PHYCOLOGICAL NEWSLETTER

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PSA AWARDS OF EXCELLENCE ANNOUNCED

The recipients of the 2003 Awards of Excellence are Isabella Abbott (Department of Botany, University of Hawaii, Honolulu, Hawaii), Gary L. Floyd (Department of Biological Sciences, Ohio State University, Columbus, OH) and Karen Steidinger (Florida Institute of Marine Sciences). This Award has been established to recognize phycologists who have demonstrated sustained scholarly contributions in, and impact on the field of phycology over their careers. These individuals have also provided service to PSA as well as other phycological societies.

Isabella Aiona Abbott

Since the beginning of her professional career in 1941, initially with William Randolph Taylor for her Masters Degree and completing her Ph.D. with George F. Papenfuss in 1950, she has been an inspiration and mentor to many generations of phycologists. Steve Murray in his letter of nomination refers to "Izzie," as she is known to her friends, as one of a handful of individuals that have impacted marine phycology and the careers of so many phycologists. Many of her colleagues believe her to be one of the most prolific and influential American phycologists. Izzie's career began to blossom after she received a Lectureship and Research Associate position at Stanford University in the late 1950s. At that time Izzie was not able to receive a tenure-track appointment because her husband, Donald Abbott, was a Stanford professor. Nevertheless, Izzie began to establish her "first" career working on the marine algae of the Monterey Peninsula and eventually was given her due – appointment to Professor. She was the first woman involved in the US-Japan Cooperative Science Program. Her first major contribution on marine algae of the Pacific region was a supplement with George J. Hollenberg to Gilbert M. Smith's renowned "Marine Algae of the Monterey Peninsula." This led several years later to the publication of a milestone in phycological studies on the west coast, the "Marine Algae of California," a floristic account that is still the "bible" for phycologists working from Baja California, Mexico to British Columbia. It was also during this time that Izzie with George Hollenberg, Peter Dixon and others, began teaching a summer phycology class at Stanford's Hopkins Marine Station. This class proved to be a major breeding ground for developing phycologists, many of whom to this day credit Izzie for inspiring them towards a career in phycology." Izzie also initiated an important series of workshops, with the assistance of NOAA's Sea Grant College Program, and has produced many publications on the "Taxonomy of Economic Seaweeds." For many, her work on the "Marine Algae of California" would have been enough, however, after returning to her Hawaii, she received an appointment as the Wilder Professor of Botany at the University of Hawaii. She immediately began working on the flora of the Hawaiian Islands and over the past 23 years, she has provided an inspiration to her native Hawaiians. Izzie has, and continues, to publish on the Hawaiian algal flora. This work is considered to have had an enormous impact on the taxonomy of economic seaweeds and ethnobotany from the Pacific region. However, it is not just her publication record (over 160 publications, eight books on marine flora and ethnobotany) that makes Izzie Abbott so special; it is also her warmth, her caring manner, and her willingness to teach and nurture budding phycologists. Izzie's professional contributions have not gone unnoticed. To her credit, she has received numerous awards including: the Distinguished Ethnobotanist award given by the Society of

Economic Botany (2001), the ARCS Scientist of the Year (2000), the prestigious G.M. Smith Medal awarded by the US National Academy of Sciences (1997), the Botanical Society of America's Darbaker Prize (1969) and Merit Award of The Phycological Society of America (1995), and the Ford Foundation's Award for Research in China (1987). It is at this time that the Phycological Society of America bestows its highest honor on Professor Isabella Aiona Abbott for her lifetime achievements in phycology – the PSA Award of Excellence.

Gary L. Floyd

Louise Lewis wrote that Gary Floyd, Professor of Biology and Dean Emeritus at Ohio State University, has had a remarkable career. Gary is one of those very rare individuals who exemplifies excellence in all three key areas of academics: scientific research, teaching and service. He has had a major impact on the shaping the current paradigm concerning the evolution of green algae. Over the past three decades, Gary with the help of his students and collaborators, has provided essential evidence to support various patterns of phylogeny among the green algae using ultrastructural and biochemical studies. As new molecular technologies emerged, he embraced these technologies as a "means of discovery" and added new insights using genetics and gene sequencing in studying the evolution of the green algae. During his remarkable career, Gary mentored no less than 20 Masters and Ph.D. students, 6 postdoctoral scholars and was a member of over 105 graduate committees (70 doctoral and 35 Masters). He has received both of Ohio State's most prestigious faculty awards, one for his scholarship and the other for his teaching. He also received the Darbaker Prize from the Botanical Society of America in 1993 and was the Dean of Life sciences at Ohio State University. In addition to serving our Society as a National Lecturer, he served on our Board of Trustees and many other committees, as well as initiating and giving oversight to the PSA slide collection. In the classroom, Gary stimulated the curiosity of his students by presenting lectures that were challenging, creative and engaging. He taught all his students on "how to do science, how to present scientific information, how to teach so that every lecture is stimulating and on the cutting edge of knowledge." He was a master teacher with charm and wit par excellence. With a love of science and his quest to learn and serve future generations, Gary and his wife, Myrna, have established endowed fellowships for students interested in middle school science education at the University of Northern Iowa. Gary has demonstrated the very essence of what it is to be nominated for an award of professional excellence. He has enriched the academic and scientific environment for everyone in the field of phycology.

Karen Steidinger

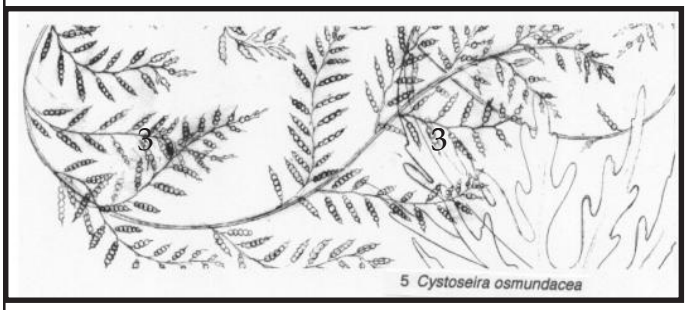
Since the beginning of her professional career in 1963, a career that has revealed a passion to study the systematics, ecology and oceanography of dinoflagellates, she has dedicated her life to the study of Florida Red-tide dinoflagellates. According to Pat Tester, Dave Millie and Don Anderson, she was among the first to recognize the importance of dinoflagellate resting stages in the dynamics of red tides. Her work on *Gymnodinium breve* (now, *Karenia brevis*), is legendary as she was the first to breakdown red tides into a logical series of stages that could be studied in isolation as well as in sequence-namely bloom initiation, development and decline. She is considered by her colleagues as the "gold standard in matters concerning *Karenia brevis*, as well as other harmful algae." She is "matriarch of the US if not global dinoflagellate taxonomy, or as Tom Malone referred to her as the "Queen of Harmful Algal Blooms." It was her dedication to public outreach while being the Director of the Florida Marine Research Institute (FMRI) and her ability to clearly define the issues surrounding red tide science, that has enabled Karen to effectively provide counsel to the US House of Representatives in the development of legislation that became the historical framework for the US federal mandated programs known as Ecology & Oceanography of Harmful Algal Blooms (ECOHAB) and Monitoring & Event Response of Harmful Algal Blooms (MERHAB). She is the President of the International Society for the Study of Harmful Algae (ISSHA), has served on the editorial boards of the Journal of Phycology and the American Microscopical Society. She also received the Florida Academy of Sciences Medalist of the Year Award (1983). Her colleagues have all recognized her "love for training of students and young scientists, the tireless involvement with academic colleagues, federal and state agency programs and scientific societies and committees that qualify her the for the Phycological Society of America's Award of Excellence.

Drs Druehl, Selivanova and Abbott enjoying the poster session at PSA 2003

Participants and organizers of the 2003 PSA Bold Award Student Session, at the annual meeting at Gleneden Beach, Oregon.

DARBAKER PRIZE IN PHYCOLOGY AWARDED TO JOHN MEEKS

The Phycological Section, Botanical Society of America, is proud to announce that John C. "Jack" Meeks is the recipient of the 2003 Darbaker Prize in Phycology. This award is for meritorious work in the study of microscopic algae during the previous two years (2001-02), published in English. Meeks is in the Section of Microbiology, Division of Biological Sciences, University of California-Davis. Meeks was awarded the prize for his work in charting chemical interactions between reacting partners of the symbiosis of *Nostoc punctiforme* and the hornwort, *Anthoceros*; making original contributions to the enzymology and mutational analysis of the phycosymbiont; and successfully championing the sequencing of the genome of that symbiont.



GILBERT MORGAN SMITH MEDAL AWARDED TO SARAH GIBBS

Dr. Sarah P. Gibbs has been awarded the Gilbert Morgan Smith Medal and a prize of $20,000 by the National Academy of Sciences. Dr.Gibbs was chosen "for her revolutionary concepts and evidence that constitute the foundation for the current theory of chloroplast evolution and the phylogenetic relationships of algae and plants."

PSA Student Grants for 2003

Grants-in-Aid of Research: A total of six grants of $1,000 each were awarded to the following students to support their research:

Michael Boller -Drag generation in flexible rocky shore macrophytes

Brian P. Kinlan - Linking environmental forcing, dispersal and patch dynamics in kelp forest communities

Hilary A. McManus - Phylogenetic relationships within the family Hydrodictyaceae (Chlorophyceae, Chlorophyta)

Ines Sunesan - Diatoms from coastal environments of Buenos Aires Province. Taxonomical analysis of the genera that include species involved in harmful algal blooms

Eric C. Dinger - Stromatolite trophic relationships: Fish, invertebrates and algae

Jose M. Estevez - Carrageenans biosynthesized by developed carpospores and tetraspores of the red seaweed *Gigartina skottsbergii* (Gigartinaceae) followed in culture

Croasdale Awards - for field course attendance ($1,000 each):
Virginia Maria Sanchez Puerta, Kiyoko Yokota, Hilary McManus

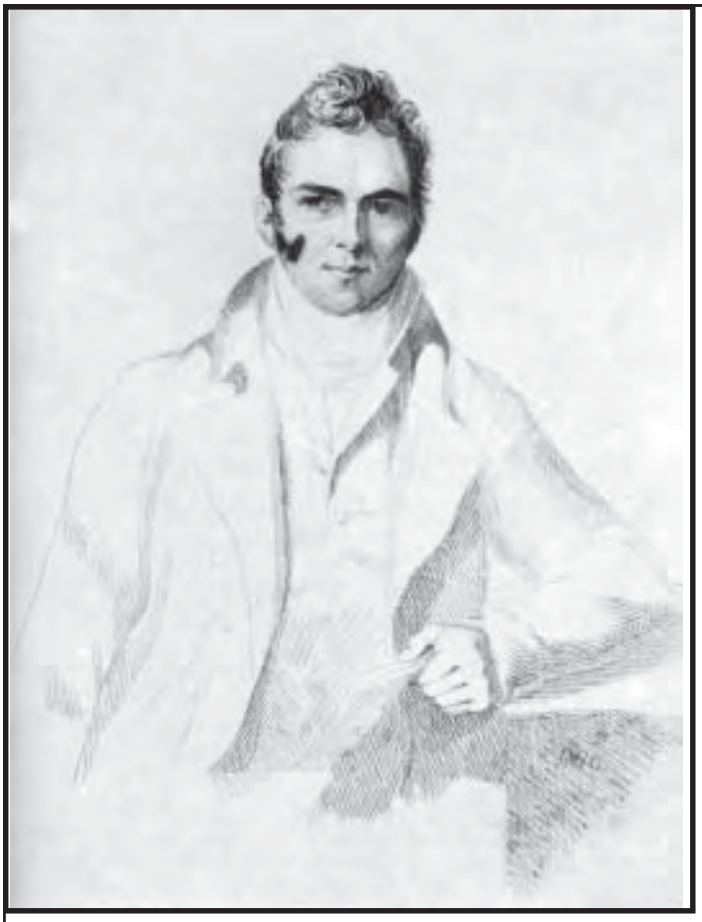
Hoshaw Travel Awards - A total of $6,500 was given to 29 students who attended and presented at the annual meeting of the PSA at Gleneden Beach, Oregon.

PROVASOLI AWARDS ANNOUNCED

The PSA awards for the best paper published in the Journal of Phycology for 2002 were announced at this year's annual meeting:

Litaker, R.W., Vandersea, M.S., Kibler, S.R., Madden, V.J., Noga, E.J., and Tester, P. A. 2002. Life cycle of the heteromorphic dinoflagellate *Pfiesteria piscicida* (Dinophyceae). *J. Phycol*. 38:442-463.

Burkholder, J. M., and Glasgow, H. B. 2002. The life cycle and toxicity of *Pfiesteria piscicida* revisited. J. Phycol. 38:1268-1272.



Dawson Turner
(engraving by Mrs. Turner from a drawing by Thomas Phillips in 1816; from Munby, 1962).

PHYCOLOGICAL TRAILBLAZER

No. 19: Dawson Turner

Dawson Turner (1775-1858) was a wealthy banker in Yarmouth, England, but a botanist and inveterate collector by avocation. Sir James E. Smith called him "that exquisite cryptogamist". Turner's early interests were with plants in general and mosses, lichens, and marine algae in particular. His earliest papers reveal that he was a field-oriented person. Living close to the Norfolk coast, he was able to carry out observations on the algae of the local shore year-round, and thus in 1800 he contributed one of the first-ever phenological studies on benthic marine algae. He produced a list of the species of *Fucus*, *Conferva*, and *Ulva* (at that time almost all the seaweeds fell into those three genera), and the seasons at which these algae produced their "fructifications". Clearly, he was an astute observer in that he noticed that *Fucus subfuscus* [*Rhodomela confervoides*], one of the most common species upon the Norfolk shore, "fructified only in the earliest months of the spring." However, it was generally collected in Sept. and often in the winter months, at which time its stems and branches were swollen and gave the false impression of being reproductive. He described several new species from local shores (1801, 1802a), such as *Ulva furcellata* [*Scinaia*], *U. multifida* [*Cutleria*], *Fucus ruscifolius* [*Apoglossum*], *F. crenulatus* [*Gymnogongrus*], *F. clavellosus* [*Lomentaria*], and *F. wiggii* [*Naccaria*]. In 1806 he described *F. tenax* [*Gloiopeltis*] on a collection sent to him from China. He had a broad appreciation of botany and with his friend James Sowerby published a list of the plants, ferns, fungi, lichens, and algae they encountered while touring the western counties of England (Turner & Sowerby, 1800). He spent the summer of 1803 in Ireland with his focus at this time entirely on mosses. He carried out much field work and studied collections in the herbaria in Dublin and elsewhere. The following year (1804b) he published a small book in Latin and with 16 colored plates done by Sowerby. This book was the first that was devoted to the mosses of Ireland.

Turner lived in a time of exploration. Owing to his status as one of the most knowledgable cryptogamists of the time, he was the fortunate recipient of algal collections being made from around the world. He received collections made by Archibald Menzies, the surgeon initially on a commercial expedition under the command of Capt. James Colnett, in the period 1786-1789. Later, Menzies served as surgeon/naturalist on Capt. George Vancouver's expedition (1791-1795) (Scagel et al. 1989). This latter expedition visited the northwest coast of America and the west coast of South America: *F. floccosus* [*Odonthalia*], *F. lividus* [*Sarcothalia*], *F. menziesii* [*Egregia*] (fig. 2). Sir Joseph Banks sent to Turner collections from Australia: *F. banksii* [*Hormosira*], New Zealand: *F. abscissus* [*Melanthalia*], and the Cape of Good Hope: *F. erinaceus* [*Nothogenia*]. Many specimens collected in Asian waters by Horner on his voyage around the world were transmitted on to Turner by Prof. Mertens: e.g., *F. horneri*, *F. hemiphyllus*, *F. microceratius* [all now in *Sargassum*]. Lord Valentia sent him specimens of new species of *Sargassum* and *Hypnea* from the Red Sea. Specimens were sent from Jamaica by Dr. Wright, from St. Croix by Martin Vahl, and from the Straits of Sunda, Indonesia, by Mr. George Watts. A major contributor to Turner's *Fuci* was Robert Brown, the botanist on board the HMS *Investigator* (1801-1805) under the command of Capt. Matthew Flinders. Thanks to Brown, Turner received about 50 specimens collected from southern Australia and the eastern coast to Arnhem Land (Ducker, 1981b) and from New Zealand: *F. quercifolius* [*Platythalia*]. Turner also received material from Governor King in Australia: *F. lambertii* [*Callophyllis*]. These algae were handsomely depicted in the four volumes of Turner's *Fuci* (1807-1819). It should be pointed out that these beautiful plates were executed almost entirely by his future son-in-law, William Jackson Hooker. Over a thirteen-year period, starting in 1806, Hooker became practically a member of the Turner family, staying in "Bank House" and eventually completing 234 plates of the total of 258 plates in the *Fuci*. Turner's behavior toward Hooker was said to be unforgivable in that he barely acknowledged Hooker's monumental

contribution to the four volumes (Allan, 1967). The only acknowledgement came from the tiny inscription W.J.H.Esq$^{r.}$ del.^{t} on most plates.

Because the publication of this series of his *Fuci* became more and more sporadic, Turner received criticism from his contemporaries (Price, 1984). At the time "a fair amount of acrimony...was generated...by Turner's inconsistency and drift." (Price, 1982). In the advertisement (dated 16 Jan. 1819) accompanying the final fascicle of his *Fuci*, Turner signed off and profusely apologized "for the frequent irregularities in the appearance of the later numbers". He realized that the knowledge of the Fuci was "in its infancy". He also acknowledged the major new arrangement of "this interesting tribe of plants" that had been contributed by Monsieur Lamouroux of Caen (1813). Turner regarded Lamouroux' classification as "ingenious and embracing a comprehensive view of the subject". Turner expressed a degree of satisfaction that he had "laid before his readers a set of figures, upon the accuracy of which they may rely". That was an understatement because taken as a whole the quality of the 258 plates in his *Fuci* has never been surpassed. Even today Turner's work can prove to be the source of new recognitions (Wynne, 2002).

Turner married Mary Palgrave in 1796, and they eventually had a total of eleven children. In 1812 the Turners persuaded the artist John Sell Cotman to settle in Yarmouth, and they arranged for him to tutor their daughters in draftsmanship and watercoloring. Turner had the means to serve as the lifelong patron to Cotman and essentially had a "cottage industry" under his roof with his several artistic daughters adding watercolors to the plates. Turner's eldest daughter, Maria, married Hooker, the draftsman of most of the plates in Turner's *Fuci*. Hooker would eventually become Sir William, the renowned botanist at Kew. In the summer of 1814 Turner traveled with his wife and two of his six daughters (Maria and Elizabeth) along with Hooker to Paris. This was the first time English citizens were allowed to set foot on French soil because of the preceding years of the Napoleonic wars. The party was able to visit the Muséum d'Histoire Naturelle and to attend meetings of the "Academie des sciences" (Ducker, 1981). Also at those meetings were such celebrated scientists of the time as Lamarck, de Jussieu, Alexander von Humboldt, and Labillardière.

Turner had a branch of his bank in Halesworth, managed by his brother James. The two Turner brothers and Samuel Paget bought an ale-producing brewery in Halesworth, along with some public houses and an associated home called the "Brewery House". Turner later invited Hooker to buy into the brewery venture as a quarter shareholder for £8000, which came from Hooker's inheritance. Hooker took on the job of superintending the brewery, and this allowed him to reside in Brewery House, which had a large garden and a heated greenhouse, where William could raise exotic orchids.

Turner was thus the maternal grandfather of Sir Joseph Dalton Hooker, the junior surgeon and botanist on the British Antarctic Expedition of 1839-1843 under the command of Sir James Clark Ross (H.M.S. *Erebus* and H.M.S. *Terror*), which made significant algal collections from New Zealand, Tasmania, and Antarctica. J. D. Hooker, who often collaborated with William H. Harvey of Dublin, was said to be "the most important botanist of the nineteenth century and one of the key scientists of his age" (Musgrave et al. 1999).

What became the major obsession in Dawson's later life was the collecting of autographed letters. He was methodical in saving all, or nearly all, the letters that came to him and then binding them into volumes in chronological sequence such that he eventually had more more than 150 volumes of bound correspondence (Munby 1962). Trinity College, Cambridge, has 82 volumes of his correspondence (Desmond, 1994). He wrote so many letters that maybe it is not surprising that a letter written by Turner to a friend of his son-in-law Sir William and dated "20 Feby 1850" was found tucked in my copy of Turner's *Fuci*. The two main topics in the letter treat Turner's health (he was in his mid-70's) and his ongoing pursuit of autographed letters. Parts of that letter follow:

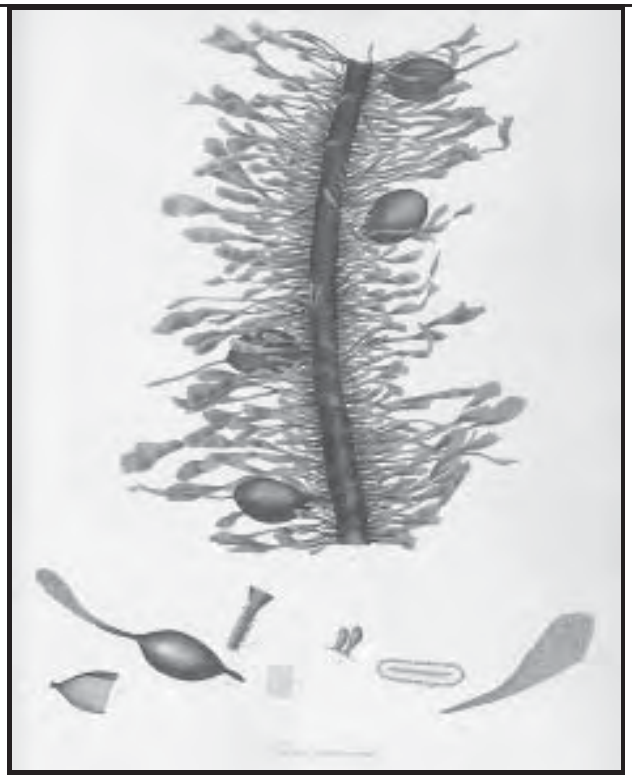
My dear Sir:
You may naturally have felt surprized at having been thus long without any acknowledgement of the letter you wrote me on the 24th of last month; and your surprize will hardly be diminished upon receiving the inclosed abstract from a letter from Mr. Fitch, which I hope I have not sent you previously. If I have, pray pardon me, & ascribe it to the same cause which has prevented my writing & has left me very much in ignorance of which I have done or not done, a long confinement to my bed & chamber, in consequence of a fall headlong down a flight of six stairs. The effect, I am thankful, has been far from serious; having been confined to severe bruises of my left shoulder & right ankle, without fracture & without dislocation. Nevertheless, a man of 74 does not escape from such a shock without feeling enfeebled; & I continue to a certain degree, tho' not materially, crippled. You will pardon me that I trouble you with these details, which I felt necessary to plead my excuse.
[He goes on to discuss a Mr. Fitch, P. Collinson, the Ipswich Public Library, Geo. Ransome, Mr. Garrod (an auctioneer), and "the late Mr. Rodd". The letter then continues:]

I have myself but a single letter of Peter Collinson's, a short one, addressed to Boolase, and introducing a Dane, a friend of Solander's, who wish to visit the Cornish mines. Of this, as of Calder's and Muhlenberg's, Dr. Cambridge is quite welcome to a copy; but would you object to ask him to write to me & express his wish for them? You will probably wonder at such a request on my part; but the truth is, that I shall be glad of his handwriting. One of the great amusements of my declining

years has been the collecting of letters written by men of eminence. I could easily tell you what pleasure I feel in the pursuit; & I look with no little pride upon my collection, the largest, I apprehend, in the world, containing little less than 25,000 letters, all carefully arranged and handsomely bound, and copiously illustrated with portraits & biographical anecdotes. To show them to you in the course of the coming summer would be a very great pleasure to me: indeed it could not be otherwise than a high gratification, to receive under my roof one of the oldest and most valued friends of a son I have such infinite reason to love & esteem as Sir Wm. Hooker.

I am
my dear Sir
Very Faithfully yours
Dawson Turner

Munby (1962) characterized Turner as going beyond being a collector: "Moreover when we examine Dawson Turner's own publications we can at once recognize the symptoms of bibliomania in an advanced form..." Despite this unfavorable regard for Turner's life-long drive to collect and despite the criticism he received when the rate of publication of the fascicles of his *Fuci* lagged, Turner should be remembered as one who made significant contributions to cryptogamic botany in a period of exploration and discovery.



***Fucus Menziesii* [= *Egregia menziesii*], pl. 27, Turner (1808)**

Allan, M. 1967. *The Hookers of Kew, 1785-1811*. Michael Joseph, London. 273 pp.

Dawson, W. R. 1936. Original Papers of the Norfolk and Norwich Archaeological Soc. 26: 59-72. [Not seen.]

_____. 1958. Dawson Turner, F.R.S. (1775-1858). J. Soc. Bibliography Nat. Hist. 3: 303-310, 4 pls.

_____. 1961. A bibliography of the printed works of Dawson Turner. Trans. Cambridge Bibliographical Soc. 3: 232-256.

Desmond, R. 1994. *Botanists and horticultorists, including plants collectors, flower painters and garden designers*. Taylor & Francis and The Natural History Museum, London. xl + 825 pp.

Ducker, S. C. 1981a. Australian phycology: the German influence. In: *People and Plants in Australia* (Carr, D. J., & S. G. M. Carr, eds.) Pp. 116-138. Academic Press, Sydney.

_____. 1981b. A history of Australian marine phycology. In: *Marine Botany: an Australasian perspective*. (Clayton, M. N. & R. J. King, eds.) Pp. 1-14. Longman Cheshire, Sydney.

Lamouroux, J. V. F. 1813. Essai sur les genres de la famille des thalassiophytes non articulées. Annales Mus. Hist. Nat., Paris 20: 21-47, 115-139, 267-293, pls. 7-13.

Munby, A. N. L. 1962. *The cult of the autograph letter in England*. The Athlone Press, University of London. viii + 117 pp.

Musgrave, T., C. Gardner, & W. Musgrave. 1999 [reprinted, 2000]. *The plant hunters. Two hundred years of adventure and discovery around the world*. Orion Publ. Group, London. 224 pp.

Price, J. H. 1982. Publication in parts: a background to the concept, efficacy and taxonomic complexity. Arch. Nat. Hist. 10: 443-459.

_____. 1984. Bibliographic notes on works concerning the algae V. A note on aspects of the *Fuci*... (Dawson Turner, 1807-1819). Arch. Nat. Hist. 11: 440-442.

Scagel, R. F., P. W. Gabrielson, D. J. Garbary, L. Golden, M. W. Hawkes, S. C. Lindstrom, J. C. Oliveira, & T. B. Widdowson. 1989. A synopsis of the benthic marine algae of British Columbia, southeast Alaska, Washington and Oregon. Phycol. Contr. No. 3. Dept. of Botany, Univ. British Columbia, Vancouver.

Turner, D. 1800. Calendarium plantarum marinarum. Trans. Linn. Soc. Lond. 5: 126-131.

_____. 1801. Ulva furcellata et multifida. Journal für die Botanik (Schrad.) 1800: 300-302, 1 pl.

_____. 1802a. Descriptions of four new species of *Fucus*. Trans. Linn. Soc. Lond. 6: 125-136, pls. VIII-X.

_____. 1802b. A synopsis of the British Fuci. Vol. 1. [i] - xlvi + [1]- 189 pp. F. Bush, Yarmouth.

_____. 1802c. A synopsis of the British Fuci. Vol. 2. [188] - 400 pp. F. Bush, Yarmouth.

_____. 1804a. Remarks upon the Dillenian herbarium. Trans. Linn. Soc. Lond. 7: 101-115.

_____. 1804b. *Muscologiae Hibernicae Spicilegium*. J. Black, London.

_____. 1806. Account of a new interesting species of *Fucus*. Ann. Bot. 2: 376-378.

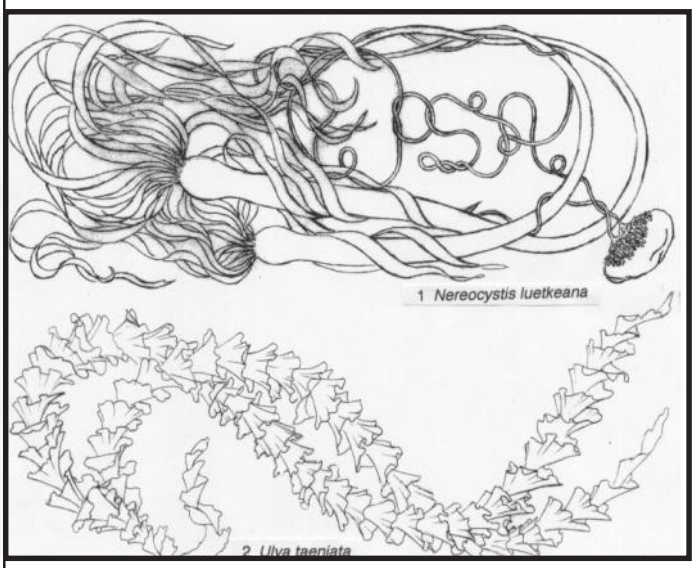
_____. 1807-1819. *Fuci, or coloured figures and descriptions of the plants referred by botanists to the genus Fucus*. 258 coloured plants, 4 vols. Vol. I, pls. 1-71(1807-1808); vol. II, pls. 72-134 (1808-1809); vol. III, pls. 135-196 (1809-1811); vol. IV, pls. 197-258 (1811-1819). John and Arthur Arch, London. [See Price (1984) for the dates of publication.]

Turner, D., & J. Sowerby. 1800. Catalogue of some of the more rare plants observed in a tour through the western counties, made in June 1799. Trans. Linn. Soc. Lond. 5: 234-241.

Wynne, M. J. 2002. *Plocamium cirrhosum* comb. nov. (Plocamiales, Rhodophyta) to replace *P. costatum*. New Zealand J. Bot. 22: 137-142.

Michael J. Wynne
University of Michigan, Ann Arbor

Next issue: Phycological Trailblazer
No. 20: Johannes Reinke



The 42nd Northeast Algal Symposium

The annual meeting of the Northeast Algal Society (NEAS) was held on the weekend of April 25-27, 2003 at Skidmore College, Saratoga Springs, NY. This year's organizers were David Domozych and Gary Saunders. About half of the nearly 120 participants were students.

The scientific program consisted of 22 platform presentations and 25 posters. Brian Teasdale (University of New Hampshire) received the Robert T. Wilce award for best student paper, and Susan Clayden (University of New Brunswick) won the poster category. The President's award, given for the best undergraduate presentations, went to Hannah Shayler (Connecticut College) in the oral category and Martin Monahan for his poster. The Frank Shipley Collins award for service to NEAS and phycology was announced at the banquet. This year's recipient was Craig Schneider.

Peter M. Bradley
Secretary, NEAS

Meeting Announcements

Second Symposium on Harmful Marine Algae in the U.S.
December 9-13, 2003, Woods Hole, Massachusetts
Sponsored by the U.S. National Office for Marine Biotoxins and Harmful Algal Blooms
Symposium Director: Donald M. Anderson
This is the second of a series of biannual meetings intended to provide a forum for scientific exchange and technical communication on all aspects of marine and estuarine HAB research in the United States. The format will include oral presentations, poster sessions, and discussion groups. One evening session will be devoted to a review of the U.S. National Plan for Marine Biotoxins and Harmful Algae and plans for a workshop to update this important guidance document. We welcome suggestions for other discussion group topics and volunteers to organize and lead these discussions.
The website address for further details is: http://www.whoi.edu/science/B/redtide/2ndsymposium/index.html

Sixth International Chrysophyte Symposium
2-7 August 2004 Lammi Biological Station, Central Finland.
Organizers: Johanna Ikävalko, Finland (johanna.ikavalko@masa-yards.fi and ikavalko@mappi.helsinki.fi), Gertrud Cronberg, Sweden (gertrud.cronberg@limnol.lu.se) and Joergen Kristiansen, Denmark (joergenk@bot.ku.dk).

43rd Northeast Algal Symposium
Avery Point Campus of the University of Connecticut over the weekend of April 24-25, 2004. The co-conveners for the 43rd symposium are Louise Lewis, Senjie Lin and Charles Yarish. Those interested in receiving information about the symposium should contact the membership director Christopher Neefus at Chris.Neefus@unh.edu or watch the NEAS website at www.e-neas.org.

XIth International Harmful Algae Conference
14-19 November 2004 in Cape Town, South Africa
www.botany.uwc.ac.za/pssa/aecon.e@mweb.co.za

For more meeting announcements, job postings, and other information see the PSA website (www.psaalgae.org)

2003 BOLD AWARD

The Bold Award was established in 1973 to honor Harold C. Bold, a charter member of the society, and the President of PSA from 1955-56. The award is for the outstanding student research presentation at the PSA annual meeting.

This year, twelve presentations were submitted to the Bold Award Symposium, and the winner was **Jennifer Smith** (Botany Department, University of Hawaii) for her presentation entitled " Invasive macroalgae on tropical reefs: impacts, interactions, mechanisms and management." Congratulations, Jen!

NWAS poster award given at PSA 2003

The Northwest Algal Symposium Society graciously provided a poster award for the best student research poster at the PSA annual meeting. This year's award was given to Aimee Bullard (CSU Fullerton, co-authored by Steve Murray) for her poster entitled "Comparisons of macrophyte cover and community primary production on two southern California shores." Congratulations, Aimee!

The Name Game - by Ralph A. Lewin

In almost every country, a new-born child is registered with at least two names, a family name and a personal name, although in many systems the order is reversed. (For instance, over here I'm called Ralph Lewin.) Similarly, for the past 250 years every species is supposed to have a specific name and the name of the genus to which it belongs. (Thus *Homo* is my generic name, and *sapiens* indicates that I'm wise - at least nominally.) Being visually oriented creatures, we generally designate species by features that we can see. (Maybe dogs would do differently.)

However, when it comes to tiny things like single-celled algae, it's often hard to make specific distinctions because we have so few visually recognizable characters to use. For instance, little green blobs that swim with two flagella are mostly called *Chlamydomonas* - literally, the cloaked one. (It's not a terribly good choice of name since the chloroplast is more bowl- or urn-shaped than cloak-shaped, but according to the International Code of Botanical Nomenclature the name, once given, has to stick unless there are very good reasons for changing it. But read on.) Over the years, more and more species of *Chlamydomonas* have been described.In 1976 a German scientist, Ettl, catalogued over 600 in a 1000-page tome. One had been called *C. eugametos* because, Lothario-like, the cells were good at mating (head-to-head) - so good, in fact, that Franz Moewus wrote a whole series of articles about the different ways in which its mating could be influenced. Since his publications turned out to be almost entirely fraudulent (see Sapp, 1990), another German scientist, Johannes Gerloff, cynically re-named the species *C. moewusii* (Gerloff, 1940). That was the species that I studied for many years. Other scientists chose another species, *C. reinhardtii*, in which the cells mate side-to-side. In various ways this proved to be more useful for scientific research, so now hundreds of scientists are studying various aspects of its biology, keeping informed with a *Chlamydomonas* newsletter and annual meetings in congenial locations.

However, people weren't too happy about all those specific differences, because many are so hard to see even with first-class microscopes.The cell shapes vary according to the age and nutrition of the cells. Some species usually have an eye-spot at the front of the cell, while others have one near the back, but it's never easy to see such things because they are so small. So one thought: if we humans aren't good at distinguishing among these species, maybe the algae themselves would be better at it. For instance, *Chlamydomonas* cells that I found on the Island of Yap, although they look identical to what I've been calling *C. moewusii*, refuse to mate with my strains, though they pair readily enough among themselves. So should I call them a different species? (I suppose it depends on how you define a species: that's another thorny subject. Now enter the molecular biologists. Just as matching DNA can help to identify a crook, so matching DNA should serve to identify a species. And that's what another German scientist, Proeschold and his colleagues, have now done for *Chlamydomonas* - with devastating results! (Proeschold, 2001). Their studies have revealed that the family tree of *Chlamydomonas* has 18 major branches, each with several twigs, which we are urged to consider as genera and species respectively. So which one should we regard as the "true" *Chlamydomonas*, and how should the other major branches be re-named??

This leads us back to our international code, which decrees that the first given name should take precedence. That was *C. pulvisculus*, the name given back in 1786, but unfortunately it was so poorly described that now we can't be sure about its specific characters. What is more, no authentic material remains. The nearest thing we have now is *C. reinhardtii*. And that's an almost unbelievable stroke of luck, because it means that none of the recent

research on *Chlamydomonas*, almost all of which has in fact been done using *C. reinhardtii*, needs to be re-named.

Of course, those few of us who had chosen to study other species, which now may have to be renamed, are just out of luck. Oh well, at least the facts remain, even if the names of the algae may have to be revised. I suppose we muist abide by the international rules.

References

Ettl, H. 1976. Die Gattung *Chlamydomonas* Ehrenberg. J. Cramer, 1122 pp.

Gerloff, J. 1940. Beitraege zur Kenntnis der Variabilitaet und Systematik der Gattung *Chlamydomonas*. Archiv f. Protistenkunde 4, 311-502.

Mueller, O.F. 1786. Animalcula infusoria fluviatilis et marina Hauniae, S.367.

Proeschold, T., Marin, B., Schloesser, U.G. and Melkonian, M. 2001. Molecular phylogeny and taxonomic revision of *Chlamydomonas* (Chlorophyta). Protist 152, 265-300.

Sapp, J. 1990. Where the truth lies. Cambridge University Press, 340 pp.

Rob Fitch playing a *Nereocystis* horm at PSA 2003. To read more about the happings at the meeting see page 10.

OBITUARIES

Kathleen M. Cole

Kathleen M. Cole passed away suddenly at her home on April 12, 2003. Kay was a faculty member at the University of British Columbia (UBC) from 1955 to 1986 and Professor Emerita from 1987 to 2003. Her distinguished career included 107 published papers, proceedings, and chapters, co-editorship of the book Biology of the Red Algae, editorship of Phycologia (1971-7), Killam Senior Fellowship (1972-3), chair of the Natural Sciences and Engineering Research Council of Canada (NSERC) Plant Biology Selection Committee (1984-5), and the George Lawson Medal of the Canadian Botanical Association (1998).

Jeff Zeikus

Jeff Zeikus, long-time curator of the Culture Collection of Algae at the University of Texas. April 2, 2003 Jeff was born in New Jersey, and he grew up in Florida where he graduated from the University of Florida with a B.S. and M.S. He served four years in the U.S. Army and completed his Ph.D. at Indiana University before teaching at the University of Alabama. He moved to Texas in 1978, and loved Texas as home. A botanist, Jeff was curator at the Culture Collection of Algae at the University of Texas. He grew thousands of bottles of pond scum, seaweeds, and their relatives, and he knew each of them well. His slowly declining health due to spinal muscular atrophy presented challenges that would have defeated most of us.

Wolfgang Gross

Wolfgang Gross passed away suddenly on 23 June 2003.

Edison J. de Paula

Dr. Edison J. de Paula died in September 2003 in a car accident. Edison died at the age of 52 years at the peak of hiscareer. He was one of the most creative phycologists in Brazil and will be missed by his colleagues.

Dr. ARA Tayor

Dr Ron Taylor passed away in August 2003. He remained an active attendee of departmental seminars,proposals and other academic functions, and was deeply interested inall of the current phycological research at UNB. Ron's commitment to

UNB, students and the algae is evidenced by a recent fellowship that he established to support graduate student research in phycology here in our department. He will be missed by all of his friends and colleagues, especially those of us in the phycological community.

PSA 2003 in coastal Oregon - a re-cap

This year, I was given the honor of hosting our 2003 PSA meeting that was held jointly with the Society of Protozoologists. I was fortunate to be able to arrange the meeting for June 14-19 at the very deluxe Westin Salishan Lodge and Golf Resort on the central Oregon Coast. Nearly 300 people attended and 200 presentations were given, including 140 talks and 60 posters. Although most people attending the meeting were from the USA, 20% were from outside the US, with Canada and impressively Korea the other most highly represented countries. Approximately 30% (88) of the attendees were students, promising a bright future for our fields.

The weather was perfect, and as a precursor to the meeting two intertidal field trips were held. Since each started at 5:45 am, they were only for energetic souls! On Saturday, 25 people joined us for the NWAS (Northwest Algal Symposium Series) sponsored trip to Seal Rock, and on Sunday morning 50 people attended the PSA intertidal trip to Otter Crest. Both carved sandstone intertidal areas are famous for their lush growth of seaweeds. With the help of Bob Rasmussen and John Young as trip leaders, we got to show our phycological friends all of the beautiful seaweeds here in Oregon, including *Postelsia palmaeformis* that was abundant in the drift on both beaches. I was particularly delighted to be able to show Mike Wynne a large bed of *Polyneuropsis stolonifera* Wynne, McBride & West, his own species that he had thought was rare! At Otter Crest, we finished off the field trip with a remarkable performance by Rob Fitch playing a *Nereocystis* horn. Ah, the many talents of our phycologists!

The sessions ran from Sunday morning through Wednesday afternoon, and 5 excellent symposia/ workshops occurred. In addition to their own "Advances in Protistology" symposium, the SOP sponsored a symposium on the "Controls of Plantonic Microalgae" with PSA. PSA's symposia included sessions on "Our Changing Coastal Ecosystems" and "Linking Algae, Oceanography and Marine Ecology" as well as a workshop on "Algae as Model Organisms in Education". The contributed paper sessions were packed and the session chairs kept a tight check on the 15 minute talk limit with warning devices such as kelp rattles made by our local artist Cheri Aldrich.

The evening social events were a great success thanks to the fabulous food provided by the Salishan Resort. They amazed us with a wide array of delicious hors d'oeuvres for our mixers, a terrific prime rib meal for our auction dinner, and an incredible salmon potlatch barbecue with Oregon wines for our banquet and awards ceremony. After all of that wonderful food, nothing could go wrong.

After the banquet, the awards ceremony was conducted by David Millie and Michele Wood for PSA and Lynn Rothchild for SOP, and we were very pleased to have nearly all of the awardees present.

The Northwest Algal Symposium Society, which I also represent, was pleased to be able to offer the new "Best Student Poster Award" for this meeting, and we hope that our award will set a precedence for other regional phycological societies to present a similar award when PSA meets in their area. This year's award was given to Aimee Bullard (and Steve Murray) for their poster, "Comparisons of macrophyte cover and community primary production on two southern California shores." Since as many students present posters as give talks, we feel that this award will help to cover this overlooked effort.

It was wonderful to be able to have such a large group of phycologist come to the beautiful central Oregon coast. For those of you who collected seaweeds for molecular analyses, I hope you will keep me informed of your name changes so that I can update my Oregon seaweeds database and website! Since we have no molecular phycologists here, we really need your help. I also very much enjoyed having the protozoologists at our meeting. Wayne Coats, who organized the SOP portion of the meeting, was a delight to work with. I hope we will combine or meetings again in the future.

Thanks so much to all of you who were able to make it.

Gayle Hansen
Local Organizer for the PSA/SOP meeting
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Gayle.Hansen@oregonstate.edu

Gayle enjoying her new found *Ulva taeniata* necklace on one of the field trips at PSA 2003.

NOW AVAILABLE!!

SOUTH PACIFIC REEF PLANTS: A DIVERS' GUIDE TO THE PLANT LIFE OF SOUTH PACIFIC CORAL REEFS by Diane S. Littler & Mark M. Littler. OffShore Graphics, Inc. Washington, D.C. 2003. pp. 331. $45.00 US www.erols.com/offshoregraphics/

The purpose of this "Divers' Guide to the Plant Life of South Pacific Coral Reefs" is to make marine plant identification possible for both the sport diving community and professional marine scientists who venture into the fascinating undersea realm of South Pacific reefs. The objective of this book is to facilitate seaweed identification for those who venture into the fascinating undersea realm of South Pacific reefs. Depicted are the major species found during more than 2,200 SCUBA dives over a 10-year period throughout Tahiti, Cook Islands, Samoa, Fiji, Solomon Islands, Papua New Guinea and the Great Barrier Reef.However, what we have depicted are the major species that we found during more than 2,200 SCUBA dives over a 10-year period throughout Tahiti, Cook Islands, Samoa, Fiji, Solomon Islands, Papua New Guinea and the Great Barrier Reef. More than 370 stunning underwater photographs showcase the major seaweeds. Over 70 additional images depict 'ecological phenomena' in photographic sidebars.

South Pacific Reef Plants features underwater color photographs of each plant on the right facing pages, with a list of key characters to the left of each photo. The location and depth of every photograph is given at the bottom left corner. The descriptions, habitat information, distributions and notes of interest appear directly across on the left facing page to facilitate identification. The photographs were selected to emphasize the characters that enhance visual identification. A specimen can thus be "picture-keyed" initially, then positively identified by using the dichotomous keys in conjunction with the key characters.characters. ***Illustrations:*** *South Pacific Reef Plants* features underwater color photographs of each plant on the right facing pages, with a list of key characters to the left of each photo. The location and depth of every photograph is given at the bottom left corner. The descriptions, habitat information, distributions and notes of interest appear directly across on the left facing page to facilitate identification. The photographs were selected to emphasize the characters that enhance visual identification. A specimen can thus be picture-keyed initially, then positively identified by using the dichotomous keys (p. 13) in conjunction with the key characters.

Graduate Assistantship (MS or PhD) Available in Seaweed Environmental Biotechnology

A Graduate Assistantship is available starting this coming January (2004) or the following fall (2004). The student will participate in one or more projects in our laboratory that is developing both native and genetically engineered seaweeds to remediate toxic compounds in marine and estuarine waters. If you are interested in environmental applications of seaweed biotechnology, contact:

Donald P. Cheney
Biology Department, Northeastern University, Boston, MA 02115 (email: d.cheney@neu.edu)

…...finally, Jeremy Pickett-Heaps is pleased to announce
that a 60 min. video:

"DIATOMS: Life in Glass Houses"

will be available in October (PAL or NTSC). Yes, this is the definitive video on the life of these extraordinary cells. Indispensable for teaching!

To see what the video covers, download the "Teacher's Guide" from the Cytographics website where you can also order your copy. We hope to have some representative clips for your amusement up there soon.

http://www.cytographics.com/resource/catalog/tapes/vt.html

Deadline for submission of information for the next PSA Newsletter:

January 15th, 2004

Please contact Alison Sherwood or Morgan Vis (psa@psaalgae.org)

PRELIMINARY ANNOUNCEMENT: PSA 2004

Mark your calendars! **PSA 2004** will be held from August 7-12, 2004 at the Williamsburg Hospitality House (across the street from the College of William and Mary), in Williamsburg, Virginia. More information to come in the spring newsletter. Hope to see you all there!

For further information contact either Chuck Amsler, Program Director (amsler@uab.edu) or Sharon Broadwater, local organizer (stbroa@wm.edu).

Participants in the Otter Crest field trip at PSA 2003.

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