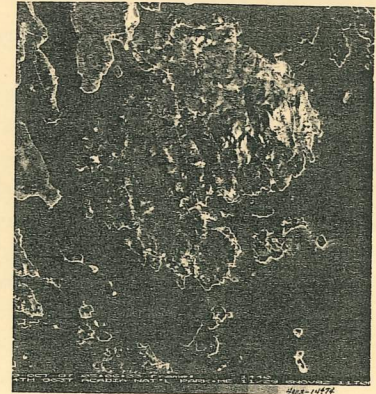


NEERS NEWS



Spring Meeting in Bar Harbor: Another great meeting; perhaps you should have been there and done that!!

Bar Harbor, ME--May, 2002--Some people know exactly where they were when Kennedy was shot, others when the Challenger went down, but where were you when NEERS met at the Atlantic Oakes Resort in Bar Harbor? Hilary Nickles and Blaine Kopp organized a great meeting at the resort complex. The meeting was jointly hosted by the US Geological Survey, Acadia National Park, and the College of the Atlantic. Hilary and Blaine worked extra hard to get many co-sponsors (HydroLab Corporation, Maine Sea Grant College Program, Maine Coastal Program, Maine Department of Marine Resources, Turner Designs, Inc., WET Labs, Inc., Woodlot Alternatives, and YSI, Inc.) and donors. This not only kept the registration costs reasonable, but provided for many extra benefits.

The NEERS meeting got under way

Thursday afternoon with a workshop on the Marine Invertebrate Diversity Initiative (website at: <http://www.fundyforum.com/MIDI/>). This session, organized by D. S. Davis and P. Larsen, was designed to inform the NEERS membership as to the goals and purposes of the initiative and to explain where the initiative was heading and what progress had been made. After the session the members adjourned to the Atlantic Oakes dining room for a buffet supper followed by the opening social.

Oral and poster presentations were held on Thursday. In order to provide time for all to view the posters, a special time for poster viewing was taken out of the oral presentations. This seemed to work well. The posters were outstanding. Many NEERSians apparently now have access to large flatbed printers, so many of the posters had the appearance of be-

ing museum or business-type exhibits. The awards banquet was held at the College of the Atlantic and followed by a contra dance in the Atlantic Gates Center (live music provided by Green Mountain Railway, one member of which participated in the mini-symposium on Saturday—is this going to set a president for oral presentation requirements?).

The Saturday session was broken up into two components, a regular oral presentation session and then a mini-symposium organized and chaired by Charlie Roman on "The role of protected areas in maintaining the integrity of coastal and estuarine systems". The five speakers provided valuable insight on MPAs. The final treat of the meeting was a boat ride on Somes Sound. This time the weather cooperated (in contrast to the gale force winds of the Portland mtg.).

Web Notes

The main enhancement to the NEERS Website is the creation of a membership directory. Scott Nixon had suggested that the directory be modeled after the ERF directory insofar as the member search tool retrieve only a few names at a time and thus discourages or prevents spammers from accessing email addresses from the entire membership. The NEERS directory uses a simple alphabetical system to retrieve membership information. Spam protection is provided by a simple javascript that dismantles email addresses into a format that cannot be retrieved by spam software. When viewed in a browser, the

javascript reconstitutes the email in a form that displays a standard email link that will launch email software depending upon the users PC configuration. Mouseover an email link and the address appears at the bottom of the directory window. Thanks to all the NEERS members that sent compliments to the web committee. All members are requested to examine the directory and forward any corrections as per the instructions on the main directory page. My personal favorite new addition is the Recipes Section found in the Library. The Oven Fish Chowder recipe developed by Helen Warren and submitted

by Scott Warren is outstanding. I know that Scott's father, the Minister/Fisherman, provided Helen with an ample supply of fish caught in Nantucket Sound to perfect this recipe. Please send your favorite recipes via email (maron@snet.net) or even snail mail a xerox copy (210 Amidon Rd, Ashford, CT 06278). These can be your favorite recipes from a cookbook or your own creation and need not have an estuarine foodchain linkage. Please identify the source of the recipe if known. Ron Rozsa

Things to think about

- 2002 ERF meeting in Seattle, Washington
- US Congress changes rules and makes the NEERS president next in line to succeed US President
- Should NEERS consider organizing our own dance band for biannual meetings?

Message from your President

June 10, 2002

Greeting,

The spring NEERS meeting at Bar Harbor was a rousing success due to the efforts of Hilary Neckles and Blaine Kopp, and of course all the NEERS members that participated. The depth of understanding, professionalism and poise in the student presentations was remarkable. These were among the best we have ever seen. The Fall meeting in Connecticut is shaping up to be another stimulating meeting. The special symposium on Long Island Sound promises to add an interesting dimension to this meeting and provides an opportunity to share information with a new array of individuals, including managers, teachers and citizens.

VOTE EARLY and VOTE OFTEN. Our Fall meeting will also be a election meeting. In addition to selecting a new suite of NEERS Officers, we will be voting on a few changes to the Constitution and reviewing an Operations Manual. The changes are needed to make the Constitution this document more closely reflect how NEERS works and the Operations manual is needed because we now have enough activities that it is difficult for everyone to keep straight who does what by when. In 1994, we modified the Constitution to conform to non-profit regulations. This time we need to change a few things to be consistent with how NEERS actually does business. The major changes are specifying that the NEERS President attends the ERF Governing Board meetings, specifying all the NEERS positions, identifying the Standing Committees, authorizing the NEERS Board to make ad hoc committees as needed, and changing the timing of notifying the membership about Constitutional changes. By changing the notification time to coincide with when we normally mail out meeting information, NEERS will avoid an extra mailing that costs us over \$600. The changes to the

Constitution will be mailed to you and the Operations manual will (eventually) be posted on the web site; copies will be available at the meeting for your reading pleasure. The Operations Manual does not require a vote, but we thought you might like to see the nuts and bolts of how all the things that make NEERS work get done. (Here's a hint – The President does nothing. All the other officers and program people do the real work!)

RANKIN PRIZE CONSIDERATIONS. We need to consider whether it is time to expand the eligibility for the Rankin Award to include poster presentations or develop a separate award. At the recent meeting, despite a very strong attendance by undergraduates, we were in the awkward position of not having anyone eligible for the Rankin Award because there were no oral undergraduate presentations. At the meeting, the membership voted to award the Rankin to the best undergraduate presentation at this meeting and to consider the quandary further at the Fall meeting.

There were several factors that contributed to this situation. First, undergraduate presentations have become an important part of NEERS meetings and given the emphasis on research projects as part of undergraduate education, we expect the number of undergraduate student presentations to increase. Second, the poster is increasingly an important presentation format at scientific meetings and NEERS is no exception. In the 80's and 90's we typically had 0-5 posters at a meeting. Recently we have typically had 10 - 20; we had 26 at this

meeting. We have encouraged poster presentations to provide opportunities for in-depth discussion and to avoid having concurrent sessions at NEERS meetings. These two trends came together at the Spring '02 NEERS meeting to provide record participation by undergraduate students with very strong poster but no oral undergraduate presentations.

The original designation of the Rankin Award for the best oral presentation was two-fold. First, we had the Ketchum Award (started in 1983) for best student oral presentation. Second, oral presentations were the norm at our meetings. Thus, when the undergraduate award was proposed in 1989, maintaining the oral presentation criteria and the specifying the Ketchum Prize as best graduate oral presentation award was logical. A few years later, when we developed the Dean Prize (1996) for the best student poster, it seemed sensible to include both graduate and undergraduates in this competition but we did not feel we had enough undergraduates competing to warrant a separate award.

What should we do? We want to encourage and award talented undergraduates, but how to accomplish this raises some issues. Undergraduates have won the Dean poster competition, but at this meeting several undergraduates said they considered not presenting a poster because they felt intimidated by competing against graduate students. If we expand the Rankin Prize eligibility to include posters, how do we fairly compare a poster to an oral presentation? We will consider our options at the Fall business meeting.

See you at the next NEERS meeting!

Linda

Message from the editor

Hope you enjoy this edition of NEERS NEWS. Many thanks to Hilary Nickles for the photos. Sorry that we can't print them in color, but David says the budget just won't allow for that expense. Geez, if the CEO for Tyco can afford 10+ million dollars of art for his

NYC apartment, surely David should be able to cook the books to get enough for color printing. But, then again, the CEO for Tyco is under indictment and I guess we wouldn't want to see our treasurer in that kind of situation. Note the slight change in the format for the coming

fall's meeting in Connecticut. Pat is doing double duty acting as local organizer and as program chair. Support her in this endeavor by getting to her early with suggestions for talks, etc.

Larry

SeagrassNet established at UNH

SeagrassNet is a global monitoring program to investigate and document both the status of seagrass resources world wide and the threats to this important and imperilled marine ecosystem. The program started with an ongoing pilot study in seven countries of the Western Pacific and is now expanding to other countries; a globally applicable monitoring protocol and web-based data reporting have been established (www.seagrassnet.org). The Western Pacific pilot program directed by Dr. Fred Short at UNH, funded by the David and Lucile Packard Foundation, recruited local scientists and coastal managers to form monitoring teams, and trained these people in identification of seagrass species and the *SeagrassNet* monitoring protocol. *SeagrassNet* team scientists monitor seagrass species composition, percent cover, canopy height,

and biomass, in addition to salinity, temperature and light.

The team scientists use M105 Palm Pilots to determine the date with a tide best suited for the quarterly sampling. Tide-Tool is a Palm OS program that provides tidal information in tabular or graphic format for 6100 locations throughout the world. We are also currently training team leaders to use their PDAs to download temperature and light data.

Thermochron (-10°C - 85°C) temperature sensors from iButton (www.iButton.com) are used to collect average daily temperatures at two locations within each site. The iButtons are launched and downloaded via DS1921 Thermochron iButton software using a Blue Dot receptor connected to a computer serial port. iButtons can also

be launched and downloaded directly to a PDA. Scanning Devices, Inc. has written user friendly iConnection software to allow communication between iButtons and PDAs. This will allow *SeagrassNet* participants to launch iButtons and download the data in the field without having to return the sensors to the lab. Light data is collected using HOBO Light Intensity Loggers by Onset Computers (www.onsetcomp.com). Box-Car 3.7 - 4.2 software is the typical method to launch and download HOBOS, but Onset Computer markets HandCar software to perform this task using PDAs. Upon returning from field sampling, temperature and light data are transferred in text format back to a computer via the PDA cradle for further analysis.

Jeff Gaeckle, UNH

Oceanographic History: The Pacific and Beyond

Benson, Keith R. and Philip Rebeck, eds. 2002. *Oceanographic History: The Pacific and Beyond*. University of Washington Press: Seattle and London.

This volume represents the proceedings of the Fifth International Congress on the History of Oceanography that was held at Scripps Institution of Oceanography, La Jolla, California, July 1993. Those of you good at math will probably quickly note the nine year delay and might ask, was it worth it? The answer is a resounding yes. The editors have done a great job of pulling together a

very diverse group of papers into a coherent whole. The volume is segmented into eleven sections: The Scripps Heritage, Pacific Remembrances, Myth and Natural Knowledge of the Sea, Exploration: The Pacific and Beyond, Pioneers of Ocean Science, North American Oceanography and Marine Biology, Technique and Technology, Fisheries Science and Management, Coral Reef Research, Plate Tectonics, and Archival Resources for the History of Oceanography. With all those topics surely you will find something to your liking. Some

of the elders of oceanography were present and made contributions to the Congress. Walter Munk describes the Sverdrup Years, while William A. Nierenberg discusses the lessons learned from deep sea drilling. Your editor has an article entitled "Four Men and an Albatross: The Growth of American Oceanography, 1882-1921. You heard part of this presentation if you were at the NEERS meeting where I talked about Henry Bryant Bigelow and his work in the Gulf Of Maine. If you can't afford it personally get your library to buy a copy.

PDAs make wonderful field collection tools. Just don't forget extra batteries.

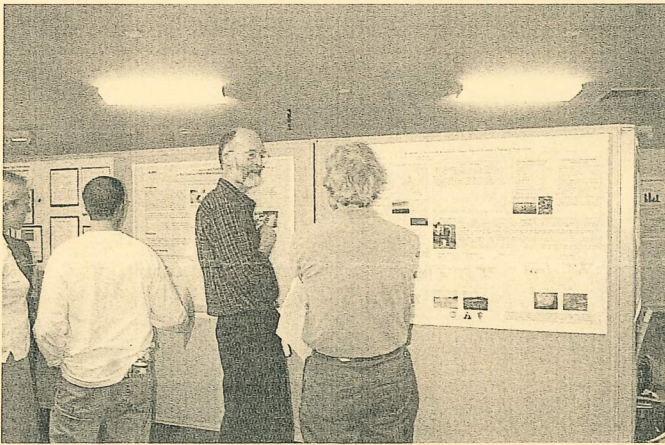
Some Bar Harbor Photos



David making sure customer has paid dues



Party on ladies



Robert gives Sheldon Pratt the low down on his poster



Boat ride on Somes Sound



Present and future fearless leaders of NEERS



NEERS members deep in thought at the banquet

Topographic and Image Analysis Using Programs and Materials from the Internet

Topographic analysis is something usually associated with terrestrial ecosystems. Why would a NEERS newsletter have an article on such. Well, actually, most estuarine ecosystems are the sea end of terrestrial watersheds. Since watershed events influence and perhaps control estuarine properties, as an estuarine scientist we often begin our studies with a topographic analysis of the watershed. By topographic analysis, I mean things such as aspect, slope, and watershed size. Also associated might be cultural features (homes, factories, etc.) and ecological features (vegetation coverage, bedrock geology, surficial geology, etc.)

There are three types of files most closely associated with watershed analysis, DEMs (digital elevation models), DLGs (digital line graphs), DRGs (digitized USGS topo maps) and Orthophotos (aerial photos that have geographic coordinates). Examples of some of these files are shown in the figures below. These files can be obtained from a variety of sources. They use to be directly available from the USGS site on the internet, but now that function has been transferred to a couple of "private" sites. The one I use the most is: <http://www.gisdatadepot.com>. The DEMs and DLGs are free, but you need to pay a small sum for the DRGs.

Once you have downloaded the files, you need a program to open them. There are a variety of programs available from the internet (free or shareware). For viewing DEMs I either use 3DEM or MicroDEM. The latter has a built in decompression

routine, whereas for the former you will have to decompress the files before viewing them. For DLGs and DRGs I use another free program, DLGV32. This program is available from the USGS, but an expansion of it, Global Mapper is also available and it will open many more types of files. Most photo programs can open Orthophotos (since most are usually stored as a geotiff), but you might want to download from Lizard Tech, their freebie that allows one to zoom in and out of an Orthophoto

Often, other researchers have converted some of the preceding file types into files usable by a GIS systems (such as ArcView or ArcInfo). In the common parlance of ArcView, the files are called shapefiles, the collection of shapefiles, data tables, etc., projects. Global Mapper can open shapefiles, but if you don't want to spend the thousands of dollars for a full-fledged GIS program, you can get from the ESRI site a project and thus shapefile viewer for either Mac or PC for free.

There are a variety of sources for GIS files. Those for Maine are available from: <http://musashi.ogis.state.me.us/catalog/catalog.asp>. New Hampshire, Massachusetts, and Connecticut have similar sites.

Image analysis implies that you examining aerial images of locations, where those images are composed of different bands of reflection off the image (e.g., visible or bands to either side of the visible—ultraviolet or infrared). Image analy-

sis would definitely be used to example land use, vegetation cover, surficial geology, etc. With respect to the water itself, we can usually determine surface temperatures, aspects associated with productivity (chlorophyll concentrations), and to a limited extent subsurface topography). A freebie for both Mac and PC is called MultiSpec. It allows one to import the images and to examine the bands making up the image either alone or in combination. I use a program called ENVI which costs thousands of dollars, but does have a free viewer that one can download to examine images. For those of you with Macs who have moved up to OS X, there is a low cost version of GRASS (another general purpose GIS/image analysis program) that runs under that system.

Image files are available from a number of locations, for free, low cost, or use your inheritance prices. Close to home, the University of New Hampshire has established EOS-Webster (<http://eos-webster.sr.unh.edu>). If the files are small enough you can download them directly, a little bit larger, they will send a CD. Use GOOGLE to search for other sites. Resolution for these images ranges with the kind of sensor, etc. Older images have relatively low resolution (30m for MSS). Landsat 7+ images are better, but cost money (about \$400). Space Imaging now has a satellite that provides one meter resolution, but you had better hock your family jewels. Their web site does have some samples available.

For anything mentioned above, I would suggest that you use GOOGLE to find the website. LTS

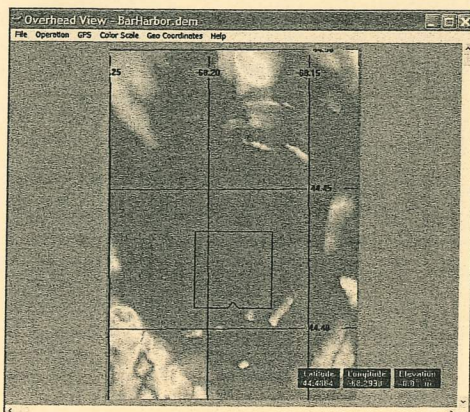


Figure 1. DEM of Bar Harbor

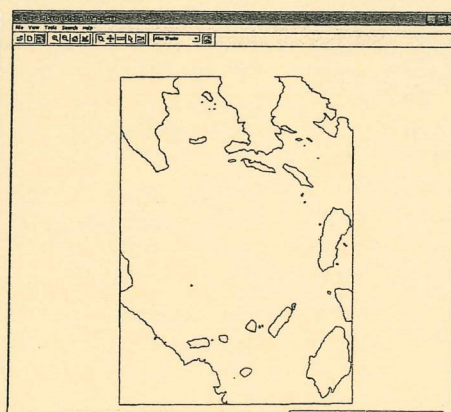


Figure 2. DLG of Bar harbor



Figure 3. Orthophoto of Mt. Desert

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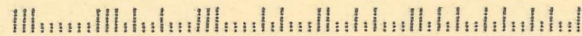


WE'RE ON THE WEB AT
WWW.NEERS.ORG



We now live in 24/7 world, but what about the trilobites in the Cambrian world. Did they have more or less time on their hands (chelipeds)?

01970+5353 24



ERF Biennial Meeting In Seattle

The 17th Biennial Internal Conference on estuarine research will be held in Seattle, Washington, 14 to 18 September, 2002. The meeting is entitled, "Estuaries on the Edge: Convergence of Ocean, Land and Culture."

Go to the following location for more details on the meeting.

[Http://fish.washington.edu/news/erf/](http://fish.washington.edu/news/erf/)



NEERS Fall Meeting

The next NEERS meeting will be held October 24-26, 2002 at the Avery Point campus of the University of Connecticut. This meeting will be held jointly with the bi-annual Long Island Sound Research Conference.

If you have been doing any research relevant to the Sound and its watershed, this meeting is your opportunity for fifteen minutes of fame. The focus of the oral presentations on Thursday and part of Friday will be various aspects of Long Island Sound, but the remainder of Friday and Saturday will follow the format of a regular NEERS meeting. Come see the new UCONN Marine Science Facilities and experience the elegance of Branford House, our on-campus mansion.

Local Host: Patricia Kremer
<pkremer@uconn.edu>.

Pat Kremer
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