern Baffin Bay in the late '90's as part of the international North Open Water (NOW) project. She greatly enjoyed floating amid icebergs and polar bears to collect samples from the Pierre Raddison icebreaker.

Trice was an avid naturalist and outdoors woman. As such, she was a staunch environmentalist, who believed in educating young people in conservation values. After her retirement from the University of Washington, she led the Washington Audubon Society board and was also a founding member of the team who created the Seward Park Audubon Center in Seattle.

Trice and her husband, Bill Booth, gave back to the UW by endowing the Banse Professorship in biological oceanography and a fellowship for postgraduate students in oceanography. They also established a scholarship fund at the Friday Harbor Marine Laboratory, and sponsored the addition of the R/V Rachel Carson to the UW's fleet of research vessels.

Trice is survived by her husband, three children and five grandchildren.

— Missi Goss

WORKSHOPS AND COURSES



Seaweed of California's Central Coast: A Three-Day Identification Workshop



Learn about the diversity, biogeography, and how to identify algae of the Central Coast!

November 12-14, 2021, at the Rancho Marino UC Natural Reserve and Camp Ocean Pines in Cambria, CA

Who should attend? Anyone interested in learning about seaweed!

This workshop is focused on learning to identify sub- and intertidal seaweeds of California's Central Coast. The course will be informative for both naturalists and phycologists alike.

Topics will also include the biogeography of algae in the Point Conception region and methods of collecting and preparation of seaweeds for herbarium specimens

👤 The workshop is organized by the Cheadle Center for Biodiversity and Ecological Restoration at UCSB and will be conducted by **Kathy Ann Miller, Ph.D.**, Curator of Algae at the University and Jepson Herbaria, UC Berkeley. Dr. Miller has spent her career studying the diversity, distribution, and evolution of California's marine algae.

👤 Attendees will arrive at Camp Ocean Pines (COP) on Friday, Nov. 12th. The lab will be held at COP, with field trips to rocky intertidal areas of the UC Rancho Marino Reserve. Attendees will stay in bunk houses, and we will dine together at COP's mess hall. The workshop begins at 2:00 PM on Friday and runs through the afternoon of Sunday the 14th.

👤 Activities will include examination of freshly collected seaweeds, a few lectures on seaweed diversity and ecology, hands-on herbarium specimen preparation, and at least two field trips to the intertidal area at Rancho Marino. The fee will be approximately \$300 for UC staff and students and \$500 for non-UC attendees (final fee TBD soon). The workshop is limited to 15 people. Course instruction, accommodations, and meals are included with the registration fee.

Contact **Greg Wahlert** to reserve your place or for any questions: wahlert@ccber.ucsb.edu



BOOK TITLES

Glushchenko, A. M., Kutznetsova and Maxim S. Kulikovskiy
The Diatoms of Southeast Asia. 2021. 1396 figs.(1358 LM & 38 SEM). 96
tabs. (4 in the text & 92 in the appendix). 2 maps. 317 p. gr8vo. - In
Russian with Latin nomenclature. EUR 139,00
(The price is tentative and might change slightly)

The monograph is a result of a 7-year investigation of diatom flora from waterbodies and watercourses in Laos, Cambodia and Vietnam (Southeast Asia).

Unlike the fauna and flora of vascular plants, the diatom flora of Southeast Asia has been poorly studied. The history of diatom investigation from Southeast Asia is considered in detail, an analysis of the fundamental works in the region is given, and a detailed annotated list is compiled. The representatives from the orders Eunotiales Silva 1962 were studied, with the exception of the genus *Eunotia* Ehrenberg 1837 (considered by the authors earlier), Mastogloiales D.G. Mann 1990, Cymbellales D.G. Mann 1990 and Naviculales Bessey 1907.

140 species and varieties have been identified. Diatoms are illustrated by 1358 original light and 38 scanning electron micrographs. The morphology and phylogeny of some taxa of diatoms are discussed

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Bank Beszteri; Richard W. Jordan (Editors)
Diatoms and Chrysohytes - Unravelling their mysteries through light and
electron microscopy: A lifetime dedicated to microalgal research: Richard
M. Crawford. 2021 (will be published September/October), ca. 310 pages
(Nova Hedwigia, Supplements No. 151) Paperback, 119 Euro ISBN
9783443510749

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EMPLOYMENT



Graduate student opportunity: 'Ecology and impacts of viruses of harmful algae'

The Environmental Virology and Ecology Research Group (i.e., ENVERG; <https://uwaterloo.ca/environmental-virology-ecology-research-group/>) led by Dr. Nissimov is recruiting a domestic or international PhD student to investigate the interactions between harmful algal bloom-forming species and their viruses.

Project Scope: Aquatic viruses are now viewed as major drivers of biogeochemical cycles and as crucial components that shape microbial food webs. Our main understanding of these viruses derives predominantly from their study in marine habitats. To that end, it is widely accepted that they can control the abundance of dominant microbial communities, decide the fate of algal blooms, and affect the diversity of microorganisms in coastal and oceanic environments. Nevertheless, despite the ecological and societal importance of freshwater environments, our understanding of the role of viruses in freshwater habitats is at its infancy. The PhD student will work in a collaborative and cross-disciplinary environment to identify and isolate from Canadian lakes novel microalgal/cyanobacterial hosts and their viruses, investigate their diversity and co-occurrence *in situ*, and conduct infection-dynamics experiments in the laboratory. Collectively, these will begin to unravel the ecological significance of virus infection of harmful algal blooms in lakes.

Academic Environment: The student will join Dr. Nissimov's research group (ENVERG) in the Department of Biology (<https://uwaterloo.ca/biology/graduate-studies>) at the University of Waterloo and will conduct research in the laboratory and in the field, as part of the highly collaborative *forWater* Network (<https://www.forwater.ca/>). The PhD candidate will conduct molecular biology and microbiology research, and bioinformatics analyses of data obtained from both laboratory experiments and *in situ* observations.

Funding: The current guaranteed stipend for graduate students is \$24,606/y. Additional details on funding breakdown and program requirements can be found in the Biology graduate handbook (<https://uwaterloo.ca/biology/graduate-studies/biology-graduate-handbook>). International candidates will also be eligible for the International Doctoral Student Award (<https://uwaterloo.ca/graduate-studies-postdoctoral-affairs/awards/international-doctoral-student-award-idsa>). Eligible students are also encouraged to apply for external funding.

Essential Qualifications:

1. Successfully complete a thesis-based MSc in Biology, Biotechnology, Aquatic Sciences, or a related field, prior to the PhD proposed start date.
2. Have meaningful laboratory experience in microbiology and molecular biology, and an interest in limnology, algal biology/ecology and environmental virology (e.g. taken upper year/graduate level classes and/or labs on these topics, or completed a relevant BSc/MSc thesis, or work experience in these areas). Prior experience in field work and bioinformatics will be looked upon favourably.
3. Have strong verbal and written communication skills.
4. Be able to work independently and collaboratively.
5. Be able to embrace challenges and not afraid to ask questions.
6. Be a self driven and motivated individual.

Starting Date: February 1st, 2022 (flexible)

Instructions: E-mail Dr. Nissimov (inissimov@uwaterloo.ca) using the subject line "Viruses and HABs 2022" and include: 1) Cover letter that outlines your research interests and how they align with the project, and how your experiences meet the stated essential qualifications; 2) Curriculum vitae; 3) Contact information of three references (must include name, affiliation and email address); and 4) Unofficial transcripts. Review of applications will begin September 1st, 2021 and the posting will remain open until the position is filled. All qualified applicants are encouraged to apply; however, preference will be given to Canadian citizens and permanent residents.

The ENVERG strives to be an equitable, diverse, inclusive, collaborative, and stimulating research environment that supports and encourages each individual to cultivate their potential and attain their professional goals. We welcome applications from women, Indigenous, Black, and other under-represented individuals.



**Submit your contributions to the next
Phycological Newsletter by January 15, 2022**

**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
PSA Communications Director
communications@psaalgae.org**

PSA accepts donations through Paypal.

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