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<http://stemd.org>

Foundation for Science and Disability Newsletter

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President's Corner

-Richard Mankin

Passing of the Baton

1/14/15. The winning of the rights of same-sex couples to marry in a total of 36 states this year illustrates the positive effects of a constantly changing American culture as different generations re-decide (or not) what is right, wrong, acceptable, or unlawful. Is there a similar change occurring in attitudes of the scientific community towards their colleagues with disabilities? I'm not sure on the national level but have seen some positive changes locally. In the last several years, I've helped offer lab research opportunities to undergraduates and have mentored several aspiring researchers with disabilities. Seeing their progress and the reactions of professional colleagues reinforces faith that strong research performance helps you develop professionally whether or not you are disabled. It's been a pleasure to work with several young, strong

FSD Student Grant Awardees since

1990

- 1990 Wendy Pava, Birgit Wolz, Elaine Hall
- 1991 Kevin Wilkins, Shan Ming Lee
- 1992 Meghal Antani, Lynn Hanninen, Mara Frohlinger
- 1993 David Fass, William Hylton
- 1995 Chris Tromborg
- 1996 Anne-Michelle Singleton
- 1997 Leslie Harper
- 1998 Maura O'Modhrain
- 1999 Joseph Barbera, Byunggyoo Kim
- 2000 Jennifer Last
- 2001 Cassandra Quave
- 2002 My Lien Nguyen
- 2003 Mark Woods
- 2004 Jessica Mahood
- 2005 Cheryl Fogle
- 2007 Melodi King
- 2008 Ryan McKindles
- 2009 Emma Sacks
- 2010 Shaun Kane
- 2011 Lisa Dunning
- 2012 Kim Yeoman
- 2013 Naomi Delventhal
- 2014 Amy Nichols

The next annual meeting of FSD is 10:00 AM-12:00 PM, Friday, February 13, 2015 in the Executive Boardroom of the Hilton San Jose, in San Jose, CA.

January 2015

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performers, and I'm certain many of you have the stamina, capability, and interest to succeed and will "pick up the baton" when your time comes.

In that regard, I would like to thank Erica Penn for serving two excellent terms as FSD President. During her tenure, FSD expanded its presence on social media and provided advice to numerous organizations interested in supporting the integration of persons with disabilities into the scientific community. Examples of her activities last year are included in the annual meeting minutes on the next page. We wish her well in her future endeavors.

Richard Mankin

FOUNDATION FOR SCIENCE AND DISABILITY (FSD)

Annual Meeting Minutes

10:00 -11:00 AM, Friday, February 14, 2014

Resource Room for AAAS Annual Meeting Participants with Disabilities
Hyatt Regency Chicago, Skyway 261
Chicago, IL

Attendees

Erica Penn, Angela Foreman, Yoshiko Miwa, Kiyomi Deards, Betty Ingram, Richard Mankin

Call to Order/Introductions-Erica Penn

Erica introduced herself as the newly reelected President. She handed out copies of the 2014 FSD meeting agenda, the 2014 FSD newsletter, and the minutes of the 2013 FSD annual meeting. She discussed her work in the biotechnology industry in Baltimore. Angela Foreman discussed her work in the biotechnology industry in San Francisco. Yoshiko Miwa discussed her work as a writer in Tokyo, and presented the foundation with a copy of her recent book about persons with disabilities in Japan. Yoshiko also presented a handout she had prepared about the recent political and institutional changes affecting persons with disabilities in Japan (see Facebook post at <https://www.facebook.com/groups/360413492800/>). Kiyomi Deards introduced herself as a new attendee and discussed her work as an Assistant Professor in the University Libraries, University of Nebraska, Lincoln. Nebraska. Richard Mankin described some of his recent research on developing a trap for Asian citrus psyllid pests in Florida that uses vibration signals to attract mate-seeking males. He also discussed recent activities interns of interns with disabilities in his laboratory last summer.

Minutes –February 15, 2013, Boston, MA

The 2013 annual meeting minutes, posted at <http://STEMD.org> , were discussed and approved as written.

Student Science Grant Committee report 2014. The Student Science Grant Committee met by email (members: Angela foreman, Erica Penn, Laureen Summers, and Chair, Richard Mankin). We reviewed five applications that met the grant criteria and selected Amy Elizabeth Nichols, a PhD student in biology at Virginia Tech University, to receive a \$1000 grant in support of Research on “Impact of evolutionary history on litter decomposition.”

Treasurer report, Angela Foreman

Angela discussed the Treasurer report, which is presented in the 2014 Annual meeting newsletter at STEM.D.org. The report was approved unanimously. Angela also noted that she had submitted the 2013 IRS form and had renewed the Foundation’s Washington DC nonprofit status.

New business

Laureen Summers was unable to attend the meeting but she sent us some comments:

Hi Everybody:

I am sorry that a personal matter is keeping me from attending the meeting. I hope it goes well and look forward to a report on this year’s Foundation meeting.

There are some items we discussed last year that you may want to bring up again. For example, stories on the experiences and accomplishments of scientists like yourself could be featured in one of AAAS’s news websites (Angela was already featured). People really enjoy the stories of successful individuals and this is a good way to encourage students with disabilities to pursue science.

The other idea from last year was to network with other organizations to encourage disability diversity – outside of AAAS. Has anything been done to build on this? Maybe you can make a plan to reach out to a few (keep it small and manageable) science organizations that have not significantly addressed issues of disability and access.

The topic of networking with other organizations also came up at a meeting of the Committee on Opportunities in Science (COOS) of the American Association for the Advancement of Science, February 12-13, 2014. Several members of FSD (Erica Penn, Imke Durre, and Richard Mankin) also are members or advisors in COOS. On February 13 we participated in a breakout session with other COOS participants, Ted Conway, Bob Megginson, and Brad Duerstock. Some of the topics that came up about Science, Technology, and Disability concerns of the COOS committee are of concern to FSD as well.

Three Main issues that were identified were identified in the breakout session:

1. *Entry Point! funding declines – Laureen Summers mentioned this issue over phone conference on Wednesday, February 12, 2014 during the COOS meeting. Suggestion from working group was that Entry Point! needs to be re-evaluated with the goal of increasing the resources available to fund interns. For example, it may be necessary to increase focus on creating new partnerships with alternate agencies (gov't, academia) and the private sector.*
2. *Imke mentioned the need for technical experts made available to AAAS to ensure that technology is available to end users are acceptable. (Small advisory group of Persons With Disabilities(PWD) – various disabilities included).*
 - *Example – electronic scientific publications should be made accessible to the visually-impaired (the use of MathML for equations instead of graphics for example).*
3. *Need to establish a national venue or society for scientists & engineers with disabilities to become a resource for individuals. There is a need for Focus on:*
 - a. *Entry-level information & support*
 - b. *Career development for mid-level career professionals*
 - c. *Mentoring – for both aspects (entry-level & mid-level), leading to professional advancement.*
 - d. *Increased use of social media (Facebook, Skype, etc.) for virtual (online) meetings*

Action items suggested for the process of organizing a national venue/society:

1. *Establish Mission statement & Committee for the new venue/society:*
 - a. *Develop query/questionnaire to obtain input from scientists/engineers with disabilities – target the Directory of Scientists & Engineers with Disabilities (from AAAS) and Entry Point! Alumni.*
 - b. *Research and obtain a general idea of the structure of similar organizations to use as model template.*
2. *Establish Beta testers:*
 - a. *PWD testing technology as it evolves*
 - b. *Implement universal design for access*
 - c. *Involve different technologies for different disabilities*
 - d. *Subgroups of a specific category can become testers*
 - e. *Develop questionnaire for Beta testers' input.*
3. *Other miscellaneous action items that came up in the breakout session:*
 - a. *First steps – charge dues? Website? How to find target individuals? Must establish basic concepts first.*
 - b. *Establish website/forum – tie-in to well-known website? How to market? Disseminate to disability communities; schools?*
 - c. *FSD website could be expanded for example to include not only grant applications, but also include narratives, resource info.*
 - d. *Front page link (direct) – ASME (example)*
 - e. *Compliance – Experts (committee), Membership (committee), deals with issues of disabilities; liaison committee.*
 - f. *Proposal to NSF (proposed by Ted Conway to help fund the beta testing and resource development process):*
 - o *Needs structure, mission, query & societal impacts included in proposal body.*
 - o *May have to be submitted through AAAS (to receive funding)*

Laureen Summers attended the AAAS Meeting on *Advancing Disability Rights through Science* and presented the COOS Committee with this report that also bears on the above discussion:

“Advancing Disability Rights through Science”

Report on the January 27, 2014 meeting of the AAAS Science and Human Rights Coalition.

Location: AAAS – Auditorium

Number of Attendees – 100 including these speakers:

Vincent Cerf

Marco Midon

Robert Dinerstein – Disability Rights Law Clinic – AU

Anju Khubchandani – Disability Issues in Psychology – APA

James Thurston (Suzanne’s brother) – International Accessibility Policy – Microsoft

Michael Gamel-McCormick – Senator Harkin’s Disability Policy Director

Davis Morrissey – US International Council on Disabilities

Charlotte McClain-Nhlapo – Disability and Inclusive Development, USAID

The focus of this meeting was on disability. It was recommended by the Science and Human Rights Coalition’s Steering Committee and arose in part from the interest of some Coalition member organizations in supporting the UN Treaty on the Convention of the Rights of People with Disabilities (CRPD. Disability was also seen as an important human rights issue with high relevance to the science and engineering community, especially the Coalition’s work on the ‘right to science’ (Article 15). (The current Steering Committee members include representatives from the American Psychological Association, American Sociological Association, American Physical Society, American Statistical Association, and the National Center for Science and Civic Engagement, as well as two representatives of human rights organizations.)

There was ample discussion on the ratification of the Treaty. The U.S. Congress is short of six votes to ratify it. Oppositions come from three misconceptions:

- 1. Parental rights (i.e. desire to homeschool) will be limited because of the clause regarding that education be provided in the best interest of the child. The fear is that this will be decided by the government and not by the family.*
- 2. Statements in the treaty regarding sexual and reproductive health and interpreted, by some, as granting the right to abortion.*
- 3. Risk of losing sovereignty – that the UN will take over supervision of domestic law.*

The benefits of ratifying the treaty:

- People with disabilities would be much more a part of an international community. They would gain more respect, equal opportunity and reasonable accommodations worldwide.*
- Inclusion would be seen as a human right.*
- Millions of people with disabilities travel internationally for work and pleasure, and accessibility would improve.*
- People with disabilities in the US have skillsets that can be shared.*
- Businesses, especially those invested in technology would benefit, because more countries would adopt accessible standards on technology and need US resources.*

Science and Technology can be an equalizer for any underserved population and has the power to be transformative. We need to build a wider net of partnerships to encourage disability as part of diversity – to be mentioned in policies and recommendations for program implementation. The USAID policies now mention disability.

Some “nuggets” from speakers:

- 15-18% of population is disabled. 800 million adults; 200 million children.*
- Pervasive stigma and segregation continue.*
- Reporting on disability often underestimates the numbers and gives a low priority to needs (technology; accessibility; etc.)*
- There are 5 billion cell phones being used – most are in Africa.*

- *Vietnam advocates for inclusive education.*
- *There is mobile banking in Kenya.*
- *Peru has granted voting right to people with intellectual disabilities.*

Interesting remarks from Marco:

- *Smart phones worked for people who are blind until Apple developed the touch screen display – new technology is not designed for the blind.*
- *Texting = Marco can only do four words a minute.*
- *Has to wait for auditory signals.*
- *ADA does not cover the internet so there are no laws governing access.*
- *Section 508 states that government should not procure non-accessible technology and should not have allowed the iPhone, but contractors should develop alternatives.*
- *Technology can take away accessibility.*
- *There should be a choice of interfaces (on tablets, phones).*
- *There is a question of how to balance technology benefits, i.e. tablets work well for people with autism, but not necessarily for everyone.*
- *Disability is an interaction between the person and the environment.*
- *We continue to design research in ways not helpful to people with disabilities. They should be equal partners.*

Vince Cerf: We need to use cultural, financial, and legal means to make assistive technology available to everybody.

Based on the discussion items above, the FSD meeting participants developed an action plan:

The first step would be to form a committee of volunteers to do beta testing.

Yoshiko, Erica, and Angela volunteered to be on this committee.

There was discussion about the costs of the new technology. Frequently the technology is not accessible to persons with disabilities. There was a suggestion that we search for magazines and web sites and technology shows that advertise and describe new technology for persons with disability.

In addition, it was determined that FSD should consider greater focus on mentoring opportunities. For example, we could bring a local undergraduate student to the next AAAS meeting in San Jose relatively inexpensively because Angela lives near there. Especially because San Jose is a hotbed of technological activity. FSD could ask AAAS to give the student a 1 day pass to the annual meeting.

Possible additional support of the Entry point program-was discussed.

Finally, networking was brought up again as a need for future development.

The meeting ended at 11:00.

Submitted by Richard Mankin, 2/15/14

Treasurer Report- Angela Foreman

Foundation For Science and Disability Treasurer Report

February 13, 2012-January 1, 2013

	2012	2013
Assets:		
Cash on Hand	\$8,856.03	\$8,909.70
Total Assets	\$8,956.03	\$8,909.70
Income:		
Dues	\$ 525.00	\$ 50.00
Contributions	\$ 530.01	\$14,000.00 (Ed Keller Trust)
Total Income	\$1,055.01	\$14,050.00
Expenses:		
Student awards	\$1,000.00	\$1,000.
Bank fees	\$ 1.34	
Total expenses	\$1,001.34	\$1,000.
Net Income:	\$ 53.67	\$13,050.00
Net Balance:	\$ 8,909.70	\$21,959.70

The Foundation for Science and Disability appreciates the gift from Edward Keller Jr., a longstanding member and officer of our organization.

· Student Science Grant Committee report-2013-Richard Mankin

The committee reviewed 4 completed applications. The numbers of applicants decreased this year after several years of consistent increases.

Naomi Delventhal, a graduate student in the department of Biology at the University of Manitoba, Winnipeg, Canada, was selected by the committee to be awarded a \$1000 grant for work on a project involving the phylogenetic relationships among *Callogobius* species in the Gobiidae family of fishes.

It was moved, seconded, and approved that a \$1000 grant be awarded to Naomi Delventhal.

New Business

It was announced that Angela Foreman had been elected for a second term as Treasurer of FSD.

It was moved, seconded, and approved that Erica Penn be nominated to a second term as President of FSD. Ballots will be sent out in the next newsletter.

Erica Penn noted that she had been a participant in a videotaped interview during the President's Reception at the AAAS Annual Meeting on February 14, and she had described some of the activities of the Foundation for Science and Disability in the interview.

Richard Mankin noted that Ian King of AAAS had suggested in the AAAS-COOS meeting, February 13-14, 2013, that committee members might prepare up to 8 stories about diversity issues the COOS committee addresses which could be contributed to MemberCentral (membercentral.aaas.org). It was moved, seconded, and approved that a subcommittee (Richard, Erica, Angela, and Imke) discuss this topic further by email and write up a story related to activities of scientists with disabilities.

The meeting adjourned at 11:45 AM. Submitted by Richard Mankin, March 5, 2013

Treasurer Report for 2015 Annual meeting:

Foundation For Science and Disability Treasurer Report

January 19, 2014-January 14, 2015

	2014	2015
Assets:		
Cash on Hand	\$21,959.70	\$21,989.70
Total Assets	\$21,959.70	\$21,989.70
Income:		
Dues	\$ 275	\$ 155.00
Contributions	\$ 755	\$ 325.00
Total Income	\$ 1,030	\$ 480.00
Expenses:		
Student awards	\$ 1,000	\$1,000.
Total expenses	\$ 1,000	\$ 1,000.
Net Income:	\$ 30	\$ -520.00
Net Balance:	\$21,989.70	\$21,469.70

Student Science Grant Committee Report 2015

The Committee (Angela Foreman, Imke Durre, Laureen Summers, and Richard Mankin) reviewed 7 applications and selected Rosemarie Figueroa, a PhD. Student in Industrial and Operations Engineering at the University of Michigan for the project "Development of a 3-d anthropometric model for simulating hand work."

Submitted 1/14/15

Richard Mankin

Abstract of Masters Thesis for 2012 Student grant awardee:

YEOMAN, KIMBERLIE, M.S. Effect of Dragonfly Nymph Presence and Conspecific Larvae Density on Oviposition Response of the Invasive Asian Tiger Mosquito (*Aedes albopictus*) (2014)

Directed by Dr. Gideon Wasserberg. 63pp.

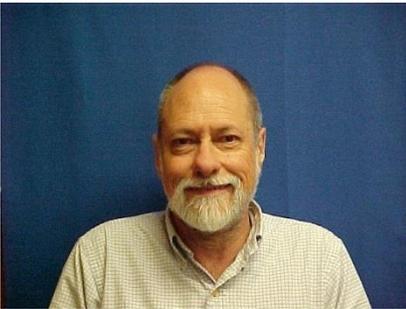
Oviposition site selection is a critical fitness enhancing decision for container breeding insects. Predators have typically been shown to repel gravid females whereas conspecifics have been shown to be attractive at low-intermediate densities but repellent at high densities resulting in hump-shaped relations. The interaction of these two factors has, unfortunately, rarely been studied. In this study, I addressed this question by testing the effect of dragonfly nymphs as larval predators, conspecifics, and their combination on the oviposition response of *Aedes albopictus* mosquitoes. I expected a negative effect of predators, a hump-shaped effect of conspecifics, and a rightward shift in the peak of the hump in the presence of larval predators. I used three levels (0, 1, 3) of caged *Odonata* (dragonfly) nymphs and a range of predetermined conspecific larvae numbers (0, 10, 50, 100, 300, 500). I used two experimental designs: (1) Six 3-by-6 oviposition traps grids each containing all 18 predator-by-larvae combinations; (2) Three transects containing 12 pairs of oviposition traps with both cups containing a similar number of larvae, but one containing a given level (0, 1, 3) of caged nymphs. In the latter, I also cultured a sample of the water medium to evaluate bacterial concentration. Hump-shaped relations of egg number with conspecifics was observed at the grid design for the one nymph level and for the transect design at nymph level zero. The effect predator level on oviposition response was either nonsignificant or, unexpectedly positive. Due to increased larval mortality in the predator cups, I could not evaluate the third hypothesis concerning the combined effect of conspecifics and predators. Bacterial concentration was negatively associated with number of eggs laid. The absence or positive effect of dragonfly nymphs on *Ae. albopictus* oviposition response is encouraging in terms of its usage as a biocontrol agent for container breeding mosquitoes which in combination with low-intermediate levels of conspecifics could be attractive to gravid female mosquitoes. Their offspring, in turn, will be decimated by the control agent.

Foundation for Science and Disability 2015 Ballot

President (beginning 2015):

_____ Richard Mankin

_____ Write in: _____



Richard Mankin is a Research Entomologist at the USDA ARS Center for Medical, Agricultural, and Veterinary Entomology, Gainesville, FL, conducting studies for over 30 years on insect detection and control and insect communication. He has been a member of FSD for about 20 years and has been active in providing research opportunities to students with disabilities.

Please mail or email your selection by February 6, 2015 to
Angela Foreman angelaleeforeman@yahoo.com
Foundation for Science and Disability, P. O. Box 3384
San Leandro, CA 94578

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The Foundation for Science and Disability (<http://stemd.org>) was founded in 1978 to promote the integration of persons with disabilities into the mainstream of the scientific community. A major focus of FSD has been the removal of barriers that restrict opportunities to develop careers and conduct scientific research. The Foundation also provides grants to students with disabilities who are conducting research in the fields of Science, Technology, Engineering, or Mathematics.

President: Richard Mankin (rmankin1@ufl.edu)

Treasurer: Angela Lee Foreman (angelaleeforeman@yahoo.com)

<http://www.facebook.com/group.php?wall&qid=360413492800>

http://www.linkedin.com/groups?qid=4116054&trk=hb_side_g

**Foundation for Science and Disability 2015 Dues Notice
Membership Application / Renewal Form**

Dues Schedule:

Student \$5.00

Regular \$25.00

Contribution _____

Total _____

Please make checks out to:

Foundation for Science and Disability

and mail to:

Angela Lee Foreman

Foundation for Science and Disability

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San Leandro, CA 94578

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