

PHYCOLOGICAL NEWSLETTER



A Letter from PSA President Linda Graham



The Phycological Society of America will have a special year in 2013 because we will be combining forces with the International Phycological Congress in Orlando, FL

August 4–10. You'll be hearing from the Program Committee and Director about several exciting PSA-sponsored symposia and workshops that will occur at those meetings in addition to IPC program features, including exceptional field expeditions. It will be wonderful to see as many of you as possible at the meetings!

Although the summer meetings will likely be a major focus for PSA members this year, be assured that the PSA is actively engaged in several other initiatives this year. For example, PSA will make a first appearance at the Boston AAAS meetings by operating an outreach booth at Family Days, February 16 and 17, 2013.

...continued.

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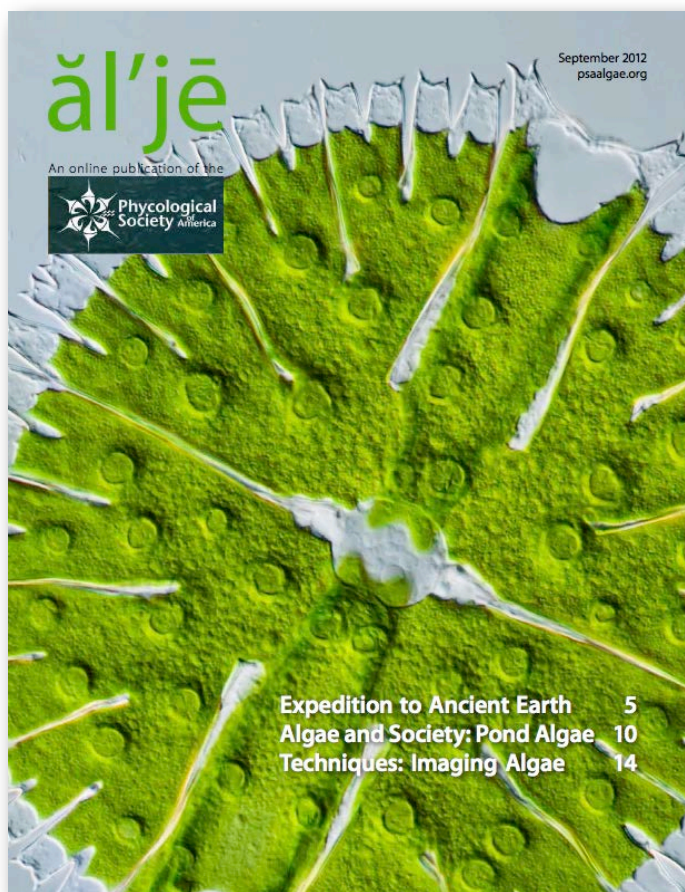
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LETTER, CONTINUED

We will build on the successful outreach activity developed last year for the National Science and Technology Fair held in Washington DC, guided by Past-President Susan Brawley and many assistants from amongst the PSA membership. At the AAAS Family Days booth kids will make colorful alginate art while also learning why alginate is so important to humans and the seaweeds from which it is extracted. Beautiful algae-themed bookmarks will be the take-away gifts. Four PSA student members from my lab will be working at the booth in tag teams and we plan to develop a “how-to” manual in the hope

that PSA can have a similar presence at future AAAS meetings (Chicago in 2014) and other venues. The AAAS is providing the PSA Family Days booth at no cost, so this is a great way to tell the world about algae. If you are interested in organizing or assisting with a future booth, just let me know!

In another effort to bring the joys of algae to the world, during the past year, and with the valued help of PSA member Lee Wilcox and Communications Committee Chair Louise Lewis, PSA has instituted an outreach electronic magazine at <http://www.psaalgae.org/algaezine/algae.html>. The first issue's cover is shown at the left, where you can see the titles of three articles, one featuring recent research activities, another on problems people have with algae in ornamental or retention ponds, and a third focusing on imaging technology. In the future we hope to publish articles about algal symbioses, biofuels, wastewater remediation, recipes, student activities, and other topics we think the general public might appreciate. If you would like to write a jargon-free outreach article on any of these or other topics for the algaezine, please let me know! We'd like to publish several issues per year if possible. Advertisements also welcome!



10TH INTERNATIONAL PHYCOLOGICAL CONGRESS

Phycologists and others interested in the algae from throughout the world are cordially invited to participate in the 10th International Phycological Congress (IPC 10) in Orlando, Florida, 4 (Sunday) - 10 (Saturday) August 2013. This Congress continues in a tradition that began in 1982 at the first IPC in St. Johns, Newfoundland,

Canada. The overarching theme of IPC 10, **Algae in a Changing World**, recognizes the important roles of algae in a world where environmental changes are rapidly accelerating. Ultimate sponsorship of these Congresses is provided by the International Phycological Society (IPS). The [Phycological Society of America \(PSA\)](#) will meet in conjunction with IPC 10.

In 2013, Florida is the first state in the USA to celebrate the 500th, or Quincentennial, Anniversary of its discovery by Europeans and its naming by the Spanish explorer [Juan Ponce de León](#). We encourage delegates to consider IPC 10 in Orlando not only as an excellent opportunity to participate in a great international scientific meeting, but also as an occasion for a wonderful vacation/holiday for the delegates and their families.

Additional details are available from <http://ipc10.intphycsoc.org/>.

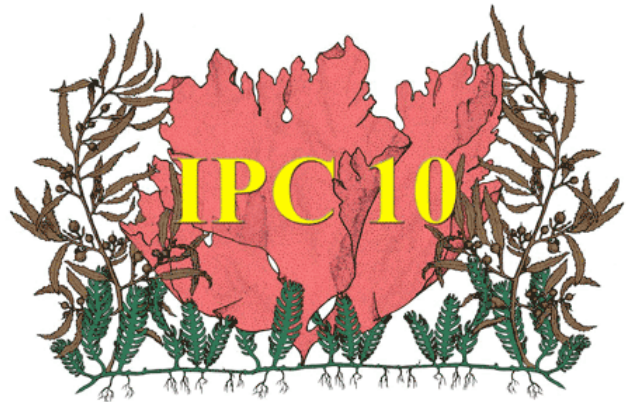
Plenary Lectures

- *Molecular Basis for Compatible Solute Accumulation in Cyanobacteria and Red Algae* – Professor Martin Hagemann, Universität Rostock, Germany
- *Extremophiles and the Search for Life in the Universe* – Professor Lynn Rothschild, NASA Ames Research Center, USA
- *Wave Impacts, Multiple Stressors and Fractured Connectivity of Algal-Dominated Shores in a Changing Climate* – Professor David R. Schiel, Canterbury University, New Zealand
- *Dawn in the Age of Robotic Phycology* – Professor Oscar Schofield, Rutgers University, USA

Important Deadlines

Applications for Financial Aid: see page 4

Receipt of Abstracts and Early Registration Fees: **15 March 2013**



10TH INTERNATIONAL PHYCOLOGICAL CONGRESS
4-10 AUGUST 2013, ORLANDO, FLORIDA USA

Alphabetical list of Symposia (and Chairs) (*sponsored by the PSA):

Algae and Biogeochemical Cycles – John Beardall; **Algal Causes of and Cures for Coastal Dead Zones* – Linda Graham; *Algal Chemical Ecology* – Valerie Paul; *Algae out of Water* – Burkhard Büdel & Jayne Belnap; *Biomonitoring and Ecotoxicology* – Pio Colepicolo & Elly Spijkerman; *Evolution and Algal Biology* – Mark Cock; *Global Change: Cellular and Molecular Aspects* – Félix López Figueroa; *Global Change: Communities and Populations* – Angela Wulff; **Into the Future: Going Where No Phycologist Has Gone Before* – Juliet Brodie and Debashish Bhattacharya; *New Concepts in Phycology* – Stuart Sandin & Jennifer Smith; *Net of Life* – Hwan Yoon; *“Omics” in Phycology* – Thomas Mock & Martin Hagemann; *Speciation* – Chris Maggs; *Trends in Applied Phycology: Moving into the 21st Century* – Alejandro Buschmann Rubio & Alan Critchley.

Financial Aid to Attend the IPC

Limited International Phycological Congress (IPC) funds are available to assist colleagues in attending IPC10 in Florida this year so that they can share their research results with the international phycological community. The funds are provided to cover the costs of registration and/or accommodation, but NOT to cover the costs of travel. A prerequisite for receiving support is that a person should present a paper or a poster.

The procedure for applying for financial aid can be found at the following URL:

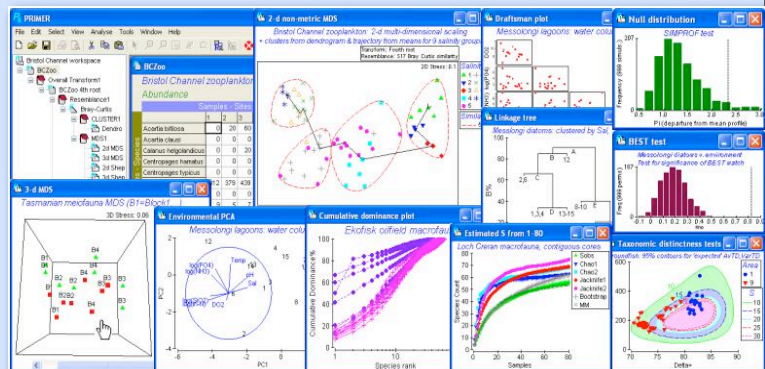
http://ipc10.intphycsoc.org/financial_assistance.php

or by contacting Akshinthala K.S.K.Prasad, Co-convenor, IPC10 (2013), Department of Biological Science, Florida State University, Tallahassee FL 32306-4370, USA (Prasad@bio.fsu.edu)

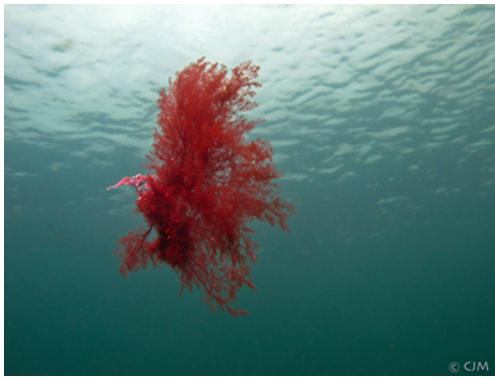
The deadline for applications with supporting documentation is 28 February 2013.

PSA 2013 We are pleased to announce that the 2013 PSA Annual Meeting will be held in conjunction with the 10th International Phycological Congress August 4th-10th in Orlando, Florida, USA. The usual excellent fare one would expect from the Annual PSA meeting is planned, and a schedule of symposia is indicated above. In addition to supporting two symposia, PSA is supporting the following 5-day workshop:

Analysis of Multivariate Data from Ecology and Environmental Science, using PRIMER v6, July 31-Aug. 4th in the same venue (detailed information including registration can be found on the [PSA website](#)).



*** Financial Aid to attend PSA is available to student members.** Please see p. 10 of this newsletter for information on the **Hoshaw Travel Awards** and the **Bold Award Competition**. *



NEAS 2013

52nd Northeast Algal Society Annual Conference

19-21 April 2013

Mystic Hilton in scenic Mystic, CT

<http://www.e-neas.org/NEAS%20Meeting2013.html>

Impacts of Invasive Species

Invaders in freshwater and marine systems

We are delighted to have Dr. Jim Carlton (Mystic-Williams program), Dr. Mark Edlund (Science Museum of Minnesota) and Dr. Alan Steinman (Annis Water Resources Institute, Grand Valley State University) as our distinguished speakers.

We look forward to your contributions and participation.

Join us for great science, an amazing auction, cool shirts, and other mysteries await!

Meeting registration, abstracts, and book award submissions are due: 1 MARCH 2013.



21st International Seaweed Symposium Bali, Indonesia

April 21-26, 2013

You are cordially invited to attend the 21st International Seaweed Symposium,

which will be on the island of Bali, Indonesia, from April 21 to 26 of this year.

International Seaweed Symposia (ISS) are held every three years under the auspices of the International Seaweed Association (ISA). For more than six decades, the ISS have been the foremost international symposia for individuals and organizations involved with seaweed research and utilization.

The theme of the 21st ISS is "Seaweed Science for Sustainable Prosperity". This theme recognizes the fact that scientific research plays a fundamental role in the development of seaweed cultivation, harvesting, processing and commercialization. ISS provide a forum for scientists, technologists, business people and resource managers to present their latest research results, exchange ideas and develop synergies.

The 21st ISS in Bali is being held in the heart of the Coral Triangle where seaweed farming employs tens of thousands of coastal people. There is a clear and present need for expanding research and development to enable environmentally, economically and societally sustainable seaweed industry commercialization, not only in the Coral Triangle but also in other regions throughout the world, either alone or integrated with other aquaculture activities. One of the goals of the 21st ISS is to catalyze support for such endeavours.

We hope to see you in April, in Bali, the birthplace of extensive commercial seaweed farming in Indonesia about thirty years ago. We hope you will also take the time to discover the rich Balinese culture under its enjoyable tropical climate. Information regarding the ISS can be found on the ISS website at

<http://xxiseaweedsymposium.org/>.

Tri Wismiarsi, Secretary of the Indonesian National Organizing Committee
Thierry Chopin, Secretary of the International Seaweed Association



The International Society of Limnology (SIL) and the organising committee of the 32nd SIL congress cordially invite you to participate in the congress which will take place **4-9 August, 2013**, Budapest, and is devoted to the theme of „**Diverse water - rich life**“. Please submit an abstract to the [topics suggested](#), following the instructions at our [website](#) to submit your abstract by **28 February, 2013**.

The organizing committee invites abstract submissions for both oral and poster presentations. Abstracts must be in English. All abstracts should be submitted [via our online system](#). All contributions will be reviewed anonymously by three members of the organizing committee. Abstracts for oral presentations that are not selected may be eligible for presentation as posters. Notice of abstract acceptance will be sent to authors within two month.

Note: all presenting authors must pay registration fees for the congress by 31th of May, 2013.

Keynote presenters of the 32nd SIL congress are: [Dr. Catherine Pringle](#) (Kilham Memorial Lecture), [Dr. Robert J. Naiman](#) (Baldi Memorial Lecture), Dr. John Downing (president of the ASLO), Dr. Martin Dokulil, Dr. Henri Dumont, Dr. Brij Gopal, Dr. Luigi Naselli Flores.



The International Congress of Protistology (ICOP) XIV is pleased to announce registration is now available for the Congress, scheduled to take place at the Westin Bayshore Vancouver Hotel from 28 July to 02 August, 2013.

There is a superb program of plenary speakers and symposia scheduled, on all aspects of protistology, including algae, parasites and free-living protozoa, and ranging from ecology and evolution to cell biology and genomics.

Keynote speakers include: Ginger Armbrust, Geoff McFadden, Ford Doolittle, and Eric Meyer.

Early Bird Registration
Until: April 15, 2013

For registration rates and details, please visit the ICOP XIV website at:
<http://www.icoprotist.com/>.

Deadline for submission of abstracts: March 15, 2013, 11:59 PM (PST)



10th International Temperate Reef Symposium 12-17 January 2014

University of Western Australia

<http://www.oceans.uwa.edu.au/news-events/10-its>

Dear friends and colleagues,

It is our pleasure to invite you to Western Australia for the 10th ITRS which will be held at UWA on the banks of the Swan River in Perth. More information will be available from the conference web site by the end of February 2013.

We hope to see you in 2014!

5th Congress of the International Society for Applied Phycology 2014

Strengthening algal industries for the future: key knowledge and skills gaps

As President of the International Society for Applied Phycology and Convenor of the conference, we are delighted to invite you to ISAP 2014 - the 5th Congress of the International Society for Applied Phycology - in Sydney, Australia.

Historically, Australia has been a leader in algal applications and currently there are many exciting research and industrial developments in algal applications happening in Australia. International interest in algal applications in Australia is strong due to our unique algal biodiversity, landscape and biogeography that lend itself to algal industry development. ISAP 2014 in Sydney will give researchers and industry representatives a wonderful opportunity to learn more of Australia's algal potential as well as to share the global achievements and future directions in this vibrant frontier at this inspiring global venue.

Susan Blackburn & Pia Winberg
President & Convenor of ISAP 2014

www.isap2014.com

Expressions of Interest OPEN

Photographic Competition OPEN



ISAP
2014

Sydney Australia
22-27 June 2014

DEPARTMENT OF
MARINE & FRESHWATER CENTRE



UNIVERSITY OF
WOLLONGONG



INTERNATIONAL SOCIETY FOR APPLIED PHYCOLOGY
ISAP



MURDOCH
UNIVERSITY





MARINOVA

PURE SOURCE - PURE SCIENCE



THE UNIVERSITY OF ADELAIDE

COLLECTING & IDENTIFYING SEaweEDS

Marine Biological Association, Plymouth 13th to 15th March 2013

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



This popular 3 day course comprising a mix of lab and field work is now in its 9th year. The course has been designed to cater for those interested in seaweeds at almost any level of expertise. A special separate unit will be run in 2013 to help the absolute beginner.



Details can be seen at:

http://dl.dropbox.com/u/33792064/BPS%202013/BPS_2013/BPS_Field_Course_2013.html

Two courses covering freshwater algae will be offered in spring, 2013 by Rex L. Lowe.

The first course runs for two weeks (May 20-May 31) at Michigan State University's **Kellogg Biological Station** and students will earn 3 semester credit hours. Graduate students from Big Ten schools can benefit from reciprocal tuition agreements. The course will focus on algal ecology and floristics. KBS environs supports an extremely rich and diverse algal flora and all algal groups will be covered. Please visit the KBS web site for more information about the field station. <<http://www.kbs.msu.edu/education/summer-courses>>

The second course, "**Algae: Diversity beyond Imagination**", is more informal and presented as a minicourse/workshop at the **University of Michigan Biological Station**. This is a non-credit course geared for anyone who would like to become more familiar with the freshwater algal flora. The course runs from June 12-June 16.

<<http://www.lsa.umich.edu/umbs/events/minicourses>>

EMBO Workshop:
The molecular life of diatoms
25-28 June 2013
Paris, France
<http://events.embo.org/13-diatom/>

Diatom Courses at Iowa Lakeside Laboratory

The year 2013 marks the 50th anniversary of the diatom course at Iowa Lakeside Laboratory. In 1963, Dr. Gene Stoermer started an informal gathering, a "Diatom Clinic", as forum for people interested in diatoms to gather and learn from one another. After Gene initiated the course, Dr. Charlie Reimer taught for many years, with Gene returning to teach for another 10 years starting in 1990. From those strong beginnings, the course has continued the tradition of training students and professionals during an intensive period of focus, in a field setting. Several courses are being offered this summer as part of the 50th Anniversary Celebration of the Diatom Clinic at Iowa Lakeside Lab.

2013 Algal Field Courses



Information on the field station and course registration is available at: <http://www.continuetolearn.uiowa.edu/lakesidelab/>

DIATOM SHORT COURSE

13-17 May, 2013 Instructor: Sarah Spaulding

ECOLOGY & SYSTEMATICS OF DIATOMS

20 May – 14 June 2013 Instructors: Mark Edlund, Marina Potapova

Special Guest Instructor: Evelyn Gaiser, Florida International University

FRESHWATER DIATOMITE CLINIC

17-21 June 2013 Instructors: Sarah Spaulding, Marina Potapova and many guest instructors

FRESHWATER ALGAE

24 June - 12 July 2013 Instructor: Kalina Manoylov

Freshwater Algae

7th - 14th June 2013 (Friday - Friday)

Led by Eileen Cox and Elliot Shubert

Level: Intermediate Kindrogan Field Studies Centre

Enochdhu, Blairgowrie, Perthshire, PH10 7PG

Tel: 01250 870150, Fax: 01250 881433

Email: enquiries.kd@field-studies-council.org ,

Web site: www.field-studies-council.org/kindrogan



Upcoming PSA Award & Fellowship Deadlines

Hoshaw Travel Awards

The Hoshaw Travel Awards are to help students with their travel expenses to the annual PSA meeting (this year, in conjunction with the 10th International Phycological Congress). All other factors equivalent,

students who will present their research at the meeting (lecture or poster) will be given priority. The deadline for the completed application is **one month before the registration deadline**. In the first circular for the meeting, this registration deadline was listed as March 15, making the award deadline **February 15**. Please note that this is much earlier than previous years; the award deadline will be confirmed once further registration details are announced. Successful applicants will be notified prior to the meeting and the awards will be presented at the meeting.



Deadline: February 15, 2013

Please see the award webpage for application procedure details:

<http://www.psaalgae.org/website/opportunities/grants/hoshaw.html>

Bold Award http://www.psaalgae.org/website/opportunities/student_awards.html

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.

Important Note: Students wishing to be considered for this award must notify the Award Committee chair (Dr. Gabrielson, address below) via e-mail or regular mail **on or before the abstract deadline**. An ORIGINAL signed letter from the student's research director (mentor or major advisor) or department chair, verifying that the candidate is a student and that the work to be presented represents the initiative, imagination, and labor of the student must be sent to Dr. Paul Gabrielson, the Bold Award Committee Chair to the following address:

Dr. Paul W. Gabrielson, Bold Award Committee Chair, 2637 Shadetree Ln, Hillsborough, NC 27278 USA, email: Paul Gabrielson <drseaweed@hotmail.com>

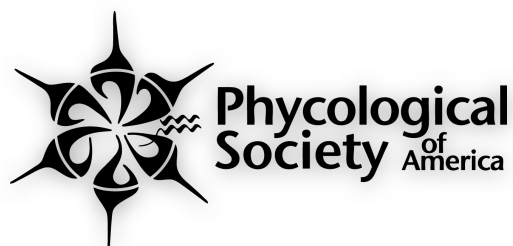
Please see the PSA awards web page for application procedure:

http://www.psaalgae.org/website/opportunities/student_awards.html

Lewin Poster Award http://www.psaalgae.org/website/opportunities/student_awards.html

The **Ralph A. Lewin Poster Award** competition will be held at the annual PSA meeting under the following criteria:

- An individual applying to be considered for the Lewin Poster Award must be a student of no more than one year past graduation at the time of the meeting where the work is presented and must notify the Award Committee Chair (address below) of his or her intention to **apply for the award competition by the abstract deadline**.
- The individual must be a Psychological Society of America member.
- Posters with multiple authors are permitted, but the student competing for the award must be the first and presenting author. Regardless of the number of authors, the student's mentor must certify that the poster is primarily the result of the candidate student's initiative, imagination, and labor. This ORIGINAL signed letter from the student's research director (mentor or major advisor) or department chair, verifying that the candidate is a student and that the work to be presented represents the initiative, imagination, and labor of the student must be sent to **Dr. Gabrielson**, the Award Committee Chair, by deadline (for last minute applications, an e-mail letter from the mentor, IF sent from an official university e-mail address is sufficient by the deadline but the hard copy letter must still be sent). Send this letter to the following address: Dr. Paul W. Gabrielson, Bold Award Committee Chair, 2637 Shadetree Ln, Hillsborough, NC 27278 USA, email: Paul Gabrielson <drseaweed@hotmail.com>
- 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. Poster size limit is 3' x 4'.
- There is no limit to the number of years in which a student may enter this competition. Posters describing the same overall project may be entered in multiple years but only if there are new data included in successive years. Posters on a student's project that has previously won this or the Bold Award are not eligible. Students who have won the Poster Award are eligible to present the same project in the Bold Award competition in a later year if additional data are included.
- Judging will include multiple aspects of the poster itself as well as the student's ability to informally discuss the work at the poster session.



Croasdale Fellowship

Deadline: March 1, 2013

The Hannah T. Croasdale Fellowships are designed to encourage graduate students to broaden their psychological training by defraying the costs of attending psychology courses at biological field stations. The purpose of the award is to broaden psychological training and not necessarily to further research goals. Proposals to study at field stations associated with universities other than the student's own are especially encouraged.

Please see the fellowship webpage for more information:
<http://www.psaalgae.org/website/opportunities/grants/croasdale.html>

Students who receive this award will have reporting requirements to the PSA; please see the fellowship webpage for details.



The Prescott Award

The Gerald Prescott award committee is taking nominations. The Prescott Award recognizes scholarly work in English in the form of a published book or monograph (including edited volumes and e-books) devoted to phycology published in the last two years (2011-2012). The award will be presented at the 2013 Phycology meetings and nominations will be accepted through **1 March 2013**.

Please send nominations to Cathy Pfister, cpfister@uchicago.edu, chair of the Prescott Award Committee

For information on previous award recipients, please see:
<http://www.psaalgae.org/website/about/awards/prescott.html>

PSA DEVELOPMENTS

LEWIN ENDOWMENT CHALLENGE DRIVE LAUNCHED!

The Ralph A. Lewin Endowment provides funds for the Lewin Poster Award given annually to the best student poster at a PSA meeting. The Lewin Award acknowledges the importance of posters in developing student careers and fostering their interest in algal research. Often, a poster is the first significant participation by a young scientist in research presentation and communication within the community of science. Thus, given the importance of the Lewin Award, we, with approval from the PSA Board of Trustees and Executive Committee, seek to enhance the principal in the Lewin Endowment in order to increase the annual amount of the Lewin Poster Award.

At present the Award is \$300 each year, and the PSA Board of Trustees has agreed to begin a fund drive to raise the amount of the award to \$500. To reach this goal, **the three of us have agreed**

to *match dollar for dollar* up to \$2,000 any donation to the Lewin Endowment during 2013.

Checks should be made payable to “Psychological Society of America” (please write in memo line “Lewin Endowment Challenge”); send to Dr. Tim Nelson, Biology Dept., Seattle Pacific Univ., 3307 3rd Ave. West, Suite 205, Seattle, WA 98119. Online donations can be made at the PSA web site (www.psaalgae.org) on the page: <http://psaalgae.org/website/about/endowment.html>. [If you donate online, please send an email to Rick McCourt (rmccourt@gmail.com) letting him know the amount and date of the donation.]

The PSA prides itself as an organization that supports its student members. Any amount you donate will *doubly* support the Lewin Endowment. We thank you in advance for your donation!

Paul W. Gabrielson, Russell L. Chapman, and Richard McCourt, Chair, PSA Board of Trustees



Ralph Lewin and Lanna Chang, 1981.
Image from R. Hoshaw via R. McCourt



Ralph and students in Puerto Penasco, Mexico, collecting *Prochloron*. 1981. Image from R. Hoshaw via R. McCourt

PHYCOLOGICAL TRAILBLAZER NO. 38: CAMILLE SAUVAGEAU

The illustrious career of Camille Sauvageau (Fig. 1), who made some landmark discoveries on the life histories of brown algae and achieved remarkable success for his times, deserves to be included in this series. His studies of algae were only a part of the full range of his botanical, mycological, and physiological interests. Camille-François Sauvageau was born on 12 May, 1861 in Angers, Maine-et-Loire, France. He earned the Bachelor of Sciences degree from the University of Rennes in 1879, the licentiate's degrees in physical sciences (1882) and natural sciences (1884) from the University of Montpellier, and finally the doctorate degree in natural sciences from the University of Paris in 1891. Career-wise, at first he had low-level jobs such as preparator for the botany course in the Faculty of Sciences in Montpellier, as a teacher at a secondary school in Bordeaux, and as an adjunct professor of the Faculty of Sciences in Lyon. In 1898 he became in charge of the botany course of the Faculty of Sciences at Dijon, then later professor there. In 1901 he was initially again in charge of the botany course in the Faculty of Sciences at the University of Bordeaux, and later he became professor there. It was at Bordeaux where he spent the greater part of his professional career.

The early phase of his career was spent in studying aquatic flowering plants (*Potamogeton*, *Zostera*, *Cymodocea*, *Halodule*, and *Phyllospadix*) as well as bacteriology, fungi and fungal diseases. It was not until 1892 when he published his first paper on brown algae. In the same year he also published on *Nostoc* and on freshwater algae collected in Algeria. So from 1892 onward, his attention was directed toward the brown algae. He received guidance from the eminent Édouard Bornet in his first efforts at studying small epiphytic brown algae. He was especially drawn toward making observations on reproduction and life histories in brown algae. In meticulous detail, Sauvageau (1898a, 1929) described his attempts, both his successes and his failures, in making "expeditions" and in establishing cultures. He spent time in the mid-1890s on the north coast of Spain, collecting at

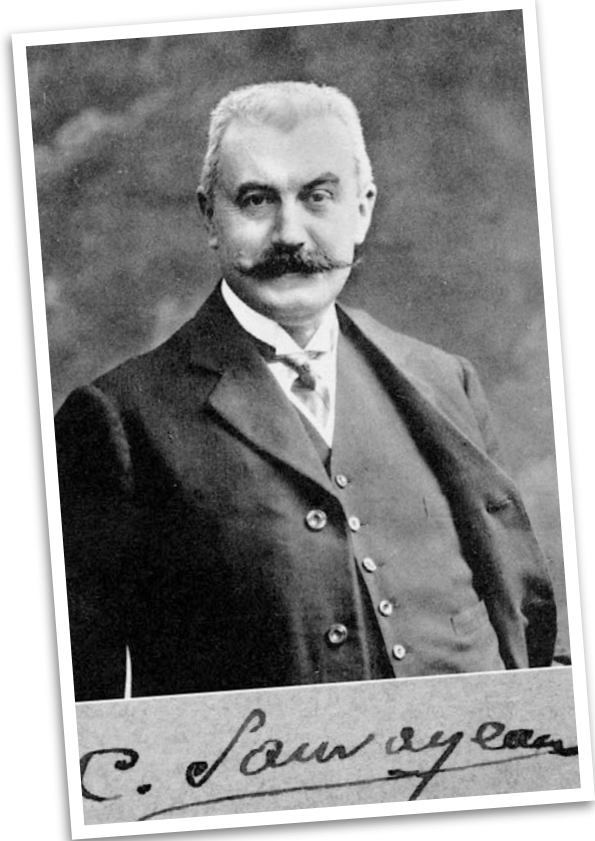
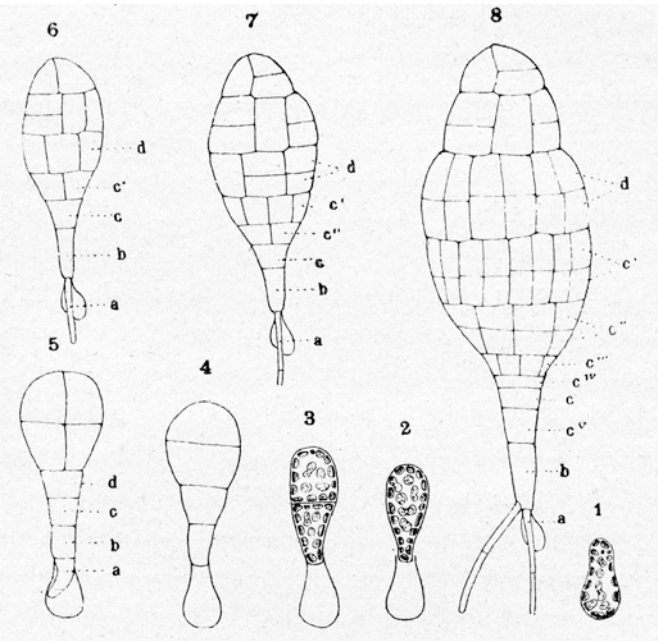


Fig. 1. Camille Sauvageau [from Dangeard, 1936] and his signature.

Gijón, Ribadeo, San Vicente de la Barquera, and La Coruña, a very picturesque coastline but then difficult to traverse because of the lack of a road parallel to the coast (Dangeard, 1937). He also ventured out to Tenerife in the Canary Islands and to Algeria to carry out his studies. Back in France he frequented coastal sites such as Cherbourg, Guéthary, and Roscoff. He would ask for a hotel room with windows facing north, to avoid full sunlight. He would set out Petri dishes with his cultures on the outside windowsill. On occasion a gust of wind would send a Petri dish to the ground, destroying the culture. He would take his cultures to the laboratory at Banyuls or at Roscoff and continue to make observations.

Sauvageau's early use of culture techniques opened that avenue of research for several other investigators, such as Kathleen Drew-Baker, Jean Feldmann and Peter Kornmann, who followed his lead in using cultures to unravel life histories of not only brown algae but red and green algae.



Figs 2. *Saccorhiza bulbosa*. Development of young sporophytes from female gametophytes. [From Sauvageau, 1915b.]

The scope of Sauvageau’s interest in brown algae ran the gamut, from the very small epiphytes to those of intermediate stature up to *Desmarestia*, fucoids (*Cystoseira* and *Fucus*) and the kelps.

Papenfuss (1955) characterized Sauvageau’s description of the heteromorphic life history in the Laminariales as an “epoch-making discovery”, and indeed it was, that the dominant sporophytic phase alternated with microscopic oogamous gametophytes, analogous to the life cycle of ferns. Sauvageau (1915a, b, c) made this discovery in the kelp *Saccorhiza bulbosa* from material that he obtained from the shore at Guéthary (Basse-Pyrénées) in the southwestern corner of France, and from material obtained from near the Biological Station at Roscoff. He observed heterogamous [oogamous] sexual reproduction involving an alternation of heteromorphic generations. The large plant known under this name is the sporophyte, and it bears uniform sporangia. He saw that each sporangium forms identical zoospores, and after their germination, they become either independent female (Fig. 2) or male (Fig. 3) gametophytes of microscopic size. The “oosphere” [egg] extruded from the female gametophyte, after fertilization, immediately germinates and develops the plantule that grows into the familiar kelp. Sauvageau speculated (correctly) that this life history is probably true for all the laminarioids.

In fact, Sauvageau was responsible for critical observations on the life histories in a number of brown algae. In the Cutleriales (1898b, 1899b, 1905, 1907d, 1908e), thanks to maintaining cultures for long periods, he was able to work out that *Cutleria adpersa* and *Aglaozonia melanoidea*, which were common at Guéthary, represented the sexual and asexual dimorphic phases of the same species.

In the Sporochnales he reported an alternation of heteromorphic generations in *Carpomitra* (1926b) and the gametophyte generation for *Nereia* (1927a). For *Tilopteris mertensii* (1928c, d) he observed that the monospores behaved as propagules, recycling the plants. He was the first (1927d) to notice and describe var. *peregrina* of *Colpomenia sinuosa*, which was an immigrant to the Basque coastline. The life histories of many brown algal genera (*Stictyosiphon*, *Litopsiphon*, *Chordaria*, *Liebmannia*, *Punctaria*, *Asperococcus*,

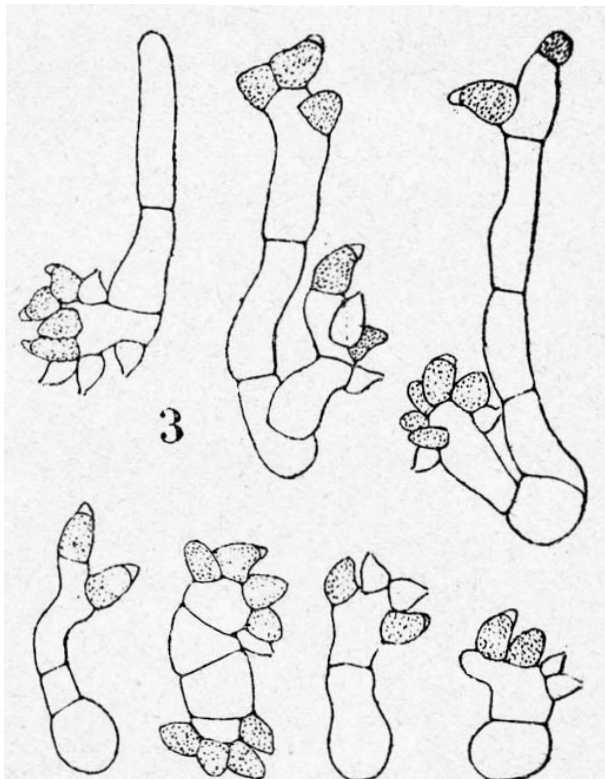


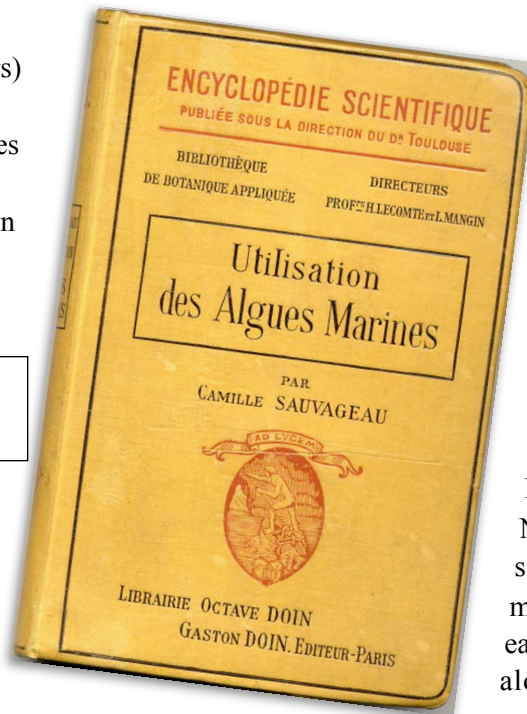
Fig. 3. *Saccorhiza bulbosa*. Male gametophytes with antheridia. [From Sauvageau, 1915c.]

Dictyosiphon, *Sporochmus*, *Arthrocladia*, *Nemacystis*, and others) were investigated by Sauvageau (1928b, 1929, 1931a). Asexual cycles were noted for some of them. He (1900-1914) also was strongly drawn to the family Sphacelariaceae and had many papers on its members.

Fig. 4. *Utilisation des algues marines* by Sauvageau (1920).

From years of his experience in observing how brown algae behave in culture, Sauvageau (1924a, b) was the first to describe the phenomenon of “heteroblasty”, in which zoospores, from the same origin, show two developmental pathways, different both morphologically and physiologically. Sauvageau (1932a) also proposed the term “plethysmothallus”. He was well aware that many brown algae, such as *Myriotrichia*, were apparent in nature for only a limited time in nature, be it a few months or even just a few weeks, and then they would disappear for the rest of the year. Their conspicuous state was their “delophycean” stage, and he referred to them being in their eclipsophycean stage during the time they disappeared. Plethysmothalli were not prothalli, a term reserved for gametophytes, nor were they protonema, which was part of the sporophyte, nor were they plantules, which are the start of the young individuals that take on the form known in the adult plant. The plethysmothalli are microscopic thalli that produce zoospores, forming more of this “adelophycean” stage, and at the right time the zoospores give rise to the conspicuous phase of the life history.

Over the full extent of his study of algae, Sauvageau was also interested in their physiology and their potential for utilization. Sauvageau (1907c) had a lengthy paper on the phenomenon of the “greening” of oysters (their gills) by their filter-feeding on the diatom *Haslea* [formerly *Navicula*] *ostrearia* (Gaillon)



Simonsen, the only organism known to accumulate this blue-green pigment in its vacuoles (Davidovich et al., 2009). This pigment in oysters was first described by Gaillon (1820), and it was first given the name “marennin” by Lankester (1895), now spelled “marennine” (Pouvreau et al., 2006). These green oysters were known in Paris as “huîtres de Marennes”, Marennes on the Normandy coast being a primary source of their growth, or mariculture. Going back to the early 19th century oyster merchants along certain stretches of the coastline of northern France would place 500,000 to 600,00 oysters in “parks” or tanks, about 200 feet in length by 50 feet in width and 4 feet in depth and at certain season during the year (especially April to June and also in September), the water in these reservoirs acquire a bluish-green tint, due to the growth of the *H. ostrearia* (Lankester, 1895).

Sauvageau always maintained a sense of the practical, and as the French authority on seaweeds he was a consultant during the World War on possible industrial utilization of seaweeds. In 1920 he published the book *Utilisation des algues marines* (Fig. 4), summarizing the state of the art for the application of seaweeds and seaweed products commercially and in agriculture. Later, he (1921b, 1922) published on the “gelose”, or agar, produced and stored in seaweeds, their phycocolloids (carrageenan and agar), recognizing the important red algae *Chondrus crispus*, *Mastocarpus stellatus*, and members of the Gelidiaceae. He thought that iodine was accumulated in special cells called “ioduques” (1925a) and bromine in other special cells (“bromuques”) (1926a), but this was later questioned by Kylin (1930).

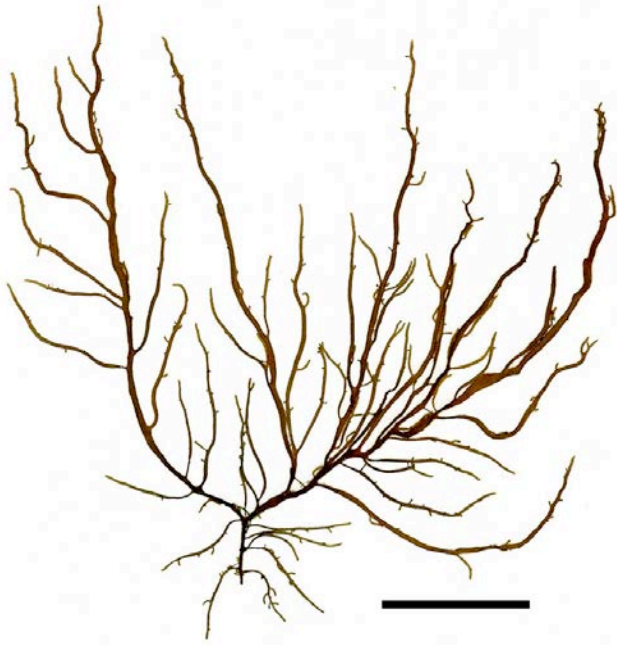


Fig. 5. *Sauvageaugloia divaricata*. [Playa de Muxia, La Coruña, Spain, leg. J. Cremades, Exsicc. Algae Ibericae No. 99, in MICH].

Sauvageau was responsible for the description of several new genera, most of which are of brown algae: *Chilionema* (1898a), *Hecatonema* (1898a), *Climacosorus* (1933c), and *Gontrania* (1936). But some of his generic names (*Alethocladus*, *Disphacella*, *Phaeocaulon*, *Protasperococcus*, and *Strepsithalia*) have subsequently been regarded as congeneric with older names. He also described a few Cyanobacterial genera: *Radaisia*, *Synechocystis* and *Tapinothrix*.

Sauvageau was the recipient of numerous academic prizes (Prix Desmazières, Prix Gay, Prix Montagne). The genus *Sauvageaugloia* was named in his honor by Kylin (1940), the current name of the type species being *S. divaricata* (Crem.) Cremades (Fig. 5). He even has a street in Bordeaux named after him (Fig. 6). A list of his publications up through 1931 was published (Sauvageau, 1931c). Dangeard's (1937) tribute to Sauvageau includes a very thorough and helpful analysis of Sauvageau's body of work along with a complete list of his papers.



Fig. 6. Street marker in Bordeaux [from the internet].

- Dangeard, P. 1937. Notice sur la vie et les travaux de Camille Sauvageau (1861-1936). *Bull. Stat. Biol. Arcachon* 34: 5-57, portr.
- Davidovich, N. A., J.-L. Mouget & P. Gaudin. 2009. Heterothallism in the pennate diatom *Haslea ostrearia* (Bacillariophyta). *Eur. J. Phycol.* 44: 251-261.
- Gaillon, B. 1820. Des huîtres vertes, et des causes de cette coloration. *Annales Generales des Sciences Physiques* 7: 89-94.
- Kylin, H. 1930. Über die Blaszellen bei *Bonnemaisonia*, *Trailliella* und *Antithamnion*. *Zeitsch. Botanik* 23: 217-226.
- _____. 1940. Die Phaeophyceenordnung Chordariales. *Lunds Univ. Årsskr., N.F., Avd. 2*, 36(9). 67 pp., 8 pls.
- Lankester, E. R. 1886. On green oysters. *Quart. J. Microsc. Sci., N.S.*, 26: 71-94, pl. VII.
- Papenfuss, G. F. 1955. Classification of the algae. In: *A century of progress in the natural sciences 1853-1953*. Pp. 115-224. California Acad. Sci., San Francisco.
- Pouvreau, J.-B., M. Morançais, F. Fleury, P. Rosa, L. Thion, B. Cahingt, F. Zal, J. Fleurence & P. Pondaven. 2006. Preliminary characterisation of the blue-green pigment "marennine" from the thycopelagic diatom *H. ostrearia* (Gaillon/Bory) Simonsen. *J. Appl. Phycol.* 18: 757-767.
- Sauvageau, C. 1892a. Sur quelques algues phéosporées parasites. *J. de Bot.* 6: 1-10; 36-44, 55-59; 76-80; 90-96; 97-106; 124-131, pls. 1-4.
- _____. 1892b. Sur l'état coccoïde d'un *Nostoc*. *Compt. Rend. Acad. Sci. [Paris]* 115: 322-325.
- _____. 1895a. Note sur l'*Ectocarpus tomentosus* Lyngb. *J. de Bot.* 9: 153-167.
- _____. 1895b. Note sur l'*Ectocarpus pusillus* Griffiths. *J. de Bot.* 9: 274-291; 307-318.
- _____. 1895c. Note sur l'*Ectocarpus Battersii* Bornet. *J. de Bot.* 9: 351-364.
- _____. 1896a. Sur la conjugaison des zoospores de l'*Ectocarpus siliculosus*. *Compt. Rend. Acad. Sci. [Paris]* 123: 431-433.
- _____. 1896b. Remarques sur la reproduction des phéosporées et en particulier des *Ectocarpus*. *Ann. Sci. Nat., Bot., sér. 8*, 2: 223-274.
- _____. 1896c. Sur le *Strepsithalia*, nouveau genre de phéosporée. *J. de Bot.* 10: 53-65.
- _____. 1896d. Sur l'*Ectocarpus virescens* Thuret et ses deux sortes de sporanges pluriloculaires. *J. de Bot.* 10: 98-107; 113-126.
- _____. 1897. Note préliminaire sur les algues marines du golfe de Gascogne. *J. de Bot.* 11: 166-179; 202-214; 252-257; 263-288; 301-311.
- _____. 1898a. Sur quelques Myrionemacées. *Ann. Sci. Nat. Bot., sér. 8*, 5: 161-288.
- _____. 1898b. Sur l'origine du thalle des Cutlériacées. *Compt. Rend. Acad. Sci. [Paris]* 126: 1435-1438.
- _____. 1898c. Sur la sexualité et les affinités des Shacélariacées. *Compt. Rend. Acad. Sci. [Paris]* 126: 1672-1675.
- _____. 1899a. Les *Acinetospora* et la sexualité des Tiloptériacées. *J. de Bot.* 13: 108-127.
- _____. 1899b. Les Cutlériacées et leur alternance de générations. *Ann. Sci. Nat., Bot. sér. 8*, 10: 265-362, pl. 9.
- _____. 1900-1914. Remarques sur les Sphacélariacées. *J. de Bot.* 14: 213-234, 247-259, 304-322, 1900; 15: 22-36, 50-62, 94-116, 137-149, 222-255, 368-380, 401-418, 1901; 16: 325-349, 379-416, 1902; 17: 45-56, 69-95, 332-353, 378-422, 1903; 18: 88-104, 1904; independently publ. pp. 349-634, 1914. Reprinted and repaginated as Fasc. 1: 1-320, from *J. de Bot.* 141-7, 1903; Fasc. 2: 321-480, 17, 18, 1904; Fasc. 3, Independently publ. 481-634, 1914.
- _____. 1905. Observations sur quelques Dictyotacées et sur un *Aglaozonia* nouveau. *Bull. Stat. Biol. Arcachon* 8: 66-81.
- _____. 1907a. Le *Nemoderma tingitana* est une algue méditerranée. *Compt. Rend. Soc. Biologie* 62: 273-274.
- _____. 1907b. Sur la sexualité de l'*Halopteris (Stypocaulon) scoparia*. *Compt. Rend. Soc. Biologie* 62: 506-507.
- _____. 1907c. Le verdissement des huîtres par la Diatomée bleue. *Bull. Stat. Biol. Arcachon* 10: 1-128.
- _____. 1907d. Sur une nouvelle complication dans l'alternance des générations de *Cutleria*. *Compt. Rend. Acad. Sci. [Paris]* 63: 139-141.
- _____. 1908a. Sur deux *Fucus* récoltés à Arcachon (*Fucus platycarpus* et *F. lutarius*). *Bull. Stat. Biol. Arcachon* 11: 65-224.

- _____. 1908b. Sur des Myxophycées roses et sur un procédé d'étude de la phycocyane. *Compt. Rend. Soc. Biologie* 64: 95-97.
- _____. 1908c. A propos d'Oscillariés rouges observées dans un aquarium du laboratoire de Banyuls-sur-Mer. *Compt. Rend. Soc. Biologie* 64: 97-99.
- _____. 1908d. Sur la coloration des Floridées. *Compt. Rend. Soc. Biologie* 64: 103-104.
- _____. 1908e. Nouvelles observations sur la germination parthénogénétique de *Cutleria adspersa*. *Compt. Rend. Acad. Sci. [Paris]* 65: 165-167.
- _____. 1909. Une question de nomenclature botanique *Fucus platycarpus* ou *Fucus spiralis*. *Bull. Stat. Biol. Arcachon* 12: 201-205.
- _____. 1911a. Sur la vie indépendante des noyaux exclusés de l'oogone des Fucacées et la possibilité de leur fécondation. *Compt. Rend. Soc. Biologie* 71: 470-472.
- _____. 1911b. Sur la végétation des *Cystoseira*. *Compt. Rend. Soc. Biologie* 71: 680-682.
- _____. 1911c. Sur l'iridescence des *Cystoseira*. *Compt. Rend. Soc. Biologie* 71: 684-685.
- _____. 1912a. Sur l'apparition du *Colpomenia sinuosa* dans le Golfe de Gascogne. *Compt. Rend. Soc. Biologie* 72: 478-
- _____. 1912b. A propos des *Cystoseira* de Banyuls et de Guéthary. *Bull. Stat. Biol. Arcachon* 14: 133-556.
- _____. 1913. Sur les Fucacées du détroit de Gibraltar. *Compt. Rend. Acad. Sci. [Paris]* 157: 1539-1540.
- _____. 1915a. Sur le développement et la biologie d'une Laminare (*Saccorhiza bulbosa*). *Compt. Rend. Acad. Sci. [Paris]* 160: 445-448.
- _____. 1915b. Sur les débuts du développement d'une Laminare (*Saccorhiza bulbosa*). *Compt. Rend. Acad. Sci. [Paris]* 161: 740-742.
- _____. 1915c. Sur la sexualité heterogamique d'une Laminare (*Saccorhiza bulbosa*). *Compt. Rend. Acad. Sci. [Paris]* 161: 796-799.
- _____. 1916a. Sur les gamétophytes de deux Laminaires (*L. flexicaulis* et *L. saccharina*). *Compt. Rend. Acad. Sci. [Paris]* 162: 601-604.
- _____. 1916b. Sur la sexualité hétérogamique d'une Laminare (*Alaria esculenta*). *Compt. Rend. Acad. Sci. [Paris]* 162: 840-842.
- _____. 1916c. Sur les "glandes à mucilage" de certaines Laminaires (*Saccorhiza bulbosa*). *Compt. Rend. Acad. Sci. [Paris]* 162: 921-924.
- _____. 1916d. Sur les variations biologiques d'une Laminare (*Saccorhiza bulbosa*). *Compt. Rend. Acad. Sci. [Paris]* 163: 396-398.
- _____. 1916e. Sur les plantules de quelques Laminaires. *Compt. Rend. Acad. Sci. [Paris]* 163: 522-524.
- _____. 1916f. Sur une Laminare nouvelles pour les cotes de France, *Laminaria Lejolisii* Sauv. *Compt. Rend. Acad. Sci. [Paris]* 163: 714-716.
- _____. 1917. Sur un nouveau type d'alternance des générations chez les algues brunes (*Dictyosiphon foeniculaceus*). *Compt. Rend. Acad. Sci. [Paris]* 164: 829-831.
- _____. 1918a. Sur les plantules d'une Laminare à prothalle parasite (*Phyllaria reniformis* Rostaf.). *Compt. Rend. Acad. Sci. [Paris]* 166: 787-789.
- _____. 1918b. Recherches sur les Laminaires des côtes de France. *Mém. Acad. Sci., Paris* 56: 1-240.
- _____. 1920a. *Utilisation des algues marines*. (1 volume of Encyclopédia scientifique). Libraire Octave Doin, Gaston Doin, Paris. 394 pp.
- _____. 1920b. A propos des *Cystoseira* de Banyuls et de Guéthary. *Bull. Stat. Biol. Arcachon* 17: 3-52.
- _____. 1920c. Nouvelles observations sur l'*Ectocarpus Padinae* Sauv. *Compt. Rend. Acad. Sci. [Paris]* 171: 1041-1044.
- _____. 1921a. Observations biologiques sur le *Polysiphonia fastigiata* Grev. *Recueil Trav. Bot. Néerland.* 18: 213-234.
- _____. 1921b. Sur la gélose de quelques algues Floridées. *Bull. Stat. Biol. Arcachon* 18: 5-113.
- _____. 1922. Remarques sur la gélose et sur diverses algues qui en produisent. *Bull. Sci. Pharmacolog.* 19: 637-640.
- _____. 1923a. Sur l'état quiescent prolongé d'une algues phéosporée éphémère. *Compt. Rend. Acad. Sci. [Paris]* 176: 478-482.
- _____. 1923b. A propos de quelques *Fucus* du bassin d'Arcachon. *Bull. Stat. Biol. Arcachon* 20: 19-136.
- _____. 1924a. Sur le curieux développement d'une algue phéosporée, *Castagnea Zosteræ* Thuret. *Compt. Rend. Acad. Sci. [Paris]* 179: 1381-1384.

- _____. 1924b. Sur quelques exemples d'heteroblastie dans le développement des algues phéosporées. *Compt. Rend. Acad. Sci. [Paris]* 179: 1576-1579.
- _____. 1925a. Sur quelques algues Floridées renfermant de l'iode à l'état libre. *Bull. Stat. Biol. Arcachon* 22: 5-45.
- _____. 1925b. Sur un développement d'une algue phéosporée, *Leathesia difformis* Areschoug. *Compt. Rend. Acad. Sci. [Paris]* 180: 1632-1635.
- _____. 1925c. A propos de la rencontre du *Desmarestia Dudresnayi* Lamx. dans le golfe de Gascogne. *Rev. Algol.* 2: 1-13.
- _____. 1926a. Sur quelques algues floridées renfermant du brome à l'état libre. II. *Bull. Stat. Biol. Arcachon* 23: 5-23.
- _____. 1926b. Sur l'alternance des générations chez le *Carpomitra cabreræ* Kütz. *Bull. Stat. Biol. Arcachon* 23: 141-192.
- _____. 1926c. Sur un nouveau type d'alternance de générations chez les algues brunes: les Sporochnales. *Compt. Rend. Acad. Sci. [Paris]* 182: 361-364.
- _____. 1926d. Sur le développement du *Colpomenia sinuosa* Derb. et Sol. *Compt. Rend. Acad. Sci. [Paris]* 185: 833-835.
- _____. 1927a. Sur le gamétophyte d'une algue phéosporée (*Nereia filiformis* Zan.). *Compt. Rend. Acad. Sci. [Paris]* 184: 1223-1224.
- _____. 1927b. Sur les problèmes du *Giraudya*. *Bull. Stat. Biol. Arcachon* 24: 5-74.
- _____. 1927c. Sur le *Fucus lutarius* et sur l'iode libre de certaines algues. *Bull. Stat. Biol. Arcachon* 24: 75-84.
- _____. 1927d. Sur le *Colpomenia sinuosa* Derb. et Sol. *Bull. Stat. Biol. Arcachon* 24: 309-353.
- _____. 1927e. Sur l'alternance des générations chez le *Nereia filiformis* Zan. *Bull. Stat. Biol. Arcachon* 24: 357-367.
- _____. 1927f. Sur le *Castagnea Zosteræ* Thur. *Bull. Stat. Biol. Arcachon* 24: 369-431.
- _____. 1928a. Un dernier mot sur les ioduques et les bromuques. *Bull. Stat. Biol. Arcachon* 25: 3-24.
- _____. 1928b. Sur le développement de deux *Asperococcus* Lamx. *Compt. Rend. Acad. Sci. [Paris]* 186: 612-615.
- _____. 1928c. Sur la question du *Tilopteris Mertensii* Kütz. *Compt. Rend. Acad. Sci. [Paris]* 186: 1253-1256.
- _____. 1928d. Sur la végétation et la sexualité des Tiloptériaies. *Bull. Stat. Biol. Arcachon* 25: 51-95.
- _____. 1928e. Seconde note sur l'*Ectocarpus tomentosus* Lyngbye. *Bull. Stat. Biol. Arcachon* 25: 121-135.
- _____. 1928f. Sur les algues phéosporées à éclipse ou Éclipsiophycées. *Recueil Travaux Bot. Néerlandais* 25A: 262-270.
- _____. 1929. Sur le développement de quelques phéosporées. *Bull. Stat. Biol. Arcachon* 26: 253-420.
- _____. 1931a. Sur quelques algues phéosporées de la rade de Villefranche (Alpes-Maritimes). *Bull. Stat. Biol. Arcachon* 28: 7-168.
- _____. 1931b. Sur trois nouveaux exemples de pléthysmothalle (*Myriotrichia* Harv. et *Protasperococcus* nov. gen.). *Compt. Rend. Acad. Sci. [Paris]* 192: 1620-1621.
- _____. 1931c. Titres et travaux scientifiques de M. Camille Sauvageau. Imprimerie de l'Université, Bordeaux. 20 pp.
- _____. 1931d. Sur le rôle des *Aglaozonia* d'origine parthénogénétique. *Compt. Rend. Acad. Sci. [Paris]* 193: 133-134.
- _____. 1932a. Le pléthysmothalle. *Bull. Stat. Biol. Arcachon* 29: 1-16.
- _____. 1932b. Sur quatre *Ectocarpus*. *Compt. Rend. Acad. Sci. [Paris]* 194: 2260-2262.
- _____. 1933a. Sur quelques algues phéosporées de Guéthary (Basses-Pyrénées). *Bull. Stat. Biol. Arcachon* 30: 1-128.
- _____. 1933b. Un genre "*Symphoriococcus*" Rke est-il justifié? *Bull. Stat. Biol. Arcachon* 30: 179-188.
- _____. 1933c. Sur le "*Climacosorus*" nouveau genre de Phéosporée. *Bull. Stat. Biol. Arcachon* 30: 189-196.
- _____. 1936. Second mémoire sur les algues Phéosporées de Villefranche-sur-mer. *Bull. Stat. Biol. Arcachon* 33: 117-204.

Michael J. Wynne
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NEWS FROM COLLEAGUES

A Gathering to Celebrate Paul Silva's 90th Birthday

On Saturday, 27 October 2012, the University of California and Jepson Herbaria celebrated Paul C. Silva's 90th birthday and his legacy, the Center for Phycological Documentation. More than 50 people attended the morning symposium, lunch and afternoon party, coming from as far as the Netherlands (Willem and Hilda Prud'homme von Reine), Korea (Sung Min Boo), and northern Ireland (Chris Maggs). Special guests were Paul's relatives from southern California, Roz and Buzz Crosby and Pat and Rob Case.

Guests heard four talks on recent research exploring the integration of molecular and morphological data for algal taxonomy. Speakers were Max Hommersand (University of North Carolina), Bob Andersen (University of Washington), Sandra Lindstrom (University of British Columbia) and Chuck Delwiche (University of Maryland).

We were happy to eat lunch outdoors, in the courtyard above the Herbaria, catching beautiful weather between our first and second winter rainstorms.

The party included cake, sparkling wine, and remarks from Paul addressing his long career and his thoughts on molecules and morphology. We enjoyed a surprise visit from Sylvia Earle just before the tours of the Center for Phycological Documentation. The heart of the Center is Paul Silva's *Index Nominum Algarum* (INA) and *Bibliographia Phycologica Universalis* (BPU). New entries to these lists of algal names and taxonomic literature are entered by Paul, Richard Moe and Max Chacana. Paul's extensive and comprehensive library of algal literature is also an essential component of the Center. For more details about the Center, please see <http://ucjeps.berkeley.edu/CPD/>.

Recently, UC was funded by the National Science Foundation to take high resolution photos and to database label data from its specimens of seaweed taxa from Washington, Oregon and California and wherever they occur in the world. As part of our dedication to phycological documentation, we will share online these 77,000 images and data with the world, when the project is completed at the end of 2013.

Kathy Ann Miller, University Herbarium
kathyannmiller@berkeley.edu



Paul Silva (seated, center) with attendees of his 90th Birthday celebration in Berkeley, 27 October 2012.

NEWS FROM COLLEAGUES

A FREE Article on Impacts of Harmful Algae

"Ciguatera Fish Poisoning in the Pacific Islands (1998 to 2008)"

Skinner MP, Brewer TD, Johnstone R, Fleming LE, Lewis RJ (2011)

PLoS Negl Trop Dis 5(12): e1416. doi:10.1371/journal.pntd.0001416

Ciguatera fish poisoning occurs throughout the tropics. After consuming contaminated coral reef fish, people report a range of acute neurologic, gastrointestinal, and cardiac symptoms, with some experiencing chronic neurologic symptoms lasting weeks to months. Ciguatera is largely caused by toxins from benthic microalgae of the genus *Gambierdiscus* that are bioaccumulated in reef fish through the marine food chain. Unfortunately, the true extent of illness and its impact on human communities and ecosystems are still not well understood. Using data gathered from Health and Fisheries Authorities of the Pacific Island Countries and Territories we identified a 60% increase in the annual incidence of ciguatera in 1988–2008 compared to 1973–1983, and estimate over 500,000 Pacific islanders might have suffered from ciguatera in their lifetime. The incidence of ciguatera is expected to continue to rise in conjunction with continued reef degradation and global warming, with greatest impact likely to be experienced in the developing PICTs and potentially the archipelagoes of southeast Asia. Despite this threat, little funding is available for research that might lead to better management of the problem either locally, regionally or globally.

<http://www.plosntds.org/article/info%3Adoi%2F10.1371%2Fjournal.pntd.0001416>

NEW TITLES

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Festschrift in honor of Prof. Dr. Horst Lange-Bertalot's 75th birthday

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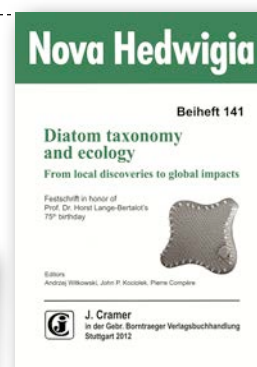
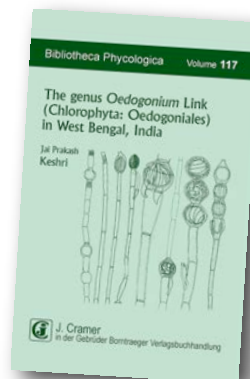
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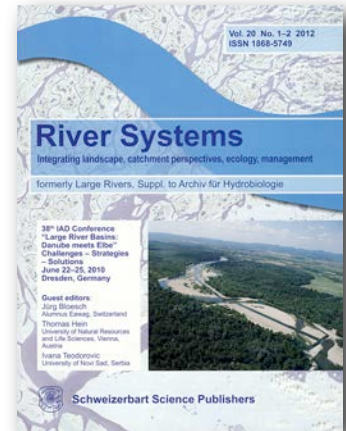
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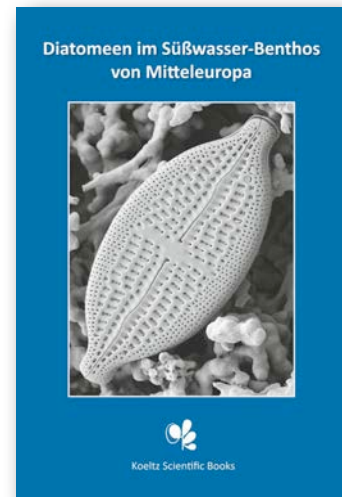
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