



# PHYCOLOGICAL NEWSLETTER

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## 2005 PSA Awards of Excellence

The 2005 PSA Awards of Excellence go to: **Thanarapu Vedanta Desikachary, Max Hoyt Hommersand and Frank Eric Round.** This lifetime achievement award was established to recognize phycologists who have demonstrated sustained scholarly contributions in the field of phycology over their careers. These individuals may have also provided service to PSA, as well as to other phycological societies.

### Thanarapu Vedanta Desikachary

Professor Desikachary began his professional career in 1940 with an undergraduate degree from the Presidency College in Madras, and began his graduate study under the supervision of Professor M.O.P. Iyengar. He earned his Master's degree in 1944 and his Ph.D. in 1951 for his research on the morphology and taxonomy of cyanobacteria. In 1963, The University of Madras, where he has spent most of his career, conferred on him the D. Sc. From 1944-1957 he held appointments at Andhra University, Pachaiyappa's College, The University of Madras and Saugar University. In addition, he worked with Professor George F. Papefuss at the University of California at Berkeley (1953-1954). Prof. Desikachary has published monumental monographs on Cyanophytes, silicoflagellates, The Atlas of Diatoms, Oamaru diatoms, Volvocales (co-authored with late Professor MOP Iyengar) and over 100 research publications. His papers established the basis for a wealth of research for many Indian phycologists and he has been long recognized as one of the world's experts in the area of Cyanophytes.

According to Professor A.K. Prasad, one of Professor Desikachary's great gifts is an encyclopedic memory both for facts and literature. This, together with his broad knowledge, enabled him to compile, in

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association with his graduate students, what proved to be a most comprehensive and widely used five-volume "Atlas of Diatoms." The Atlas contained a wealth of information in a systematic form and proved to be valuable to both researchers and teachers. The monographs on silicoflagellates and Oamaru Diatoms (Bibliotheca Diatomologica) that Professor Desikachary co-produced are widely used and have proven of great value to both newcomers and specialists in the study of fossil diatoms.

Professor Desikachary has also made significant contributions to our knowledge of Indian macroalgae, particularly, red algae, in collaboration with his colleagues, the late Professor M. S. Balakrishnan and Professor V. Krishnamurthy, and published a multi-volume treatise titled "Rhodophyta". Among other achievements of Prof. Desikachary is the establishment of the Culture Collection of Algae, now generally known as the Madras University Botany Laboratory Culture Collection. His cultures were essential to his research but he would happily pass them on to others to use.

Professor Desikachary was the President of the Phycological Society of India until recently, and the editor of *Phykos* for many years. He served on the editorial boards of *Phykos*, *Phycologia*, *Hydrobiologia* and the *Indian Journal of Marine Science*. He has been on many committees; responsibilities that gave him national and international influence and visibility in the profession. It is at this time that the Phycological Society of America bestows its highest honor on Thanarapu Vedanta Desikachary for a lifetime of achievement

in phycology – the PSA Award of Excellence.

### Max Hoyt Hommersand

Max, as he is known to most of us, has had (and continues to have) a remarkable career of great significance in terms of teaching, scholarship and service to phycology. He received his Bachelor's degree from the University of California at Berkeley in Botany in 1954. He received his Doctorate in Botany from the University of California at Berkeley under the aegis of Professor George F. Papenfuss where he produced a massive dissertation on the morphology and taxonomy of selected Ceramiaceae and Rhodomelaceae. In the Fall of 1957, Max was awarded a two-year NSF Postdoctoral fellowship from Harvard University. Max has been on the faculty of the University of North Carolina at Chapel Hill for over 38 years and has supervised more than 22 doctoral students.

For people who know Max, his being an energetic and active Professor Emeritus is not a great surprise. According to Paul Silva, Max was a precocious high school student the year they met (1946) at the Allan Hancock Foundation. As a young student, Paul encountered Max "reading Fritsch (*Structure and Reproduction of the Algae*) while eating sandwiches!" Max was fascinated by seaweeds after being introduced to them on nature walks by E. Yale Dawson (following World War II). Actually, Max's fascination and passion for seaweeds has been his signature trait throughout his life. He has travelled the world collecting material for his phycological studies.

Many contemporaries of Max consider him to be one of the great phycological intellects of the last half century. He and his many collaborators have had unparalleled contributions to the fields of seaweed biogeography and red algal systematics. He has published more than 68 major scientific papers. His evolution from a classical macro-algal taxonomist to one of the world's leaders in using and interpreting molecular data together with more classical observations on algal morphology and reproduction is unique among his generation of phycologists. According to Mike Guiry, "the significance of the development of the female reproductive apparatus before and after fertilization was first recognized by Schmitz in Germany, pursued by Kylin in Sweden, and by Papenfuss in Berkeley, but it was Max and his co-workers who have striven to establish the value of these hypotheses."

Perhaps the last 15 years have been most significant for Max in terms of his professional accomplishments. Working with a number of colleagues, Max has significantly altered our generic level understanding of the classical Order Gigartinales. He has revised the taxonomic understanding of key genera in the Ceramiales, Gracilariales and Gelidiales, and improved our understanding of red algal phylogeny and phylogeography. Max has published seminal papers

highlighting the information to be gleaned by marrying his extensive knowledge of marine floras and in particular, the red algae, with what we know of plate tectonic movements. He and his co-workers have used the huge potential of DNA sequences in constructing phylogenetic hypotheses. As Steve Murray writes, "today, almost 50 years following the award of his dissertation, Max is at the top of his game and continues to impact phycology."

Max continues to be a model and an inspiration to a new generation of scientists in phycology from around the world. Max Hoyt Hommersand has demonstrated the very essence of what it means to be nominated and receive the PSA Award of Excellence.

### Frank Eric Round

Frank received his B.Sc. in Botany from the University of Birmingham in 1948. In 1954, he received his Doctor of Philosophy and then in 1965, a Doctor of Science, from the University of Birmingham. In 1948, he received a 2-year postdoctoral fellowship from the Freshwater Biological Laboratory, Windermere. Early in his career he was an Assistant Lecturer in Botany at the University of Liverpool. By 1952 he was a Lecturer in Botany at the University of Birmingham. In 1955, Frank joined the faculty at the University of Bristol. He was a Lecturer in Botany, Reader in Phycology, a Professor of Botany and eventually the Dean of Science, until his retirement in 1987. He continues to be Emeritus Senior Research Fellow at the University of Bristol.

Frank's contributions in phycology are in the areas of rhythmic migrations of the algae, paleoecology (both marine and freshwater), life history dynamics, the evolution of protists, the higher-level taxonomy of green algae, and of course the evolution and taxonomy of diatoms. With more than 167 publications, his work broke new ground and was based on a wide and deep appreciation of the literature. Frank's broad experience, particularly of the way things worked in the natural environment, came to fruition in two books that he authored. The first, *The Biology of the Algae*, was published in 1965 and was, perhaps, the first general treatment of the algae since Fritsch's classic *Structure and Function of the Algae* and Pringsheim's *Manual of Phycology*. In 1981, that book was followed by the *Ecology of the Algae* which was a wonderful source of information that deserves to be better known by students today! A third contribution in the form of *The Diatoms, Biology and Morphology of the Genera* broke new ground in the diatoms after Frank recognized a difficulty that many ecologists have when faced with the bewildering diversity of the diatoms. Its publication in 1990, after 25 years of electron microscopy, provided a three-dimensional explanation of the composition of the complex cell wall of the diatoms. It has become one

of the most important resources for diatomists throughout the world. In 1991, this book was awarded the Gerald W. Prescott Award by the Phycological Society of America. In 1994, Frank was honored by receiving The Linnean Society of London Gold Medal for Botany.

Frank has served on many committees and the editorial boards of several learned societies. He was elected to positions on The Council and Editorial Committee of the British Phycological Society. He was elected the British Phycological Society's Vice-President in 1973 and its President in 1974. He was a founding member of the International Society for Diatom Research. Frank served on the Councils of the British Ecological Society, Freshwater Biological Association, Marine Biological Association and was a member of the British Committee of the International Biological Program (I.B.P.). In 1986, he established the journal *Diatom Research*, published by his company, Biopress. This journal is now the major publication devoted entirely to diatom research and publishes nearly 400 pages in 2 issues every year.

Frank has had numerous graduate and post graduate students. He pursued his work with a degree of humanity, is regarded with very deep affection by his students and was known as an inspiring teacher at Bristol University. Frank Round is an outstanding scientist; his abilities have been widely and effectively applied over a long career to the advancement of phycology that qualifies him for the Phycological Society of America's Award of Excellence.



PSA 2005 Award of Excellence recipient Max Hommersand accepting his award from President Curt Pueschel at the IPC Durban meeting in August.

## News of Colleagues

### Happy retirement to Gene Stoermer!

After 40+ years at the University of Michigan, Eugene F. Stoermer officially retired on January 10th, 2005. Gene will still be reachable at the University for several months, but most of his collections and accumulated literature have been transferred to the California Academy of Sciences in San Francisco. Anyone wishing to access material, or some of the more unusual literature he has accumulated over the years should contact Pat Kociolek at CAS.

### Postdoctoral Opportunity

The Biotechnology Program at Florida Gulf Coast University invites applications for a postdoctoral position in the area of initiation and control of Red Tide Blooms. This position will be co-mentored by Dr. Randall S. Alberte and Dr. Allan D. Shapiro. This project will involve applying contemporary molecular, genomic and biochemical approaches in a project with the goal of identifying novel regulators of *Karenia brevis* growth, leading to the development of novel bloom diagnostics.

The ideal applicant will have experience with phytoplankton physiology and with contemporary molecular biology/biochemistry. Especially strong applicants with only one of these skill sets and the desire to expand their skills in the other will be considered. Applicants must have received their PhD from an accredited institution in the position discipline or related discipline and have evidence of successful research activities (refereed publications). Initial appointments will be for one year with the opportunity for renewal upon satisfactory performance.

Information about the Biotechnology Program at FGCU is available at <http://www.fgcu.edu/cas/biotech>. A new Core Research Facility with state-of-the-art molecular biology, analytical chemistry and computational facilities is available for this project. The successful applicant will also benefit from strong interactions with researchers in other Florida institutions engaged in phytoplankton research.

All applications should include a brief cover letter, current Curriculum Vitae and contact information for three references. Submit applications via email (.pdf files preferred) to [ashapiro@fgcu.edu](mailto:ashapiro@fgcu.edu). Position is available immediately. Florida Gulf Coast University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.



## PHYCOLOGICAL TRAILBLAZER

### No. 23: Franz Carl Mertens (father) and Karl Heinrich Mertens (son)

Franz Carl Mertens (1764-1831) of Bremen, Germany, and his son Karl Heinrich Mertens (1796-1830) made a number of early contributions to phycology, but for various reasons their names are somewhat in the shadows. The illustrious Dawson Turner (1808) seconded the compliment earlier given by Weber and Mohr to Mertens by calling him "the most able algologist of our times". The fact that the junior Mertens was responsible for the original description of the giant kelp *Nereocystis luetkeana* is alone a sufficient reason to include his name also in this series of "phycological trailblazers". More about that later.

F. C. Mertens (Fig. 1) came from a noble but impoverished background. Because of their poverty, the family at first home-schooled Franz, their only son. It was his mother who was determined to get the best education for him, and so she sought out aid from city officials. It was arranged that Franz could attend classes with the son of a city official (Karg, 1999). Soon he showed his remarkable intelligence and a strong ambition. He received financial support that allowed him to attend the University of Halle, where he earned a degree. Soon he was appointed to a teaching position at Bremen Polytechnic College.

But Franz had an overriding desire to pursue botany. In his youth, through a friend, Mertens had met Albrecht W. Roth, a physician and botanist in Oldenberg (Karg, 1999). The pair went on collecting trips together, and Roth (1797) honored him with the generic name *Mertensia* nom. cons. of the Boraginaceae. For the third volume of Roth's *Catalecta botanica* (1806), Mertens illustrated all of the algal plates and also provided the descriptions for some new algae, including such familiar species as *Colpomentia sinuosa* (Mert. ex Roth) Derbès & Solier, *Liagora distenta* (Mert. ex Roth) Lamouroux, and *Chondracanthus teedei* (Mert. ex Roth) Kütz. He also provided the descriptions of many new algal species appearing in Jürgens' *exsiccata* (1816-1822). Mertens traveled over much of Europe, visiting botanical gardens and meeting fellow botanists. He also carried on an active correspondence with contemporary scientists, including C. Agardh, Bory de Saint-Vincent, A. P. De Candolle, Adelbert von Chamisso, René Desfontaines, and A. Palisot de Beauvois.

Owing to Mertens' stellar reputation as an authority on marine algae, he received many collections from around the world. He shared specimens from his herbarium with Turner and contributed two sketches, which were published in vol. III of Turner's (1809-1811)

*Fuci*. Pl. 165 is *Fucus langsdorffii* [= *Coccophora langsdorffii* (Turner) Grev.], collected by Dr. Georg H. von Langsdorff on board Capt. Krusenstern's *Nadeshda* from "the coast of Japan". Pl. 193 is *Fucus fraxinifolius* [= *Neurymenia fraxinifolia* (Mert. ex Turner) J. Agardh], the exquisite figure made by Mertens based on a specimen from the "East Indies" and in Vahl's herbarium in Copenhagen. Turner's pl. 169 of *Fucus hemiphyllus* [= *Sargassum hemiphyllum* (Turner) C. Agardh] was based on a specimen loaned to Turner by Mertens. The single specimen in Mertens' herbarium was collected by Dr. Horner in Nagasaki, Japan.

Mertens made two trips to Paris to examine specimens brought back by the French expeditions. In 1814, he visited Paris with his younger son [Karl] Heinrich, and at that time they met many of the major French scientists, such as Lamarck, Antoine de Jussieu, Desfontaines, and Mirbel (Lütke, 1835-1836). They also met several other visitors including Alexander von Humboldt, Dawson Turner, W. J. Hooker, and another German visitor, August F. Schweigger from Königsberg (Ducker, 1981b). In 1816, Mertens returned to Paris, along with Schweigger, to continue their study of the French collections. According to Ducker (1981a) Mertens and Schweigger were the first German botanists to work on Australian algae. Mertens' next step on this trip was to London to examine specimens in the herbaria of Turner and Sir Joseph Banks. Mertens had shipped ahead from Bremen to London his more interesting algal specimens along with sketches and his manuscript notes. But when he arrived in London, he discovered that his shipment had been ransacked and destroyed (Ducker, 1981b). This setback and a later estrangement from his English colleagues may have contributed to his diminished overall productivity. A letter exists in which Mertens wrote to W. J. Hooker, by then Director of the botanic garden in Glasgow, complaining that he had not received any letters from his English colleagues for six years (Ducker, 1981b). Mertens' 1819 publication was the only work on Australian algae that he completed (Fig. 2).

The son, Heinrich Mertens, was a student at the University of Göttingen and then studied medicine at the University of Halle. Professor Kurt Sprengel, one of his mentors at the latter university, offered to obtain a spot for Heinrich as naturalist-botanist on board the *Vostok*, under the command of Capt. Thaddeus von Bellingshausen, on its voyage to the Antarctic Seas (1819-1821) (Lütke, 1835-1836). The Captain was fully expecting to pick up two non-Russian naturalists, the young Mertens of Halle and Dr. Kuntze of Leipzig, at the stop-over of the two ships, the *Vostok* and the *Mirnyy*, in Copenhagen with the idea that one of the naturalists would be assigned to each ship (Debenham, 1945). But instead, letters of regret from both Mertens and Kuntze were awaiting the Captain at the stop-over, with explanations that the lack of time and the journey to Copenhagen precluded them from participating. Also, the senior Mertens was against the idea, insisting that



Fig. 1. Franz Carl Mertens. Based on a sketch made by his son. Courtesy of the Hunt Institute for Botanical Documentation, Carnegie Mellon University, Pittsburgh, PA.

his son complete his medical degree. The lack of naturalists on the two ships caused von Bellingshausen to realize that his expedition would be at a disadvantage. So Heinrich went on to earn his degree and began practicing medicine in Bremen. But by 1824 his strong interest in natural history prompted him to travel to St. Petersburg in the hope of joining Kotzebue's expedition to the South Seas. But there was no space for him on that voyage (Ducker, 1981b). So he remained living in St. Petersburg until the opportunity arose for him to serve as a naturalist on a different voyage of exploration, that of the Russian expedition of 1826-1829 under the sponsorship of Tsar Nicholas I. Peace treaties had been signed with Great Britain and the United States, and thus warships were no longer needed to patrol the shores of Russia. The expedition consisted of two sloops, the *Moller* under the command of Capt.-Lieut. M. N. Staniukovich and the *Seniavin* under the command of Capt. Fedor Petrovich Lütke [sometimes transliterated as "Litke"]. For his part of the expedition, Lütke was charged with surveying the coasts of the Chukotsk [= Chukchi] Peninsula (eastern Russia) and the Alaska Peninsula, the north and south shores of the Okhotsk Sea, and the Shantarskie Islands (Pierce, 1987). The results of the two voyages were strikingly different in that Staniukovich had little interest in science, while Lütke had a great interest and stimulated the naturalists on board the *Seniavin* to pursue their inquiries with vigor. So it was fortunate that Heinrich was assigned to the *Seniavin*. He was primarily

interested in plants and invertebrates. The second naturalist on the *Seniavin* was Baron F. K. von Kittlitz, an artist-ornithologist. Also along was the geology student Alexander Postels, originally from Estonia, who was assigned to make observations on mineralogy and geology (Alekseev, 1996). But Postels quickly revealed his great talent in making sketches. So he became the primary draftsman and painter for the voyage. In fact, all three naturalists were skilled at making sketches of the biota during the long voyage.

On Aug. 20, 1826, the two corvettes sailed from the port of Kronstadt, making a quick stop in Portsmouth before sailing across the mid-Atlantic to Rio de Janeiro. The ships then sailed around Cape Horn to Chile, making stops and spending time at Concepcion and Valaparaíso. Next, the *Seniavin* sailed in a northwesterly direction (toward, but not reaching, Hawaii), and then northeastwardly, reaching the sheltered harbor of "New Archangel" [= Sitka, Alaska] on June 11, 1827 (Pierce, 1987). Mertens made use of a *baidarka* to reach nearby rocky islands and soon began collecting seaweeds and invertebrates. It was in this area that he encountered a new giant kelp, floating luxuriantly offshore. The sea otters were often seen contentedly resting, even sleeping, among the surface fronds. The Russians at the colony of Sitka had their own name for this seaweed: "sea otters' cabbage". In a letter back to his father, Heinrich described his observations, including an account of this interesting new species of alga, to which he gave the name *Fucus luetkeanus*. He also noted that the local peoples used the long stipes as fishing line and the hollow parts as a siphon to pump water out of their *baidarkas*. The senior Mertens communicated his son's observations of this and other "Fuci" to von Schlechtendal's journal *Linnaea* (Mertens, 1829a). In this way *Nereocystis luetkeana* (Fig. 3) was first described. Mertens' detailed description of *Fucus luetkeanus* was repeated in English in Hooker's *Botanical Miscellany* (Mertens, 1829c), and this latter translation was repeated in full by Harvey (1852). Another account from a letter to a friend in St. Petersburg was also published (Mertens, 1829b, d). In describing his ascent of a mountain near Sitka, climbing through the "lofty forests", Mertens showed his deep knowledge of the plant species (ferns, conifers, and flowering plants).

The natives around Sitka (now known as the Tlingits) were called "Kaloches" by the Russians. Unlike the Kaloches of Nootka Sound to the south, the Kaloches of Sitka were not cannibalistic, but captured prisoners of war were often turned into slaves. At communal celebrations a slave might be sacrificed (Pierce, 1987). Such a "celebration", involving the strangulation of a slave, had occurred just before the *Seniavin* had arrived at Sitka. Mertens learned that the victim's body lay in a thicket near the shore, and so with an assistant he located the body and severed the head. They placed it inconspicuously in Mertens' satchel for botanical



Fig. 2. *Fucus platylobium* Mert. = *Cystophora platylobium* (Mert.) J. Agardh. [Part of pl. 14, Mertens (1819)].

specimens and took it back to the safety of the ship. Examples of the "natural history" collections enumerated included 100 species of amphibians, 300 species of fish preserved in alcohol, 700 species of insects, 150 species of crustaceans, and "some skulls of savages" (Pierce, 1987). So this would explain the provenance of at least one of those skulls. It was certainly not a "politically correct" age.

After staying at Sitka for about 6 weeks, the *Semiavin* set sail for Unalaska, then south to the Pribilofs, westward to St. Matthew Island, and then over to the port of Petropavlovsk, Kamchatka. The winter of 1827-1828 was spent in the Caroline Islands in the South Pacific, discovering, surveying, and describing a number of atolls. The ship returned to survey the east coast of Kamchatka and the northern part of the Bering Sea during the summer of 1828. They returned to the western Carolines to spend the winter of 1828-1829. The *Semiavin* returned to Kronstadt on August 23, 1829. The *Moller* had arrived at Kronstadt two days earlier. During their three years at sea, the two ships had spent more time apart than together.

By the end of the voyage Mertens' herbarium contained more than 2,500 seed plants and ferns, complemented by a collection of seaweeds. Some of Heinrich's algal specimens, in the freshly collected condition, had been painted by Postels, and these plates (e.g., fig. 3) were included in the *Illustrationes algarum* of

Postels & Ruprecht (1840). Collections made by G. Kastalsky, naturalist on the *Moller*, were also included in this magnificent tome (Setchell & Gardner, 1903). Mertens had painted at least 100 crustaceans from living specimens, and he had also painted molluscs, annelids, radiata, and aculephs (jellyfish). Some of these invertebrates are extremely delicate, and so it would have been impossible to preserve them. All three naturalists, Mertens, Postels, and Kittlitz, also did more general landscapes to capture the vegetation, and these sketches comprised the Atlas for the French version of Lütke's (1835-1836) account of the voyage.

Mertens' collections of algae, plants, animals, and artifacts (native handicrafts) were deposited in museums in St. Petersburg, including the Komarov Institute. According to Shetler (1967), many of Mertens' collections made from Sitka, Alaska, in 1827 did reach St. Petersburg, unlike many of the other collections made in Alaska in that period, and those specimens were the basis for one of the earlier publications on the Alaska flora, namely "Observations sur le Végétation de l'Île de Sitka" by H. G. Bongard (1833). One such new species described by Bongard was *Picea mertensiana*, now *Tsuga mertensiana*, the mountain hemlock.

Later, in 1830, Lütke was ordered to command some maneuvers of three frigates as training exercises for naval cadets. Heinrich Mertens, who by that time was associated with the Academy of Sciences and the naval department, willingly agreed to participate in these maneuvers in the Baltic Sea and the North Atlantic (around the British Isles, to the shores of Iceland, then to Brest, France, and back to Kronstadt) (Aleksiev, 1996). An outbreak of typhoid hit the frigate *Prints Oranskii*, seventy of the cadets becoming ill. Without any regard to his own health, Dr. Mertens worked to fight the epidemic. Then unknowingly infected, he left the ship and traveled to St. Petersburg, where he also came down with typhoid and died soon afterwards, on Sept. 17, 1830, at the age of 34.



Fig. 3. *Nereocystis luetkeanus* (K. Mert.) Postels & Rupr. (1840, pl. 9).



Around 1960, thanks to the alertness of Dr. Mildred Mathias of UCLA, a bound volume of 263 letters of F. C. Mertens' correspondence was found to be in the possession of Mertens' two elderly great-granddaughters living in Los Angeles, California. This treasure trove was purchased by Mr. and Mrs. Roy A. Hunt and was deposited in the Archives of the Hunt Institute for Botanical Documentation (Karg, 1999).

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Michael J. Wynne  
University of Michigan, Ann Arbor



## 44th Annual Northeast Algal Symposium

The 44th Annual Northeast Algal Symposium was held over the weekend of April 15-17, 2005 at the Samoset Resort in Rockland, Maine. Organizers of the symposium were Charles O'Kelly and Robert Andersen of the Bigelow Laboratory for Ocean Sciences, West Boothbay Harbor, ME. The meeting started with tours of the FMC Marine Colloids facilities. The scientific program consisted of 29 platform presentations and 51 posters. Robert Vadas was named as the Honorary Chair of the symposium.

Graduate student presentations were eligible for the Robert T. Wilce awards. In the oral category, there were two awards. Priya Sampath-Wiley (University of New Hampshire) received the award for the paper "An improved method for determining phycobilin pigment content from crude aqueous extracts of *Porphyra* (Bangiales, Rhodophyta)" by P. Sampath-Wiley & C.D. Neefus. Jeremiah Hackett (University of Iowa) received the award for the paper "Histones and histone-like proteins in dinoflagellates" by J. D. Hackett & D. Bhattacharya. In the poster category, the award went to Lisa Pickell (University of Maine) for "The effect of iron chemistry on phytoplankton community structure and carbon cycling in the oceans" by L.D. Pickell & M.L. Wells. The President's award, given for the best undergraduate presentation, went to Katie Williams (University of New Hampshire) for her poster entitled "Localization of endosymbiotic bacteria in *Caulerpa cupressoides* with emphasis on alpha-proteobacteria and *Rhodobacter*" by K.L. Williams, W.R. Fagerberg, J. Coufburn & L.S. Tisa.

The distinguished speaker was Debashish Bhattacharya (University of Iowa). He gave a talk entitled "A phylogenetic tree and genomic perspective on the origins of photosynthetic eukaryotes within the tree of life" by D. Bhattacharya, H.S. Yoon & J.D. Hackett.

The Frank Shipley Collins award for contributions to the Northeast Algal Society and Phycology was given this year to Larry Liddle.

## Minutes of the PSA Annual Business Meeting

16 August 2005  
Durban, South Africa  
(International Convention Center)

The PSA Awards of Excellence, Provasoli Awards, and Certificate for Past President were presented during the PSA-sponsored all-congress social which preceded the Business Meeting. For the benefit of non-members who might be interested in information about the PSA annual meeting in Alaska, the Business Meeting began with the Program Director's report.

The meeting was called to order at 7:11 pm by PSA President Curt Pueschel. There were 41 present. Approximately half of the Executive Committee members were absent from the meeting, and this, in combination with a small available window of time for the meeting, meant that not all regular annual reports were given at the meeting.

### Program Director's report (Chuck Amsler):

The meeting began with a presentation about future PSA meetings by Program Director Chuck Amsler. For 2008, the Program Committee is working hard to have a meeting in New England, possibly Maine or Rhode Island, but the details are not yet in place. The 2007 meeting will be held in New Orleans, and will be hosted by Jim Wee. Features of this meeting location include access by trolley ride from the French Quarter and availability of dormitory accommodations for students. The meeting is scheduled for somewhere around the last 3-4 days of July and the first 3-4 days August, and it will be a joint meeting with the International Society of Protozoologists (the same group that we met with in Oregon in 2003) (*but see p. 12 of newsletter*). Next year PSA will meet in Juneau, Alaska, in a joint meeting with Northwest Algal Society. The dates are set for 7-12 July. The meeting will be co-sponsored by the University of Alaska Southeast, Auke Lake Campus. Chuck Amsler presented a PowerPoint presentation from Mike Steckoll, our Local Representative. Chuck recently visited Juneau and gave some details on the location. Juneau can be reached by air from Seattle, and possibly also Anchorage. Costs for airfare are typically about \$150 more than other locations from hub cities in the mainland USA. Another possibility for travel to Juneau is the Alaska ferry from Bellingham, WA. Many nearby hotels will be available at a range of prices and comfort levels. The meeting website with travel and other relevant information will be set up well in advance. The meeting will be held at the Centennial Hall Convention Center. Free wireless is available throughout the Convention Center. Full-time tourism resources are also available at the center. The informal

Deadline for submission of information for the next PSA Newsletter:

January 15th, 2006

Please contact Alison Sherwood  
([asherwoo@hawaii.edu](mailto:asherwoo@hawaii.edu))



banquet at the Gold Creek Salmon Bake promises to be one of the highlights of the conference.

The conference has been organized around the best low tides of the summer. Sandra Lindström will lead a mid-conference tour. A 2-3 day trip to the open coast will also be held after the meeting. Many day trips will also be available (fishing, whale watching, etc). The venue will have something for every kind of phycologist - freshwater streams and lakes (both polluted and pristine), marine intertidal, estuaries, ice & snow habitats. University labs with microscopes will be available.

A new invited speaker format will be tested at the Juneau meetings, which are set up as mini symposia focused around a plenary speaker (45-60 min. talks). Four plenary speakers have accepted invitations; each will have 2 or 3 associated symposium speakers (who will deliver 25-30 min. talks):

- 1) Robert Paine - Mike Graham, Karina Nielsem, Anne Solomon
- 2) Ed Theriot - unknown symposium speakers
- 3) Paul Falkowski - Virginia Ambrust, Dion Durnford
- 4) Mark Hildebrand - Nils Kroger, Betsy Read, J. Mark Cock

#### **Approval of the 2004 Annual Business Meeting Minutes (Curt Pueschel):**

The minutes of the 2004 business meeting were distributed for approval. These minutes were previously published in the PSA Newsletter. Acceptance of the minutes was moved by Pat Wheeler and seconded by Thierry Chopin; the motion to accept the minutes passed by voice vote.

#### **PSA President's report (Curt Pueschel):**

Curt outlined recommendations for changes in price of membership. A 4% increase in institutional price has been approved by the Executive Committee, but the EC proposed no increase in members' dues. Curt commented on the revolutionary changes in the publishing industry at the moment that are coupled with the open access issues, and what this may mean for the society. One consequence could be the demise of small society journals like our own. The EC has to look at these changes and consider consequences in the long term. As a result, the EC has had to develop expertise these complex issues, and this has fallen most heavily to Pat Wheeler (Journal Editor). Pat's term ends next year, and Curt expressed his profound thanks for her services. PSA is looking for a new editor, and members should submit nominations to either Curt Pueschel or Morgan Vis.

The work of the society is done by 12 standing committees, which are being reviewed and possible changes in the PSA by-laws will be considered to update and improve operations. A By-law change already approved by the membership in the last election allows our elections to be conducted via electronic balloting. All committees will be reviewed in the coming months. Some

will expand and will need additional members, and PSA will need some volunteers to fill these positions.

Curt announced new PSA initiatives for workshops or professional development sessions that could be included to enhance the value of the annual meetings. These may include such topics as career development sessions for graduate students, workshops on getting grants, dealing with gender issues in academia, etc.

One benefit of PSA membership is the 30% discount on the book *Algal Culturing Techniques*, which has already sold 1,060 copies. This discount will be available to PSA members until Oct 15<sup>th</sup>, 2005.

The results of the 2005 election were announced, as follows:

VP/President-elect - Richard Triemer

Secretary - Craig Bailey

Student Representative - Hilary McManus

New Editorial Board Members - Elisabeth Gantt, Martha Cook, Daniel Vaultot, and Michael Graham.

Curt thanked all those who stood for election.

#### **Membership director's Report (read for John LaClaire by Rick McCourt):**

Rick McCourt urged all members to contact John LaClaire if they have membership issues. The PSA membership directory is now available as a PDF file, and this file can be obtained by emailing John (laclaire@uts.cc.utexas.edu). The membership data from Blackwell was briefly reviewed. The number of institutional subscribers seems to be level as of July 1<sup>st</sup>. There is a slight decline in total member numbers, with a slight increase to non-US members. The long-term trends indicate a slight decline over the last few years, with student members more constant. The long-term institutional trends are roughly stabilized, but overall there is a slight decline. The US membership numbers are overall slightly declining, but foreign memberships are relatively constant. It is recommended that we recruit more US (North American?) members, implement a more aggressive advertising campaign through Blackwell, and keep membership dues constant.

Question posed: Was a membership survey done after the mention of it at the Williamsburg 2004 meeting? Rick did an email survey. Blackwell independently did a survey with better response rates. The report is not yet available. Marjorie Spencer from Blackwell didn't have the data at hand, but she commented that there was a large response, and that the primary service wanted by the membership was the journal, followed by the annual meetings. 30% of the membership responded, which is a comparable rate to the annual elections. Chris Maggs noted that Dennis Hanisak is holding a meeting of all societies at IPC to discuss this common issue of membership

decline, which will be attended by Morgan Vis and Curt Pueschel from PSA.

**Fund Manager and Treasurer's Reports (summarized for Tim Nelson and Mike Gretz by President Curt Pueschel):**

The Society has substantial reserves through its endowment, which currently stands at \$1,026,210. All PSA Awards run off the interest generated by these funds. The larger the reserves that PSA maintains, the more awards we can offer. From this endowment we annually provide four Croasdale awards of \$1,000 each, the Bold Award, Grants-in-Aid, Hoshaw Awards, Prescott Awards, etc. Starting next year an award for the outstanding student poster will be given as well.

**Journal of Phycology Editor's report (Pat Wheeler):**

The journal started with a publication rate of approximately 200pg/year, and now publishes close to 1300pg/year. Pat estimates that we will level off close to this value. The Journal had approximately 1,000 subscriptions in 2004, and 500 institutional members. The "Online-only" option has increased substantially to 3,000 institutional memberships. Turn-around times for manuscripts submitted to the Journal are roughly 2 months. Online access usage data is shooting up to 11,000 hits/month since data started to be collected for this in 2001. The Journal's Impact factor remains above 2 and is increasing slightly. The Journal is ranked #5 in Marine & Freshwater Biology, and has an Immediacy Index rank of 2. For cited half-life the Journal is ranked #3. Pat thanks Chris LeBoeuf for her help with the journal as Editorial Assistant, and Marjorie Spencer from Blackwell. Pat thanks the editorial board, associate editors and reviewers for their voluntary contributions.

**Communications Director's Report (Alison Sherwood):**

Early in 2005 the new composition of the Communications Committee was established. The PSA newsletter production will be shifted to the University of Hawaii from Ohio University starting with the Fall 2005 issue, and we will continue to publish two newsletters per year. Please email Alison with newsletter contributions (asherwoo@hawaii.edu). The website has been overhauled and redesigned by our new website editor, Judith Connor (MBARI). The site has also been moved to a private host (which costs \$34.95/month). Many thanks to Judith for her work on the website. All continues to go well with the PSA Listserv, and we have used this resource quite a bit this year for relevant PSA announcements.

Motion to adjourn meeting from Morgan Vis, seconded by Wayne Chiasson, passed by voice vote. Meeting adjourned at 7:57pm.

**PSA 2006**

The 2006 annual meeting will be held July 7-12 in Juneau, Alaska and is being hosted by Dr. Michael Stekoll (University of Alaska Southeast and University of Alaska School of Fisheries and Ocean Sciences). The Northwest Algal Society will meet in conjunction with PSA. The University of Alaska Southeast is a meeting sponsor and is hosting the opening mixer.

In a new meeting format, PSA will sponsor Plenary talks and associated mini-symposia with participants identified by the Plenary speakers. Contributed papers related to the mini-symposia topics will be solicited and scheduled in "featured contributed talk" sessions immediately following each mini-symposium. The Plenary Speakers for 2006 are:

**Dr. Robert T. Paine** (University of Washington): *macroalgae as powerful, experimental probes of how natural communities are organized.* The associated mini-symposium speakers will be Drs. Michael H. Graham (Moss Landing Marine Labs), Karina J. Nielsen (Sonoma State University), and Anne Solomon (University of Washington).

**Dr. Edward C. Theriot** (University of Texas at Austin): *diatom phylogenetics, systematics, and ecology.* Mini-symposium speakers are to be announced.

**Dr. Paul G. Falkowski** (Rutgers University): *how, when, and why secondary red symbiotic algae rose to ecological prominence in the contemporary ocean.* Mini-symposium speakers are to be announced.

**Dr. Mark M. Hildebrand** (Scripps Institution of Oceanography): *genomics approach toward studying silicon uptake and transporters in diatoms.* Mini-symposium speakers will be Drs. Nils Kroger (Georgia Institute of Technology), Betsy Read (California State University, San Marcos), and J. Mark Cock (Station Biologique, Roscoff).

The tides in southeast Alaska are excellent during the meeting week and Dr. Sandra Lindstrom (University of British Columbia) will lead an optional 2-3 day field trip to the open coast (Sitka area) following the meeting. There will also be a variety of mid-meeting field trips that will include an intertidal trip in Juneau (also led by Dr. Lindstrom), freshwater collecting, and several of the many recreational activities that make Juneau an outdoor vacation destination. The welcoming mixer will be the evening of 7 July. Because airline schedules will mean that many participants will want to come in on the evening of 6 July, we expect to have some part or full day field trip options during the day on the 7<sup>th</sup>. The meeting will feature a somewhat informal, but very "Alaskan," banquet at the Gold Creek Salmon Bake alongside a stream with a small waterfall that is likely to have salmon running.

### PSA 2006 cont.

A meeting web page with additional information and, eventually, links to on-line registration and abstract submission sites will be set up on the PSA web site this winter.

### **Special Algae Collection Available for Study**

As part of the NSF-funded Salt Plains Microbial Observatory ([www.okstate.edu/artsci/SPMO](http://www.okstate.edu/artsci/SPMO)), we have submitted fifty unique isolates of halotolerant algae, including cyanobacteria, chlorophytes (mainly *Dunaliella*) and pennate diatoms, to both the Culture Collection of Algae at the University of Texas at Austin (UTEX) and the Provasoli-Gullard National Center for Culture of Marine Phytoplankton (CCMP). UTEX lists them as a special collection: see <http://www.bio.utexas.edu/research/utex>. They are part of the regular collection at CCMP: search the catalog for "Oklahoma" at <http://ccmp.bigelow.org/>. Many of the SPMO isolates have been accessioned and the two facilities continue to grow and cryopreserve the remainder of the strains. We simply do not have the time or inclination to do all the potentially rewarding detailed work (taxonomy, ultrastructure, phylogenetics and physiology) on all of these interesting isolates without the assistance of the larger community. We have complete 16S or 18S rDNA sequences and growth responses to salinity (on agar) for all of the isolates, which respectively should be posted to GenBank and published eventually. Meanwhile, contact Andrea Kirkwood ([akirkwoo@ucalgary](mailto:akirkwoo@ucalgary)) if you would like salinity tolerance information.

Bill Henley, Oklahoma State University  
Andrea Kirkwood, University of Calgary

### **Journal of Phycology Editor's Position**

PSA is seeking to fill the post of Editor of the *Journal of Phycology*, and the Executive Committee seeks input from PSA members. The office has a five-year term and the transition to the new editor should begin during summer of 2006. Nominations, recommendations, and offers to volunteer should be directed to Curt Pueschel ([curtp@binghamton.edu](mailto:curtp@binghamton.edu)) or Morgan Vis ([vis-chia@oak.cats.ohiou.edu](mailto:vis-chia@oak.cats.ohiou.edu)). A search committee will make recommendations to the Executive Committee, who will forward the name of a candidate to the PSA membership for approval by ballot.

### **2005 Bold Award - Virginia Sanchez**

This year's Bold Award was given to Virginia Sanchez (University of Maryland) for her award-winning presentation at the International Phycological Society meeting in Durban, South Africa. Virginia's talk was entitled "Plastid evolution of haptophytes and their relationship to other chlorophyll-c containing algae". Congratulations, Virginia!



2005 Bold Award winner, Virginia Sanchez, receiving her prize from President Curt Pueschel at the IPC Durban meeting in August.

### **OBITUARIES**

#### **Robert G. Wetzel**

Professor Robert G. Wetzel passed away at his home on April 18, 2005. Prof. Wetzel was a true leader in freshwater studies, and one of the most prominent limnologists of our time. Prof. Wetzel published over 30 books and 400 publications during his more than three decades of scientific work. His passion for freshwater ecosystems was also conveyed in his call for the conservation of these systems.

#### **Robert Ross**

Robert Ross, the former Keeper of Botany at the Natural History Museum, London, and a former President of the International Society for Diatom Research, died May 24, 2005 at the age of 92. Despite recent ill health, he was still collaborating with many diatomists, and his expertise and experience will be sadly missed.



## MEETING ANNOUNCEMENTS

### **Northeast Algal Society (NEAS) 2006**

The 45th Annual Symposium of the Northeast Algal Society will be held at Marist College, Poughkeepsie, NY, over the weekend of April 21-23, 2006. For information contact the Membership Director, Christopher Neefus at [Chris.Neefus@unh.edu](mailto:Chris.Neefus@unh.edu). You can also check for information on the NEAS website: <http://www.e-neas.org>.

### **Botanical Society of America (BSA) 2006**

The centennial meeting of BSA will be held July 28-August 3, 2006, at the University of California-Chico. October 15, 2005 is the deadline for submission of proposals for symposia at next year's special centennial meeting ([www.2005.botanyconference.org/Botany2006/index.php](http://www.2005.botanyconference.org/Botany2006/index.php)). Symposia must be sponsored by one or more sections of the BSA. Co-sponsorship among sections is encouraged. If you would like to propose a symposium to be sponsored by the Phycological Section of the BSA, please send a pre-proposal to the section program director, Charles Delwiche: [delwiche@umd5.umd.edu](mailto:delwiche@umd5.umd.edu) ASAP. Final proposals are submitted by following the instructions at the BSA website: ([www.2006.botanyconference.org/callinfo/2006CallForSymposia.php](http://www.2006.botanyconference.org/callinfo/2006CallForSymposia.php)).

### **PSA 2007 and 2008**

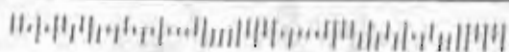
The 2007 annual meeting has been planned for Loyola University in New Orleans, Louisiana, hosted by Dr. James L. Wee (Loyola University) with assistance from Drs. David Millie (Florida Marine Research Institute) and T.J. Evans (USDA-ARS). The dates are confirmed as 30 July through 2 August with an opening mixer on 29 July and field trips on 3 August. However, disruptions caused by Hurricane Katrina have made these plans uncertain and, at press time, it is possible that the 2007 meeting may need to be moved. We expect to decide on a site in New England for the 2008 annual meeting in September, and if the 2007 meeting must be moved out of New Orleans, the most likely possibility is that it will move to the New England site that was being planned for 2008. When these issues are decided they will be announced on the PSA Listserv and on the PSA web site.

### **27th Annual Southeastern Phycological Colloquy**

Dates: 4-6 November 2005

Location: Johnson Education Center, Harbor Branch Oceanographic Institution, Fort Pierce, Florida.

The SEPC is a small, informal meeting which emphasizes student participation and student-faculty interaction. Contributed paper and poster sessions are planned for the full day of Saturday, November 5. Presentations on all aspects of the biology of algae, seagrasses, and other aquatic plants are welcome. <http://www.uab.edu/uabbio/sepc/>.



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