

PHYCOLOGICAL NEWSLETTER



**Phycological
Society
of America**

The Premier Society for the Science of Algae

Supporting Student Research in...

Climate Change

Biodiversity

Water Quality

Harmful Algal Blooms

Biofuels

Genomics

Biomedicine

and other exciting areas of discovery



*through grants-in-aid of research,
travel, field studies, workshops,
mentoring, and more.....*

psaalgae.org



PSA Supports Students:
Lang Fellowships
Bold Award
Lewin Award
Croasdale Fellowship
Hoshaw Travel Award
Grants-in-Aid of Research

Dear Fellow Phycologists,

I am looking forward to an exciting year working with all of you as 2017 begins. Perhaps most exciting, we will be awarding Lang Fellowships for the first time this year thanks to the generous bequest of the late Norma Lang. Please stay tuned as we make announcements regarding this great opportunity for post-doctoral members! I would also thank the members of our new Legacy Society who have indicated support for PSA as a beneficiary in their wills, as Dr. Lang had done.

Outreach will continue to be a theme for PSA this year. As part of the meeting in Portland in 2014, we have joined with several other societies as part of CASS, the Consortium of Aquatic Science Societies. Given recent political events around the globe, I expect our ability to collaborate with other CASS members in helping inform governments will be of the utmost importance. We have already collaborated with CASS on outreach via booths at annual SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) meetings and the biennial U.S. Science and Engineering Festival, as well as writing to the new administration encouraging the use of evidence-based scientific analysis, and anticipate continuing this shared work.



Table of Contents

Message from PSA President
pages 1-2

PSA Annual Meeting
page 3

Tributes
page 4-5

PSA Legacy Society
page 6

Upcoming
Award Deadlines
pages 7-9

Message from PSA
Membership Director
page 10

Meetings
pages 11-15

Field Courses and
Workshops
pages 16-23

Opportunities
pages 24-27

New Titles and Other
Resources
pages 28-30

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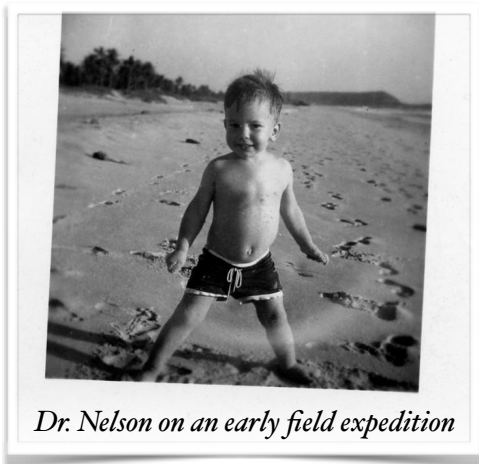
On a related note, we have openings on many PSA Committees, including the Public Policy Committee. If you are interested in serving, or would like to nominate a colleague for committee membership, please contact me (tnelson@spu.edu) A full list of committees can be found on our website or by clicking here.

Please join me in welcoming our new officers this year. **Alison Sherwood** is now our Vice President/ President-Elect. Alison is an experienced former Executive Committee member, having been the Secretary for 6 years. **Maggie Amsler** was elected as our Membership Director and will be joining the Executive Committee for the first time though having served on various committees and volunteering for ad hoc jobs at our annual meeting. Similarly, **Jeff Morris** is new to the EC, as our Communications Director. Jeff has been a member of PSA since his student days.

Thanks are due to our “retiring” officers: **Rick Zechman** has completed his service in the Presidency of PSA, **Deb Robertson** was term-limited after ably serving 6 years as Membership Director, and **Kirsten Müller** has completed her term as Communications Director in which role she took on multiple improvements to PSA’s electronic presence. This year will also mark the end of the terms of several officers, including **Paul Gabrielson** (Past President), the fabulous **Dale Casamatta** (Program Director), **Rick McCourt** (Board of Trustees’ Chair), **Mariana Cabral de Oliveira** (International V.P.), and **Emily Johnston** (Student Member).

Lastly, I look forward to seeing you all at our annual meeting in Monterey this June!

~ Tim Nelson



Dr. Nelson on an early field expedition

Upcoming PSA Meeting: Monterey, California June 4-8, 2017

Greetings Algal Allies,

Have the recent spate of holidays made you long for the true love of your life, algae? If so, I am pleased to announce some details for our 2017 annual meeting to be held June 4-8, at the scenic [Embassy Suites by Hilton Monterey Bay](#) (Seaside, California).



We have an excellent selection of keynote speakers to address the past, present, and future of algal endeavors, including **Mike Guiry** and **Laura Rogers-Bennett**. We also have a bevy of fantastic symposia, including *Picophytoplankton in a Changing World* (J. Jeffrey Morris), *The Ecology of Macroalgal Blooms* (the PSA Presidential Symposium, Tim Nelson), and *Non-Aquatic (terrestrial, subaerial, etc.) Algae* (Nicole Pietrasiak).

Our excellent education committee is planning several workshops, including, but not necessarily limited to, *An Introduction to Metabarcoding Data Analysis* (Emily Johnson) and *Balancing Science Communication and Science: Achieving Effective Outreach Using Social Media* (Susan von Thun). We will also have opportunities to explore the local region, with copious details to follow in the near future.

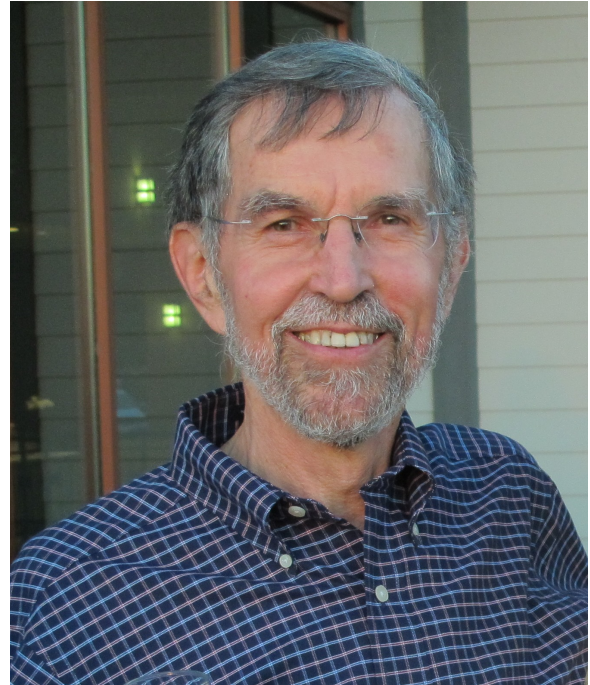
Registration will begin Feb. 15 and continue until April 3. We have also obtained a block of rooms at a great rate (well, for California) that can be found here:

http://embassysuites.hilton.com/en/es/groups/personalized/M/MRYESES-PSA-20170603/index.jhtml?WT.mc_id=POG

Please check the PSA website for additional information in the near future. This is shaping up to be a great, memorable meeting, and we are looking forward to seeing everyone in sunny California!

In memoriam: Professor Emeritus Paul J Harrison, FRSC

It is with sadness that I learned that our colleague Paul J. Harrison passed away on 17 December 2016, after a brief illness. Paul was a quiet and humble giant in the phycological world. He joined the University of British Columbia in 1975 after completing his PhD at the University of Washington. He soon built an internationally recognized program in the physiological ecology of algae and biological oceanography. In his career at UBC he trained 45 graduate students, 15 postdoctoral scholars and countless undergraduates, many of whom went on to be leaders in academia, government and industry. He published >300 refereed scientific papers (nearly 50 in the last 5 years), was a co-author of “The Bible” *Seaweed Ecology and Physiology*, and is one of the most highly cited scholars in his discipline. He often worked on important but not flashy topics that moved the entire field forward, such as developing a broad-spectrum artificial seawater medium for growing microalgae, that was published in *Journal of Phycology* in 1980 and remains one of the journal’s most highly cited papers. Despite being the recipient of many awards, including being elected to the Royal Society of Canada and receiving PSA’s Award of Excellence in 2004, Paul was a humble individual that always put the achievements of others above his own. He was also an exceptional educator, and was the first recipient of UBC’s Graduate Teaching Award. In 2002, he left UBC to become the Director of the Graduate Program in Atmospheric and Marine Science at the Hong Kong University of Science and Technology, where he had a great impact on advancing research on microalgae, not only in Hong Kong but also in mainland China. He returned to The University of British Columbia as Professor Emeritus in 2010, where he remained as active, as ever. All of us who interacted with Paul will miss his sage advice, kind words of encouragement, and continual support that helped make our community so much stronger. A celebration of Paul’s life is planned to occur at UBC in late March.

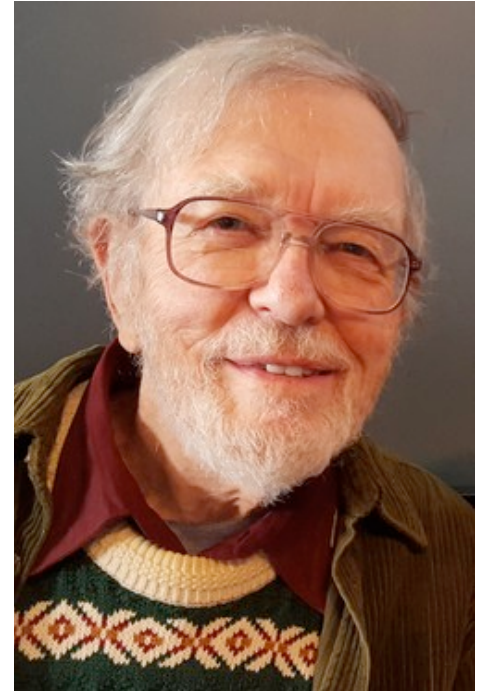


- **Curtis A Suttle**

In memoriam: H. William "Bill" Johansen, Ph.D.

Bill Johansen, 84 of Holden, MA passed away peacefully at home in the presence of his loving family on Thursday, November 17, 2016 after an illness. He was born in Worcester on June 11, 1932 to a Norwegian immigrant couple, Edith L. and Fredrik Johansen, and grew up in Worcester, MA, East Haven, CT and San Mateo, CA.

Bill attended college in central California and taught science at San Mateo High School for four years where he was also the assistant track coach. After earning a Master's degree from San Francisco State University, he entered the doctoral program at the University of California, Berkeley working with Dr. G.F. Papenfuss and obtained his PhD in 1966. Bill's research focused on the morpho-anatomy and systematics of coralline algae. In addition to doing extensive work along the coast of California, Bill and his family spent nine months at Rhodes University in Grahamstown, South Africa conducting post-doctoral research on coralline algae in the Indian Ocean. In 1968, Bill joined the faculty of Clark University in Worcester, MA where he was a biology professor until retiring in 1999.



During his years at Clark, he continued research on coralline algae, often working with scientists in other countries, including, Japan, Ireland, England and Australia. He authored and co-authored more than 50 articles on the coralline algae as well as two books. Bill contributed the Corallinaceae descriptions in Abbott and Hollenberg's "Marine Algae of California. For many years, Bill was an integral member of the Northeast Algal Society (NEAS) and was President for 5 years.

At Clark, Bill taught courses in biology and annually led students on week-long trips to Bermuda to explore marine diversity. He participated in Clark's month-long study abroad program in Luxemburg and taught two summer courses on aquatic life at Boothbay Harbor, Maine. Bill's passion for teaching and sharing knowledge continued into his retirement years. Bill taught an annual course for seniors based at Assumption College, Worcester, MA. The diversity of courses that he developed (The Viking Era, Great Rivers of North American, the Great Italian Immigration, Biodiversity of the Oceans, the Ice Ages, Extinctions of Life, and Human Evolution) are a testament to Bill's curiosity about the world around us and his passion for knowledge.

In 1982, Bill married Frances Pedusey. Through Fran, Bill became enthused with the little town of Bethel, VT, where Fran's father had spent his youth and where her Italian grandparents had lived. Bill's enthusiasm resulted in a book on Bethel's so-called Italian era which extended from 1900-1940. The book was published in 2016.

Bill is survived by his wife, Frances, as well as his son, Eric, daughter-in-law, Lois, and grandsons, Clayton and Bennett.

- Deborah Robertson

Making a Bequest to the PSA Legacy Society

The PSA Legacy Society was inaugurated last summer at the Annual Meeting at John Carroll University in response to the generosity of Dr. Norma J. Lang. Speaking for myself and the Board of Trustees, we appreciate the support of PSA members and the Lang family in launching the PSA Legacy Society.

A few have written me about the Legacy Society and ways to include PSA in their estate planning. The procedure will vary from person to person, depending on the kind of bequest involved. Each person considering this should consult their attorney as to how to do this, since it will vary from state to state and personal situation. In general, the Psychological Society of America can be named as the recipient of financial instruments such as life insurance policies or stocks. For this purpose, people may list the Psychological Society of America with the city and state where our current Treasurer resides:

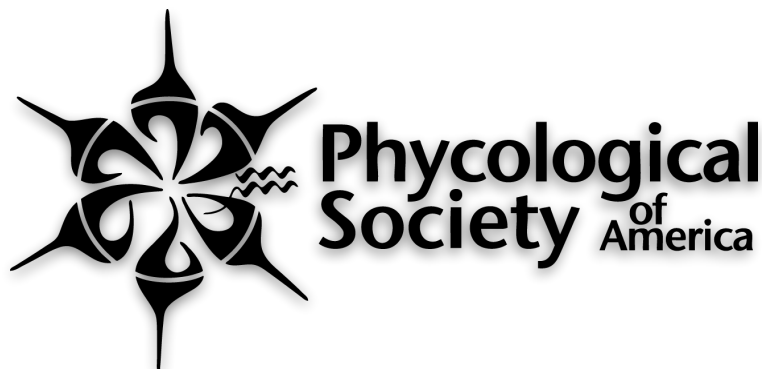
The Psychological Society of America, Inc
C/o Eric Linton, Treasurer
Central Michigan University
1455 Calumet Court
3401 Biosciences Bldg.
Mount Pleasant, MI 48859

I would also suggest including the PSA web site, where updated information and new Treasurer information can be found: www.psaalgae.org

The name and address of the Treasurer will be changing every 3-6 years, but the contact information should be sufficient. We will be posting further details on this on the PSA web site in the near future. In the meantime, if you have any questions or suggestions, please send them to me and I will share them with the Board of Trustees.

Again, thank you for your support of PSA and I hope to see you at future Annual Meetings and Legacy Society events.

Rick McCourt
Chair, PSA Board of Trustees



Upcoming PSA Award Deadlines

Norma J. Lang Early Career Fellowship

In 2017, PSA will select its **first Lang Fellow**. Named in honor of the late Norma J. Lang, this fellowship will grant a one-time payment of \$10,000 to one early career researcher, who will be a Norma J. Lang Fellow for three years. Applications will be accepted from **Postdoctoral Fellows, Pre-Tenure Faculty**, and others (those not in traditional academic positions) who are members of the society and are within 10 years of completing their Ph.D. Applications from international members are welcome, but all application materials must be in English. Individuals must be employed by a university or other non-commercial entity and be doing research on algae. The purpose of this award is to provide "seed" money for projects, with the ultimate goal of increasing the likelihood of federal or other grant funding for the recipient. It is expected that the Fellow's home institution will cover any indirect costs as an institutional match.

For more information please go to <http://www.psaalgae.org/norma-j-lang-fellowships/>

Application Deadline: MAY 1, 2017

PSA Student and Postdoctoral Grants

Each year over \$25,000 is awarded to support student (and, for the first time in 2017, postdoctoral) 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.

For more information see <http://www.psaalgae.org/grants-and-fellowships/>. The committee looks forward to reviewing more great applications this year!

All grant applications should be sent to Dan Thornton (dthornton@geos.tamu.edu).

DEADLINES:

CROASDALE FELLOWSHIP: March 1, 2017

HOSHAW TRAVEL AWARD: April 1, 2017

GRANTS-IN-AID: November 1, 2017

PSA Award of Excellence

The Phycological Society of America is soliciting nominations for one or more Awards of Excellence. Recipients of the 2017 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.

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.

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, University of Alabama. All nomination materials should be electronic files submitted by email to jlopez@ua.edu.

Nomination Deadline: January 31, 2017

For more information go to <http://www.psaalgae.org/award-of-excellence/>



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<http://smile.amazon.com>

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

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

The Bold Award

Students are invited to participate in the **Harold C. Bold Award** competition, awarded for the outstanding student research presentation at the Annual PSA Meeting. This award, named in honor of the late Professor Harold C. Bold, has been awarded at PSA Annual Meetings since 1974. The winner will be awarded a certificate and monetary prize.

Bold Award Eligibility: Graduate students who are PSA members, regardless of nationality, are eligible to compete for the Bold Award, as well as former students within twelve months of completion of their degree. The work presented must be that of the student, must be presented orally by the student in English, and should be a complete or nearly complete project. Only one presentation may be made per year and students may enter no more than twice, and not in successive years. Previous Bold Award recipients and those who have failed to give a scheduled Bold Award paper without valid reason are ineligible.

Deadline:
April 3, 2017
For Both Awards

The Lewin Award

The **Ralph A. Lewin Poster Award** competition will be held at the annual PSA meeting. The Lewin Award was established in 2009 by colleagues of Ralph A. Lewin, former president of The Society and a distinguished teacher and researcher at The University of California at San Diego, Scripps Institution of Oceanography. The Lewin Award shall consist of a certificate and a monetary prize.

Lewin Award Eligibility: Graduate students who are PSA members, regardless of nationality, are eligible to compete for the Lewin Award, as well as former students within twelve months of completion of their degree at the time of the meeting where the work is presented. Posters with multiple authors are permitted, but the student competing for the award must be the first and presenting author. Only one poster per student per year may be entered in the competition. If meeting rules allow multiple posters to be contributed by the same presenting author, the student must designate which poster is to be considered for the award.

Please see the PSA Website (<http://www.psaalgae.org>) for more information or contact Dr. Patrick Martone, Award Committee Chair (pmartone@mail.ubc.ca).



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 Membership

If you were a member in 2016, you should have received an electronic renewal notification from Wiley Membership Services. You can renew your membership, join PSA, or sponsor a member via [Wiley's Online Library](#).

Membership Benefits

- **The Journal of Psychology**, published six times a year, is the premier psychological journal. PSA members can access the Journal of Psychology using the Wiley Online Library. Log in information is sent to members after they have joined/renewed their PSA membership. Please contact cs-membership@wiley.com with any access related inquiries.
- PSA members can search and obtain full-text electronic articles from all issues of the Journal of Psychology.
- PSA members are NOT charged page fees when they publish in the Journal of Psychology as communicating authors.
- Members can access the Journal of Psychology through an iPad and iPhone app. Instructions on how to access the journal are available at the PSA website.
- Members receive a pdf copy of the Psychological Newsletter or they can download it from our website. The Newsletter contains news of Society activities, news of colleagues, book review, information on summer field courses and graduate programs, and general articles of interest to psychologists.
- Student members are eligible for grants in support of research, travel to the Annual Meeting, and tuition for field courses.
- Post-doctoral members of PSA are eligible for grants in support of research.
- Post-doctoral and early career members are eligible to apply to the Norma J. Lang Early Career Fellowships.
- Members receive a 35% discount on all Wiley publications.

Most importantly, your participation and dues are essential to maintaining this vibrant psychological community, so make sure to keep your membership current!

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

Meetings

The 56th Annual Northeast Algal Symposium (NEAS)

will be held on **April 21-23, 2017** at the historic **Mount Washington Resort**. We have been given very affordable rooms rates at this beautifully renovated grand hotel, which is situated in Bretton Woods, New Hampshire on the edge scenic White Mountain National Forest. NEAS provides an excellent opportunity for professionals and students to present talks or posters and to interact with other phycologists from northeastern US and eastern Canada. Details and registration information are available on the Northeast Algal Society website at e-NEAS.org



NEAS Lab Manual Workshop, 2-5pm on Friday, April 21 in conjunction with the Northeast Algal Symposium (see above). The Workshop will consist of reformatting an existing lab activity of your choice using a provided template, for inclusion into a NEAS Lab Manual, which will

include activities appropriate for undergraduate and graduate students. Participants will develop learning objectives and brainstorm with colleagues on appropriate and effective assessment techniques. For the first 15 registrants to the NEAS Manual workshop, a **\$125 stipend** will be awarded upon submission of their completed lab activity at the conclusion of the workshop. If you are not ready to contribute a lab activity, you are still welcome to attend the workshop and assist in the critique of completed lab activities. Those who enroll in the workshop will be asked to provide the topic of their lab activity prior to meeting in order to ensure no overlap in activities exists. For more information, contact Elizabeth Lacey at Elizabeth.Lacey@stockton.edu.



For information about NEAS
please contact Louise Lewis (louise.lewis@uconn.edu)

Student Travel Award Information:
http://e-neas.org/files/NEAS_Student_Travel.pdf



The 11th International Phycological Congress

The Eleventh International Phycological Congress (IPC 11) 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 invited to attend this event. This Congress continues in a tradition that began in 1982 with the first IPC in St. John's, Newfoundland, Canada. The overarching themes of IPC 11 will include **the challenges and opportunities of the molecular era for algal research and biopropecting**, addressing the application of molecular tools in phylogeny, evolution, biogeography, ecology and bioindication, and the possibilities for expanding the use of algae and algal products in the renewable energy, food and feed industries and material sciences.

The organizing committee are also delighted that the city has endorsed the conference. A logo has been specifically designed for the meeting and its colours (blues and greens) have been chosen to reflect the nature of Szczecin and its location, an extensive green area with an abundance of natural water bodies. The centre of the logo is occupied by a stylised profile of a griffin or gryphon, a legendary creature with the body, tail and back legs of a lion, the head and wings of an eagle, and an eagle's tails as its front feet. The griffin has become a historical symbol of Szczecin's region, Pomerania, the griffin's head being the symbol of the city itself. The central position of Szczecin's symbol represents phycologists getting together in our city. The griffin's head in the centre is surrounded by a "wreath" composed, from left to right, of a filament of the prokaryote, the cyanobacteria *Anabaena raciborskii* Woloszynska 1912, a series of diatoms, and *Fucus vesiculosus* best known representative of Baltic Sea seaweeds, all representing the wide variety of morphologies encountered in phycology. The image was prepared, based on a sketch by Małgorzata Bąk and Przemysław Dąbek, by Radosław Kościukiewicz.

Early Registration Deadline: **March 15, 2017**

For more information: <http://ipc11.intphycsoc.org/>





The 2017 ISOP Annual meeting at the 15th International Congress of Protistology

July 30, 2017 – August 4, 2017

This year the ISOP annual meeting will be held in conjunction with the International Congress of Protistology (ICOP). Held every four years, ICOP attracts protistologists from various field of our discipline creating a friendly and creative protistological atmosphere. Research on protists has a long tradition in the Czech Republic and the first congress of the ICOP series took place in Prague in 1957. We are happy that after 60 years the ICOP congress will come back to the place where it started.

The meeting will be held at the **Hotel Pyramida (Prague)**.

ISOP events include two Hutner talks, Susanne Menden-Deuer (2015) and Joel Dacs (2016), Virginia Edgcomb's Past President Address, and Three Special Symposia: '70 years of ISOP', 'Physiology of Single Cells' and 'Eukaryotes and the Microbiome'.

Conference website: <http://www.icop2017.org/>



FIRST ANNOUNCEMENT

APPF 2017

The 8th Asian Pacific Phycological Forum

ALGAE: NEW PERSPECTIVES
TOWARDS A PROGRESSIVE AND SUSTAINABLE LIVING

A Forum for Phycology Development and Regional Cooperation
in the Asian Pacific Region

Date : 8-13 October 2017

Venue : Pullman Hotel, Bangsar, Kuala Lumpur

Organiser : Institute of Ocean and Earth Sciences, University of Malaya

We welcome submissions of proposals for Mini-symposiums, to be submitted by 31st October 2016 to appf2017@um.edu.my

Important dates:

*Abstract Submission by 30th March 2017

*Early Bird Registration by 30th May 2017

The forum includes scientific sessions that will deliberate on the following broad issues:

- Algal Systematics, Phylogenetics and Diversity
- Algal Culture Collections
- Algae and Environmental Pollution
- Algae and Climate Change
- Harmful Algae Blooms
- Bioremediation and Biorefineries
- Algae for Biofuels
- Mass Culture Systems for Algae Production
- Therapeutic Applications of Algae
- Algal Physiology and Biochemistry
- 'Omics' in Algal Biotechnology
- Algal Ecology



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For more information, please contact us via e-mail at appf2017@um.edu.my or visit us at <http://umconference.um.edu.my/APPF2017>

Field Courses and Workshops

Freshwater Algae

Course costs: £650 for sole occupancy, £495 for a shared room, and £380 for the course and dinner each day but no B&B.

Friday 22 June 2017 to Friday 30 June 2017, Kindrogan, 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.

Course Description

The area around Kindrogan 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 Kindrogan for over 20 years.

About the Tutors

Eileen Cox is Head of Post Graduate Studies at the Natural History Museum, London, with an extensive research background and a particular interest in the taxonomy and ecology of diatoms. She has published over 100 scientific papers and completed a key to the identification of live diatoms. She has run a number of courses and workshops on algae with particular emphasis on algal diversity and the identification of genera and species. Eileen is currently Editor for *Diatom Research*, on the Editorial Board of *Fottea*, Leader of the Working Group on Diatom Terminology and Co-Editor of two special volumes on Ecology of Springs and of a book on Long-term Ecosystem Study of the Breitenbach.

Elliot Shubert is Editor-in-Chief of *Systematics and Biodiversity* at the Natural History Museum, London. His research interests are phenotypic plasticity, gene expression and cell wall chemistry in the freshwater green alga, *Desmodesmus*. Previously, he was Professor of Biology at the University of North Dakota USA for 21 years where he taught undergraduate and post-graduate courses on algae. He has published over 60 research articles, and has produced a revised chapter on “Nonmotile coccoid and colonial green algae” for the 2nd edition of “Freshwater Algae of North America”.

Guest Lecturers

Professor John Day is Head of the Culture Collection of Algae and Protozoa at the Scottish Marine Institute at Oban. He is a recognised world expert on algal culturing, algal biofuels and cryopreservation. He is widely sought as an invited speaker for international scientific meetings.

Dr Laurence Carvalho, Centre for Ecology and Hydrology, will give a presentation on the EU Water Framework Directive with special reference to lakes and will describe their counting methods.

Where can I find more information?

- For detailed information about the Kindrogan Field Centre:
<http://www.field-studies-council.org/centres/kindrogan.aspx>
- For information on the Field Studies Council:
<http://www.field-studies-council.org/>
- Course information for 2017:
<http://www.field-studies-council.org/individuals-and-families/courses/2016/kd/freshwater-algae-59652.aspx>
- Booking information
<http://www.field-studies-council.org/individuals-and-families/booking-information>

If you have any other queries, please contact: e.shubert@nhm.ac.uk



British Phycological Society COLLECTING & IDENTIFYING SEaweEDS



Marine Biological Association, Plymouth,
25th to 27th April 2017

Course Instructors: Professor Christine Maggs (Queens University of Belfast)
Francis Bunker (MarineSeen, Pembrokeshire)



Location: The Plymouth area has an exceptionally diverse intertidal flora and offers habitats for marine algae ranging from open coast to sheltered rock and sediment and from fully saline to estuarine conditions. The MBA is an ideal location at which to base this course with its excellent laboratory facilities (with ready supplies of running seawater) and proximity to field sites.

Topics to be covered

- Collecting and identifying algae in the field
- Water Framework Directive Species Identification
- Use of keys and identification guides, microscopes and identification in the lab
- Seaweed classification
- Seaweed life histories and reproduction
- Preserving seaweeds for a variety of different purposes
- Making a herbarium with necessary notes (it is hoped to include a viewing of the MBA's famous algal herbarium)
- Donating seaweeds voucher specimens to museums; archiving material
- Preparing specimens for DNA extraction and analysis techniques
- Culture of seaweeds for research purposes

Costs and applications: The course fee is £215 (inc VAT) which will cover the teaching and use of laboratory facilities (excluding food and accommodation). Application forms are available from the course administrator, Sally Archer-Thomson (Contact: archerthomson@btinternet.com)

For more information:

http://www.aquaticsurvey.myzen.co.uk/Plymouth2017/Plymouth2017/BPS_Field_Course_2017.html

SUMMER FIELD OPPORTUNITIES AT IOWA LAKESIDE LABORATORY

Four summer courses related to algae are being offered in Summer 2017 at Iowa Lakeside Laboratory. Classes target advanced undergraduates, grad students and post-docs, and professionals. There is also a class for high school students with the opportunity to earn college credit.



More Information/Registration?: <http://www.continuetolearn.uiowa.edu/lakesidelab/>

Contacts:

Sylvia Lee
National Center for Environmental
Assessment, U.S. EPA
sylvlee39@gmail.com

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ECOLOGY AND SYSTEMATICS OF DIATOMS

15 May – 09 June 2017

Instructors: Mark Edlund, Sylvia Lee

This course, now in its 55th year, will introduce students to field and laboratory study of freshwater diatoms. We will visit diverse aquatic habitats of the Upper Midwest to make live and fossil collections of most freshwater diatom genera. Students will learn techniques in collection, preparation, and identification of diatoms. Lectures will cover diatom taxonomy, systematics, stream, lake, and wetland ecology, research applications, and biogeography. Students will assemble individual voucher collections as a means for practicing diatom research and species verification. As a final project, students will complete a taxonomic treatment of a species that will be ready to submit for peer-review to the *Diatoms of the United States* web project. This is an intensive, field-oriented class appropriate for advanced undergraduate students, graduate students, and post-graduate workers in ecology and diatom taxonomy. Students are encouraged to bring individual research materials, and there will be opportunities to discuss research approaches and practical problems of using diatoms in ecological and paleoecological applications. Two scholarships, the CW Reimer Scholarship and the EF Stoermer Scholarship, will be awarded based on scholastic merit. The JC Kingston Fellowship supports an assistant for the class. (see <http://www.continuetolearn.uiowa.edu/lakesidelab/university/scholarships/index.html> for scholarship info). Class size is limited to 10. Early registration recommended. Contact Mark Edlund if you get waitlisted.

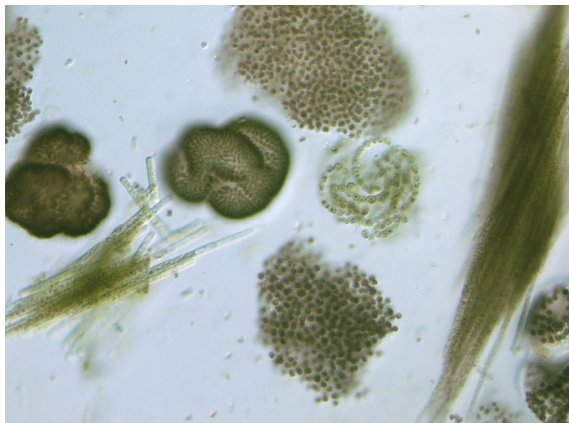


ECOLOGY AND SYSTEMATICS OF ALGAE

12 June - 07 July 2017

Instructor: Kalina Manoylov

An ecological perspective is used to explore the diversity of photosynthetic microbes that form the energy base of freshwater ecosystems, including cyanobacteria, green algae, and diatoms. Students will learn techniques in collection, preparation, and identification of algae. Lectures will cover all algal groups' taxonomy, systematics, and ecology. Environmental and economic concerns caused by algal growth will be examined. Field collections will be used to identify common genera of algae, study life histories, and examine environmental factors that affect growth and distribution. This is an intensive, field-oriented class appropriate for advanced undergraduate students, graduate students, and post-graduate workers in bioassessment, algal ecology, and taxonomy. Students are encouraged to bring individual research materials, and there will be opportunities to discuss research approaches using algae. Students should have a working knowledge of basic biology. Class size is limited to 10.

**ECOLOGY OF ALGAL BLOOMS**

10 July - 21 July 2017

Instructor: Mindy Morales

Harmful algal blooms (HABs) are increasing in frequency and intensity worldwide. Despite the ubiquity of blooms, only a handful of algal and Cyanobacteria species are considered "bloom-forming". This course will investigate ecological mechanisms that trigger and maintain blooms in aquatic ecosystems, as well as the physiological advantages that allow some species to bloom while others do not, with emphasis on Cyanobacteria. This intensive course will combine discussion of primary literature, applied field sampling techniques, species level taxonomic identification and physiological characterization (stable isotope or toxin analyses) of local bloom-forming taxa.

COLLEGE PREP DIATOMS

24 July - 04 August 2017

Instructors: Sylvia Lee, Kerry Howard, Shelly Wu

This is a field-based, hands-on, introductory-level course on freshwater diatoms for advanced placement high school students. Course topics include: microscopy of live and prepared specimens, methods of diatom specimen collection & preparation, diatom morphology, ecology, and life cycles, diatoms & water quality, diatoms in forensics, introduction to peer-reviewed scientific literature, and introduction to multivariate statistics (ordination) using the R statistical program. Students will also conduct a group research project during the course and prepare personal collections of approximately 20 diatom genera. One-week and two-week options will be offered. High school biology (AP Biology preferred) is a prerequisite for this course. Students must apply by submitting a transcript, a 1-2 page essay on their interests in the course, and a letter of recommendation from a science teacher. Class size is limited to 10. Accepted students will receive room and board and a tuition waiver for 1 college credit. Registration will be \$50. Applications will be accepted until May 19. Contact Sylvia Lee for more details if you are interested. <http://www.continuetolearn.uiowa.edu/lakesidelab/outreach/camps/diatom.html>



DURHAM COURSE ON FRESHWATER ALGAL IDENTIFICATION

Van Mildert College and Department of Biosciences, Durham University, UK

Organizers: Brian Whitton (Durham) and David John (London)

Dates: Sunday 9 July - Saturday 15 July 2017

The course provides training for staff in environment agencies, water companies, museums, consultancies, museums, research students and overseas visitors in the identification of the more widespread and environmentally important microscopic and macroscopic freshwater algae.

Topics introduced include monitoring, field sampling, preservation, harmful and nuisance algae.

The Durham identification courses have been run independently by the organizers since 1992 and have been attended by more than 500 people from over 35 countries. Durham is a well-known important tourist destination because of its cathedral (began in 1093, completed within 40 years) and castle that is now part of the University and a World Heritage Site – both are just 15 minutes walk from the course venue. .



Tutors: Prof. David John and Prof. Brian Whitton. Dr Gordon Beakes (formerly University of Newcastle), Dr Alan Donaldson (consultant) and Dr Martyn Kelly (Bowburn Consultancy) also contribute.



Venue: Accommodation in Van Mildert College and the course in the Department of Biosciences (about 600 m away). All meals and evening lectures are in the College.

Lecture and practicals: run until 2120 each evening (including the Sunday) and the formal part of the course ends at 1300 on the Friday. Most study is in the laboratory or seminar room, but there is a short field excursion on Tuesday afternoon. Following the end of the formal course there is a half-day field visit to river sites and to streams influenced by former lead-zinc mining, followed by a meal in an Alston pub in the Pennines.

Costs: The inclusive cost for all members other than full-time research students is £900 (no VAT charge) for those making a firm reservation by 1 April. Overseas members may stay one further night in advance of the course free of charge. The cost is the same whether leaving after lunch on Friday or breakfast on Saturday.

The discounted price for full-time students is £800. Students who have been members of the British Phycological Society for at least three months (*essential!*) may apply directly to the Society for some support, but any decision rests with the BPS. Details will be posted on the BPS website (<http://www.brphycsoc.org/funding.lasso>), but it is recommended that an application is submitted **as early as possible**. Graduate students belonging to other societies (Phycological Society of America, British Ecological Society, etc.) can also apply to them for funding to defray the cost of attending specialist courses.

Van Mildert College can provide accommodation for anyone wanting to stay one extra night at the beginning and as many as required at end of the course (about £37 for B & B, with, if wanted, lunch £11 and/or dinner £13 - exact sums to be announced soon). Payment can be included in the main invoice, provided organizers know well in advance, but otherwise it can be paid to the college after arrival.

Further Information:

Anyone wanting more details, including a copy of a previous year's programme and manual is welcome to contact

Brian Whitton: b.a.whitton@durham.ac.uk phone +44(0)191-3867504 or

David John: d.john@nhm.ac.uk or d_m_john@ntlworld.com phone +44(0)208-4646367/07920124825 or

Department of Life Sciences, Natural History Museum, Cromwell Road, London SW7 5BD, UK

Booking: Provisional and firm reservations for one of 16 places should be made by email (b.a.whitton@durham.ac.uk) or to B.A.Whitton Algal Training, 74 Archery Rise, Durham DH1 4LA, UK. A full refund will be made to anyone paying in advance, but then cancelling before 1 June, while 50% refund will be made to anyone cancelling between then and 1 July.



Upcoming Education & Training Workshops

ATP³ workshops offer a diverse range of topics pertaining to the management and processing of microalgal cultures, and uses of their products. All lecture and laboratory activities are conducted by algae experts, biochemists, and engineers.

Nov 7-11, 2016 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.

March 6-10, 2017 at AzCATI: **Routine Measurement and Biochemical Analysis of Microalgal Cultures**

This workshop provides an introduction to the diversity of microalgae and common analytical methods for the evaluation of microalgal biomass. Topics presented are relevant to those interested in an overview of microalgal biochemistry, performing routine laboratory procedures and data analysis. Field training will include sample collection and handling techniques from ponds and photobioreactors. Participants will also have ample opportunities to work in the laboratory learning how to measure culture density (cell counting and optical density), observe algae using compound light and fluorescence microscopy, perform gravimetric analyses (wet weight, dry weight, ash-free dry weight, ash and moisture content), and techniques for the measurement of bulk proteins, starch, carbohydrates and lipids. The workshop will be held at AzCATI, a nationally-recognized algae testbed facility, where participants can explore every aspect of growing microalgae at the laboratory and pre-commercial scale.



For more information about these and future workshops please visit www.atp3.org/education

OPPORTUNITIES

The **Department of Biological Sciences at the University at Buffalo** is seeking outstanding applicants for a **tenured/tenure track faculty position (open rank) in freshwater molecular ecology**. A competitive startup package will be provided to the successful candidate.

The University at Buffalo (UB) is the largest and most comprehensive campus in the State University of New York (SUNY) system. The Department of Biological Sciences is a comprehensive center for innovative, interdisciplinary life sciences research. The faculty position is offered as part of the newly established Institute on Research and Education in Energy, Environment and Water (RENEW) at UB in its Freshwater Coastal Ecosystems & the Blue Economy focus area. The goal of this focus area is to advance research in water and environmental sustainability. As such, the successful candidate will work in an interdisciplinary group of highly collaborative faculty whose research impacts all areas of freshwater science, including engineering, economics, and environmental policy management. Further details on RENEW and the focus area can be found at <https://www.buffalo.edu/renew.html>.

The successful candidate will be expected to maintain an externally funded research program and to participate in graduate and undergraduate teaching. Successful candidates are envisioned to articulate “T-shaped” research programs that combine deep disciplinary studies with interdisciplinary work to advance the research and teaching missions of the University at Buffalo, the RENEW Institute and the Department of Biological Sciences.

Applicants should have a Ph.D. (or other doctorate degree), at least two years of postdoctoral experience, a scholarly publication record and fluency in both spoken and written English. Candidates at the senior level should have an exceptional record of research funding and display leadership in their field.

To apply, electronically submit a curriculum vitae, description of current and future research interests (3 pages maximum), and copies of published or in press publications (no more than five) from recent work to: <https://www.ubjobs.buffalo.edu/applicants/Central?quickFind=59630>. Applications will be reviewed upon completion, but for full consideration should be received by **February 15, 2017**. Please consult our website (<http://www.biology.buffalo.edu>) for information about UB, our department and our community.

UB is an AA/EOE and welcomes all to apply including veterans and individuals with disabilities.

We are seeking a highly motivated PhD student to join a research project recently funded by the Australian Research Council.

This is an exciting opportunity to join a cross-continental and interdisciplinary team of researchers from eastern and Western Australia to understand the mechanisms that shape marine communities across tropical-temperate transition zones, from coral-dominated to kelp-dominated systems. The project leaders are:

**University of New South Wales
University of Western Australia**

[Dr Adriana Vergés & Prof Peter Steinberg](#)
[A/Prof Thomas Wernberg](#)

THE APPLICANT: You'd need to have a keen interest in marine conservation, the ecological impacts of climate change and experimental marine ecology. SCUBA and advanced underwater fieldwork skills including SCUBA diving are needed. Boating experience is desirable but not essential. Start date: August 2017. Please see scholarships opportunities detailed below.

PROJECT SYNOPSIS: Ocean warming is causing the collapse of highly valuable temperate kelp forests globally and on both sides of Australia, but we do not know if this is because of direct physiological effects of temperature, or because of indirect effects arising from changes in species interactions. In this project the direct impacts of marine heatwaves will be compared to the indirect effects of range-shifting tropical herbivores and pathogens for one of Australia's largest coastal ecosystems: kelp forests of the Great Southern Reef. Through an innovative combination of continental-scale field experiments and environmental microbiology this project aims to enhance our capacity to respond to ongoing degradation of these valuable natural assets.

SCHOLARSHIPS FOR AUSTRALIAN STUDENTS

Students are expected to apply for an Australian Postgraduate Award through either UNSW or UWA. Deadline for commencing in S2 2017: TBC (likely March 2017)

SCHOLARSHIPS FOR INTERNATIONAL STUDENTS

UNSW and UWA offer highly competitive [International Postgraduate Research Awards](#). Please note the following minimum requirements to apply:

- BSc equivalent to 1st Class Honours
- One or two publications in ISI scientific journals (at least one first-authored)
- Work experience in marine ecology

UNSW deadline for international students commencing in S2 2017: **3 February 2017**

Interested students please email Dr Adriana Vergés (a.verges@unsw.edu.au) and Associate Professor Thomas Wernberg (t.wernberg@uwa.edu.au) including a copy of your CV and a copy of your academic transcript.

REU @ the Marine Science Institute

Research in Subtropical Marine Ecosystems May 31 – August 4, 2017

Nine research fellowships will be available for the summer of 2017, for undergraduate students to conduct independent research projects on topics such as:

- Biogeochemistry, nutrient cycling
- Watershed processes, land-sea interactions
- Estuarine ecology, Community ecology
- Seagrass and marsh ecosystems
- Zooplankton and phytoplankton ecology
- Fish ecology and physiology
- Coastal and organic geochemistry

Information on faculty research interests may be found at <http://reu.utmsi.utexas.edu/about/possible-projects/>

The Marine Science Institute is located in Port Aransas, on 72 acres on the Gulf of Mexico. REU projects will take advantage of the wide variety of coastal habitats near the Institute, such as shallow bays, hypersaline lagoons, seagrass beds, mangroves, marshes, and estuaries, including the 185,000-acre Mission-Aransas National Estuarine Research Reserve.

The 10-week summer program begins with a full-day research cruise on the R/V Katy and ends with a symposium in which students will present their research results.

- **Eligibility:** Students must be currently enrolled as an undergraduate, and be U.S. citizens or permanent residents of the U.S. and its possessions.
- **Stipends:** Students will receive a summer stipend of \$5000 for the 10-week program, full room and board, a research allowance, and a travel allowance.
- **APPLY!** <http://reu.utmsi.utexas.edu> for forms and instructions
- **Deadline for applications is February 13, 2017.**

Questions about the program may be directed to Dr. Deana Erdner at UTMSI.REU@gmail.com



ARCTIC PRIZE

**ARCTIC PRIZE -
Arctic
PRoductivity in the
seasonal Ice Zone**

Nitrogen uptake and phytoplankton productivity in the changing Arctic Ocean

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www.sams.ac.uk/arctic-prize

NEW TITLES AND OTHER RESOURCES

Desmids of Eastern Himalaya

Debjyoti Das; Jai Prakash Keshri

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(Bibliotheca Phycologica, Band 119)

ISBN 978-3-443-60046-4, paperback, 109.00 €

www.schweizerbart.com/9783443600464

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Taxonomy, distribution, new species

I. Investigation of the cave diatom flora of Kauai, Hawaii:

an emphasis on taxonomy and distribution

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Ed.: Laura H. Miscoe; Jeffrey R. Johansen; J. Patrick Kociolek;

Rex L. Lowe; Melissa A. Vaccarino; Nicole Pietrasiak; Alison R. Sherwood

2016. 152 pages, 448 figures, 2 tables

(Bibliotheca Phycologica, Band 120)

ISBN 978-3-443-60047-1, paperback, 89.00 €

www.schweizerbart.com/9783443600471

Phycology in Polar Regions

Algal Projects funded by the German Science Foundation in the Frame
of the coordinated Priority Program 1158

"Antarctic Research with Comparative Investigations in Glaciated Areas
of the Arctic" / Ed.: Ulf Karsten

2016. 165 pages, 41 figures, 15 tables

(Algological Studies, Volume 151-152)

ArtNo. ES221015100, paperback, 139.00 €

http://www.schweizerbart.com/papers/algol_stud/list

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Iconographia Diatomologica: Annotated Diatom Micrographs.

Ed. by Horst Lange -Bertalot.

Volume 24: Zidarova, Ralitsa, Katerina Kopalova and Bart Van de Vijver: Diatoms from the Antarctic Region. I: Maritime Antarctica. 2016. 216 photographic plates. 509 p. gr8vo. Hardcover. EUR 180.00 (ISBN 978-3-946583-05-9)

This volume provides the first detailed diatom identification guide for the Maritime Antarctic region. All taxa found during a large taxonomic and ecological freshwater diatom survey on the South Shetland Islands and James Ross Island are included. Taxa are listed following the systematic classification of Round et al. (1990) and further alphabetically within each genus. Each taxon is discussed on a single page providing the following data: the original reference; a morphological description based on LM and SEM observations; a comparison with similar taxa; data on its ecology (where available). Per taxon, an entire plate composed of high quality LM and SEM micrographs is shown, illustrating all morphological details. The last plates contain unidentified taxa for which, due to their rarity in the samples, insufficient observations were made and hence formal description / identification is not possible. Short descriptions giving morphometric details are added for these taxa. The appendix at the end of the volume contains confirmed distribution records for each taxon & a list of all taxonomic papers that have been published since the start of this survey by the book authors on Maritime Antarctic diatoms.

The diatom genus *Neidium* Pfitzer (Bacillariophyceae) from Zoige Wetland, China. Morphology, Taxonomy, Descriptions.

Qi Liu, John P. Kociolek, Bo Li, Qingming You and Quanxi Wang, 2017. (Bibliotheca Diatomologica, 63). 2 tabs. 281 figs. 120 p. gr8vo. Paper bd. EUR 76.00

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DIATOM FLORA OF BRITAIN AND IRELAND



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The *Diatom Flora of Britain and Ireland* is a major project aiming to compile a web-based diatom flora and comprehensive taxonomic review of diatoms from freshwater, brackish and subaerial habitats in the British Isles. The project involves much original research on problematic groups, and description of new species.

The website aims to support researchers, students and professionals with an interest in diatom taxonomy, systematics, ecology and biogeography as well as the wider freshwater ecology community.

Approximately 2800 species of freshwater diatoms have been recorded from Britain and Ireland, but many of these have been recorded only rarely. We aim to document most of the commoner species encountered during water quality assessments within the first few years but will also gradually add species encountered rarely, or living in protected or hard-to-reach habitats. Additionally we will display images of type material once they have been published in peer-reviewed journals.

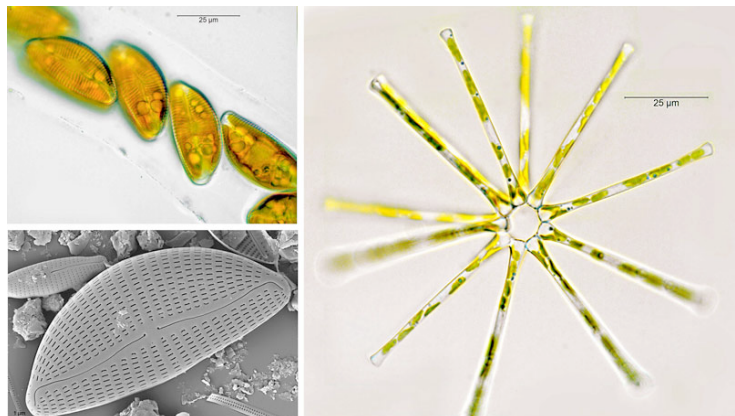
The website is therefore a work in progress and 51 genera and 140 species have been added to date. We will add a least 80 taxa in 2017/2018 and again in 2018/2019. In 2017 we will add a glossary section to the website, along with ecological information for selected species.

We welcome contributions from colleagues, whether from the British Isles or abroad, and will acknowledge those who have contributed on the website.

You can find the website at <http://naturalhistory.museumwales.ac.uk/Diatoms>.

Best wishes,

Ingrid, Helen, Chris, Eileen, Roger, Viv, Martyn, David, Carl, David and Luc





**Submit your contributions to the next
Phycological Newsletter by August 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