

PHYCOLOGICAL NEWSLETTER



Fresh from the 70th annual meeting of phycologists in North America and refreshed by stimulating talks and posters on all aspects of algae, I was again reminded of the significance of the work that we do--from the clarion call many of us felt from John Smol's excellent, if somewhat depressing, plenary address *Algae in the Anthropocene: Studying human impacts using lake sediments* that so clearly and convincingly demonstrated the effects of climate change particularly in the Arctic, to Marty Auer's plenary talk *Great Lakes: Past and Future Change* that illustrated the essential combination of engineering and biology along with a dogged determination to try and resolve ongoing water quality issues in the Great Lakes. These were examples of phycologists making significant contributions and communicating their findings to stakeholders to bring about change. We applauded them for their efforts.

This was a well-organized and intimate meeting on a small university campus, John Carroll University, with all facilities within an easy walking distance. Jeff Johansen and Morgan Vis, local organizers, and Dale Casamatta Program Director, did an outstanding job as did the support staff at John Carroll University. Thanks to all of you! The Dolan Science Center was at the heart of the meeting and of the university. With its spacious and welcoming atrium, the perfect place for our opening reception and auction, its upstairs balconies around the atrium, a fine setting for posters, and its hallways well-lighted and well-appointed with comfortable chairs, ideal for snack breaks and casual conversations, this made for a most pleasant and relaxed meeting locale. The mid-meeting break with a trip to the arts district was fun; the Cleveland Museum of Art was exceptional--alone well worth the trip to Cleveland.



Looking ahead to PSA's long term future and success, the Executive Committee of the PSA made the following decisions with respect to the nearly \$1 million bequest to the society's endowment by our late colleague, Dr. Norma J. Lang (see tribute in summer/fall 2015 newsletter): 1) the ceiling on GIAR awards will be raised from \$1500 to \$2000; 2) \$5,000 will be available annually for one or two post-doctoral awards, 3) each year the society intends to make one \$10,000 award to an early career or post-doc individual--these recipients will be designated Lang Fellows. Application procedures already are in place for the GIAR awards, and these will apply to the post-doc award(s) in #2 above. Application procedures for the Lang Fellow Award will be posted on the website in late 2016/early 2017 with a 1 May application deadline. One must be a member of PSA to apply for any of these awards. Those members attending the meeting were enthusiastic in their support of these new initiatives. Joining us to celebrate this unprecedented gift were surviving close relatives of Norma's, and it was a delight to have them with us (see Rick McCourt's article on the Legacy Society for more details).

At the banquet, the Award of Excellence was presented to a most deserving colleague, Milton R. Sommerfeld (see Award of Excellence article in this Newsletter and article by Bob Anderson in 2016 winter/spring Newsletter). Additional persons recognized for their service to the society were: Arley Muth, editorial assistant since 2012 and respected by all the journal AEs with whom she has worked and who is leaving at the end of the year to pursue a Ph.D.; Deborah Robertson, Membership Director for the last six years who ably represented our members, especially as an advocate for students and post-docs, and wisely navigated our relationship with Wiley; Kirsten Müller, Communications Director for her outstanding work on the website and newsletter. We thank each of them for their excellent service to our society.



Paul Gabrielson and Arley Muth

We will continue our outreach through CASS (Consortium of Aquatic Scientific Societies), with whom we sponsored a booth in April at the US Science and Engineering Festival in Washington DC and with whom we will sponsor a booth at SACNAS (Society for the Advancement of Chicanos and Native Americans in Science) in Los Angeles in October. Dr. Steve Murray has agreed to attend the conference as our local representative. I thank our recent former society Presidents for their efforts to involve the society in more public outreach. This has been very effective in garnering more recognition for the PSA and in making our voices heard on the national level through helping to sponsor congressional briefings, having public talks or symposia free and open to the public at our annual meetings (this year the Great Lakes Symposium), and booths at these national conferences. And we

Table of Contents

Message from PSA President

pages 1-3

Legacy Society

pages 4-5

Award of Excellence

page 6

Message from Membership Director

page 7

Awards from PSA Annual Meeting

pages 8-9

Minutes from the PSA Business Meeting

pages 10-11

Photos from the PSA Annual Meeting

pages 12-17

Tribute - Mitsuo Chihara

pages 18-19

Upcoming Awards

pages 20-21

Upcoming Meetings

pages 22-24

Courses

page 25

Workshops

page 26

New Books

page 27

News from Colleagues

pages 28-29

have found ways to do this at less monetary cost to the society, particularly by belonging to CASS.

Our next two meetings will be on the west coast of North America, June 4-8, 2017 in Monterey, California with Mike Graham as the local organizer, and Vancouver, British Columbia (dates TBA) with Patrick Martone as the local organizer. Plans are well under way for the Monterey meeting, but if you have ideas for symposia, plenary speakers, or workshops, please contact Dale Casamatta (Program Director) or Tim Nelson (Vice President/President elect).

With the additional awards that we will begin making later this year and next year, we need more members to serve on the GIAR committee, as well as the Lang Fellows Review Committee. Most committee work occurs over short time spans each year, and the reward is to see deserving colleagues and students that you know personally or through their work be supported or recognized by the society. If you are interested in serving on any committee, please contact me or any other member of the EC.

It has been my pleasure these past two years, first as Vice President and now as President, to work with the dedicated and talented members of the Executive Committee (EC) of the PSA. What has been most gratifying to witness is EC members putting the best interests of the society at the forefront. This makes ours an effective and strong scientific society. We don't all agree on procedures and policies, but through respectful dialogue we frequently reach consensus on the best way forward. And this has been true historically for our society--a major reason for our current financial stability and service to our membership. I thank all members, past and present, who have volunteered their time and energy to make ours one of the leading scientific societies.

~Paul Gabrielson

PSA Honors Norma J. Lang and Launches Legacy Society at the 2016 Annual Meeting

The Board of Trustees launched the PSA Legacy Society at the Annual Meeting at John Carroll University this year at a reception honoring the late Dr. Norma J. Lang, former President and Member of the Board of Trustees, who in her will donated nearly \$1 million to the PSA Endowment. The reception was attended by several members of Dr. Lang's family, who were guests of PSA at the Annual Meeting. Dr. Lang's nephew, Andy Lang, and his wife Cathy, and her niece, Lana Lang Payne and her husband Bob, gathered with about 40 meeting attendees to toast Norma and to announce the establishment of the PSA Legacy Society. Over Bananas Foster and cocktails, attendees listened to tributes to Norma by Board Chair Rick McCourt and PSA President Paul Gabrielson. In addition, Communications Director Kirsten Müller paid special tribute to Norma as an early trailblazer for women in science and noted that PSA has had 16 women Presidents and that three of the Endowment Funds are named for female PSA members.

Norma J. Lang's gift to the Endowment was not expected, but it occurred at a propitious time that coincided with the launch of the PSA Legacy Society, which establishes a means for PSA members to include the Society in their wills and estates. The Legacy Society is open to all members who wish to include PSA in their estate planning. Details will be provided in upcoming Newsletters, but in brief, any donors who wish to become a member of the PSA Legacy Society need only send an email to the Board of Trustees Chair (Rick McCourt; rmccourt@gmail.com) letting him know of their intent to make a bequest. It's that simple, and each member makes his or her own arrangements for the gift in a will or trust.



Andy Lang speaking at Legacy Reception; Lana Lang Payne, Bob Payne and Rick McCourt (right)

The PSA Endowment began in 1974 with a modest \$100 contribution by Gerry Prescott and grew to more than \$1.6 million by 2015. The growth over this 40-year period was due mostly to small donations and proceeds from Headquarters Room sales and auctions, along with prudent investment strategies. This pattern changed dramatically with the Lang gift. The Endowment funds support students through the Bold Award for best student oral presentation and the Lewin Award for best student poster presentation both at the Annual Meeting, the Bob and Ruth Hoshaw Travel Awards, the Croasdale Award for courses in phycology at field stations, and the Commemorative Fund for research. Dr. Lang directed that her gift go to the Commemorative Fund and will be used to establish the Lang Fellowships to support the research of early-career phycologists (for details, see the President’s Message in this issue of the Newsletter).



~Rick McCourt
Chair, PSA Board of Trustees



2016 Award of Excellence

Dr. Milton R. Sommerfeld

Professor, Department of Applied Biological Sciences
 Co-Director of the Laboratory of Algae Research and Biotechnology
 Co-Director of the Arizona Center for Algae Technology and Innovation (AzCATI)
 Arizona State University

The PSA Award of Excellence honors scientists for a record of sustained scholarly activity, including teaching and service, who have had a major impact on the field of phycology. Dr. Milton R. Sommerfeld epitomizes this award in all aspects of his 50+ year career in phycology.

Milt first learned about algae during a summer course taught by Drs. Harold Bold and Wayne Nichols. After obtaining his Ph.D. from Washington University in 1978, he accepted a faculty position at Arizona State University. Milt has been there ever since, including eight years as Department Chair and 15 years as an Associate Dean. He has been recognized as an outstanding teacher, winning that university award in 1987, and has mentored students at every level from undergraduates through

postdocs. He has published nearly 150 journal articles and book chapters and given over 200 presentations at meetings, including at this year's annual meeting. He holds one patent. In addition, he served PSA as a member of the Board of Trustees for 10 years.

But most impressive has been Milt's record of obtaining 111 research grants over his career, amounting to over \$34 million dollars, with \$27 million granted in the last eight years! This is an outstanding accomplishment, and, as Bob Anderson wrote in his article about Milt in the Winter/Spring 2016 PSA Newsletter, "...AzCATI is the house that Milt Sommerfeld and his colleagues built." This facility is the largest academic algal test bed in the world. That Milt has been a pioneer in algal technology is clearly evidenced by the following awards presented to him from 2007-2010: Innovator of the Year given by the Arizona Technological Enterprises and ASU; #11 on *Time Magazine's* list of 50 Best Inventions of 2008; the Governor's Celebration of Excellence Award for Innovation presented by the state of Arizona; the Arizona Award for Research Excellence presented by the Arizona Technological Council. To this list, we add the Phycological Society of America's Award of Excellence, honoring our colleague and friend, Dr. Milt Sommerfeld. Thank you, Milt, for all that you have done to advance phycology for the benefit of humankind.

Thanks to the Award of Excellence Committee for their work: Juan Lopez-Bautista, Chair; Chuck Amsler; Emily Johnston, student representative; Tom Mumford; Paulette Peckol; Rick Zechman



~Paul W. Gabrielson

PSA Membership

Dear PSA Members,

After two terms, I will be stepping down as the PSA Membership Director and am pleased to report that the new director will be Margaret Amsler. I thank the members of the Society for their continued support and active participation in the various of activities sponsored by the PSA. It has been a pleasure to work with the membership as well as the PSA Executive Committee over the past six years.

Membership renewal notices for 2017 will be arriving soon. The Society voted in 2015 to raise the membership dues for regular members (both online only and print plus online) by a modest amount (\$5 USD) and that increase will begin with the 2017 renewal. I am pleased to report that the membership numbers are strong and the society is fiscally sound. We continue to provide several avenues for support of graduate students and with the generous gift from Dr. Norma J. Lang we are now able to provide funding opportunities for post-doctoral and early career scientists. As you consider renewing your membership this year, please realize that your dues provide you with access to the Journal of Phycology as well as other member benefits, but also contribute funds in support of all of the societies activities, including student support. When you renew online, please note that you can also sponsor new members. This is a nice way to recognize students or early career scientists that may not be aware of the resources available through the PSA.

With regards,

Deb

(Deb Robertson is the PSA Membership Director and Professor of Biology at Clark University, Worcester, MA).



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Awards at the PSA Annual Meeting in Cleveland, Ohio.

Provasoli Award

The Provasoli Award winners for the best paper published in the Journal of Phycology in 2015 were announced during the PSA banquet at the annual meeting in Cleveland, OH. Wladimir Costa Paradas, Thalita Mendes Crespo, Leonardo Tavares Salgado, Leonardo Rodrigues de Andrade, Angélica Ribeiro Soares, Claire Hellio, Ricardo Rogers Paranhos, Lilian Jorge Hill, Geysa Marinho de Souza, Alphonse Germaine, Albert Charles Kelecom, Bernardo Antônio Perez Da Gama, Renato Crespo Pereira and Gilberto Menezes Amado-Filho were awarded for their work "Mevalonosomes: specific vacuoles containing the mevalonate pathway in *Plocamium brasiliense* cortical cells (Rhodophyta)", *J. Phycol.* 51:225-235. This work describes a new red algal vacuole, mevalonosomes, using a number of methods including electron microscopy, chemical analyses, biological assays, linking cellular biochemistry with organelle structure and the biological function of the chemicals produced.



Paul Gabrielson (PSA President) and Wladimir Costa Paradas

Harold C. Bold and Ralph A. Lewin Awards

In July 2016, at the annual PSA meeting in Cleveland, OH, four students competed for the Harold C. Bold award for the best oral presentation. The top honor was awarded to Thomas Sauvage (Suzanne Frederiq's lab) for his talk entitled "A metabarcoding framework for a facilitated survey of endolithic phototrophs with *TuFA*". Three students competed for the Ralph A. Lewin Award for the best poster presentation. The winner was Robin Sleith (Ken Karol's lab) for his poster entitled "In Characeae: Everything is everywhere, but the environment selects". Congratulations to these students and their mentors!



Robin Sleith and Patrick Martone (Award Chair)



Thomas Sauvage and Patrick Martone



Information on all of these awards and fellowships can be found under the PSA Awards and grants tab at the PSA website:

<http://www.psaalgae.org>

PSA Annual Business Meeting Minutes

**July 26, 2016
Cleveland, OH**

This meeting reached the required quorum for voting, with roughly 65 attendees.

Lang Fellows Discussion: Paul explained the important points of the Lang Fellows RFP. Questions revolved around the eligibility of applicants and the transfer of funds and how that would work. Potential applicants were encouraged to contact committee members if they have questions prior to applying.

The minutes from the 2015 business meeting were approved.

President's Report (Gabrielson)

Monthly conference calls with other members of CASS have been very effective. We have a greater voice in policy, even as a smaller society. Paul felt this was a very useful consortium to remain a member of. He proposed that we continue a membership with CASS and evaluate annually. PSA participated in the US Sci and Eng Festival as part of the CASS booth. We will also be present at SACNAS as part of the CASS booth in October. The report was approved by the membership.

Membership Report (Robertson)

Membership overall has been in slight decline for some time. Many societies are facing this same problem. Part of the issue is unpaid memberships, so encouraging people to stay up to date is important. The report was approved by the membership.

Treasurer's Report (Linton)

Taxes have been filed through our accountant, RPC. Xoom is a new service we are using for non-US money transfers. We have joined societies like AIBS, and we are supporting AlgaeBase. Last year we transferred \$50k to the endowment. The report was accepted by the membership.

Fund Manger's Report (Murray)

We currently have the Endowment in an investment strategy geared towards current income generation, but that is low risk. The Reserve is in a balanced account, which has slightly more risk, but more potential for appreciation. The total projected earnings from the investment accounts are \$62,773. Over the past few years we have been allocating money to some sub-accounts in order to fully fund the award profile supported by that account. Several have been fully funded, and we expect to fully fund the Provosoli award this year. The Hoshaw and Croasdale are the remaining awards not fully funded, and we hope to do some targeted fund raising for these awards. It will take roughly \$407k in order to fully fund all awards. The report was approved by the membership.

Managing Editor's Report (Muth)

Journal publication times have continued to trend at the lower rate that has been established over the last few years. We are also now searchable on PubMed. A transition in Editorial Assistant will happen at the end of the calendar year from Arley Muth to Sarah Jeffries. The report was accepted by the membership.

Board of Trustee's Report (McCourt)

The Lang donation dominated the year, in terms of the business of the BoT. Juliet Brodie has been added to the Board this year, and Alison Sherwood (as Vice President/President elect) will be joining next year. The Legacy Society is a new initiative to encourage people to consider donating to PSA in their will. This will be launched this year. The report was accepted by the membership.

Communications Report (Müller)

The deadline for the newsletter is Aug 15. Updates to the webpage are coming as the new awards are coming online. The blog and twitter are active for the meeting. The report was accepted by the membership.

Program Director's Report (Casamatta)

The 2017 meeting will be in Monterey Bay, possibly with symposia on macroalgal blooms. The 2018 meeting will be in Vancouver, coordinated with ISOP.

The 2019 may be in RI.

The report was accepted by the membership.

V-P/Pres Elect Report (Nelson)

Tim will help with the 2017 meeting symposia and the outreach events that will include K-12 educators and resource managers. The report was accepted by the membership.

Elections Committee (Litaker)

Elections results:

VP/Pres Elect - Alison Sherwood

Communications Director - Jeff Morris

Membership Director - Maggie Amsler

ED Board - Sue Killam, Chris Lane, Jeff Johansen, Wilson Freshwater

~Chris Lane

PSA Secretary

PSA Annual Meeting Cleveland, OH

Opening Mixer



Paul Gabrielson speaking about the Lang Fellows and support for early career phycologists



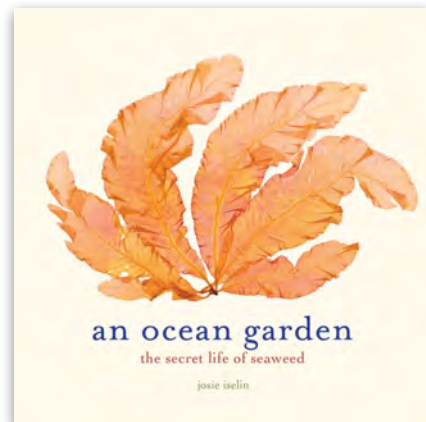
Jeff Johansen (Local Organizer) welcoming everyone to John Carroll University



PSA Auction

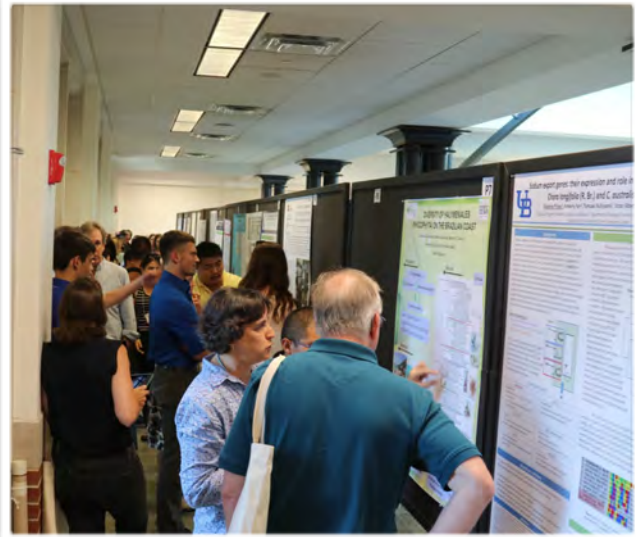


Algae as Art - Workshop



Josie Iselin presented a workshop on her techniques of capturing the beauty of marine algae in her book, "An Ocean Garden. The Secret Life of Seaweed"

Poster Sessions



Banquet - John Carroll University



Paul Gabrielson and outgoing Communications Director, Kirsten Müller



Dale Casamatta (Program Director), Paul Gabrielson and Jeff Johansen (Local Organizer)



Current and past presidents (left to right): Curt Pueschel, Paul Gabrielson, Chuck Amsler, Morgan Vis, Rick McCourt, Juan Lopez-Bautista, Mike Wynne

Banquet - John Carroll University



Banquet - John Carroll University



Tribute - Mitsuo Chihara (1927-2016)

Word has reached us of the passing of a major figure in phycology, Mitsuo Chihara, whose death occurred on August 17, 2016. He was 88 years old. Mitsuo was born on Sept. 15, 1927, in Kamogawa City in Japan. He earned the D.Sc. degree from the Tokyo University of Literature and Science in 1961 and went on to have a very distinguished career at the National Science Museum in Tokyo and also at the University of Tsukuba, Ibaraki. In addition he served as president of the Natural History Museum and Institute in Chiba, from April 1, 1998, until March 31, 2003. He served as president of the International Phycological Society in 1994-1995.

Some of Mitsuo's earliest research interests centered around working out the life histories of Japanese members of the red algal family Bonnemaisoniaceae (Chihara 1961, 1962). He always had a special knack at culturing algae of diverse classes and published the results of his work on many genera of green algae: *Derbesia* (and *Halicystis*), *Bryopsis*, *Pedobesia*, *Pseudobryopsis*, *Trichosolen*, *Ostreobium*, *Willeella*, and *Collinsiella*. He also cultured members of the Prymnesiophyceae and coccolithophorids and the centric diatoms *Ditylum* and *Melosira*, reporting on stages of fertilization in a strain of *Melosira* (Idei & Chihara 1992). Also using cultures, he used the patterns of spore germination in the corallines for characteristics in their systematics (Chihara 1973, 1974). In fact, he had several publications on the systematics of articulated coralline algae. His publications covered the gamut of algal groups: both marine and freshwater red algae (*Thorea*, *Composopogon* and *Compsopogonopsis*), cyanobacteria, crustose brown algae and algal pigments. He published on the taxonomy and ultrastructure of *Tetraselmis* (with T. Hori and R. Norris) and *Pyramimonas* (with T. Hori and I. Inouye), the raphidophyte *Chattonella*, dinoflagellates (with T. Horiguchi), and cryptophytes (with M. Ishimitsu). He provided evidence that *Pseudodichotomosiphon constrictus* was not a chlorophyte but a xanthophyte. He described the reproductive systems of such red algae as *Liagora japonica* [now *Otohimella japonica*], *Hyalosiphonia caespitosa*, and *Ptilonia okadae*. Hara & Chihara (1974) studied chloroplast ultrastructure in a broad survey of taxa of red algae. He collaborated on a monograph of marine *Cladophora* (Hoek & Chihara 2000). With J. Tanaka, Chihara had several papers on mangrove-associated algae, including *Caloglossa* and *Bostrychia*. His research interests included ecological studies of the *Ecklonia cava* community. He described the haptonema as a food-capturing device in *Chrysochromulina*. His study (with M. Rerate) of the ultrastructure of *Rhodomonas* gave evidence to regard *Pyrenomonas* as congeneric with *Rhodomonas*.

Some of his new genera include *Jomonlithus* (Inouye & Chihara 1983) *Oltmannsiellopsis* (1986, with Inouye in Chihara et al. 1986), *Spiniferodinium* (1987, with T. Horiguchi), the marine prasinophyte *Prasinococcus* (with H. Miyashita) and *Collinsiellopsis*. Especially exciting was the description of a green dinoflagellate containing endosymbionts with chlorophylls *a* and *b* (Watanabe et al. 1987). This *Gymnodinium*-like alga was later described as the new genus and species *Lepidodinium viride* (Watanabe et al. 1990).

Chihara produced two significant manuals of the marine algae of Japan (1970, 1975), rich with color, mostly *in situ* images of the algae. In 2007, the Botanical Society of Japan presented Mitsuo Chihara with



Mitsuo Chihara [Photograph by Marion Cave, courtesy of the University and Jepson Herbaria Archives, University of California, Berkeley]

its “Grand Award” in recognition of “his efforts to dramatically raise the level of Japanese phycology research to the world’s highest standards and teach phycology to many young individuals”.

One of my own memories of Mitsuo goes back to the mid-1960s, when a group of us from UC Berkeley went up to Bodega Bay in Sonoma County on a collecting trip. I was a grad student, and Mitsuo was at UC on sabbatical. Fellow grad student Bill Johansen was also on this foray and showed us an unusual small coralline that he had found, and Bill somewhat rashly (I thought) declared “If this is a new genus, I am going to call it *Chiharaea!*” after Mitsuo, also along in the car on the drive back. That alga became *Chiharaea bodegensis* (Johansen, 1966), a fitting tribute to our esteemed fellow collector and friend Mitsuo.

Chihara, M. 1961. Life cycle of the Bonnemaisoniaceae algae in Japan (1). Sci. Rep. Tokyo Kyoiku Daigaku, Sect. B, 10: 121-153, 6 pls.

_____. 1962. Life cycle of the Bonnemaisoniaceae algae in Japan (2). Sci. Rep. Tokyo Kyoiku Daigaku, Sect. B, vol. 11: 27-54, 5 pls.

_____. 1970. *Common seaweeds of Japan in color*. Hoikusha Publishing Co., Osaka. xviii + 173 pp. [In Japanese.]

_____. 1973. The significance of reproductive and spore germination characteristics in the systematics of the Corallinaceae: articulated coralline algae. Jpn. J. Bot. 26: 369-379.

_____. 1974. The significance of reproductive and spore germination characteristics to the systematics of the Corallinaceae: nonarticulated coralline algae. J. Phycol. 10: 266-274.

_____. 1975. [*Marine algae: illustrated compendium for study by middle and high school students.*] Gakken Co., Ltd., Tokyo. 290 pp. [In Japanese.]

_____, I. Inouye & N. Takahata. 1986. *Oltmannsiellopsis*, a new genus of marine flagellate (Dunaliellaceae, Chlorophyceae). Arch. Protistenk. 132: 313-324.

Hara Y. & M. Chihara. 1974. Comparative studies on the chloroplast ultrastructure in the Rhodophyta with special reference to their taxonomic significance. Sci. Rep. Tokyo Kyoiku Daigaku, Sect. B, 15: 209-235.

Hoek, C. van den & M. Chihara. 2000. A taxonomic revision of the marine species of *Cladophora* (Chlorophyta) along the coasts of Japan and the Russian Far-east. National Sci. Museum Monographs No. 19. 242 pp. National Science Museum, Tokyo.

Horiguchi, T. & M. Chihara. 1987. *Spiniferodinium galeiforme*, a new genus and species of benthic dinoflagellates (Phytodiniales, Pyrrophyta) from Japan. Phycologia 26: 478-487.

Idei, M. & M. Chihara. 1992. Successive observations on the fertilization of a centric diatom *Melosira moniliformis* var. *octagona*. Bot. Mag., Tokyo 105: 649-658.

Inouye, I. & M. Chihara. 1983. Ultrastructure and taxonomy of *Jomonolithus littoralis* gen. et sp. nov. (Class Prymnesiophyceae), a Coccolithophorid from the Northwest Pacific. Bot. Mag., Tokyo 96: 365-376.

Johansen, H. W. 1966. A new member of the Corallinaceae: *Chiharaea bodegensis* gen. et sp. nov. Phycologia 6: 51-61.

Watanabe, M. M., Y. Takeda, T. Sasa, I. Inouye, S. Suda, T. Sawaguchi & M. Chihara. 1987. A green dinoflagellate with chlorophylls *a* and *b*: morphology, fine structure of the chloroplast and chlorophyll composition. J. Phycol. 23: 382-389.

Watanabe, M. M., S. Suda, I. Inouye, T. Sawaguchi & M. Chihara. 1990. *Lepidodinium viride* gen. et sp. nov. (Gymnodiniales, Dinophyta), a green dinoflagellate with a chlorophyll *a*- and *b*-containing endosymbiont. J. Phycol. 26: 741-751.

AlgaeBase [www.algaebase.org] should be consulted for additional papers by Chihara.

Michael J. Wynne
University of Michigan Herbarium

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 2016 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 the previous year (2016) for nominees who were not selected in 2016 will automatically be reconsidered in 2017. Updates to nomination packages submitted in 2016 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 2016 will not automatically be reconsidered but completely new nomination packages for such candidates will receive full consideration.

Nomination Package due:

January 31, 2017

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 Juan Lopez-Bautista, The University of Alabama. All nomination materials should be electronic files submitted by e-mail to jlopez@ua.edu.

In order to receive full consideration for the award that will be made at the 2017 annual meeting of the PSA, the complete nomination package must be received by January 31, 2017.

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 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/grants-and-fellowships/>. The committee looks forward to reviewing more great applications this year!

Deadline:

November 1, 2016

Upcoming deadline: Grants-in-Aid of Research on November 1, 2016

Please see the PSA website for information and the reporting requirements of successful applicants: <http://www.psaalgae.org/grants-in-aid-of-research-program>



Information on all of these awards and fellowships can be found under the PSA Awards and grants tab at the PSA website:

<http://www.psaalgae.org>

PSA now accepts donations through Paypal. Please support the Hoshaw award by following this link and donate to support student travel to the annual PSA meeting!

<http://www.psaalgae.org/endowment-donations>

Meetings

The Eleventh International Phycological Congress (IPC 11: convener Prof. Dr. Andrzej Witkowski) will take place in Szczecin, Poland, from August 13 (Sunday) through August 19 (Saturday), 2017. Phycologists and others interested in algae from throughout the world are warmly invited to attend this event, which continues a tradition that began in 1982 with the first IPC in St. John's, Newfoundland, Canada.

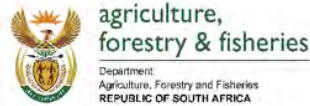
The theme of IPC 11 will be **“Challenges of the molecular era for algal research and the promise of bioprospecting”**, but as usual, contributions on all aspects of phycology will be welcome. The Congress will have the usual format, with a mixture of plenary talks, symposia and contributed sessions (of talks and posters) on four days, and a midweek break and excursions. Pre and post-congress excursions will be available. There will also be opportunities to run Workshops in association with the Congress: anyone interested in doing so should contact the convener as soon as possible.

For further information, please visit the IPC 11 WEBSITE <http://ipc11.intphycsoc.org>, where the first circular and other information will be accessible by October 1st 2016.



5th Annual Lacawac Ecology Conference

The Lacawac Sanctuary and Biological Field Station, located in Northeastern Pennsylvania, will be holding their 5th annual ecology conference on September 24, 2016. The Lacawac Ecology Conference (LEC) is a great venue for connecting with regional researchers, discussing ideas in an informal setting, and building new collaborations. LEC is attended by faculty and students from more than 15 institutions of higher education each year. For more information contact the Director of Research and Education, Sarah Princiotta (sarah.princiotta@lacawac.org) or visit <http://www.lacawac-outreach.org/lacawac-ecology-conference.html>.



agriculture,
forestry & fisheries
Department
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

30th Congress of the Phycological Society of Southern Africa (PSSA2017)

Call for “expression of interest”

You are cordially invited to the 30th Congress of the Phycological Society of Southern Africa. The Congress is held every 1-2 years and is attended by industry, researchers and students involved in the study and use of algae. The programme usually includes a wide range of phycological topics such as applied research, taxonomy, freshwater algae, biofuels, climate change, harmful algal blooms, estuaries, sandy beaches etc.

Venue

De Hoop Nature Reserve (<http://www.capenature.co.za/reserves/de-hoop-nature-reserve/>) is a 34 000 hectare natural area lying only three hours (by road) from Cape Town. It is one of the largest marine protected areas on our coast, conserving a variety of sea-life. In addition, the reserve covers a number of vegetation types including some rare limestone plant communities, and is home to a variety of wildlife and a rich bird-life.

Dates 12 – 17 January 2017. Arrive Thurs 12, in the afternoon. Fri 13 – Sunday 16 – conference, including field trip. Monday 17, leave after breakfast.

Estimated Costs

Complete conference package (non-student i.e. **each with own room**): R 6000

Complete conference package (students i.e. **sharing rooms**): R 5000

Conference packages include registration fee, accommodation and all meals (excluding drinks).

Accompanying persons: R 4000

Daily registration fee: R 750 per person (including lunch and teas).

Accommodation

Delegates will be housed in the “De Hoop Village” or the “Equipped Cottages”. These all comprise self-contained cottages, each with one bathroom and kitchen, but the “Village” cottages have three bedrooms and the “Equipped” have two. Both are a short walk to the conference venue. Further details of the cottages are on the attached pdf file called “Accommodation Details”. Please note that registrants paying the “Student” fee will be required to share bedrooms.

Transport We regret that no transport will be provided.

Expression of Interest deadline: 30 August 2016

Registration: 1 September – 31 October 2016

Click [Here](#) for more information on the PSA webpage under upcoming meetings

Organising committee chair:

Mark Rothman

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**38th Annual Southeastern Phycological Colloquy
Valdosta State University, Valdosta, Georgia
November 4-5, 2016**

For thirty-eight years, professionals and students who study algae (freshwater or marine), seagrasses, or other marine plants have gathered together from all over the southeastern United States (and beyond), to share their research activities and ideas. This meeting is open to anyone interested; student contributions are especially encouraged. Contributed paper and poster sessions are planned for the full day of **Saturday, November 5, 2016**.

A registration fee of \$40 for students and \$70 for other participants will cover the cost of the meeting. Payment includes a Friday night social and lunch, dinner, and coffee breaks on Saturday. Tickets for Saturday's dinner can be purchased separately for accompanying (unregistered) spouses or guests.

Valdosta State is conveniently located in southern Georgia along the I-75 corridor (for directions, see <https://www.valdosta.edu/about/documents/directions-to-vsu.pdf>). Valdosta is serviced by Valdosta Regional Airport with regularly scheduled flights to and from Atlanta; Jacksonville International Airport is an easy two-hour drive away. Valdosta has over 30 hotels in all price ranges within 3 miles of the campus. Feel free to select the one that best fits your needs.

For more information and registration materials please contact Jim Nienow at jnienow@valdosta.edu.

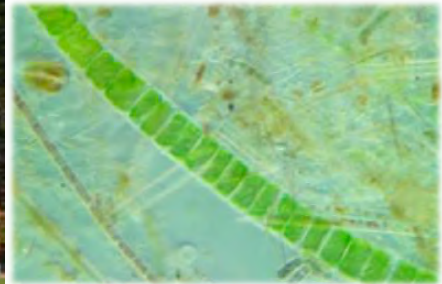


More information on other upcoming meetings, conferences and courses/workshops can be found at the PSA website:

<http://www.psaalgae.org>

Courses

Freshwater Algae - Kindrogen Scotland



This course provides an introduction to the diversity and identification of freshwater algae and involves informal lectures, field collection from a variety of sites and microscope work. **A basic knowledge of biology is required.**

The area around Kindrogen provides a diversity of habitats for freshwater and sub-aerial algae, offering many opportunities to learn about this fascinating and ecologically important group of organisms.

We shall take full advantage of this excellent range of local aquatic and terrestrial habitats in this beautiful area of Highland Perthshire to provide a sound introduction to the recognition, identification and ecology of freshwater algae. Emphasis will be placed on the use of the microscope and taxonomic keys for the identification of algae to generic and species level, but ecological considerations will not be ignored.

For those with some prior experience of the algae, we hope that the opportunity to study samples from a range of habitats will broaden their knowledge and/or allow them to focus on particular groups.

Field trips, on foot or by road, will be varied, but not strenuous and will be complemented by laboratory work, illustrated talks and class discussion.

The course focuses on how to become familiar with the major algal groups and get to grips with identification, while providing an overview of algal morphology, structure, reproduction, and classification (morphological and molecular). The course has been part of our programme at Kindrogen for over 20 years.

Tutors: Elliot Shubert & Eileen Cox. Guest Lecturers: Geoffrey Codd & Laurence Carvalho

Click [Here](#) for more information on this course including how to sign up.
On the PSA webpage under the Opportunities tab!

Workshops

ATP³ workshops offer a diverse range of topics pertaining to the management and processing of microalgal cultures, and uses of their products. For more information about these and future workshops please visit www.atp3.org/education



Fall 2016: Nov 7-11 at AzCATI **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. 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.



Fall 2016 UTEX Training Workshop, September 29-30 - 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. Topics are geared toward individuals who are interested in learning principles and practices of growing and managing microalgal cultures, and relevant for those who are interested in commercialization of algae or their products.

Workshops feature presentations and demonstrations, as well as opportunities for hands-on microscopic manipulations and training in common laboratory techniques. Participants are encouraged to bring algal samples that they wish to microscopically observe and/or identify. Workshops are informal; participants are encouraged to ask questions, share information with the group, and network.

Activities will take place at the UTEX Culture Collection of Algae facilities, located in the center of the University of Texas campus. This unique venue will provide participants with the opportunity to observe the diversity of microalgae and learn about the management of laboratory cultures.

Link: <https://utex.org/blogs/training-workshops/utex-training-workshop-managing-microalgal-cultures>

New Book Titles

Pacific Seaweeds. A Guide to Common Seaweeds of the West Coast. By Louis Druehl and Bridgette Clarkston. 2016

ISBN: 978-1-55017-737-4

\$28.95 Paperback

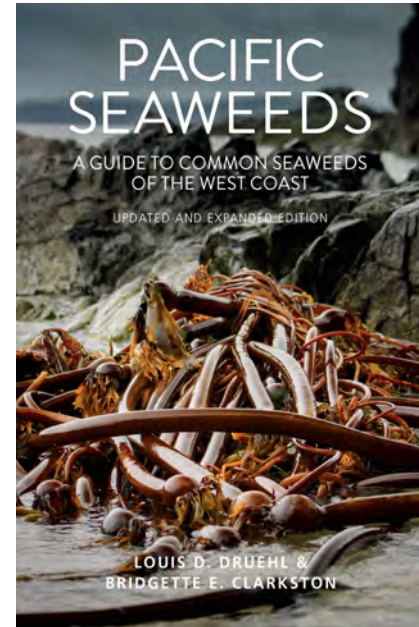
320 pages

350+ colour photos, B&W illustrations

<http://www.harbourpublishing.com/title/PacificSeaweeds2>

Completely revised and updated after selling more than 10,000 copies, *Pacific Seaweeds: A Guide to Common Seaweeds of the West Coast* by Louis Druehl and Bridgette Clarkston is the authoritative guide to over 200 common species of seaweeds in the Pacific Northwest. This accessible and visually stunning guidebook includes a visual seaweed identification guide, added recipes, profiles on 100 new seaweeds and an exploration of the new directions seaweed research has taken since the first edition was published.

Louis D. Druehl taught and researched kelp for 36 years at SFU and operates Canadian Kelp Resources, Ltd with his wife, Rae Hopkins. Bridgette E. Clarkston is a seaweed biologist, science educator and avid photographer with over a decade of teaching experience.



River Algae. Orlando Necchi Jr. (Editor)

1st ed. 2016

ISBN 978-3-319-31984-1

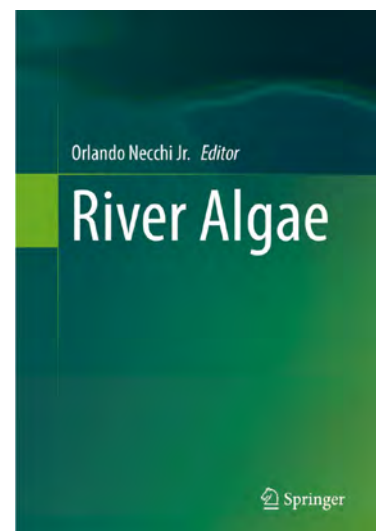
XIV, 279 p. 45 illus., 32 illus. in color.

\$129.00 Hardcover, \$99 eBook

<http://www.springer.com/us/book/9783319319834>

The content is focused on benthic communities showing how they play an important role in the river ecosystems. Provides also information on taxonomy of river-inhabiting algal groups, including phylogeny, distribution, collection, preservation and description of the most representative genera of algae in river benthic algal communities.

The book also approaches the ecology of river algae not to mention the ecological factors influencing abundance, distribution and diversity of river benthic algal communities and their use as bio-indicators, providing an up-to-date information on taxonomy, ecology, methodology and uses, and a great source of research to everyone interested in freshwater algae, limnology, water quality assessment and biodiversity in river ecosystems.



News from Colleagues

Phycological Journals available from:

Lee S. Jahnke (LSJ@unh.edu): Journal of Phycology back to 1977. Free to anyone wanting part or all of these issues. Individual would need to pick these up in Durham, NH.

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Micscape, established 1995, is an e-zine for microscopy enthusiasts and has contributors with extensive experience of their fields of interest. Wim van Egmond is a multi-award winning photomicrographer and lives a short distance from the former site of the Berkelse Meer where Antonie Van Leeuwenhoek took his sample.

In the February 2016 issue of the monthly e-zine *Micscape* the author Wim van Egmond with the phycologist Frans Kouwets as collaborator published:

The riddle of the 'green streaks'. In search of the first microorganism which Antonie Van Leeuwenhoek described."

<http://www.microscopy-uk.org.uk/mag/artfeb16/wimleeuwenhoek2.html> (PDF version linked to in page)

It is a reassessment of whether Van Leeuwenhoek's first description of an aquatic microorganism was *Spirogyra* (as later attributed by Dobell, 1932) or a proposed more likely candidate, a coiled planktic species of cyanobacteria in the genus *Dolichospermum*. *Dolichospermum* seems to better match all the clues which Van Leeuwenhoek provides when using the original Dutch.

In particular, it is proposed that he was more likely to first describe the external form of the organism as having a spiral arrangement rather than first discussing its internal structure. If *Dolichospermum* is the more likely, it would also be the earliest report of a microscopical study of a cyanobacterial bloom.

Comments on the reassessment of Van Leeuwenhoek's first description of an aquatic microorganism are welcomed by the magazine.

WORKSHOP - Advances in cryopreservation methods for microorganisms and plants

On the 21st of June 2016, the culture collections BCCM/ULC and BCCM/DCG organized a workshop about the advances in cryopreservation methods for microorganisms and plants. This workshop took place in Berlin just before the GGBN Conference 2016.

Cryopreservation is now considered as the best 'ex situ' preservation approach for microorganisms. However, this is still problematic for some taxonomic groups. The purpose of this workshop was to provide an overview of recent applications of preservation methods to organisms considered as delicate or difficult to preserve.

The workshop was organized in two parts, first with lectures and then followed by a round table discussion. The first part of the workshop started with a lecture by Prof John Day (Culture Collection of Algae and Protozoa, SAMS, Scottish Marine Institute, UK), a recognized expert, on the "Ex situ cryopreservation of microbial biodiversity". This was followed by the presentation of the results of the PRESPHOTO project, concerning the improvement and validation of cryopreservation protocols for diatoms and cyanobacteria. Thereafter, Dr. Maike Lorenz curator at the Culture Collection of Algae at Gottingen University (SAG, Germany) shared her experience with the cryopreservation of microalgae at SAG with a particular emphasis on the detection of genetic and epigenetic stability.



The round table allows the participants to exchange their experience about cryopreservation of delicate or recalcitrant organisms, propose advices and build a community of interested scientists for future initiatives. The programme, abstracts and report of the round table discussion during the workshop can be found on the PRESPHOTO website (<http://www.presphoto.ulg.ac.be/workshop.html>).



~The PRESPHOTO team



**Submit your contributions to the next
Phycological Newsletter by January 15, 2017**

**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

Jeffrey Morris

evolve@uab.edu