

Waikiki Aquarium classroom
Monday Oct 28, 2013
9AM to 4PM

Officers Present: Steve Palumbi, Mike Hadfield, Steve Weisberg

Members Present: Gary Cherr, Neil Davies, Bob Cowen, Ruth Gates, Jim Harvey, Jo-Ann Leong, Roberta Marinelli, Shaun Moss, Bob Richmond, Billie Swalla, Brian Tissot

1. Officer slate and board membership 2014-2015

Steve Palumbi, President
Steve Weisberg, President-Elect
Ken Sebens, Past President
Secretary ?? None appointed
Mike Hadfield, Treasurer

2. Treasurer's Report (Mike Hadfield)

Mike handed out a clear accounting of WAML's expenses and income from the year. However, it is not clear who has paid WAML dues, because we don't have a list from NAML about who has paid. The WAML money is in a bank account that is not getting interest and Mike Hadfield has the checkbook. Could we be earning more interest on this account?

There also should be a list of who has paid from WAML.

Jim Harvey offered to contact all of the Marine Labs that are part of WAML and find out if they are still interested in being part of the organization and if not, why not? What are their concerns and what would they like to get from NAML?

Audit of Treasurer's Report – Audit was conducted by Steve Weisberg and Roberta Marinelli and the Treasurer's books were found to be sound and solid.

WAML accomplishments in past 5 years

- A. Meeting with other Marine Lab Directors to discuss common problems. For example, bringing Marine Lab managers to a meeting to see how different problems are solved in different places.
- B. Commonality – Potential for Networks, e.g. Marine Monitoring – water, climate, etc.
- C. Bob Richmond mentioned that he has an NSF grant to give research experiences to underrepresented undergraduate and graduate students and would like to have places to send their students in the summer. Many Pacific Island students looking for research experiences.

3. WAML WEB site

If links are not correct, please contact Chris Patton <cpatton@Stanford.edu>

A. Listings of the WAML members and their educational links

Can faculty give a course that involves several marine labs?
Steve is doing MOOCs

- Hadfield Marine Lab – Polycom courses, e-courses, smaller version of MOOC
- B. Map of the WAML members – shows the enormous footprint in the Pacific Ocean.
- C. Bob Richmond mentioned that there may be a group of students who are in Master’s programs, high school teachers for certificate credit, etc.
- D. Is it possible to co-teach courses between different marine labs? What are the challenges? Benefits?
- E. Are there things that we can do as a group that we can’t do as individuals?
- F. What is WAML?
 A way to bring the marine environment to the public.
 Marine research and education network
 Marine Science Network
 Different geographic regions
 Access to unique habitats
 Kelp forests
 Rocky Shores
 Mangroves

WAML Research Goals

A. Long term Monitoring for Ocean Acidification – all WAML members could put a pH monitor in their sea water tables. Steve Palumbi showed the fluctuation that is recorded at Hopkins Marine Lab over the summer. If you scrub the water for CO₂, then you do not see those fluctuations. Get a “best practices” guide together to send to everyone so that they have a monitoring plan. Need – Great need for this monitoring right now

1. QA of Measurements – Honeywell pH meters – Standardizing effort already started in California – Steve Weisberg is the President of California Current Acidification Network (CCAN).
2. Steve is committed to developing a standardization protocol for monitoring. Please send Steve whoever might be involved at your station with these monitoring practices. Steve Weisberg will also be responsible for one page of best practices for a December NSF FSML grant.
3. Is it possible for one Institution to submit an FSML for the NAML Network?
4. Burk Hale’s DIC, pCO₂ and dCO₂ instrument (\$50,000)

B. Marine Genomics

1. Can we foster Marine Genomics at NAML sites?
2. Can we spread the technology out for collecting data at other labs?
3. Microbial communities
4. Field stations give researchers access to biodiversity
5. ARMS (Artificial Reef Monitoring System) have been deployed at different places in order to compare latitudinal gradients, biogeographical differences, etc. Steve and John are deploying some right now at Hopkins and at Moss Landing in order to generate the datasets to let others know what kind of data you can

get from this approach.

6. Do we all have species list for our labs?
7. Genetic Diversity – Invasion Biology, Marine Genomic Observatories
8. Hawaii has a problem because if you have
9. Steve Palumbi gave an example when doing whale research through CITIES, he had to do the DNA extraction and sequencing in Japan. His argument is that once he had done the PCR, it was a copy of the DNA, not the DNA itself. That way you can sequence the DNA elsewhere.
10. Standardization of biodiversity panels that could be deployed at different marine labs. These would be keyed out and then do metagenomics.
11. Genomics of “Marine Dandruff”
12. Marine Life Observatory – Bar Coding – Do most labs have a course that teaches students genetic Bar Coding?
13. Next steps – Everyone goes back to their faculty and asks if there is buy in from their faculty.

WAML Education Goals

WAML Communication of Science

Student WEB pages?

Next WAML Meeting will be in Monterey at about the same time in 2014.

Let’s all think about WAML as a great opportunity for research and education of Marine Science.

WAML Board – To be discussed at dinner tonight and voted on tomorrow.

Submitted by Billie J. Swalla
10-28-13