Highlights



JASM 2014







ALGAE STAMPS



A Message from PSA President John Stiller

It was my great pleasure to see so many of you at our annual meeting in Portland this past May. The meeting brought us together with three other aquatic societies, the Society for Freshwater Science (SFS), Association for the Sciences of Limnology and Oceanography (ASLO) and Society of Wetland Scientists (SWS) in the first ever Joint Aquatic Sciences Meeting (JASM). With such a large meeting, over 3100 in attendance, it wasn't always easy



to find PSA colleagues and their presentations, but there were many interesting opportunities for our members to network with other scientists from a broad range of aquatic disciplines. Following up on discussions at the meeting, the Presidents of the four societies, along with executive officers attending the meeting from other societies and organizations, have continued to collaborate on efforts to promote research and education in the aquatic sciences. This includes working on a joint statement to policy makers and the general public on the importance of increased attention and funding opportunities for research aimed at maintaining healthy water quality, not simply an adequate supply for economic and social uses.

In addition to our general participation, the PSA sponsored Dennis Meredith's (author of *Explaining Science*) presentation in the special session on

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"Communicating the Value of Aquatic and Wetland Ecosystems to the Public and Policy Makers", as well as his Pre-conference workshop entitled "Tools and Techniques for Communicating Research." We also supported several well-attended symposia, and our members contributed many excellent talks and posters. Each of the four societies coordinated one of the morning all-conference plenary sessions, and ours took place on Wednesday, May 21. This session featured talks by Rex Lowe and Christine Maggs, winners of the 2014 PSA Awards for Excellence (see details elsewhere in this newsletter), and the plenary lecture by Ginger Armbrust entitled "Genomic insights in Microbial Ecosystems." For those of you who were unable to attend but would like to see any of these presentations, they are available for viewing at the following website http://www.sgmeet.com/jasm2014/plenary-lectures.asp.



Rex Lowe, John Stiller and Chris Maggs at JASM 2014 in Portland Oregon

After several years of large conferences with other societies, our annual gathering next year will be a more intimate, stand-alone meeting. This means it also will be more affordable, particularly for student and post-doctoral members, and will feature the complete range of algal biology of interest to our full membership. The 2015 meeting will take place August 8-13 at Drexel University in Philadelphia, PA. Please circle the dates on your calendars now and begin making plans to attend. Beyond the normal benefits of participating in our annual meeting, the 2015 gathering will be the culmination of the 50th anniversary celebration for the *Journal of* Phycology, first published in March 1965. The journal's editorial staff is working on a number of ideas to commemorate this "golden anniversary", as are the Program and Local Organizing Committees. If you have suggestions for how the journal and society can best mark this historic milestone, or want to help out with planning, please contact the journal editorial office, Board of Trustees chair and local meeting organizer, Rick McCourt psaalgaebot@gmail.com, or chair of our Program Committee Dale

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Casamatta <u>dcasamat@unf.edu</u>. Please visit the PSA website regularly for updates on meeting plans and associated opportunities, particularly announcements about student award deadlines.

It has been a busy year for the PSA and I've enjoyed my time to date as President, especially the opportunity it has afforded me to be in contact with so many of our active and dedicated members. Although I soon will be transitioning to the position of Past-President, there are a number of exciting initiatives underway that I will continue to work on in the future, some of which you can read about in this issue of the Newsletter. The PSA is good hands with our next President, Rick Zechman, assuming the reins in January, newly elected Vice-President/ President Elect Paul Gabrielson to follow, and committed groups on the Executive Committee and Board of Trustees. Nevertheless, our efforts to promote student research, career development, education, outreach, and public policies important to our mission, can succeed only through the active participation of our broader membership. These important goals of the society are achieved largely through the work of our standing committees, and committee chairs are always on the lookout for new members. Feel free to contact me or Rick, who will be responsible for appointing committee members for 2015, if you would like to participate more actively in the Society the its endeavors. Please give serious consideration to volunteering this year.

Thank you all for the opportunity so serve in this position and best of luck as we embark on a new academic year.







Highlights from the Joint Aquatic Sciences Meeting 2014 Awards

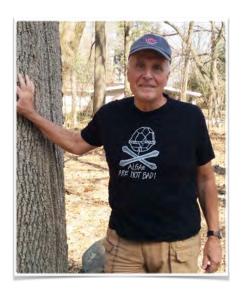


2014 Awards of Excellence

Dr. Rex L. Lowe

Professor Emeritus, Biological Sciences Bowling Green State University

Dr. Lowe was recognized for his nearly 50 years of sustained excellence in research, service and teaching in algal biology. During that time he has authored or coauthored four books or monographs, has been awarded almost 70 research grants, and has contributed over 130 peer-reviewed journal articles on a wide range of topics. His areas of study have included basic and applied ecology, taxonomy, biodiversity, saprobity, invasive and endemic species, and environmental assessment. He has focused on a wide variety of algal groups including diatoms, cyanobacteria, red, green, and brown algae that grow in a variety of freshwater ecosystems from all around the world. He has a long history of service, including as a consultant to over 30 regulatory agencies, public interest groups and companies, and as organizer



of a wide range of scientific meetings stretching across nearly 40 years.

Dr. Lowe's impact on the field of Phycology is exemplified by his influence on the careers of several generations of algal researchers and educators. As noted by his primary nominator, "The impact of his teaching cannot in reality be measured. For as long as I can remember, his teaching at university and field stations has changed the lives of countless undergraduate students." In 2006, a number of those students, including all three guest editors (R. Jan Stevenson, Yangdong Pan and J. Patrick Kociolek) assembled a special issue of the journal Hydrobiologia, entitled "Advances in algal biology: a commemoration of the work of Rex Lowe". Comments from that issue speak most eloquently to Dr. Lowe's influence. With respect to his teaching, "Rex has had extraordinary effects on his students and colleagues with his engaging personality, sometimes dangerous senses of humor and fun, and infectious fascination with the diversity and ecology of algae". Another comment noted that "Through his pioneering leadership in the North American Benthological Society during the 1970's, benthic algal ecology has become a wholly integrated element of research conducted by stream ecologists. His review of diatom ecological tolerances provided a key reference for researchers in environmental assessment. Rex and his students have explored algal flora, described new species and documented regional biodiversity throughout the US for the last 30 years". As one former students mused, "If algae were able to vote for the PSA Award for Excellence, they would create a massive bloom on their way to vote for Rex Lowe." This most certainly is true of Dr. Lowe's former students. - John Stiller

Professor Christine A. Maggs

Head of School of Biological Sciences. Queen's University, Belfast

As highlighted in her nominating letter, "Professor Maggs is an unusually productive scientist and career phycologist who richly deserves the PSA Award of Excellence. Everything she does is excellent." She has coauthored three books, one of which, Seaweeds of the British Isles, Volume 1 Rhodophyta, Part 3A Ceramiales, won the PSA's Prescott Award in 1995. Her research has been disseminated in over 110 peer-reviewed articles, including her pioneering molecular and morphological characterization of the Gymnogongrus devoniensis complex in the North Atlantic, which received the 1994 Provasoli award for the most outstanding paper in the Journal of Phycology. Summarizing the impact of Professor Maggs' research on the scientific community, one letter of support noted "...it is the combination of taxonomic expertise and a keen eye for finding the rare, unusual or overlooked in the field married to a powerful understanding of the molecular area that has made Maggs such an innovative leader in the field."



In addition to her outstanding research, Professor Maggs has distinguished herself through extensive service as an officer, committee member and/or editor for at least eight scientific societies, and through her leadership in science in the United Kingdom and worldwide. She has been Editor-in-Chief for the *European Journal of Phycology* since 2010, after previously serving for 10 years in that role earlier in her career, and has made valuable contributions as a member of the Editorial Board for the *Journal of Phycology*, and an Associate Editor for *Phycologia*. Professor Maggs served as President of the International Phycological Society from 2006-2007, and currently is in that same position for the British Phycological Society. In recognition of her outstanding contributions to science, she was elected to membership in the Royal Irish Academy in 2013.

Professor Maggs' influence on the field of Phycology, both personal and professional, are perhaps best summed up by nominating comments from a longtime colleague, regarding their work surveying seaweeds as part of an effort to establish Marine Nature Preserves in the UK: "As a seaweed novice myself, I also found that her generosity in introducing me to many thrilling new species left me with immense respect for her and she has remained a colleague and friend ever since." Professor Maggs continues to influence students and colleagues through a wide range of ongoing projects concerning taxonomy, phylogeny, population genetics, genomics, culturing and exploitation of macroalgae, and through her tireless efforts to promote the field of Phycology in general. She does, indeed, epitomize phycological excellence. - John Stiller

Provasoli Award

Two Provasoli Award winners for the best papers published in the Journal of Phycology in 2013 were announced during the PSA business at the Joint Aquatic Sciences Meeting in Portland, OR. Carrine E. Blank received the award for her work, Origin and early evolution of photosynthetic eukaryotes in freshwater environments: reinterpreting proterozoic paleobiology and biogeochemical processes in light of trait evolution (49:1040-1055). Dr. Blank's paper advanced the novel hypothesis that the origin of the eukaryotic plastid was within freshwater rather than marine systems, supported by detailed phylogenetic analyses and trait mapping. Dr. Blank's research is sure to stimulate further



Michael Graham and Carrine Blank

research on early evolution of plastids. Jennifer S. Clark, Alistair G. B. Poore, Peter J. Ralph and Martina A. Doblin were also recognized for their work *Potential for adaptation in response to thermal stress in an intertidal macroalga* (49:630-639). Clark et al. used a suite of savvy experiments to study the effect of genotype-environment interactions on the susceptibility of fucoid embryos to climate change, subsequently demonstrating the utility of thermal reaction patterns for understanding the response of algae to global change.

Bold & Lewin Awards

At the Joint Aquatic Sciences Meeting in Portland, OR in May, twenty-two students competed for the Harold C. Bold award for best oral presentation at the annual PSA meeting. Two students shared the top honor for the Bold Award: Heather Hunsperger (Rose Ann Cattolico's lab) for a talk entitled, "Many paths to chlorophyll: the evolution

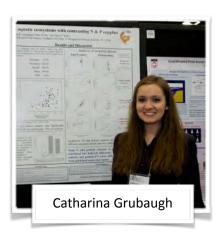


of protochlorophyllide
oxidoreductases in the algae" and
Rachel Wade (Alison Sherwood's
lab) for a talk entitled "Molecular
determination of kleptoplast origins
of the sea slug *Plakobranchus ocellatus*supports cryptic Bryopsidalean diversity
in the Hawaiian Islands." Ten students
competed for the Ralph A. Lewin award
for the best poster presentation. The
winner was Catharina Grubaugh (John
Wehr's lab) for a poster entitled,
"Periphyton protein content in aquatic

ecosystems with contrasting N and P supplies." Congratulations to these students and to their mentors.



John Stiller & Heather Hunsperger



PSA Annual Business Meeting Minutes

May 19, 2014 Portland, OR

The meeting was called to order by PSA President John Stiller at 6:08 pm, with 38 members in attendance.

- 1. Awards and recognitions. John Stiller recognized Linda Graham as Past President and Alison Sherwood as outgoing Secretary. A short presentation was made in memory of TJ Evens, past Program Director, who passed away in September 2013. Rick McCourt (Chair of the BOT) recognized Morgan Vis as an outgoing member of the BOT.
- **2. President's Report (John Stiller)**. John thanked the officers and committee chairs of PSA for their assistance at the beginning of his term. He announced the 50th anniversary of the Journal of Phycology in 2015, and reported that PSA has sponsored Dennis Meredith's participation in a workshop on communicating science at the present JASM meeting.
- **3. Past-President's Report (Linda Graham)**. Linda reminded the membership of the bylaws changes that will be on the next ballot. She has been interested in outreach to the public, and described the AlgaeZine she has been editing. Linda solicited contributions for the AlgaeZine from the membership.
- **4. Student Representative's Report (Kate Schoenrock)**. Kate reported on the student mixer and social events to be held at the JASM meeting.
- **5. Education Committee Report (Robin Kodner)**. The Education Committee has organized the Dennis Meredith Communicating Science workshop on Sunday, and his slides will be made available. They are also establishing a database of active learning exercises involving phycology that will be available to members of the Society. Suggestion from the membership: A number of high profile marine microbiology courses are being offered, which is a big draw for membership of related societies PSA should consider supporting the establishment of a phycology field course that could act as a pipeline for the society. The Education Committee will investigate this further.

- **6. Membership Report (Deb Robertson)**. The current membership has been level at about 1,000 for some years now. Some members are not timely in paying their dues, and she urges those in this category to complete their renewals. Current PSA membership includes phycologists from 47 countries, with the number of student members approximately equaling all other categories. Deb reported that the EC decided not to raise fees this year. PSA will be changing the mechanism for renewal it will now be handled through the Wiley Online Library site, which should be more straightforward.
- **7. Treasurer's Report (Eric Linton)**. Eric reported that PSA has a new accounting firm, and that the Society's Form 990 has been filed and accepted. Last year's revenue was \$295,527. Swipe card technology is now available to accept credit card payments. Eric is still talking with State Farm Insurance about providing insurance for the society's outreach events. He is concerned about diversifying income for PSA right now the Journal is the biggest source of income. He demonstrated the CafePress site with PSA items for sale. Eric announced Amazon Smile, where members can select PSA to receive donations (smile.amazon.com) equal to 0.5% of the purchase price.

Eric reported that the 2013 gross income was \$86,370, and the net income was just over \$28K. The Society is financially healthy. An income of \$92,000 is projected for this year, and this amount will probably increase next year. PSA holds ca. \$1.9 million in assets in the Treasury plus the Endowment.

- Q: How can we advertise Amazon Smile more broadly? A: Amazon has strict rules about how to advertise it must be electronically, but PSA is working on putting it on the website, Facebook, and in the PSA newsletter.
- Q: A request for printed summary of the Society's finances was made. How has the profit changed over the past three years? A: In 2011 it was >\$99K, in 2012 >\$95K, in 2013 \$86K, but it is going up this year to \$92K due to lowered production cost for the Journal.
- **8. Managing Editor's Report (Mike Graham)**. The Journal of Phycology is doing well. Mike thanked the three co-Editors (Debashish Bhattacharya, Arthur Grossman and John Zehr), and Assistant Editor Arley Muth. They are in their third year of running the Journal. The Journal is supported by 25 Associate Editors (AEs); they are publishing about 132 papers/year and have had about 275 submittals/year (but this year they are seeing an increase so far).

The Journal has an acceptance rate of about 35%. The average time to rejection in 2010 was 85 days, and it has now been reduced to less than 30 days.

Acceptances took 300 days 2010, and now occur in under 100 days. Currently it takes under 200 days for articles to be published online, and under 250 days in print.

Upcoming endeavors for this year: 1) The "Letters" format has been launched, which they will start promoting. These articles are meant to undergo rapid review and be published within 30 days. They will be reviewed by the editorial board, appear in the front of the Journal, will be free content, and will have free color figures. 2) The Journal App is now available at the app store, and an Android version is coming soon. 3) The 50th anniversary of the Journal will occur in 2014. Mike will be sending around a survey to the PSA membership to inquire about the most important publications from the last 50 years. The editors will then solicit authors to write perspectives on these papers for a special issue.

Mike announced the winners of the Provasoli Award (the judges recommended a tie between two papers):

- 1. For macroalgae: Clark, J. S., Poore, A. G. B., Ralph, P. J., Doblin, M. A. (2013), Potential for adaptation in response to thermal stress in an intertidal macroalga. Journal of Phycology, 49: 630–639. doi: 10.1111/jpy.12067
- **2. For microalgae:** Blank, C. E. (2013), Origin and early evolution of photosynthetic eukaryotes in freshwater environments: reinterpreting proterozoic paleobiology and biogeochemical processes in light of trait evolution. Journal of Phycology, 49: 1040–1055. doi: 10.1111/jpy.12111

Finally, Mike reported that the number of web hits to the Journal has almost doubled in last few years, which he attributed to the front matter.

9. Board of Trustees and Fund Manager's Report (Rick McCourt). Rick first presented Tim Nelson's Fund Manager Report (Tim was unable to attend due to a family illness).

The BOT manages the Endowment and works to increase it. Tim recommended several financial actions concerning the Endowment, which were described by Rick. First, he recommended transferring \$3K from the Treasury to the award lines of the Endowment to be able to make awards at typical levels, which was approved by the EC.

Secondly, the Life Members' fund pays for life member dues, and is managed separately from the remainder of the Endowment. Tim recommended moving it into the Endowment, which would make the funds more predictable and increase returns slightly. This was approved by the EC.

Finally, currently the Lewin Award line allows for a \$350 prize, and a requested transfer of \$150 from the Treasury to bring the amount up to \$500 was approved by the EC.

Rick then presented the BOT Report.

The BOT welcomed two new members – Michelle Wood and Juliet Brodie. The BOT will be appointing another new member starting in January 2015.

The BOT is partnering with the Editorial Office of the Journal to plan the celebrations of the 50th anniversary of the Journal. Next year Rick will be cohosting the annual meeting with Naomi Phillips; they are planning a fundraising reception and other activities, and he welcomes other suggestions from the membership. Last year a \$50 for the 50th anniversary of the Journal campaign was suggested, and Rick will have more details on this effort soon.

Rick discussed the Legacy Society, which will be set up to allow members to donate from their will or estate to PSA. The goal is to protect the financial well-being of the Society and raise funds for initiatives.

The BOT is also considering corporate and industry involvement. To begin, they will resurrect the corporate membership.

- 10. **Grants and Fellowships Committee Report (Amy Carlile).** Three awards are managed by the Grants and Fellowships Committee: the Grants-in-Aid (eight awards were made totaling \$11,499), the Croasdale Fellowships (five awards were made totaling \$6K) and the Hoshaw Travel Awards (15 awards were made totaling \$10K). The committee was supported by 17 reviewers this past year, and 74 applications were reviewed.
- Q: Does Endowment support all of these award lines? A: Yes.
- Q: Are the Hoshaw Awards also available to undergradates? A: No, just graduate students.
- 11. **Program Director's Report (Dale Casamatta).** Dale reported that the current meeting has 2,976 attendees from 50 countries, and more than 1,800 presentations are scheduled. In 2015 we will be meeting in Philadelphia during the second week of August with Rick McCourt and Naomi Phillips as co-conveners, which will be a solo meeting. In 2016 we will be meeting in Cleveland at John Carroll University with Jeff Johansen as local organizer, which will also be a solo meeting. In 2017 we will be meeting in California with Mike Graham as the local organizer, location and time are TBD, but this will also be a solo meeting.

Dale described the survey he will be sending out next week to poll meeting preferences from the membership. He also indicated that he will advertise the meetings further in advance. He welcomed suggestions and comments from the membership.

12. **Election Committee Report (Wayne Litaker)**. Wayne announced the results of the recent PSA election. He indicated that 174 votes were received, and the following people were elected to position for 2015:

Vice-President/President-Elect: Paul Gabrielson

Secretary: Chris Lane

Editorial Board of the Journal: Gary Saunders, Frederik Leliaert, Corina Brussaard,

Carmelo Tomas

Chair of the BOT: Rick McCourt Fund Manager: Steve Murray

Wayne indicated that the by-laws changes on the ballot were also approved (Section 3. Election. Elected Offices: iii. A minimum of 2 nominees are required for each position except for the Editorial Board where 4 nominees are required. In the event that a minimum number of nominees do not emerge from nominating procedures outlined above, the Elections Committee Chair will consult with the President and Executive Committee to identify additional qualified candidates. A ballot with fewer than the required number of candidates may be approved by majority vote of the Executive Committee). He thanked everyone who ran for office.

- 13. Vice-President / President Elect (Rick Zechman). Rick acknowledged John Stiller for his leadership this year. He is looking forward to next year's meeting in Philadephia. He would like to work on increasing the diversity of PSA; he suggested organizing a society contingent at the SACNAS (Society for Advancement of Chicanos and Native Americans in Science) conference in Los Angeles in October 2014, which would be an opportunity to connect with under-represented students.
- 14. A motion to accept the minutes from the 2013 PSA Annual Business Meeting in Orlando, Florida was made by Morgan Vis, seconded by Chuck Amsler, and unanimously approved.
- 15. Rick McCourt ended the meeting by describing next year's annual meeting to be held in Philadelphia, PA (second week of August), to be co-convened by Naomi Phillips and himself.

The meeting was adjourned by consensus at 7:21 pm.

Minutes respectfully submitted by PSA Secretary Alison Sherwood.

Highlights from JASM 2014









Rick McCourt & Morgan Vis, Outgoing BOT member



Eric Linton giving a presentation in Memoriam of TJ Evens



Some of the attendees at the Business meeting



Kate Schoenrock, student representative with President elect, Rick Zechman



Deb Robertson providing the membership report

Highlights from JASM 2014









PSA Student Mixer

The 2014 PSA student social was held at the Spirit of 77 on Friday evening of the JASM conference. Despite the late timing of the mixer in the conference schedule, the festivities were well attended by students as well as some postdocs and professors. We hope to see everyone again next year at the solo PSA meeting in Philadelphia.





Highlights from JASM 2014



Ríck McCourt



Scott Balogh

Deb Robertson, Wayne Lítaker & Katy Hínd





Curt Pueschel

Dennis Hanisak

John Titus

Brian Lapointe

William Henley

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 2015 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 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/website/about/awards/excellence.html.

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 the previous year (2014) for nominees who were not selected in 2014 will

Nomination Package due: January 31, 2015

automatically be reconsidered in 2015. Updates to nomination packages submitted in 2014 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 2014 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 also should highlight the candidate's service to PSA and/or other phycological societies. Inquires and/or electronic nomination materials should be directed to Chuck Amsler, University of Alabama at Birmingham. All nomination materials should be electronic files submitted by e-mail to amsler@uab.edu or, in the case of files too large to e-mail, via the UAB drop box at https://dropbox.dpo.uab.edu/scgi-bin/dropbox.cgi

In order to receive full consideration for the award that will be made at the 2015 annual meeting of the PSA, the complete nomination package must be received by January 31, 2015.

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.

PSA Grants-in-Aid of Research

Each year over \$25,000 is awarded to support student members in furthering their research (Grants-in-Aid of Research), education (Croasdale Fellowship), and travel to the annual PSA meeting (Hoshaw Travel Award). Competition for these awards is high, so the committee recommends that students have their advisors review their application before submission. Also, the committee would like to remind applicants that all incomplete (i.e. not addressing all of the required points of each award, missing

Deadline: November 1, 2014

letter(s) of recommendation) or late applications will not be reviewed. The deadline and requirements for each award application is listed on the PSA website: http://www.psaalgae.org/website/opportunities/grants.html. The committee looks forward to reviewing more great applications this year!

Upcoming deadline: Grants-in-Aid of Research on November 1, 2014

Please see the PSA website for information and the reporting requirements of successful applicants: http://www.psaalgae.org/website/opportunities/grants/grants_in_aid.html



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!

PSA 2015 Annual Meeting 50 for 50 — Phycology in Philly August 8-13, 2015

Plan To Attend PSA's Annual Meeting In Philadelphia, Pennsylvania, One of The Most Vibrant and Diverse Cities in the Country!

Come feel the LOVE, run the Rocky Steps at the Philadelphia Museum of Art, visit the Liberty Bell, catch a Phillies game, have a cheesesteak, and most importantly attend a world-class scientific meeting on algae.

The PSA 2015 Annual Meeting theme is "50 for 50--Phycology in Philly," a celebration of the 50th year of publication of the Journal of Phycology, the premier journal on the science of algae. The next Newsletter and the PSA web site, Facebook page, and twitter feed will have news and information as details.



We are planning an exciting set of plenary lectures and symposia, in addition to the contributed talks on all areas of phycology, and pre- and post-meeting scientific and cultural field trips. The meeting is timed to take place between new and full moons so as not to interfere with intertidal forays, and it is several weeks earlier than the European Phycological Congress.

The Meeting Venue

The meeting will take place in Philadelphia, the City of Brotherly Love, on the campus of Drexel University, one of the nation's premier urban universities, and at the Academy of Natural Sciences. The Academy is the nation's first and oldest natural history museum, home to the botanical collections of Lewis & Clark (including at least one seaweed), John James Audubon, Edward Drinker Cope, and Joseph Leidy, just to name a few. The Academy was home to the diatomist legends Ruth Patrick (1907-2013) and Charlie Reimer (1923-2008) and is today a center for phycological research, with one of the largest Diatom Collections in the world. Exciting field trips, plenary sessions, and social activities will be announced on the PSA



website (www.psaalgae.org) and Facebook page. For behind-the-scenes tours and requests to work on the algae or diatoms in the herbarium (acronym PH), contact the curators (<u>Rick McCourt</u> and <u>Marina Potapova</u>). Scientific sessions will take place on the campus of Drexel University. Social events are planned at the Academy of Natural Sciences, including behind-the-scenes tours of the 18 million specimens in the collections and a banquet in Dinosaur Hall.

Staying in Philly

Staying in Philly Housing on Drexel's campus will be both affordable and comfortable, with enough two-room suites (kitchenette and bathroom for each suite) to house the entire conference. Estimated rates are approximately \$50/night for a double and \$60 for a single. There are also many hotels and inns nearby. In terms of eating, Philly is a foodie's paradise from brewpubs to cheesesteaks, to some of the hippest food trucks, Philadelphia's food scene has restaurants of all prices and atmospheres.

What to Do in Philly--History, Art, and More

Center City Philly is home to National Park Service sites, including the Independence National Historical Park (http://www.nps.gov/inde/index.htm), home of the Liberty Bell, Independence Hall,



and the Ben Franklin Museum. And there's even more history at the National Museum of American Jewish History (http://www.nmajh.org/) and the National Constitution Center (http://www.nmajh.org/) and the U.S. Mint (http://www.usmint.gov/mint_tours/) and the Betsy Ross (http://www.nms.gov/mint_tours/) and the Betsy Ross (http://historicphiladelphia.org/betsy-ross-house/what-to-see) and Edgar Allen Poe National Historic Site (http://www.nps.gov/edal/index.htm).

You'll find numerous cultural museums with unmatched collections of art and artifacts, such as the Philadelphia Museum of Art (http://www.philamuseum.org/) Barnes

Foundation (http://www.barnesfoundation.org/), Rodin Museum (http://www.rodinmuseum.org/), the American Philosophical Society (http://www.amphilsoc.org/), and the University of Pennsylvania Museum of Archeology and Anthropology (http://www.penn.museum/).

Beyond Philly

Philadelphia is also close to the Atlantic shore, Valley Forge National Park, the Brandywine Battlefield Park, and innumerable gardens. Within a few hours driving or train ride are New York City, Washington, DC, Gettysburg, Longwood Gardens, and of course, the Jersey Shore!



So save the date and we will see you at 50 for 50--Phycology in Philly!!!!!

Rick McCourt (Academy of Natural Sciences of Drexel University) and Naomi Phillips (Arcadia University), Local Hosts



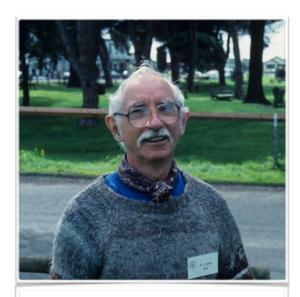


Tribute Paul Claude Silva (1922-2014)

October 31, 1922 (San Diego, California) - June 12, 2014 (Berkeley, California) Curator of Algae, University Herbarium, University of California, Berkeley (1960 - 2014) Editor, International Code of Botanical Nomenclature (1954-2006)

Paul Silva was a world-renowned marine biologist. He was the pre-eminent expert on the seaweed genus *Codium*. He compiled the names that have been historically applied to algae in his master work, the *Index Nominum Algarum*. A specialist in botanical nomenclature, he edited successive editions of the *International Code of Botanical Nomenclature*, which regulates and standardizes plant names.

He was the youngest (and only boy) of 4 children of Roy and May Silva. After a boyhood full of music and natural history in San Diego County, his academic career began at the University of Southern California, where his initial interest in piano performance and composition was sidetracked, first by marine biology, and then by World War II. He left USC for the US Navy, serving as the Combat Information Center Officer on the U.S.S. Darby and participating in the Battle of Leyte Gulf.



Paul C. Silva near the shore of Port Phillip Heads, Victoria, Australia, August, 1988.

Following the war, upon finishing his undergraduate degree at USC, Silva studied at Stanford University with Gilbert Morgan Smith, investigating the seaweeds of the Big Sur coast, which was then newly accessible. He obtained a master's degree in 1948 and enrolled in the doctorate program at the University of California at Berkeley to study the genus *Codium* with George F. Papenfuss.

When he received his PhD in 1952, he undertook a one-year post-doctoral investigation of freshwater algae. He accepted a job as professor at the University of Illinois, where he received tenure in the Botany Department.

He returned to Berkeley in 1960, became a Research Botanist and Curator of Algae at the University Herbarium and developed a research program dedicated to phycology (the study of algae) and botanical nomenclature. He participated in expeditions to the Galapagos Islands, the Gulf of California, and the California Channel Islands. He collaborated with phycologists around the world. His position as Research Botanist did not allow him to formally have students, nevertheless he influenced the graduate careers of many at Berkeley and elsewhere. He delayed retirement until 2000 and continued a slightly reduced working routine until 2012.

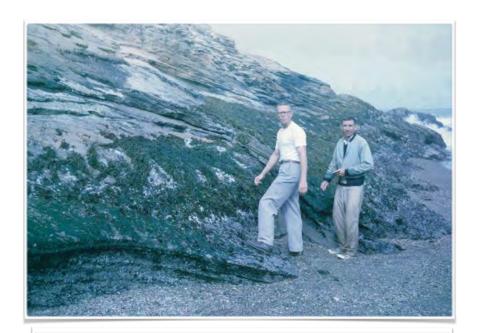
Silva belonged to many societies dedicated to the promotion of knowledge of algae. He helped to found the International Phycological Society; his editorial standards ensured that the papers published in the society journals were of high quality. He received numerous awards for his studies of algae. He provided names for ~800 species. The genera *Paulsilvella*, *Silvanella* and *Silvetia* are named in his honor, as are many species. His work facilitated phycology throughout the world.

He had a rich extra-academic life. He was a fervent supporter of the San Francisco Ballet, of Democratic politics, and of GLBT causes. He was an enthusiastic fan of the Giants and A's, the 49ers and Raiders. He collected modern Japanese prints and enjoyed working in his garden.

Silva faced difficulties: he lost his life-partner, Lawrence Heckard, and many other friends to AIDS; his house burned in the Oakland Hills fire of 1992; finally, he developed kidney disease and prostate cancer. Through it all, he pursued his research and assisted botanists throughout the world with theirs.

He left a generous bequest to found the Silva Center for Phycological Documentation at the University Herbarium, UC Berkeley (http://ucjeps.berkeley.edu/CPD/algal_research.html). This center, which will continue his life's work on the systematics of algae, is a fitting legacy for one of the field's greatest practitioners.

Richard L. Moe University of California Herbarium, Berkeley



Bill Johansen and Paul Silva, low tide at Montaña de Oro, San Luis Obispo County, California, 4 May, 1965. [M.J Wynne]

Tribute Francis Magne (1924-2014)

With sadness, we note the passing of Francis Magne (19 January 1924 - 22 May 2014), a phycologist whose long and productive career displayed a broad versatility, with contributions on macroalgae and microalgae, mostly marine but some freshwater, morphology and development, life history studies, cytology, ecology, and systematics. It was the

Chrysophyceae that captured his first attention, and this work was done at the Roscoff Biological Station. With Pierre Bourrelly as an early mentor and a co-author, in 1953 he described two new species, Ruttnera chadefaudii and Chrysobotrys feldmannii. On his own, Magne (1954) described a variety of algae growing in the marine aquaria of the Station. He later described two new Ochrophyte genera (Podochrysis and Polypodochrysis) (Magne, 1975). In a paper in 1953 he showed that in two kelps meiosis occurs at the time of the first nuclear division prior to the formation of zoospores and that the haploid number was 13 for both species [now Laminaria digitata and Saccharina latissima].

Magne spent the period from November 1954 to September 1962 at the Roscoff Station, both teaching courses on the algae and carrying out the research to achieve his doctoral degree. That research, which was published in *Cahiers de Biologie Marine* in 1964, summarized what was known up to that time on mitosis and meiosis in numerous species of red algae. His



Francis Magne on the beach at Port Phillip Heads, Victoria, Australia, August, 1988.

work showed that the accepted notion that meiosis occurred in the fertilized carpogonium in genera including *Nemalion, Scinaia, Lemanea* and *Bonnemaisonia*, was incorrect in that the carpospores were diploid and gave rise to a third generation rather than return the gametophyte. Magne offered evidence that a haplobiontic life history did NOT occur in those genera, but that they had a haplodiplophasic and trigenetic life history. He went on to discover unexpected life history patterns in species of *Acrochaetium, Kylinia, Rhodothamniella* and *Rhodochaete*. In a 1990 paper Magne showed that the commonly found *Erythrotrichia carnea* has an unexpected sexual cycle that had been completely missed by previous workers. Here the monospores germinated and developed into three-celled gametophytes, the apical cell initially producing a spermatium and then later becoming a carpogonium. After fertilization, the zygote then remained attached to the gametophyte and produced a linear series of cells (distal to the gametophyte), later forming the familiar monospores. Magne (1992) was very observant, reporting the small red alga *Goniotrichopsis* for the first time in Europe (from the English Channel and the Mediterranean).

Cryptogamie, Algol. 10: 33-55.

With another mentor, Marius Chadefaud, Magne proposed new concepts on classification in the Rhodophyceae. They recognized new categories at the higher levels of classification, including three subclasses: Archeorhodophycidae, Metarhodophycidae, and Eurhodophycidae. Magne (1978, 1988) had a knack in using innovative approaches and in proposing new terms. Using electron-microscopy, Magne (1976) showed that non-dividing cells of the brown alga Bachelotia antillarum contained discrete narrow plastids that were joined at the extremities in a stellate configuration. Each plastid had a terminal pyrenoid, and the central part of the plastid grouping was made up of all the pyrenoids side by side. He and his student Abdel-Rahman showed that the tetraspores of Acrochaetium polyidis developed into Helminthora divaricata, the conspicuous gametophyte stage (Magne & Abdel-Rahman, 1983).

Following the retirement of his major professor Jean Feldmann, Francis Magne succeeded him as Professor and Head of the Laboratoire Biologie Végétale Marine at the Université Pierre et Marie Curie in Paris, where he trained several PhD students. Upon his own retirement, he continued to do research at the Muséum National d'Histoire Naturelle. On the occasion of his 75th birthday, I was pleased to author "a tribute" to him (Wynne, 2000), in which I offered some recollections on when our paths crossed not only in Paris but at meetings, in Santa Barbara, St. John's, Asilomar, Bangor, Melbourne, and São Paulo. Francis Magne will be remembered not only for his scientific contributions but also for his clever sense of humor, his kindness, and being the wonderful colleague that he was to so many.

Abdel-Rahman, M. H. & F. Magne. 1984. Le développement de l'Audouinella boryana sp. nov. (Rhodophycée, Acrochaetiale). Cah. Biol. Mar 25: 1-14. Bidoux, C. & F. Magne. 1989. Étude de quelques Acrochaetiales (Rhodophyta) devant être rapportés au genre Rhodothamniella.

Boillot, A. & F. Magne. 1973. Le cycle biologique de Kylinia rosulata Rosenvinge (Rhodophycées, Acrochaetiales). Bull. Soc. Phycol. France 18:

47-53. Bourrelly, P. & F. Magne. 1953. Deux nouvelles espèces de Chrysophycées marines. Rev. Gén. Bot. 60: 684-687. Magne, F. 1953, Méjose et nombre chromosomique chez les Laminariaceae (Laminariales, Pheophyceae), C. R. Acad. Sci. Paris 236: 515-517. . 1954. Les Chrysophycées marines de la Station biologique de Roscoff. Rev. Gén. Bot. 61: 389-415. __. 1957. Sur un biotope marin favorable aux Chrysophycées benthiques. C. R. Acad. Sciences, Paris. 245: 983-985. ___. 1960. Le Rhodochaete parvula Thuret (Bangioidée) et sa reproduction sexuée. Cah. Biol. Mar. 1: 407-420. . 1964. Recherches caryologiques chez les Floridées (Rhodophycées). Cah. Biol. Mar. 5: 461-671. . 1967. Sue l'existence, chez les Lemanea (Rhodophycées, Némalionales), d'un type de cycle de développement encore inconnu chez les algues rouges. C. R. Acad. Sci. Paris. sér. D 264: 2632-2633. . 1969. Sur l'interprétation du cycle de quelques Rhodophycées. Bull. Soc. Phycol. France 13-14: 28-30. _. 1972. Le cycle de développement des Rhodophycées et son évolution. Soc. Bot. Fr., Mém. 1972: 247-268. __. 1975. Contribution à la connaissance des Stichogloeacées (Chrysophycées, Stichogloeales). Cah. Biol. Mar. 16: 531-539. . 1976. Quelques caractères cytologiques particuliers du Bachelotia antillarum (Phéophycées, Ectocarpales). Phycologia 15: 309-319. . 1978. The application of cytology to taxonomy of red and brown algae. In: Modern approaches to the taxonomy of red and brown algae (D.E.G. Irvine & J.H. Price, eds.). 145-156. Academic Press, London. pp. 145-156. . 1981. Remarques sur l'Acrochaetium unifilum (Rhodophycées, Acrochaetiales). Cryptogamie, Algol. 2: 171-178. . 1982. On two new types of life history in the Rhodophyta. Cryptogamie, Algol. 3: 265-271. . 1989. Classification et phylogénie des Rhodophycées. Cryptogamie, Algol. 10: 101-115. __. 1988. Sur les notions d'archéthalle et de nématothalle. Cryptogamie, Algol. 9: 267-272.

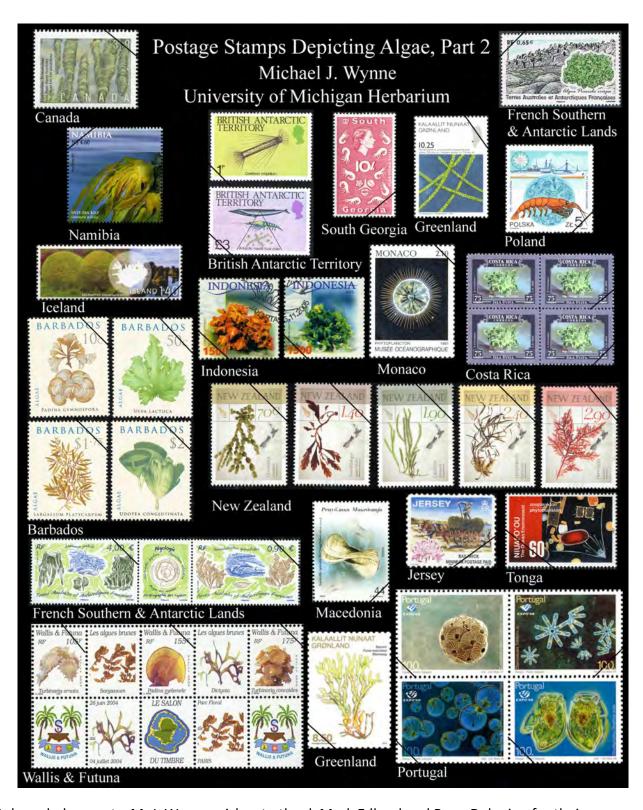
. 1990. Reproduction sexuée chez Erythrotrichia carnea (Rhodophyceae, Erythropeltidales). Cryptogamie, Algol. 11: 157-170. _. 1992. Goniotrichopsis (Rhodophycées, Porphyridiales) en Europe. Cryptogamie, Algol. 13: 109-112.

& M. H. Abdel-Rahman. 1983. La nature exacte de l'Acrochaetium polyidis (Rhodophycées, Acrochaetiales). Cryptogamie, Algol. 4: 21-35.

Wynne, M. J. 2000. Francis Magne: a tribute. Cryptogamie, Algol. 21: 93-95.

& F. Magne. 1991. Concerning the name Fucus muscoides (Cotton) J. Feldmann et Magne. Cryptogamie, Algol. 12: 55-65.

Michael J. Wynne University of Michigan Herbarium, Ann Arbor



Acknowledgements: M. J. Wynne wishes to thank Mark Edlund and Rene Delepine for their assistance in gathering stamps used in this montage.

Meetings



This is the first call for the 6th European Phycological Congress, which will be held on the 23 – 28 August, 2015 at the Novotel Hotel West London, UK. EPC6 is co-sponsored by the Federation of European Phycological Societies (FEPS) and the British Phycological Society (BPS).

The website is open: http://www.epc6.org and early registration is available. You can also view the scientific programme and other aspects of the Congress.

If you have any questions, please send an Email to: epc6@nhm.ac.uk

We look forward to welcoming you to London in 2015.

Jane Lewis and Elliot Shubert, Co-Chairs, Local Organising Committee

Website: www.epc6.org

Twitter: @EPC6.org

Facebook: http://www.facebook.com/EPC6London



The event features keynotes, panels and nearly 100 presentations in breakout sessions organized into four tracks: Biology, Engineering & Analysis, Finance & Policy, and Commercialization.

Information about special registration rates, an exciting agenda and tours of San Diego-area algae facilities is available at www.algaebiomasssummit.org.

2014 Geological Society of America Annual Meeting

19-22 October 2014 - Vancouver, BC Canada at the Vancouver Convention Centre,

http://community.geosociety.org/gsa2014/home/



Registration Deadline: September 15, 2014

Courses

Marine Algae Course Announcement
Friday Harbor Laboratories, The University of Washington
Summer A-term: June 15 - July 17, 2015

(FHL 430: 9 credits at the University of Washington)

With nearly 625 species of marine macroalgae reported for the region, the San Juan Islands provide one of the most species-rich seaweed assemblages in the world. This charismatic megaflora has played host to generations of phycologists for over 100 years and is the type locality for over 20 species. Come visit this phycological hotspot and be a part of a rich, and dynamic history. Here you can revel in the opportunity to study the algae with like-minded phycophiles seeking to understand algal diversity using traditional and modern methods. When you take a break from daily field excursions to diverse, algal-dominated habitats or from the well equipped identification laboratory, you will enjoy a community of engaged and productive scholars studying the biodiversity, physiology and development of marine invertebrates and vertebrates, conservation biology, ecology, ocean acidification, biomechanics, or scientific diving. Weekly seminars given by world-renowned marine biologists also enhance the Friday Harbor experience.

Considering the range of human impacts on natural ecosystems and current trends in biodiversity decline from increases in sea surface temperatures, ocean acidification or biological invasions, to name but a few, an understanding of the diversity, distribution and ecological role of habitat-structuring marine floras is key. Whether you are studying warm or cold-water phycology, plant-animal interactions in the sea, or natural products chemistry from marine macrophytes, etc., this course *IS* for you. You will gain practical experience in the characterization of algal diversity using traditional morphological approaches, and you will have the opportunity to test those assertions by generating and analyzing your own molecular data set. With these approaches in hand, you'll be poised to ask the really interesting ecological, phylogenetic or applied research questions that *always* rely on accurate species determinations. In addition to developing or enhancing these universal skill sets, you will also gain practical experience communicating your technical expertise to broader audiences through the production of a public outreach product.

The Marine Algae course at Friday Harbor is 5-weeks of total phycological immersion; see what inspired your phycological predecessors (e.g., Tilden, Kylin, Lüning, Goff, Wynne), and ask your advisor what year he/she took the course, and what his/her most memorable experience was. Then, visit: http://depts.washington.edu/fhl/studentSummer2015.html to find out more about application deadlines, tuition and opportunities to fund/defray costs to participate. Applications will be accepted starting September 25th. Funding is available through the PSA's Hannah Croasdale Fellowships (http://www.psaalgae.org/website/opportunities/grants/croasdale.html).

Contact the 2015 course instructors, Tom Mumford (tmumford@uw.edu) and Brian Wysor (bwysor@rwu.edu) to see how your research can integrate into course goals to further your own research while being part of what we hope to be a career-shaping experience studying the marine flora of the San Juan Islands.







Acceptance of Applications begins on September 25, 2014



We are glad to announce the

11th Advanced Phytoplankton Course - APC 11 Taxonomy and Systematics

The Course will be held on 4-24 October 2015 at Stazione Zoologica Anton Dohrn, Naples, Italy.

The Course is organized by the Stazione Zoologica in cooperation with the Department of Biology, University of Copenhagen, Denmark, and the IOC Science and Communication Centre on Harmful Algae.

APC 11 will cover morphology, taxonomy, and phylogeny of marine phytoplankton species. The aim is to increase and update the expertise of the students in the taxonomy and specific identification of diatoms, dinoflagellates, coccolithophores and other phytoflagellates, with emphasis on light microscopy and integrating molecular data and new approaches to the study of microalgae.

The programme will consist of lectures and practical sessions. During the latter, a diverse collection of preserved and live material will be offered for examination in light microscopy. Selected material will be observed in electron microscopy.

Topics

- methods and criteria for species identification
- molecular and morphological phylogeny
- specialized literature
- toxic and harmful species
- general and specific aspects of phytoplankton biodiversity and biogeography

Faculty

- Federica Cerino (Istituto Nazionale di Oceanografia e di Geofisica Sperimentale, Trieste, Italy)
- Mona Hoppenrath (Forschungsinstitut Senckenberg, Wilhelmshaven, Germany)
- Wiebe H.C.F. Kooistra (Stazione Zoologica Anton Dohrn, Naples, Italy)
- · Carina B. Lange (University of Concepción, Chile)
- Jacob Larsen (IOC Science and Communication Centre on Harmful Algae)
- Nina Lundholm (Natural History Museum, University of Copenhagen, Denmark)
- Øjvind Moestrup (Department of Biology, University of Copenhagen, Denmark)
- Marina Montresor (Stazione Zoologica Anton Dohrn, Naples, Italy)
- · Ian Probert (Station Biologique, Roscoff, France)
- Diana Sarno (Stazione Zoologica Anton Dohrn, Naples, Italy)
- Karen Steidinger (University of South Florida, St. Petersburg, FL, USA)
- Carmelo R. Tomas (University of North Carolina at Wilmington, NC, USA)
- Adriana Zingone (Stazione Zoologica Anton Dohrn, Naples, Italy)

Participation is limited to 20 participants with PhD, MSc degree or equivalent, and with documented experience in phytoplankton identification. A good knowledge of the English language is necessary. The registration fee of ϵ 600 includes course tuition and materials, as well as social activities.

More detailed information, as well as the application form, will be available on the Stazione Zoologica website (www.szn.it) by the end of September 2014.



Advance notice of the annual freshwater algal training courses in Durham, England, in 2015, and run by Profs David John and Brian Whitton.

The 'Introductory Course on Freshwater Algae' will run from 28 June to 3 July and the 'Advanced Course on Freshwater Cyanobacteria and Green Algae' from 5 to 10 July. The emphasis of both is on identification, but ecological aspects are also covered, especially those relevant to nuisance algae and their control. The courses are based at Durham University, using the School of Biological and Biomedical Sciences for study and Van Mildert College for accommodation. Several other staff assist with the courses, including Drs Alan Donaldson and Martyn Kelly. Queries to b.a.whitton@durham.ac.uk.



Workshops

The University of Texas at Austin 2014 Workshops

September 18 - 19, 2014 (\$600 USD) Managing Microalgal Cultures

This 2-day workshop is designed to enhance the knowledge of those who are already familiar with algae, and provide an introduction to algal culture management for those with no prior experience. Many topics are of direct relevance for those who are interested in commercialization of algae.

November 12 - 14, 2014 (\$1000 USD, lunch included)

Bioprospecting, Isolation and Analysis of Microalgae

This 3-day workshop is designed to teach the principles and practices of microalgal strain collection, enrichment, screening, isolation, identification, and natural product characterization. Presentations and hands-on laboratory activities are tailored to take participants step by step through the process of collecting samples from the field, establishing and characterizing cultures, and identifying and analyzing metabolic products of interest.

Visit http://web.biosci.utexas.edu/utex/workshopsoverview.aspx to register

ATP³ Fall 2014 Workshop

November 3-7, 2014 at AzCATI, ASU, Mesa, AZ (\$1600 USD, lunch included)

Large-Scale Algal Cultivation, Harvesting and Downstream Processing

This workshop will cover practical applications and issues with growing and managing microalgal cultures at the production scale, including methods for handling cultures, screening strains for desirable characteristics, identifying and mitigating contaminants, scaling up cultures for outdoor growth, harvesting and processing technologies, and methods for the analysis of lipids, proteins and carbohydrates in biomass. Related laboratory and field training will include numerous hands-on opportunities for participants to collect and perform routine sample measurements, monitor cultures for contaminants, and evaluate the chemical composition of algal biomass. This workshop is ideal for those interested in obtaining a broad overview of the management of microalgal cultures at scale, and for advanced students and trainees interested in the practical applications of microalgae. Activities will be held at AzCATI, a nationally-recognized algae testbed facility, where participants can explore every aspect of growing microalgae at the production scale.

The Arizona Center for Algae Technology and Innovation (AzCATI) at Arizona State University and the Culture Collection of Algae (UTEX) at the University of Texas at Austin, through the D.O.E.-sponsored Algae Testbed Public-Private-Partnership (ATP³), offer comprehensive workshops on the cultivation of microalgae, strain selection, pilot-scale cultivation, harvesting and processing, and analysis of valuable oils and co-products. Workshops are conducted by trained phycologists, biochemists, and engineers.

For information about this and future workshops please visit: http://atp3.org/education-and-training

News from Colleagues





Canadian certified organic IMTA kelps hit market

Cultivated kelps raised on a farm in the Bay of Fundy have been certified to the Canadian Organic Aquaculture Standard and will soon be making their way into the marketplace.



The organic kelps are produced by Cooke Aquaculture at its Charlie Cove farm site near Back Bay, New Brunswick, and are being marketed under its True North Salmon brand. The company is producing two species of kelps at the site - *Alaria esculenta* and *Saccharina latissima*, also called winged and sugar kelps, which are known for their superior sweetness and flavour. These seaweeds can be eaten fresh or cooked.

"Seaweeds, like kelps, are popular around the world and in North America we are discovering how easy they are to prepare and

how delicious and healthy they are," said Andrew Lively, Marketing Director with True North Salmon, the processing and sales arm of Cooke Aquaculture. "Our sales team has been identifying a wide

range of potential customers, such as chefs, restaurants and non-food sectors like the cosmetic and feed industries. We look forward to providing our first customers with organic kelps in the next few weeks."

The certification to the Canadian Organic Aquaculture Standard comes following third-party audits by SAI Global, an internationally accredited certification company.

The Charlie Cove site is an Integrated Multi-Trophic Aquaculture (IMTA) farm, which means that it raises species from different trophic levels and is designed to mimic the natural ocean ecosystem where many seaweeds and animals co-exist. The farm raises fish that are fed along with seaweeds and shellfish that

Alaria esculenta (winged kelp) growing on a rope at the IMTA site (photo credit: Thierry Chopin).

are extractive - which means that they absorb nutrients from their environment. In this case, the Charlie Cove farm produces the kelps along with blue mussels and Atlantic salmon. This IMTA venture is a collaborative project between Cooke Aquaculture, the University of New Brunswick and Fisheries and Oceans Canada.



The UNB team, led by Dr. Thierry Chopin, assists in managing the kelp portion of the IMTA farm by collecting mature kelps in the summer and using them to cultivate stock for the next grow-out cycle. By late fall, the kelps are transferred from the UNB team to the Cooke IMTA ocean site, where the farm crew cares for the kelps as part of the farm's operation. The kelps are ready for harvest in late spring/early summer. The finished products can be delivered to customers either wet or dry.

Grown as part of the IMTA system, the kelps receive essential nutrients, such as nitrogen and phosphorus, which are by-products of the natural metabolic processes of salmon and mussels. No growth enhancers are required.

Vol. 5, No. 4, July 2014



CIMTAN Shippets

Once harvested, the kelps are rinsed with seawater and dried with no additional manufacturing aids.

Any cleaning and disinfection of harvest vessels and equipment destined for the organic production site is done with products that are listed and approved by the Organic Aquaculture Standard.



Saccharina latissima (sugar kelp) growing on a rope at the IMTA site (photo credit: Thierry Chopin).

"Kelps are versatile products that local chefs have been experimenting with for years and we're pleased to be able to now bring organic kelps to our customers," Lively said.

As the sales and marketing division of Cooke Aquaculture, the True North Salmon Company has been providing fresh, naturally-raised, farmed Atlantic salmon to the U.S. and Canada for over 30 years. It is the largest producer of fresh Atlantic salmon in North America, and a premier supplier of certified

sustainable Atlantic salmon to leading supermarkets and restaurants across North America.

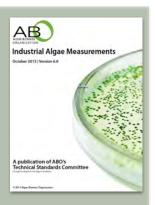


One of the delicious dishes created by Chef Chris Aerni (the Rossmount Inn in St. Andrews, New Brunswick): crispy skin IMTA Atlantic salmon fillet, organic IMTA kelp (Saccharina latissima) wrap, nori (Porphyra purpurea) dust, ginger-carrot purée, sweet soy drizzle, potato blini, Atlantic salmon caviar and goose tongue greens (photo credit: Thierry Chopin).

An Operators Manual for the Algae Industry

The Algae Biomass Organization has published the most recent set of standards to measure and compare diverse algae industry operations. *Industrial Algae Measurements, Version* 6.0 (IAM 6.0) is a collaboration of more than 30 industry experts and organizations providing a methodology and common descriptive language that can be applied across a variety of algae operations, regardless of size, technology or end products.

The IAM 6.0 document will be a crucial reference as companies or research teams develop and improve new technologies to create fuels, feeds, nutritional supplements, biochemical and other products from algae.



Industrial Algae Measurements, Version 6.0 is available as a free download from the Algae Biomass Organization: http://www.algaebiomass.org/resource-center/technical-standards/introduction/

The Gilbert Morgan Smith Medal

We ask your participation in the identification of outstanding candidates for the National Academy of Science's 2015 Gilbert Morgan Smith Medal. The Gilbert Morgan Smith Medal is awarded every three years to recognize excellence in published research on marine or freshwater algae (The term "algae" will be considered broadly, e.g., to include cyanobacteria). The award is presented with a gold-plated bronze medal and a \$50,000 prize. Additional information, including past recipients, can be found at: http://www.nasonline.org/about-nas/awards/gilbert-morgan-smith-medal.html.

The nomination process has been simplified from past years and we now require only the following materials. These items should be submitted via the online nomination form at https://awards.nasonline.org/:

- 1. A letter from the nominator describing the candidate's work and why he or she should be selected for the award. *No more than three (3) pages*.
- 2. Curriculum vitae. No more than two (2) pages.
- 3. Bibliography listing *no more than 12* of the nominee's most significant publications.
- 4. Optional: Letters of support. *No more than three (3)*. Strongly encouraged.
- 5. Optional: Full Curriculum vitae.

Deadline for Nominations: October1, 2014

NAS membership is not required to nominate candidates or to be considered for an award. Nominations and nominees from all nations will be considered.

Nominations will be accepted until 11:59pm EDT, Wednesday, October 1, 2014. Please help spread the word that the nomination process is underway.

Sincerely,

The Gilbert Morgan Smith Medal Selection Committee:

Sabeeha S. Merchant, Chair, University of California, Los Angeles, sabeeha@chem.ucla.edu

Jay C. Dunlap, Geisel School of Medicine at Dartmouth, jay.c.dunlap@dartmouth.edu

David M. Karl, University of Hawaii, dkarl@hawaii.edu

Susan S. Golden, University of California, San Diego, sgolden@ucsd.edu

Jeffrey D. Palmer, Indiana University, jpalmer@bio.indiana.edu

Notices of New Titles

Freshwater Dinoflagellates of North America (S.Carty)

2014. 272 pp. [Hardcover]. Comstock Publishing Associates, Cornell University Press. ISBN 978-0-8014-5176-8. \$95

http://www.cornellpress.cornell.edu/book/? GCOI=80140100744860.

An Ocean Garden: The Secret Life of Seaweed (J. Iselin)

2014. 144 pp. Abrams Books. Photographer, book designer and avid beachcomber Josie Iselin reveals the unexpected beauty of seaweed. Produced on a flatbed scanner, her vibrant portraits of ocean flora reveal the exquisite color and extraordinary forms of more than 200 specimens gathered from tidal pools along the California and Maine coasts. Her engaging text, which accompanies the images, blends personal observation with scientific fact to present a unique window onto the little-known world of seaweed. ISBN: 1419711709

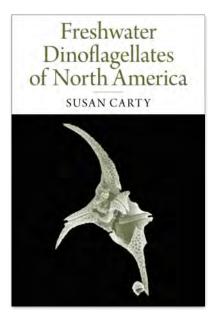
http://www.abramsbooks.com/Books/ An Ocean Garden-9781419711701.html

Seaweed Ecology and Physiology. 2nd Edition (Hurd et al.) 2014. 562 pp. Cambridge University Press. ISBN: 978052114595

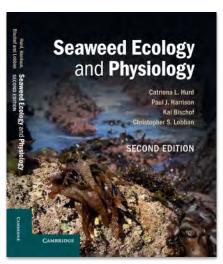
http://www.cambridge.org/ca/academic/subjects/lifesciences/plant-science/seaweed-ecology-andphysiology-2nd-edition?format=PB?format=PB

Algae (Graham et al.)

"The introductory phycology textbook Algae by Graham et al., previously published in print, will soon be available as a third, updated digital (and possibly print-ondemand) edition. Prof. Martha Cook of Illinois State University has been added to the continuing author team of Linda Graham, James Graham, and Lee Wilcox. The digital edition—provided as a PDF for download onto desktop and laptop computers as well as mobile devices—will include >50% color images. A sample PDF, covering the streptophyte algae, is available at http://www.botany.wisc.edu/graham/papersandbooks.html."







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Álvarez-Blanco, Irene; Blanco, Saúl: Benthic diatoms from Mediterranean coasts
2014. 409 pages, 1 figure, 3 tables, 91 plates, 14x23cm (Bibliotheca Diatomologica, Band 60)
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