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Animal Care Committee

Committee Highlights

New Animal Care Committee Chair as of January, 2012 – Dr. Jonathan Spears (University Veterinarian for UPEI)

Current Committee Activities

Assisting Science Atlantic member institutions to create mechanisms of providing internal/external scientific merit review of Animal Care Protocols and creating and maintaining a list of potential reviewers to provide such reviews.

Background

The Canadian Council of Animal Care (CCAC) requires all research projects involving animals be subject to review for scientific merit prior to an institutional Animal Care Committee (ACC) granting final approval. In the majority of cases, the process of scientific merit review is carried out by a granting agency when funding competitive applications. On occasion, projects are presented to an institutional ACC without a formal review process, for example, if a project is funded from internal monies or from industry contracts. In these cases, the CCAC requests that the institutional ACC obtain internal and/or external reviews from at least two knowledgeable scientists that do not collaborate with the applying investigator and at least one of which is external to the ACC. This requirement has created problems for smaller institutions in Canada as there are typically so few scientists involved in animal based research within a particular field at the University. The problem is often compounded as most of our animal users actively sit on the institutional ACC, leaving very few potential reviewers with appropriate expertise within the institution.

Activity and Actions

a) Two conference call meetings have been conducted with member institutional representatives since January, 2012.

b) We have established a mechanism for creating a list of potential reviewers that will initially be compiled and maintained by UNB through the office of Research Services and will be taken over by UPEI Office of Research Services in 2013.

c) A letter of invitation to potential reviewers has been circulated to representatives of member institutions to recruit potential reviewers. Each campus will create their own mechanism for administration of the Scientific Merit Review (based on the collective experience of the Science Atlantic Animal Care Committee) and tap into the database of reviewers as required. Concerns
raised over the process include maintaining confidentiality for reviewers and of Principle Investigators and limiting the number of requests for individuals to provide review.

d) Science Atlantic’s plan for collaborating on this effort has been discussed with the CCAC and they are supportive of our efforts and provided some guidance through the process.

**Future Activities**

We are focusing and maintaining momentum on this initiative for Scientific Merit Review with another meeting planned for May, 2012.

We would like to see the creation of a web page for the committee on the Science Atlantic website.

The committee welcomes other concerns over animal-care common to member institutions. The collective experience of Science Atlantic member institutions in assisting individual Universities with their issues is proving to be an invaluable resource.

*Submitted by Jon Spears, Chair*
Aquaculture & Fisheries Committee

The primary focus of the Aquaculture and Fisheries Committee of Science Atlantic is to organize an annual student conference in March. We did this along with both the Biology and Environment Committees and the decision was made to do so again in 2013 at Acadia. This year, three concurrent sessions were organized by and held at Mount Allison University 2-4 March 2012. The 22nd Aquaculture and Fisheries student conference was open to both undergraduate and post-graduate students. This year 25 students presented which was an increase over the past three conferences (mean 2009-2011 = 19) with 2 students presenting in Biology or Environment sessions that fit well within the Aquaculture and Fisheries focus, but elected to present elsewhere. Noticeably absent were student participants from Mount Allison, New Brunswick Community College, St. Francis Xavier, Saint Mary’s University, University of New Brunswick, St. John, and University of Prince Edward Island (Table 1) – all having participants in previous years. Representatives were in attendance from Mt. A., Saint Mary’s, St. FX, and UPEI ensuring that the Aquaculture and Fisheries Committee message will be relayed for future conferences. All institutions will be contacted for the 23rd Conference to be held at Acadia University in 2013.

Table 1: Participant institutions and number of students

<table>
<thead>
<tr>
<th>University</th>
<th># Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acadia University</td>
<td>2</td>
</tr>
<tr>
<td>Bedford Institute of Oceanography</td>
<td>1</td>
</tr>
<tr>
<td>Cape Breton University</td>
<td>1</td>
</tr>
<tr>
<td>Dalhousie University</td>
<td>7</td>
</tr>
<tr>
<td>Memorial University</td>
<td>2</td>
</tr>
<tr>
<td>Nova Scotia Agricultural College</td>
<td>8</td>
</tr>
<tr>
<td>Université de Moncton</td>
<td>1</td>
</tr>
<tr>
<td>University of New Brunswick, Fredericton</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23</strong></td>
</tr>
</tbody>
</table>

It is now well established that this conference has a dual focus of aquaculture and fisheries and this was duly reflected in the breadth of presentations spanning fisheries modeling to feed responses in cultured species. Students were roughly a 50:50 split between undergraduate and post-graduate presenters and a few students, as always, made the trip to support their fellow classmates and/or to broaden their horizons.
The committee thanks our outgoing secretary and fundraising organizer Dr. Tillmann Benfey for, once again, encouraging all representatives to seek funding support. Our sponsors responded with $4,400 in support with new sponsors from the fisheries sector and one NGO (Bluenose Coastal Action Foundation) that collaborates with fisheries (Table 2). We also thank NSERC and Science Atlantic for their financial contribution to the conference awards. We also thank Dr. Jim Duston for steering the ship these past three years.

Table 2: 2012 Sponsor affiliations

<table>
<thead>
<tr>
<th>Sponsor</th>
<th>Aquaculture</th>
<th>Fisheries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic Elver Fishery, Inc.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Bluenose Coastal Action Foundation</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Canadian Centre for Fisheries Innovation</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Clearwater</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cooke Aquaculture</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Corey Feed Mills Ltd.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Lobster Council of Canada</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Novartis Animal Health</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Skretting</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Valox Ltd.</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Key discussion points at Aquaculture and Fisheries Committee meeting #41 2 March 2012

1. **Election of new Chair and Secretary**
   The following were elected to a new three-year term commencing at the end of the current conference: Trevor Avery (Chair) and Mark Fast (Secretary). Congratulations to both for putting their names forward. Much thanks to Tillmann Benfey (Secretary) and Jim Duston (Chair) for cracking the whip over the past three years.

2. **Additional sponsors**
   A goal from 2011 was to seek sponsors from the fisheries sector. In 2012, five additional sponsors from fisheries provided sponsorship funds.

3. **Fall Council Meeting Dalhousie. 2011. (C. Herbinger)**
   Christophe Herbinger was the local representative at the fall council meeting of Science Atlantic.
Committee Membership

<table>
<thead>
<tr>
<th>Representative</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jim Duston</td>
<td>NSAC (outgoing Chair)</td>
</tr>
<tr>
<td>Tillmann Benfey</td>
<td>UNBF (outgoing Secretary)</td>
</tr>
<tr>
<td>Trevor Avery</td>
<td>Acadia (incoming Chair)</td>
</tr>
<tr>
<td>Mark Fast</td>
<td>UPEI (incoming Secretary)</td>
</tr>
<tr>
<td>Rod Beresford</td>
<td>Cape Breton University</td>
</tr>
<tr>
<td>Thierry Chopin</td>
<td>University of New Brunswick, St. John</td>
</tr>
<tr>
<td>Cyr Couturier</td>
<td>Marine Institute, Memorial University</td>
</tr>
<tr>
<td>Tim Frasier</td>
<td>Saint Mary’s University</td>
</tr>
<tr>
<td>Caroline Graham</td>
<td>New Brunswick Community College</td>
</tr>
<tr>
<td>Christophe Herbinger</td>
<td>Dalhousie University</td>
</tr>
<tr>
<td>Matt Litvak Mt A</td>
<td>Mount Allison University</td>
</tr>
<tr>
<td>Matt Rise MUN.</td>
<td>Memorial University of Newfoundland</td>
</tr>
<tr>
<td>Sébastien Plante</td>
<td>Université de Moncton</td>
</tr>
<tr>
<td>Benedikte Vercaemer</td>
<td>DFO-BIO</td>
</tr>
<tr>
<td>Jim Williams</td>
<td>St. Francis Xavier University</td>
</tr>
</tbody>
</table>


Best Overall Presentation – Science Atlantic Communication Award

Njal Rollinson, Dalhousie University.  
**Big Forestry, Big Fish, and the Evolution of Maternal Investment in Atlantic Salmon**

Awards for Best Graduate Student Presentations

1st place Clearwater / Novartis Animal Health Canada Award

Njal Rollinson, Dalhousie University.  
**Big Forestry, Big Fish, and the Evolution of Maternal Investment in Atlantic Salmon**

2nd place (tie) Cooke Aquaculture / Canadian Centre for Fisheries Innovation Award

Kyle Matheson, Memorial University.  
**Temperature mediates non-competitive and competitive foraging in indigenous rock (Cancer irroratus) and recently introduced green (Carcinus maenus) crabs**

2nd place (tie) Cooke Aquaculture / Canadian Centre for Fisheries Innovation Award

Gina Stewart, Nova Scotia Agricultural College.  
**Shubenacadie River striped bass egg and larvae spatio-temporal density and distribution**
3rd place Skretting / Lobster Council of Canada Award
Vicky Yaroshewski, Dalhousie University. Genetic Effects of Pearl Culture Practices and the Fine Scale Recruitment of the Black-Lipped Pearl Oyster (Pinctada margaritifera) in French Polynesia

Awards for Best Undergraduate Student Presentations

1st place Clearwater / Atlantic Elver Fishery Award
Lauren Ellis, University of New Brunswick, Fredericton. The effect of dissolved oxygen concentration on critical thermal maximum in triploid brook charr, Salvelinus fontinalis

2nd place Corey Nutrition / NSERC Award
Nancy Roney, Dalhousie University. Old fish, new fish: The effects of stock structure on recruitment in Gadus morhua and Clupea harengus

3rd place Valox / Bluenose Coastal Action Foundation Award
Jessica Ellis, Dalhousie University. Current trends in hagfish fisheries in Atlantic Canada and worldwide

Submitted by Trevor Avery, Chair
Biology Committee

Conference

The most important concrete activity of the Biology Committee since the Fall was the joint conference with Biology, Aquaculture & Fisheries and Environment at Mount Allison. Magi Beaton ably led the organizing committee in producing a memorable event, setting new standards for future conferences to emulate.

The 2013 conference will be hosted by Acadia University.

Other activities

Work continues to organize a Biology Speakers’ Tour.

At the March committee meeting, collaboration on reviewing first year biology laboratories was discussed.

Committee Membership

Dr. Alyre Chiasson was elected as Chair, Dr. Heather Hunt as Secretary and Dr. Russell Wyeth as Vice Chair. All were acclaimed.

Submitted by Bob Hooper, Chair
Chemistry Committee

Conference Information

The 37th annual student undergraduate chemistry conference (ChemCon 2012) will be held at Cape Breton University, May 15th -18th, 2012. Information can be found at http://scienceatlantic.ca/conferences/ocs/index.php/chem/Chemistry. It is co-sponsored by Science Atlantic (formerly APICS) and the Chemical Institute of Canada (CIC).

Although the major emphasis will be on undergraduate research presentations (oral and posters), graduate student presentations are strongly encouraged. Students have been able to arrange two excellent keynote speakers, Dr. Philip Jessop from the Department of Chemistry, Queen’s University and Dr. Jason Pearson from the Department of Chemistry, University of Prince Edward Island. Dr. Jessop is a professor of Inorganic Chemistry as well as Canada Research Chair of Green Chemistry at Queen’s University in Kingston, Ontario. The Jessop Research Group focuses on hydrogen storage, CO2 fixation, switchable solvents and surfactants, liquid polymers, homogenous catalysis as well as catalyst recovery methods. In addition to his work at Queen’s University, Dr. Jessop is also the Technical Director of GreenCentre Canada which brings academic researchers and industry partners together with the goal of developing clean, less energy-intensive alternatives to traditional chemical products and manufacturing processes. Dr. Pearson is an Assistant Professor of Chemistry at the University of Prince Edward Island. His research interests are in computational chemistry and he focuses on the understanding of inter-and intra-molecular interactions as well as how such interactions affect chemical properties and reactivity. Dr. Pearson is an alumus of the Cape Breton University and was quite active in the activities of APICS as a student. His selection as a keynote speaker fits well with the 50th Anniversary celebration of Science Atlantic.

They are also organizing a tour of Sydney Tar Ponds Coke Ovens Remediation Project. The Sydney Tar Ponds and Coke Ovens Remediation is a $400 million government-funded project involving multi-million dollar contracts with environmental engineering firms. A deep understanding of the chemistry of the 700 000 tons of contaminated soil has been essential to this remediation project. This tour should illustrate some of the important applications of a chemistry background to careers in government and industry.

Speaker Tour Program

The Science Atlantic/CIC Tour speaker for the Fall of 2011 were Dr. Adam Dyker of the University of New Brunswick and Dr. Bobby Ellis of Acadia University. Dr. Dyker presented a talk entitled "Organic sodium: The most powerful organic reducing agents" at Mt. Allison University (October 14) and the University of PEI (February 12, 2012). Dr. Ellis spoke on "Main group
molecules masquerading as metals" at St. Francis Xavier University (November 3), Cape Breton University (November 4) and the University of New Brunswick (November 25).

**Website update**

The Science Atlantic Chemistry Committee website is managed by Lois Whitehead from the Science Atlantic Head Office. There has been a migration off all web contents to the new site [http://scienceatlantic.ca/committees/chemistry](http://scienceatlantic.ca/committees/chemistry). An up to date membership list for the Chemistry Committee can now be found at: [http://scienceatlantic.ca/committees/chemistry/chemmembers/](http://scienceatlantic.ca/committees/chemistry/chemmembers/). Dr. Jason Masuda of Saint Mary's University is the Tour Speaker Coordinator and Dr. Ray Syvitski of NRC Institute of Marine Biosciences is the Vice Chair of the Chemistry Committee.

*Submitted by Dr. Amitabh Jha, Chair*
Computer Science Committee

Conference

The primary focus of the committee is on the organization of the annual joint conference with the Mathematics and Statistics committee held in October. The 2011 conference was hosted by St. Francis Xavier University and reported on last November. The 2012 conference will be hosted by Mount Allison University on October 12 – 14.

At the time of writing this report, the committee is planning its annual Spring teleconference during which a report is presented on the previous conference, planning for the upcoming conference is discussed, and a preliminary budget presented. Also, elections for a new chair and secretary are planned.

Committee membership

Martin van Bommel, StFX (Chair); Laurie Ricker, MtA (Secretary); Jim Diamond, Acadia; Vlado Keselj, Dal; Todd Wareham, MUN; Ilya Blum, MSVU; Norma Linney, SMU; Jalal Almhana, UdeM; Ken Kent, UNBF; Hazel Webb, UNBSJ; David LeBlanc, UPEI.

Submitted by M. van Bommel, Chair
Earth Science Committee

The two main activities of the Earth Science Committee are the organization of the Science Atlantic-AGS speaker tour and the AUGC.

Speaker tour

Science Atlantic (ES) co-sponsors a visiting speaker tour with the Atlantic Geoscience Society, coordinated by Jacob Hanley. The 2011-12 speakers were Cliff Shaw (UNB), who visited Memorial, Dalhousie and St. FX in March and Fraser Keppie (NS DNR) who visited UNB, Acadia and St. Mary’s in January. Cliff’s lecture was entitled “When Magmas Attack” and Fraser’s lecture was entitled “How do supercontinents break up?” Both were well received, with audiences ranging from 16 to over 50.

AUGC

The 62nd AUGC will be held at Dalhousie University on 18-20 October 2012, and is well under way in planning. The website at http://www.augc2012.com carries the details, with sponsorship from CSEG (Challenge Bowl) and CSPG (including a judge) already confirmed. The organizing committee are arranging for recognition of the 50th anniversary of APICS/Science Atlantic at the 2012 conference at Dalhousie, by inviting prominent Atlantic region scientists, particularly those who have APICS connections in the past, to speak in place of a keynote speaker.

Membership

At the February meeting of the Committee Brendan Murphy (St.FX) was elected Chair.

Submitted by Rob Raeside, Outgoing Chair
Environment Committee

Since November 2011, there are two items on which to report.

Spring 2012 Student Conference (March 2-4, Mount Allison University)

This year we held a joint conference with the Science Atlantic Biology and Aquaculture & Fisheries committees, co-organized by Brad Walters on March 2-4, 2012. It was an excellent meeting with over 170 registrants (with 35 registered for the Environment sessions). There were 16 oral presentations and 5 poster presentations made by undergraduate and graduate students from DAL, StFX, Acadia, Mount Allison, UPEI, UNB-F, MUN, and MUN-SWGC. Faculty attendance was good, with representatives from UPEI, UNB-F, MUN-SWGC, MUN, Acadia, and StFX. The presentations were all of very high quality, and four awards were presented:

The award categories and winners were: 1) Best Undergraduate Oral – Emma Davis (Mount Allison University); 2) Best Graduate Oral – Jim Ghoshdastidar (Acadia University); and 3) Best Poster – Chelsey Lawrence (Memorial University of Newfoundland).

Environment Committee Meeting (March 2, Mount Allison University)

On the Friday night of the student conference, our committee met formally to discuss several issues. Present were: Carolyn Peach Brown (UPEI); Nelson O’Driscoll (Acadia); Van Lantz (UNB-F); Brad Walters (Mount Allison); Dave Risk (represented by grad student, SFX); Christine Campbell (represented by another faculty member, SWGC).

Committee business centered around discussion of: 1) this year’s joint conference initiative; 2) judging responsibilities and evaluation forms; 3) voting for our new Environment Committee Chair; and 4) the lack of social-science presentations at our conferences. For the joint conference discussion, all were again pleased with this year’s event and it was agreed to continue this arrangement with Biology and Aquaculture & Fisheries for next year, if these committees are in agreement. For judging responsibilities, it was agreed to involve four committee members (two judges per presentation). For the Environment Committee Chair, there was one volunteer (Daniel Rainham), who was voted unanimously as the new Chair. This leaves the Vice-chair position vacant (with currently no volunteer for this position). Finally, for the lack of social-science presentations at our conferences, it was agreed that we should try an encourage more of these in future conferences since the environmental discipline is multi-disciplinary and therefore should incorporate a balance of primary natural and social science research.
Mathematics & Statistics Committee

A new Chair was elected for the Committee. Gordon MacDonald, UPEI, will take over the position in April.

Submitted by Robert Dawson, Outgoing Chair

Physics & Astronomy Committee

AUPAC 2012

The Science Atlantic Undergraduate Physics and Astronomy Conference was held Feb. 3 - 5, 2012 at Dalhousie University, Halifax, NS. From the student perspective the conference ran smoothly, due to an excellent student organizing committee. However, Dalhousie Physics Department failed to provide adequate guidance and mentoring to the student committee. Following the retirement of long-term APICS representative Dr. David Tindall, the department had selected Dr. Scott Chapman to be their new representative. Just prior to the conference, I learned that Dr. Chapman was not on campus and would be beginning a faculty position on 1 July 2012. Leaving the local student committee without a mentor and APICS/Science Atlantic representative was an unanticipated situation. Two months after the conference, we are awaiting a report and budget submission. The Physics and Astronomy Division expresses its gratitude to Lois Whitehead for her extraordinary efforts on our behalf.

The award winners are available at:
http://scienceatlantic.ca/committees/physics/aupacawards/

Committee Business

The next AUPAC conference will be hosted by Universite de Moncton in 2013.

The committee thanked Igor Mastikhin for several years of service in organizing the lecture tour and accepted Carl Adams offer to take-on this responsibility beginning next year.

The committee decided that the $500 for prizes provided by Canadian Science Publishing and the Canadian Journal of Physics would be used to supplement the existing awards this year. Michael Stienitz will try to make this an ongoing contribution.

The committee voted to present a joint award to Dr. David Tindall and Michael Steinitz for long-term service and leadership to the Division of Physics and Astronomy of APICS/Science Atlantic.
We decided that representatives would submit nominations directly to Science Atlantic with regard to past student speakers who might be able to present at the 50th Anniversary Gala Event. Searches and contacts with those students who had been mentioned in e-mails resulted in my submission of nominations for Steven Bayea, Thom Mason, and Dale Frail. There were two or three submissions by other representatives.

Bob Hawkes has been working on filling in some of the missing years of our history.

2012 Science Atlantic-CAP Lecture Tour

Igor Mastikhin organized the co-sponsored tour that brought three distinguished speakers to the Atlantic region (details at: http://scienceatlantic.ca/committees/physics/patour/):

- “The neutrino enigma and other dark matters” by Tony Noble, Queen's University.
- “Looking beyond the Standard Model with the Large Hadron Collider (LHC)” by Thomas Gregoire, Carleton University.
- “Using Earth’s atmosphere to study the cosmos” by Eric Donovan, University of Calgary.

Issues

This year’s conference situation has raised the issues of needed guidelines on:

- Role and the responsibilities assumed by the local conference representative.
- Financial reporting and submission of conference receipts for Science Atlantic’s files.

Submitted by Bryan Latta, Chair

Psychology Committee

The next student conference and committee meeting will be hosted at Acadia University, May 8-9, 2012. Election of a new Chair will be held at that time.

A report on the meeting and membership will be available in the Fall.

Submitted by Rick Mehta, Chair