



National Association of Marine Laboratories

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MINUTES
NATIONAL ASSOCIATION OF MARINE LABORATORIES
FOURTH BIENNIAL MEETING
Chesapeake Biological Laboratory, Solomons, MD

The business meeting of the Association was called to order following the previous hour's Regional meetings in the Chesapeake Ballroom, Holiday Inn, Salomons, MD, by Ken Tenore, NAML President. Ken's opening statements contained words of welcome and announcements pertaining to the day's activities including the Luncheon speaker, Dr. Eugene Cronin, retired director of CBL, and the openhouse and evening's festivities at CBL. Sixty two directors, invitees, and guests were in attendance and are listed in Appendix I.

NAML Business Meeting

The **Treasurer's Report** was presented by Alan Kuzirian, Secretary/Treasurer. The report covered the period since the last Biennial Meeting, Mote Laboratory, Sarasota, FL, through 31 August 1997. Non-posted income includes \$2000.00 in capital contributions recently received and another \$300.00 in outstanding credits. In addition to the summery report given at the top of the document, yearly summaries of income and expenditures were also given. Acceptance of the report was moved (Brooks), seconded (Dagg), voted upon, and unanimously accepted without discussion.

Nominations for President-Elect were called for by Ken Tenore. Ray Highsmith representing WAML, nominated Lavem Weber, Hatfield Marine Science Center, Newport, OR. Ken called for nominations from the floor. With no other nominations presented, Ken closed the nominations and Lavem was unanimously elected by voice vote.

The **Meeting Schedule** for NAML was then discussed. It was agreed by consensus that the NAML biennial meeting format would be retained and the Board of Directors (BoD) would meet at least yearly. A winter BoD meeting will be held in Washington, DC on the odd-numbered years following the Congressional elections. That meeting would entail the now established reception format and the entire membership would be invited to attend. Ken reminded everyone that the next NAML Biennial Meeting would be hosted by Art Brooks in Milwaukee, WI in 1999.

Alan Kuzirian next distributed a draft amendment to the **Bylaws** to establish the position of **Emeritus Membership**. A motion to accept the Article was made (Knap) and seconded (Shapiro). Discussion followed and the wording was changed by consensus to limit the eligibility to retired persons who have worked fervently within, or on behalf of NAML. Nancy Marcus asked that a section describing the Rights and Privileges of the Emeritus Members also be added. The addition of the Emeritus Article was accepted unanimously as corrected. Kuzirian will need to distribute the final version of the Article before the Biennial Meeting adjourns.

Following the acceptance of the Article, it was moved (Brandt) and seconded (Clegg) that Michael Greenberg, Harlyn Halvorson, and Robert Jones be accepted as Emeritus Members by acclimation. It was so voted. Art Brooks will recommend to the Emeritus Nominating Committee that Dr. Albert Beeton, retired NOAA chief Scientist and former director of the NOAA, Great Lakes Environmental Research Lab, Ann Arbor, MI. be accepted as a suitable candidate for election to Emeritus status.

To be consistent with the current practices, it was also recommended by the Secretary that the duties of the President-Elect be amended to include the chair of the Audit Committee. It was moved (Wise), seconded (Maturro), and voted unanimously to accept the recommendation.

NAML Session 1. Organizational Issues

Ken Tenore presented his **Presidential Report** for the opening of Session. Ken stressed that NAML has expanded from the original SAML members to over 100 members and now includes WAML and NEAMGLL. The diversity of the member labs is as great as the geographic areas they portend; from Guam to Puerto Rico, from Alaska to the Antarctic; from biotechnology and biomedical research, to state and federal labs, to internationally recognized marine aquaria.

All of us have a greater understanding of the organization and what we are. We have begun to answer Grant Gross' question, "what is a marine lab. We have moved ahead in the following areas:

1. Common Identity – From the early history of marine labs that Gene Cronin will talk about, we have established our "sense of place." Harlyn Halvorson and Kumar Mahadevan promoted the identity of marine labs and NAML to the Washington, DC scene. From that will come the staffer relationships now being fostered.
2. Problems and Solutions – NAML has tackled such internal issues as, how to deal with OSHA requirements for divers, to one of today's topics on animal research regulations and IACUC committees and the problems they impose. Accounting packages and how to choose and use them will also be covered in this meeting and SAML has scheduled time in a future meeting that will include their business office personnel, to discuss these issues.
3. Outreach – NAML has developed a common outreach to the community of other agencies and organizations like Sea Grant, and NASULGC thanks to the efforts of Jim Clegg and Tom Malone through the Sarasota Workshop. With the establishment of LABNET and its networking infrastructure, NAML will increase its outreach to the public and management officials. The "Hill-Forum" meetings have begun our outreach to government officials to let them know that we are the voters and folks back home and how we can put together resources that can be useful to them. NAML labs cover every aspect of coastal diversity. NAML can provide solutions and information to help them make informed decisions.

The challenge is to continue to contribute service where it is needed and to carry forward NAML initiatives. It is recommended that the incoming president, Art Brooks, take on ONE initiative during his tenure and carry it through. Ken reminded everyone that individual members must come forward and help. Active participation by key people interested in taking on a particular project is required for success.

Regional reports followed.

SAML: Nancy Marcus – SAML is doing well. Sue Cook is working on the next version of a new recruitment video with minorities being specifically targeted. SAML gained two new Associate members; the NSF, Office of Polar Programs and the Coastal Survey Development Lab, NOS-NOAA. There are currently 58 members. Madilyn Fletcher has officially been elected as Pres-Elect for 1997 and will assume the SAML Presidency in 1998. Tom Malone will become Pres-Elect in 1998.

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WAML: Gary Greene – WAML now has 23 labs as members. WAML has re-evaluated their Bylaws and voted to move to a two-year presidency. Ray Highsmith was elected Pres-Elect. Their annual meetings will be held at West Coast labs and will focus on the Pacific Basin.

NEAMGLL: Steve Brandt – Steve reported for the ailing Jerry Schubel that NEAMGLL is also carrying 23 members. Fred Grassle hosted a spring meeting at the Tuckertown Lab which featured Jim Carlton who spoke on the introduction of exotic or non-indigenous species. Jim recommended using NAML as a coastal alert network for non-indigenous species. Fred will lead a task force for that purpose. Bill Wise will host the April 98 meeting in Stony Brook. It will focus on operational issues as well as scientific topics. Cooperative Institutes and how they work is another issue that will be investigated.

Ken also reminded everyone about our **International Outreach** through MARS that was originated and expedited by Harlyn and Fred Grassle. Jack Matthews is their Sec/Treas. and our principal contact person. At the ESCA/ERF Meeting earlier this year, NAML/MARS issued a joint communication asking other nations to develop their own national organizations of marine laboratories. MARS, following NAML's lead, has a request in to the European Community to form a European LABNET. Twelve lab directors will hold a meeting during the International Marine Biotechnology Conference (IMBC'97), Sarrento, Italy, with an additional 8 national representatives. Ken requested that any NAML member attending IMBC'97 participate in the biodiversity workshops. In following up on the pursuit of international cooperation, Kumar recommended that a Caribbean connection be established. Harry B ^Λes is interested in pursuing this. Harry is currently the president of the Caribbean coral reef association, CARICOMB. Qj

The **NAML WWW Page** was discussed next. Alan Kuzirian gave a brief summary of the activities that have occurred. The NAML Web Page remains one of the most contacted pages at the MBL. A template was developed by Dave Remsen and Kuzirian for NEAMGLL members to enter their two-page lab descriptions. It was a follow up to the electronic WAML pages. Kuzirian asked that the SAML labs now complete the process. Alan handed out copies of the instructions used for NEAMGLL. The instructions for direct access to enter the NAML Web Page for any entering or editing needs are:

ADDRESS: <http://www.mbl.edu.html/NAML/EDITS>
Username: NAML
Password: ch@nge

All entries can include logos, text and figures, whether photo images or diagrams. Ken related that Jack McClain, NASA's Goddard Space Center, and member of the LABNET technical team is willing to develop satellite links between NAML labs. This capability will most likely be developed in the future as part of the continuing NAML LABNET initiative or the Interactive Video Education program.

At this point, Ken took time to introduce and welcome **New NAML Members**. For SAML, Dennis Peacock, NSF, Office of Polar Programs spoke about his institution. They consist principally of a US Antarctic support group (Antarctic Support Associates; ASA) that provides ships and laboratory facilities, as well as program support. ASA has seasonal staff. Because they operate on the opposite season to the Northern hemisphere, there are ample chances for exchanges of ASA personnel with NAML member laboratory staff. The Program supports two ships (ice breakers) as mobile research platforms. Employment opportunities with ASA occur regularly. A Polar Diving Program is active and was instituted by Jim Stuart from Scripps, who is author of their diving manual.

Ann Ball representing the NOAA, Coastal Services Center, Charleston, SC, spoke next. Their aim is to foster Science and Management working cooperatively together for the proper benefits of both. Their specific directives include: 1. Technology transfer to outside potential

users; 2. Coastal Management Service, a fellowship program for students and training institute for writing environmental data; 3. Coastal Information Services studying sedimentation, red tides, via a change analysis program, i.e. over temporal changes to our coastal zones; 4. the facilitation of Coastal Zone Data documentation and use.

Bruce Parker, Coast Survey Development Laboratory, National Ocean Service, NOAA, Silver Spring, MD, also spoke to the members. Their principal efforts are directed to producing nautical charts and tide tables. The charts are used by and depended upon by the Commercial Maritime Community and those responsible for coastal zone management. The programs included are: 1. Oceanography dealing with the physical characteristics of oceans; 2. Hydrodynamic Modelling programs dealing especially with weather and ocean currents for better forecasting and storm predictions; 3. Hydrographic components dealing with charting ocean floors, etc.

Session 1. concluded with Art Brooks offering Ken Tenore thanks for a job well-done as NAML president. Ken was instrumental in establishing LABNET, Congressional Staffers' Forum, and continuing and extending the NAML/MARS connection. Art also nominated Ken as the NAML Restaurateur for Life!!

Luncheon Speaker: Eugene Cronin, Professor and Director Emeritus, Chesapeake Biological Laboratory, spoke on the, "The Strength and Weaknesses of Marine Labs."

Ken Tenore introduced Gene Cronin, founder of University of Delaware, Marine Lab, now the College of Marine Studies, and Director Emeritus of CBL. Gene spoke about ONR founded tours of European marine labs during the 1960's. He had the opportunity to visit 40 labs and many of them were helped by funding from ONR. Marine Labs are everywhere now; our eyes on the Ocean. We need to train students and develop management programs for the coastal zones. We have historically been loath to be managed by Washington. However, the money is there and is available for expansion of marine programs. "Faculty rebels" always seem to be present at marine labs to promote marine sciences and move the system forward; often at the expense of the marine lab director. Don Pritchard was mentioned as a rebel, as was the founder of the journal, *Chesapeake Science*, Romeo Mansueti.

Gene mentioned that linkages are formed between individuals and labs whether formally or informally. As an example, Gunner Thorson and the Arctic Council was cited for their exchange of students, and faculty between the Scandinavian labs and the University of Miami. Under this arrangement, participants obtained both Arctic and tropical study experiences. The Chesapeake Council was also an example; Don Pritchard, Bill Hargis and Gene Cronin put together a program that studied the Chesapeake estuarine system.

Gene went on to emphasize that NAML has the potential to continue to go out and obtain cooperative data. He recommended that each director save a little money to encourage the rebels and help students; essentially to protect the poor. Systematists are good examples of poor people who cannot get money to do their work. Focus your contributions to those who have little or none, but contribute so much to our field was the philosophy that Gene stressed.

Computers are worrisome to Gene. They are repositories of data for easy recall, but who is collecting the NEW data? Dixie Lee Ray founded the first marine organization he joined. The group was looking for money even at that time. Gene warned that individual labs are generally weak when it comes to the political arena; strength lies only in numbers and that is precisely what NAML makes available.

NAML Session 2. LABNET

Lynda Shapiro announced that the **Ocean Studies Board**, NAS, has formed a committee to evaluate the funded major ocean programs (MOPs); i.e. JGOFS, WOCE, GLOBEC, etc. Because the committee wants the input to be as large as possible, Lynda asked that NAML help spread the announcement and encourage faculty and staff to participate in the questionnaire. The questionnaire can be accessed on their webpage:

<http://www2.nas.edu.osb>

LABNET INITIATIVE:

As a reaction to the initiative which originated with the Sarasota Workshop, and the funding made available by governmental funding agencies (NOAA, EPA, NSF, and NASA), NAML, under the leadership of Ken Tenore, formed a steering committee to move LABNET forward. A planning Workshop was held in February, 1997, in Charleston, SC, hosted by Margaret Davidson, NOAA Coastal Services Center. Members of the NAML Steering Committee include; Art Brooks, Fred Grassle, Gary Greene, Tom Malone, Joe Ramus, and Ken Tenore (chair). The Technical Committee is comprised of: Margaret Davidson (chair); Daniel Jacobs, Sea Grant, University of Maryland, College Park, MD; Patrick Michaud, Texas A&M, Corpus Christi, TX; and David Remsen, MBL, Woods Hole.

LABNET is planned to be a virtual laboratory of environmental data. It is a means to deliver something to the scientific community on behalf of NAML. The scope of the project is to be flexible and able to be modified depending upon the need. Future needs can then be funded on their own merits. The technical group has been working to implement the physical aspects of the network. The workshop was put together with people who collect environmental data and use it.

A Laboratory Survey is planned to elucidate what data sets available and what type of data can be assembled immediately. From our attempts at putting together the OBSF/NAML questionnaire, it is clear that the survey design must be done professionally. The University of Wisconsin-Milwaukee, Institute for Survey and Policy Research has been selected. The proposed schedule is to have the pilot project in place by next summer so we can bring it forward to the rest of the community. Tom Malone's letter to ASLO is a good summary of the program.

Art Brooks, for the U-Wisconsin Survey group, reported on the draft questionnaire that came from the Charleston workshop. The basic set of questions the workshop group deemed necessary for the questionnaire was: what data is available, how important are they to the environment, and are they accessible (i.e., non-proprietary, non-classified). The data types chosen were:

- physical data (temp, light, bathymetry, turbidity, weather, sediments)
- chemical data (inorganics, organics)
- biological data (species inventories (invertebrates, vertebrates), habitats)
- time-span (frequency of data collection, major gaps)
- documentation platform (paper, computer, etc.)

Art emphasized that this is the beginning of the process, designed to yield information about what data is available that might be developed into a specific project by the second Workshop. It was suggested the KDI Program (Knowledge and Distributed Intelligence) from NSF might be a good future funding source for project. The initial questionnaire is finished and will be distributed to each member shortly. Art urged everyone to fill it out and return it.

Discussion on the **Potential Projects for LABNET** was led by Tom Malone. Tom introduced the topic by giving a review of US Coastal Global Ocean Observing System (GOOS) and International-GOOS and their potential relationship to LABNET.

The goals of Coastal GOOS include: quantification and prediction of environmental trends and their consequences by global long-term data assimilation, dissemination, and analysis.

These goals overlaps extensively with the goals of LABNET. Convergence of the two programs is to be promoted and not done in parallel or in competition. Independently funded committees with similar commitments are not efficient and not recommended.

During the discussion, it was noted that the Health of the Ocean Panel is also similar, and Tony Knap is a member of that group. OBSF is also moving along with a similar program. Three members of the OBSF group were invited to the Workshop according to Ken. The terrestrial aspects of their input would be very complimentary.

A discussion on a proposed **NOAA Training Workshop** for NAML labs for implementing LABNET was led by Anne Ball, filling in for Margaret Davidson. One important item that Ann brought out was Metadata. Metadata is defined as writing text reports on data that allow the data to be accessed and searched electronically by a set key-words. A well-written metadata can be easily scanned and read to see if the information in the data set is useful. Currently, the standard being used most is the FGCD standard; Federal Geographic Data Committee. The FGDC standard provides a common set of terminology and definitions supporting common metadata uses. It was initiated by Executive Order in 1994, and is currently issuing RFP's for geographic metadata, but its premise can be extended to add more fields for other applications. It is an accepted national standard and is now incorporated into most electronic systems. Once the format is established for a data set, it is self-sustaining and access is done without further intervention.

Two future training sessions are planned for LABNET; the first for those accepted into the pilot projects of LABNET, and the second to have the first group train others to use the system. The NOAA facility at Charleston is the site and will be specifically designated to LABNET. Approximately 18 people will attend the Workshops which will last two days; half a day learning LABNET, the remainder on writing metadata.

NAML Session 3. "Internal Issues"

Institutional Animal Care and Use Committee (IACUC) Compliance Issues are fast becoming a major issue for marine labs as the regulations mandated by Federal Funding Agencies continue to increase, not only for experimental protocols but also for animal care and husbandry. Dr. Mary Haasch, Chesapeake Biological Laboratory, has recently gone through the process of bringing the CBL into compliance with NIH regulations and spoke about her experiences. Basically, Mary stated emphatically that compliance with the Public Health Service, Animal Welfare Assurance Policy is needed for any research done on vertebrate animals. An institutional policy must be negotiated with the Public Health Service before federal grants can be awarded. There must be a designated Institutional Official as the responsible party for the policy and for compliance with it.

An IACUC needs to be established with a chairperson, veterinarian, and at least one, non-scientist member. The program and animal facilities must be reviewed every six months with a complete review every 3 years. Each program is designed to oversee health programs administered by animal care workers, as well as training programs for all people dealing with animals. Complete records must be kept for at least 3 years after the expiration of any project; annual reports are sent to the Office of Protection from Research Risks. Alan Kuzirian added that the USDA is the enforcement office and minimally conducts unannounced annual inspections. All aspects of the program come under scrutiny, from physical facilities to proper record keeping. The USDA inspector has the authority to close down any and all parts of the program found in violation. Roger Hanlon noted that the NCRR-NIH has drafted a policy for establishing Per Diem Charges for the care of animals, and the policy is open for comments. It was further recommended in the ensuing discussion that if your institution has an IACUC in place, it is best to have a marine representative on it. References for assistance with animal care issues can be found in:

1. Report of the AVMA Panel on Euthanasia (1993) JAVMA 202(2):229.

2. Guidelines for the Use of Fishes in Field Research.

To obtain a copy check: www.utexas.edu/depts/asih/pubs/fishguide.html

Lynda Shapiro related that security for animal research facilities from animal welfare activists is also a concern. The record is clear about the amount of disruption and damage these organizations have inflicted on several academic institutions. The potential is there for these organizations to target marine labs as well, so all of us should be vigilant

Accounting Practices, especially as they relate to marine labs that are either autonomous or semi-autonomous from an academic/parent institution are a major issue. Gus Mercanti, Assistant for Business Affairs, CBL, spoke to the issues involved. The basic question that led the session was, "outside accounting packages, are they useful and appropriate?" It was Gus' feeling that for small institutions with few numbers of grants to manage, it is probably not needed. However, is the accounting information that comes from your home institution useful to you and current enough to fill your needs? Is there historical data available to show you trends and the scope of the program? The following considerations are important to determine if an accounting system is needed for your lab:

What are the initial costs and how much will it be supported budgetarily on an annual basis?

Can you maintain your own system and who will support it technically?

Package Inclusions and other things to consider:

Salaries, personnel history, inventory control, historical data, payment from revolving accounts

Technical support and stability of the company

Costs; initial purchase price and annual maintenance costs, plus equipment setup costs to run the system.

Jim Wren, President, IT Works, presented examples of the package they market. Their company was developed for universities over 10 years ago. They sell their software in modules:

Grant Module - projects into the fiscal year, the income that can be expected.

Personnel Tracking Module - tracks personnel and their total employment history.

Accounting Module - formatted as a flexible, double ledger system with object codes and cost centers.

The Reporting Process is important according to the information desired. Flexibility in the reporting format is also a major consideration whether it will appear in paper, networking, email, or netscape.

This session adjourned and was followed by an evening's **Open House, Reception and southern Maryland-style BBQ** hosted by Ken and CBL.

**NAML Biennial Meeting
13 September 1997**

NAML Session 4. Implementing NAML's National Role: Congressional Staffers

Ken opened the morning's meeting by announcing the purpose of this session was to expand on the premise that NAML is NOT a Washington based group, but rather in the Washington sense, the constituent at home. NAML's Interactions with Congressional office holders is based upon a one-on-one association between the individual labs and their federally elected officials. As a result of this year's February BoD Meeting, NAML is pursuing relationships with the Congressional Staffers who do the leg work for their congressmen. Staffers are politically isolated between the two parties. NAML can help bridge that gap by bringing them together in a neutral setting to discuss matters of mutual importance.

The questions we need to ask and seek answer to for this session are, "What can we give to the Staffers that will help them? How can we help them focus on NAML and what kind of information can we offer to them?" An **Open Discussion** followed.

Art Brooks asked how do we contact staffers and who approves their schedules? The Washington staffers separate from the ones working in the home districts. You have to deal with both sets sometimes.

Kumar Mahadevan added that you have to get to know them and then it comes easier.

Tom Malone suggested the course of developing a good working relationship with your congressmen. There are common problems throughout the coasts, so NAML can move to build bridges between congressional districts and thus form important coalitions.

Lee Stevens reminded everyone that Washington is an agenda driven place. They will ask, "what is it you want us to do for you?" Lee emphasized that the "one-page" letter NAML issued at the Hill Forum supporting congressional funding of basic research agencies (February 1996) is what Congressmen like. Committee staffers generally have more knowledge than general staffers. You have to give them your Conclusions on an issue. Short one-pagers are perfect. It takes a lot of time to educate staffers. Schedule a training session between them and NAML.

Fred Grassle supported Lee Stevens saying that Staffers have one or two issues that they address and have knowledge of. You have to give information to them in a packet with discrete conclusions.

Sandy Sage suggested that we establish this next session as an educational meeting for us to have the Staffers help us organize how we could interact with them.

Margaret Davidson reiterated that we can and should help staffers build networks within Congress between Congressional offices working on the same issues. We must be sensitive to political party lines, but even within their parties, they have large gaps in their knowledge of who is doing what. NAML as an expediter to foster connections with others is a perfect role.

Phil Helffich repeated Kumar's statement that the best thing is to develop personal relationships with them and their offices. NAML's DC BoD meetings are good opportunities to do that.

Gary Greene/Bill Wise recommended sending personal invitations to staffers to visit your lab where presentations would be given, or have them attend events that promote their knowledge of the lab. Fisheries decline, El Niño, etc. might be issues to attract their participation.

John O'Neil suggested NAML send out to the delegations yearly, a list of issues, research topics, and NAML's general conclusions. If one of the listed topics comes up, they can call back to the lab for advise.

Jim Sanders put forth the idea that NAML fix on a national issue and use it to get their attention. LABNET might be one issue to use.

Conclusions/Action Item:

Ken Tenore: The next BoD Meeting should focus on LABNET, and we should invite staffers to attend. We will ask Lee Stevens to do a workshop to educate members on how to approach Congressional people. A Staffer list will be compiled for NAML members to review and to target specific people to attend the meeting. The list will then be redistribute to the membership and to the staffers themselves.

NAML Session 5. Congressional Staffers: Round Table Discussion

Ken had the Staffers introduce themselves to open the session (Appendix A). As a means of promoting discussion, two presentations were given.

Art Brooks, Center for Great Lakes Research, U-Wisconsin-Milwaukee, spoke on **Zebra Mussels** and how introduced species in general have been a problem since the 1800's. The Welland Canal has opened the entire Great Lakes system to shipping and hence to the problem of exotic species introductions. Zebra mussels were introduced during 1986/7 by ship ballast and subsequently have been spread by them and especially pleasure boats. They are now established throughout the entire mid-west lake and river systems. The Sea Grant Mussel-Watch Program help to stem the spread of the impact. Municipal water treatment plants and utility companies are especially impacted. They have also caused major impacts on the ecological diversity of endemic species within the Great Lakes waterways. Food webs have been changed by zebra mussels because they do not feed on blue-greens but preferentially on other algal species. This has led to increased blue-green algae blooms and subsequent massive die-offs that foul water supplies. There has been a 60 billion dollar impact on municipal water and electric utilities alone. State Inspection programs have recently found zebra mussels on boat trailers entering California. Florida which also has an inspection program has so far escaped known introductions. Legislation to reduce the threat of introduced, non-endemic species from ship ballast is greatly needed. Mandatory ballast regulations are in place in the Great Lakes, but are only voluntary elsewhere. The Louisiana coast is concerned about cholera introductions. Research programs on infected ecosystems, the reproduction strategies, and physiological tolerances of introduced species is also needed.

Don Boesch, UMCES, Cambridge, MD, and Joe Ramus, Duke University Marine Laboratory, Beaufort, NC, gave a presentation on the dinoflagellate, *Pfiesteria piscicida*. Joe began with a description of this one-cell protozoan and its associated names; *Cell-fromhell* or *Flesh-eating protozoan*. The organism has been made famous by the book, And the Water Turned to Blood, by Rodney Barker. *Pfiesteria* is a small dinoflagellate, 2-3µm, armored with cellulose plates, and is an obligate heterotroph. However, when they feed on human blood cells, they die. The taxonomy is very confused and they can only be identified with certainty by SEM. This is indeed a new species and is toxic as are other dinoflagellates. It is not known with certainty if it is the causative agent responsible for the massive fish-kills reported around the Chesapeake. The phenomenon may be caused by induced anoxia with the dinoflagellate simply being present. Area crab fishermen have more skin lesions than most people and the sores are exposed to *Vibrio*, etc. and therefore suffer illnesses at a high rate. 70-80% of the anthropomorphic nutrient loading that is thought to be the cause of the *Pfiesteria* blooms, is from non-point sources; agriculture, animal husbandry, etc. Only 20-30% of the nutrient loading comes from waste treatment plants, that are the politically targeted sources. An inter-university response is trying to monitor the water sources to predict the onset of threatening outbreaks. Single cell culture has now been done at the Provasoli-Guillard National Center for Culture of Marine Phytoplankton (CCMP), Bigelow Laboratory for Ocean Sciences (Bob Anderson) to identify the organism and to develop probes for its correct identification. It was Joe's conclusion that coastal, land-use policies and their effects are potentially the over-bearing cause of the problem.

Don Boesch related that his research on toxic dinoflagellates has led to his role on MD governor's council. Some good evidence exists that *Pfiesteria* is certainly involved with fish Mils. The toxin it produces does kill fish, and it does induce fish epithelial cells to slough off and then secondary pathogens invade. Poultry farming is probably responsible for the nutrient loading that has promoted this new problem. A media circus has developed from these events, especially in the Washington area. Most of the coverage is not based upon scientific facts. NAML can use this problem as an example on how to develop and apply basic science research to help alleviate it. The government cannot direct money at this as a one-time burst, because it has to be a sustained effort distributed over regional areas. The search for a solution must be done as a multifaceted approach; from developing molecular probes to identifying the organisms involved, to environmental clean-up studies, and finally, medical epidemiology and health care. PET scan data recently revealed that the patients of the clinical study groups have abnormal glucose in that part of the brain dealing with short-term memory.

The Staffers' response to both presentations and from the discussions that followed was a desire to see a "Road-map" from NAML as to where the money should be directed and distributed.

Luncheon Speaker: US Representative, Steny Hoyer (D-MD), "Networking the Local Talent of the NAML Labs"

Representative Hoyer gave a light hearted but enlightening presentation on the subject of "Effective Advocacy." Effective advocacy is extremely important because the competition for public moneys is so keen. NAML is critical to the ecological impact of the growth of our country and the world in general. *Pfiesteria* is an example of what can go awry with mismanagement. Rep. Hoyer reminded us that fiscal responsibility has now taken on a new importance with the balanced budget. Entitlement programs have taken over the budget and there is little discretionary spending; only 17% of the entire federal budget. Decisions undergo greater scrutiny on how the money is allotted. Science as an entity, needs to be a better advocate for its importance and hence funding. Level spending has eroded the useful dollars for research. To get funding above inflation you must advocate for yourselves at all levels; local, state and federal. Personal contact and mutual respect between science and congressmen needs to be on-going said Rep. Hoyer. Reactionary meetings are not beneficial. There has to be a continuous relationship between us. This kind of relationship must occur at the local level as well, not just with the Washington group; presence and proximity are important.

On a philosophical note, Rep. Hoyer told us that, "there is always tomorrow." You can't go through life looking in the review mirror, so look ahead and proceed on without carrying grudges or excess baggage. Opinions change and new alliances can always be developed.

NAML Session 6. NAML's Evolving National Role

Hill-Forum: Gary Greene said that Rochelle Domatt (Sam Farr's Office, CA) volunteered to help expedite circulating a list of NAML labs with key personnel and their expertise among the staffers. NAML members wishing to participate need to get the short descriptions of their lab's expertise and concerns to Ken or Art. Cory Alexander (Steny Hoyer's Office, D-MD) will also help coordinate this effort. It was agreed that establishment of a core group of staffers is necessary. We need a specific agenda to attract those who are concerned and interested in the topics chosen. Reciprocally, we can get Staffer input on what topics they need information and conclusions on.

The "State of the Coast" might be one topic to start with for the 1999, Washington BoD Meeting. The one-page letters have been very effective and that format can continue to be used. Committee staffers who are in charge of the legislation or appropriations will be the target because they are the gate-keepers to the way in.

LABNET Revisited

Jim Clegg was concerned that we get good compliance and return of the LABNET survey questionnaire. Ken assured everyone that reminders and pressure would put upon the directors to get them returned. Regional presidents will also be asked to help.

The survey is a "check-the-box" type and people will need to be somewhat flexible in answering the questions and not get hung up on being too precise, but answer the questions in a broad context. That format should also facilitate getting them completed and sent back.

There are two approaches that will be proposed. The first approach is the pilot project. That choice is extremely important from the standpoint of getting LABNET successfully off the ground. Then there are future projects that will follow. Topic examples suggested include:

- Geographic spread of non-indigenous species and shipping data
- Long-term spacial temperature data
- Long-term tidal/salinity data
- Non-point source pollution input; nutrient chemistries vs water flows vs salinity
- Spacial/temporal toxic algal blooms
- Zoo-geographic species changes; species distribution maps

It was noted the National Heritage Program is involved in biodiversity documentations. They started with endangered species. However, their lists are scant on aquatic animal data. Jim Clegg again brought up the fact that OBSF is proceeding in parallel and that fact should not be ignored. They have a 5-day workshop in Santa Barbara scheduled for January 1998. There is a meeting next week at OIMB, Newport, OR. Lynda Shapiro will check on their activities and let appropriate people know.

Dinner Feast: "Evans Seafood on the Potomac River," was the site of the evening's activities.

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Final Copies of the new Article V, **Emeritus Members** (Appendix II) were circulated by Alan Kuzirian. There were no additions or corrections to the final revision. The vote on the amended Bylaws from 12 September stands as voted.

The **Audit Committee** reported that the Financial Records of the Treasurer were reviewed and accepted. A motion was made by Jim Clegg and voted unanimously to approve the Audit Committee's report

NAML Session 7. NAML, "On-Line"

Joe Ramus filling in for Ken, opened the session with Lavem Weber, NAML Pres-Elect, giving a presentation on **networking initiatives**. Lavem would like to see the LABNET program used to promote K-12 programs through a cooperative partnership with Sea Grant. Lee Stevens is supportive of the concept as are other volunteers who have come forward. The National Marine Educators are particularly interested, as is the Museum of Science in Boston. The National Oceanographic Program (NOP) might be another source of funding. Jason sites and labs with established satellite or electronically linked programs could easily be networked and thus not have to be built from scratch.

Nancy Marcus next spoke on her first attempt at setting up an **Interactive Video Seminar Series**. About 6 people responded to her email call to establish the seminar series. People were

unsure of the equipment requirements and necessary inventories. Nancy said there was a general lack of response by students and faculty at FSU. Nancy is now open to suggestions in how to proceed or if there are interested laboratories. The series was originally perceived as a monthly seminar with contributed lectures from interested faculty. Special seminars by visiting speakers are another source of presentation material. The question of equipment compatibility is a big problem. Interactive compressed video is compatible via telephone lines but not with satellite links. Herb Windom suggested that outside groups are interested in interactive video or video taped lectures, like engineering programs wanting information on contaminated marine sediments, etc. Video tapes of lectures/seminars are marketable and people are looking for it. It is a topic to consider again.

Herb Windom reported on the SAML initiative to take survey of **unique facilities and analytical capabilities** within member labs. A questionnaire was sent out requesting information on what analytical capabilities are present and their user policies. There has not been a good return because the questionnaire again was too diffuse. Herb suggested that a log on laboratory unique capabilities, access to specialized equipment, and what data collected would be very applicable to LABNET data storage. Herb also feels funding opportunities for this data collection has good potential.

In the generated discussion, it was felt that an expertise data base for NAML members could easily be established. It would include, faculty and staff with their expertise and formatted with appropriate key words compatible with, and used by, current search engines. Community of Science data base is an example. News media are always looking for sources as well as science journal editors recruiting potential reviewers. The NAML WWW-page could easily be modified to accommodate this listing. Formation of a **NAML Marketplace** is the logical outcome of these areas. A Committee of three to pursue it was asked for.

The subject of NAML **summer course listings** was discussed by Alan Kuzirian and Joe Ramus. Alan told the group that we had listed 54 summer courses for 1997 from labs such as the Marine Biological Laboratory, Darling Marine Center, and the Franz-Theodore Stone Laboratory. Alan also said that the form used this year was very simple. It listed the lab, course title, dates given, a key to the NAML Directory listing, and a link address back to the institutions' homepage for further information. Joe and Alan will modify the form slightly for next year to include course level (undergraduate, graduate, post-doctoral, etc.) and application deadline date. We will send out a memo to the membership early this fall, and then again at the first of the year as a reminder to those who wish to participate. The template will be accessible via the NAML homepage just as the Directory 2-pager template is now. We expect member labs to enter their own listings directly with links back to their own homepages for the detailed course information. People interested in participating in the NAML "On-Line" Committee were: Art Brooks, Alan Kuzirian, Nancy Marcus, Joe Ramus, Lavem Weber, and Herb Windom.

The **NAML Job Page** has been up and a running success. Announcements of job openings should continue to be sent to Alan Kuzirian. He will post them and keep the list current. Alan told everyone that for those jobs that do not have a firm closing-date (i.e., until filled, immediate opening) the job will be posted for one month, after which it will be removed.

NAML Session 8. NAML Partnerships

Jim Clegg, as chair of the session asked each of the participants to give a summary of the groups activities and possibilities working with NAML. Jim noted that Joy Bartholomew of ERF had attended many of the NAML meetings, but has not been responsive to developing relationships with NAML.

ASLO – Tom Malone reported for ASLO noting that in the year, 2002, the ASLO/ERF Meeting will center on the subject, "Comparative Approaches to the Development of a Predictive Understanding of Aquatic Ecosystems in the Coastal Zone." It was his wish to invite NAML to

participate and help sponsor the meeting. Tom will bring this up at the February (1998) BoD Meeting.

Sea Grant Association – Chris D’Elia spoke for SGA saying there are changes being made in the administration and downsizing of the staff. SGA is defining its new role to be "Stewards of the Process", NOT selectors of Projects. Research Programs and Initiatives will be reviewed at the local levels on the NSF style. SGA’s new director, Ron Baird wants to reach out to other agencies like NOAA, and NSF’s Ocean Sciences/biotechnology as example. New initiatives will include a NOAA-University partnership (\$500k), nonindigenous species (zebra mussels; @ \$2.8M), oyster diseases (\$1.5M), and marine biotechnology (\$1.8M). Regional Organizations are likely to move program monitoring to the regional levels as well. There will continue to be heavy emphasis to new National Initiatives.

There will also be a consolidation of governance which will elevate the Sea Grant Association as the sole organizing body of SGA. Programs will be getting more intrinsic authority with the agreement of the Association and the Strategic Plan. The strategic plan will include, Economic Development, Coastal Ecosystem Health, Public Safety/Coastal Hazards, Education, and Human Resources.

Chris sees the following areas of collaboration with NAML:

Education - particularly in the recruitment of under-represented groups (minorities)

"Ask-A-Scientist" Program

LABNET and other WWW links

Interactive video - especially for K-12 programs and teachers

Public Science Literacy

Outreach and Research - all areas of strategic priority

Chris commends the idea of LABNET as a terrific opportunity, and suggests strongly that NAML not think too narrowly about its scope. Chris sees many potential allies in its development, especially SGA, NASULGC, and the atmospheric communities not associated with the coasts.

We were reminded by Chris that Sea Grant is an unauthorized program so it needs federal renewal yearly. The House passed SGA’s FY-98 funding and it is pending in the Senate. Cosponsors of the bill are still needed. The Senate included \$1.7M for NE Open Ocean Aquaculture Program (ear-marked program possibly to be removed), as well as oyster disease research.

There was discussion on SGA initiatives and whether they will be driven from the top-down or bottom-up. It is a very complicated and political topic. There are concerns that the new initiatives be scientifically sound, relevant, and meaningful.

Ken Tenore related that he and Ron Baird have talked about LABNET and how to implement it from an equipment standpoint. Ron asked NAML for help in putting together evaluation teams for SGA programs.

OBSF – With no one present to represent the organization, Jim Clegg and Lynda Shapiro offered that OBSF will meet next week but there has been No communication between the groups. Lynda will represent NAML next week at their meeting which is being held at OIMB. There was a formal negotiated agreement to share officer duties and attendance between the groups.

NASULGC – Kerry Bolognese reported that NASULGC’s National initiatives are underway. NASULGC has spent a lot of time on the NOAA re-organization of the Ocean & Atmospheric Research Board, which they had apposed. A Science Advisory Board within NOAA is being established which will be comprised of a 15 member rotating board. They have also established a Natural Coastal Disasters initiative. An official partnership with USGS is finally being established while the EPA partnership is continuing to work very well.

Ken stated that NASULGC has been supportive of LABNET in the early stages and added a strong impetus for NOAA to accept it. Lee Stevens emphasized the serious problem of the reorganization because there is NO research component planned and the reorganization is not

good for science in general as it is presently conceived. NAML will support efforts to help get the information out that the science community is not supportive of the proposed reorganization. Nancy Foster or Secretary of Commerce will be the target people. Information will be distributed to the membership for their input.

MARS – Fred Grassle gave a brief update on MARS (MARine Research Stations). The association developed from the biodiversity issue. Data bases and zoo-geographic questions are their emphasis. MARS is especially interested in LABNET for the purposes of going to the European Union for funding. We need to keep in contact with them so that the Diversitas Office can let people know what is happening including their terrestrial people.

The Meeting was formally adjourned by acclamation.

Respectfully submitted,

Alan M. Kuzirian, PhD
NAML Secretary/Treasurer

APPENDIX I
ATTENDEES; NAML BIENNIAL MEETING
Solomons, MD; 12-14 September 1997

Peter Anderson, The Whitney Lab, U-FL, St. Augustine, FL
Anne Ball, NOAA Coastal Services Cntr., Charleston, SC
Stephen Brandt, Great Lakes Environmental Res. Lab., Ann Arbor, MI
Arthur Brooks, Center Great Lakes Studies, U-WI-Milwaukee, WI
James Clegg, Bodega Marine Lab., Bodega Bay, CA
George Crozier, Dauphin Island Sea Lab., Dauphin Island, AL
Michael Dagg, LUMCON, Chauvin, LA
Robert van Dolah, SC Dept. Natural Resources, Charleston, SC
Margaret Davidson, NOAA, Coastal Services Cntr., Charleston, SC
Madilyn Fletcher, Baruch Inst., Marine Biol., U-SC, Columbia, SC
David Greenfield, Hawaii Institute Marine Biol., Kaneohe Bay, HI
Gary Greene, Moss Landing Mar. Lab., CA State U., Moss Landing, CA
J. Frederick Grassle, Marine & Coastal Sci., Rutgers, New Brunswick, NJ
Jay Grimes, Inst. Marine Sci., U-S-MS, Ocean Springs, MS
Roger Hanlon, Marine Resources Cntr., Mar. Biol. Lab., Woods Hole, MA
Michael Hadfield, Kewalo Marine Lab., U-Hawaii, Honolulu, HI
Philip Helfrich, Emeritus, Hawaii Inst. Marine Biol., Kaneohe, HI
Raymond Highsmith, West Coast NURP, U-AK, Fairbanks, AK
Robert W. Hinds, Wallops Island Marine Science Cntr., Wallops Island, VA
Donald Hockaday, Coastal Stud. Lab, U-TX, Pan Am., So. Padre Island, TX
Glenn Jones, Texas A & M, Galveston
Tony Knap, Bermuda Biological Station, Bermuda
Steven T. Kottmeier, Antarctic Support Associates, Englewood, CO
John Kubaryk, Dept. Marine Sci., U-PR
Alan M. Kuzirian, Marine Biol. Lab, Woods Hole, MA
Phillip Lee, U-Texas Medical Branch, Galveston, TX
Kumar Mahadevan, Mote Marine Lab, Sarasota, FL
Thomas Malone, HPEL, UMCES, U-MD, Cambridge, MD
Nancy Marcus, FSU Marine Lab, Tallahassee, FL
Frank Maturo, U-FL Marine Lab., Gainesville, FL
James Merritt, Cntr. Mar. Sci. Res., U-NC, Wilmington
Douglas Miller, College Marine Stud., U-Delaware, Lewes, DE
Frank Millero, RSMAS, U-Miami, Miami, FL
Timothy Nelson, Blakely Island Field Sta., Seattle Pacific U., Seattle WA
Walter Nelson, Coastal Ecology Branch, EPA, Newport, OR
John O'Neil, Inst. Mar. Sci., U-NC, Moorehead City, NC
Bruce Parker, Coastal Survey Dev. Lab., NOS, NOAA, Silver Spring, MD
Gustav Paulay, Univ. Guam Marine Lab., Mangilao, Guam
Dennis S. Peacock, Office Polar Programs, NSF, Arlington, VA
Gary Pruder, Oceanic Institute, Waimanalo, HI
Joseph Ramus, Duke Univ. Marine Lab., Beaufort, NC
Bruce Robinson, Monterey Bay Aquar. Res. Inst., Moss Landing, CA
James Sanders, Estuarine Res. Cntr., Acad. Nat. Sciences, St. Leonard, MD
Lynda Shapiro, Oregon Inst., Marine Biol., U-OR, Charleston, OR
Stephen Sulkin, Shannon Pt. Marine Lab., Anacortes, WA
Kenneth Tenore, CBL, UM Cntr. Envir. Studies, U-MD, Solomons, MD
Joel Thompson, Galbraith Mar. Sci. Lab., Eckerd College, St Petersburg, FL
Bruce Tripp, Coastal Research Lab., WHOI, Woods Hole, MA
Sandra Vargo, Keys Marine Lab., FL Inst. Oceanog., St Petersburg, FL
Cynthia Venn, Wallops Island Marine Science Cntr., Wallops island, VA

Herbert Windom, Skidaway Institute of
Oceanography, Savannah, GA
William Wise, Marine. Sci. Res. Cntr.,
SUNY, Stony Brook, NY
David Ziemann, Oceanic Institute,
Waimanalo, HI

Science Community:

Kerry Bolognese, NASULGC
Chris D'Elia, MD Sea Grant Association,
CBL, Solomons, MD
Lee Stevens, Sea Grant Assoc.

Congressional Staffers

Rochelle Domatt (Sen. Sam Farr, CA)
Jennifer Newton (Sen. Sam Farr, CA)
Mickey Reed (Rep. Connie Morelia, MD)

Guest Speakers

Eugene Cronin, Emeritus, Chesapeake
Biological Lab., Solomons, MD
Steny Hoyer, US Representative, D/MD

APPENDIX H
ARTICLE V to BYLAWS
Emeritus Members

Section 1: Definition and Eligibility

- A. The position of Emeritus Member is established to recognize individuals who have made significant contributions to the Association and/or to the promotion and advancement of marine sciences under the auspices of the Association.
- B. Persons eligible for nomination as Emeritus Members must be retired and from one of the following categories: the Association's Board of Directors, member laboratory directorship, or leadership position in an organization or agency promoting the advancement of marine sciences or member laboratories through the Association.

Section 2: Nomination and Election

- A. The person will be nominated by a Nominating Committee composed of the three immediate Association Past-Presidents. Notice of such nominations shall be given by the Board of Directors to all members at least thirty (30) days prior to the election.
- B. A vote on the nomination may be taken at the Biennial Meeting of the Association. The election, with the consent of the Board of Directors, also may be held by mail or electronic ballot at a specified date other than the biennial meeting by allowing at least forty five (45) days from the distribution of the ballots before the voting is concluded. In this latter case, the Secretary will certify the election and archive the ballots as verification of the results.

Section 3: Rights and Responsibilities

- A. An Emeritus member will be a non-voting member of the Association. The person has the right to attend meetings and the privilege of having all meeting registration fees waived.
- B. Emeritus members have the responsibility to continue in service to the Association through active participation on committees or through other assumed or assigned responsibilities that promote the goals designated under the Articles of Incorporation.