

Newsletter of the **FRIENDS**
OF THE
FARLOW

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K. Griffith, Editor

David Linder and the Boylston Street Diatoms

Robert K. Edgar

Farlow, Thaxter, Riddle, Dodge, Linder, White, Weston, Lamb and Pfister¹ -- across the past 130 years these curators (a decidedly mycological lot) have managed the Farlow. Only Riddle and Lamb worked primarily on lichens, only Farlow and Lamb made important studies on algae, and only Linder conducted research focussed on the diatoms. Despite the wealth of Farlow Herbarium diatom material available to him at the time, ranging from the abysses of the Southern Ocean to the slopes of the Sierra Nevada and from the Eocene to the present, Linder found interest in diatoms beneath the feet of the pedestrians of Boylston Street in downtown Boston.

In 1915 during subway excavation for an extension of the current day Green Line west from Boston Common under Boylston Street, workers exposed a series of wooden stakes near Clarendon Street about 30 feet below street level. The topmost 16 feet was fill added since about 1850, and primarily derived from topping Trimountain (now Tremont) westward into the waters and

marshes of Back Bay; below the fill was another 16 feet of an older naturally deposited sediment.



Fig. 1. David Hunt Linder²

The stakes stood more-or-less vertically, were 2-3 inches in diameter and about 4 feet long with their lower ends axe-sharpened and set in the glacial blue clay at

FoF Annual Meeting
Saturday, November 3. See page 10.

the bottom of the exposed profile. Between the stakes were a series of wattles - smaller branches woven to form an apparent fence (see Fig. 4). Such a deeply buried, apparently man-made structure immediately raised questions as to its antiquity and function. The pursuit of these questions centered around Frederick Johnson, director of the Robert S. Peabody Foundation for Archaeology at Phillips Academy in Andover, Massachusetts. The leading hypothesis was that the structure was a Native American fish weir, but some thought the area had been a site of oyster culture. In an attempt to understand this structure, Johnson assembled an interdisciplinary team of experts: Elso Barghoorn and Irving Bailey, a plant paleontologist and a plant anatomist, respectively, at Harvard; Thurlow Nelson, an oyster expert at Rutgers; and David Linder at the Farlow.

Linder, a nephew of William Farlow, was a Massachusetts native thoroughly schooled at Harvard from his bachelor's to his doctoral degrees, where his mycological training was at the foot of Roland Thaxter and with the hand of William "Cap" Weston. After an expedition to North Africa and appointments at Washington University and the Missouri Botanical Garden in St. Louis, Linder was enticed by Weston to return to Harvard in 1931. Starting as curator the following year, he became responsible for major growth in the Farlow's collections and library over the next decade and a half. As a mycologist, he continued his internationally recognized work, especially on the helicosporous fungi imperfecti, and initiated pioneering studies of marine fungi.³ Despite all the work at hand, in 1939 he stepped into the field of applied diatom studies in response to Johnson's solicitation for help with the Boylston Street samples.

Linder microscopically examined portions of the profile, especially those near the wattles, and made semi-quantitative estimates of diatom species' relative abundance. He coupled these observations to a salinity classification of European diatoms based on where they produced their maximal growth - in either marine, brackish or freshwater habitats (Fig. 2).



Figure 2. *Pinnularia* (left), a robustly silicified freshwater diatom, and *Gyrosigma* (right), a more delicate marine diatom, from Linder's samples. Note the *Gyrosigma* is broken just below its center (the lens-shaped nodule marked by the small arrow). The complete valve is S-shaped and about twice as long as the fragment shown. Breakage of diatoms in compacted sediments is common.

I have summarized Linder's 6 tables of results⁴ in Fig. 3, in which I have calculated the proportions of each sample composed by marine, brackish and freshwater diatom species, each weighted by Linder's estimate of their abundance. No diatoms were found in the blue clay, but just above it was a small layer containing few but mostly freshwater diatoms, which Linder interpreted as having been laid down above the mean high water mark. Above this, marine diatoms become abundant and dominate at all higher levels, except for two apparent times when the water was more brackish – one corresponding to the level of the weir. He found no hiatus in diatom deposition in the profile, and concluded deposition had been continuous in brackish-marine water reflecting mildly varying exchanges between Back Bay and the open sea due to submergence of the land.

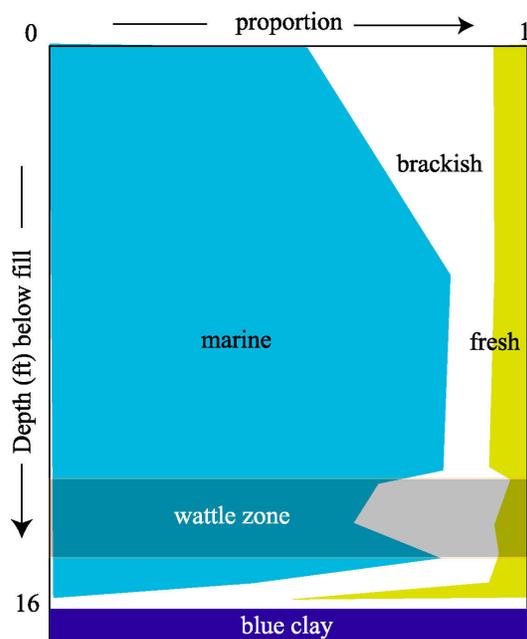


Fig. 3. Linder's observed distribution of diatoms at the Boylston Street site classified by salinity optima.

Paul Conger, the diatomist at the Smithsonian Institution, called it a "careful and able study."⁵ It was good, normal science done within the context of the prevailing ideas. However, it is one thing to see diatoms; it is quite another to claim submergence (or that a bunch of buried sticks was a fish weir). Linder sent his findings to Johnson in December of 1940, and Johnson returned a seven-page, single-spaced, commenting, critiquing and challenging "epistle" (in Linder's words⁶) ending with "I hope you will not be completely disgusted with me."⁷ Johnson had made it clear from the beginning that he was not an expert in these things - that he was unlikely to challenge observations - but he would be playing intellectual hardball with inferences derived from them. Thus when Linder claimed some specific diatoms were characteristic of "river mouths," Johnson wanted to know what that meant and what evidence there was for such a claim.⁷ When Linder offered explanations of the apparent salinity pattern changes in the profile in terms of historical topographical changes in the Shawmut peninsula, Johnson found that too big a leap *from the diatoms alone* for his taste and asked Linder to tone down his postulations about topography as there were many lines of evidence to be considered.⁷ In the correspondence between Johnson and Linder one finds both men seeking statements they could live with, sometimes with some exasperation. In response to one change made by Johnson, Linder wrote: "Your change historic to recent, is indeed an improvement, for who am I to state when the blinkin' mud was deposited?"⁶

Ah, the "blinkin' mud" ... its absolute age was not measured until the carbon-14 dating technique became available about a decade and a half later. The base of the profile is currently estimated at 5700 years before present and the weirs as having been maintained 3700-5200 years before present.⁸

Thus, in about 5700 years, the intersection of sea and land rose about 16 feet (or about 400 cm), that is, at the roughly rounded average rate of 1 mm per year, or 1 m per thousand years. [This is a good number to put in your pocket as you read about global climate change in the future around here.] In the 1940s there was a prevailing interpretation of the “subterranean position” of the weir site as due to sinking of the land – the subsidence of the Shawmut peninsula. But relative changes in sea level are a combination of changes in the elevation of land, primarily associated with its response to glaciation about 10,000 years ago, and changes in the volume of the ocean due to the melting of polar land ice. In Boston, all the increase in relative sea level has been due to volume increases in the ocean; the land has been relatively stable. However, along the southern New England coast, sea level has risen at about twice the rate (2-3 mm/yr) as that at Boston – about half due to volume changes and half due to land subsidence.⁹

In 1939, excavation for the New England Mutual Insurance Building, adjacent to the current John Hancock Building, and other nearby building excavations revealed a vastly more extensive field of stakes at the same level as those below Boylston Street – an estimated 65,000 of them spread across 2 hectares!⁸ By 1945 Johnson had access to a 135-foot profile from this new excavation – nearly 10 times the length of the one Linder had analyzed earlier - and he eagerly invited Linder’s involvement. Linder thought it a “fascinating problem” and was “very much interested,” but he was doubtful about “finding the time to take on this extra work since I have about all I can do trying to take care of the running and correspondence of the Farlow Herb. On top of this I am slated next Fall to give a course which knocks out three whole days a week. How in God’s name I can run the Farlow on half time, I would love to do the

diatoms for you but it is quite obvious that I can’t do anything on the material until June 1947 ... [when I might] turn from mycologist to diatomist again.”¹⁰ David Linder unexpectedly died late in 1946 before he could again make the “turn.” Paul Conger undertook the study.⁵



Fig. 4. Model of fish weir displayed on Boston Common from 2004-2007.

Linder’s paper marks an early application of the study of diatoms to problems in archaeology. Now such studies are common, in which diatoms not only are used as environmental proxies but as tracers of the movement of human artifacts, such as pottery.¹¹ The Boylston Street fish weir sites continue to capture the attention of archaeologists to this day, but diatoms have only sparsely been employed in their analyses. The Boylston Street site, not a single weir but a series of weirs, apparently was in use for about 1500 years, after which rising sea level likely forced its abandonment or relocation.⁸ In 2004 a replica of a weir was built by students from

the Neighborhood House Charter School and was exhibited at the Charles Street edge of the Boston Common until 2007 (Fig. 4).¹² Currently the Arlington Street Station on the Green Line is closed for renovation but is expected to open in 2008 with new entrances and a new mural – of the Boylston Street fish weir.¹³ If you pass through this part of Boston, recall that swatches of the past from beneath your feet reside in the Farlow, having contributed to elucidating Native American history on the Shawmut Peninsula and alerting us to substantial natural recent millennial-scale changes in Boston's coastal landscape that are continuing and, for man-made reasons, accelerating.

ENDNOTES

¹ William Gilson Farlow (1879-1919), Roland Thaxter (Honorary, 1919-1932), Lincoln Ware Riddle (1919-1921), Carroll William Dodge (1924-1930), David Hunt Linder (1932-1946), William Lawrence White (1948-1952), William Henry Weston, Jr. (1952-1953), Ivan Mackenzie Lamb (1953-1972), and Donald Henry Pfister (1974-). Lisa DeCesare of the Harvard Botany Libraries kindly provided this listing and the dates of the curators' tenure.

² Photo from the Farlow Library Archives.

³ Rusden, P. L. 1947. David Hunt Linder. September 24, 1899 - November 10, 1946. *Mycologia* 39:133-144.

⁴ Linder, D. H. 1942. Diatoms, pp. 67-81. In Johnson, F. The Boylston Street fishweir [I]. Papers of the Robert S. Peabody Foundation for Archaeology, vol. 2.

⁵ Conger, Paul S. 1949. The diatoms, pp. 109-123. The Boylston Street fishweir II. Papers of the Robert S. Peabody Foundation for Archaeology, vol. 4.

⁶ Linder, D. H. to F. Johnson, letter dated 28 June 1941, Farlow Library Archives.

⁷ Johnson, F. to D. H. Linder. letter dated 27 June 1941, Farlow Library Archives.

⁸ Décima, E. B. & D. F. Dincauze. 1998. The Boston Back Bay fish weirs, pp. 157-174. In Bernick, K., ed. Hidden dimensions: the cultural significance of wetland archaeology. Pacific Rim Archaeology and Wetland Archaeology Research Project (WARP), Occasional Paper, no. 11. University of British Columbia Press, 382 pp.

⁹ Donnelly, J. P. 2006. A revised late Holocene sea-level record for northern Massachusetts, USA. *Journal of Coastal Research* 22:1051-1061. See also <http://www.geo.brown.edu/georesearch/esh/QE/Research/CoastStd/SeaLevel.htm>.

Barnhardt, W. A., W. R. Gehrels, D. F. Belknap and J. T. Kelley. 1995. Late Quaternary sea-level change in the western Gulf of Maine: evidence for a migrating glacial forebulge. *Geology* 23:317-320.

¹⁰ Linder, D. H. to F. Johnson, letter dated 21 June 1945, Farlow Library Archives.

¹¹ Mannion, A. M. 1987. Fossil diatoms and their significance in archaeological research. *Oxford Journal of Archaeology* 6:131-147.

¹² Ancient Fishweir Project, <http://www/fishweir.org>. Accessed 15 September 2007. Figure 4 reproduced with permission of the Project.

¹³ Back Bay Sun, May 24, 2006. <http://www.backbaysun.com/>. Accessed 15 September 2007.

Editor's note: The photo in the upper left corner on the first page is of a fossil diatom (very early Miocene, c. 20 million years ago) from beneath the city of Richmond, Virginia. The diatom's generic name is *Heliopelta* - meaning, more or less, a shield shaped like the sun.

News from the Farlow

Matthew E. Smith has joined the Farlow as a post-doctoral fellow. Matt did his graduate work at the University of California, Davis on mycorrhizae in dry oak woods. He is interested in the ecology and taxonomy of these fungi. His taxonomic interests were spurred by his discovery of *Genea* and related taxa, truffle-like species associated with the roots of these oaks. He is continuing work on these species at the Farlow and will be expanding his investigations to include European material. He will also be seeking rare and elusive members of the genus *Genea* that occur in eastern North America, several of which were collected by Roland Thaxter and described as new by Helen Gilkey, North America's then reigning expert on the Tuberales. Matt is a wonderfully energetic addition to the Farlow.

Yuhuan Wu, from the Institute of Applied Ecology, Chinese Academy of Science, P. R. China, has spent nearly two months at the Farlow studying mosses and liverworts. Her work focused on the families Geocalycaceae, Gymnomitriaceae and Amblystegiaceae. She extended her stay because of the richness of the Farlow collections in these groups, particularly type specimens. She has examined and annotated many, many type specimens and clarified notations on the specimens.

Harvard freshman **Kwee Boon Brandon Seah** has begun work in the Farlow collections. Brandon came to the Farlow soon after his arrival from his native Singapore to introduce himself as a former student and assistant to Benito Tan. Tan was previously on the Farlow staff studying mosses. With his training in bryology and many other interests, Brandon will be a welcome addition to the Farlow curatorial ranks.

Thanks to Friends of the Farlow, **Genevieve Lewis-Gentry**, our curatorial assistant, was able to study mosses in a seminar at Eagle Hill. This gives her important basic training in mosses and supports her work here in the Herbarium.



We have a newly minted Ph. D. at the Farlow in **Kristin Peterson**. Kris completed her thesis and successfully defended it in September. Kris worked primarily on the systematics, biogeography and co-occurrence of *Cyttaria*, a fungus on the southern beech, *Nothofagus*. We look forward to seeing Kris back in Cambridge for graduation along with her young son and mycologist husband Matias Cafaro. All now reside in Mayaguez, Puerto Rico and teach at the University of Puerto Rico. Don Pfister began his teaching career there as well.

David Hewitt, who finished his Ph.D. with Don last spring has taken a position here at Harvard as a preceptor in Life Sciences. In that role he will be assisting in courses offered in Life Sciences and in Organismic and Evolutionary Biology.

FoF member and chemist **George Davis** has been assisting in various ways in the Herbarium. He recently procured a gas chromatograph rig that he is rehabilitating for use in the Farlow Laboratory. This equipment will be used particularly to study lichen chemistry and systematics. It is a wonderful addition to the Farlow.

Michaela Schull, lichenologist, **Genevieve Lewis-Gentry**, and **David Hewitt** attended the New Hampshire Andrews foray in September.

We were also delighted to see **John S. Farlow** and **Virginia Zoll** from Maine; **Scott LaGreca** from the Natural History Museum, London; and **Norton Miller** from the New York State Museum.

William Gilson Farlow has been framed, or rather, reframed. The large portrait of Farlow that hung in the hall has been remounted using acid free materials, thanks to the Friends of the Farlow. Several years ago, Don found an amusing commentary by Farlow on the portrait in a letter written to Curtis G. Lloyd. The following facsimile of the letter will be hung beside the portrait:

30 January 1916

Dear Mr. Lloyd,

I am sending with this my photograph which some people say is good but some do not. At any rate, I am always satisfied because not to be satisfied would mean that I must sit again which I should never do if I could help myself. In the photograph I seem to have but one hand but that one you will see is arranged in the most "approved" manner, so that I appear to be lost in thought, perhaps thinking what an infernal bore it is to have one's picture taken.

Yours very truly,
W. G. Farlow

Teuvo Ahti honored



FoF member Teuvo Ahti at the Newfoundland Tuckerman Workshop

Teuvo Ahti was photographed standing by the sign along the Trans-Canada Highway for the Sir Robert Bond Park in Whitbourne, Newfoundland. The small cultivated park has a mature stand of *Acer plantanoides*, on which *Normandina pulchella*, *Evernia prunastri*, *Lobaria pulmonaria* and *Leptogium* species are growing. In addition, over fifty thalli of *Degelia plumbea* and mature thalli of *Lobaria quercizans* are growing on hawthorn.

From Helsinki, Finland, Teuvo started surveying lichens along the caribou ranges of Newfoundland in 1956. The Newfoundland Department of Environment and Conservation hosted the September 2007 Tuckerman Workshop on the Avalon Peninsula of southeastern Newfoundland. Both Teuvo Ahti and Wolfgang Maass, who has located habitats favored by the sometimes endangered lichen *Erioderma pedicellatum* in the provinces, were honored for their commitment to lichens of Newfoundland by the NDEC.

Selected New Books at the Farlow

Compiled by Gretchen Wade

Mycosphaerella and its anamorphs. 2, Conspectus of Mycosphaerella. By André Aptroot ; edited by Pedro Crous. Utrecht : Centraalbureau voor Schimmelcultures, 2006.

Bladmossor : sköldmossor--blåmossor = Bryophyta : Buxbaumia--Leucobryum : detta volym omfattar samtliga nordiska arter / texter Tomas Hallingbäck ..., [et al.] ; bidrag har dessutom lämnats av Karin Wiklund ; illustrationer Pollyanna von Knorring ..., [et al.]. [Uppsala] : ArtDatabanken ; Sveriges lantbruksuniversitet, 2006.

Genera of freshwater fungi. By Lei Cai, Kevin D. Hyde & Clement K.M. Tsui. Hong Kong: Fungal Diversity Press, c2006.

Handbook of mosses of the Iberian Peninsula and the Balearic Islands : illustrated keys to genera and species . By Creu Casas ... [et al.] ; illustrations: Anna Barrón, Iolanda Filella ; translation into English: Elena Ruiz ; revision of the English text: Alan Roy Perry. Barcelona : Institut d'Estudis Catalans, 2006.

The genus Cladosporium and similar dematiaceous hyphomycetes. edited by Pedro W. Crous ... [et al.]. Utrecht, The Netherlands : Centraalbureau voor Schimmelcultures, 2007.

The mycota : a comprehensive treatise on fungi as experimental systems for basic and applied research. edited by K. Esser. 2nd ed. Berlin ; New York : Springer, c2004. *We have just received the second edition of volume 8: Biology of the fungal cell.*

A check-list and atlas of the seaweeds of Britain and Ireland. By F. G. Hardy and M. D. Guiry ; with maps prepared by H. R. Arnold. Rev. ed. London : British Phycological Society, c2006.

Mosses and other bryophytes : an illustrated glossary. By Bill and Nancy Malcolm. 2nd ed. Nelson, N.Z. : Micro-Optics Press, 2006.

International Symposium on Arcto-Alpine Mycology (6th : 2006 : Kangerlussuaq, Greenland)
Arctic and alpine mycology 6 : proceedings of the sixth International Symposium on Arcto-Alpine Mycology (ISAM 6), Greenland, 11-21 August 2006 / edited by David Boertmann & Henning Knudsen. Copenhagen : Danish Polar Center, 2006.

Freshwater cyanoprokaryota of north eastern Australia : 1: Oscillatoriales. By Glenn B. McGregor. Canberra, ACT : Australian Gov't., Dept. of the Environment and Heritage, Australian Biological Resources Study, 2007.

Diatoms of Uruguay : compared with other taxa from South America and elsewhere. By Ditmar Metzeltin, Horst Lange-Bertalot & Felipe García-Rodríguez. Ruggell [Liechtenstein] : A.R.G. Gantner ; Königstein, Germany : Distributed by Koeltz Scientific Books, 2005.

World monograph of the genus Cheilymenia (Discomycetes, Pezizales, Pyronemataceae). By Jiří Moravec. Eching bei München : IHW-Verlag, 2005.

The Phyllachoraceae of Australia. By Ceridwen A. Pearce & Kevin D. Hyde. Hong Kong : Fungal Diversity Press, 2006.

An annotated checklist of polish liverworts and hornworts. By Jerzy Szwejkowski. Krakow : W. Szafer Institute of Botany, Polish Academy of Science, 2006.

Surveying and report writing for lichenologists. By David J. Hill. London : British Lichen Society, 2006.

Norsk lavflora. By Håkon Holien, Tor Tønsberg. Trondheim : Tapir Akademisk Forlag, c2006.

Bryophytes of Colorado : mosses, liverworts, and hornworts. By William A. Weber and Ronald C. Wittmann. [Santa Fe, NM] : Pilgrims Process, Inc., c2007.

Visiting Lichenologists



The Friends of the Farlow supported the husband and wife team of **Eimy Rivas Plata, M.Sc.** and **Dr. Robert Lücking** from the Field Museum, Chicago while on a working visit to Farlow Herbarium from June 25th to 30th. The purpose of their visit was to revise the lichen collections of Dodge, LeGallo, Clemens, Deighton, Tuckerman, and others, focusing on the families Thelotremataceae and Graphidaceae collected in the tropics.



Chapsa sp.

The various collections they studied included specimens found in the following countries and territories: Argentina, Brazil, Cameroon, Chile, Colombia, Costa Rica, Cuba, Fiji, French Guiana, Guadeloupe, Guatemala, Hawaii, India, Indochina, Jamaica, Kenya, Malaysia (Borneo), Mozambique, New Guinea, New Zealand, Nigeria, Panama, Peru, Rhodesia, São Thomé, Sierra Leone, Sri Lanka, the Philippines, Uganda, the continental USA, and Venezuela.

As well as revisions, this study required morphological and molecular analysis to identify patterns of distribution and their changes throughout time. One outcome from this revision will be a monograph of Thelotremataceae and Graphidaceae from the Philippines.

Eimy and Robert found the Dodge collection a great source of information due to the collecting sites and the quality of the specimens. More than a thousand specimens



Thelotrema sp. "new to science?"

from both families were re-identified at genus and species level, and some species new to science were found. They also produced around 500 digital images of many specimens, which will be used in the color guide "Corticolous lichens of the tropics," produced by Eimy. This will be made available through the Field Museum Botany webpage, the Environmental and Conservation Program and The Field Museum's KE EMu online database (<http://emuweb.fieldmuseum.org/botany/Query.php>).

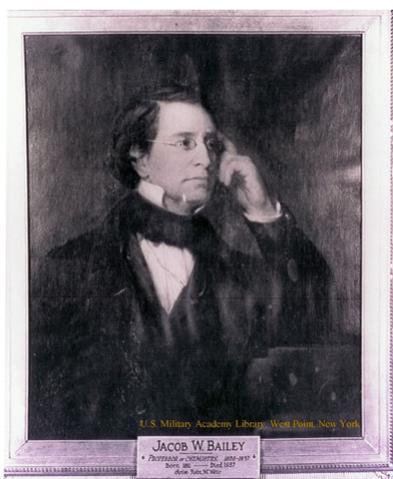


Thelotrema sp.

Eimy and Robert reported that their stay was successful and enjoyable due to "the amazing people who welcomed us warmly, such as Professor Don Pfister, and his staff: Dr. Michaela Schmull, Ingrid McDonough and David Hewitt."

FoF Annual Meeting

The FoF Annual Meeting will be held on Saturday, November 3, beginning at 3:45 p.m. with a business meeting. At 4 p.m. the lecturer will be **Robert K. Edgar**, Professor Emeritus of Biology of the University of Massachusetts and caretaker of the diatom collections at the Farlow, speaking about



"Jacob Whitman Bailey (1811-1857): Diatoms, West Point and the American Academy." The Friends will host a reception in the Farlow Library after the lecture.

Professor Edgar describes his upcoming lecture in the paragraph below.

Diatoms are photosynthetic, unicellular, eukaryotic organisms which play prominent roles in global biogeochemical cycles and marine and freshwater food webs. Their study originally developed in the early nineteenth century among about a dozen workers, all European except for a single American, Jacob Whitman Bailey (1811-1857), who for the two decades prior to the Civil War was the Professor of Chemistry, Mineralogy and Geology at the United States Military Academy. While this lecture will address Bailey's and West Point's seminal roles in early diatom studies and Bailey's

alliances with John Torrey, Asa Gray and others in the development of a professionalized American science, considerable attention will be accorded to the diatoms themselves - the ideas that drove their scientific investigation, the understanding of their nature that had developed by mid-century and the state of that understanding from our current 21st century perspective. Illustrations will draw heavily from Bailey's and other diatom collections at the Farlow.

Parking for Annual Meeting

If you plan to park in the Oxford Street Garage for the Annual Meeting, call Ingrid McDonough at (617-496-3023) or email her at imcdonou@oeb.harvard.edu. Please respond as soon as possible so Ingrid will be able to reserve the correct number of spots.

Directions

For the Oxford Street Parking Garage

Coming via Massachusetts Avenue, go down Everett Street, cross Oxford Street and enter the driveway to the parking garage, which is presently in the midst of a construction site. If you are coming via Oxford Street, enter the garage area at the light at Everett Street.

The guard house is manned 24 hours a day. The guard will give you a magnetized paper ticket. Insert this ticket in the box before the gate, which will allow the gate to open. You will use this same ticket to open the pedestrian door when returning to the garage elevators, as well as for opening the gate when you leave the garage.

From Oxford Street Garage to Herbaria

Upon exiting the elevator, follow the directions on the yellow signs which direct you to the Museum of Natural History and the Law School. The walkway will take you to the back of the Herbaria. Follow the white cross marks to the walkway between the Herbaria and the Museum of Comparative Zoology. Pass through the walkway. Entrance to Herbaria will be on your left.

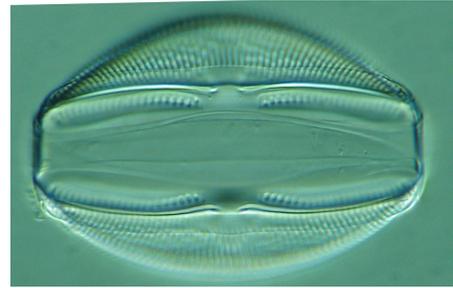
Farlow presence at NEBC meeting

The Farlow was well represented when the New England Botanical Club met in May at the Garden in the Woods in Framingham. David Hewitt spoke to the group on "The genus *Neoelecta* - hidden diversity in New England, surprising uniformity across the Atlantic." Benjamin Wolfe, an OEB Ph.D. student was the winner of this year's NEBC graduate student proposal to study "Biogeography, genetics, diversity and host specificity of *Amanita* in New England." Also attending the meeting were Maria Alice Neves, a Ph.D. candidate affiliated with the New York Botanical Garden, working at the Farlow thanks to FOF support, and Michaela Schnull, curatorial/research associate at the Farlow.



Left to right: Ben Wolfe, Maria Alice Neves, Michaela Schnull and David Hewitt.

Diatom Workshop Sunday, November 4th



FoF will offer a workshop on **Diatoms** at the Harvard University Herbaria from **11 a.m. to 5 p.m. on Sunday, November 4th, 2007**. This workshop will utilize the diatom collections of the Farlow as well as living samples to present an overview of the morphological diversity of these ecologically important microorganisms. It will be conducted by three professional diatomists: **Robert Edgar** (Farlow Herbarium), **Karin Ponader** (Harvard University Herbaria) and **Stacy Edgar** (diatom.org).

The workshop will cover the major groups (families) of living and fossil diatoms and the habitats in which they are found. Examination of the diatoms will be primarily by means of light microscopy, but a 45-minute session (in groups of 3) using the scanning electron microscope will also be provided. Novice and expert microscopists will be equally welcomed. Participants are invited to bring their own samples. Sample collection and preparation will be addressed as interest warrants.

Space is limited to 12 participants; any spaces not filled by October 5th will be opened to persons who are not FoF members. All materials for the workshop will be supplied. Plan for a bring-your-own working lunch; beverages will be provided. Inquiries may be directed to Robert at rkedgar@fas.harvard.edu or Ingrid at imcdonou@oeb.harvard.edu.

Join us!

Receive the FOF Newsletter, notification of the annual book sale, discount on Farlow publications and services, invitations to the annual meeting and other events, and a special welcome when visiting the Farlow.

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